KUMAVISION Help

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KUMAVISION AG

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1. Docs

1.1 Welcome to KUMAVISION Help

With our online help we hope to provide you with the best possible guidance. If something should be unclear, please do not hesitate to contact our support.

Note

The content of the KUMAVISION Help reflects the latest versions of the KUMAVISION industry solutions and apps. If you are using a different version, some features and processes may not yet be available for the version you are using.

1.1.1 Verticals

- base (BOOSTER)
- project365
- project365 Real Estate
- project365 Architects
- project365 Engineering
- trade365
- healthcare365
- factory365
- medtec365

1.1.2 Apps

- Applications Overview

1.2 Verticals

1.2.1 base (BOOSTER)

KUMAVISION base (BOOSTER)

KUMAVISION base (BOOSTER) provides the base functionality for all KUMAVISION industry solutions. For more information, see the following topics.

Topics

- General Business Functionality
- Financial Management
- Sales
- Purchasing
- Manufacturing
- Warehouse Management
- Service
- Purchase Request
- Dispatch
- Compliance
- Warranty Claims, Complaints, and FMEA
- Unique Device Identification
- Package Labels
- Packages / Carriers: Microsoft Dynamics 365 Business Central extension
- General Setup

Get KUMAVISION BOOSTER from Microsoft AppSource

General Business Functionality

The following features expand standard Microsoft Dynamics 365 Business Central[1] functions to provide additional options to those using General Business Functionality.

CONTACT MANAGEMENT

As an addition to standard marketing functionality, the contact management feature provides salespeople and purchasers alike with the option of creating cockpit views that include every relevant piece of information stored about a contact.

Each view can be customized to meet a specific user’s requirements. You can also directly add certain actions to a view.

Setup

To specify what information and functions should be part of the cockpit:

1. Choose the Search icon, enter User Setup, and then choose the related link.
2. Select a user and choose Edit on the ribbon.
3. On the Cockpit View FastTab, specify what you want to display, such as marketing functions and sales documents if you’re a salesperson.
4. On the Cockpit Actions FastTab, select what actions are required in the view, depending on whether the cockpit is used in sales or purchasing.

Contact card

Each contact card now shows the information and actions that you specified.

1. Choose the Search icon, enter Contacts, and then choose the related link.
2. This opens a list on which organization contacts are shown in bold. The people associated with the relevant organization are shown underneath, in standard font. Double-click an organization.
3. Go to the FastTab called Contacts (which was added to the card) to see the people linked to the company contact.

Contacts

Field	Description
No.	Specifies the number of the contact person. Clicking this field opens the card related to the contact.
Name	Specifies the contact person’s name.
Phone No.	Specifies the contact’s phone number. If a connection to a TAPI interface has been established, the number entered in this field can be dialed immediately.
Comment	A Yes indicates that remarks have been stored for this contact. Clicking the field will show them to you.
Email	Specifies the contact’s email address. If you select the address entered in this field, you can send an email to the contact via your email provider.

Ribbon actions

On the ribbon, you’ll find the functions that you specified in User Setup on the Cockpit Actions FastTab.

> **Note**
>
> You can hide and unhide functions and FactBoxes on the contact card in the same way you would in the standard system. The default values specified in User Setup will then be overridden.

Contact Statistics

Found on the right-hand side of the card, this FactBox displays the marketing activities and sales documents linked to the contact. You can click a value to open the data records associated with each of the fields.

Forecast

Also on the right-hand side, you can see the current sales opportunities linked to the contact and the sales quotes related to those opportunities.

TRANSLATE RESOURCES AND WORK TYPES

As companies are increasingly branching out into markets around the world, texts for resources and work types must be translated as well. They can be found both on the Translations page and on purchase and sales documents.

Setup

You can store translations of resources and work types as base data. To set up a translation:

1. Choose the Search icon, enter Resources or Work Types, and then choose the related link.
2. Open a resource or work type card.
3. Choose Translations on the ribbon and enter a language code in the Description field.
4. Fill in the remaining fields as necessary.

Use a translation

When you enter a resource on sales documents, the system checks whether a translation has been specified for the resource in the language entered on the sales header.

If a translation is found, it is entered in the Description and Description 2 fields on the sales lines. If none is available for a language code, the standard text is used. The same is true for work types when you enter a type on a purchase or sales document.

EDIT TEXT

In the standard system, long paragraphs are broken up into smaller segments and distributed onto multiple lines. Because of this, you can’t simply copy and paste larger bodies of text, which might make adding notes to documents a tedious and cumbersome task.

The solution to this has been to develop an easy-to-use text editor for copying and pasting extended and document texts without line breaks. As an example, to create an extended text (see also Extended Text), you can do the following:

1. Write a note, for example, in Microsoft Word.
2. Open the Extended Text page.
3. Choose Manage > Formatting Editor on the ribbon.
4. Use the copy-and-paste function to copy the note from Word.

> **Note**
>
> Even if you format text in a certain way, some of your stylistic choices—such as having text printed in bold, italic, or underlined—might not appear on documents printed from Microsoft Dynamics 365 Business Central[1].

You can also enter a beginning or ending text on a document line.

1. Open a document.
2. Go to the Lines FastTab.
3. Select the line for which you want to enter text.
4. Choose Related Information > Document Texts > Beginning or Ending Text on the ribbon.
5. On the Document Text card, choose Formatting Editor.
6. Enter a text manually or copy and paste one that you wrote earlier.

To have the text printed on certain documents, select the relevant Print fields on the line that you entered the text on.

EXTENDED TEXT

Besides using standard functionality to add item descriptions to a document, you can now also specify text that you want shown on headers and footers or before and after a line on a document.

Document texts that you want to enter at the line level, that is, as beginning or ending texts, can be specified as early as setting up items, resources, or G/L accounts. At the header level, you can store these texts as early as setting up a customer or vendor.

Create an extended text

To create an extended text:

1. Open the card of an item, resource, G/L account, vendor, or customer.
2. Choose Extended Text on the ribbon.
3. Enter a text on a line.
4. Fill in the Starting Date and Ending Date fields if you want to make the text available only during a certain period. You can also select the All Languages checkbox if you want it shown regardless of the language code stored for a customer’s or vendor’s documents.
5. You can then select other checkboxes on the line to specify on which kind of purchase or sales document you want the text to be shown.

Afterward, you can choose between three options in the Use as Document Text field as described in the following table.

Option	Description
Yes	The text can be opened by choosing Line > Document Texts > Beginning or Ending Text.
No	The text is used as a document line. Formatted document texts cannot be transferred to document lines.
Automatic	The text is inserted automatically.

In the Position field, you can choose whether the extended text should appear as a beginning text at the top of documents or above a description of an item, a resource, or a G/L account—or as an ending text at the bottom or below any of these descriptions. To put an extended text on a document:

1. Open a document.
2. Go to the Lines FastTab.
3. Choose Functions, and then choose Insert Ext. Texts.

Document starting and ending dates

Although you can use standard functionality to specify how long an extended text assigned to base data should be displayed on documents, the availability of a certain text is only checked when you create a document but not when its content is copied to another type of document or when it is still open after the last date on which to include the text has passed.

As a result, printouts might contain lines that should no longer be available. To remedy this situation, the starting and ending dates assigned to a text are now automatically copied to the Beginning Text or Ending Text page or to the lines of a document when extended text is being added.

The system then checks these dates when you run the Copy Document action or choose Create Sales Order on a sales quote, for example, to determine if a certain text line should be retrieved at all.

Extended Texts Print control depending on order types in documents

Order types for sales, purchasing and service can be set up in the extended texts. This makes it possible to control the printing of beginning- and ending-texts for the special order types.

These texts are always transferred to the document, but are only printed if the order types corresponds to the relevant order types. Only the texts printed in the document are transferred to the posted documents. Order types that are empty are always printed.

Note

The checkbox on the line to specify on which kind of document must also be activated. Otherwise the text will not be printed. Also see Create an extended text.

Advertising groups

Besides adding extended texts to vendor, customer, and other documents, you can assign them to advertising groups.

Advertising groups are used to store extended texts for multiple or all vendors or customers, for example, to inform about company holidays, physical stock-taking periods, and trade shows. To set up a group:

1. Choose the Search icon, enter Advertising Groups, and then choose the related link.
2. Choose New on the ribbon to create a new advertising group or choose Edit to change an existing group. You can also choose Delete if you want to remove a group from the list.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a meaningful description for the advertising group.
Description	Enter a more detailed description of the group and the extended texts stored for it.
All Customers	Select this checkbox if you want the advertising group used for all customers.
No. of Customers	Instead of selecting All Contacts, you can specify in this field a certain number of contacts for whom the group should be used. Selecting the lookup in the field will take you to the Advertising Group Members page, where you can add specific customers.
All Vendors	Select this checkbox if you want the advertising group used for all vendors.
No. of Vendors	Instead of selecting All Vendors, you can specify in this field a certain number of vendors for whom the group should be used. Selecting the lookup in the field will take you to the Advertising Group Members page, where you can add specific vendors.
All Contacts	Select this checkbox if you want the advertising group used for all contacts.
No. of Contacts	Instead of selecting All Contacts, you can specify in this field a certain number of contacts for whom the group should be used. Selecting the lookup in the field will take you to the Advertising Group Members page, where you can add specific contacts.
No. of Extended Texts	Shows the number of extended texts stored for the group.

To assign an extended text to an advertising group:

1. Select a group.
2. On the ribbon, choose Extended Text.
3. Choose New and enter a text.

For more information on how to create a text module, see Extended Text.

POSITION NUMBERS

You can also assign position numbers to lines to structure a document.

You can enter numbers manually in the Position No. fields on document lines. Alternatively, you can run the Assign Position Nos. function from the ribbon to have numbers assigned automatically.

How position numbers are assigned can be specified in Purchases & Payables Setup or Sales & Receivables Setup as described in the following table.

Field	Description
Check Pos. Nos. on Purch./ Sales Lines	**(blank)** No impact. **Check** Checks for position numbers when a document is released. Shows an error message if the numbers are missing. **Auto Assign** Checks for numbers and assigns them automatically when a document is released.
Auto Pos. Nos. (Type)	**(blank)** No impact. **Single** Assigns sequential numbers. How big the steps between numbers are is set in the Auto Position Nos. (Step) field. **Multilevel** The Position No. field contains an outline (1 / 1.1…). This can be helpful especially when it comes to subtotals and bundles, as position numbers then point to their level within the structure.
Auto Pos. Nos. (Step)	Specifies how big the steps between position numbers are *(10, 100, or 1000).*

PRINT LINE

To cut down on paper usage, lines without price information can be removed from printouts. To hide a line, open a document, go to the Lines FastTab, and select the relevant line. Afterward, clear its Print Line checkbox.

PRINT LINE BREAK

For layout purposes, a page break can be added to printouts by selecting Print Line Break on a document line.

STRUCTURE DOCUMENTS

You can now structure purchase, sales, and service documents more easily by adding a heading to a document line or by having certain lines form a subtotal or bundle (with per-line prices not being shown). You can also assign a position number to each line.

To structure a document, you need to fill in the Type field on the relevant lines. The options of the field are described in the following table.

Field	Description
Headline	Shows text entered in the Description field in bold on printouts.
Subtotal	Shows text entered as a description in bold on printouts and marks the starting point for a number of items, resources, or G/L account lines you want included in a subtotal.
Bundle	Shows text entered as a description in bold on printouts and marks the starting point for a number of items, resources, or G/L account lines you want included in a bundle. The Print Prices Detail for Bundle field in the Sales & Receivables Setup can be used to specify whether the price details are printed in the lines or only in the End-Subtotal/Bundle.
End-Subtotal/ Bundle	Shows text entered as a description in bold on printouts and marks the end point for a number of items, resources, or G/L account lines you want included in a subtotal or bundle. Subtotals can be changed in sales to reflect reductions. The price difference is then distributed evenly among the sales lines.

MANUFACTURING DATE / SUBCONTRACTED LOT

Besides using standard item tracking functionality, you can now store the manufacturing date and the external lot number for an item.

Setup

You can store the date when an item was manufactured or the lot number that a supplier used for it together with the standard item tracking code.

1. Choose the Search icon, enter Item Tracking Codes, and then choose the related link.
2. Choose New on the ribbon or select a code and choose Edit.
3. Fill in the fields as necessary. On the Misc. FastTab, turn on the Manual Prod. Date Required or the Manual External Lot Required toggle, or both, to specify that the field(s) must be filled in for tracking codes.

Assign a tracking code

To assign a tracking code to an item:

1. Choose the Search icon, enter Items, and then choose the related link.
2. Choose New on the ribbon or select an item and choose Edit.
3. Go to the Item Tracking FastTab and fill in the Item Tracking Code field.

You can assign a code to any outgoing or incoming document. For a posted entry, a posted tracking code is stored retroactively. See the standard online help for more information: Trace Item-Tracked Items.

BLOCK AN ITEM OR A VARIANT

Sometimes, business decisions might lead you to block items from being used in sales and purchasing (but not in service, for example). To prevent the use of an item in a specific area:

- Open an item card.
- On the Item FastTab, turn on the Blocked toggle that corresponds to the area where you don’t want the item to be entered.

(For more information, see Block Base Data.) You can also block item variants from being used in some or all areas.

- On the item card, choose Related > Item > Variants.
- Select a line with a variant and select the Blocked fields that correspond to the areas where you don’t want the variant to be used.

In addition to standard app options, KUMAVISION base (BOOSTER) also offers you variant blocking in the following areas:

- Manufacturing
- Consumption
- Transfers
- Assembly
- Projects

You see an error message if a blocked variant is entered in any of these, and the entry will be discarded. In purchasing, for example, the system checks for blocked variants in the following order of priority:

1. Blocked toggle on the item card
2. Purchasing Blocked toggle on the same card
3. Purchase Variant Blocked toggle on the variant card

ITEM ATTRIBUTES

Item attributes are used to group and find items according to certain criteria. You can assign attributes to every item that is stored in the system, either by assigning them to an individual item or to a category of items.

Setup

Before you can use this feature, you need to set up the required attributes and their attribute values.

1. Choose the Search icon, enter Item Attributes, and then choose the related link.
2. Choose New on the ribbon.
3. Fill in the fields as described in the following table.

Field	Description
Name	Specify the description of the attribute. You can enter a maximum of 250 characters in this field.
Type	Specify the type of data referenced on this line. Any value that you specify for the attribute must match this type. You can choose between Option, Text, Integer, Decimal, and Date.
Values	Used to specify values for attributes of type Option. **Note** This field is only shown if you chose Option in the Type field.
Blocked	With the toggle turned on, the attribute can no longer be used.
Required	Turn on this toggle if you want to require users to fill in this attribute for item masters.
Printing Sequence No.	Specify the order in which you want attributes printed if more than one attribute is included on a document.

Printing

On this FastTab, you can specify whether to print an item attribute on sales or purchase documents.

1. Select an attribute.
2. Use the Assist Button next to the Sales or Purchasing field to open the print selection.
3. Select the checkboxes for the type of sales or purchase documents on which you want to print the attribute, and then choose Close.

To select the field on more than one line:

1. Mark the relevant lines.
2. Choose Print on Document > Sales or Purchase on the ribbon. Initially, all fields will be blank (that is, deactivated).
3. Select the relevant checkboxes and confirm by choosing Close.

Print settings that you've already specified will be overwritten (provided you choose Yes on the message that appears).

Unit of measure translations

For attributes that come with a unit of measure, you can choose Translations on the ribbon to store—and later print on documents—a translation of the unit in another language.

Assign an attribute

Items

To assign an attribute to an item:

1. Open an item card.
2. Choose Item > Attributes on the ribbon.
3. Fill in the fields as necessary.

You can then see the assigned attributes in the Item Attributes FactBox on the card.

> **Note**
>
> If the Required checkbox is selected for an attribute and the Item Field Check toggle was turned on in Inventory Setup, a mandatory field check is performed when you're about to complete item maintenance. An error message will be shown if you haven't entered a value for an attribute specified as Required or if a category with a required but (so far) unspecified attribute was assigned to the item.

Printing

On this FastTab on the Item Attribute Values page, you can specify whether to print an item attribute on sales or purchase documents.

1. Select an item attribute.
2. Use the Assist Button next to the Sales or Purchasing field to open the print selection.
3. Select the checkboxes for the type of sales or purchase documents on which you want to print the attribute, and then choose Close.

> **Note**
>
> Selections that might have already been made because of how you set up the item attribute or category will be replaced by what you specify on this page.

To select the field on more than one line:

1. Go to the Item Attribute Values FastTab.
2. Mark the relevant lines.
3. Choose Print on Document > Sales or Purchase on the ribbon. Initially, all fields will be blank (that is, deactivated).
4. Select the relevant checkboxes and confirm by choosing Close.

Print settings that you've already specified will be overwritten (provided you choose Yes on the message that appears).

Item categories

To assign an attribute to an entire category of items:

1. Choose the Search icon, enter Item Categories, and then choose the related link.
2. Select a category to open it.
3. Fill in the fields on the Attributes FastTab.

You can then see the attributes you assigned to categories in the Attributes FactBox on the right-hand side of the Item Categories page. When you later assign an item to a category, attributes stored for the category will be copied to the item automatically. Should you change attributes of a category, the items assigned to it will be updated as well.

> **Note**
>
> Attributes specified for parent categories are inherited to subcategories but can’t be changed there. Instead, you need to adjust these attributes for each item using them.

Printing

On the Item Categories page, you can again specify whether to print an item attribute on sales or purchase documents.

1. Select an item attribute.
2. Use the Assist Button next to the Sales or Purchasing field to open the print selection.
3. Select the checkboxes for the type of sales or purchase documents on which you want to print the attribute, and then choose Close.

> **Note**
>
> Selections that might have already been made because of how you set up the item attribute will be replaced by what you specify on this page.

To select the field on more than one line:

1. Go to the Attributes FastTab.
2. Mark the relevant lines.
3. Choose Print on Document > Sales or Purchase. Initially, all fields will be blank (that is, deactivated).
4. Select the relevant checkboxes and confirm by choosing Close.

Print settings that you’ve already specified will be overwritten (provided you choose Yes on the message that appears).

Specify attribute values

On the Item Attribute card, you can use a lookup in the Values field to select a predefined value for an attribute. If no value has been entered, you can create a new one according to the format given in the Type field on the card.

> **Note**
>
> You can’t release an item for which a required attribute hasn’t been specified.

Search by attributes

You can use the attribute search feature to look for item attributes in sales or purchasing.

The standard way of searching for items is to filter the item list for a specific attribute. Keeping this in mind, the search feature has been extended so that you can set filters on document entries as well.

To run the extended search:

1. Open a sales or purchase document.
2. On the Lines FastTab, select a line and choose Manage > Search by Attributes.
3. Enter an item category to see the first related attribute. You can extend this list to include other attributes, up to a maximum of 20.
4. Specify an attribute value in the second field. The line needs to be of the Item type.
5. After you've specified the search criteria, choose Filter by Attributes on the ribbon.
6. Choose OK to copy the relevant line to the document.

> **Note**
>
> If you're using KUMAVISION factory365, click here for more details about attribute searches.

APPLICATION TRACING

For easier traceability or checks of application sequences for incoming and outgoing items, use the Application Tracing feature.

To run the feature, choose Related > Application Tracing on the Items page.

The page that opens shows the complete application sequence. If an item is incoming *(Receipt, Purchase, Output)*, the page shows each movement of the entry, along with its quantity and value, up until the last outbound transaction (Shipment, Sale, Consumption), including all transfers.

If an item is outgoing, the page shows each movement, as well as its quantity and value, up to the first incoming transaction, again including all transfers.

SPECIAL NOTES

Comments that you add for a customer, a vendor, or an item can be marked as special notes so that they're included in the information pane on the right-hand side of a sales, purchase, or service document, or a purchase request.

Setup

Comment Line Codes

First, you need to set up a code for each special note:

1. Choose the Search icon, enter Comment Line Codes, and then choose the related link.
2. Fill in the Code and Description fields per line.

Purchases & Payables Setup

To assign a code to purchase documents:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the General FastTab, in the Special Notes Code field, specify a code that will be used to distinguish special remarks from other comments.

You can then fill in the special notes code in the Code field on comment lines entered for a vendor, an item, or a resource.

> **Note**
>
> Because you can specify different codes for purchase, sales, and service documents, and purchase requests, certain notes might only be shown on some of the document types available in the system.

Purchase Requests

To assign a code to purchase requests:

1. Choose the Search icon, enter Purchase Request Setup, and then choose the related link.
2. On the General FastTab, in the Special Notes Code field, specify a code that will be used to distinguish special remarks from other comments.

You can then fill in the special notes code in the Code field on comment lines entered for a vendor, an item, or a resource.

> **Note**
>
> Because you can specify different codes for purchase, sales, and service documents, and purchase requests, certain notes might only be shown on some of the document types available in the system.

Sales & Receivables Setup

To assign a code to sales documents:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the General FastTab, in the Special Notes Code field, specify a code that will be used to distinguish special remarks from other comments.

You can then fill in the special notes code in the Code field on comment lines entered for a customer, an item, or a resource.

> **Note**
>
> Because you can specify different codes for purchase, sales, and service documents, and purchase requests, certain notes might only be shown on some of the document types available in the system.

Service Management Setup

To assign a code to service documents:

1. Choose the Search icon, enter Service Management Setup, and then choose the related link.
2. On the General FastTab, in the Special Notes Code field, specify a code that will be used to distinguish special remarks from other comments.

You can then fill in the special notes code in the Code field on comment lines entered for a customer, an item, or a resource.

> **Note**
>
> Because you can specify different codes for purchase, sales, and service documents, and purchase requests, certain notes might only be shown on some of the document types available in the system.

Workflow

Special notes can be displayed on the following documents:

- Purchase quotes
- Purchase orders
- Purchase invoices
- Sales quotes
- Sales orders
- Sales invoices
- Service quotes
- Service orders
- Purchase requests

They’re shown in the information pane on the right-hand side when you select a customer or a vendor whom special notes are stored for or when you switch between documents on which this type of customer or vendor is entered.

Special notes about items are shown in the pane to the right of the document lines when you select an item these notes are stored for or when you change from one line assigned to this kind of item to another.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

Financial Management

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s finance department.

CHECK VAT STATEMENT FOR COMPLETION

VAT declarations come in many forms. To ensure that the entries posted and the product and business posting groups specified for value-added taxes are shown on statements on a consistent and constant basis, accounting staff can use a report to create and reconcile these documents. To open the report:

1. Choose the Search icon, enter Check VAT Statement for Completion, and then choose the link.
2. Fill in the fields as necessary.

INTRASTAT REPORTING

To simplify the creation of Intrastat reports even more, new fields have been created in the setups for sales and purchasing as well as customes and vendors. These fields are transferred as default settings to the corresponding documents in sales and purchasing for the Intrastat report.

> **Note**
>
> These fields only contain functionality if the Microsoft Dynamics 365 Business Central[1]-App "Intrastat Core" is installed. Further information see Set up Intrastat reporting.

Sales and Receivables Setup

The following fields have been added to the Foreign Trade FastTab:

Field	Description
Transport Method	Specifies the transport method, for the purpose of reporting to Intrastat.
Exit Point	Specifies the point of exit through which you ship the items out of your country/region, for reporting to Intrastat.
Area	Specifies a specification of the return document's transaction, for the purpose of reporting to Intrastat.
Transaction Specification	Specifies a specification of the document's transaction, for the purpose of reporting to Intrastat.
Trans. Spec. Returns Code	Specifies a specification of the return document's transaction, for the purpose of reporting to Intrastat.

Customer

The following fields have been added to the Foreign Trade FastTab:

Field	Description
Exit Point	Specifies the point of exit through which you ship the items out of your country/region, for reporting to Intrastat.
Area	Specifies a specification of the return document's transaction, for the purpose of reporting to Intrastat.
Transaction Specification	Specifies a specification of the document's transaction, for the purpose of reporting to Intrastat.
Trans. Spec. Returns Code	Specifies a specification of the return document's transaction, for the purpose of reporting to Intrastat.

Purchases & Payables Setup

The following fields have been added to the Foreign Trade FastTab:

Field	Description
Transport Method	Specifies the transport method, for the purpose of reporting to Intrastat.
Entry Point	Specifies the port of unloading through which you will unload the items in your country/region.
Area	Specifies a specification of the return document's transaction, for the purpose of reporting to Intrastat.
Transaction Specification	Specifies a specification of the document's transaction, for the purpose of reporting to Intrastat.
Trans. Spec. Returns Code	Specifies a specification of the return document's transaction, for the purpose of reporting to Intrastat.

Vendor

The following fields have been added to the Foreign Trade FastTab:

Field	Description
Entry Point	Specifies the port of unloading through which you will unload the items in your country/region.
Area	Specifies a specification of the return document's transaction, for the purpose of reporting to Intrastat.
Transaction Specification	Specifies a specification of the document's transaction, for the purpose of reporting to Intrastat.
Trans. Spec. Returns Code	Specifies a specification of the return document's transaction, for the purpose of reporting to Intrastat.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

Sales

The following features expand standard Microsoft Dynamics 365 Business Central functionality to provide additional options to those working in your organization’s sales department.

CREATE HIERARCHIES

Hierarchies are used to link *(any number of)* customers, vendors, or contacts to each other. Hierarchical relationships can be shown progressing from top to bottom or bottom to top.

Type Setup

When you’re trying to add a customer to a hierarchy, you might see the following:

“Specify at least one hierarchy type.”

This means that no hierarchy has been set up yet. To create a hierarchy:

1. Choose the Search icon, enter Hierarchy Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Comment
Code	Specify a code for the type of hierarchy.
Description	Enter a text that describes the type of hierarchy.
Default	Specify if this type of hierarchy should be used as the default type when you create new hierarchies.
Source Table Caption	Specify if you want to link the hierarchy type to customers, vendors, or contacts.

Assign customers

To specify hierarchical relationships between customers:

1. Choose the Search icon, enter Customers, and then choose the related link.
2. Open a customer card.
   To set up a top-down structure
   a. On the ribbon, choose Related > Customers > Hierarchy – Related Customers.
   To set up a bottom-up structure
   b. On the ribbon, choose Related > Customers > Hierarchy – Relates to Customer.
3. Check if the correct type filter is set.
4. Specify a customer number in the Value field.
5. Choose another line and repeat the steps.

View a hierarchy

To see a hierarchy:

1. Open a customer card.
2. On the ribbon, choose Related > Customers > Hierarchy – Where-Used.
3. Select a method for display:
   - Related records (top-down approach)
   - Relates to records (bottom-up approach)
4. Choose Calculate.

SALES ORDER TYPES

Keeping track of large numbers of unposted documents in the system can be a difficult task: some might have been created to fulfill standard orders, some might have been set up for rush jobs, and some might be the basis for repairs or consignment. A quick solution to this problem is to organize documents by type so that they can be filtered later.

Setup

To set up an order category:

1. Choose the search icon, enter Sales Order Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for this type of order. The code must be unique.
Description	Specify a description for this type of order.
Minimum Profit %	Specify a minimum profit in percent. For more information, see Line-Level and Document-Level Profit Check.
Default	Specify if this type should be used as the default type for new sales orders.
Shopify Default	Turn on this toggle if you want to have the system fill in the type for orders created through the Shopify function.
Payment Terms Code	Specify the payment terms typically associated with this type of order, to replace those stored in the customer master. When the order type is entered on a document, the system then fills in the terms from this page. If necessary, however, you can change them again manually on the document.
Payment Method Code	Specify the payment method typically associated with this type of order, to replace the method stored in the customer master. When the order type is entered on a document, the system then fills in the method from this page. If necessary, however, you can change the method again manually on the document.
Duplicate Orders	Select this field to see a message if an order of the same type and with the same customer and item already exists.

Note

If you’re using KUMAVISION trade365, you have additional options for setting up order types. For more information, click here.

Assign dimensions

You can then assign dimensions to an order type for analytical purposes. To assign a dimension:

1. Choose the Search icon, enter Sales Order Types, and then choose the related link.
2. Choose Related > Sales Order Type > Dimensions > Dimensions-Single to assign the current record or choose Dimensions-Multiple to assign more than one data record.
3. Choose OK to open the Dimensions page.
4. Fill in the fields as described in the following table.

Field	**Description**
Dimension Code	Select the code of the dimension that will be used.
Dimension Value Code	Select the value that will be used.
Value Posting	Specify the requirements that need to be met should you want to use the dimension and dimension value. • Code Required • Shared Code • No Code
Allowed Values Filter	Description to follow.

Select reports by type

You can also use order types to specify what sales reports to print.

1. Choose the Search icon, enter Report Selection – Sales, and then choose the related link.
2. In the Usage field, specify the type of document that you want printed.
3. Fill in the Report ID field on a line or choose Order Types on the ribbon to store a report based on a specific type.

Like on the standard report selection page, you can specify a sequence if you want to enter more than one report here.

Assign an order type

To assign a type to an order:

- Create or open a sales order.
- On the General FastTab, in the Sales Order Type field, select a type.

ORDER BACKLOG

Large and midsize organizations often use their order backlog as an indicator of how business is going.

Backlog, as understood in this context, means the value of all incoming orders and of all unposted invoices not created from orders minus the value of return orders and of unposted credit memos, as revenues are typically generated at a much later date.

The backlog value might change with every edit made to a sales document. It can therefore be a daunting, if not impossible, task to determine that value for a specific point in time from the documents posted in the system. This is also true when trying to add together the amounts that remain on invoices not yet posted. However, both figures play a key role in management decisions.

Setup

You need to set up the feature before you can use it.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the ribbon, choose Actions > Enable Backlog Statistics. This will also turn on the Create Order Backlog toggle on the page.
3. On the General FastTab, in the Backlog Creation Date and Backlog Modification Date fields, select whether you want the creation and change of backlog entries to be based on an order date or the work date.

Note

It may take a while for the feature to be initialized during first-time setup.

Workflow

To track the value of orders placed with your organization, the system adds backlog entries to the following documents:

- Sales orders
- Sales return orders
- Sales invoices (not created from an order)
- Sales credit memos

For an order or return order, entries are created when the status of the sales document is set from Open to Released or from Released to Open (the latter applies only if you activated the backlog feature after releasing the order).

The same is true when you invoice or reverse the document. Entries change, on the other hand, when you reopen a released order for editing purposes, for example, and invoice, edit, or delete some of the lines.

For an invoice or a credit memo, entries are created once—during the posting process—unless the lines of the document have been assigned to an order or a return order.

Note

Backlog entries can be created for ongoing sales transactions but not for documents that have already been archived.

Each backlog entry contains all the information from the sales or return order line for which it was set up. This means an unbilled line is mapped to an entry with the terms and conditions, as well as dimensions, specified on it, whereas a line that has been invoiced is mapped with the values and dimensions taken from the related invoice.

When the status on a document header is reset from Released to Open, order backlog will include—broken down by dimension—only amounts already billed. Amounts on lines that have yet to be billed, on the other hand, will be negative to offset the positive value entries created during release.

ITEM REFERENCE NUMBERS

Many orders include numbers that a customer uses for items. These numbers can be filled in on an order provided they’re specified in the item or customer master.

To facilitate data maintenance, item references can now also be created and changed directly on sales lines after filling in, for example, the following fields:

- Type = Item
- No. = [item number]
- Reference No. = [number that the customer assigned to the item]
- Unit of Measure Code = [standard unit used for the item]
- Variant Code = [blank]

Note

If a certain combination already exists, you’re asked if you want to replace the old item reference with the new number.

LINE UNIT COST AND PROFIT %

In contrast to standard functionality, you can now specify if the Unit Cost (LCY) field on a sales line can be edited. To activate this option:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the Prices FastTab, turn on the Can Edit Unit Cost toggle.

> **Note**
>
> If you turn on the toggle, the minimum profit check might no longer work as intended. *(You also see a message about this when you change the unit cost on a sales line.)*

With the toggle turned off, costs are filled in on documents by using item card *(or, if available, stockkeeping unit)* data.

The Profit %, a field value related to the unit cost, is also no longer copied from an item card, like in the standard app, but is determined based on the Unit Cost (LCY), Unit Price, and Discount line values so that you can see the actual profit on each line.

LINE-LEVEL PROFIT CHECK

A lower profit limit can be specified for each item and item category stored in the system. This way, you'll be notified immediately when the money that you would make from a transaction will not earn you enough profit. You'll also see the price required to achieve the lowest possible profit target.

Only specially authorized users can then continue with the transaction without having to adjust item prices. The system will check for profit minimums in the following order of priority:

1. Item
2. Item Category

Setup

User setup

On this page, you can specify the users who can continue with transactions even if those transactions generate less than the minimum profit.

1. Choose the Search icon, enter User Setup, and then choose the relevant link.
2. Select the user whom you want to authorize for the procedure.
3. On the line, select the Deactivate Profit Minimum field.
4. Alternatively, open the card linked to the user. On the KUMAVISION FastTab, turn on the Deactivate Profit Minimum toggle.

An authorized user then sees a brief note when a certain profit threshold isn't met but will be allowed to continue. If the field is cleared (or the toggle turned off), the user will see an error message instead.

Maintain minimum profits

To have lines checked for minimum profits, you need to specify them on item cards or for item categories first.

On Item Cards

To set a minimum profit on an item card:

- Open a card.
- On the Prices & Sales FastTab, in the Minimum Profit % field, enter the profit that should at least be achieved with each transaction.

On Item Categories

An item category can be used to group profit targets so that each item in the category is set up with the same minimum profit. To set up a minimum for a group:

- Open an item group card.
- On the relevant line, in the Minimum Profit % field, enter the profit that should at least be achieved with each transaction.

DOCUMENT-LEVEL PROFIT CHECK

You can also set profit requirements on documents. However, like with line-level checks, an authorized user can continue with a transaction even if the minimum profit isn’t achieved.

For this purpose, the Deactivate Minimum Profit field can be selected in User Setup. Separate authorizations for releasing documents and their lines aren’t available. The system will check for document-wide profit minimums in the following order of priority:

1. Customer
2. Sales Order Type
3. Sales & Receivables Setup

Setup

Sales & Receivables Setup

To set up a lower profit limit for use throughout the system:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the relevant link.
2. On the KUMAVISION FastTab, in the Minimum Profit % field, enter the profit that should at least be achieved on sales documents.

Sales order types

For a sales order type, you set the limit by filling in the Minimum Profit % field on the relevant line.

Customers

On a customer card, you specify the minimum profit on the Invoice FastTab.

Workflow

When a document is assigned to a customer for whom a minimum profit has been specified, you receive a message if the profit isn’t achieved with a sales transaction. The message also shows you the price required for achieving the lowest possible profit target.

Only authorized users can then continue with a transaction without having to change prices in the system. To authorize a user:

1. Choose the Search icon, enter User Setup, and then choose the relevant link.
2. Select the user whom you want to authorize for the procedure.
3. On the line, select the Deactivate Minimum Profit field.
4. Alternatively, open the card linked to the user. On the KUMAVISION FastTab, turn on the Deactivate Minimum Profit toggle.

Typically, profit checks are performed when you release documents—unless release is automatic, for example, after creating an advance invoice.

Archive

To see how often a profit minimum hasn’t been met:

- Open a sales document.
- On the ribbon, choose Navigate or Releases.

You can now track in detail who released orders that fell short of the minimum profit and when this occurred, information which you can also find in the Sales Document Information FactBox. This box will additionally tell you how high the profit should have been (at least) and where the lower profit limit comes from.

> **Note**
>
> If a minimum profit isn’t achieved at either line or document level, the system will log only the shortfall at document level, whereas line shortfalls will be released.

FACTBOXES

The new FactBoxes and FactBox-related functions included with KUMAVISION base (BOOSTER) can provide you with even more details on sales documents and their lines.

Sales Line Profit Details

Provides the contents of the following fields filled in for an item or a customer on a sales document line:

- No. (=item number)
- Line Amount (LCY)
- Line Amount (LCY) Excl. VAT
- Unit Cost (LCY)
- Cost (LCY)
- Profit (LCY)
- Profit %
- Minimum Profit %
- Min. Profit Source
- Low Profit Released By

Sales Document Information

Provides the contents of the following fields filled in for a customer on a sales document:

- Beginning Text
- Ending Text
- Sell-to Customer (Comment)
- Bill-to Customer (Comment)
- Profit (LCY)
- Profit %
- Minimum Profit %
- Min. Profit Source
- Low Profit Released By

Sell-to Customer Sales History

As with standard functionality, provides the number of documents created for a customer in the sales area.

In contrast to standard functionality, however, the extended FactBox now also includes tiles that show the number of archived quotes, orders, blanket orders, or return orders. You can click a tile to view the individual documents.

You can also set a date filter to limit how many of them will be shown. To set up the filter period:

1. Choose the Search icon, enter Sales & Receivables Setup.
2. On the Archiving FastTab, in the Sales History Date Formula field, specify a formula, such as -1Y.

Note

The formula used will limit the period based on the work date. To avoid confusion, the filter also only applies to archived and posted documents but not to those that are still being processed.

Note

If you’re using KUMAVISION trade365, you'll additionally see a Bill-to Customer Sales History on the right side of the page. For more information, click here.

ADD TRANSACTION DATA

You can use the Add Transaction Data function to correct posting information on orders that have been shipped but not invoiced.

You make the corrections before choosing this action on the ribbon. When you run the action, the contents of the following fields will be copied from the lines that have been shipped but not billed to a posted shipment and the associated item, G/L, and value entries:

- Gen. Bus. Posting Group
- VAT Bus. Posting Group
- Gen. Prod. Posting Group
- VAT Prod. Posting Group
- Dimension Set ID
- Global Dimension 1 Code
- Global Dimension 2 Code

PRINT RELEASED DOCUMENTS

The system performs multiple checks when a sales document is released. This includes checking if mandatory fields are filled in and whether prices and costs have been calculated.

For this reason, KUMAVISION base (BOOSTER) limits printouts to documents that have been released, the only exception being quotes (print previews will not be restricted either).

SEND QUOTES TO CONTACTS

You can use a customer template to send quotes to potential suppliers, that is, to contacts to whom no customer has been assigned.

Customer templates are set up in Finance. You can then run the Create Sales Quote action from the ribbon of a customer card to fill in a new quote with the required contact details and choose in the Customer Template Code field the template that you want to use.

You can also create a quote without having to create a customer. In this case, a customer must be set up only when you convert the quote to an order.

BLANKET ORDER EXTENSION

When you create a sales order from a standard blanket agreement, the prices set by the agreement are copied alongside other data to the new order.

However, when you change the quantity on the order, the prices specified on it will most likely change as well. This is because standard functionality updates all prices regardless of origin. See also Price Origin.

The new pricing feature, on the other hand, will update only lines on which the Blanket Order field has not been selected.

Create a sales order from a blanket order

When you fill in a quote or an order line, you might see a message saying that the item and customer given on the line have both been assigned to a blanket sales agreement.

After the number of the blanket order is entered in the Blanket Order No. field, you’re asked whether you want to copy the contents of the Unit Price and Line Discount % to the line. You can choose Yes to replace current values or No to keep the price and discount stored on the quote or order line.

For trackability purposes, you can now also see in the Qty. on Order and Rem. Qty. on Blanket Order fields on a blanket agreement the quantities entered on related sales orders and the quantity that remains for release.

The field additions were required because standard functionality doesn’t show the quantity delivered with an order until you post a sales shipment for it.

An error message appears if you attempt to retrieve more from an agreement than is available after the order quantity is subtracted from the quantity that is still outstanding.

FRAMEWORK AGREEMENTS

Framework agreements are an addition to (customer-specific) blanket orders. In contrast to blanket orders, framework agreements can be used by multiple customers linked to each other in a hierarchy. The agreement therefore binds both the main customer and the customers on a lower hierarchical level.

Framework agreements aren’t assigned to requisition or planning worksheets. As a result, you need to use a variety of settings or sales plans to manage the items that will be used on sales orders created from this type of agreement.

Setup

You need to set up the feature before you can use it.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the Number Series FastTab, in the Framework Agreement Nos. field, select the series that will be used for framework agreements.
3. You can also specify the hierarchy type that should be used by filling in the Framework Hierarchy Type Code field on the KUMAVISION FastTab.

> **Note**
>
> Only customers who are linked to this type of hierarchy can later be assigned to a framework agreement.

Create a framework agreement

To set up an individual agreement:

1. Choose the Search icon, enter Open Framework Agreements, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	Description
No.	Exit the field to have the system automatically assign a new number from the series set up for this purpose.
Customer No.	Specify the customer to whom the agreement should be linked. For an agreement to be used by multiple customers, you must fill in the main customer in this field. Other customers are then linked to the main customer through the hierarchy type code.
Name	Shows the name of the customer entered in the Customer No. field.
Description Description 2	Here you can specify an internal description for the agreement.
Valid From Valid To	Fill in these fields to specify the period in which the agreement should be valid.

Lines

On the framework lines, you can store for each item the total quantity that can be purchased by all customers during the period entered in the Valid From and Valid To fields.

Instead of an item, you can also enter an item price group; the specific item is then retrieved from the group when you create an order from the agreement.

Prices and discounts can be specified here too. All values are shown without VAT, as the framework agreement feature is only used for B2B transactions.

When you’ve finished filling in the fields, you can choose Release and Confirm on the ribbon to release and print the agreement, respectively.

Create an order from an agreement

When you fill in a standard quote or order, you’ll see a message if a framework agreement exists for an item and customer entered on a document line.

When the number of the agreement is then filled in on the line, the system will copy the price and discount specified for the agreement to the quote or order.

On the agreement, on the Lines FastTab, you can choose Line and the relevant document line function if you want to see the quantities that have been copied to *(archived)* sales documents.

After an agreement is no longer valid, you can archive it by choosing Actions > End to move it to the Completed Framework Agreements page.

This decision cannot be undone. However, you can use the Copy Framework Agreement function *(as you can use the Copy Document function)* to copy a completed agreement to a new one. You can choose on the options dialog if you want to transfer all data from the old header and lines or just transfer the header or the lines.

MANAGE SALES COMMISSIONS

You can use the commission feature to determine the compensation that your sales representatives should receive for their performance. Each payment will be calculated with the help of an invoice or a credit memo posted in Microsoft Dynamics 365 Business Central[1].

Only revenues generated as part of standard workflows count toward payouts. This excludes, for example, sales recorded and posted manually in the form of invoices to G/L accounts in Finance.

To fill in the Salesperson Code and Salesperson 2 Code fields when you set up commissions, you can have salespeople copied from the customer master. As an alternative, you can specify them on a sales invoice or credit memo prior to posting.

The commission feature is used only on a field that is filled in. If you specify a salesperson in both fields, a commission will be calculated for each. However, neither field influences the other when payments are calculated.

As salesperson codes apply to a document as a whole, the codes aren't found on unposted lines.

A commission can be calculated for a certain customer or product, a group of customers or products, or a responsibility center. The amount that a sales rep receives can be based on net or gross revenues or on profits.

> **Note**
>
> Only with the Salesperson Code field and, if necessary, the Salesperson 2 Code field filled in on a posted sales document will a commission be calculated. You can clear both fields manually if an order doesn't involve commission payments.

Setup

Salespeople

Each salesperson whom you want to pay a commission to must be set up on the Salespeople/Purchasers page and be assigned on the relevant customer card in the Salesperson Code or Salesperson 2 Code field *(on the Commission FastTab)*.

Commission groups

Commission groups are used if the same commission rate applies to multiple customers or items. They're copied to posted documents automatically.

Customer Commission Groups

On this page, you can set up codes and descriptions for groups of customers. A code can then be selected on the Commission FastTab on a customer card.

Product commission groups

Here you can group items in the same way as you did customers. The groups can then be selected on item cards on the Prices & Sales FastTab.

To achieve standardization, you can assign product commission group codes to each G/L account, item, resource, fixed asset, and item charge stored in the system.

Commission rates

Commission rates regulate how much commission a salesperson can receive. You can specify a variety of factors that will be used to determine payments in each case. To search for a rate:

1. Choose the Search icon, enter Commission Rates, and then choose the related link.
2. On the header, fill in the fields as described in the following table.

Field	**Description**
Salespers. Commission Type Filter	Specify if you want to see only a certain type of commission.
Starting Date Filter	Specify if you want to see only rates starting from a certain date.
Salesperson Filter	Specify if you want to see only rates stored for a certain salesperson.

To set up or change a rate, select a line and fill in the fields as described in the following table.

Field	Description
Salesperson Commission Type	Specify if the rate should be valid for the person shown in the Salesperson Code or the Salesperson 2 Code field—or for all salespeople.
Salesperson Code	Fill in this field according to the option that you selected in the Salesperson Commission Type field.
Customer Commission Type	Specify if the rate should be used for all customers, a group of customers, or a specific customer.
Customer Code	Fill in this field based on the option that you selected in the Customer Commission Type field.
Product Commission Type	Specify if the rate should be used for items, G/L accounts, resources, fixed assets, item charges, product commission groups, or all products.
Product Code	Fill in this field based on the option that you selected in the Product Commission Type field.
Responsibility Center	Specify a responsibility center if you want to make the commission calculation dependent on one.
Starting Date Ending Date	Fill in these fields if you want to further restrict the period in which the rate should be valid.
Commission Base	Select the posted document line value based on which the rate should be calculated: • Amount Excl. VAT • Profit • Adjd. Profit • Amount Incl. VAT
Commission %	Specify the commission amount in percent.
Description	If necessary, add an internal note explaining the rate.
Blocked	Select this field if you want to block the rate from being used.

Calculate a commission

Payouts are calculated based on the commission rate that is valid at the time. If more than one is valid within the period specified on a sales document, the rate is retrieved according to the following order of priority:

- Individual rates are preferred over general rates. A rate linked to a single customer will therefore be prioritized over entries assigned to customer commission groups. These, in turn, have a higher priority than rates that have been assigned to all customers.
- A valid rate for an individual product will be selected before a rate linked to a customer is. Customer-specific rates, in turn, will be prioritized over those assigned to salespeople.

In combination with a responsibility center, a rate will be retrieved as follows:

- If no rate can be found for a certain salesperson and responsibility center, the system will use the rate assigned to the All Salespeople option in combination with the responsibility center.
- If a rate for the salesperson and responsibility center is found, the rate will be used.
- If no responsibility center has been specified for a salesperson, the system will use the rate set up for this salesperson in combination with a blank Responsibility Center field.

Workflow

Commission journal Post a commission

On the commission journal, you can have commission payments suggested based on posted document lines.

1. Choose the Search icon, enter Commission Journal, and then choose the related link.
2. On the ribbon, choose Set Up Commission to fill in the journal lines. You can choose on the Options tab what filters to set. For example, you can set a filter on document dates or posting dates, customer ledger entries, salespeople, or invoice headers.

The function then uses the posted lines that include salespeople for whom no commissions have been posted to calculate valid commission rates. The business logic as described here lends itself to the creation of a variety of agreements with multiple levels of granularity. As a result, more than one rate might be applicable in a given situation.

The number of currently valid commission rates can be found in the lower part of the journal. Rates aren’t totaled; to see them, select the highlighted number in the No. of Valid Commission Rates field. All journal lines can also be edited manually.

Commission entries are created by using the Post function. When you run this action, the invoice line field Commission Posted (Salesperson) or Commission Posted (Salesperson 2) is automatically selected for the salesperson linked to the entry (to prevent a commission from being paid twice).

> **Note**
>
> The journal lines represent only suggestions and can be deleted or corrected. If a line is deleted, it will be inserted again when you rerun the Post function.

Cancel a commission

Commission entries can be cancelled.

1. Choose the Search icon, enter Commission Entries, and then choose the related link. You can also open a posted invoice and choose Related > Invoice > Commission Entries on the ribbon.
2. Select a line.
3. On the ribbon, choose Reverse Entries.

Cancellation results in the Commission Posted (Salesperson) or Commission Posted (Salesperson 2) field being cleared on the relevant document line. This way, you can retrieve a commission statement again for editing.

Commission register

Commission entries can also be analyzed through reports. Printouts of these reports provide the basis for commission statements (commission data isn’t copied to payroll or purchase documents anymore).

You can print one of the following reports:

- Commission Register
- Commission Statement (By Group)
- Commission Statement (By Doc.)

A register shows all posted commission entries, whereas a statement shows the payout per salesperson (if necessary, broken down by commission group). You can set filters, for example, on posting dates and salespeople, before you print a report.

ALTERNATE QUOTE LINES

When you fill in a sales quote, you can specify for each document line whether the price shown on it should be included in the total quote price.

A line where the Alternative field is set to Alternative, Optional, Selectable, or On Request then appears on printouts in a different format and alongside the value you chose in that field so that you can make customers aware of their options for customization.

VALIDITY PERIOD ON QUOTES

To limit the period in which an offer is valid, you can fill in the Quote Expiration Date field on the General FastTab of a quote document or have the system fill in the date by specifying a formula in the Quote Validity Formula field in Sales & Receivables Setup.

Afterward, users will be notified of validity issues when quotes are converted to orders but can ignore the warning if necessary.

QUOTE STATUS

A status code was added to sales quotes so that when you create or convert a quote, you can enter this code (for example, NEW or ORDER) in the Quote Status Code field on the document or have it filled in automatically. To set up a status:

1. Choose the Search icon, enter Quote Status, and then choose the related link.
2. On the ribbon, choose New.
3. In the Code and Description fields, specify the code and description that will be used for the status.

Afterward, select one of the other fields on the line if you want the code filled in automatically under the specified circumstances.

NON-BILLABLE LINES

Standard functionality typically prevents users from invoicing sales orders on which one or more line amount fields are empty.

However, as some of these lines might still need to be shown on invoices, for example, because of a goodwill policy or warranty claim, the Not Billable field has been added to all invoice lines. Choosing an option in this field will allow an invoice to go through and display the option value on printouts.

When you choose an option on a line, you can also decide whether to have the line amount field cleared or keep the amount and have a line discount of 100% entered automatically.

You can specify in setup when the system should check for blank line amount fields.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the FastTab, turn on the Check Not Billable on Release field to have the system check for non-billable lines when a document is released. If the toggle is turned off, lines will only be checked after the document is posted.

PROFORMA INVOICE ON ORDER

Some businesses, especially those exporting goods, need to provide shipping agents or customers with a proforma invoice prior to delivery. The invoice can be printed from every order available in the system.

Basically, a proforma invoice looks like a confirmation receipt, the difference being that the extended texts printed on invoices are also printed on proforma documents.

Setup

Sales & Receivables Setup

Proforma invoices typically require an invoice number. To set up a number series for them:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the Proforma Invoice FastTab, turn on the Get Invoice No. toggle.

Report Selection – Sales

You also need to set up the proforma invoice report on the Report Selection – Sales page.

Printing

To print a proforma invoice:

1. Open an order.
2. On the ribbon, choose Actions > Posting > Proforma Invoice.

The system then uses the series set up for invoices to assign a number to the proforma invoice, adding a P upfront. Despite the added P, the number can no longer be used for posting a standard invoice later.

PRINT SHIPMENT OR DELIVERY DATE ON ORDER CONFIRMATION

With this feature, you can specify if you want the Planned Shipment Date or the Planned Delivery Date printed on confirmation receipts.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, in the Print Planned Shipment or Delivery Date field, select the date that you want printed in this context.

DUPLICATE ORDERS

Besides telling you about existing quotes and blanket orders, the system can also notify you of possible duplicates when you fill in a sales order.

Setup

Sales & Receivables Setup

You need to set up the feature before you can use it.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the General FastTab, in the Duplicate Orders Period field, enter how far back the system should go to search for the same item having been added to an order for the same customer. All periods are entered with a minus sign.

Sales order types

A notification is only shown if you’re also using sales order types. As a result, you must select the Duplicate Orders field for types that you want to show the notification for.

Check for duplicates

After the feature has been set up and assigned to an order type, you can enter an order for a customer. You are notified if another order of this type contains a line on which the item has been entered within a certain period.

To identify the correct search period, the system will use the formula entered in setup and, as a starting point, the date shown in the Created On field on the new order.

DROP SHIPMENT AND SPECIAL ORDER EXTENSION

As an addition to standard functionality, you can now create purchase orders for drop shipments and special deliveries directly in the sales area.

Drop shipments

You use drop shipments to have goods shipped by one of your suppliers to a customer without the items being delivered to you first. To make a drop shipment in sales:

1. Create a sales order and enter the items you want to sell on the lines.
2. Select the Drop Shipment field on lines that you want delivered to the customer without your direct involvement.
3. On the ribbon, choose Order > Drop Shipment > Purchase Order.

> **Note**
>
> Instead of selecting the Drop Shipment field, you can also fill in the Purchasing Code field to choose a line for drop shipment. When you fill in this field, the Drop Shipment field is selected automatically.

Like in the standard app, the selected lines are then copied when you choose OK on the vendor selection page (on which the default vendor is filled in). If a drop shipment includes items from a variety of suppliers, that is, the item master shows a different vendor for each item, a purchase order is created per vendor.

Special orders

You can use special orders, for example, to receive customized items from a supplier for inspection by your quality management staff. To create a special order in sales:

1. Create a sales order and enter the items you want to sell on the lines.
2. Select the Special Order field for lines that you want delivered for inspection.
3. On the ribbon, choose Order > Special Order > Purchase Order.

> **Note**
>
> Instead of selecting the Special Order field, you can also fill in the Purchasing Code field to choose a line for a special order. When you fill in this field, the Special Order field is selected automatically.

Like in the standard app, the selected lines are then copied when you choose OK on the vendor selection page (on which the default vendor is filled in). If a special order includes items from a variety of suppliers, that is, the item master shows a different vendor for each item, a purchase order is created per vendor.

PROCESS IDS

A shared document number, known as a document process ID in the system, can be helpful, for example, for tracking a sale from quote entry to (potential) return receipt.

This is especially true if the documents used during a transaction need to be connected across departments, such as when orders returned by customers must be linked to orders that will be returned to vendors.

Setup

Before you can use document tracking, you need to set up a number series for process IDs.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the Number Series FastTab, in the Document Process ID Nos. field, select the number series that you want to use for this purpose.

Workflow

A process ID is always copied from the header of the initial document to each header and line created from the document on quotes, orders, shipments, and invoices, as well as return orders (provided the Get Posted Document Lines to Reverse action was used to set up the order lines) and their archived versions.

For example, a process ID entered on a sales order is transferred to an invoice or shipment that you created from it when you post the order.

On the order, on the Line FastTab, you can then choose Line > Navigate Doc. Process ID on the ribbon to see the documents linked to the ID. You can also view individual documents by selecting the value in the No. of Entries field, or you can use the standard Navigate action to look for them.

When you copy a document or run the Get Posted Document Lines to Reverse function to create lines from a return order, the system will transfer the ID that is specified on the source document to all new lines. Afterward, you can find a line only by searching for the source document ID.

If you don’t want this to occur, you must turn off the Copy Document Process ID toggle on the options dialog before you fill in document lines with the Copy Document function. As for return order lines, the ID is always copied from the original sales order.

SALUTATION ON DOCUMENTS

In addition to formal and informal ways of addressing contacts with the help of standard functions, you can choose in the Sell-to Contact field a salutation for assignment to documents.

This feature was introduced because some contacts might not have their first names stored in the system, which means that only their last names without a salutation would be printed in the standard app.

Setup

Document-based salutations should be set up for all available salutation codes.

1. Choose the Search icon, enter Salutations, and then choose the related link.
2. Select the line for which you want to set up a salutation formula.
3. On the ribbon, choose Formulas.
4. For each language code, fill in the fields as necessary.

SHOW SALESPEOPLE ON PRINTOUTS

In KUMAVISION base (BOOSTER), you can specify two salesperson codes on each customer card and sales document.

One or the other code might later show up on documents sent to customers. For example, the Salesperson Code field might contain the code of the sales rep whom you pay commissions to, whereas the Salesperson 2 Code might refer to the person whom the customer will be talking to.

In this context, the customer should see only the contact details of the second person. To specify the correct code on a document, you need to fill in the Print Salesperson field on the Commission FastTab there. Alternatively, as a global setting, you can fill in the Print Salesperson field on the KUMAVISION FastTab in Sales & Receivables Setup.

COMMUNICATION TYPES (DATA PRIVACY)

OOn September 1, 2012, an amendment to Germany’s data privacy act BDSG took effect, in many ways changing the way customer data is being handled.

The revisions, especially to section 28 of the act, mainly covered the use and processing of personal data for advertising purposes. Tailoring ad content to specific audiences therefore became an even more difficult challenge, as the success of any campaign now hinges entirely on the consent of those whom the ads are supposed to reach.

Additionally, the revisions might apply retroactively to data already collected. Even though non-personalized ads, such as ad papers that land in mailboxes, aren’t affected by the new rules, many customers most likely have had to opt in to their data being processed.

What’s more, consent given over the phone must be confirmed in writing. The people targeted by personalized ads must also be informed each time another company begins storing their information.

For the CRM functionality, this means:

Contacts need to consent to the use of personal data prior to their inclusion in marketing segments used for ad campaigns. This primarily affects campaigns that are distributed over email. Personalized ads in the mail are allowed if they haven’t been objected to. Organizations, by contrast, can always be contacted through any method.

Communication types in contact management

On contact cards, you can set up the following types of communication on the Communication FastTab:

- Fax
- Email
- Phone
- Letter

You can select Yes or No in each field. Initially, all of them are blank. However, the fields must be filled in before you can assign contacts to a segment.

To see if or when (and by whom) the fields have been edited, choose Related > Related Information > Communication Log Entries on the ribbon.

When you fill in or change a communication type field, you’ll see a text window where you need to enter a comment (such as “consent given during our phone conversation on”) to ensure that changes aren’t made by mistake and that you can quickly respond to inquiries about the permitted means of communicating with a contact.

To set all types to No for contacts stored in the system (as blank fields cannot be used anywhere), you can run the Initialize Communication Allowance batch job.

None of the settings you make, however, will prevent you from sending emails to contacts via the email symbol or create individual interactions. The system will only check if certain communication types are permitted when you set up interactions on the Logged Segments page.

Add contacts to a segment

After creating a segment, you must add a communication type before adding contacts. This ensures that only those contacts who have agreed to a certain means of communication will be part of the segment.

Before the segment is logged, the system will recheck if the specified types of communication haven’t been objected to in the meantime.

You can specify a type by selecting an interaction template on the header of a segment. We recommend that you set up one interaction template per type of communication.

When you run the Add Contacts function on the ribbon, the system will check if a person who matches the search criteria can be contacted in the way that has been described in the segment. Only contacts for whom the entered type is allowed will be added.

> **Note**
>
> A subsequent change in communication types on the segment header doesn’t affect the contacts who have already been added.

If you want to change a type completely, you must do so on the interaction template and pull that template onto the segment header to have the system perform another check.

AUTO SHIP ADDED SALES LINES

Besides specifying items that require warehouse handling, you often need to enter associated expenses, such as freight costs, on document lines. Service items are also being used in this context with increasing frequency.

Typically, with the release of an order, the sales department’s job is done (as delivery of the order is handled in the warehouse and inventory area with the help of a one-stage or two-stage picking process and invoices are sent by the billing department on a periodic basis).

However, any item not posted through the standard warehouse and inventory functionality will not be shipped or billed in this scenario. Although sales staff could go ahead and post these items manually, that would mean spending an inordinate amount of time and effort on posting the related invoices as well.

For this reason, KUMAVISION base (BOOSTER) provides you with the Auto Ship Added Sales Lines function. This feature automatically invoices all items on a sales order when you post warehouse and inventory documents for the order.

SETUP

KUMAVISION Module Setup

You need to turn on the function before you can use it.

1. Choose the Search icon, enter KUMAVISION Module Setup, and then choose the related link.
2. On the Settings FastTab, turn on the Auto Ship Added Sales Lines toggle.

> **Note**
>
> You must activate this toggle to see the setup options available for additional line shipments.

Add sales lines

To set up a sales line:

1. Choose the Search icon, enter Added Sales Line Shipment Setup, and then choose the related link.
2. On the lines, fill in the fields as described in the following table.

Field	Description
Type	Specify the service item, resource, or G/L account that will be shipped with sales orders.
No.	Depending on what option you selected in the Type field, specify the number of an item, a resource, or a G/L account—unless you want the line to be valid for all items, resources, or G/L accounts, in which case you leave this field blank.
Description	Shows the description of the data record entered in the No. field.
Print Line	Select this field if the line should be printed on shipping notes, if applicable.
Shipping Time	Specify if the shipment of the line should be posted with the first or last delivery associated with the order.

Workflow

The auto ship feature is only used when you post a warehouse or an inventory document on a sales order. For drop shipments, for example, quantities must still be entered manually. If an order contains lines with and without warehouse and inventory items, the feature is run each time you post a warehouse or an inventory document. Non-warehouse items that have been shipped earlier can be posted manually.

Before a shipment is posted, the system checks if the document that you’re working on contains a line stored in Added Sales Line Shipment Setup, such as a G/L account used for freight costs. If so, the Qty. to Ship field is filled in automatically.

This doesn’t create a second shipping note, however; everything is still shown on the same note.

> **Note**
>
> For the items mentioned, except for items of type Service, no entries will be created when you ship them.

PRINT ALTERNATIVE LINE TOTALS

With this feature, you can print separate totals on sales quotes.

Separate means that one total line will show the sum of all lines related to a bundle or subtotal, whereas a second number put in parentheses will display the total value of all lines marked as alternate lines.

To set up the feature:

1. Choose the Search icon, enter Company Information, and then choose the related link.
2. Turn on the Print Alternative Line Totals toggle. With the toggle turned off, the bundle or subtotal lines specified as alternative totals will not be printed when you print the quote document.

PACKAGING ACT (GERMANY)

Extended producer responsibility has been a staple of EU waste management policy for many years. As a short explanation, EPR programs are based on the principle that manufacturers should also be responsible for the environmental impact of the goods that they put on the market.

Among the laws intended to reduce, reuse, and recycle waste across the Union is the German Packaging Act of 2019—which established a national packaging registry by the name of LUCID, among other things.

In KUMAVISION base (BOOSTER), you can maintain all information that must be submitted to ZSVR, who manages LUCID, including data regarding the amount of material used to pack items that you intend to sell in the country

Note

Currently, the aim of this feature is to ensure compliance with German regulations on industrial and consumer goods packaging. If requested, however, the function can be adapted to meet the requirements of other European Union countries.

Setup

LUCID

Those who market goods in Germany, whether they're manufacturers or 'initial distributors,' must report the materials they use to pack the items to ZSVR. For this purpose, they must register with the agency's LUCID database.

The registration requirement, which took effect on July 1, 2022, applies to any kind of packaging used for products sold in a store, shipped to a customer, or repacked in a warehouse if the manufacturer or initial distributor participates, including financially, in a system where the collection, sorting, and recycling of waste is left to a producer responsibility organization.

The requirement, however, also applies to all materials not collected by a PRO, including transport wrappings, as well as reusable or single-use packaging you might need to redeem a deposit for.

To simplify the management aspect of waste collection, a business such as a bakery, which packages goods just before selling them to end customers, can take advantage of a special rule that lets it buy pre-licensed materials from its suppliers, that is, packaging for which waste collection and recycling fees have already been paid.

Depending on whether a supplier or customer has agreed to bear the costs for wrapping the requested items, you might need to store the business partner's LUCID ID in the system so that you can check the number in ZSVR's registry, if necessary.

To specify an ID, open a customer (or vendor) card, and then fill in the LUCID ID field on the Shipping (or Receiving) FastTab.

To maintain (and print) your own ID, fill in the field with the same name on the Company Information page (on the General FastTab). You can use the Tell Me function to get to the page.

Default unit of measure

You can also choose a shared unit of measure, for example, gram or kilogram, that all materials designated for packing items should be shown in.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, fill in the Packaging Material Unit of Measure field.

Packaging Materials

On this page, which can be opened by using the Tell Me function, you specify the materials that will be assigned as packaging to items. Examples are PPT, glass, and tinplate.

Note

You need to set up the materials in a way that they match the packaging quantities reported in LUCID.

Assign materials to items

If you want to calculate the amount of packaging (materials) that you placed on the market, you need to assign packaging to every item involved.

1. Open an item card.
2. On the ribbon, choose Related > Item > Packaging Material Assignment. Alternatively, use the Tell Me function to open the page.
3. Fill in the fields as described in the following table.

Field	Description
Item No.	Shows the number of the item for which you want to store packaging material. This field is also used as a filter field. You can remove the filter if you need to specify packaging for multiple items at once.
Variant Code	Specify a code if the material differs by variant. If you leave the field blank, the selected material is used to pack all variants of the item.
Item Description	Shows the description of the item for tracking purposes. You cannot change the content of this field.
Packaging Material Code	Select the material that you want to assign to the item.
Packaging Material Description	Shows the description of the packaging material.
Quantity per Qty. (Base)	Specify the quantity of material per the item’s base unit. **Example** If 250 grams of glass are required for one item (the base unit), enter 250 here (provided Gram is set up as a unit of measure).
Starting Date Ending Date	Specify the period in which the material should be used to pack the item. By filling in both fields, you can respond more quickly to changing material requirements. **Note** To calculate the amount of packaging that was placed on the market, the system will use the date when you shipped the item.

Packaging materials entries

These entries are used to determine the amount of packaging that was placed on the German market. An entry is created automatically each time you assign a material.

You can also have the system determine the amount needed for certain items even if those items have been shipped already. This way, you can still enter or change the packaging material on orders where none is assigned or where the wrong packaging or quantity has been specified. To edit an entry:

1. Choose the Search icon, enter Packaging Material Entries, and then choose the related link.
2. On the Lines FastTab, select the entries that you want to change. You can also select all of them, if necessary.
3. On the ribbon, choose Manage > Delete, and then choose OK to confirm.
4. Afterward, choose Actions > Refresh Entries on the ribbon. You can set filters on the request page if you want to limit the number of entries that should be recreated.

You can then use Excel, Power BI, or the analytical tools provided by Microsoft Dynamics 365 Business Central1 to evaluate and report packaging materials to ZSVR (a separate analysis option isn’t part of this feature).

ITEM REFERENCE STARTING DATE

With standard functionality, you can enter both starting and ending dates for item references in the system.

In KUMAVISION base (BOOSTER), you can also specify if the starting date should be filled in automatically when a reference is created from a sales line.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the General FastTab, in the Item Reference Starting Date, select one of the options described in the following table.

Option	Description
None	No starting date is retrieved.
Document Date	The starting date equals the date of the document from which the reference is created. **Note** On invoices and credit memos, the posting date is used instead.
Old Value	The starting date is copied from the previous item reference.
Ask	You see a message asking you what date should be entered.

ITEM REFERENCE VALIDITY

If valid at the time, item reference starting and ending dates can also be used for framework agreements, labels, and price data.

COMPATIBILITY OF ELECTRONIC SALES INVOICE AND CREDIT MEMOS

Using the Peppol BIS 3.0 path, headings, bundles, line totals and lines with Print Line = false are skipped during export. When Data Exchange, you can store your own specific pre-mapping codeunit for the lines in the Data Exchange Definitions.

Sales Invoice Lines	`5048918 KVSKBAPreMapSalesInvLine`
Sales Cr. Memo Lines	`5048917 KVSKBAPreMapSalesCrMemoLine`
Service Invoice Lines	`5048920 KVSKBAPreMapServiceInvLine`
Service Cr. Memo Lines	`5048919 KVSKBAPreMapServiceCrMemoLine`

PRICES

New pricing experience

The new pricing features must first be turned on.

1. Choose the Search icon, enter Feature Management, and then choose the related link.
2. Go to the line that says Feature Update: New Sales Pricing Experience and set the Enabled For field to All Users.

> **Note**
>
> If you’re using the older pricing functionality, do not turn on this feature. Once turned on, the new feature cannot be turned off again.

Quoting prices to customers

For retailers that sell products over the phone or online, providing quick price estimates is an indispensable part of doing business. With a new feature, you can now tell customers immediately whether certain items are in stock and at what price they can be shipped.

You can also save newly agreed-on prices and discounts in the system, show price histories, and log the quotes provided to a customer. To create a quote for an item:

1. Open a contact card.
2. On the ribbon, choose Related > New Price Quote (Customer).
3. Fill in the fields as described in the following table.

Note

Price quotes are available for contacts assigned to the customer master. If a contact hasn’t been turned into a customer, you need to take the standard route by creating a sales quote first. You’ll be notified when you’re trying to quote prices to contacts who aren’t customers yet.

Field	Description
No.	Specify the number of the item for which a price should be quoted.
Variant Code	If the item has variants, specify the requested variant in this field.
Quantity	Enter for what item quantity the customer wants a price quoted.
Unit of Measure Code	Shows the item’s base unit. You can enter another unit manually if necessary.
Date	Shows when the price was quoted. You can enter another date manually if necessary.
Currency Code	Shows the currency that is used by the customer. You can enter another currency manually if necessary.
Price Unit	Shows the item’s price unit. You can enter another unit manually if necessary.
Responsibility Center Code	Shows the responsibility center assigned to the customer.
Sales Order Type	Here you can assign a sales order type to the price quote if a type is available.
Description Description 2	Shows the relevant descriptions from the item master.
Base Unit of Measure Code	Shows the base unit from the item master.
Unit Cost (LCY)	Shows the unit cost from the item master.
Minimum Profit %	Shows the minimum profit stored in the item master.
Location Code	Shows the location code assigned to the customer. You can change the location manually if necessary.
Unit Price	Shows the unit price for the item. You can enter another price manually if necessary.
Line Discount %	Shows the line discount granted for the item. You can enter another discount manually if necessary.
Line Discount Amount	Shows the discount amount calculated based on the Line Discount % field.
Line Amount Excl. VAT	Shows the net amount of the sales line.
Minimum Quantity	Specify the minimum quantity to be sold. You need this field if the prices that you quote to the customer should be saved in a price list.
Starting Date Ending Date	Specify in what period the price should apply (as agreed on with the customer). You need these fields if the prices that you quote should be saved in a price list.
Allow Line Disc.	Turn on this toggle if you want to use an available line discount on the item line.
Allow Invoice Disc.	Turn on this toggle if you want to use an available invoice discount on the item line.

Field	Description
Pricing Method	Specify the pricing method that should be used. **Lowest price** Standard sales pricing **KUMAVISION base Lowest price** Best price calculation **KUMAVISION base Price Sequences** No best price calculation
Price List Code	Select a price list. You must fill in this field if you want to save sales prices.
Discount Price List Code	Specify a discount price list. You must fill in this field if you want to save sales prices.
Comments	Indicates whether comments have been entered for this line.
Auto Save on Exit	With the toggle turned on, prices are saved automatically.

From the copied or manually entered price and discount data, the system then calculates a line amount (without VAT) that can be quoted to the customer.

Besides the Line Amount (LCY) Excl. VAT, you can also see the Cost (LCY), the Profit (LCY), and the Profit % on a price quote line. None of these fields can be edited, however.

The Comment, Minimum Quantity, Starting Date and Ending Date, on the other hand, can be changed. They’re used when you copy prices and discounts from the price quote to the Sales Price Lists page.

You can store a price or discount by choosing Save Sales Price or Discount on the ribbon. You can also have price information saved automatically when leaving the page by turning on the Auto Save on Exit toggle.

When you run either function, the system will also check for duplicate records. If a combination of customer, item, and variant already exists in a certain price list, you’ll be notified so that you can remove the lines from that list.

Price source

The Price Source field indicates where the Unit Price Excl. VAT or Unit Price (Price Unit) Excl. VAT value on a document line comes from:

Option	Description
Item	The value was copied from an item card.
Sales Price	The value was copied from a sales price list.
Blanket Order	The value was retrieved from a blanket sales order.
Manual	The value was entered manually.
Item Price Group	The value was copied from a sales price list *(item price group)*.
Framework	The value was retrieved from a framework agreement valid at the time.
External	The value was transferred from an external application. **Note** With the field set by the external program, the price is not recalculated in the system.
Assembly	The value was copied from an assembly BOM.
Resource	The value was retrieved from a resource card.

Note

When copied to a sales order from a blanket agreement or entered manually, the unit price will—contrary to standard processes—not be updated when you enter a new quantity on the order.

For line discounts, the equivalent to this field is the Line Discount Source field.

Sales conditions

Sales conditions provide another way for you to calculate a wide variety of prices or discounts on documents. For this purpose, a condition is linked to calculation lines on which you can enter the price or discount formulas that should be used within the system.

You can already specify calculation lines when you set up base data in the app and can later copy these lines along with a condition to one or more price or discount records.

Create a condition

To create a sales condition:

1. Choose the Search icon, enter Sales Condition List, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following tables.

General

Field	Description
No.	Exit the field to have the system assign a number from the series set up for this purpose or enter a number manually. The number must be unique.
Description	Specify a description for the condition.
Calculation Base	Specify what the condition is used for.
Currency Code	Specify the currency code that will be used for the condition. You must fill in this field, as a sales condition is always used in combination with one and the same currency code.

Lines

On the lines, you can specify how a price or a reduction in price will be calculated when the condition applies.

Note

Prices and discounts will later be determined based on the order in which you fill in these lines.

Field	Description
Description	Specify a description for the condition line.
Operators	Specify the operator that will be used for the price or discount. + adds the entered percentage or amount - subtracts the entered percentage or amount
Value	Specify the percentage or amount that you want to add or subtract (depending on what operator you're using).
Calculation Method	Specify the type of price calculation that will be performed. **Previous Result** Calculates a percentage based on the result of the previous condition line. **Net Percentage** Determines a percentage by using the total direct unit cost or line discount. **Currency Amount** Adds or subtracts the entered amount in the specified currency.

As an example, a condition might have been specified as follows:

Description	Operator	Value	Calculation Method
Trade show discount	-	10	Previous result
General markup	+	5	Previous result

In this example, a 10% discount needs to be deducted from the cost amount—which is EUR 3,040—before 5% is added to the resulting EUR 2,736 (EUR 3,040 - EUR 304) because the product has a markup.

By applying the condition, the item is then sold at EUR 2872.80. As another example, consider the following net percentage conditions:

Description	Operator	Value	Calculation Method
Trade show discount	-	10	Net percentage
General markup	+	5	Net percentage

Here, a 10% discount needs to be deducted from the cost amount before a 5% markup based on the original amount is added to the total.

In this situation, the item can be sold at EUR 2888.00 (with EUR 2,736 left after applying the basic discount but EUR 136.80 added at the end).

Additionally, you can choose Translations on the Lines FastTab to have steps in the calculation translated and copied automatically to documents on which the specified language code is used.

Field	Description
Target Language	Choose a language for translation.
Value	Enter the translated description of the calculation step.

Note

Although sales conditions aren’t typically printed on documents in KUMAVISION, the translations can be retrieved if required for a specific implementation project.

Link a condition to a price or line discount

You must fill in the Price Condition No. field on a price list if you want to link a condition to a price or line discount. The currency that you’ve specified for the condition must match the currency entered for the price or discount.

For prices or discounts linked to conditions, the Unit Price or Discount % field will always be blank in the price list. The values in these fields will be filled in only when you enter a condition-based price or discount on a document line.

Use a condition to find the best price or line discount

When trying to determine the best prices or reductions in prices, the system uses condition-based prices or line discounts in the same way as standard functionality; a condition isn’t a factor in deciding whether a certain price or line discount can be entered on a sales document. The only difference to standard functions is that sales prices or line discounts linked to conditions are calculated in real time.

Get Sales Price

The standard Get Sales Price action can be used to copy the sales prices that are available for a document from a price list to selected document lines. With this action, you can bypass the pricing function that is run when you enter an item number or a quantity on a line.

The same is true for the Get Line Disc. action. However, this function now also calculates for each line that is assigned to a sales condition the discount based on price lists that include the condition (instead of retrieving a value of 0 from the item master).

Sometimes, the currency and unit of measure specified for the document line and price record might differ when you’re trying to calculate the best price for an item. The following fields were thus added to the Sales Price Lists page:

- Unit of Measure (Calc.)
- Currency Code (Calc.)
- Unit Price (Calc.)

The first two fields contain the values that were entered on the document line from which the calculation was run. The third field shows the price in the unit and currency specified on the line—unlike the standard Unit Price field, which shows prices in the currency and unit stored in the price list master.

You can select the Assist button next to the Price Condition No. field to see in what way a condition has been used to determine sales prices or discounts.

No default units on sales lines

Standard functionality will fill in the sales unit of measure as the unit on new price list lines.

However, this means that if you regularly store prices in the item’s base unit, you will need to remove that unit manually from each price before the system can calculate a new price based on another unit of measure.

To have the unit field left blank on new lines:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the Prices FastTab, turn on the No Default UOM Code toggle.

Price units

The following formula is used in the standard app to determine the price on a document line:

Line Amount Excl. VAT = Quantity * Unit Price * [(100 – Line Discount %) / 100]

But there are other formulas. One of them provides a method for calculating a multiple of an amount by using a price unit. Typically, this method is preferred when dealing with items that are large in number but low in price (like screws).

Example 1
You enter Piece as the base unit on an item card and a document line.

You can then state a price on the line in multiples of 1000, that is, the price unit (or price per unit) equals the sales price for 1000 pieces.

Example 2
You enter Piece as the base unit of measure on an item card and Package on a purchase line. A package equals 50 pieces, as specified on the Item Units of Measure page.

You can then state a price on the line in multiples of 50, that is, the price unit (or price per unit) represents the sales price for 50 packages.

You can already specify price units that you and your customers agreed on when you set up basic app data.

> **Note**
>
> Price units aren’t used to convert one unit of measure into another. This is because fixed conversion rates cannot be entered for item units of measure.

For example, you might want to use the unit Piece and enter an item on a document line in pieces. However, the price for the line is determined based on weight (weight-dependent document pricing). To calculate this price, you will need another method that requires a separate explanation (outside the scope of this article).

Item price groups

For items of the same type, you can assign sales prices per category. For example, a group of paperbacks might cost the same because of the size and material used (regardless of who authored each book).

You can set up prices for item groups in the same way as for individual items. The feature supports entering agreements:

- For sales types
- For campaigns
- In customer hierarchies
- For sales conditions
- According to quantity, delivery date, and currency
- Based on units of measure, in the following way:

  You can store the price (for a group) in a certain unit of measure on a document line provided the unit has been assigned to the relevant group beforehand.

> **Note**
>
> Item price groups cannot be used to store prices for variants. If variants are available for an item assigned to a price group, the group price will apply to all variants.

To set up a price group for an item:

1. Choose the Search icon, enter Item Price Groups, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a meaningful abbreviation for the group.
Description	Specify a description for the group.
Sales	Turn on this toggle if the group should be used in sales.
Purchases	Turn on this toggle if the group should be used in purchasing.

After creating a group, you can choose Prices > Sales Prices on the ribbon to enter prices for the group. This process is the same as for prices maintained in the standard app.

Block prices

The values that are shown in the Unit Price and Line Discount % fields on sales document lines depend on the price and discount terms you agreed to with your customers.

You can specify a wide variety of agreements in the app, including agreements you made with an individual customer, multiple customers, or all customers to arrangements covering single products or a group of items.

When you add an item to a document, the system then checks the value that you enter in the Quantity field on a line against the minimum quantities set in the item master to calculate the best possible price and discount.

In short, prices and discounts are usually calculated separately on each line. However, you might sometimes need to add the same item to multiple lines, such as when products will be shipped in batches on different dates.

For this reason, the standard functionality has been extended so that you can now also see prices and discounts based on the total quantity that is entered for an item on all lines of a document. But for a line to be included in the total, the values in the following fields must match those on the other lines:

- Type and No.
- Variant Code (depending on whether you turned on the relevant toggle in Sales & Receivables Setup or on the item card)
- Unit of Measure Code and Qty. per Unit
- Allow Line Disc. and Allow Invoice Disc.

Additionally, you can have the system calculate a block price for an item while ignoring the variants that might exist for it:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. Turn on the No Variant Block Prices toggle.
3. To change this setting for a certain item, open an item card and in the No Variant Block Prices (Sales) field, select one of the options described in the following table.

Option	Description
Default	Applies the Yes or No option (see below) to the item depending on whether you turned the No Variant Block Prices toggle in Sales & Receivables Setup on or off. **Note** As the global setting is inherited to all items, this option is always set initially.
No	Block prices are calculated from the quantities and prices on all lines referring to the same sales document, item, and variant.
Yes	Block price quantities are determined without considering the item’s variants.

> **Note**
>
> You cannot maintain variant-specific prices if you want to use this feature.

Lines on which the following fields aren’t blank will not be included under any circumstances:

- Shipment No. or Return Receipt No. *(on invoice or credit memo lines created from a blanket sales order)*
- Blanket Order No. *(on order lines that refer to a blanket order line)*
- Alternative checkbox

To calculate block prices:

1. Open a sales document.
2. On the ribbon, choose Update Block Pricing. Block prices are then calculated automatically when you release the document.

If you manually change the Unit Price or Line Discount % field on a document line, the value in either isn’t updated when you run this action, and the line isn’t included in quantity calculations.

The same happens with document lines related to blanket order or framework lines, with alternate lines, and when you invoice a posted shipment or return.

You can also deactivate the block pricing feature by turning on the Price/Disc. Min. Qty. per Line toggle on a document header to show on printouts how you’ve arrived at certain prices or discounts.

If you’ve already filled in some of the document lines before using this option, you’re asked to confirm your choice.

Note

For this feature to work, you need to have selected the KUMAVISION Lowest Price or Price Sequences option in the Pricing Method field in Sales & Receivables Setup and turned off the Price/Disc. Min. Qty. per Line toggle there.

You can also turn off block pricing altogether by turning on the Disable Block Prices toggle in Sales & Receivables Setup and selecting KUMAVISION base Lowest Price in the Price Calculation Method field on the page.

Both settings are then used by default when creating sales orders. This way, you can decide per order if you want to turn block pricing back on.

Pricing by order type

In certain situations, you might need differing (price and discount) conditions considering the purpose of an item, such as when it is sold to a new customer versus when it is required for repairs.

For this reason, you can now assign a sales order type to sales prices and line discounts on item cards. Either is then used by the pricing functionality only if you enter the relevant order type on the header of a sales document.

Customer resource prices

As another option, you can now assign customer-specific prices to resources on customer or resource cards.

Resource prices can be created for a specific customer, a customer group, or all customers. They can also be linked to an individual resource or a resource group and, like item prices, can be given a starting and an ending date.

The business logic that undergirds best price and price sequence calculations is also used to determine resource prices.

Note

Prices for resource work aren’t incorporated into hierarchy-based pricing.

Save prices or discounts

Often, the sheer number of item variations sold in the retail sector means that prices aren’t maintained in advance but depend on quotes or orders.

The Save Price/Discount feature provides a convenient way for you to save for reuse the item prices that you agreed to on quotes or orders the next time that the items are needed. To save prices from a quote or an order:

1. Create a sales quote or order that contains the requested items.
2. Change the values in the Unit Price and Line Discount % line fields to what has been agreed on.
3. Select a line that you want to save a price or discount for.
4. On the Lines FastTab, on the ribbon, choose Line > Related Information > Price/Discount Calculation > Save Price/Discount.
5. Fill in the fields as described in the following tables.

Note

You can select multiple lines before running this function; only lines of type Item will be saved. If none are among those selected, you will see a message and the process will be canceled.

For sales prices:

Field	Description
Save Price	Select this field to save the unit price entered on the line. You need to turn on this toggle before you can fill in the other fields.
Price List Code	Select a price list. You must fill in this field if you want to save sales prices.
Customer No.	Specify for what customer the price should be saved.
Starting Date	Specify the date starting on which the price should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the price should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be copied as the minimum quantity for the price to a price list.
Copy Variant Code	Turn on this toggle if you want the variants specified on the line to be copied to a price list as being sold at this amount per unit. With the toggle turned off, the unit price will be valid for all variants.
Show New Price	Turn on this toggle if you want to see the new unit price on the Price List Lines page so that you can review and (potentially) revise the sales price for the item.

For line discounts:

Field	Description
Save Line Discount	Select this field to save the discount entered on the line. You need to turn on this toggle before you can fill in the other fields.
Customer No.	Specify for what customer the discount should be saved.
Starting Date	Specify the date starting on which the discount should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the discount should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be copied as the minimum quantity for the discount to a price list.
Copy Variant Code	Turn on this toggle if you want the variants specified on the line to be copied to a price list as variants bought at this discount per unit. With the toggle turned off, the line discount will be valid for all variants.
Show New Line Discount	Turn on this toggle if you want to see the new discount on the Price List Lines page so that you can review and (potentially) revise the line discount for the item.

Afterward, choose OK to exit the page.

Close prices or discounts

The system retrieves unit prices and line discounts based on the starting and ending dates entered for them on a price list.

KUMAVISION base (BOOSTER) always uses the most recent price or discount for an item or item group provided all other factors with an impact on sales remain the same.

However, you can also have an ending date assigned automatically when you create another price or discount for which you enter a later starting date. This might make it easier for users to understand changes in prices and discounts. To have a date assigned automatically:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the Prices FastTab, turn on the Close Prices and Discounts toggle.

If you then enter a price or discount for the same item-price or item-discount combination but enter a later starting date, the system will fill in the Ending Date field for the previously valid entry with a date set to one day before the new starting date.

> **Note**
>
> A price or discount can only be closed if the entry replacing it doesn’t have an ending date.

Move prices to another price list

You can now move sales price lines from one price list to another, for example, to a list that you’ve set up for the sole purpose of storing historic prices.

1. Open a sales price list.
2. Go to the Lines FastTab and select the prices that you want to transfer.
3. On the ribbon, choose Move Lines.
4. This opens the Select Price List window, where you can set filters to limit the number of lists that are displayed on the page.
5. Choose a list, and then choose OK.

Afterward, the selected price lines are both copied to the new list and deleted from the old one.

> **Note**
>
> This feature is also available for price lines created in purchasing.

Best price calculations

Microsoft Dynamics 365 Business Central[1] will always calculate the best price on sales documents. In this context, the best price is the lowest unit price with the highest line discount allowed on a given date.

Sales prices and discounts are entered on price lists independently from each other. This means that a sales line might contain the lowest price of one price list line and the highest discount of another.

Certain customers, however, are typically charged prices slightly above those calculated by the system. For this reason, you can now turn off the best price option for everyone or only certain customers.

Turning off the feature corresponds to hierarchical pricing.

General setup

To change the pricing rules:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the General FastTab, in the Pricing Method field, select if and to what extent the best price option should be used.

Option	**Description**
(blank)	The system should always calculate the best possible price.
KUMAVISION base Price Sequences	Best price calculation should not take place at all.
KUMAVISION base Lowest price	If the best price for an item is calculated will depend on whether you’ve turned on the Best Price toggle on the relevant customer card.

Customer-specific setup

You can also specify a price calculation method for a customer by filling in the Pricing Method field on the relevant customer card. The option you select then replaces the setting you made in Sales & Receivables Setup.

With the No Best Price toggle for a customer turned on, the system will always use a price that is specific to the customer, even if that price is higher than the standard price. The pricing method is also copied automatically to the Invoice Details FastTab on each document created for this customer.

The correct calculation method is determined in the following order of priority:

1. Manual setting on the sales document
2. Customer card
3. Customer price group
4. Sales & Receivables Setup

Pricing behavior

To account for a variety of item quantities, customers, and customer groups, you can enter different (but equally valid) prices for an item. If the best price calculation is used, the system then retrieves these price records to find the lowest possible price at which the item can be sold.

Pricing date

The date used to calculate prices on quotes, orders, and return orders is the order date. On credit memos and invoices, it’s the posting date.

Price sequences

With the Best Price toggle turned off, the system will retrieve a price based on the following field values, each listed in order of priority:

1. **Hierarchy Level**
   Lowest to highest. The value in this field, however, is only used if you’re working with hierarchies in the system, for example, when selling to members of an association.
2. **Sales Type**
   Campaign, Customer, Customer Price Group, All Customers
3. **Sales Order Type**
   [filled in], [not filled in]
4. **Type**
   Item, Item Price Group
5. **Variant Code**
   [code specified], [no variant]. The value in this field, however, is only relevant if you’re working with variant codes in the system.
6. **Unit of Measure Code**
   [filled in], [not filled in]
7. **Currency Code**
   [code], [no code]. The value in this field, however, is only relevant if the customer uses a foreign currency.
8. **Responsibility Center Code**
   [filled in], [not filled in]
9. **Minimum Quantity**
10. **Starting Date**
    [newest], [older], [not filled in]

When you enter a campaign created for a customer on a sales document, the customer’s other (active) campaigns will be disregarded. The prices specified for this campaign have a higher priority than all other types of prices.

If no campaign is specified, every campaign linked to the customer or contact will be included in the price calculation (when a hierarchy is available: if it was created for the main customer in a hierarchy).

Initially, the best price is determined only for the customer whom you entered on the document. If the customer is linked to another customer in a hierarchy, the latter will be ignored by the system for the time being.

However, if no valid price is found for the customer, the system will search the next level of the hierarchy. You’ll see an error message if the customer has been linked to multiple other customers on the same level.

The number of hierarchy levels can be unlimited. If no valid price can be found for the customer on any level, the system will go through the available customer price groups based on the same logic. Within a group, a price for an item variant has a higher priority than a general price for an item—provided the sales and item type match.

The same check is later repeated for currencies. In this context, a price with a currency is prioritized over prices for which no currency has been set up. As for the minimum quantity, the highest quantity threshold within the validity period will be used to retrieve the price.

Lastly, the system will check the starting date, with a more recent price given a higher priority than older entries. Essentially, only prices available on the order date can be retrieved.

Discount calculations

Discounts are determined in the exact same way as prices. Sales prices and discounts are entered on price lists independently from each other. This means that a sales line might contain the lowest price of one price list line and the highest discount of another.

Pricing by hierarchy

Another new feature will include the prices and discounts stored at a higher level of a customer hierarchy (see Create Hierarchies) to determine the lowest price with the highest discount for an item that you want to sell to a customer. However, before you can use this feature, you must set it up first:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. In the Hierarchy Type Code Pricing field, select the type of hierarchy that you want to use for extended pricing.

Customers linked to this hierarchy are then included in calculating the best price and discount on a document line based on multiple price-related factors, such as the validity period, minimum quantity, unit of measure, currency, and responsibility center.

At which level of a customer hierarchy a value is determined isn’t relevant in this situation, as prices or discounts might be calculated, for example, for customers and item price groups at multiple levels at the same time.

Pricing by responsibility center

In addition to standard functionality, you can now also assign prices and line discounts to different responsibility centers.

To be able to use this feature, you only need to fill in the Responsibility Center field for a unit price or line discount on a price list.

Document pricing by sell-to (not bill-to) customer

Standard functionality calculates prices on a sales document by using the bill-to customer entered on it.

This might cause difficulties when invoices are sent to an association, as you might have agreed on a different set of prices with a member of the association *(=sell-to customer)*.

With the new feature, you can now decide which customer you want to run the pricing functionality for.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. In the Pricing Customer field, choose one of the options described in the following table.

Option	Description
Default	Standard functionality will be used.
Sell-to	Prices and price information *(=customer price groups)* will be retrieved from sell-to customers.
Bill-to	Prices and price information *(=customer price groups)* will be retrieved from bill-to customers.

If you choose the second or third option, you can change the setting again on the relevant customer card.

Consider parent item categories in pricing

Standard functionality only allows the assignment of one group of prices per customer. However, not all items a certain customer buys from you might be subject to the same sales agreement.

With this extension, you can assign a price group to every item category, and its subcategories, in the system.

Example
One of your customers typically needs to pay the prices specified in group A. However, for items of the Bicycle category and its subcategories (such as Tires, Apparel, and Accessories), the customer will be billed at group B prices, as per your setup.

Setup Sales & receivables setup

To be able to work with the feature:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the Prices FastTab, turn on the Consider Parent Item Categories toggle.

Item categories

To create an item category or subcategory:

1. Choose the Search icon, enter Item Categories and then choose the related link.
2. On the ribbon, choose New, and then fill in the fields as necessary.

For more details, see Categorize Items - Business Central | Microsoft Learn.

Customer price groups

Set up one or more customer price groups, as described under Register New Customers - Business Central | Microsoft Learn.

Afterward, you must assign at least one of these groups to an item category.

1. Open a customer card.
2. On the ribbon, choose Related > Sales > Item Categories, and then fill in the fields as necessary.

For more details, see Assign a Category to a Customer.

Items

Assign the items that you want to set up special prices for to the relevant item categories.

Prices (List)

Create price lists for the price groups and items that you want to use. For more information, see Record special sales prices and discounts - Business Central | Microsoft Learn.

> **Note**
>
> To be able to do this, you must have activated the New Pricing Experience.

Assign a category to a customer

To assign a generally valid price group to a customer, fill in the Customer Price Group field on the relevant customer card (on the Invoicing FastTab). You can then assign another group to a specific category of items by choosing Related > Sales > Item Categories on the ribbon.

Based on our earlier example, you can therefore fill in price group A directly on the customer card while running the relevant ribbon function to assign group B to the Bicycle category.

Workflow

Following setup, the system will start retrieving price list entries based on the customer price group and item category that you've assigned to the customer and item entered on a sales document (in addition to the currency, order type, and other criteria specified on it). For more general information about the pricing business logic, click here.

Price worksheets

Price worksheet extension

The following fields have been added to the Price Worksheet page for when you want to calculate or save prices on a price list:

- Price Unit
- Unit Price (Price Unit)
- Responsibility Center
- Order Type
- Price Condition No.

Link a sales condition to a worksheet

In Microsoft Dynamics 365 Business Central[1], you can use price worksheets to specify factors for calculating unit prices. In KUMAVISION base (BOOSTER), you can now also use a sales condition (see Sales Conditions) on a price worksheet.

Workflow

To link a condition to a worksheet:

1. Choose the Search icon, enter Price Worksheet, and then choose the related link.
2. On the ribbon, choose Suggest Lines.
3. Choose Price Condition in the Calculation Type field.
4. In the Price Condition No. field, create or select the condition that should be used to determine a new price.

The price is then created and copied to the worksheet.

For conditions that relate to unit costs, you can fill in the Unit Cost Calculation Date field to specify when the cost should be calculated, giving you the option of calculating unit prices for future unit costs.

You can then use the standard Implement Price Change function to copy the prices to the Sales Prices page.

Note

If you perform multiple calculations for an item on the same worksheet, for example, because you want to use another date each time, you can run the Calculation action from the ribbon to view the calculation log (consisting of the condition lines).

PRICES (DEPRECATED)

Note

The following sections describe the pricing features that were in use before upgrading to Microsoft Dynamics 365 Business Central[1] Version 26.

Quoting prices to customers

For retailers that sell products over the phone or online, providing quick price estimates is an indispensable part of doing business. With a new feature, you can now tell customers immediately whether certain items are in stock and at what price they can be shipped.

You can also save newly agreed-on prices and discounts in the system, show price histories, and log the quotes provided to a customer. To create a quote for an item:

1. Open a contact card.
2. On the ribbon, choose Related > New Price Quote (Customer).
3. Fill in the fields as described in the following table.

Note

Price quotes are available for contacts assigned to the customer master. If a contact hasn’t been turned into a customer, you need to take the standard route by creating a sales quote first. You’ll be notified when you’re trying to quote prices to contacts who aren’t customers yet.

Field	Description
No.	Specify the number of the item for which a price should be quoted.
Variant Code	If the item has variants, specify the requested variant in this field.
Quantity	Enter for what item quantity the customer wants a price quoted.
Unit of Measure Code	Shows the item’s base unit. You can enter another unit manually if necessary.
Date	Shows when the price was quoted. You can enter another date manually if necessary.
Currency Code	Shows the currency that is used by the customer. You can enter another currency manually if necessary.
Price Unit	Shows the item’s price unit. You can enter another unit manually if necessary.
Responsibility Center Code	Shows the responsibility center assigned to the customer.
Sales Order Type	Here you can assign a sales order type to the price quote if a type is available.
Description Description 2	Shows the relevant descriptions from the item master.
Base Unit of Measure Code	Shows the base unit from the item master.
Unit Cost (LCY)	Shows the unit cost from the item master.
Minimum Profit %	Shows the minimum profit stored in the item master.
Location Code	Shows the location code assigned to the customer. You can change the location manually if necessary.
Unit Price	Shows the unit price for the item. You can enter another price manually if necessary.
Line Discount %	Shows the line discount granted for the item. You can enter another discount manually if necessary.

From the copied or manually entered price and discount data, the system then calculates a line amount (without VAT) that can be quoted to the customer.

Besides the Line Amount (LCY) Excl. VAT, you can also see the Cost (LCY), the Profit (LCY), and the Profit % on a price quote line. None of these fields can be edited, however.

The Comment, Minimum Quantity, Starting Date and Ending Date, on the other hand, can be changed. They're used when you copy prices and discounts from the price quote to the Sales Price Lists page.

You can store a price or discount by choosing Save Sales Price or Discount on the ribbon. You can also have price information saved automatically when leaving the page by turning on the Auto Save on Exit toggle.

When you run either function, the system will also check for duplicate records. If a combination of customer, item, and variant already exists in a certain price list, you'll be notified so that you can remove the lines from that list.

Price source

The Price Source field indicates where the Unit Price Excl. VAT or Unit Price (Price Unit) Excl. VAT value on a document line comes from:

Field	Description
Item Sales Price	The value was copied from an item card or the sales price master.
Blanket Order	The value was retrieved from a blanket sales order.
Manual	The value was entered manually.

Note

When copied to a sales order from a blanket agreement or entered manually, the unit price will—contrary to standard processes—not be updated when you enter a new quantity on the order.

For line discounts, the equivalent to this field is the Line Discount Source field.

Save prices or discounts

Often, the sheer number of item variations sold in the retail sector means that prices aren't maintained in advance but depend on quotes or orders.

The Save Price/Discount feature provides a convenient way for you to save for reuse the item prices that you agreed to on quotes or orders the next time that the items are needed. To save prices from a quote or an order:

1. Create a sales quote or order that contains the requested items.
2. Change the values in the Unit Price and Line Discount % line fields to what has been agreed on.
3. Select a line that you want to save a price or discount for.
4. On the Lines FastTab, on the ribbon, choose Line > Related Information > Price/Discount Calculation > Save Price/Discount.
5. Fill in the fields as described in the following tables.

Note

You can select multiple lines before running this function; only lines of type Item will be saved. If none are among those selected, you will see a message and the process will be canceled.

For sales prices:

Field	Description
Save Price	Select this field to save the unit price entered on the line. You need to turn on this toggle before you can fill in the other fields.
Customer No.	Specify for what customer the price should be saved.
Starting Date	Specify the date starting on which the price should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the price should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be considered the minimum quantity for applying the price to the item.
Copy Variant Code	Turn on this toggle if you want the variants specified on the line to be sold at this sales amount per unit. With the toggle turned off, the unit price will be valid for all variants.
Show New Price	Turn on this toggle if you want to see the new unit price on the Sales Prices page so that you can review and (potentially) revise the sales price for the item.

For line discounts:

Field	Description
Save Line Discount	Select this field to save the discount entered on the line. You need to turn on this toggle before you can fill in the other fields.
Customer No.	Specify for what customer the discount should be saved.
Starting Date	Specify the date starting on which the discount should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the discount should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be considered the minimum quantity for applying the discount to the item.
Copy Variant Code	Turn on this toggle if you want the variants specified on the line to be bought at this discount per unit. With the toggle turned off, the line discount will be valid for all variants.
Show New Line Discount	Turn on this toggle if you want to see the new discount on the Sales Line Discounts page so that you can review and (potentially) revise the line discount for the item.

Sales conditions

Sales conditions provide another way for you to calculate a wide variety of prices or discounts on documents. For this purpose, a condition is linked to calculation lines on which you can enter the price or discount formulas that should be used within the system.

You can already specify calculation lines when you set up base data in the app and can later copy these lines along with a condition to one or more price or discount records.

Create a condition

To create a sales condition:

1. Choose the Search icon, enter Sales Condition List, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following tables.

General

Field	Description
No.	Exit the field to have the system assign a number from the series set up for this purpose or enter a number manually. The number must be unique.
Description	Specify a description for the condition.
Calculation Base	Specify what the condition is used for.
Currency Code	Specify the currency code that will be used for the condition. You must fill in this field, as a sales condition is always used in combination with one and the same currency code.

Lines

On the lines, you can specify how a price or a reduction in price will be calculated when the condition applies.

Note

Prices and discounts will later be determined based on the order in which you fill in these lines.

Field	Description
Description	Specify a description for the condition line.
Operators	Specify the operator that will be used for the price or discount. + adds the entered percentage or amount - subtracts the entered percentage or amount
Value	Specify the percentage or amount that you want to add or subtract (depending on what operator you’re using).
Calculation Method	Specify the type of price calculation that will be performed. **Previous Result** Calculates a percentage based on the result of the previous condition line. **Net Percentage** Determines a percentage by using the total direct unit cost or line discount. **Currency Amount** Adds or subtracts the entered amount in the specified currency.

As an example, a condition might have been specified as follows:

Description	Operator	Value	Calculation Method
Trade show discount	-	10	Previous result
General markup	+	5	Previous result

In this example, a 10% discount needs to be deducted from the cost amount—which is EUR 3,040—before 5% is added to the resulting EUR 2,736 (EUR 3,040 - EUR 304) because the product has a markup.

By applying the condition, the item is then sold at EUR 2872.80. As another example, consider the following net percentage conditions:

Description	Operator	Value	Calculation Method
Trade show discount	-	10	Net percentage
General markup	+	5	Net percentage

In this example, a 10% discount needs to be deducted from the cost amount—which is EUR 3,040—before 5% is added to the resulting EUR 2,736 (EUR 3,040 - EUR 304) because the product has a markup.

Additionally, you can choose Translations on the Lines FastTab to have steps in the calculation translated and copied automatically to documents on which the specified language code is used.

Field	Description
Target Language	Choose a language for translation.
Value	Enter the translated description of the calculation step.

Note

Although sales conditions aren’t typically printed on documents in KUMAVISION, the translations can be retrieved if required for a specific implementation project.

Link a condition to a price or line discount

You must fill in the Sales Condition No. field if you want to link a condition to a price or line discount. The currency that you’ve specified for the condition must match the currency entered for the price or discount.

For prices or discounts linked to conditions, the Unit Price or Discount % field will always be blank in the item master. The values in these fields will be filled in only when you enter a condition-based price or discount on a document line.

Use a condition to find the best price or line discount

When trying to determine the best prices or reductions in prices, the system uses condition-based prices or line discounts in the same way as standard functionality; a condition isn’t a factor in deciding whether a certain price or line discount can be entered on a sales document. The only difference to standard functions is that sales prices or line discounts linked to conditions are calculated in real time.

Note

The standard business logic for calculating sales prices or line discounts hasn’t changed.

Get Sales Price

The standard Get Sales Price action can be used to copy the sales prices that are available for a document to selected document lines. With this action, you can bypass the pricing function that is run when you enter an item number or a quantity on a line.

The same is true for the Get Line Disc. action. However, this function now also calculates for each line that is assigned to a sales condition the discount based on price entries that include the condition (instead of retrieving a value of 0 from the item master).

Sometimes, the currency and unit of measure specified for the document line and price record might differ when you’re trying to calculate the best price for an item. The following fields were therefore added to the Sales Prices page:

- Unit of Measure (Calc.)
- Currency Code (Calc.)
- Unit Price (Calc.)

The first two fields contain the values that were entered on the document line from which the calculation was run. The third field shows the price in the unit and currency specified on the line—unlike the standard Unit Price field, which shows prices in the currency and unit stored in the sales price master. You can select the Assist button next to the Sales Condition No. field to see in what way a condition has been used to determine sales prices or discounts.

Copy a condition to a calculation line

When you specify a price or discount on a sales line, the condition lines that might be linked to either will be copied to a sales line subpage. To see the subpage:

- Open a sales order.
- Go to the Lines FastTab and select a line.
- On the ribbon, choose Line > Price/Discount Calculation > Price or Line Discount.

You can change, delete, or insert lines here if necessary. Alternatively, you can set up a blank calculation sheet and use a ribbon function to copy values from condition lines.

Edits are made on this buffer page so that you can simulate their impact first and discard them if necessary; only changes that are accepted by you will be copied to the relevant sales line (and saved for when you want to reopen the page to make revisions).

When you exit the page, the Price Calculation or Discount Calculation field will be selected on the associated sales line depending on which kind of calculation has been changed.

Note

Both checkboxes are hidden by default.

Copy calculation lines

When you post or archive a sales order, all calculation lines that have been filled in for a condition-based price or discount on the order are copied alongside other data to the posted or archived document. However, you can still open the lines from there (albeit in read-only format).

Note

Exceptions are shipment and return receipt lines, as neither contain sales price fields.

Price units

The following formula is used in the standard app to determine the price on a document line:

Line Amount Excl. VAT = Quantity * Unit Price * [(100 – Line Discount %) / 100]

But there are other formulas. One of them provides a method for calculating a multiple of an amount by using a price unit. Typically, this method is preferred when dealing with items that are large in number but low in price (like screws).

Example 1
You enter Piece as the base unit on an item card and a document line.

You can then state a price on the line in multiples of 1000, that is, the price unit (or price per unit) equals the sales price for 1000 pieces.

Example 2
You enter Piece as the base unit of measure on an item card and Package on a purchase line. A package equals 50 pieces, as specified on the Item Units of Measure page.

You can then state a price on the line in multiples of 50, that is, the price unit (or price per unit) represents the sales price for 50 packages.

You can already specify price units that you and your customers agreed on when you set up basic app data.

Note

Price units aren’t used to convert one unit of measure into another. This is because fixed conversion rates cannot be entered for item units of measure.

For example, you might want to use the unit Piece and enter an item on a document line in pieces. However, the price for the line is determined based on weight (weight-dependent document pricing). To calculate this price, you will need another method that requires a separate explanation (outside the scope of this article).

Item price groups

For items of the same type, you can specify a price per category. For example, a group of paperbacks might cost the same because of the size and material used (regardless of who authored each book).

You can set up prices for item groups in the same way as for individual items. The feature supports entering agreements:

- For sales types
- For campaigns
- In customer hierarchies
- For sales conditions
- According to quantity, delivery date, and currency
- Based on units of measure, in the following way:

  You can store the price (for a group) in a certain unit of measure on a document line provided the unit has been assigned to the relevant group beforehand.

Note

Item price groups cannot be used to store prices for variants. If variants are available for an item assigned to a price group, the group price will apply to all variants.

To set up a price group for an item:

1. Choose the Search icon, enter Item Price Groups, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a meaningful abbreviation for the group.
Description	Specify a description for the group.
Sales	Turn on this toggle if the group should be used in sales.
Purchases	Turn on this toggle if the group should be used in purchasing.

After creating a group, you can choose Related > Item Price Group > Sales Prices on the ribbon to enter prices for the group. This process is the same as for prices maintained per customer or customer group in the standard app.

Block prices

What values are shown in the Unit Price and Line Discount % fields on document lines depends on the agreements you have in place with customers.

You can specify a wide variety of sales price and discount agreements in the system, including agreements made with an individual customer, a group of customers, or all customers, as well as agreements covering single products or an entire group of items.

When you add an item to a document, the system will compare the value that you enter in the Quantity field on a line against the minimum quantities set for the associated customer in the item master to calculate the best sales price and discount available.

In short, the standard app calculates prices and discounts separately on each line of a document. Sometimes, however, you might need to enter one and the same item on multiple lines, for example, because products must be delivered in batches on different dates.

For this reason, standard functionality has been extended so that prices and discounts can now be determined based on the total quantity entered for an item on all lines of a document. For a line to be included in the total, however, the values in the following fields must also match those on the other lines:

- Type and No.
- Variant Code
- Unit of Measure Code and Qty. per Unit
- Allow Line Disc. and Allow Invoice Disc.

Lines on which the following fields aren’t blank will not be included under any circumstances:

- Shipment No. or Return Receipt No. (concerns invoice or credit memo lines created from a blanket sales order)
- Blanket Order No. (concerns order lines that refer to a blanket order line)
- Alternate

To calculate block prices:

1. Open a sales document.
2. On the ribbon, choose Update Block Pricing. Block prices are then calculated when you release the document.

If you manually change the Unit Price or Line Discount % field on a document line, the system will not update the value in either field when you run the function, and the line will not become part of the quantity for calculation.

The same will happen with document lines that are related to blanket order or framework lines, with alternate lines, and when you invoice posted shipments or returns.

You can also deactivate the block pricing feature on individual documents by turning off the Price/Disc. Min. Qty. per Line toggle on the relevant document header. This might be necessary if you want to show a customer how a block price or discount is calculated on a quote.

> **Note**
>
> For this feature to work, you need to have selected Extended Pricing in the Pricing Method field in Sales & Receivables Setup and turned off the Price/Disc. Min. Qty. per Line toggle there.

Pricing by order type

IIn certain situations, you might need differing (price and discount) conditions considering the purpose of an item, such as when it is sold to a new customer versus when it is required for repairs.

For this reason, you can now assign a sales order type to sales prices and line discounts on item cards. Either is then used by the pricing functionality only if you enter the relevant order type on the header of a sales document.

Customer resource prices

As another option, you can now assign customer-specific prices to resources on customer or resource cards.

Resource prices can be created for a specific customer, a customer group, or all customers. They can also be linked to an individual resource or a resource group and, like item prices, can be given a starting and an ending date.

The business logic that undergirds best price and price sequence calculations is also used to determine resource prices.

> **Note**
>
> Prices for resource work aren’t incorporated into hierarchy-based pricing.

Save prices or discounts

Often, the sheer number of item variations sold in the retail sector means that prices aren’t maintained in advance but depend on quotes or orders.

The Save Price/Discount feature provides a convenient way for you to save for reuse the item prices that you agreed to on quotes or orders the next time that the items are needed. To save prices from a quote or an order:

1. Create a sales quote or order that contains the requested items.
2. Change the values in the Unit Price and Line Discount % line fields to what has been agreed on.
3. Select a line that you want to save a price or discount for.
4. On the Lines FastTab, on the ribbon, choose Line > Related Information > Price/Discount Calculation > Save Price/Discount.
5. Fill in the fields as described in the following tables.

> **Note**
>
> You can select multiple lines before running this function; only lines of type Item will be saved. If none are among those selected, you will see a message and the process will be canceled.

For sales prices:

Field	Description
Save Price	Select this field to save the unit price entered on the line. You need to turn on this toggle before you can fill in the other fields.
Customer No.	Specify for what customer the price should be saved.
Starting Date	Specify the date starting on which the price should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the price should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be considered the minimum quantity for applying the price to the item.
Copy Variant Code	Turn on this toggle if you want the variants specified on the line to be sold at this sales amount per unit. With the toggle turned off, the unit price will be valid for all variants.
Show New Price	Turn on this toggle if you want to see the new unit price on the Sales Prices page so that you can review and (potentially) revise the sales price for the item.

For line discounts:

Field	Description
Save Line Discount	Select this field to save the discount entered on the line. You need to turn on this toggle before you can fill in the other fields.
Customer No.	Specify for what customer the discount should be saved.
Starting Date	Specify the date starting on which the discount should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the discount should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be considered the minimum quantity for applying the discount to the item.
Copy Variant Code	Turn on this toggle if you want the variants specified on the line to be bought at this discount per unit. With the toggle turned off, the line discount will be valid for all variants.
Show New Line Discount	Turn on this toggle if you want to see the new discount on the Sales Line Discounts page so that you can review and (potentially) revise the line discount for the item.

Afterward, choose OK to exit the page.

Best price calculations

Microsoft Dynamics 365 Business Central[1] will always calculate the best price on sales documents. In this context, the best price is the lowest unit price with the highest line discount allowed on a given date. Sometimes, this means that a higher unit price with a line discount might beat out a lower price that comes with no discount.

Certain customers, however, are typically charged prices slightly above those calculated by the system. For this reason, you can now turn off the best price option for everyone or only certain customers.

Turning off the feature corresponds to hierarchical pricing.

General setup

To change the pricing rules:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the General FastTab, in the Best Price Calculation field, select if and to what extent the best price option should be used.

Option	**Description**
Always	The system should always calculate the best possible price.
Never	Best price calculation should not take place at all.
See Customer	Whether the best price for an item is calculated will depend on the Best Price setting on the relevant customer card.

Customer-specific setup

If you selected See Customer in Sales & Receivables Setup, the No Best Price toggle must be turned off for each customer for whom you want to calculate the best possible sales price.

With the No Best Price toggle for a customer turned on, the system will always use a price that is specific to the customer, even if that price is higher than the standard price. The toggle then also turns on automatically on each document created for this customer.

You can still change the setting on a sales document if you selected Always or See Customer in the Best Price Calculation field in setup (if you set it to Never, the field will be grayed out). This way, you can offer the lowest prices also to a customer typically not included in best price calculations, for example.

Pricing behavior

To account for a variety of item quantities, customers, and customer groups, you can enter different (but equally valid) prices for an item. If the best price calculation is used, the system then retrieves these price records to find the lowest possible price at which the item can be sold.

Pricing date

The date used to calculate prices on quotes, orders, and return orders is the order date. On credit memos and invoices, it’s the posting date.

Price sequences

With the Best Price toggle turned off, the system will retrieve a price based on the following field values, each listed in order of priority:

1. **Hierarchy Level**
   Lowest to highest. The value in this field, however, is only used if you’re working with hierarchies in the system, for example, when selling to members of an association.
2. **Sales Type**
   Campaign, Customer, Customer Price Group, All Customers
3. **Sales Order Type**
   [filled in], [not filled in]
4. **Type**
   Item, Item Price Group
5. **Variant Code**
   [code specified], [no variant]. The value in this field, however, is only relevant if you’re working with variant codes in the system.
6. **Unit of Measure Code**
   [filled in], [not filled in]
7. **Currency Code**
   [code], [no code]. The value in this field, however, is only relevant if the customer uses a foreign currency.
8. **Responsibility Center Code**
   [filled in], [not filled in]
9. **Minimum Quantity**
10. **Starting Date**
    [newest], [older], [not filled in]

When you enter a campaign created for a customer on a sales document, the customer’s other (active) campaigns will be disregarded. The prices specified for this campaign have a higher priority than all other types of prices.

If no campaign is specified, every campaign linked to the customer or contact will be included in the price calculation (when a hierarchy is available: if it was created for the main customer in a hierarchy).

Initially, the best price is determined only for the customer whom you entered on the document. If the customer is linked to another customer in a hierarchy, the latter will be ignored by the system for the time being.

However, if no valid price is found for the customer, the system will search the next level of the hierarchy. You’ll see an error message if the customer has been linked to multiple other customers on the same level.

The number of hierarchy levels can be unlimited. If no valid price can be found for the customer on any level, the system will go through the available customer price groups based on the same logic. Within a group, a price for an item variant has a higher priority than a general price for an item—provided the sales and item type match.

The same check is later repeated for currencies. In this context, a price with a currency is prioritized over prices for which no currency has been set up.

As for the minimum quantity, the highest quantity threshold within the validity period will be used to retrieve the price.

Lastly, the system will check the starting date, with a more recent price given a higher priority than older entries. Essentially, only prices available on the order date can be retrieved.

Discount calculations

Discounts are determined in the exact same way as prices.

Pricing by responsibility center

In addition to standard functionality, you can now also assign prices and line discounts to different responsibility centers.

To be able to use this feature, you only need to fill in the Responsibility Center field for a unit price or line discount record.

Pricing by hierarchy

Another new feature will include the prices and discounts stored at a higher level of a customer hierarchy (see Create Hierarchies) to determine the lowest price with the highest discount for an item that you want to sell to a customer. However, before you can use this feature, you must set it up first:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. In the Hierarchy Type Code Pricing field, select the type of hierarchy that you want to use for extended pricing.

Customers linked to this hierarchy are then included in calculating the best price and discount on a document line based on multiple price-related factors, such as the validity period, minimum quantity, unit of measure, currency, and responsibility center.

At which level of a customer hierarchy a value is determined isn’t relevant in this situation, as prices or discounts might be calculated, for example, for customers and item price groups at multiple levels at the same time.

Price worksheets

Price worksheet extension

The Extended Sales Price Worksheet page includes the following fields for when you want to calculate or save prices:

- Price Unit
- Current Unit Price (Price Unit)
- New Unit Price (Price Unit)
- Responsibility Center
- Sales Order Type

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩

Purchasing

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s procurement department.

CREATE HIERARCHIES

Hierarchies are used to link (any number of) vendors, customers, or contacts to each other. Hierarchical relationships can be shown progressing from top to bottom or bottom to top.

Type Setup

When you’re trying to add a vendor to a hierarchy, you might see the following:

“Specify at least one hierarchy type.”

This means that no hierarchy has been set up yet. To create a hierarchy:

1. Choose the Search icon, enter Hierarchy Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the type of hierarchy.
Description	Enter a text that describes the type of hierarchy.
Default	Specify if this type of hierarchy should be used as the default type when you create new hierarchies.
Source Table Caption	Specify if you want to link the hierarchy type to vendors, customers, or contacts.

Assign vendors

To specify hierarchical relationships between vendors:

1. Choose the Search icon, enter Vendors, and then choose the related link.
2. Open a vendor card.
   To create a top-down structure
   a. On the ribbon, choose Related > Vendors > Hierarchy – Related Vendors
   To create a bottom-up structure
   b. On the ribbon, choose Related > Vendors > Hierarchy – Relates to Vendor
3. Check if the correct type filter is set.
4. Enter a vendor number in the Value field.
5. Choose another line and repeat the steps.

View a hierarchy

To see a hierarchy:

1. Open a vendor card.
2. On the ribbon, choose Related > Vendor > Hierarchy – Where-Used.
3. Select a method for display:
   - Related records (top-down approach)
   - Relates to record (bottom-up approach)
4. Choose Calculate.

PURCHASE ORDER TYPES

Keeping track of large numbers of unposted documents in the system can be a difficult task: some might have been created to fulfill standard orders, some might have been set up for rush jobs, and some might be the basis for repairs or consignment. A quick solution to this problem is to organize documents by type so that they can be filtered later.

Setup

To set up an order category:

1. Choose the search icon, enter Purchase Order Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	**Description**
Code	Specify a code for the type of order. The code must be unique.
Description	Specify a description for the order type.
Type	Specify the type of order: • Standard • Quote Request • Subcontracted
Default	Specify if this type will be used as the default type for new purchase orders.
Payment Terms Code	You can assign special payment terms to each type of order to replace those stored in the vendor master.

Assign dimensions

You can then assign dimensions to an order type for analytical purposes. To assign a dimension:

1. Choose the Search icon, enter Purchase Order Types, and then choose the related link.
2. Choose Related > Purchase Order Type > Dimensions > Dimensions-Single to assign the current record or choose Dimensions-Multiple to assign more than one data record.
3. Choose OK to open the Dimensions page.
4. Fill in the fields as described in the following table.

Field	**Description**
Dimension Code	Select the code of the dimension that should be used.
Dimension Value Code	Select the dimension value that should be used.
Value Posting	Specify the requirements that need to be met should you want to use the dimension and dimension value. • Code Required • Shared Code • No Code
Allowed Values Filter	Description to follow.

Select reports by type

You can also use order types to specify what purchase reports to print.

1. Choose the Search icon, enter Report Selection – Purchase, and then choose the related link.
2. In the Usage field, specify the type of document that you want printed.
3. Fill in the Report ID field on a line or choose Order Types on the ribbon to store a report based on a specific type.

Like on the standard report selection page, you can specify a sequence if you want to enter more than one report here.

Assign an order type

To assign a type to an order:

- Create or open a purchase order.
- On the General FastTab, in the Purchase Order Type field, select a type.

DISTRIBUTE WORKSHEET LINES

In large and midsize organizations, requisition and planning worksheets might be maintained by more than one person.

For this reason, you can distribute the results of requisition and planning onto worksheets assigned to individual employees.

More specifically, when you’ve completed a worksheet, the lines that you filled in on the document can be copied to various worksheet names, which you can then assign to any number of IDs. To be able to use the feature, you must first assign an item to an ID:

- Open an item card.
- On the Planning FastTab, fill in the Assigned User ID field.

On requisition or planning worksheets, the Assigned User ID field is then filled in on the lines where you enter the number of the item.

Additionally, you must set up a link between the assigned ID and a worksheet name:

1. Choose the Search icon, enter Wksh. Line Distribution Filter, and then choose the related link.
2. Fill in the fields as necessary.

> **Note**
>
> Each ID can only appear once within the distribution filters.

SPLIT REQUISITION WORKSHEETS BY LOCATION

When a requisition worksheet created in Microsoft Dynamics 365 Business Central[1] contains multiple worksheet lines assigned to the same vendor, the system will combine all of them into one purchase order even if the location assigned to each line is different (that is, the items that were entered on the lines will be received at different sites).

As a result, the purchase header shows that the order will be sent to address A, whereas the lines also show locations B, C and D—and all items ultimately end up at A despite different sites specified on the lines. To prevent this from happening:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, choose Yes in the Copy from Req. Wksh. by Location field.

QUOTE REQUESTS AND PRICE OVERVIEW

You can use the new Price Overview page to see all price quotes requested for purchasing products individually or in bulk, the prices themselves, and the lead times for procuring the items from vendors and contacts.

The information shown on the page can be copied to a vendor-item catalog or stored with the relevant unit cost entries.

Quote requests are typically created from a requisition or planning worksheet for multiple vendors or contacts at once. Alternatively, you can enter vendors from a vendor-item catalog. To create a quotation request from a worksheet:

1. Open a worksheet.
2. Select the For Quote Requests field on the worksheet line that you want to create a request for.
3. On the ribbon, choose Related > Quote Request > Request Selection > Dimensions-Single or Dimensions-Multiple to select the vendors or contacts whom you want to ask for prices.
4. Choose Create Quote Requests on the ribbon to generate requests per vendor or contact number.
5. On the dialog, choose whether—besides the vendors or contacts listed on the request selection—you also want to use vendors from the item-vendor catalog.
6. Turn on the Print Quote Requests toggle if you want to print the quote requests immediately after running the function.
7. Choose OK.

The conditions that must be met for achieving certain prices are then entered on a price list. To see the list:

- Open a requisition or planning worksheet.
- Choose Related > Quote Request > Item Price Overview.

Besides unit costs grouped by vendor, the list includes information from other fields, such as the Lead Time field.

At the end of a line, you can see the field Direct Unit Cost Excl. VAT (Base / LCY). This field shows you the result of dividing the line amount without VAT by the unit quantity. If you specify a currency code, the value in the field will also be converted to the entered currency.

The actions that you can run from the overview are described in the following tables.

Action > Functions

Field	**Description**
Item/Vendor Catalog	Copies the lead time on a line to the field with the same name in the catalog assigned to the selected vendor and item.
Save Price/ Discount	Used to create block prices or update them on orders. Creates lines on the Purchase Price Lists page and copies the data for the selected vendor and item there. The Starting Date field on the lines, however, is filled in with the work date. If the Vendor No. field on a quote is still blank, you’re asked if the entered contact should be converted to a vendor. Choose No if you want to cancel the entire process.

Related > Purchase Prices

Field	**Description**
Item	Opens the related item card.
Purchase Prices	Opens the purchase prices specified for this item and vendor combination.
Item/Vendor Catalog	Opens the catalog that has been assigned to this item and vendor.
Quote Request	Opens the related quote request.
Document Texts Header Text Extended Texts	Opens the document, header, or extended texts assigned to the document line.

VALIDITY PERIOD ON QUOTES

To limit the period in which an offer should be valid, you can fill in the Quote Expiration Date field on the General FastTab of a quote document.

When you run the Save Prices/Discounts function from the Lines FastTab and this field is filled in, the validity date will be suggested as the ending date for the entire quote. However, you can still change the date manually if necessary.

PURCHASE ORDER AND SUPPLIER CONFIRMATION

You can now enter confirmation documents you received from vendors directly on purchase orders.

1. Open a purchase order.
2. Select one or more lines, and then choose Line > Functions > Create Purch. Order Cnfrmn.
3. Fill in the fields as described in the following table.

Field	Description
Confirmation No.	Enter the number of the supplier confirmation.
Confirmation Date	Enter the date printed on the confirmation.
Confirmed Delivery Date	Here you can specify the receipt date entered by the supplier on the confirmation document. This date is then copied to the selected lines as the Promised Receipt Date.
Delivery Date Confirmed	When the supplier has confirmed the requested receipt date, you do not need to enter anything. Instead, turn on this toggle to have the new date copied to the Promised Receipt Date field.

Afterward, choose OK to close the page so that the system can create a purchase order confirmation entry to store the confirmation document that you received.

You can track on a purchase confirmation document both the confirmation status and the history of delivery dates. To view a document:

1. Open a purchase order.
2. Choose Related > Documents > Purch. Order Cnfrmn. on the ribbon.

ORDER CONFIRMATION REMINDERS

You can also remind suppliers to confirm the orders you placed with them.

Setup

Purchases & Payables Setup

To set up confirmation reminders:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the General FastTab, in the Default PO Cnfrm. Rmdr. Date field, select a reference date for confirmation reminders.
3. On the Number Series FastTab, specify a number series for new and issued confirmation reminders.

Confirmation reminder codes

To set up conditions for a reminder:

1. Choose the Search icon, enter Purch. Order Cnfrmn. Rmdr. Terms, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the reminder.
Description	Specify a description for the reminder.
Max. No. of PO Cnfrmn. Rmdrs.	Specify how many reminders can be sent when using this code.

To specify the number of reminder levels and assign text to them:

1. Choose the Search icon, enter Purch. Order Cnfrmn. Rmdr. Terms, and then choose the related link.
2. Select a reminder.
3. On the ribbon, choose Level.
4. Fill in the number of levels and the formula that you want to use on each level.

To enter introductory and closing texts for a stage, choose Related > Level > Beginning or Ending Text on the ribbon.

Assign terms to vendors

To assign reminder terms to a vendor:

1. Choose the Search icon, enter Vendors, and then choose the related link.
2. Open a vendor card.
3. On the Receiving Tab, select a reminder in the Cnfrmn. Rmdr. Terms Code field.

Extended Report Selection

As a last step, you need to make the reminder report available in the system.

1. Choose the Search icon, enter Report Selection – Extended, and then choose the related link.
2. In the Usage field, select the PO Cnfrmn. Rmdr. Test option.
3. On the lines, fill in the Sequence and Report ID fields.

Issue a reminder

To remind a supplier of a delivery and ask the supplier to confirm the order:

1. Choose the Search icon, enter Purch. Order Cnfrmn. Rmdr. List, and then choose the related link.
2. Exit the No. field to have the system fill in a number from the series set up for this purpose.
3. On the ribbon, choose Create Confirmation Reminder.
4. You can then fill in the filter fields, for example, to limit the creation of a reminder to a certain vendor or item. Leave these fields blank if you want the system to search for all overdue confirmation receipts.
5. Choose OK.

> **Note**
>
> Before you can send a confirmation reminder to a vendor, a reminder terms code must be specified for the vendor on the vendor card.

The reminder must then be registered in the system so that you can set up reminder levels and print reminder documents. To register a reminder:

- On the ribbon, choose Issue.
- When you run the action, the corresponding receipt will be printed on the device set up as the default printer.
- Alternatively, you can print the reminder from the Issued Purch. Order Cnfrmn. Rmdr. List.

PROCESS IDS

Shared document IDs can be helpful, for example, for tracking purchases from quote entry to (potential) return shipment.

This is especially true if the documents used for a transaction must be linked across departments—such as when you want to tie a customer’s return order to an order returned to a vendor.

Setup

Before you can use document tracking, you need to set up a number series for process IDs.

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the Number Series FastTab, in the Document Process ID Nos. field, select the number series that you want to use for this purpose.

Workflow

A process ID is always copied from the header of the initial document to the headers and lines on quotes, orders, receipts, invoices, return orders (if the return order lines were created by using the Get Posted Document Lines to Reverse action), and archived documents created from the document.

For example, a process ID entered on a purchase order is transferred to an invoice or receipt created from it when you post the order.

On the order, on the Line FastTab, you can then choose Line > Navigate Doc. Process ID on the ribbon to see the documents linked to the ID. You can also view individual documents by selecting the value in the No. of Entries field or use the standard Navigate action to look for them.

When you copy a document or run the Get Posted Document Lines to Reverse function to create lines from a return order, the system copies the process ID from the source document to the new lines. Afterward, you can only find them by searching for the source document ID.

If you don’t want this to occur, you must turn off the Copy Document Process ID toggle in Purchases & Payables Setup before you fill in document lines with the Copy Document function. As for return order lines, the ID is always copied from the order.

ADD TRANSACTION DATA

You can use the Add Transaction Data function to correct posting information on orders that have been received but not invoiced.

You make the corrections before choosing this action on the ribbon. When you run the function, the contents of the following fields are copied from lines that have been received but not invoiced yet to a posted receipt and the associated item, material, and value entries:

- Gen. Business Posting Group
- VAT Business Posting Group
- Gen. Product Posting Group
- VAT Product Posting Group
- Dimension Set ID
- Global Dimension Code 1
- Global Dimension Code 2

SEND QUOTES TO CONTACTS

You can use a vendor template to send quotes to potential suppliers, that is, to contacts to whom no vendor has been assigned.

Vendor templates are set up in Finance. You can then run the Create Purchase Quote action from the ribbon of a vendor card to fill in the purchase quote with the required contact details and choose in the Vendor Template Code field the template that you want to use.

You can also create a quote without having to create a vendor. In this case, a vendor must be set up only when you convert the quote to an order.

PRINT RELEASED DOCUMENTS

The system performs multiple checks when a purchase document is released. This includes checking if mandatory fields are filled in and whether prices and costs have been calculated.

For this reason, KUMAVISION base (BOOSTER) limits printouts to documents that have been released, the only exception being quotes (print previews will not be restricted either).

BLANKET ORDER EXTENSION

When you want to purchase items in large quantities, you often set up blanket orders in the system so that you can receive products from suppliers at lower prices but in multiple smaller shipments over a specified period.

However, when using standard functionality, you might not see that creating a purchase order from a blanket agreement is even possible until that order has been posted. Moreover, because you cannot see or select blanket agreements on requisition and planning worksheets, you run the risk—especially when you need to order many items at once—that products might be bought at standard conditions and prices.

To solve these issues, the Rem. Blanket Order Qty. field has been added to the lines of purchase orders and the Blanket Order No. field to those of requisition and planning worksheets. This way, you can assign a line of a worksheet to a line of a purchase order provided a large enough part of the originally agreed-on quantity remains, with vendor data and price terms being retrieved from the blanket agreement.

Alternatively, you can have the blanket order lines that are still available for the selected vendor assigned by the system, with price conditions copied too. You can also create separate purchase orders for every blanket order line.

The Rem. Blanket Order Qty. (Base) is a FlowField that totals the Rem. Blanket Order Qty. (Base) values on purchase lines created from a blanket order. From the value in this and in the Qty. Per field, the system then calculates the Rem. Blanket Order Qty. value when you create standard purchase orders. Other fields that have been added to worksheet lines are:

- No. of Blanket Order Lines
- Blanket Order No.
- Blanket Order Line No.

The first is a FlowField that indicates the number of blanket purchase lines on which the type, number, and location match and the value in the Rem. Blanket Order Qty. (Base) field is greater than 0.

You can use the lookup in the other fields to assign a blanket order or blanket order line to the worksheet. Filling in either copies the vendor and, if available, the vendor item number and price terms and conditions (cost, discount, price unit, and currency) from the assigned blanket purchase line.

The system then checks if subtracting the value in the Outstanding Qty. (Base) from the Rem. Blanket Order Qty. (Base) and worksheet line quantity results in a value greater than 0 in the Quantity (Base) field.

Should you clear the Blanket Order No. and Blanket Order Line No. fields later, the system will recheck the assigned vendor number and update the purchase prices if necessary.

Auto assign a blanket order

To have blanket order lines assigned automatically:

1. Open a purchase order.
2. On the ribbon, choose Assign Blanket Order. Other options are Delete or Reassign (a combination of Assign and Delete).
3. Alternatively, choose Carry Out Action Message on the ribbon when you create a purchase order and select Auto Assign Blanket Order.

When you run the assignment function, the system checks all worksheet lines for which the carry out action message was set to New.

If you haven’t linked lines manually, the search will extend to all blanket orders that have been assigned to this vendor, item, item variant, and location and for which the outstanding quantity is not 0, starting with the lowest document and document line number.

When a blanket order line with enough remaining quantity is found, the line will be assigned to the worksheet line or split off prior to assignment for a quantity that is greater.

Besides assigning the blanket order line, the system will copy the contents of cost and price fields (Unit Cost, Price Unit, and Line Discount, for example) to the worksheet line.

You can remove a line by selecting it and choosing Delete on the ribbon. The vendor is then revalidated, and the line will be repriced.

Additionally, a new toggle is now included with the Carry Out Action Message function. Turning on this toggle—called One Order per Blanket Order—will sort worksheet lines based on blanket order and blanket order line numbers before a new order is created for each line where these numbers are filled in.

Assign an order manually

You can also use the Assign function to transfer the terms and conditions of a blanket agreement to a manually created purchase line by filling in the Blanket Order No. field on that line.

You are then asked whether you want to copy the value in the Direct Unit Cost Excl. VAT or the Line Discount % field from the line on the blanket agreement.

Location-independent orders

Additionally, you can now use a blanket order for items that must be delivered to multiple locations, with the focus being on the quantity that you want to buy and the agreed-on prices.

To be able to use this feature, the relevant blanket order lines must not contain location codes. As in the standard app, you can then have the system copy the needed quantities from a requisition worksheet to the lines. Afterward, you can run the Carry Out Action Message function to create a purchase order for each location that was specified on the worksheet.

COPY ITEM FUNCTION

The following options have been added to the Copy Item action:

Field	Description
All	Turns all options on or off.
Version (Prod. BOM)	Fills in this field with the production BOM version that is valid at the time. However, the version can be changed manually if necessary.
Version (Routing)	Fills in this field with the routing that is valid at the time. However, the version can be changed manually if necessary.

Running the function then creates not only an item but also a production BOM or a routing filled in with the number of the item in the No. field and linked to it on the item card. The following item header information is also copied:

Field	Description
Description	Specifies the description of the item.
Unit of Measure Code	Specifies the basic unit code of the item.
Type	Specifies the type of routing or production BOM that will be copied.

Note

Item versions aren’t copied but must be assigned manually. As the version codes of routings and production BOMs aren’t linked to triggers, the system will copy only the entries it has found so that a version you create by using the relevant toggle must be changed manually as well.

ITEM TRACKING

In Microsoft Dynamics 365 Business Central[1], you can specify that items must be posted with serial or lot number tracking. Often, however, this specification changes during the lifecycle of a product, which makes the item more difficult to track and complicates repairs.

In KUMAVISION base (BOOSTER), you can change both numbers under certain conditions:

- The item cannot have open item entries.
- The relevant item entries cannot be fully invoiced.
- The unit cost on the item card must have been adjusted.
- Reservations for the item cannot be made with a serial or lot number.

These conditions also apply to items for which you set the costing method to Specific.

SUPPORTING DOCUMENTS

This feature is used to maintain item-related documents, such as drawings and certificates, in the system.

Store a document

To store a document for an item:

1. Choose the Search icon, enter Items, and then choose the related link.
2. Open an item card.
3. On the ribbon, choose Related > Item > Supporting Documents.
4. Fill in the fields as described in the following table.

Field	Description
Type	Specify the type of document. Options are: • Drawing • Protocol • Description • Marketing • Prescription • Approval Letter • Certification • Long-Term Supply Contract • Short-Term Supply Contract
File Name	Use the arrows to select a file for upload.
Description	Enter a description for the document.
Starting Date Ending Date	Specify the period in which the document is valid.
Version	Specify the version of the document.
Sub Version	Specify the sub-version of the document.

The actions found on the ribbon are described in the following table.

Function	Description
Import	Imports a file for the selected line.
Export	Exports a file for the selected line for storage elsewhere in the system.
Delete	Deletes the document stored for the selected line.

PRICES

New pricing experience

The new pricing features must first be turned on.

1. Choose the Search icon, enter Feature Management, and then choose the related link.
2. Go to the line that says Feature Update: New Sales Pricing Experience and set the Enabled For field to All Users.

Note

If you’re using the older pricing functionality, do not turn on this feature. Once turned on, the new feature cannot be turned off again.

Price source

The Price Source field indicates where the Direct Unit Cost Excl. VAT or Direct Unit Cost (Price Unit) Excl. VAT value on a document line comes from:

Option	Description
Item	The value was copied from an item card.
Purchase Price	The value was copied from a purchase price list.
Blanket Order	The value was retrieved from a blanket purchase order.
Manual	The value was entered manually.
Item Price Group	The value was copied from a purchase price list *(item price group)*.
External	The value was transferred from an external application. **Note** With the field set by the external program, the price is not recalculated in the system.
Resource	The value was retrieved from a resource card.

Note

When copied to a purchase order from a blanket agreement or entered manually, the direct unit cost will—contrary to standard processes—not be updated when you enter new quantities on the order.

For line discounts, the equivalent to this field is the Line Discount Source field.

Save prices or discounts

Often, the sheer number of item variations sold in the retail sector means that prices aren’t maintained in advance but depend on quotes or orders. The Save Price/Discount feature provides a convenient way for you to save for reuse the item prices that you agreed to on quotes or orders the next time that the items are needed. To save prices from a quote or an order:

1. Create a purchase quote or order that contains the requested items.
2. Change the values in the Direct Unit Cost and Line Discount % line fields to what has been agreed on.
3. Select a line that you want to save a price or discount for.
4. On the Lines FastTab, on the ribbon, choose Line > Price and Discount Calculation > Save Price/Discount.
5. Fill in the fields as described in the following tables.

> **Note**
>
> You can select multiple lines before running this function; only lines of type Item will be saved. If none are among those selected, you will see a message and the process will be canceled.

For purchase prices:

Field	Description
Save Price	Select this field to save the unit cost entered on the line. You need to turn on this toggle before you can fill in the other fields.
Price List Code	Specify a price list. You must fill in this field if you want to save purchase prices in the system.
Vendor No.	Specify for what vendor the unit cost should be saved. Specify the date starting on which the unit cost should apply. This field is filled in with the work date by default but can be changed manually.
Starting Date	Specify when the unit cost should no longer apply.
Ending Date	Specify for what vendor the unit cost should be saved.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be stored as the minimum quantity on the price list assigned to the item.
Copy Variant Code	Turn on this toggle if you want the variant specified on the line to be copied to the price list at this cost amount per unit. With the toggle turned off, the direct unit cost will be valid for all variants.
Show New Price	Turn on this toggle if you want to see the new unit cost on the Price List Lines page so that you can review and (potentially) revise the purchase price for the item.

For line discounts:

Field	Description
Save Line Discount	Select this field to save the discount entered on the line. You need to turn on this toggle before you can fill in the other fields.
Vendor No.	Specify for what vendor the discount should be saved.
Starting Date	Specify the date starting on which the discount should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the discount should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be stored as the minimum quantity on the price list assigned to the item.
Copy Variant Code	Turn on this toggle if you want the variant specified on the line to be copied to the price list at this discount per unit. With the toggle turned off, the line discount will be valid for all variants.
Show New Line Discount	Turn on this toggle if you want to see the new discount on the Price List Lines page so that you can review and (potentially) revise the line discount for the item.

Afterward, choose OK to exit the page.

Purchase conditions

Purchase conditions provide another way for you to enter line discounts. For this purpose, a condition is linked to calculation lines on which you can enter your various discounting methods for use on purchase documents.

A condition can already be created and transferred to one or more purchase discount records when you create base data in the app.

Create a condition

To create a purchase condition:

1. Choose the Search icon, enter Purchase Condition List, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	Description
No.	Exit the field to have the system assign a number from the series set up for this purpose or enter a number manually. The number must be unique.
Description	Specify a description for the condition.
Calculation Base	Specify what the condition is used for.
Currency Code	Specify the currency code that will be used for the condition. You must fill in this field, as a purchase condition is always used in combination with one and the same currency code.

Lines

On the lines, you can specify how a reduction in price will be calculated when the condition applies.

Note

Discounts will later be determined based on the order in which you fill in these lines.

Field	Description
Description	Specify a description for the condition line.
Operators	Specify the operator that will be used for the discount. + adds the entered percentage or amount - subtracts the entered percentage or amount
Value	Specify the percentage or amount that you want to add or subtract (depending on what operator you’re using).
Calculation Method	Specify the type of price calculation that will be performed. **Previous Result** Calculates a percentage based on the result of the previous condition line. **Net Percentage** Determines a percentage by using the total purchase price or direct unit cost. **Currency Amount** Adds or subtracts the entered amount in the specified currency.

As an example, a condition might have been specified as follows:

Description	Operator	Value	Calculation Method
Basic discount	-	5	Net percentage
Special offer	-	3	Net percentage

In this example, a 5% discount needs to be deducted from the direct unit cost of a certain item before another 3% discount applied to the original amount is subtracted from the result because the product is on offer.

You now want to buy the item from vendor 3000 on 04/15/2023 as part of a new purchase order. The line discount that has been assigned to the item is valid within the following period:

Vendor	Discount %	Purchase Condition No.	Valid From	Valid Until
3000		PUR_COND_EX	01/01/2023	04/30/2023

Note

Because the discount in this example depends on a purchase condition, the Discount % field in the item master remains empty; the system will instead calculate the actual value the moment you assign the line discount to a purchase document.

When you fill in the document, the condition specified for the discount is then used by the standard pricing function to calculate the total line discount (8%).

Note

To see how values are calculated, you can go to the Lines FastTab, select a line, and choose Line > Price/Discount Calculation > Line Discount on the ribbon.

Additionally, you can choose Translations on the Lines FastTab to have steps in the calculation translated and copied automatically to documents on which the specified language code is used.

Field	Description
Target language	Choose a language for the translation.
Value	Enter the translated description of the calculation step.

Note

Although purchase conditions aren't typically printed on documents in KUMAVISION, the translations can be retrieved if required for a specific implementation project.

Link a condition to a price or line discount

You must fill in the Price Condition No. field if you want to link a condition to a price or line discount. The currency that you've specified for the condition must match the currency entered for the price or discount.

For price lists linked to conditions, the Discount % field will always be blank in the item master. The value in this field will be determined only when you enter a condition-based price or discount on a document line.

Use a condition to find the best price or discount

When trying to determine the best reductions in item prices, the system uses condition-based purchase prices in the same way as standard prices; a condition isn't a factor in deciding whether a certain price can be entered on a purchase document. The only difference to standard functionality is that prices linked to conditions are calculated in real time.

Note

The standard business logic for calculating line discounts hasn't changed.

No default units on purchase lines

Standard functionality will fill in the purchase unit of measure as the unit on new price list lines.

However, this means that if you regularly store prices in the item's base unit, you will need to remove that unit manually from each price before the system can calculate a new price based on another unit of measure.

To have the unit field left blank on new lines:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the Prices FastTab, turn on the No Default UOM Code toggle.

Price units

The following formula is used in the standard app to determine the price on a document line:

Line Amount Excl. VAT = Quantity * Direct Unit Cost * [(100 – Line Discount %) / 100]

But there are other formulas. One of them provides a method for calculating a multiple of an amount by using a price unit.

Example 1
You enter Piece as the base unit on an item card and a document line.

You can then state prices on the line in multiples of 1000, that is, the price unit (or price per unit) equals the purchase price for 1000 pieces.

Example 2
You enter Piece as the base unit of measure on an item card and Package on a purchase line. A package equals 50 pieces, as specified on the Item Units of Measure page.

You can then state a purchase price on the line in multiples of 50, that is, the price unit (or price per unit) represents the price for 50 packages.

Workflow

You use the following fields to specify price units on purchase lines:

- Price Unit
- Direct Unit Cost (Price Unit) Excl. VAT

These fields can later also be found on archived and posted documents.

Alternatively, you can assign a unit to a single document or store the unit for use by the pricing functionality. When you specify direct unit costs for items, you need to ensure that price units have been specified as well.

> **Note**
>
> Price units aren’t used to convert units, as fixed conversions cannot be entered for item units of measure

For example, you might want to use the unit Piece and enter an item on a document line in pieces. However, the price for the line is determined based on weight (weight-dependent document pricing). To calculate this price, you will need another method that requires a separate explanation.

Print a unit on documents

Price units and the direct unit costs specified in these units can be printed on each purchase document in the system.

You can already specify price units that you and your vendors agreed on when you set up basic app data.

Item price groups

For items of the same type, you can assign purchase prices per category. For example, a group of paperbacks might cost the same because of the size and material used (regardless of who authored each book).

You can set up prices for item groups in the same way as for individual items. The feature supports entering agreements:

- In vendor hierarchies
- For purchase conditions
- According to quantity, delivery date, and currency
- Based on units of measure, in the following way:

You can store the price (for a group) in a certain unit of measure on a document line provided the unit has been assigned to the relevant group beforehand.

> **Note**
>
> Item price groups cannot be used to store prices for variants. If variants are available for an item assigned to a price group, the group price will apply to all variants.

When you enter the number of an item on a purchase line, the following will happen:

- Besides the price stored specifically for the item, the system will also use the prices entered for the relevant item price group.
- The best price will be determined among all prices found in the system, with neither item-specific nor group prices boasting an advantage here.

You can use the FactBoxes on purchase (invoice) lines to look up item prices, including those specified for a group. You can also select a price there (which corresponds to running the Get Purchase Price action).

To set up a price group for an item:

1. Choose the Search icon, enter Item Price Groups, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	**Description**
Code	Specify a meaningful abbreviation for the group.
Description	Specify a description for the group.
Sales	Turn on this toggle if the group should be used in sales.
Purchases	Turn on this toggle if the group should be used in purchasing.

After creating a group, you can choose Related > Item Price Group > Purchase Prices on the ribbon to enter prices for the group. This process is the same as for prices maintained in the standard app.

Block prices

The values that are shown in the Direct Unit Cost and Line Discount % fields on purchase document lines depend on the price and discount terms you agreed to with your vendors.

You can specify a wide variety of agreements in the app, from agreements you made with an individual vendor, multiple vendors, or all vendors to arrangements covering single products or a group of items.

When you add an item to a document, the system then checks the value that you enter in the Quantity field on a line against the minimum quantities set in the item master to calculate the best possible price and discount.

In short, prices and discounts are usually calculated separately on each line. However, you might sometimes need to add the same item to multiple lines, such as when products will be received in batches on different dates.

For this reason, the standard functionality has been extended so that you can now also see prices and discounts based on the total quantity that is entered for an item on all lines of a document. But for a line to be included in the total, the values in the following fields must match those on the other lines:

- Type and No.
- Variant Code *(depends on whether you activated the relevant toggle in Purchases & Payables Setup or on the item card)*
- Unit of Measure Code and Qty. per Unit
- Alternative checkbox (must be blank)
- Allow Line Disc. and Allow Invoice Disc.

Additionally, you can have the system calculate a block price for an item while ignoring the variants that might exist for it:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. Turn on the No Variant Block Prices toggle.
3. To change this setting for a certain item, open an item card and in the No Variant Block Prices (Purchases) field, select one of the options described in the following table.

Option	Description
Default	Applies the Yes or No option *(see below)* to the item depending on whether you turned the No Variant Block Prices toggle in Purchases & Payables Setup on or off. **Note** As the global setting is inherited to all items, this option is always set initially.
No	Block prices are calculated from the quantities and prices on all lines referring to the same purchase document, item, and variant.
Yes	Block price quantities are determined without considering the item’s variants.

> **Note**
>
> You cannot maintain variant-specific prices if you want to use this feature.

Lines on which the following fields aren’t blank will not be included under any circumstances:

- Receipt No. or Return Shipment No. *(on invoice or credit memo lines created from a blanket purchase order)*
- Blanket Order No. *(on order lines that refer to a blanket order line)*
- Alternative checkbox

To calculate block prices:

1. Open a purchase document.
2. On the ribbon, choose Update Block Pricing. Block prices are then calculated automatically when you release the document.

If you manually change the Direct Unit Cost or Line Discount % field on a document line, the value in either isn’t updated when you run this action, and the line isn’t included in quantity calculations.

The same happens with document lines related to blanket order or alternate lines and when you invoice a posted receipt or return.

> **Note**
>
> For this function to work, the Price Calculation Method field in Purchases & Payables Setup must be set to either KUMAVISION base Lowest Price or Price Sequences and the Disable Block Prices toggle needs to be turned off on the page.

Close prices or discounts

The system retrieves direct unit costs and line discounts from price lists based on the starting and ending dates entered for them.

KUMAVISION base (BOOSTER) always uses the most recent direct unit cost or discount for an item or item group provided all other factors with an impact on purchases remain the same.

However, you can also have an ending date assigned automatically when you create another price or discount for which you enter a later starting date. This might make it easier for users to understand changes in prices and discounts. To have a date assigned automatically:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the Prices FastTab, turn on the Close Prices and Discounts toggle.

If you then enter a cost or discount for the same item-price or item-discount combination but enter a later starting date, the system will fill in the Ending Date field for the previously valid entry with a date set to one day before the new starting date.

> **Note**
>
> A price or discount can only be closed if the entry replacing it doesn’t have an ending date.

Best price calculations

Microsoft Dynamics 365 Business Central[1] will always calculate the best price on purchase documents. In this context, the best price is the lowest unit price with the highest line discount allowed on a given date.

Purchase prices and discounts are entered on price lists independently from each other. This means that a purchase line might contain the lowest price of one price list line and the highest discount of another.

Certain suppliers, however, are typically charged prices slightly above those calculated by the system. For this reason, you can now turn off the best price option for everyone or only certain suppliers.

Turning off the feature corresponds to hierarchical pricing.

General setup

To change the pricing rules:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the Prices FastTab, in the Price Calculation Method field, select if and to what extent the best price option should be used.

Option	Description
Lowest Price	The Microsoft Dynamics 365 Business Central[1] standard pricing should always be used.
KUMAVISION base Lowest price	If the best price for an item is calculated will depend on whether you’ve turned on the Best Price toggle on the relevant supplier card.
KUMAVISION base Price Sequences	Best price calculation should not take place at all.

Vendor-specific setup

You can also specify a price calculation method for a vendor by filling in the Price Calculation Method field on the relevant vendor card. The option you select then replaces the setting you made in Purchases & Payables Setup.

With the No Best Price toggle for a vendor turned on, the system will always use a price that is specific to the vendor, even if that price is higher than the standard price. The pricing method is also copied automatically to the Invoice Details FastTab on each document created for this vendor.

The correct calculation method is determined in the following order of priority:

1. Manual setting on the purchase document
2. Vendor card
3. Vendor price group
4. Purchases & Payables Setup

Pricing behavior

To account for a variety of item quantities, vendors, and vendor groups, you can enter different (but equally valid) prices for an item. If the best price calculation is used, the system then retrieves these price records to find the lowest possible price at which the item can be sold.

Pricing date

The date used to calculate prices on quotes, orders, and return orders is the order date. On credit memos and invoices, it’s the posting date.

Price sequences

With the Best Price toggle turned off, the system will retrieve a price based on the following field values, each listed in order of priority:

1. **Hierarchy Level**
   The lowest hierarchical level of a creditor has priority over the next higher level. This only comes into play when working with creditor hierarchies, e.g. within the framework of association structures.
2. **Purchase Type**
   Campaign, Vendor, Vendor Price Group, All Vendors
3. **Purchase Order Type**
   [filled in], [not filled in]
4. **Type**
   Item, Item Price Group
5. **Variant Code**
   [code specified], [no variant]. The value in this field, however, is only relevant if you’re working with variant codes in the system.
6. **Unit of Measure Code**
   [filled in], [not filled in]
7. **Currency Code**
   [code], [no code]. The value in this field, however, is only relevant if the vendor uses a foreign currency.
8. **Responsibility Center Code**
   [filled in], [not filled in]
9. **Minimum Quantity**
10. **Starting Date**
    [newest], [older], [not filled in]

When you enter a campaign created for a vendor on a purchase document, the vendor's other (active) campaigns will be disregarded. The prices specified for this campaign have a higher priority than all other types of prices.

If no campaign is specified, every campaign linked to the vendor or contact will be included in the price calculation (when a hierarchy is available: if it was created for the main vendor in a hierarchy).

Initially, the best price is determined only for the vendor whom you entered on the document. If the vendor is linked to another vendor in a hierarchy, the latter will be ignored by the system for the time being.

However, if no valid price is found for the vendor, the system will search the next level of the hierarchy. You’ll see an error message if the vendor has been linked to multiple other vendors on the same level.

The number of hierarchy levels can be unlimited. If no valid price can be found for the vendor on any level, the system will go through the available vendor price groups based on the same logic. Within a group, a price for an item variant has a higher priority than a general price for an item—provided the purchase and item type match.

The same check is later repeated for currencies. In this context, a price with a currency is prioritized over prices for which no currency has been set up.

As for the minimum quantity, the highest quantity threshold within the validity period will be used to retrieve the price.

Lastly, the system will check the starting date, with a more recent price given a higher priority than older entries. Essentially, only prices available on the order date can be retrieved.

Discount calculations

Discounts are determined in the exact same way as prices. Purchase prices and discounts are entered on price lists independently from each other. This means that a sales line might contain the lowest price of one price list line and the highest discount of another.

Pricing by responsibility center

In addition to standard functionality, you can now also assign prices and line discounts to different responsibility centers.

To be able to use this feature, you only need to fill in the Responsibility Center field for a unit price or line discount record.

Move prices to another price list

You can now move purchase price lines from one price list to another, for example, to a list that you’ve set up for the sole purpose of storing historic prices.

1. Open a purchase price list.
2. Go to the Lines FastTab and select the prices that you want to transfer.
3. On the ribbon, choose Move Lines.
4. This opens the Select Price List window, where you can set filters to limit the number of lists that are displayed on the page.
5. Choose a list, and then choose OK.

Afterward, the selected price lines are both copied to the new list and deleted from the old one.

> **Note**
>
> This feature is also available for price lines created in sales.

Pricing by responsibility center

In addition to standard functionality, you can now also assign purchase prices and line discounts to different responsibility centers.

To be able to use this feature, you only need to fill in the Responsibility Center field for a unit cost or line discount field on a price list.

Document pricing by buy-from (not pay-to) vendor

Standard functionality calculates prices on a purchase document by using the pay-to vendor entered on it.

This might cause difficulties when invoices are sent to your association, as you might have agreed on a different set of prices with your supplier *(=buy-from vendor)*.

With the new feature, you can now decide which vendor you want to run the pricing functionality for.

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. In the Pricing Vendor field, choose one of the options described in the following table.

Option	Description
Default	Standard functionality will be used.
Buy-from	Prices and price information *(=vendor price groups)* will be retrieved from buy-from vendors.
Pay-to	Prices and price information *(=vendor price groups)* will be retrieved from pay-to vendors.

If you choose the second or third option, you can change the setting again on the relevant vendor card.

Keep worksheet prices

When data is copied from a requisition or planning worksheet to a purchase order, the standard app rechecks the order date on the document, which will also refresh the prices stored on it. To prevent this from happening:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, in the Update Price when Copied from Req. Wksh., select No Repricing.

PRICES (DEPRECATED)

Note

The following sections describe the pricing features that were in use before upgrading to Microsoft Dynamics 365 Business Central[1] Version 26.

Price source

The Price Source field indicates where the Direct Unit Cost Excl. VAT or Direct Unit Cost (Price Unit) Excl. VAT value on a document line comes from:

Option	Description
Item Purchase Price	The value was copied from an item card or the purchase price master.
Blanket Order	The value was retrieved from a blanket purchase order.
Manual	The value was entered manually.

Note

When copied to a purchase order from a blanket agreement or entered manually, the direct unit cost will—contrary to standard processes—not be updated when you enter new quantities on the order.

For line discounts, the equivalent to this field is the Line Discount Source field.

Extended pricing

You can now also assign purchase prices and line discounts to different responsibility centers.

Moreover, you can use the prices and discounts stored at a higher level of a vendor hierarchy (see Create Hierarchies) to determine the lowest price with the highest discount for an item that you want to purchase from a vendor. However, before you can use this feature, you must set it up first:

1. Choose the Search icon, enter Purchases & Payables, and then choose the related link.
2. In the Hierarchy Type Code Pricing field, select the type of hierarchy that you want to use for extended pricing.

Vendors linked to this hierarchy are then included in calculating the best price and discount on a document line based on multiple price-related factors, such as the validity period, minimum quantity, unit of measure, currency, and responsibility center.

At which level of a vendor hierarchy a value is determined isn’t relevant in this situation, as prices or discounts might be calculated, for example, for vendors and item price groups at multiple levels at the same time.

Purchase conditions

Purchase conditions provide another way for you to enter line discounts. For this purpose, a condition is linked to calculation lines on which you can enter your various discounting methods for use on purchase documents.

A condition can already be created and transferred to one or more purchase discount records when you create base data in the app.

Create a condition

To create a purchase condition:

1. Choose the Search icon, enter Purchase Condition List, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	**Description**
No.	Exit the field to have the system assign a number from the series set up for this purpose or enter a number manually. The number must be unique.
Description	Specify a description for the condition.
Calculation Base	Specify what the condition is used for.
Currency Code	Specify the currency code that will be used for the condition. You must fill in this field, as a purchase condition is always used in combination with one and the same currency code.

Lines

On the lines, you can specify how a reduction in price will be calculated when the condition applies.

Note

Discounts will later be determined based on the order in which you fill in these lines.

Field	**Description**
Description	Specify a description for the condition line.
Operators	Specify the operator that will be used for the discount. + adds the entered percentage or amount - subtracts the entered percentage or amount
Value	Specify the percentage or amount that you want to add or subtract (depending on what operator you’re using).
Calculation Method	Specify the type of price calculation that will be performed. **Previous Result** Calculates a percentage based on the result of the previous condition line. **Net Percentage** Determines a percentage by using the total purchase price or direct unit cost. **Currency Amount** Adds or subtracts the entered amount in the specified currency.

As an example, a condition might have been specified as follows:

Description	Operator	Value	Calculation Method
Basic discount	-	5	Net percentage
Special offer	-	3	Net percentage

In this example, a 5% discount needs to be deducted from the direct unit cost of a certain item before another 3% discount applied to the original amount is subtracted from the result because the product is on offer.

You now want to buy the item from vendor 3000 on 04/15/2023 as part of a new purchase order. The line discount that has been assigned to the item is valid within the following period:

Vendor	Discount %	Purchase Condition No.	Valid From	Valid Until
3000		PUR_COND_EX	01/01/2023	04/30/2023

Note

Because the discount in this example depends on a purchase condition, the Discount % field in the item master remains empty; the system will instead calculate the actual value the moment you assign the line discount to a purchase document.

When you fill in the document, the condition specified for the discount is then used by the standard pricing function to calculate the total line discount (8%).

Note

To see how values are calculated, you can go to the Lines FastTab, select a line, and choose Line > Price/Discount Calculation > Line Discount on the ribbon.

Additionally, you can choose Translations on the Lines FastTab to have steps in the calculation translated and copied automatically to documents on which the specified language code is used.

Field	Description
Target Language	Choose a language for the translation.
Value	Enter the translated description of the calculation step.

Note

Although purchase conditions aren’t typically printed on documents in KUMAVISION, the translations can be retrieved if required for a specific implementation project.

Link a condition to a line discount

You must fill in the Purchase Condition No. field if you want to link a condition to a line discount. The currency that you’ve specified for the condition must match the currency entered for the discount.

For discounts linked to conditions, the Discount % field will always be blank in the item master. The value in this field will be determined only when you enter a condition-based discount on a document line.

Use a condition to find the best discount

When trying to determine the best reductions in item prices, the system uses condition-based line discounts in the same way as standard line discounts; a condition isn't a factor in deciding whether a certain discount can be entered on a purchase document. The only difference to standard functionality is that discounts linked to conditions are calculated in real time.

Note

The standard business logic for calculating line discounts hasn't changed.

Copy a condition to a calculation line

When you specify a discount on a purchase line, the condition lines that might be linked to the discount will be copied to a purchase line subpage. To see the subpage:

- Open a purchase order.
- Go to the Lines FastTab and select a line.
- On the ribbon, choose Line > Price/Discount Calculation > Price or Line Discount.

You can change, delete, or insert lines here if necessary. Alternatively, you can set up a blank calculation sheet and use a ribbon function to copy values from condition lines.

Edits are made on this buffer page so that you can simulate their impact first and discard them if necessary; only changes that are accepted by you will be copied to the relevant purchase line (and saved for when you want to reopen the page to make revisions).

When you exit the page, the Discount Calculation field will be selected on the associated purchase line.

Note

This checkbox is hidden by default.

Copy calculation lines

When you post or archive a purchase order, all calculation lines that have been filled in for a condition-based discount on the order are copied alongside other data to the posted or archived document. However, you can still open the lines from there (albeit in read-only format).

Note

Exceptions are receipt and return shipment lines, as neither contain purchase price fields.

Additionally, the lines are copied from one document to another when you use the Copy Document action or when you create a purchase order from a blanket order. Only if you run the Recalculate Lines function will they be updated instead.

The Discount Calculation checkbox can also be unhidden there.

Price units

The following formula is used in the standard app to determine the price on a document line:

Line Amount Excl. VAT = Quantity * Direct Unit Cost * [(100 – Line Discount %) / 100]

But there are other formulas. One of them provides a method for calculating a multiple of an amount by using a price unit.

Example 1:
You enter Piece as the base unit on an item card and a document line. You can then state prices on the line in multiples of 1000, that is, the price unit (or price per unit) equals the purchase price for 1000 pieces.

Example 2:
You enter Piece as the base unit of measure on an item card and Package on a purchase line. A package equals 50 pieces, as specified on the Item Units of Measure page.

You can then state a purchase price on the line in multiples of 50, that is, the price unit (or price per unit) represents the price for 50 packages.

You can already specify price units that you and your vendors agreed on when you set up basic app data.

Workflow

You use the following fields to specify price units on purchase lines:

- Price Unit
- Direct Unit Cost (Price Unit) Excl. VAT

These fields can also be found on archived and posted documents.

Alternatively, you can assign a unit to a single document or store the unit for use by the pricing functionality.

When you assign direct unit costs to items, you need to ensure that price units are set up as well.

> **Note**
>
> Price units aren’t used to convert one unit of measure into another. This is because fixed conversion rates cannot be entered for item units of measure.

For example, you might want to use the unit Piece and enter an item on a document line in pieces. However, the price for the line is determined based on weight (weight-dependent document pricing). To calculate this price, you will need another method that requires a separate explanation (outside the scope of this article).

Item price groups

For items of the same type, you can assign purchase prices per category. For example, a group of paperbacks might cost the same because of the size and material used (regardless of who authored each book).

You can set up prices for item groups in the same way as for individual items. The feature supports entering agreements:

- In vendor hierarchies
- For purchase conditions
- According to quantity, delivery date, and currency
- Based on units of measure, in the following way:

You can store the price (for a group) in a certain unit of measure on a document line provided the unit has been assigned to the relevant group beforehand.

> **Note**
>
> Item price groups cannot be used to store prices for variants. If variants are available for an item assigned to a price group, the group price will apply to all variants.

When you enter the number of an item on a purchase line, the following will happen:

- Besides the price stored specifically for the item, the system will also use the prices entered for the relevant item price group.
- The best price will be determined among all prices found in the system, with neither item-specific nor group prices boasting an advantage here.

You can use the FactBoxes on purchase (invoice) lines to look up item prices, including those specified for a group. You can also select a price there (which corresponds to running the Get Purchase Price action).

To set up a price group for an item:

1. Choose the Search icon, enter Item Price Groups, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a meaningful abbreviation for the group.
Description	Specify a description for the group.
Sales	Turn on this toggle if the group should be used in sales.
Purchases	Turn on this toggle if the group should be used in purchasing.

After creating a group, you can choose Related > Item Price Group > Purchase Prices on the ribbon to enter prices for the group. This process is the same as for prices maintained per vendor or vendor group in the standard app.

Block prices

What values are shown in the Direct Unit Cost and Line Discount % fields on document lines depends on the agreements you have in place with vendors.

You can specify a wide variety of purchase price and discount agreements in the system, including agreements made with an individual vendor, a group of vendors, or all vendors, as well as agreements covering single products or an entire group of items.

When you add an item to a document, the system will compare the value that you enter in the Quantity field on a line against the minimum quantities set for the associated vendor in the item master to calculate the best purchase price and discount available.

In short, the standard app calculates prices and discounts separately on each line of a document. Sometimes, however, you might need to enter one and the same item on multiple lines, for example, because products must be delivered in batches on different dates.

For this reason, standard functionality has been extended so that prices and discounts can now be determined based on the total quantity entered for an item on all lines of a document. For a line to be included in the total, however, the values in the following fields must also match those on the other lines:

- Type and No.
- Variant Code
- Unit of Measure Code and Qty. per Unit
- Allow Line Disc. and Allow Invoice Disc.

Lines on which the following fields aren’t blank will not be included either:

- Receipt No. or Return Shipment No. (concerns invoice or credit memo lines created from a blanket purchase order)
- Blanket Order No. (concerns order lines that refer to a blanket order line)
- Alternate

To calculate block prices:

1. Open a purchase document.
2. On the ribbon, choose Update Block Pricing. Block prices are then calculated when you release the document.

If you manually change the Direct Unit Cost or Line Discount % field on the line of a document, the system will update neither value when you run the function, and the line will not become part of the quantity for calculation.

The same is true for document lines related to blanket order or alternate lines and when you invoice posted receipts or returns.

> **Note**
>
> This feature is only available if you selected Extended Pricing in the Pricing Method field in Purchases & Payables Setup.

Save prices or discounts

Often, the sheer number of item variations sold in the retail sector means that prices aren't maintained in advance but depend on quotes or orders.

The Save Price/Discount feature provides a convenient way for you to save for reuse the item prices that you agreed to on quotes or orders the next time that the items are needed. To save prices from a quote or an order:

1. Create a purchase quote or order that contains the requested items.
2. Change the values in the Direct Unit Cost and Line Discount % line fields to what has been agreed on.
3. Select a line that you want to save a price or discount for.
4. On the Lines FastTab, on the ribbon, choose Line > Price and Discount Calculation > Save Price/Discount.
5. Fill in the fields as described in the following tables.

> **Note**
>
> You can select multiple lines before running this function; only lines of type Item will be saved. If none are among those selected, you will see a message and the process will be canceled.

For purchase prices:

Field	Description
Save Price	Select this field to save the unit cost entered on the line. You need to turn on this toggle before you can fill in the other fields.
Vendor No.	Specify for what vendor the unit cost should be saved.
Starting Date	Specify the date starting on which the unit cost should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the unit cost should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be considered the minimum quantity for applying the cost to the item.
Copy Variant Code	Turn on this toggle if you want the variants specified on the line to be bought at this cost amount per unit. With the toggle turned off, the direct unit cost will be valid for all variants.
Show New Price	Turn on this toggle if you want to see the new unit cost on the Purchase Prices page so that you can review and (potentially) revise the purchase price for the item.

For line discounts:

Field	Description
Save Line Discount	Select this field to save the discount entered on the line. You need to turn on this toggle before you can fill in the other fields.
Vendor No.	Specify for what vendor the discount should be saved.
Starting Date	Specify the date starting on which the discount should apply. This field is filled in with the work date by default but can be changed manually.
Ending Date	Specify when the discount should no longer apply.
Copy Min. Quantity	Turn on this toggle if you want the quantity specified on the line to be considered the minimum quantity for applying the discount to the item.
Copy Variant Code	Turn on this toggle if you want the variants specified on the line to be bought at this discount per unit. With the toggle turned off, the line discount will be valid for all variants.
Show New Line Discount	Turn on this toggle if you want to see the new discount on the Line Discounts page so that you can review and (potentially) revise the line discount for the item.

Afterward, choose OK to exit the page.

Close prices or discounts

The system retrieves direct unit costs and line discounts based on the starting and ending dates entered for them.

KUMAVISION base (BOOSTER) always uses the most recent direct unit cost or discount for an item or item group provided all other factors with an impact on purchases remain the same.

However, you can also have an ending date assigned automatically when you create another price or discount for which you enter a later starting date. This might make it easier for users to understand changes in prices and discounts. To have a date assigned automatically:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, turn on the Close Prices and Discounts toggle.

If you then enter a cost or discount for the same item-price or item-discount combination but enter a later starting date, the system will fill in the Ending Date field for the previously valid entry with a date set to one day before the new starting date.

> **Note**
>
> A price or discount can only be closed if the entry replacing it doesn’t have an ending date.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩↩

Manufacturing

The following features expand standard Microsoft Dynamics 365 Business Central[^1] functionality to provide additional options to those working in your organization’s production department.

COMPLIANCE WITH 21 CFR PART 11 / GAMP5

In manufacturing, more than one employee might be logged on to the same work center when a product is reported as finished. To fulfil 21 CFR Part 11, production journals need to contain an identifier *(an electronic signature)* to show who reported item consumption or completion.

Setup

Extended Manufacturing Setup

Before you can decide who will report on production progress, you must turn on the digital signature feature:

1. Choose the Search icon, enter Extended Manufacturing Setup, and then choose the related link.
2. On the General tab, turn on the Check Digital Signature toggle.

Manufacturing User Setup

To specify who can post to manufacturing and store their digital signatures:

1. Choose the Search icon, enter Manufacturing User Setup, and then choose the related link.
2. Choose New on the ribbon.
3. Assign access to posting based on the following criteria:
   a) If individual login credentials are assigned to everyone, fill in the User ID field but leave the Resource No. field blank.
   b) If one ID is assigned to each work center (so that more than one person can post at a station), group the relevant resources by ID.
   c) If output can be reported on any work center, enter an authorized resource in the Resource No. field but leave the ID field blank.
4. Fill in the rest of the fields as described in the following table.

Field	Description
Digital Signature	Specify the person’s digital signature.
Signature Blocked	Turn on the toggle if you want to block this signature from being used.
Signature Fail Count	Shows the number of times the wrong signature was entered. Following three failed attempts, the Signature Blocked toggle turns on automatically. The reason for blocking the sign-off is then shown in the Signature Blocking Reason field.
Signature Blocking Reason	Shows why the signature was blocked.
Reset Signature	With the toggle turned on, the signature needs to be updated before it can be used again.

Post production journals

Provided the Digital Signature feature is turned on in Extended Manufacturing Setup, the system will ask for a signature when a production journal is posted.

> **Note**
>
> If multiple resources are assigned to the same work center, the resource authorized to post to manufacturing must be specified in a Resource No. field in Manufacturing User Setup.

ID and resource log

During the posting process, the user ID and the resource number of the person who entered a digital signature is stored with the item or capacity entry posted so that you can see who created a certain entry.

PRODUCTION ORDER COCKPIT

Two fields have been added to the list and to the cards of released production orders to indicate in percent and through a traffic light system the progress of the following production order values:

- Material consumption
- Capacity consumption
- Completion (output status)

Other new fields show the progress of outsourced tasks:

- % Subcontracted
  Indicates in percent—for each subcontracted operation—the total of Outstanding Qty. (Base) field values from related purchase lines and the Quantity (Base) values from posted receipt lines. These values, which represent all operations, are then divided by the input quantities entered for the order before being divided by 100. The Subcontracted field, written without the percent sign, indicates by color the degree to which work on the production order has been outsourced to other companies.
- % Subcontrd. Output
  Indicates in percent—for each subcontracted operation—the total of output values as stored in the associated capacity entries. These values, which represent all operations, are then divided by the input quantities entered for the order before being divided by 100. The Subcontrd. Output field, without the percent sign, indicates by color how much subcontracted work has been reported as finished.

> **Note**
>
> For performance reasons, the cockpit entries aren’t updated automatically after each change made to an order. You can choose Home > Update Cockpit on the Released Production Orders ribbon to refresh the data for the selected production order or all orders at once.

NAVIGATE PRODUCTION BOMS AND ROUTINGS

This feature gives you direct access to the production bill of materials and the routing from an item card, making it easier to find production base data.

Component BOMs now also show the BOM and the routing stored for an item, and you can navigate further from there.

Day-to-day production management and work preparations often require that users can go directly from the item card to, for example, the Production BOM and the Routing pages.

However, to see a BOM version in the system, for example, you typically need to open the relevant item and go from there to the production BOM list before you can open the versions page from that list. The goal of the new feature is thus to provide a faster, one-click experience when looking for manufacturing-related information.

Assist button

To see production data, just use the Assist button next to a production field:

- On the item card, to see the production BOM and the routing, as well as their versions, use the button next to Production BOM or Routing.
- On production BOM lines, to see the related BOM, select the button next to the Production BOM field.

> **Note**
>
> The Assist button feature available in KUMAVISION factory365 provides even more options. For details, click here.

Create production data

If the production BOM and routing fields on an item card are empty, you can also use the Assist button to create and link the base data of manufacturing with assembly items.

1. Open an item card.
2. On the Purchasing FastTab, select the Assist button next to the Production BOM No. field.
3. You’re asked if you want to set up a new BOM. Choose Yes to open the production BOM for editing and certification.

CHECK SHORTAGE PRIOR TO RELEASE

Another new feature adds a missing parts list to production orders. Called a shortage list, it contains all components that aren’t available at present.

You can open the list manually from a production order by choosing Shortage List on the ribbon, but it will also open on its own when an order is checked for shortages prior to release.

Setup

You need to turn on the feature before you can use it.

1. Choose the Search icon, enter Manufacturing Setup, and then choose the related link.
2. On the General tab, choose an option in the Shortage Release Check field to specify whether to show the shortage list—and, potentially, a warning message—when a production order is released.

Regardless of what option you choose, the list will include the fields described in the following table.

Field	Description
Type	Specifies the type of component (item) that is not available.
No.	Specifies the number of the component item.
Due Date	Specifies when the production item must be completed.
Description	Specifies the description of the component item.
Quantity per	Specifies the component quantity that is not available for completing the production item.
Unit of Measure Code	Specifies the unit used for the component item (the typical unit for these items is Piece).
Flushing Method	Specifies the method used to record the consumption of the component item in manufacturing.
Expected Quantity	Specifies the estimated demand for the component item in manufacturing.
Remaining Quantity	Shows the result of subtracting the expected from the output quantity.
Projected Available Balance	Specifies how many component items (with the same variant and location code) are available prior to the due date entered on the line, considering all positive and negative adjustments made during that period.
Available Inventory	Specifies the number of component items in inventory.
Substitution Available	Specifies if an item substitute is available for the component.

PRODUCTION STRUCTURE LISTS

A production structure is a partly of fully exploded BOM that shows, along with routings, the data used to manufacture a certain item. All lower-level BOMs for components can also be exploded in this view.

To see a detailed breakdown of how an item is produced:

1. Choose the Search icon, enter Production Structures List, and then choose the related link.
2. Select an item in the Item Filter field. This will fill in both the Prod. BOM Filter field with the BOM stored for this item and the Routing Filter field with the routing number linked to the item.
3. The Prod. BOM Version Filter shows the BOM version that is active on the date values are calculated, whereas the Routing Version Filter field displays the active routing version.
4. The Calculation Date field initially shows the date specified for the routing.
5. If—in addition to BOM components—you also want to see operations on the page, turn on the Show Routings toggle.

You can then run the Calculate function from the ribbon to show all first-level components and operations (=Level field contains the number 1) on the lines.

Afterward, you can expand or collapse the structure by using the arrows next to Level fields. To show every part of the structure, choose the double arrows.

To see the card, BOM, or routing of the item originally used for the production structure, go to the ribbon, choose Related > Production Structure, and select the option you want.

To see the same information about an item stored within the structure, that is, on a line, select a line before choosing Related > Line and the option you want on the ribbon.

To see the structure for a different calculation date than the working date:

1. In the Calculation Date field, choose the date for which you want to display the structure. After you've specified a date, the system will search for BOM and routing versions active on that date and fill in the Prod. BOM Version Filter and the Routing Version Filter.
2. Choose Calculate on the ribbon.

To calculate a BOM version that isn't active on a certain calculation date, you need to change the Prod. BOM Version Filter manually. The new date will only affect the validity of individual components (within starting and ending dates).

You can also see the structure of production BOMs that aren't assigned to any item. These are known as phantom BOMs.

1. On the Production Structures List page, enter a number in the Prod. BOM Filter field so that the system can start searching for a BOM version active on the calculation date.

   Note
   If you calculate a phantom BOM without an item number, routings cannot be shown.
2. Choose Calculate on the ribbon.

PRODUCTION ORDER STRUCTURES

With the help of a production order structure, you can explode all components of a production order in a single view across all levels (provided that the order has more than one level).

1. Choose the Search icon, enter Production Structures List (Prod. Order), and then choose the related link.
2. In the Prod. Order Status Filter and Prod. Order No. Filter fields, select the status and the number of the order that you want to show.
3. If—in addition to BOM components—you also want to see operations on the page, turn on the Show Routings toggle.
4. Choose Calculate on the ribbon.

The actions on the ribbon of the page provide the same functionality as on the Production Structures List page.

CANCEL A PRODUCTION ORDER RELEASE

Note

The function is deprecated. We recommend using the Microsoft standard functionality.

In the standard system, a production order cannot be completed when you've already posted, for example, consumption or resource hours to it but have yet to specify actual output (that is, a warehouse receipt).

Thanks to a new feature, you can now cancel these orders and set their status to Finished.

Requirements

For the cancellation feature to work, the following conditions need to be met:

- In User Setup, on the KUMAVISION FastTab, the Can Cancel Prod. Order toggle must be turned on for users who require the function.
- If output, that is, receipts, have already been posted, they must first be cancelled in the Output Journal.
- If consumption postings have already been canceled, the system will check whether the cancelled amounts match those originally consumed. If the amounts don't match, the feature can't be used.

Instead—as in the standard app—manual intervention is required to cancel transfers tied to production and set the order to Finished.

Cancel a release

If the stated conditions are met, the production order is cancelled per line via consumption and capacity postings. All postings will be made on the working date.

Consumption postings

- Remaining material quantities are reversed through application of the related consumption entries. Therefore, one reversal is posted per entry.
- Any dimension value is copied from its original consumption entry.

Output (capacities)

- For each routing and operation number, the system will total the output and scrap quantities posted, the setup and run times, the downtime, and the direct and overhead costs.
- The direct cost is calculated per cancelled posting based on total times (setup times, run times, and downtime), as they're reversed with each posting.
- If a finished or semi-finished product entered on an order line isn't valuated according to the standard method, the overhead (Indirect Cost %) is weighted and posted based on total overhead.
- Any dimension value is copied from its original capacity entry.

Complete a production order

After the consumption and output postings have been reversed on each line, the production order is set to Finished with the help of standard functionality.

> **Note**
>
> Using standard functionality to change the status of a production order to Finished could very well still allow 'retroactive' postings, such as those for operation-related setup times.

Warehouse Management

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization's logistics department.

MAKE COPIES OF SHIPPING NOTES

By using standard app functionality, you can specify a set number of invoice copies that are printed when you post an invoice sent to a customer.

A new feature lets you do the same for shipping notes so that, for example, as a wholesaler, you can respond to forwarders' requests for a certain number of copies that they need to supply to international clients.

Each copy is printed automatically when a shipping note is posted. To specify the number of copies:

1. Choose the Search icon, enter Customers, and then choose the related link.
2. Open a customer card.
3. On the General FastTab, fill in the No. of Shpt. Copies field.

SHOW QUANTITIES IN ITEM STATISTICS

The statistics page you can open from item cards in Microsoft Dynamics 365 Business Central[1] provides multiple ways in which to list currency amounts for a specific item. None of these views, however, contain item-related quantities. Therefore, a Quantity option has been added to the page.

To see quantities in statistics:

1. Choose the Search icon, enter Items, and then choose the related link.
2. Open an item card.
3. Choose Related > Statistics > Item Statistics.
4. Select Quantity in the Show as Lines field and fill in the other fields as necessary.
5. Choose Show Matrix on the ribbon.

You can then see the following quantity totals for each item ledger entry type:

- Positive Adjmt. (Qty.)
- Purchases (Qty.)
- Output (Qty.)
- Assembly Output (Qty.)
- Quantity Increase
- Sales (Qty.)
- Consumption (Qty.)
- Assembly Consumption (Qty.)
- Quantity Decrease
- Transfer (Qty.)

All quantities except those related to item ledger entries of the Transfer type are shown as positive values. You can drill down on a field to see all the item ledger entries totaled for a certain type.

IDENTIFY RECEIPTS BY SUPPLIER

When retrieving source document lines for warehouse receipts, you can now see the external reference numbers stored on the document lines in addition to item numbers. This way, you can filter for a supplier's item reference when creating documents for warehouse receipts.

MANAGE NEGATIVE INVENTORY BY LOCATION

By using standard system functionality, you can prevent negative inventory at every location of your company. However, some locations might need to make use of the option of posting into the negative.

A field has been added to the location card so that you can decide individually for each location how posting negative adjustments should be handled.

1. Choose the Search icon, enter Locations, and then choose the related link.
2. Select a location card.
3. On the General FastTab, fill in the Prevent Negative Inventory field.

If you didn’t turn on the Prevent Negative Inventory toggle in Inventory Setup, the field on location cards shows the following options:

- Default (No)
- No
- Yes

However, if you turned on the toggle in Inventory Setup, the options are:

- Default (Yes)
- No
- Yes

In other words, the default setting at a location depends on whether you’ve turned the toggle in Inventory Setup on or off.

> **Note**
>
> What default option is set in item masters, that is, a Default (Yes) or a Default (No), always depends on whether you turned on the Prevent Negative Inventory toggle in Inventory Setup.

When you’re trying to post a negative adjustment, the system goes through the following sequence to decide whether to perform or prevent the posting:

- What option is set on the item card?
- What option is set for the location?
- Has the toggle been turned on in Inventory Setup?

SUPPLY CERTIFICATES OF CONFORMITY

You can now also store conformance certificates for lots and provide them to customers if necessary.

Setup

Extended Manufacturing Setup

To be able to use this feature, you need to specify a number series for certificates. To set up a series:

1. Choose the Search icon, enter Extended Manufacturing Setup, and then choose the related link.
2. On the General FastTab, select a series in the Conformance Certificate Nos. field. Alternatively, to create a new series, select the button next to the field and then choose New.

Manage a certificate

To manage certificates:

1. Choose the Search icon, enter Conformance Certificate List, and then choose the related link.
2. On the ribbon, choose New to create a certificate or choose Manage > View or Edit after selecting an existing one.
3. If you choose New, the No. field will be filled in with a number from the series that you set up for this purpose. You can also assign a number manually.
4. Optionally, fill in the Description and Certificate No. fields based on what you see written on the certificate. The other fields on the General FastTab will be filled in by the system after you’ve run the Import function.
5. Choose Import on the ribbon to select the file that contains the certificate.

You can then choose Get Lots from Purch. Receipts, Get Lots from Lot No. Info, or Get Lots from ILEs on the ribbon to assign the certificate to a lot.

The other actions available on the ribbon are described in the following table.

Function	Description
Export	Saves the image file displayed on the header.
Open	Shows the image file displayed on the header.
Delete	Deletes the image file displayed on the header.

Lot No. Information card

This card shows in the Conformance Certificate No. field the number of a certificate of conformity. You can use the Assist button next to the field to open the card of the certificate itself.

POST TRANSFERS AUTOMATICALLY

Another new feature is that you can have the receipt of transfer orders posted at the same time as their shipment. This can be useful, for example, when you have no staff member who could confirm receipt at the destination.

You can use standard or KUMAVISION functionality for direct transfer orders, the difference being that when you choose the default option, you cannot ship or receive only part of an order.

With the KUMAVISION option, on the other hand, the system also posts partial receipts and shipments. To set up the feature:

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. On the Numbering FastTab, in the Direct Transfer Setup field, select the option you want to use (Microsoft Direct Transfer or KUMAVISION base Direct Transfer).
3. In the Direct Transfer Posting field, select Direct Transfer for standard functionality. For the KUMAVISION base extension, select Receipt and Shipment.

However, for the KUMAVISION base function to work, you must also turn on the feature for a location:

1. Open a location card.
2. On the General FastTab, turn on the Auto Post Transfers toggle.

The toggle is then set automatically on transfer orders to which this location is assigned.

GET SOURCE DOCUMENT LINES

In Microsoft Dynamics 365 Business Central[1], you can use the Get Source Documents function to retrieve source data for the following inventory and warehouse documents:

- Inventory Put-Away
- Inventory Pick
- Whse. Receipt
- Whse. Ship

All lines that still need to be received or shipped are then copied there. Lines that aren’t required must be deleted manually. The new Get Source Document Lines function extends standard functionality to include filter options for the lines of source documents. Grouped by type of document, the lines can then be filtered, for example, by item numbers so that only part of a document is retrieved.

POST DURING INVENTORY COUNTS

Standard functionality allows you to post to locations even during physical inventory counts. To prevent this, you can now specify that items can only be posted to other locations or not all during stocktaking.

1. Choose the Tell Me function, enter Inventory Setup, and then choose the related link.
2. Turn the Allow Posting of Items in Physical Inventory on or off.

Deactivating the toggle means you cannot post any item that is currently stored in a physical inventory journal or on an inventory order. Items that aren’t can be used for posting, however.

Activate the toggle if you want to allow items to be posted to other locations. As an example, you might need to take stock in Warehouse 1 but want to continue working in Warehouse 2.

GET BLOCKED ITEMS OR VARIANTS

Typically, blocked items or item variants cannot be used in physical inventory journals.

This means that they aren’t copied to a journal, for example, when you run the Calculate Inventory action from it, and you cannot enter them manually on the lines either. You also aren’t notified whether some are still in inventory despite being blocked.

In KUMAVISION base (Booster), you can use a ribbon function to specify items that would typically be unavailable but must be included in a count temporarily:

1. Open a physical inventory journal.
2. On the ribbon, choose Get Blocked Items/Variants.
3. On the page that opens, you can select the items you want to unblock, and then choose Unblock Items/Variants to include them in a count.

Afterward, the items or variants remain unblocked on the page until you select them again and choose Block Items/Variants.

> **Note**
>
> Rerunning the function clears the current page, however. This means that any items that you didn’t re-block before exiting the page will remain available in the system.

The lines on the page contain the fields described in the following table. You cannot change any of them manually.

Field	Description
Journal Template Name	Specifies the name of the journal template that the line is associated with. This field is relevant only to users working with multiple physical inventory journals at once.
Journal Batch Name	Specifies the name of the journal that the line is associated with. This field is relevant only to users working with multiple physical inventory journals at once.
Line No.	Specifies the number of the line, in steps of 100.
Item No.	Specifies the number of the blocked item.
Variant Code	If available, specifies the item variant that is blocked.
Blocked By	Specifies if the item or variant was blocked because of a failed field check or because a user did so manually.
Blocked (User)	If the item or variant was blocked by a user, specifies the ID of the person who blocked it.
Item Jnl. Variant Block	Specifies if the item variant is blocked in an item journal.
Unblocked (Temp.)	Specifies if the line was unblocked by using the Unblock Items/Variants function. With the field selected, the item or variant shown on the line can be manually entered in a physical inventory journal or be filled in by running the Calculate Inventory action.
Unblocked (Temp.) At/On	Specifies when the Unblock Items/Variants function was run.
Unblocked (Temp.) By	Specifies who ran the Unblock Items/Variants function.
Created On	Specifies when the Get Blocked Items/Variants function was run.
Created By	Specifies who ran the Get Blocked Items/Variants function.

We recommend that you first use the Get Blocked Items/Variants action to fill in the page, then select the lines that you want to unblock and run the Unblock Items/Variants function from the ribbon.

Afterward, you can add the lines to the relevant journal manually (or choose Calculate Inventory on the ribbon) before completing the count and running the Block Items/Variants function to block the items again.

Note

To be able to use unblocked items or variants on sales or purchase documents, the Sales or Purchasing Blocked toggle must also be turned off on the associated item or variant cards.

INVENTORY

Overview

The Inventory Summary page provides you with a comprehensive overview of what inventories you have and what tracking information is available for them.

This means that the summary includes all items and item variants, as well as their tracking codes in the form of lot, serial, and package numbers, sorted by location, zone, and bin. Quantities are shown in the relevant item’s base unit of measure and, if you’re using advanced warehouse functionality, put-away unit.

> **Note**
>
> For locations that don’t need bins, the quantity is shown per serial number if the SN Specific Tracking toggle is turned on for the tracking code assigned to the item. For locations where bins are mandatory, inventory is shown by serial numbers if the SN Warehouse Tracking toggle is activated instead.
>
> The same applies to lot and package numbers and their toggles.

Setup

To turn on the feature:

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. Fill in the fields on the Inventory Summary FastTab as described in the following table.

Field	Description
Auto Create Inventory Summary	Turn on this toggle if you want the overview to be kept up to date by the system. When you activate the feature, an initial summary is created based on all inventory movements that have already been posted. You can turn the toggle off again if you notice that the real-time updates are slowing down the app. You can then still update the overview, albeit manually, by choosing Actions > Refresh Inventory Summary on the ribbon of the page.
Include Adjmt. Bins in Summary	Turn on this toggle if you want the summary to also display all quantities entered in adjustment bins *(see the Adjustment Bin Code field on the relevant location card)*.
Include Negative Invt. in Summary	Turn on this option if you want the summary to also show any negative inventory quantity that might exist.

Inventory summary

To see the items your business currently has in stock, choose the Search icon, enter Inventory Summary, and then choose the related link. The values you see on the page are described in the following table.

Note

You might need to use the Personalize function to unhide some of the fields that will be described in this table.

Field	Description
Entry No.	Shows the unique number of the entry, assigned from a number series when the entry was created.
Location Code	Specifies the location that inventory is shown for.
Zone Code	Specifies the zone that inventory is shown for.
Bin Code	Specifies the bin that inventory is shown for.
Item No.	Shows the number of the item specified on the line.
Variant Code	Shows the code of the item variant specified on the line.
Lot No.	Shows a lot number if one is specified for the posted item.
Serial No.	Shows a serial number if one is specified for the posted item.
Package No.	Shows a package number if one is specified for the posted item.
Description	Specifies the description of the item.
Description 2	If available, specifies the additional description of the item.
Quantity	In advanced warehousing configurations, specifies the item quantity in the put-away unit of measure. In all other configurations, specifies the quantity in the item’s base unit of measure.
Unit of Measure Code	In advanced warehousing configurations, shows the put-away unit of measure assigned to the item. In all other configurations, specifies the item’s base unit of measure.
Qty. per Unit of Measure	Specifies the number of base units per put-away unit. The put-away unit is the unit of measure in which the item is stored in inventory.
Quantity (Base)	Specifies the item quantity in the base unit of measure.
Qty. (Base) to Take	Specifies the quantity of inventory in the base unit of measure that can be use. If the inventory is blocked (checkbox Item Blocked activated), this field is set to "0". The calculation of the field depends on whether the location for the line of the inventory overview is managed with bins or not. **Locations with Bins:** For Lines with locations that are managed with bins, the field is calculated as follows: Quantity (Base) less the following quantities: • Qty. (Base) in Warehouse Activity • Qty. (Base) in Item Journal • Qty. (Base) in Item Reclass. Journal • Qty. (Base) in Whse. Item Journal • Qty. (Base) in Whse. Reclass. Journal • Qty. to Handle (Base) in Pick Worksheet **Locations without Bins:** For Lines with locations that are not managed with bins, the field is calculated as follows: Quantity (Base) less the following quantities: • Reserve Quantity (Base)

Field	Description
Qty. (Base) in Warehouse Activity	Specifies the total quantity in the base unit of measure for all warehouse activity lines of actiontype = Warehouse removal.
Qty. (Base) in Item Journal	Specifies the total quantity in the base unit of measure for all journal lines of the posting types Sales, Issues or Consumption and the Item Journal Templates with the Type "Item".
Qty. (Base) in Item Reclass. Journal	Specifies the total quantity quantity in the base unit of measure for all journal lines of the item type "Transfer" and the Item Journal Templates with the type "Transfer".
Qty. (Base) in Whse. Item Journal	Specifies the total quantity in the base unit of measure for all journal lines of the Posting Type "Transfer" and the Warehouse Journal Template with the Type "Transfer".
Qty. (Base) in Whse. Reclass. Journal	Specifies the total quantity in the base unit of measure for all journal lines of the item type "Bin transfer" and the Warehouse Journal Template with the type "Transfer".
Qty. to Handle (Base) in Pick Worksheet	Specifies the total quantity in the base unit of measure for all lines in the picking worksheets.
Item Blocked	If selected, specifies that transactions with the item cannot be posted, for example, because it is in quarantine.
Mvmt. Blocked (Bin)	Specifies if the associated bin does not allow outbound or inbound transfers, or both.
Mvmt. Blocked (Bin Content)	Indicates if the associated bin content cannot be used in inbound or outbound transfers, or both.
Inventory Blocked	Specifies whether transactions with this inventory can be posted. The field is only selected if: • Item Blocked is selected. • Bin Blocked is set to Outbound or All. • Mvmt. Blocked (Bin) is set to Outbound or All. • Iten Trkg. Blocked is selected.
Item Trkg. Blocked	If selected, at least one of the tracking information cards associated with the inventory (that is, the Lot No. Information Card, Package No. Information Card, or Serial No. Information Card) is blocked.
Dedicated	If selected, specifies that the inventory in the associated bin cannot be picked to meet demand from orders elsewhere.
Bin Ranking	Shows the priority of the associated bin.
Bin Mandatory	Indicates if the Bin Mandatory toggle is turned on for the location at which the item is stored.
Lot Specific Tracking	Indicates if the Lot Specific Tracking toggle is turned on for the item on the associated Item Tracking Code Card.
Lot Warehouse Tracking	Indicates if the Lot Warehouse Tracking toggle is turned on for the item on the associated Item Tracking Code Card.
SN Specific Tracking	Indicates if the SN Specific Tracking toggle is turned on for the item on the associated Item Tracking Code Card.
SN Warehouse Tracking	Indicates if the SN Warehouse Tracking toggle is turned on for the item on the associated Item Tracking Code Card.
Package Specific Tracking	Indicates if the Package Specific Tracking toggle is turned on for the item on the associated Item Tracking Code Card.
Package Warehouse Tracking	Indicates if the Package Warehouse Tracking toggle is turned on for the item on the associated Item Tracking Code Card.

Ribbon functions

Function	Description
Item Card	Opens the item card associated with the selected record.
Variant Card	Opens the variant summary, filtered to the item number and variant code that is entered on the selected record. **Note** This ribbon action is only shown if a variant code is assigned to the record.
Lot Information Card	Opens the lot number information card that is linked to the selected record. **Note** This ribbon action is only available if a lot number is assigned to the record. You see an empty page if no card exists.
Serial No. Info Card	Opens the serial number information card linked to the selected record. **Note** This ribbon action is only available if a serial number is assigned to the record. You see an empty page if no card exists.
Package No. Info Card	Opens the package number information card linked to the selected record. **Note** This ribbon action is only available if a serial number is assigned to the record. You see an empty page if no card exists.
Bin	Opens the bin summary, filtered to the location and bin code that is entered on the selected record. **Note** This ribbon action is only shown if a bin is assigned to the record.
Transfer Inventories	This function is used to initiate transfers within the location for locations with bins. Depending on the location, the Qty. (Base) to Take can be transferred to the following journals for the selected lines. **Locations without controlled storage and picking:** • Item Journals • Internal Transfer **Locations with controlled storage and picking:** • Warehouse Journal • Movement Worksheet To transfer the data to a journal (item or warehouse), the template name and the journal name are entered. By activating the "Open document" toogle, the transferred data is showed directly and can be posted.
Post Pos.-/Neg. Adjm. for selected Inventories	This function can be used to initiate warehouse corrections through additions and disposals. The data for the selected lines is transferred to the following journals depending on the location. **Locations without controlled storage and picking:**

Function	Description
	Item Journal **Locations with controlled storage and picking:** • Issue -> Qty. (Base) to Take • Receipt -> 1 To transfer the data to journal (item or warehouse), the template name and the journal name are entered. By activating the Open Document toggle, the transferred data is displayed directly and can be posted.

Note

None of these actions can be run if you select multiple records at once.

For base data and on documents

You can also see a filtered summary of available inventory by running the Inventory Summary action from the following pages:

Run from	Summary filtered to
Items	Item number
Item Card	Item number
Item Variants	Item variant
Item Variant Card	Item variant
Stockkeeping Units	Item number, variant code, and location
Stockkeeping Unit Card	Item number, variant code, and location
Lot No. Information List	Item number, variant code, and lot number
Lot No. Information Card	Item number, variant code, and lot number
Serial No. Information List	Item number, variant code, and serial number
Serial No. Information Card	Item number, variant code, and serial number
Package No. Information List	Item number, variant code, and package number
Package No. Information Card	Item number, variant code, and package number
Bins	Location code, zone code, and bin code
Bin Content/Bin Contents	Location code, zone code, bin code, item number, variant code, and unit of measure code (the exact filters depend on the page that the action is run from)
Purchase Order (Lines FastTab)	Location code, item number, and variant code (as entered on the line) **Note** Here, the action can only be run for lines of type Item.
Sales Order (Lines FastTab)	Location code, item number, and variant code (as entered on the line) **Note** Here, the action can only be run for lines of type Item.
Transfer Order (Lines FastTab)	Outbound location (Transfer-from Code), item number, and variant code (as entered on the line)
Released Production Order (Lines FastTab)	Item number, variant code, location code, and bin code (as entered on the line)
Production Order Components	Item number, variant code, location code, and bin code (as entered on the line)
Assembly Order (Lines FastTab)	Item number, variant code, location code, and bin code (as entered on the line)
Warehouse Receipt (Lines FastTab)	Item number, variant code, location code, and bin code (as entered on the line)
Warehouse Shipment (Lines FastTab)	Item number, variant code, location code, and bin code (as entered on the line)
Internal Movement (Lines FastTab)	Item number, variant code, location code, and From Bin Code (as entered on the line).
Warehouse Put-away (Lines FastTab)	Item number, variant code, location code, and bin code (as entered on the line)
Warehouse Pick (Lines FastTab)	Item number, variant code, location code, and bin code (as entered on the line)
Inventory Movements (Lines FastTab)	Item number, variant code, location code, and bin code (as entered on the line)
Warehouse Movements (Lines FastTab)	Item number, variant code, location code, and bin code (as entered on the line)

Run from	Summary filtered to
Item Journals	Item number, variant code, location code, and bin code
Item Reclassification Journals	Item number, variant code, location code, and bin code
Physical Inventory Journals	Item number, variant code, location code, and bin code
Warehouse Item Journal	Item number, variant code, location code, and bin code
Warehouse Reclassification Journals	Item number, variant code, and location code
Warehouse Physical Inventory Journal	Item number, variant code, and location code
Warehouse Internal Put-away (Lines FastTab)	Item number, variant code, location code, and From Bin Code (as entered on the line).
Warehouse Internal Pick (Lines FastTab)	Item number, variant code, and location code (as entered on the line).
Movement Worksheets	Item number, variant code, location code, From Zone Code, and From Bin Code (as entered on the line)

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩

Service

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s service department.

ALTERNATE QUOTE LINES

When you open the service item worksheet assigned to a service quote, you can specify for each document line whether the price shown on it should be included in the total quote price.

A line where the Alternative field is set to Alternative, Optional, Selectable, or On Request then appears on printouts in a different format and alongside the value you chose in that field so that you can make customers aware of their options for customization.

REPAIR IN-HOUSE EQUIPMENT

Logs repairs and similar services for in-house machinery or other equipment in the system. To use this function:

1. Choose the Search icon, enter Service Management Setup, and then choose the related link.
2. Turn on the Internal Orders toggle on the KUMAVISION FastTab.

This ensures that service orders set up for a customer for whom the Internal checkbox is selected don’t create open entries. As a result, these services are treated as not billable on invoices.

CONTROL SERVICE (ITEM) LINES ON DISPATCH ORDERS

Specifies whether you want service (item) lines included on dispatch orders, for example, to create package labels with tracking codes.

1. Choose the Search icon, enter Service Management Setup, and then choose the related link.
2. Activate one or both fields described in the following table.

field	description
Service Item Lines on Dispatch Order	Turning on this toggle copies service item lines (that is, repaired items) to dispatch orders.
Service Lines on Dispatch Order	Turning on this toggle copies service lines (that is, a list of the spare parts consumed) to dispatch orders.

PAYMENT TERMS: SERVICE ORDER TYPES

You can assign payment terms to a service order type, to replace those stored in the customer master. To assign terms to an order type:

1. Choose the Search icon, enter Service Order Types, and then choose the related link.
2. On the ribbon, choose New. Alternatively, choose Edit List to edit a type that already exists.
3. Fill in the Payment Terms Code field.

PROFORMA INVOICES

Some businesses, especially those exporting goods, need to provide shipping agents or customers with a proforma invoice prior to delivery. The invoice can be printed from every serviceorder available in the system.

Basically, a proforma invoice looks like a confirmation receipt, the difference being that the extended texts printed on invoices are also printed on proforma documents.

Setup

Service Management Setup

A proforma invoice typically requires an invoice number. To specify a number series for these kinds of documents:

1. Choose the Search icon, enter Service Management Setup, and then choose the related link.
2. On the General FastTab, turn on the Use Invoice Nos. on Proforma Invoices toggle.

Report Selection – Service

You also need to set up the proforma invoice report on the Report Selection – Service page.

Print a proforma invoice

To print a proforma invoice:

1. Open a service order.
2. On the ribbon, choose Actions > Posting > Proforma Invoice.

The system then uses the series set up for invoices to assign a number to the proforma invoice, adding a P upfront. Despite the added P, the number can no longer be used for posting a standard invoice later.

COPY SERVICE DATA

For repeated transactions, you can now use the Copy Document action that is part of standard sales and purchases functionality on service documents.

You can copy both service items and the following documents by running the function from the relevant ribbon:

- Service Quotes
- Service Orders
- Service Invoices
- Service Credit Memos
- Posted Service Shipments
- Posted Service Invoices
- Posted Service Credit Memos

> **Note**
>
> The feature is currently not available for archived documents.

Like in sales, you can copy documents including selected document headers, or copy the lines and refresh the prices on them.

Service items are copied as part of base data by opening a service item card and choosing Copy Service Item on the ribbon. You can transfer the following data in this way:

- General item information
- Components
- Maintenance Plans
- Resource skills
- Comments
- Warranty starting and ending dates

DROP SHIPMENTS AND SPECIAL ORDERS IN SERVICE

In the standard app, you cannot work with drop shipments or special orders in Service. But for on-site repairs especially, having replacement items sent from a supplier directly to a customer can be a useful feature.

To be able to work with drop shipments or special orders in service:

1. Open the Service Item Worksheet.
2. Select a line, and then select the Drop Shpt. Order or the Special Order field.
3. Alternatively, fill in the Purchasing Code field.
4. Repeat the process as necessary.

When you’ve changed the required lines, choose Actions > Plan > Drop Shipment or Special Order to create a purchase order or open the document linked to them.

> **Note**
>
> You might need to use the Personalize function to unhide the Drop Shipment, Special Order, or Purchasing Code field on the page.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Purchase Request

OVERVIEW

A purchase request (BANF in German) is made for items that aren’t linked to item masters. Examples are marketing materials and work clothes.

Requests have their own release process that doesn’t involve standard item planning options, such as requisition worksheets. Request lines can instead be filled with pseudo-items linked to G/L accounts.

A completed request can then be submitted to your company’s procurement department, where staff can create a purchase order from it in the same way as from a requisition worksheet.

> **Note**
>
> You need a separate license before you can use this functionality.

SETUP

Purchase Request Setup

To set up the functionality:

1. Choose the Search icon, enter Purchase Request Setup, and then choose the related link.
2. Fill in the fields as described in the following tables.

General

Field	Comment
Purchase Order Type	Specify the default type that will be assigned to purchase orders created from requests.
Department Code	Specify Global Dimension Code 1. In Microsoft Dynamics 365 Business Central[1], this code typically refers to a department.
Customergroup Code	Specify Global Dimension Code 2. In Microsoft Dynamics 365 Business Central[1], this code typically refers to a cost unit.

No. Series

Field	Comment
No. Series	Specify the number series that will be used for requests.

Email Notification

Field	Comment
Email Notification	Turn on this toggle if you want people working on requests to receive notifications about them by email.
Declined Offers	Select who will be notified should a request be declined, the person who approved it or everyone involved in the process. You can also leave the field blank if nobody should receive an email.
Extended Text for Releases	Specify a message that will be included on emails notifying the relevant people of requests released during an approval workflow.
Extended Text for Rejections	Specify a message that will be included on emails notifying the relevant people of requests rejected during an approval workflow.
Extended Text for Orders	Specify a message that will be included on emails notifying the relevant people of requests ordered during an approval workflow.
Reminder Interval	Specify the interval after which people will be reminded that they still have purchase requests to respond to.

Email accounts

The Purchase Request functionality includes approval workflows during which people set up as approvers in the system will receive email notifications about the progress of requests that they need to respond to.

The email account from which notifications should be sent can be a standard account used by your organization or one specifically created for this purpose. To specify a separate account:

1. Choose the Search icon, enter Email Scenario Assignment, and then choose the related link.
2. Choose Assign Scenarios and select Purchase Request.
3. Fill in the fields as necessary.

Approval User Setup

You can now assign an approval administrator and request workflow codes. The approval administrator has all rights to purchase request functions. Only a single user can be selected as the administrator.

1. Choose the Search icon, enter Approval User Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

Note

All users who work with purchase requests should have a workflow code entered on this page, as the code is needed to identify both the approval process and individual approvers.

Field	Description
User ID	Select the ID of the user involved in the approval process.
Salespers./Purch. Code	Specify the code of the salesperson or purchaser linked to the user.
Approver ID	Select the ID of the user who must approve requests made by the person specified in the User ID field.
Sales Amount Approval Limit	Specify the maximum sales amount that the user entered in the Approver ID field can approve.
Unlimited Sales Approval	Select this checkbox if the user entered in the Approver ID field can approve all kinds of amounts in sales. You cannot fill in a Sales Amount Approval Limit if this field is selected.
Purchase Amount Approval Limit	Specify the maximum purchase amount the user entered in the Approver ID field can approve.
Unlimited Purchase Approval	Select this checkbox if the user entered in the Approver ID field can approve all kinds of amounts in purchasing. You cannot fill in a Purchase Amount Approval Limit if this field is selected.
Request Amount Approval Limit	Specify the maximum request amount that the user entered in the Approver ID field can approve.
Unlimited Request Approval	Select this checkbox if the user entered in the Approver ID field can approve purchase requests regardless of amount. You cannot fill in a Request Amount Approval Limit if this field is selected.
Substitute	Specify a person that can assume the approver role if the original approver is not available.
E-Mail	Enter an email address for each person involved in the approval process. You can also use shared addresses.
Phone No.	Enter the user’s phone number.
Approval Administrator	Turn on the toggle if the user entered on this line is also the workflow administrator, who has unrestricted access to the entire purchase request functionality.
Request Workflow Code	Specify the code of the required approval process.

A workflow code that you enter on this page is automatically copied to a new request that involves the person assigned to the code. This way, you can drill down on the Code field to set up a workflow before you make a request. For more information about how to specify a workflow, see Workflows.

You will need to enter the code, at the latest, when you fill in the request itself. Else, the document cannot be submitted due to a missing workflow. However, the requester can choose another code mid-process. This might be necessary if the approval procedure or the cost center has changed.

Workflows

A workflow specifies the number and permissions of people or departments required for the approval process. To set up a workflow:

1. Choose the Search icon, enter Approval Workflows, and then enter the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the workflow.
Description	Specify a meaningful description for the approval process.
No. of Approvers	Shows the number of approvers required for the process.

You can then choose Approvers on the ribbon to add people to the workflow.

Field	Description
Approver ID	Select the user who will be involved in the approval process.
Name	Shows the name of the user specified in the Approver ID field.
Level	Specify the order in which approvers will be notified or need to approve a document. You can put more than one person on the same level. They are then notified at the same time.
Approval Amount Limit	Fill in this field if the approver should only be notified when the requested amount exceeds a certain limit during approval.
Can Edit	Select this field if the approver should be able to edit requests.
Can Reject	Select this field if the approver should be able to reject requests.
Notify if Fixed Asset	Select this field if the approver should be notified that a fixed asset has been entered on a request line.

Note

If you're using KUMAVISION project365, you can store an approval workflow on the Projects Setup page. For more information, click here.

PSEUDO ITEMS

You can create and manage any number of G/L account-linked pseudo items for use on purchase requests. To set up a pseudo item:

1. Choose the Search icon, enter Pseudo Item List, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
No.	Specify the number that will be used for the item. You must fill in this field manually.
Description	Specify the name of the item.
Description 2	Here you can enter a more detailed description of the item if necessary.
G/L Account	Specify a G/L account that you want to link the item to. You can only choose an account that can be used to post to purchasing (that is, an account for which the Direct Purchasing field has been selected).
G/L Account Description	Shows the description of the account linked to the item.
Vendor No.	Specify the vendor of the item. You can only choose an existing vendor in this field.
Vendor Item No.	Shows the number assigned to the item by the vendor.
Direct Unit Cost	Here you can enter a per-unit price for the item.
Unit of Measure Code	Specify the unit in which the item is purchased.
Department Code	Specify Global Dimension Code 1. In Microsoft Dynamics 365 Business Central[1], this code typically refers to a department.
Customergroup Code	Specify Global Dimension Code 2. In Microsoft Dynamics 365 Business Central[1], this code typically refers to a cost unit.
No. of Extended Texts	Shows the number of text modules stored for the item.

When you create a purchase request later, the lines of the request will be filled in with the information entered on this page.

Note

Pseudo items cannot currently be used with project budgets created in KUMAVISION project365. For more information, click here.

Extended Texts

For each pseudo item, you can store extended texts that will be copied to the orders created from purchase requests. To store a text:

1. Open a pseudo item card.
2. On the ribbon, choose Extended Texts.

For more information on the topic, see Create an Extended Text.

Purchase Prices

You can also maintain special purchase prices for pseudo items. To set up a price:

1. Open a pseudo item card.
2. On the ribbon, choose Prices.
3. Fill in the fields as necessary.

For example, you can enter a starting and an ending date for prices that you only want used within a certain period. Or you can enter a minimum quantity starting at which a certain price should apply.

The Vendor Item No. field can be filled in to differentiate between prices set by multiple or alternative suppliers. If you change vendors on a pseudo item line, the default price entered for the item is then replaced by this new price.

PURCHASE REQUEST WORKFLOW

Create a request

To create a purchase request:

1. Choose the Search icon, enter Purchase Request List, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	**Description**
No.	Exit the field or press Enter to have the system assign a number automatically.
Order Date	This field is automatically filled in with the work date.
Due Date	Specify a date that will represent the requested, planned, and expected receipt dates during the ordering process.
Request Workflow Code	Specify a code for the request workflow. This field might be filled in with a value from the Approval User Setup page if a code has been specified there.
Reason Code	Specify a reason code for the Reject function.
Department Code	Specify Global Dimension Code 1. In Microsoft Dynamics 365 Business Central[1], this code typically refers to a department.
Customergroup Code	Specify Global Dimension Code 2. In Microsoft Dynamics 365 Business Central[1], this code typically refers to a cost unit.
Status	Shows the status of the document within the approval process. The request might be: • Open • Pending Release • Rejected • Ready for Ordering
Created By	Shows the user who created the purchase request.
Created On	Shows the date and time when the request was created.
Last Modified On	Shows when the document was last edited.
Last Modified By	Shows by whom the document was last edited.
Level	Indicates how far the request is in the approval process. You can select the hyperlink to see the order of approval.
Comments	Indicates if comments have been stored for the request. You can select the hyperlink to see them.
Net Total Amount	Shows the net amount for all items entered on the lines.

> **Note**
>
> If a workflow code hasn’t already been selected in Approval User Setup, you need to select a code here—or the request cannot be sent because of a missing workflow. A code can be created as described under Approval User Setup and Workflows.

Lines

You can then fill in the lines. A line can be of type G/L account, Item, Resource, or Fixed Asset. Standard items are ordered through requisition worksheets.

However, you can also select a pseudo item on a line. You don’t specify a line type in this case. Instead, the type is automatically set to G/L account and the account number linked to the item is entered in the No. field.

After you’ve entered a quantity for item, the unit cost stored for the specified vendor is copied from the Direct Unit Cost field on the pseudo item card—or the Pseudo Item Purchase Prices page if the relevant cost is specified there. The same applies to costs specified on G/L account, item, and fixed asset lines.

If the purchase price page includes alternative supplier costs or cost scales, you can also drill down on a Vendor No. field to choose a supplier and an item number on the request line. However, because of a lack of grouping criteria, a separate number is often created for a pseudo item.

The Purchase Request URL field supports the procurement department. It can be used by the person who requested an item to enter a web address that the purchaser tasked with fulfilling the request can open to see more information about the item itself and the terms and conditions of its delivery (by selecting a line and choosing Open URL on the ribbon).

When all required data has been entered, the request can be sent to the initial approver. To send a request:

- Choose Send on the ribbon.
- Choose Yes to start the approval workflow. Or choose No to make changes or corrections.
- If you choose No to correct the request, you must restart the workflow after making the correction by again choosing Send and choosing Yes on the dialog that appears.

Note

To send emails as part of an approval workflow, an SMTP server needs to be set up by your company’s IT department.

Afterward—unless the value of what is being asked exceeds an approval limit specified in Approval User Setup—the request is sent to the approver that has been set up for the next step in the process.

Release a request

An approver can release a request by clicking the link in the notification email they receive or search for the request number within Microsoft Dynamics 365 Business Central[1]. To release a request in the system as an approver:

1. Choose the Search icon, enter Purchase Request List, and then choose the related link.
2. Choose Search and enter the number you received in the notification email. You’ll see the status of the request having been set to Release.
3. Choose Edit to open the request.
4. Choose Release on the ribbon. To add notes to the approval workflow, choose the Comments function and enter a note prior to release.

The request is then sent to the next specified approver. This exact process is repeated until the request has passed through all approval stages. In the last stage, the request is set to Ready for Ordering.

Reject a request

After being emailed about a pending release, an approver can also reject the request that is referenced in the email, because the person who is asking for certain items might not have been authorized to do so. To reject a request:

1. Choose the Search icon, enter Purchase Request List, and then choose the related link.
2. Choose Search and enter the number you received in the notification email. You’ll see the status of the request having been set to Release.
3. Choose Edit to open the request.
4. On the General FastTab, fill in the Reason Code field to specify why this request is being rejected.
5. Choose Reject on the ribbon.

The request document is then reset to Open, and the requester is notified of the rejection.

Resubmit a request

Following a rejection, the requester can edit the document before choosing Send to restart the approval process as described above.

Cancel a request

If a request has been rejected and there's no reason to expect that a revised document would fare any different, the request can instead be canceled and archived. To cancel the request:

- Choose Cancel on the ribbon.
- A dialog appears. Choose Yes to set the document status to Cancelled and have it moved to the Archived Purchase Request List.

Create an order

If a purchase request has been released by all specified approvers, the items can be procured.

1. Choose the Search icon, enter Purchase Request List, and then choose the related link.
2. Choose Search and enter the number you—working in your company's procurement department—received in the notification email. You'll see the status of the request having been set to Ready for Ordering.
3. Choose Edit to open the request.
4. Choose Create Purchase Order on the ribbon. Based on the number of different vendors shown on the request, one or more purchase orders will be created. Afterward, the request will be completed and archived.
5. The requester will be notified of the order by email.

All orders created from purchase requests include the following information:

Purchase header

Field	Description
Purchase Order Type	This field is set to Default, unless otherwise specified in Purchase Request Setup.
Due Date	Shows the due date entered on the purchase request.

Purchase lines

Field	Description
Promised Receipt Date	Specifies the promised receipt date of the purchased items. The content of this field is calculated based on the expected receipt date.
Expected Receipt Date	Specifies the due date entered on the purchase request.
Requested Receipt Date	Specifies the requested receipt date of the purchased items. The content of this field is calculated based on the expected receipt date.
Purchase Request No.	Specifies the document number from the purchase request.
Pseudo Item No.	Specifies a pseudo item, used as a G/L account filter.
Requester ID	Specifies the person who created the purchase request.

Actions – Document Texts
Running the Beginning Text or Ending Text function from the purchase order also shows all texts entered for pseudo items on the original request.

Archived requests

Requests are archived when you create purchase orders for them by using the Create Purchase Order function or, following rejection, choose Cancel (without creating an order).

With the status set to Ordered or Cancelled, the documents are then moved to the Archived Purchase Request List.

Request log

All steps in the request process are recorded in a log. To see the log, choose Log Entries on the ribbon of a purchase request card or choose Related > Log Entries on the ribbon during the approval process.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩↩↩

Dispatch

OVERVIEW

With the Dispatch functionality, you can create orders that contain item lines, manually created document lines—such as for the simple dispatch of sample parts—and information about the packaging used for delivery.

Orders of this type might contain posted shipments alongside warehouse and inventory documents, such as Whse. Shipment and Inventory Pick. On each order, you can assign different unit loads (carriers) to one another to create a deep-nested packaging structure. You can then assign a carrier ID on each level so that when you send (that is, post) the order, the consumption of packaging material and the related warehouse or inventory documents will be posted at the same time.

You can also set up packing suggestions to store instructions on how to pack items and make use of available packaging materials. A suggestion specifies the packing methods for one type of item or packaging material. For grouping different items or materials on a higher level, for example, a pallet, you need to combine both types of suggestions.

Note

The words “carrier” and “packaging," found in Dispatch Setup and elsewhere in the system, are interchangeable in this context. Both describe common types of unit loads and packaging materials.

On dispatch lines, a carrier specifies a single package that might be identified by an ID. The terms “carrier” and “package” are also synonyms here.

Note

As a carrier has, by definition, a quantity of 1, the functionality shouldn’t be used for posting the consumption of ancillary packaging materials (10 meters of stretch film or 4 pieces of edge protectors, for example).

SETUP

You need to set up the functionality before you can use it.

Dispatch Setup

1. Choose the Search icon, enter Dispatch Setup and then choose the related link.
2. Fill in the fields as described in the following tables.

General

Field	Description
Dispatch Order Nos.	Specify the number series that will be used for dispatch orders.
Packing Suggestion Nos.	Specify the series that will be used for packing suggestions.
Posting Type	Specify if the Post function should be used to ship orders or ship and invoice them at the same time.
Print Shipment	Turn on this toggle if you want to use the Post and Print function to print the shipment documents created for a dispatch order.
Print Invoice	Turn on this toggle if you want to use the Post and Print function to print the invoice documents created for a dispatch order.
Print Posted Dispatch Order	Turn on this toggle if you want to use the Post and Print function to print a posted dispatch order.
Company ID	Specify the ID that GS1 has assigned to your company.
Carrier ID Nos.	Specify the number series that will be used for a carrier as part of a carrier ID. A carrier ID combines a company ID and a number from another series.
Set Carrier IDs at Order Release	Turn on this toggle if you want a carrier or package ID assigned automatically when a dispatch order is released.
Set Check Digit for Carrier IDs	Turn on this toggle if you want to create SSCC-compliant carrier IDs. Activating the option will affect both the calculation and input of IDs. As mentioned previously, a carrier ID combines a company ID and a number from another series. With the toggle turned on, the system will check if the specified string is SSCC-compliant. SSCC-compliant means the ID must be numerical in nature and consist of 17 characters in total (the check digit not included). You will see an error message if one of these conditions is not met during the creation of an ID.
New Carrier Posting Method	Turn on this toggle to activate carrier postings. This way, you can post disposable and returnable carriers at different locations.
Dispatch Field Check	Specifies if the mandatory field check is run on dispatch headers and lines.
Create new Dispatch Order from Unassigned Lines	Turn on this toggle, if you want to release and post a dispatch order even if not all item lines are assigned to a load carrier. The release and posting can proceed as long as at least one item line is assigned to a load carrier. When posting, a posted dispatch order is created for the item lines that are assigned to a load carrier. For all other item lines without a load carrier, a new dispatch order is created, and the current dispatch order is deleted. After the posting process, the newly created dispatch order is showed directly.

Carrier Posting

Field	Description
Carrier Item Jnl. Template Name	Choose the name of the item journal template that you want to post shipments with non-returnable packaging to.
Carrier Item Jnl. Batch Name	Choose the name of the item journal batch that you want to post shipments with non-returnable packaging to.
Carrier Transfer Jnl. Template Name	Choose the name of the item journal template that you want to post transfers with returnable packaging to.
Carrier Transfer Jnl. Batch Name	Choose the name of the item journal batch that you want to post transfers with returnable packaging to.

> **Note**
>
> Only journals that aren't already linked to a number series can be entered in these fields.

Packing suggestion groups

You can assign groups of packing suggestions to certain customers, vendors, and locations by using the Packing Suggestion Links function on the ribbon of the relevant card. To set up a group:

1. Choose the Search icon, enter Packing Suggestion Groups and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a unique identifier for the group.
Description	Enter a description for the group.

Report selection

The dispatch functionality comes with its own group of reports. To set them up:

1. Choose the Search icon, enter Report Selection – Dispatch, and then choose the related link.
2. In the Usage field, select one of the options described in the following table.

Option	Uses (as default) report
Dispatch Orders	5048961 – Dispatch Order
Posted Dispatch Orders	5048962 – Posted Dispatch Order
Posted Dispatch Label	5049202 – Posted Dispatch SSCC Label

You can then fill in the rest of the fields as for any other report selection. For more information, see Report Selection for Documents in Business Central - Business Central | Microsoft Learn.

For the Posted Dispatch SSCC Label report, you can also specify in the Source Type (Contents) field whether the report should be used to print carrier or item labels. Afterward, you can narrow down your choice to a certain carrier or item in the Source No. (Contents) field, if necessary (see the following table).

Option	**Uses (as default) report**
(blank)	Nothing has been selected or set up.
All Items	The report will be used to print labels for all items set up in the system.
Item	The report will only be used for the item specified in the Source No. (Contents) field.
All Carriers	The report will be used to print labels for all carriers set up in the system.
Carrier	The report will only be used for the carrier specified in the Source No. (Contents) field.
Item Category	The report will only be used for items that belong to the category specified in the Source No. (Contents) field.

Carriers

To set up a carrier:

1. Choose the Search icon, enter Carriers, and then choose the related link.
2. Fill in the fields as described in the following tables.

General

Field	**Description**
Code	Specify a code for the carrier. You cannot assign a number from a series in this field.
Description	Enter a description for the carrier.
Added Packaging	Turn on this toggle if the carrier represents additional packaging.
Inventory	If the carrier is linked to an item, this field shows how many of these types of carriers you have on hand.
Item No.	Fill in this field if the carrier should be linked to an item.
Carrier Posting Type	If the carrier is posted to a warehouse and the Item No. field has been filled in, you can use this field to specify whether the carrier can be returned to the sender. For disposable packaging, negative adjustment is posted during dispatch. For multi-use units, a transfer is posted to the address set up to receive the carrier (address of a customer or vendor, or another type of location).
ID Required	Turn on this toggle if you want the system to check for a carrier or package ID when the dispatch order assigned to the carrier is released.
Carrier ID Nos.	Here you can specify another number series for the carrier so that a number from this series (instead of the series selected in Dispatch Setup) will be used to create a carrier ID. As mentioned previously, a carrier ID combines a company ID and a number from another series. With the Set Check Digit for Carrier IDs toggle turned on in Dispatch Setup, the system will also check if the specified string is SSCC-compliant.

Note

There is no inventory management feature that links lot or serial numbers to carriers.

Dimensions

Field	Description
Length	Specify the length of the carrier in the unit commonly used in your company.
Width	Specify the width of the carrier in the unit commonly used in your company.
Height	Specify the height of the carrier in the unit commonly used in your company.
Weight	Specify the weight of the carrier in the unit commonly used in your company.

Locations

The location card has been extended to include a FastTab covering dispatch-related functions. To set up the new features:

1. Choose the Search icon, enter Locations, and then choose the related link.
2. Open a location card.
3. Fill in the fields on the Dispatch FastTab as described in the following table.

Dispatch

Field	Description
Dispatch Type	Specify if you want to use the Dispatch functionality at this location. **(blank)** The functionality will not be used. However, if necessary, you can still create a dispatch order that is based on documents linked to the site. **Packages** You can enter packages on sales, purchase return, and transfer orders without having to create dispatch orders. However, if necessary, you can still create a dispatch order from documents linked to the site. **Dispatch Orders** Dispatch orders will be used.
Dispatch Qty. (Suggestion)	Specify the item quantities that should be copied from (warehouse, inventory, or posted) document lines to the lines that you want to dispatch. **Quantity** The quantity entered on each document lines is transferred. **Remaining Quantity** Only what remains to be sent is copied, which means the quantities specified on open and registered but not yet dispatched orders.
Create Dispatch from Pick	With the toggle turned on, the Register Pick and Create Dispatch function is shown on pick documents. When you run the function while registering a pick, a dispatch order is created. **Note** The toggle can only be turned on if you selected the Dispatch Orders option in the Dispatch Type field.
Dispatch Picked Qty. Only	With the toggle turned on, the system copies the pick quantity from the Net Change field to a dispatch order on which the Register Pick and Create Dispatch function is run. Registered quantities that are entered on pick lines (as posted net change) but have not been dispatched (as they originate with open and registered dispatch orders) are not transferred along. They are, however, if this toggle is turned off and the Dispatch Qty. (Suggestion) field is set to Remaining Quantity. With the field set to Quantity, the number of items is copied from the associated warehouse shipment line. If the picked items are material consumption for an assembly item, a dispatch order is only created when the Register Pick and Create Dispatch function is executed if the material consumption has been completely picked. **Note** You need to activate the Create Dispatch from Pick option before you can turn on this toggle.
Dispatch for Whse. Shipments	With the toggle turned on, the functions Create New Dispatch and Add to Dispatch are shown on the Warehouse Shipment page. Running the former action creates a dispatch order for the quantity in the Qty. to Ship field; running the latter extends an existing order to include that quantity. **Note**

Field	Description
	The toggle can only be changed if you selected Dispatch Orders in the Dispatch Type field and turned on the Require Shipment toggle on the Warehouse FastTab.
Packing Suggestion Group	Specify a group for packing suggestions. By assigning a group, you do not need to create a link to a packing suggestion each time an internal dispatch order is received at one of your company’s locations.
Outbound Packaging Location Code	Specify the location that you want to use for packaging that will be shipped. You can then post negative adjustments of disposable and multi-use carriers to this location.
Outbound Packaging Bin Code	Specify the bin that you want to use for packaging that will be shipped. You can then post negative adjustments of disposable and multi-use carriers to this bin.
Inbound Packaging Location Code	Specify the location that you want to use for packaging that will be received. You can then post internal transfers of multi-use carriers to this location.
Inbound Packaging Bin Code	Specify the bin that you want to use for packaging that will be received. You can then post internal transfers of multi-use carriers to this bin.

Customers

The customer and vendor cards have also been extended to include dispatch-related functions. To set up the features for a customer:

1. Choose the Search icon, enter Customers, and then choose the related link.
2. Open a customer card.
3. Fill in the fields on the Dispatch FastTab as described in the following table.

Dispatch

Field	Description
Packing Suggestion Group	Specify a group for packing suggestions. By specifying a group, you do not need to create a link to a packing suggestion each time a dispatch order is sent to a customer.
Inbound Packaging Location Code	Specify the location that you want to use for packaging that will be received. Multi-use carriers from the customer’s dispatch orders are then posted to this location. For maximum transparency, only one customer should be set up per location.
Inbound Packaging Bin Code	Specify the bin that you want to use for packaging that will be received. Multi-use carriers from the customer’s dispatch orders are then posted to this bin.

Ship-to Addresses (action)

Field	Description
Inbound Packaging Location Code	Specify the location that you want to use for packaging that will be received. Multi-use carriers from dispatch orders shipped to the specified address are then posted to this location. For maximum transparency, only one address should be set up per location.
Inbound Packaging Bin Code	Specify the bin that you want to use for packaging that will be received. Multi-use carriers from dispatch orders shipped to the specified address are then posted to this bin.

Vendor

The customer and vendor cards have also been extended to include dispatch-related functions. To set up the features for a vendor:

1. Choose the Search icon, enter Vendors, and then choose the related link.
2. Open a vendor card.
3. Fill in the fields on the Dispatch FastTab as described in the following table.

Dispatch

Field	Description
Packing Suggestion Group	Specify a group for packing suggestions. By specifying a group, you do not need to create a link to a packing suggestion each time a dispatch order is sent to a vendor.
Inbound Packaging Location Code	Specify the location that you want to use for packaging that will be received. Multi-use carriers from the vendor’s dispatch orders are then posted to this location. For maximum transparency, only one vendor should be set up per location.
Inbound Packaging Bin Code	Specify the bin that you want to use for packaging that will be received. Multi-use carriers from the vendor’s dispatch orders are then posted to this bin.

Packing suggestions

Packing suggestions contain all the information relevant to creating dispatch orders. To include a suggestion on an order, you can use the Process Packing Suggestions function found on the ribbon.

The numbers of suggestions are already filled in on the lines of an order when you run one of the actions to get data from warehouse, inventory, or posted documents.

Create a packing suggestion

To set up a suggestion:

1. Choose the Search icon, enter Packing Suggestions, and then choose the related link.
2. Fill in the fields as described in the following tables.

General

Field	Description
Packing Suggestion No.	Exit the field to have a number assigned automatically from the series set up for this purpose.
Type	Specify if the suggestion will be used for an item or a carrier.
No.	Enter the number of an item or a carrier, depending on what option you chose in the Type field.
Description	After filling in the No. field, you can see the description of the item or carrier here. You can also change the description if necessary.
Status	Specifies the status of the suggestion. **New** Automatically set when you create a new packing suggestion. In this status, you can both change an assigned checklist and the suggestion itself. **Certified** You can no longer edit the suggestion. Suggestions need to be in this status before you can use them on dispatch orders. To change a certified suggestion, you need to reset the status to Under Development. **Under Development** You can edit the suggestion. **Expired** Specifies that the suggestion has expired and is no longer in use. It can also no longer be changed.

Lines

To create or delete suggestion lines, choose Insert Line or Delete Line on the ribbon at the top of the Packing Suggestion page.

Field	Description
Sequence No.	A sequence number is assigned automatically when you use the Insert line function to add a line to the suggestion. The content of this field cannot be changed manually.
Object Type	Specifies if the suggestion covers instructions for an item or a carrier. On the first packing line, the value in this field is copied from the suggestion header. On all subsequent lines, it is copied from the Packing Type field found on the preceding line. The content of this field cannot be changed manually.
Object No.	Specifies the item or carrier packed at the specified level. Depending on the option specified in the Object Type field, this field is filled in with the item or carrier that was assigned to the suggestion. On all subsequent lines, the number is copied from the Packing No. field found on the preceding line. The content of this field cannot be changed manually.
Packing Type	Select whether you want the item or carrier shown in the Object No. field packed inside a specific carrier or if it should be linked to a suggestion instead.
Packing No.	Depending on the option specified in the Packing Type field, this field shows the suggestion number used for packing the item or carrier entered in the Object No. field.
Packing Description	Shows the description of the suggestion entered in the Packing No. field. However, you can change the description if necessary.
Qty. per Level	Specifies how many pieces of the item or carrier entered in the Object No. field can be packed on one level. You can only fill in this field if the Object Type and Packing Type are both set to Carrier.
No. of Levels	Specifies how many levels can be stacked inside the carrier that was entered in the Packing No. field. You can only fill in this field if the Object Type and Packing Type are both set to Carrier.
Total Quantity	Shows the result of multiplying the Quantity per Unit and No. of Levels fields. If, on a line of packaging type Carrier, the value in this field is 0, you can enter another value manually. You cannot fill in the field on lines of type Packing Suggestion.
Single Lot	Turn on this toggle to ensure that only one type of carrier or item has been entered on the line when you create a dispatch order. The toggle can only be turned on if the line is the first line on the suggestion or the toggle is also activated on the preceding line. On lines of type Item, the toggle can only be turned on if the item is set up for lot tracking.
Use Packaging as Filler	Specify if you want to use packaging material to fill up container deliveries. **(blank)** No packaging will be added on the last level. **Fill Level** On the last level, the container is filled with as many carriers as needed to match the number shown in the Qty. per Level field. **Fill Corners**

Field	Description
	On the last level, carriers will be added to fill out the corners of the container. You can only choose something in this field if the Qty. per Level and No. of Levels fields contain a value other than 0. The Object Type and Packing Type fields must also be set to Carrier.
Added Packaging	Indicates if the Added Packaging function on the Lines FastTab was used to add more packaging to the line.

Assign a suggestion

To link an item to a packing suggestion:

1. Choose the Search icon, enter Packing Suggestion Links, and then choose the related link.
2. Choose New.
3. Fill in the fields as described in the following table.

Note

When you work with item variants, item and packing suggestion numbers can always be found at the lowest level of suggestions used for dispatch orders so that you can group the variants. To have a variant packed individually, you must create a separate suggestion and separate links for it.

Field	Description
Item No.	Specify the number of the item for which a suggestion will be set up on the line.
Variant Code	Here you can specify an item variant if available.
Item Description	Shows the description of the item entered in the Item No. field. You cannot change this field manually.
Link Type	Specify the type of recipient that the suggestion should be used for. **(blank)** Represents the default assignment if no other option can be used for the item when entered on a dispatch order. **Customer** Links the item to a customer. **Vendor** Links the item to a vendor. **Location** Links the item to a location. This is the default option for assigning internal orders. **Suggestion Group** Links the item to a packing suggestion group. The group can then be assigned to a customer, vendor, or location.
Link No.	Specify a number for the link based on the Link Type field.
Link Description	Shows the description of the link entered in the Link No. field.
Packing Suggestion No.	Specify the number of the suggestion that should be used for the item and the link on a dispatch order.
Packing Suggestion Description	Shows the description of the suggestion that you entered in the Packing Suggestion No. field. You cannot change this field manually.
Packing Suggestion Status	Shows the status of the suggestion entered in the Packing Suggestion No. field. **Note** Only certified suggestions can be used for dispatch orders.
Starting Date Ending Date	Specify the period for which you want the link to be valid. **Note** Filling in these fields is optional.

WORKFLOW

Every dispatch needs a dispatch order, a delivery that consists of one or more packages (=carriers). You can specify packages as early as creating the sales, purchase return, and transfer orders that you want to dispatch.

When you post their shipment, dispatch orders are created and posted by the system while the amount of packaging that you have on hand is reduced (for more information, see Packages on Outbound Documents.

By creating orders manually, you can link different packages together to set up a multilevel structure for a shipment (for more information, see Dispatch Orders for Warehouse and Inventory Documents and Dispatch Orders for Posted Documents). You can also assign packages to individual document lines only.

> **Note**
>
> The location that items are shipped from or consumed at isn't important to creating a dispatch order.

Packages on outbound documents

For ease of use, you can enter packages (=carriers) on the following outbound documents:

- Sales orders
- Purchase return orders

Before you can specify a carrier type or quantity on a document, however, you need to enter on the document header a location for which the Dispatch Type field is set to Packages. This is because linking a carrier to a document line or one carrier to another (such as a box to a pallet) isn't possible here.

When the document is posted as shipped, the system then creates and posts a dispatch order including the source lines and carriers before it transfers the carriers to another location (if they're returnable) or removes them altogether (if they aren't).

> **Note**
>
> If you select the Packages option on a location card and then enter the location on a document header, you must add at least one package to this document as well.

> **Note**
>
> A carrier used in inventory management, that is, a carrier assigned to an item tracked through a serial or lot number, doesn't lower inventory levels. Moreover, you can post any document assigned to the carrier and will not encounter an error.

You can also enter carriers on transfer orders where the Transfer-from Code location supports this option. A dispatch order is then created and posted as you post the outbound transfer.

The transfer order fields can be filled in as described in the following table.

Field	Description
Carrier Code	Specify the code of the carrier.
Carrier Description	This description is copied from the carrier card and cannot be changed.
Carrier Quantity	Specify the number of carriers used.
Carrier Gross Weight (Scales)	Specify the gross weight of the filled carrier.

Manual dispatch

To create a dispatch order manually:

1. Choose the Search icon, enter Dispatch Order List, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	Description
No.	Exit the field to have a number assigned automatically from the series set up for this purpose.
Dispatch Location Code	Enter the location from where the requested goods should be dispatched. You can also use this field to specify the location to which packaging must be posted.
Shipment Method Code	Specify the method for dispatch. You must fill in this field. When you copy another document to the order, the value in this field will be overwritten with the method stored on that document.
Shipping Agent Code	Specify the shipping agent responsible for the dispatch. You must fill in this field. When you copy another document to the order, the value in this field will be overwritten with the agent code stored on that document.
Shipping Agent Service Code	Specify the shipping agent service rendered for the order.
Shipping Agent Text	For more information, see Shipping Agent Text.
Dispatch Notes	For more information, see Dispatch Notes.
Dispatch Provider	For more information, see Shipping Agents.
V-LOG Company	For more information, see V-LOG Setup.
Forwarder/Waybill No.	Specify the number that was assigned to the dispatch order by the forwarder or can be found on the bill of lading.
Assigned User ID	Specify the ID of the user responsible for the document.
Single-Package Dispatch	Select this field if you want to create a posted order for each carrier or package when you send (post) this dispatch order.
Status	Shows the status of the order.
Goods Value	Shows the total value of the goods that you want to dispatch.
Destination Type	The field is filled in automatically when the first document is retrieved.
Destination No.	The field is filled in automatically when the first document is retrieved.
Sell-to Contact No.	The field is filled in automatically when the first document is retrieved.
Ship-to Code	The field is filled in automatically when the first document is retrieved.
Ship-to Name	The field is filled in automatically when the first document is retrieved but can be changed on the order.
Ship-to Country/ Region Code	This field is filled in automatically when the first document is retrieved but can be changed on the order. This field must be filled in.
Ship-to Post Code	The field is filled in automatically when the first document is retrieved but can be changed on the order.
Ship-to Contact	The field is filled in automatically when the first document is retrieved but can be changed on the order.
Fixed Shipping Date	Here you can enter the fixed shipment date that you want transmitted via the V-LOG interface.
Fixed Shipping Time	Here you can enter the fixed shipping time that you want transmitted via the V-LOG interface.
Document ID Scan	Used to insert lines by scanning a document ID.

Shipping Agent/Forwarder

Field	Description
Pickup Date	Specify the date on which the order needs to be picked up.
Pickup Time	Specify the date at which the order needs to be picked up.
Received On	Specify the date on which the order needs to be delivered.
Received At	Specify the time at which the order needs to be delivered.

Packaging Locations

Field	Description
Outbound Packaging Location Code	Specify the location that you want to use for packaging that will be shipped. You can then post negative adjustments of disposable and multi-use carriers to this location.
Outbound Packaging Bin Code	Specify the bin that you want to use for packaging that will be shipped. You can then post negative adjustments of disposable and multi-use carriers to this bin.
Inbound Packaging Location Code	Specify the location that you want to use for packaging that will be received. You can then post internal transfers of multi-use carriers to this location.
Inbound Packaging Bin Code	Specify the bin that you want to use for packaging that will be received. You can then post internal transfers of multi-use carriers to this bin.

Ribbon Actions Dispatch

Posts an order according to the posting type specified in Dispatch Setup. This process includes:

- Posting warehouse and source documents assigned to the order.
- Posting the packaging material consumed.
- For single-lot dispatch, creating a separate posted dispatch order for each carrier or package. The source document will be displayed in the Single-Package Dispatch Parent Order No. field on every order.
- Archiving the posted document(s).

> **Note**
>
> The dispatch order must be released before you can run this function.

Post and Print

Posts a dispatch order and prints the documents that you selected via toggle in Dispatch Setup.

> **Note**
>
> The dispatch order must be released before you can run this function.

Goods Value

Updates the value of goods on the header and lines of a dispatch order.

Release

Changes the status of a dispatch order from Open to Released. The following checks are performed automatically when an order is released:

- Have the Shipment Method Code, Shipping Agent Code, Ship-to Name, Ship-to Country/Region Code and Ship-to Post Code been filled in?
- Has at least one carrier been specified on the order?
- Have all item lines and manual lines been assigned to the specified carriers or have none been assigned to them?
- For single-package shipments:
  Are carriers found only on level 1 of the packing structure and have the document lines been assigned to the specified carriers?

If the answer to all these questions is Yes, the order will be released.

Reopen

Resets the status of an order from Released to Open.

Scan Document ID (Scanner)

Used to create dispatch lines automatically by scanning a document ID.

Can be run for all documents that can also be retrieved by using the Get Warehouse Shpt. or Get Inventory Pick action.

Actions – Functions

The following functions can be called via the menu item "Functions":

Manual Line
Used to enter dispatch lines manually. For more information, see Manual Lines on Dispatch Orders.

Process Packing Suggestions
See Process a Packing Suggestion.

Refresh Packing Structure
Updates the packing structure.

> **Note**
>
> This function also runs automatically when you add packaging materials or assign document lines to packages.

Assign Carrier ID
Assigns an ID to each carrier entered on a dispatch order as early as the order being in the Open status.

> **Note**
>
> For the function to work, you must have specified a number series for carrier IDs and turned on the ID Required toggle for the carrier.

Actions – Warehouse & Inventory

See Dispatch Orders for Warehouse and Inventory Documents.

Actions – Posted Documents

See Dispatch Orders for Warehouse and Inventory Documents.

Related

Choose Dispatch Order > Comments if you want to enter comments for a dispatch order.

Choose Dispatch Order > Edit Dispatch Notes to change the shipping notes sent with V-LOG transmissions.

Dispatch lines

The Lines FastTab contains the item or manual dispatch lines (see Manual Lines on Dispatch Orders) you want dispatched and the carriers that will be used for delivery.

Carriers can be assigned to one another to create a multilevel structure on an order. One or more carriers can also be assigned to item lines or manual lines.

The fields shown on the FastTab are described in the following table.

Field	Description
Document Line Type	Specifies the type of dispatch line. Options are: • (blank) • Item • Carrier
Document Line No.	Specifies the number of an item or the code of a carrier.
Packing Structure	This field is filled in by the system.
Added Packaging	Specifies a line to which no contents (items) can be added but that completes the packaging used *(by providing wrapping foil, pallet bands, or box lids, for example)*.
Empty Packaging	Specifies a packaging line where there are no contents (items) to retrieve. They can be added, however. You can also have this kind of packaging complete a carrier (such as a pallet) to make it safe for transport.
Carrier Posting Type	Specifies if the shipment comes with disposable or multi-use packaging. The field is also used to post packages when you post orders. Disposal packaging is then posted (consumed) off a warehouse that you specified, whereas multi-use packaging is transferred to another location.
Description	Shows the description of the item from the source document line, the manual dispatch line, or the carrier.
Service Item No.	If the order relates to the service area, this field shows number of the service item to be shipped.
Serial No.	Shows the serial number that was stored on the warehouse, inventory, or posted document assigned to the line.
Lot No.	Shows the lot number that was stored on the warehouse, inventory, or posted document assigned to the line.
[Carrier caption] No.	Shows the package or carrier number that was stored on the warehouse, inventory, or posted document assigned to the line. **Note** After the Enable Carriers toggle is turned on in Inventory Setup, the part of the caption that is given in brackets is replaced with the description you entered in the Package Caption field there.
Quantity	This field is filled in by the system.
Qty. to Handle	This field is filled by the system. You can reduce the Qty. to Handle by choosing Functions > Split Line on the ribbon to create multiple lines with carriers.
Unit of Measure Code	Specifies the unit used on the source document line or for the carrier.
Packing Suggestion Group	Shows the code of a suggestion group if the packing suggestion is based on one.
Packing Suggestion No.	Shows the number of a suggestion if the dispatch line was inserted based on a suggestion link.
Packing Suggestion Status	Shows the status of the suggestion that was retrieved.
	Shows, if stored, comments made about the goods value.

Field	Description
Goods Value Comment	
Length	Specifies the length of the packaging.
Width	Specifies the width of the packaging.
Height	Specifies the height of the packaging.
Carrier ID	You can enter a carrier ID manually or have one calculated by the system. For automatic calculation, you need to have turned on the ID Required field on the card of the carrier and set up a number series for carrier IDs. As mentioned previously, a carrier ID combines a company ID and a number from another series. If the Set Check Digit for Carrier IDs toggle is turned on in Dispatch Setup, the system will check if the specified string is SSCC-compliant. For more information, see Dispatch Setup. **Note** The carrier ID is shown without the check digit here. A check digit is typically required for barcode carrier IDs. However, in the present context, the digit must be calculated later based on the type of barcode that should be printed.
Carrier ID Required	Specifies if the carrier requires an ID.
Weight per UOM	Specifies the gross weight stored on the source document line or the weight of the entered carrier. You can change the content of this field manually.

Manage

Choose Delete Line to remove one or more lines from a dispatch order.

Functions Split Line

Splits a line of type Item into two lines.

For the function to work, the quantity on the source line must be greater than 1 and the Qty. to Handle less than the total. The difference between the original quantity and the Qty. to Handle is then entered on the new line.

Add More Packaging

Adds one or more carriers or packaging materials to a dispatch order.

You can specify the total quantity you want to add when you select the carrier or material. A dispatch line with a quantity of 1 is then entered on the order for each individual carrier or material.

Highlight Lines

Highlights in red one or more manually selected dispatch lines so that they can be assigned to another dispatch line.

Remove Highlighting

Deletes the highlighting from lines.

Add to Package

Assigns the highlighted lines to another dispatch line.

- Lines of document line type Item or (blank) can only be assigned to a dispatch line of type Carrier.
- Lines of document line type Carrier can only be assigned to a dispatch line of type Carrier.

Assigning one line to another creates a multilevel structure, with the relations between lines indicated in the Packing Structure field. If you assign a dispatch line that contains a substructure, the entire structure will be added as well.

> **Note**
>
> You should always assign carriers from bottom to top. On Level 1—the lowest level---you should, for example, specify the pallet used. On Level 2, you should store the first set of cardboard boxes. On Level 3, an anti-slip mat might be introduced, and Level 4 might then contain another set of boxes.

Remove from Package

Removes the highlighted lines from a carrier or package.

A line that contains a carrier or package with a substructure is moved to Level 1 in the packing structure, with the substructure left intact.

Line Source Document Line

Opens the source document for a line of type Item. Source documents can be:

- Sales orders
- Purchase return orders
- Service orders
- Transfer orders
- Posted shipments
- Posted service shipments
- Posted return shipments
- Posted outbound transfers

Whse. Document Line

Opens the warehouse shipment or inventory pick for a line of type Item.

FactBoxes

Dispatch order

Field	Description
Dispatch Comment	Indicates if notes have been added to the dispatch order.
Customer No./Vendor No.	Shows the content of the Destination Type field from the dispatch header.
Gross Weight	Shows the total gross weight on Level 1 dispatch lines.
Tare Weight	Shows the total tare weight from all carrier lines, regardless of their level within the structure.
Net Weight	Shows the total net weight from all item and manual dispatch lines, regardless of their level within the structure.
No. of Packages (Level 1)	Shows the total number of packages on Level 1.
No. of Packages (Total)	Shows the total number of packages on all levels.
Interface	Indicates if an interface is used for the dispatch order.

Dispatch Lines

Field	Description
Tare Weight	Specifies the carrier net weight that was entered on the carrier card.
Net Weight	For carrier lines without substructures, this field is empty. For carrier lines with substructures, this field shows the total gross weight from all substructure levels. For item lines, the value in this field is identical to the gross weight of the item times the quantity entered for the item on the lines. **Note** Dispatch considers net and gross weights to be interchangeable. This is because items have already been packed at this point—for example, paint has already been filled into a can.
Gross Weight	For a carrier line without a substructure, this field shows the weight of the carrier. For a carrier line with a substructure, the field shows the total net weight plus the tare weight. For item lines, the value in this field is identical to the gross weight of the item times the quantity entered for the item on the lines.
Length	Specifies the length of the carrier.
Width	Specifies the width of the carrier.
Height	Specifies the height of the carrier.

Dispatch orders for warehouse and inventory documents

You can copy data from warehouse shipments or inventory picks to manually created dispatch orders by choosing Actions > Warehouse & Inventory on the ribbon of an order.

When data is copied from the first document, the Ship-to Address entered on it is transferred to the field with the same name on the dispatch header. Each time you retrieve data from additional documents, you then see a message if the address initially copied to the header is different from the one entered on the document that you want to copy. If you choose OK, the system will create new document lines but leave the data on the header unchanged.

Get Warehouse Shpt. (action)

Copies warehouse shipment data to a dispatch order.

For this function to work, the following requirement must be met:

- The Qty. to Ship field on the shipment lines must be filled in.

Note

In two-stage picking, picks need to be registered before you can copy a warehouse shipment to a dispatch order.

The information stored on the warehouse shipment lines is then used to fill in new dispatch lines as described in the following table.

Field	Description
Document Line Type	This field is filled in with line type Item.
Document Line No.	This field is filled in with the number of the item.
Packing Structure	This field is not filled in automatically.
Description	This field shows the item description from the source document line.
Serial No.	This field is filled in if the warehouse shipment line contains an item tracking line with a serial number.
Lot No.	This field is filled in if the warehouse shipment line contains an item tracking line with a lot number.
Quantity	This field is filled in by the system.
Qty. to Handle	This field is filled in by the system.
Unit of Measure Code	This field shows the unit of measure used on the source document line.
Packing Suggestion Group	This field is filled in if the packing suggestion entered for the order in the Packing Suggestion No. field was calculated with the help of a suggestion group.
Packing Suggestion No.	This field shows the number of the packing suggestion specified for the line.
Packing Suggestion Status	This field shows the status of the specified packing suggestion. Only certified suggestions can be used for dispatch orders.
Carrier ID	For item lines, this field remains blank.
Weight per UOM	This field shows the gross weight from the source document line. You can change the value in this field on the dispatch line.

Get Inventory Pick (action)

Copies inventory picking data to a dispatch order.

For this function to work, the following requirements must be met:

- The inventory pick is not part of another dispatch order.

The data stored on the inventory pick lines is then used to fill in new dispatch lines as described in the following table.

Field	Description
Document Line Type	This field is filled in with line type Item.
Document Line No.	This field is filled in with the number of the item.
Packing Structure	This field is not filled in automatically.
Description	This field shows the item description from the source document line.
Serial No.	This field is filled in if the inventory pick line contains an item tracking line with a serial number.
Lot No.	This field is filled in if the inventory pick line contains an item tracking line with a lot number.
Quantity	This field is filled in by the system.
Qty. to Handle	This field is filled in by the system.
Unit of Measure Code	This field shows the unit of measure used on the source document line.
Packing Suggestion Group	This field is filled in if the packing suggestion entered for the order in the Packing Suggestion No. field was calculated with the help of a suggestion group.
Packing Suggestion No.	This field shows the number of the packing suggestion specified for the line.
Packing Suggestion Status	This field shows the status of the specified packing suggestion. Only certified suggestions can be used for dispatch orders.
Carrier ID	For item lines, this field remains blank.
Weight per UOM	This field shows the gross weight from the source document line. You can change the value in this field on the dispatch line.

Packing structure

For more details on how to add carriers or packaging materials to a dispatch order and assign them to one another, as well as assign item lines to carriers or packaging materials, see Dispatch Lines.

Dispatch an order

Before a dispatch order can be sent (that is, posted), it must be released. The following checks are performed automatically when an order is released:

- Have the Shipment Method Code, Shipping Agent Code, Ship-to Name, Ship-to Country/Region Code and Ship-to Post Code been filled in?
- Has at least one carrier been specified on the order?
- For single-package shipments:
  Are carriers found only on level 1 of the packing structure and have the document lines been assigned to the specified carriers?

If the answer to all these questions is Yes, the order will be released. Posting the order will:

- Post the consumption of packaging material.
- For single-package shipments, create a separate posted dispatch order for each carrier or package. The source document will be displayed in the Single-Package Dispatch Parent Order No. field on every order.
- Archive the posted document(s).

Dispatch orders for posted documents

Get posted documents

You can copy data from the following posted documents to manually created dispatch orders by choosing Actions > Posted Documents on the ribbon of an order:

- Posted sales shipments
- Posted service shipments
- Posted transfer shipments
- Posted return shipments

Note

Regarding posted service shipments, the system copies only lines on which the For Dispatch Order checkbox is selected.

When data is copied from the first document, the Ship-to Address entered on it is transferred to the field with the same name on the dispatch header. Each time you retrieve data from additional documents, you then see a message if the address initially copied to the header is different from the one entered on the document that you want to copy. If you choose OK, the system will create new document lines but leave the data on the header unchanged.

The information that was entered on the source document lines is then used to fill in new dispatch lines as described in the following table.

Field	Description
Document Line Type	This field is filled in with line type Item.
Document Line No.	This field is filled in with the number of the item.
Packing Structure	This field is not filled in automatically.
Description	This field shows the item description from the source document line.
Serial No.	This field is filled in if the source document line contains an item tracking line with a serial number.
Lot No.	This field is filled in if the source document line contains an item tracking line with a lot number.
Quantity	This field is filled in by the system.
Qty. to Handle	This field is filled in by the system.
Unit of Measure Code	This field shows the unit of measure used on the source document line.
Unit	This field shows the unit of measure used on the source document line.
Packing Suggestion Group	This field is filled in if the packing suggestion entered for the order in the Packing Suggestion No. field was calculated with the help of a suggestion group.
Packing Suggestion No.	This field shows the number of the packing suggestion specified for the line.
Packing Suggestion Status	This field shows the status of the specified packing suggestion. Only certified suggestions can be used for dispatch orders.
Carrier ID	For item lines, this field remains blank.
Weight per UOM	This field shows the gross weight from the source document line. You can change the value in this field on the dispatch line.

Packing structure

For more details on how to add carriers or packaging materials to a dispatch order and assign them to one another, as well as assign item lines to carriers or packaging materials, see Dispatch Lines.

Dispatch an order

Before a dispatch order can be sent (that is, posted), it must be released. The following checks are performed automatically when an order is released:

- Have the Shipment Method Code, Shipping Agent Code, Ship-to Name, Ship-to Country/Region Code and Ship-to Post Code been filled in?
- Has at least one carrier been specified on the order?
- For single-package shipments:
  Are carriers found only on level 1 of the packing structure and have the document lines been assigned to the specified carriers?

If the answer to all these questions is Yes, the order will be released. Posting the order will:

- Post the consumption of packaging material.
- For single-package shipments, create a separate posted dispatch order for each carrier or package. The source document will be displayed in the Single-Package Dispatch Parent Order No. field on every order.
- Archive the posted document(s).

Dispatch workflow

Besides the option of creating dispatch orders and lines based on unposted warehouse or inventory documents or based on posted documents, you can create or add lines to dispatch orders during certain logistics processes, as described in the following.

Picking

When you turn on the Create Dispatch from Pick toggle on a location card, you can create a dispatch order for the location when you register a pick. As for the quantity to deliver, you can choose one of the following options after turning on the toggle Dispatch Picked Qty. Only on the card:

- Picked quantity
- Picked quantity + registered quantities

For more information, see Locations – Dispatch.

Warehouse shipments

When you turn on the Dispatch for Whse. Shipments toggle on a location card, you can create a dispatch order or add quantities to an existing order on the Warehouse Shipment page.

For more information, see Locations – Dispatch.

Process a packing suggestion

To create a set of instructions on how to pack items and carriers according to the suggestion numbers that were filled in on dispatch lines, choose Actions > Functions > Process Packing Suggestions. The numbers were copied to the lines when you used one of the functions to get data from a warehouse, an inventory, or a posted document.

When you run the action, the system creates a temporary structure with the help of the specified packing suggestion and the links between suggestions and items that you set up on the Packing Suggestion Links page.

You cannot edit the structure that you see, but you can copy it to the order by choosing OK.

Manual lines on dispatch orders (no warehouse, inventory, or posted documents)

To add document lines to a dispatch order manually:

1. Choose the Search icon, enter Dispatch Order List, and then choose the related link.
2. Open a dispatch order.
3. On the ribbon, choose Actions > Functions > Manual Line.
4. Fill in the fields as described in the following table.

Field	Description
Description	Specify a description for the dispatch line.
Quantity	Enter a quantity for the line.

This creates a dispatch line with the following field values on the lines:

Field	Description
Document Line Type	Remains blank and cannot be changed.
Document Line No.	Remains blank and cannot be changed.
Packing Structure	Remains blank and cannot be changed.
Description	Shows the entered description.
Serial No.	Remains blank and cannot be changed.
Lot No.	Remains blank and cannot be changed.
Quantity	Shows the entered quantity.
Qty. to Handle	The field is filled in by the system.
Unit of Measure Code	Remains blank and cannot be changed.
Carrier ID	Is determined automatically.
Weight per UOM	Remains blank and cannot be changed.

Packing structure

For more details on how to add carriers or packaging materials to a dispatch order and assign them to one another, as well as assign manually created lines to carriers or packaging materials, see Dispatch Lines.

Dispatch an order

Before a dispatch order can be sent (that is, posted), it must be released. The following checks are performed automatically when an order is released:

- Have the Shipment Method Code, Shipping Agent Code, Ship-to Name, Ship-to Country/Region Code and Ship-to Post Code been filled in?
- Has at least one carrier been specified on the order?
- For single-package shipments:
  Are carriers found only on level 1 of the packing structure and have the document lines been assigned to the specified carriers?

If the answer to all these questions is Yes, the order will be released. Posting the order will:

- Post the consumption of packaging material.
- For single-package shipments, create a separate posted dispatch order for each carrier or package. The source document will be displayed in the Single-Package Dispatch Parent Order No. field on every order.
- Archive the posted document(s).

V-LOG dispatch

Besides the packing slip, wholesalers might need other shipping documents, especially a package label for use by the shipping agent. The interface to the program used to ship orders is thus often adapted to meet the requirements of specific projects.

KUMAVISION base (BOOSTER) provides Dispatch users with an interface to V-LOG. With the help of V-LOG, they can automate workflows for shipping orders via UPS, DHL, DPD, and other logistics companies and forwarders.

However, this means that all data needed for V-LOG transfers, for example, the delivery address, the number of packages, and the weight, must be provided in a standardized format.

Additionally, you need to set up the interface in the system as described in the following:

V-LOG response fields

Some fields transmitted with a KUMAVISION V-LOG request must be copied over to the message returned by ecovium, as the codes stored in them will need to be analyzed by the system after the response has been received.

Field	Used after receiving a response by ecovium to…
send_referenznr_02	…determine the PostedDispatchHandHeader of the specified shipment.
send_referenznr_06	…determine the postedDispatchHandlingLine of the specified package.
send_referenznr_07	…determine the postedDispatchHandlingLine of the specified package.
send_gewichteinzel	…set the postedDispatchHandlingLine to Gross Weight (Scales).

No. Series

Specify a number series for future orders if necessary.

For more information on how to create a series, see Dispatch Setup.

Carrier Setup

Set up the carriers required for the interface.

For more information on how to set up a carrier, see Dispatch Setup.

Locations

Set up one or more locations with dispatch type Dispatch Orders.

Only locations with this setup can be transferred via the interface.

V-LOG Setup

Turn on the interface itself.

1. Choose the Search icon, V-LOG Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

Note
Usually, this interface is set up in collaboration with KUMAVISION staff.

Field	Description
Active	Turn on this toggle to activate the V-LOG interface. **Note** The interface should be turned on only after you finished configuring the web service endpoint.
Webservice Endpoint	Specify an ecovium-compliant URL.
V-LOG Company	Enter a company in an ecovium-compliant format.
Authentication Type	Here you can choose between anonymous (none) and basic authentication. If basic authentication is selected, fields for user name and password are also displayed. We expressly recommend connecting V-Log with authentication. This applies in particular but not exclusively to SaaS environments. Other V-LOG authentication Types can be implemented on a project-specific basis.
Printer	Select the printer that labels should be printed on.
Status Request Cooldown (min)	Specify the cooldown period required between successive, manually triggered status requests on a V-LOG line. Another V-LOG update can only be requested by a user after the time entered in this field has passed.
Verify V-LOG Postage Mapping	Specify whether the system should check for valid V-LOG postage mappings before dispatch orders are released.
Use XML Formatting	Turn on this toggle if you want to use the XML format to transfer the following values: • 'Send_Date' • 'Send_DateTime' • 'inch_value' • 'send_height' • 'send_length' • 'send_width' • 'send_value of goods' The option is turned on automatically when you first set up the interface. For an existing setup, you can turn off this option to test if the program receiving the data can handle the XML values.

Shipping agents

Specify V-LOG as the default dispatch provider for a shipping agent.

1. Choose the Search icon, enter Shipping Agents, and then choose the related link.
2. Select a shipping agent.
3. Select V-LOG in the Default Dispatch Provider field.

This option is used so that you don’t need to enter the provider manually on every new order. However, you can choose a different provider if necessary.

Transmissions to V-LOG mainly consist of numeric key values. If you want all dispatch orders shipped by an agent transmitted through V-LOG, you need to enter the agent’s numeric value in the V-LOG Code field. This numerical value must be requested from ecovium on a case-by-case basis.

Shipping method

A growing number of carriers require that you include a shipping method when you transmit data through V-LOG.

1. Choose the Search icon, enter Shipping Agents, and then choose the related link.
2. On the ribbon, choose Shipping Agent Services.
3. Select a line, and then fill in the fields described in the following table.

Field	**Description**
V-LOG Code	Specify the numeric value of the carrier whose services that you want to use. The value must be requested from ecovium on a case-by-case basis.
V-LOG Shipping Method	Specify the shipping method that you want to transmit through V-LOG. **Note** This method is used to further specify the code entered in the previous field, but it is not always required. Whether a method must be entered depends on the carrier that you have chosen.<>

V-LOG notes

Additionally, you can add notes that the shipping agents require. These notes might include descriptions of the dispatch process and customizable, numeric V-LOG codes that can later be assigned to an order. To add a note:

1. Choose the Search icon, enter Shipping Agents, and then choose the related link.
2. Select a shipping agent.
3. On the ribbon, choose Related > Line > Dispatch Notes.
4. Fill in the fields as described in the following table.

Field	Description
Shipping Agent	Shows the shipping agent for whom you want to add a note.
V-LOG Dispatch Note	Enter a V-LOG code to categorize the dispatch note. For more information, see the following table.
Description	Specify a text that will be used as a description when you assign the note to a dispatch order.
Numeric V-LOG Dispatch Note	Specify a numeric V-LOG code manually, if necessary.

V-LOG Code	Option Name	ecovium Field Name
DEL	Delivery Remarks	Delivery Advice
SUR	Miscellaneous	Miscellaneous Information
SIN	Tail Lift Required	Tail Lift Required
SE	Secured	Secured
INV	Order Group (Separate Billing)	Consignment Group (for Separate Invoice)
RE	Invoice Text	Invoice Text
COD	COD at Pickup	COD for Collection
AVI	Pickup Notice	Advice Information for Collection
C01	Order Text 1	Order Text 1
C02	Order Text 2	Order Text 2
I01	Invoice Text 1	Invoice Text 1
I02	Invoice Text 2	Invoice Text 2
I03	Invoice Text 3	Invoice Text 3
I04	Invoice Text 4	Invoice Text 4
EAV	Email Address	Email Address

Shipping agent text

You can use the Shipping Agent Text field on dispatch orders to enter another note that you want to transmit to a shipping agent. You can enter a maximum of 250 characters here.

Dispatch notes

You can also drill down on the Dispatch Notes field found on dispatch orders to select a V-LOG dispatch note that you assigned to a certain shipping agent.

Status and package tracking requests

If V-LOG isn't used in Black Box mode or doesn't return a tracking number for a package automatically, you can retrieve the required information by scheduling a job queue entry for codeunit `Codeunit 5049232 KVSKBAVLOGJobQueue`.

This entry must include the value entered in the Status field. To get it, you need to set the following filters on each V-LOG line:

- Published field is selected.
- Completed field is selected.
- V-LOG status code is neither 8?? nor 9??
- Status transferred before the period specified in the Status Request Cooldown (min) field in V-LOG setup (default being 10 minutes). The codeunit can also be used to transmit all V-LOG lines in the Waiting status (see Interface Command field) to the V-LOG program at once.

Mapping V-LOG Interface Data Response to V-LOG

V-LOG XML Tag	Microsoft Dynamics 365 Business Central[1] Table	Field/Value
send_mandant	KVSKBAPostedDispatchHandHeader	"KVSKBA V-LOG Company"
send_frankaturkz	Shipment Method	"KVSKBA V-LOG Code"
empf_land_kurz	PostedDispatchHandHeader	"Ship-to Country/Region Code"
frachtfuehrer	Shipping Agent	"KVSKBA VLOG ShippingAgentCode"
empf_mail	Customer	"E-Mail"
send_referenznr_01	KVSKBAPostedDispatchHandHeader	"No."
send_referenznr_02	KVSKBAPostedDispatchHandHeader	"No."
empf_adr_01	KVSKBAPostedDispatchHandHeader	"Ship-to Name"
empf_adr_02	KVSKBAPostedDispatchHandHeader	"Ship-to Name 2"
empf_adr_03	KVSKBAPostedDispatchHandHeader	"Ship-to Contact"
empf_ort	KVSKBAPostedDispatchHandHeader	"Ship-to City"
empf_plz	KVSKBAPostedDispatchHandHeader	"Ship-to Post Code"
empf_staat	KVSKBAPostedDispatchHandHeader	"Ship-to County"
empf_strasse	KVSKBAPostedDispatchHandHeader	"Ship-to Address"
empf_tel		-
send_hilf_01	KVSKBAPostedDispatchHandHeader	"KVSKBA V-LOG ShippingAgentText"
serviceindicator_count	KVSKBAVLOGPostDispSvcInictr	Count
collection_index		empty
serviceindicatorcode	KVSKBAVLOGPostDispSvcInictr	"V-LOG Service Indicator"
send_serviceindicator	KVSKBAVLOGPostDispSvcInictr	"Numeric V-LOG ServiceIndicator"
send_serviceindicator_text_01	KVSKBAVLOGPostDispSvcInictr	Description
send_artlademittel_01	KVSKBAVLOGCarrierMapping	"V-Log Code"
send_beschreibunginhalt	KVSKBAVLOGCarrierMapping	Description
send_2n_prodcode	Shipping Agent	"KVSKBA VLOGShippingServiceCode"
send_versandart	Shipping Agent	KVSKBAVLOGShippingMethod
send_nr		PacketNo
end_hoehe	PostedDispatchHandlLine or Carrier	Height
send_laeng	PostedDispatchHandlLine or Carrier	Length
send_breite	PostedDispatchHandlLine or Carrier	Width
send_gewichteinzel	KVSKBAPostedDispatchHandlLine	"Gross Weight (Scale)" or "Net Weight" + KVSKBAPostedDispatchHandlLine.Tara
send_referenznr_06	KVSKBAPostedDispatchHandlLine	"No."
send_referenznr_07	KVSKBAPostedDispatchHandlLine	"Line No."
Zoll_InhaltKurzb	Item	"Tariff No."

V-LOG XML Tag	Microsoft Dynamics 365 Business Central[1] Table	Field/Value
send_Warenwert	KVSKBAPostedDispatchHandlLine	"KVSKBA V-LOG Value of Goods"
send_warenwertwaehrung		'EUR'
article		empty
Send_TerminDatum	KVSKBAPostedDispatchHandHeader	"KVSKBA V-LOGAgreedShippingDate"
Send_TerminUhrzeit	KVSKBAPostedDispatchHandHeader	"KVSKBA V-LOGAgreedShippingTime"
zoll_waehrung		'EUR'
zoll_Wert	KVSKBAPostedDispatchHandHeader	"KVSKBA V-LOG Value of Goods"

Data Response from V-LOG

XML Tag	Microsoft Dynamics 365 Business Central[1] Table	Field/Value
send_referenznr_02	KVSKBAPostedDispatchHandHeader	"No."
shipment_status	KVSKBAVLOGInterfaceLine	"V-LOG Status Code"
send_referenznr_06	KVSKBAPostedDispatchHandlLine	"No."
send_referenznr_07	KVSKBAPostedDispatchHandlLine	"Line No."
send_gewichteinzel	KVSKBAPostedDispatchHandlLine	"Gross Weight (Scale)"
send_id	KVSKBAPostedDispatchHandlLine	"Package Tracking No."

Posted dispatch orders

To print a posted dispatch order:

1. Choose the Search icon, enter Posted Dispatch Orders List, and then choose the related link. Alternatively, open any posted order linked to the dispatch order.
2. Select a dispatch order and choose Reports > Print. Alternatively, open the relevant document and choose Line > Dispatch.

If you open the posted order from a source document, the source document lines found on it are highlighted in blue.

SHIP LIMITED HAZMAT QUANTITIES

With the Dangerous Goods feature, you can restrict the amount of hazardous material that is handed over to forwarders with each package and carrier per day and monitor compliance with these quantity specifications.

Note

The functionality is meant to help you manage your company’s day-to-day operations but isn’t a replacement for apps covering all aspects of dangerous goods handling. It cannot be used to automate the classification of hazardous materials, for example.

It also doesn’t provide the options needed to create safety and other datasheets, formulate operating guidelines, or implement rules and checks regarding storage and mixed shipments.

Note

You need a separate license before you can use this feature.

Setup

Hazmat classes

As a first step, you need to set up hazmat classes that can later be assigned to hazmat IDs. To set up a class:

1. Choose the Search icon, enter Hazmat Classes, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the class of hazardous materials.
Description	Specify a description for the class.

Transportation categories

These categories indicate how likely it is that certain materials will cause an unreasonable risk to safety, health, and property during shipping. The higher the number, the greater the danger posed by the material.

Typically ranging from 0 to 4, each category includes a factor *(often, a value between 0 and 50)* that is multiplied with the amount of dangerous goods to be shipped, the result being the hazmat score assigned to the delivery.

To set up a category:

1. Choose the Search icon, enter Transportation Categories, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Transportation Category	Specify a code for the category.
Factor	Specify the factor that will be used for the category as required by law.

Tunnel codes

A tunnel code—usually, in the form of A to E—is assigned to hazmat IDs to specify what types of dangerous goods can be transported safely through tunnels with this code.

1. Choose the Search icon, enter Tunnel Codes, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the tunnel restriction.
Description	Enter a description for the restriction.

Hazmat classification

On the Hazmat Classification page, available via the general search function, you can specify the properties of dangerous goods, such as whether they’re corrosive, toxic, or oxidizing.

Field	Description
Code	Specify a code for the hazardous material classification.
Description	Enter a description for the classification.

Hazmat IDs

To set up the numbers used to identify hazardous materials.

1. Choose the Search icon, enter Hazmat IDs, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify the code that will be used to identify the hazardous material.
UN Number	Enter the code that the UN assigned to the material to classify it as a dangerous good which might pose a risk to the public during transportation.
Hazmat Class	Specify the class of hazardous materials that you want to assign to the ID.
Packing Group	Specify the packing group that will be used for this ID.
Shipping Class	Specify the shipping class that will be used for this ID.
Special Regulations	If available, specify a code for special regulations governing this class of dangerous goods.
Limited Quantity	Specify the maximum hazmat quantity that a package can contain according to the requirements for limited quantities.
Excepted Quantity	Specify the maximum hazmat quantity that a package can contain according to the requirements for excepted quantities.
Unit of Measure	Specify the unit of measure that will be used for limited and excepted quantities.
Description	Specify a description for the hazmat ID.
Environmental Hazard	Select this field if the material is considered harmful to the environment.
Transportation Category	Specify the transportation category (typically, one between 0 and 4) that will be used for this ID. The category indicates the likelihood that items with this hazmat ID will cause an unreasonable risk to safety, health, and property when transported in commerce.
Factor	Shows the multiplication factor that has been specified for the transportation category. This factor is later multiplied with the quantity being shipped, the result of which will be assigned as a hazmat score to the delivery.
Tunnel Code	Shows the tunnel restrictions that will be in place for this hazard ID.
Classification Code	Assign a classification to this ID.

Label items as dangerous

To label an item as potentially dangerous:

1. Open an item card.
2. On the Warehouse FastTab, fill in the Hazmat ID field.
3. You also must fill in the Hazmat Pts. per Base Unit field, as this score is used to monitor the quantity allowed per inner packaging and carrier.

Maximum hazmat score (shipping agent)

Afterward, you need to specify the maximum number of hazmat points that are allowed on the supplier side:

1. Choose the Search icon, enter Shipping Agents, and then choose the related link.
2. Select the relevant agent, and then fill in the Max. Hazmat Pts. per Day field.

Workflow

Deliver hazmat materials

After a sales line containing dangerous goods is posted as shipped, you need to create a dispatch order and run the Posted Documents action to copy data from the posted shipment to the new document. Afterward, you can fill in and post the order as you’re used to.

Daily balance End of day worksheet (hazmat)

Before dangerous goods are handed over to a forwarder, the system checks if their shipment exceeds the maximum number of hazmat points that a supplier can use per day.

To see the total score, open the End of Day Worksheet (Hazmat) page via the general search function. The page header shows the following information:

Field	Description
Loading Date	Specifies on which date the dangerous goods were loaded by the shipping agent.
Loading Time	Specifies at which time the dangerous goods were loaded by the shipping agent.
Total Score	Shows the sum of hazardous material points from the worksheet lines. **Note** If this value exceeds the maximum number of points allowed per day, the score in the field is shown in red.
Max. Points	Specifies the maximum number of points that are allowed for the relevant shipping agent per day.

You can then run the Get Lines function from the ribbon to copy to the page all posted dispatch lines on which dangerous goods are entered but that have yet to be registered. The fields on the lines are described in the following table.

Field	Description
No.	Shows the number of the posted dispatch order from which the hazmat line originates.
Ship-to Name	Shows the name goods were shipped to according to the posted dispatch order from which the hazmat line originates.
Shipping Agent Code	Shows the agent who delivered the goods according to the posted dispatch order from which the hazmat line originates.
Shipping Agent Service Code	Shows the shipping agent service that was used according to the posted dispatch order from which the hazmat line originates.
Total Score	Shows the total hazardous material points, as entered on the posted dispatch order from which the hazmat line originates.

You can then use the Register function on the ribbon to confirm handover of the goods to the supplier.

Note

Hazmat deliveries exceeding the daily point limit cannot be registered unless you lower the number of dispatch lines. Delete the relevant lines from the journal and rerun the Register action. The lines you’ve removed are available again afterward.

Register a Daily Balance

To see the hazmat deliveries registered on a certain day:

1. Choose the Search icon, enter End of Day List (Hazmat), and then choose the related link.
2. On the ribbon, choose Report > Daily Balance to see a manifest of all dangerous goods shipments on the specified loading date.

You also see the following information on an End of Day Card where goods have been registered:

Field	Description
No.	Specifies the sequence number assigned to the daily balance.
Loading Date	Specifies the loading date for the daily balance.
Loading Time	Specifies the loading time for the daily balance.
Total Score	Shows the sum of all hazmat points from the posted dispatch lines at the end of the day.

The worksheet lines contain the posted dispatch lines that were copied to the carrier when the daily balance was registered.

Cancel and recreate a daily Balance

To cancel a daily balance:

1. Choose the Search icon, enter End of Day List (Hazmat), and then choose the related link.
2. Select the relevant end-of-day registration.
3. On the ribbon, run the Cancel action. The daily balance is deleted and the posted dispatch lines it contained can be re-registered in another worksheet.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

Compliance

OVERVIEW

The Compliance functionality helps you design processes that can fulfil regulations such as FDA 21 CFR 11. It supplies, for example, the operational system checks you need for properly certifying BOMs and routings, releasing items, vendors, customers, and validation plans, and providing feedback on manufacturing operations.

You can specify individual regulatory requirements through table and field filters. If, following a change in data, you want to re-release a record that must meet some of those requirements, a compliance document will be generated. This document then needs to be approved by certain staff members prior to release.

> **Note**
>
> You need a separate license before you can use this functionality. If you’re working with KUMAVISION medtec365 and the Workflow and Notification Manager, you can also specify a workflow for handling approvals.

> **Note**
>
> If you’re working with KUMAVISION healthcare365 and the Workflow and Notification Manager, you can also specify a workflow for handling approvals.

SETUP

Compliance Setup

To set up compliance management:

1. Choose the Search icon, enter Compliance Setup, and then choose the related link.
2. Fill in the field as described in the following table.

Field	Description
Compliance Nos.	Specify the number series that you want to use for compliance documents.
Legal Owner or Possessor Reqd. for Rejection	Turn on this toggle if you want only the user who created a compliance document to be able to reject it. With the toggle turned off, all users who have the relevant compliance permissions can reject the document.

Compliance permissions

Individual permissions

You set up permissions for users to specify who will be involved in each step of the compliance process. To set up a permission:

1. Choose the Search icon, enter Compliance Permissions, and then choose the related link.
2. Choose New on the ribbon.
3. Fill in the fields on the new line as described in the following table.

Field	Description
Code	Enter a meaningful code to identify the permission. You can later assign this code to a permission group.
Description	Enter a brief text to describe the permission.

Permission groups

Individual permissions can be grouped before being assigned to a user authorized to manage compliance checks. To set up a group:

1. Choose the Search icon, enter Compliance Permission Groups, and then choose the related link.
2. Choose New on the ribbon to insert a new line on the page.
3. Fill in the fields as described in the following table.

Name	Description
Code	Enter a meaningful code to identify the permission group.
Description	Enter a brief text to describe the group.

To add individual permissions to a group, fill in the Code fields on the Lines FastTab.

You can then enter a maximum net amount that values entered on purchase or sales documents will be checked against. If a value you specify is exceeded, the document can no longer be released. Should you also require minimum amounts for multi-level approval processes, you can enter them in the relevant Compliance Tables.

Compliance User Setup

This page specifies the users who are authorized to manage compliance checks. It also contains all digital signatures for case-related functionality. To set up a user for compliance procedures:

1. Choose the Search icon, enter Compliance User Setup, and then choose the related link.
2. Choose New on the ribbon to insert a line for a new user.
3. Fill in the fields on the line as described in the following table.

Field	Description
User ID	Specify the user for whom you want to add a signature.
Salespers./Purch. Code	Shows the code from the field with the same name in standard user setup after you’ve entered an ID.
Digital Signature	Enter the digital signature of the user.
Signature Blocked	Turn on this toggle if you want to block the user from using the entered signature.
Signature Fail Count	Shows the number of times the user has entered the wrong digital signature.
Signature Blocking Reason	Shows why the digital signature was blocked.
Reset Signature	With the toggle turned on, the user’s digital signature needs to be updated before another attempt to enter it can be made.

Note

If you’re using KUMAVISION medtec365, you can assign follow-ups at this point. For more information, click here.

Assign permission groups

Any number of compliance permission groups can be assigned to a user. What the user is authorized for is covered by the individual permissions assigned to a group. For example, if permission A is required for a certain compliance table, the user must have this permission according to at least one assigned permission group. To assign a group:

1. Choose the Search icon, enter Compliance User Setup, and then choose the related link.
2. Select a user on a line.
3. Choose Compliance Permission Groups on the ribbon.
4. Fill in or change the group. If you change it, choose OK to confirm.

Compliance tables

You can specify in compliance tables for which records a check for compliance is required. To set up a table:

1. Choose the Search icon, enter Compliance Tables, and then choose the related link.
2. Choose New on the ribbon.
3. Fill in the fields on the new line as described in the following table.

Field	**Description**
Code	Enter a unique code for the data record.
Table No. Table Caption	Specify a table for which you want to check compliance. **Note** Some tables have subtables that might become part of the compliance check.
Sorting	If the system finds multiple entries that differ in their field filters, a record might be subject to more than one release requirement. You can then use this field to specify the order in which to check entries in the table. The sequence is always ascending.
Description	Specify an internal description for the table.
No. of Field Filters	Shows how many requirements must be fulfilled before the table is said to be compliant with the relevant regulation. You specify a requirement by choosing Compliance Fields on the ribbon.
Status	Indicates if the table is part of the compliance process. Only in the Released status will a compliance rule that you specified on the line be applied throughout the system.
Minimum Amount	You can use this field to specify an amount limit on purchase and sales documents. If this amount exceeds the total net value entered on the relevant document, approval will be required.
Signature Required for Release	Select this checkbox if you want each compliance release verified through the digital signature.
Change Permission Code	Choose the code that permits changing the record. This will start the compliance process.
Release Permission Code	Choose the code that permits release of the record.
Reject Permission Code	Choose the code that permits rejection of the record.
Release 1-5	Select the releases, that is, approvals required for the record. You can have up to 5 levels of approval.
Release 1-5 Permission Code	Select the permission codes for releases.

Note

If you’re using KUMAVISION medtec365, you’ll see additional options on this page. For more information about them, click here.

You can specify compliance requirements per table. To set a filter on a field:

1. Select a table.
2. Choose Compliance Fields on the ribbon.
3. Fill in the fields as described in the following table.

Field	Description
Field No. Field Caption	Specify the number of a field available in the selected table.
Field Value	Specify a value for the field.

If you don’t fill in these fields, the entire record will be checked. This means that any change to the table will trigger a compliance check.

If a field value has been specified, the system will check whether this value matches the field value in the relevant table. Only then will it trigger a compliance check or set up a compliance record.

Note

If you’re using KUMAVISION medtec365, you’ll see additional options on this page. For more information about them, click here.

For example, you might want to monitor the tracking code field of a certain item. The current value in the field is BE. You now change the code to NL, which will generate a compliance document.

Or you might want to track changes to the Quote document type. The data records to be monitored have already been filtered based on the Buy-from Vendor field, with the filter set on a specific vendor. When a quote is later created for the vendor, a compliance document will be created as well.

Note

Only if a data record meets at least one of the specified requirements will the system create a compliance document. Also, filling in a table that has subtables might mean that they, too, will be checked for compliance. You can see the relations to subtables on the Compliance Tables page by unhiding the Subtable ID Filter.

Audit trail (change log)

The Compliance functionality only logs the time when a compliance record was last modified and the ID of the user who modified the record, whereas the content of the changes made to checked data are listed in a log called an Audit Trail.

However, you first need to set up this change log for—at least—the tables entered on the Compliance Tables page. To set up a log:

1. Choose the Search icon, enter Change Log Setup, and then choose the related link.
2. Alternatively, enter Compliance List, select a data record, and choose Report > Audit Trail. You can also select an open or archived record and then choose this function.
3. On the Change Log Setup card, turn on the Change Log Activated toggle.
4. On the ribbon, choose Tables and select the table for which you want to set up an audit trail.
5. In the Log Insertion, Log Modification, and Log Deletion fields on the line, you can specify if the log should include changes to some or all fields.
6. To specify the exact fields when selecting the Some Fields option, choose the Assist button next to Log Insertion, Modification, or Deletion to open a list of all fields in the relevant table. Depending on the log function you selected, you can then choose Insertion, Modification, or Deletion on the relevant line.

Afterward, you can choose Audit Trail in open compliance records or the compliance list to see all changes that must be released, whereas the Compliance List Archive—and archived compliance records in general—also include changes made previously.

MANAGE COMPLIANCE

Trigger compliance

Changing and releasing a record or completing data maintenance in a table triggers a check for compliance if one of the conditions specified on the Compliance Tables page is met.

Following the change, you need to give a reason for why the data record needs to be released again. You can also enter a longer explanation of the change via a separate text field if necessary. After you’ve entered a reason, the system informs you that the record can only be released after the changes have been approved.

You can see the status and history of compliance procedures related to the record in the Compliance FactBox on the right.

Edit a compliance document

To see a compliance document:

1. Choose the Search icon, enter Compliance List, and then choose the related link.
2. This opens a list of all documents with open compliance procedures. Select a record and choose Manage > View on the ribbon.

Document approvals

Document releases (that is, approvals) are handled based on how you’ve set up the approval process for compliance documents. To release a document:

1. Select the approvals in the Approvals area and choose Release on the ribbon.
2. Depending on the release option you chose for the relevant compliance table, the system might now ask you for your digital signature.

> **Note**
>
> When all approvers have released the compliance document, the source document is also released.

Following approval, the compliance document will be closed and archived.

Reject a document

To reject a document:

1. Select a record and choose Reject on the ribbon.
2. Enter a reason for the rejection. You can also enter a longer explanation in a separate field.

Following rejection, the compliance document will be closed and archived.

Note

Based on what you specified in Compliance Setup, only the legal owner or possessor of a piece of equipment might be able to reject a compliance document covering the machinery. The user who wants to reject the document must also have been granted the necessary compliance permissions.

Audit trail (compliance card and list)

If you set up an audit trail, you can see a log of all changes by running the Audit Trail function on the card or list ribbon. The basis for this trail is the change log you set up as described earlier (see Audit Trail (Change Log).

Compliance List Archive

To view already completed compliance documents, choose the Search icon, enter Compliance List Archive, and then choose the related link.

The page that opens shows you two sets of records, the released and the rejected compliance documents.

Warranty Claims, Complaints, and FMEA

OVERVIEW

The Complaints Management functionality helps you handle warranty claims and customer complaints that concern products or services provided by your organization.

Based on ISO 9001:2015 and ISO 13485:2016, “claim” and “complaint” have the following meaning when used in KUMAVISION base (BOOSTER):

Claim
Refers to a specific product or service and grants legal remedies should the product or service not be up to standard.

Complaint
Voices displeasure with the quality of a product or service.

When you receive a claim or complaint, you can enter in the system the people and products or services written on the document and the staff members who will investigate or review the matter. Staff can also look at the purchase, sales, service, or production documents that might be relevant to the case.

The claim or complaint can then be reviewed, with the aim of taking preventive or corrective actions to remedy or mitigate failures. The effectiveness of these measures can later be evaluated as part of a failure mode and effects analysis (FMEA).

Note

You need separate licenses before you can use Complaints Management and FMEA functions.

SETUP

Claims and complaints

Warranty Claims & Complaints Setup

To be able to enter claims and complaints in the system, you must turn on the functionality first.

1. Choose the Search icon, enter Warranty Claims & Complaints Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

General

Field	Description
Contact Creation	Specify whether you want a contact created automatically when you receive a claim or complaint by a person or organization not yet stored in the system.
Update Contact	Specify whether data for an existing contact who is involved in a claim or complaint should be updated if some of the information given on the document differs from what is stored in the system.
Check Digital Signature	Turn on this toggle if a user’s signature should be required when a complaint, claim, or FMEA card is released, reopened, archived, or deleted.

Note

If you’re using KUMAVISION medtec365, you can see additional options for adjusting transaction codes on this page. For more information, click here.

Warranty Claims

In the Warranty Claim Nos. field, specify a number series that will be used for warranty claims.

For all other fields, use the Create Permissions action on the ribbon to assign codes to functions for which permissions should be checked.

Complaints

In the Complaint Nos. field, specify a number series that will be used to assign numbers to complaints.

For all other fields, use the Create Permissions action on the ribbon to assign codes to functions for which permissions should be checked.

Ribbon Function

Choose Create Permissions to have permission codes initialized during setup of the functionality and copied to the Claim & Complaint Permissions page.

> **Note**
>
> Do not rerun this function after the permission codes have been initialized.

Claim & Complaint Permissions

For more information on how to initialize the values shown on this page, see Warranty Claims & Complaints Setup.

For users to be able to view claims or complaints, they must have at least the Read permission assigned to an associated permission group.

Claim & Complaint Permission Groups

On this page, claim and complaint permissions can be grouped on the lines.

> **Note**
>
> The Super permission group must contain each individual permission for a claim or complaint.

Warranty Claims & Complaints User Setup

To specify who can use the functionality and store their digital signatures:

1. Choose the Search icon, enter Warranty Claims & Complaints User Setup, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
User ID	Select the ID of the user for whom you want to enter a digital signature.
Digital Signature	Specify the user’s digital signature.
Signature Blocked	Turn on the toggle if you want to block this signature from being used.
Signature Fail Count	Shows the number of times the wrong signature was entered. Following three failed attempts, the Signature Blocked toggle turns on automatically. The reason for blocking the sign-off is then shown in the Signature Blocking Reason field.
Signature Blocking Reason	Shows why the signature was blocked.
Reset Signature	With the toggle turned on, the signature needs to be updated before it can be used again.

You can then assign permissions in groups to a user authorized to manage claims and complaints:

- Select the line on which to find the relevant user.
- On the ribbon, choose Claim & Complaint Permission Groups.

Any number of groups can be assigned to the user. If a specific permission is required for a complaint, the user must have this permission in at least one of the assigned groups.

Failures

On the Analysis FastTab of claims and complaints, you can specify a code for every category of failures that you want to record. For a complete, meaningful evaluation of claims and complaints, each of these categories needs to cover as many defects and errors as possible. To set up a code:

1. Choose the Search icon, enter Failure Categories, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code that clearly identifies the failure.
Type	Specify for which document the code can be selected. **(blank)** You can select this category on claims and complaints. **Complaint** The category is only available for complaints. **Warranty Claim** The category is only available for claims.
Description	Here you can enter a more detailed description of the error.
Description 2	Here you can enter even more details.
Case Type Code	Specify for which type of case the code can be selected.
Case Subtype Code	Specify for which subtype of a case the code can be selected.

The type and subtype specified for a claim or complaint determine the codes available on the Analysis FastTab of the claim or complaint card. If no type or subtype has been specified, all codes will be available for selection, including those that haven’t been assigned anywhere.

Note

The system doesn’t check if the case type or subtype that you selected is valid.

Authorities

To set up the authorities to which incidents must be reported:

1. Choose the Search icon, enter Authorities, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the agency to which incidents must be reported.
Description	Enter a brief description of the agency.

Government authorities that must be notified of certain claims or complaints are later entered on the Analysis FastTab of a claim or complaint card.

Reasons for rejecting cases

To specify reasons why a claim or complaint might have been rejected:

1. Choose the Search icon, enter Case Rejection Reasons, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the rejection reason. The code must be unique.
Description	Describe why the claim or complaint is being rejected.
Relevant to Statistics	Specify if the rejection reason should be included in statistical analyses. This checkbox can be used for informational purposes or as part of BI functionality.
Default	Select a procedure that the system needs to follow in certain situations. **(blank)** No default procedure to follow. **Closed by Class Change** If you reclassify a warranty claim or complaint, the system will archive the document with this option selected in the Rejection Reason Code field on the claim or complaint card.

A rejection reason code must be filled in when the Justified field on a claim or complaint card that you want to close has been set to No. The codes can be found on both open and archived document lists.

Types and subtypes of cases

To specify case types:

1. Choose the Search icon, enter Case Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the type. The code must be unique.
Description	Specify a description for the type.
No. of Case Subtypes	Indicates the number of subtypes assigned to this type. You can select this field to see the subtypes.

To assign subtypes to a certain type:

1. Select the highlighted No. of Case Subtypes field. Alternatively, select a line and choose Case Subtypes on the ribbon.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the subtype. The code must be unique.
Description	Specify a description for the subtype.

Both types and subtypes might be linked to a claim or complaint, for example, to distinguish between complaints by document type. You assign them to documents in the fields described in the following table.

Field	Description
Type	Select a case type from the Case Types page.
Subtype	Select a subtype from the Case Subtype page based on the type of case specified.

Although archived claims and complaints also include these types, you cannot edit them there.

Actions

Mitigation and remedial measures can be maintained in the system as stand-alone actions or in the context of specific claims, complaints, or FMEAs. For this reason, they cannot be specified in Warranty Claims & Complaints Setup.

Action Setup

To set up actions for use throughout the system:

1. Choose the Search icon, enter Action Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

General

Field	Description
Action Nos.	Specify the number series that will be used for actions.
Action Data Check	Turn on this toggle if you want to activate the mandatory field check feature for actions.
Check Risk Assessment Texts	Specify if risk assessment texts need to be available when an action card is closed or an FMEA (or an archived FMEA) has been linked to the action.

Permissions

On this FastTab, codes are assigned to functions for which permission checks should be performed. To initialize these codes, choose Create Permissions on the ribbon.

For users to be able to view actions, they must have at least the Read permission assigned to an associated permission group.

Note

Do not rerun this function after the permission codes have been initialized.

Action Permissions

For more information on how to initialize the values shown on this page, see Actions Setup.

Action Permission Groups

On this page, action permissions can be grouped on the lines.

Action User Setup

Here you can assign permissions in groups to a user authorized to manage actions. To assign a group:

- Select the line on which to find the relevant user.
- On the ribbon, choose Action Permission Groups.

Any number of groups can be assigned to the user. If a specific permission is required for an action, the user must have this permission in at least one of the assigned groups.

> **Note**
>
> The setup on this page doesn’t replace the roles and permissions specified for a user elsewhere in the system.

Case CAPA

CAPA stands for Corrective and Preventive Actions. This quality management subsystem is part of the continuous improvement process (CIP).

A CAPA process ensures GMP-compliant work through identifying deviations from a specified standard before corrective and preventive actions are taken.

> **Note**
>
> CAPA are used to immediately correct a failure and avoid further repercussions.

To set up a procedure:

1. Choose the Search icon, enter Case CAPA, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the CAPA.
Type	Specify for which type of action the code can be selected: • (blank) • Corrective • Preventive
Description	Specify a description for the CAPA.
Description 2	Enter a more detailed description of the CAPA if necessary.

CAPA codes are used on action cards in the Action Code field on the General FastTab. What codes are available depends on what you choose in the Action Type field there.

FMEA

FMEA, which is short for Failure Mode and Effects Analysis, is used to assess the risks associated with an error or a defect. Because FMEAs can be created from actions or as stand-alone solutions, you cannot specify them in Warranty Claims & Complaints Setup.

FMEA Risk Matrix Field Setup

Before you can work with risk matrices, you must specify a color scheme for the graphs.

Based on a set of x and y coordinates [(1|1) – (4|4)], these colors can then help you visualize, for example, if the severity or effect probability associated with a certain failure has changed since the last time you printed a matrix for it. To initialize the colors:

1. Choose the Search icon, enter FMEA Risk Matrix Setup, and then choose the related link.
2. Select a line and fill in the fields as described in the following table.
3. Repeat the process until a color has been specified for all coordinates.

Field	Description
X Axis	Specify the X coordinate (1 – 4) that will be assigned to this line on the matrix.
Y Axis	Specify the X coordinate (1 – 4) that will be assigned to this line on the matrix.
Field No.	Select what field content should be shown at the coordinates entered in the X Axis and Y Axis fields.
Field Caption	Shows the caption of the matrix field that you selected a Field No. for.

You can also choose New > Initialize on the ribbon to have the system set up a default color scheme or reset the current matrix to those default values.

FMEA Setup

To set up FMEAs for use throughout the system:

1. Choose the Search icon, enter FMEA Setup, and then choose the related link.
2. Fill in the fields as described in the following.

General

In the FMEA Nos. field, specify the number series that will be used for analyses.

Permissions

On this FastTab, codes are assigned to functions for which permission checks should be performed. To initialize these codes, choose Create Permissions on the ribbon.

Note

Do not rerun this function after the permission codes have been initialized.

Indicators

On this FastTab, specify the indicators that will be shown on FMEA lines when the analyzed values exceed certain risk priority thresholds.

Field	Description
Green Light	Select this field to choose an image file that, as part of a traffic light system, should represent the green light on FMEA lines.
Yellow Light	Select this field to choose an image file that, as part of a traffic light system, should represent the yellow light on FMEA lines.
Red Light	Select this field to choose an image file that, as part of a traffic light system, should represent the red light on FMEA lines.

> **Note**
>
> Changing the files will not update the images that have already been in use on open and archived FMEA lines unless you also change something else on these lines.

FMEA Permissions

For more information on how to initialize the values shown on this page, see FMEA Setup.

FMEA Permission Groups

On this page, FMEA permissions can be grouped on the lines.

For users to be able to view analyses, they must have at least the Read permission assigned to an associated permission group.

FMEA User Setup

Here you can assign permissions in groups to a user authorized to perform analyses:

- Select the line on which to find the relevant user.
- On the ribbon, choose FMEA Permission Groups.

Any number of groups can be assigned to the user. If a specific permission is required for an analysis, the user must have this permission in at least one of the assigned groups.

> **Note**
>
> Only users entered on this page can view, create, or edit FMEAs.

Internal claims and complaints

You can also register claims and complaints that arise within a company, for example, while a product is being manufactured. To set up a case that will be handled internally:

- Create a new contact card and fill in your company information.
- Select Internal on the card.
- Proceed as if the claim or complaint came from an external contact.

REGISTER A WARRANTY CLAIM

To register a claim in the system:

1. Open the card of an existing contact, customer, or vendor for which you want to register a claim.
2. Choose New Case on the ribbon.
3. Choose Warranty Claim.
4. The data stored for the contact, customer, or vendor is then copied to the claim automatically. The other fields must be filled in as described in the following table.

> **Note**
>
> This is the only way to register a claim in the system; you cannot choose New on the ribbon of a warranty claim list.

General

Field	Description
No.	Shows the number of the claim document. This number is assigned by the system and cannot be changed manually.
Description	Enter a brief text that describes the claim.
Type	Specify if the claim was received internally or from a vendor or customer.
Vendor No. Customer No.	Based on the type of claim, one of these fields might be filled in automatically. If the wrong vendor or customer has been entered, you must create a new record and close the current case.
Contact No.	This field is always filled in and cannot be changed.
Name Name 2	Based on the type of claim, these fields show the name and additional name of a vendor, customer, or contact.
Note	Shows if notes have been entered for a customer or vendor.
Justified	Specify if the claim is justified. **(blank)** The claim has not been classified yet. **Yes** Is justified. **No** Is not justified. **Goodwill** Is accepted because of a goodwill policy. Classifying the claim will open an editor in which you must enter the reason for the classification. Without entering something there, the claim cannot be (re)classified.
Justification Text	Selecting Yes in the Justified field will open an editor in which you must enter a text to explain why the claim is considered justified. Only the first line of text entered in the editor will later be shown in this field, regardless of whether the line comes from a justification or analysis. You can adjust this in the editor. Changes to the text will be added as new versions to the description of the analysis.
Rejection Reason Code	Select a code for why the claim was rejected. You can only select a code if the Justified field is set to No; you can then close the case if necessary. Changing the Justified field will remove the code in this field.
Rejection Reason Description	Shows a text that describes the rejection.
Status	Indicates the status of the claim. **Open** The document can be edited. **Released** The document requires only final review.

Field	Description
	If the signature feature has been turned on, the status will not change until the specified signature has been entered.
Source No.	If the claim was created by converting a complaint, this field is filled in with the number of the complaint document.
Case Type Code	Choose a code to specify the type of case being handled.
Case Subtype Code	Choose a code to specify the subtype of the case.
Assigned User ID	Select an ID in this field to assign a user to the claim.
No. of FMEAs	Shows the number of analyses linked to the claim.
No. of Archived FMEAs	Shows the number of archived analyses linked to the claim.
No. of FMEA Actions	Shows the number of FMEA actions implemented to resolve the claim.
No. of Archived FMEA Actions	Shows the number of archived FMEA actions implemented to resolve the claim.

Reported By

This FastTab shows the person who made the claim.

If the person has been entered as a contact, data from the contact master is entered automatically on this FastTab. With a CTI system connected to Microsoft Dynamics 365 Business Central[1], you can also call the person from the app.

Other contacts can be entered on the following lines. For people already in the system, this means that each contact linked to the person who made the claim can be chosen in the No. field.

The details of these contacts are then filled in by the system if automatic contact creation has been turned on in Warranty Claims & Complaints Setup. Else, you need to fill in the line fields manually.

Reported For

This FastTab is used to enter the items, services (resources or G/L accounts), and other things that were named in the claim and that the person who made the claim has reported issues with.

You can also have the lines filled in with data from documents available in the system. For more information, see Ribbon Actions.

If you fill in the lines manually, you should do so field by field, starting with the Type field. This ensures that, for example, you can enter things not maintained in the app—for example, because a warranty claim had not been resolved prior to switching to another software system.

Registration Text

On this FastTab, you can use a plain text editor to note down the conversation that led to registering the case in the system. Choose New Text on the ribbon to make an entry. When you’re finished, the text will be displayed on the tab.

Texts are versioned. For more information on how to enter text here, see Enter Text.

Analysis

On this FastTab, you can document the analysis of the issues named on the claim document.

Field	Description
Analyzed On Analyzed By	These fields specify who analyzed the claim and when.
Analysis Reviewed On Analysis Reviewed By	These fields specify who checked the analysis and when. **Note** The user who checks the analysis cannot also be the user who performed it *(dual control principle)*.
Notification Required	Turn on this toggle if the warranty claim must be reported to the authorities.
Notifications to Authorities	Indicates how many notifications are related to the case. You can select the blue hyperlink to view or enter notifications. **Note** You cannot transmit notifications from Microsoft Dynamics 365 Business Central[1].
Assigned Failures	On this FastTab, you can categorize the errors or defects that were found during analysis by using the failure codes set up in the system. You must fill in the Failure Code field here. The Description and Description 2 fields are filled in from Warranty Claims & Complaints Setup.
Analysis Text	Shows the analysis and justification texts that have already been entered in the system.

Assigned Actions

On this tab, you can link preventive and corrective actions to open claims or create new action cards based on the claims for use on other documents.

All actions are managed on cards. Actions created or entered for a claim are transferred along when you archive the document.

Note

You can only close claims for which all actions have been set to Implemented.

Field	Description
Action Card No.	Specify the action card that you want to assign to the claim.
Failure Code	Assign a failure code to the claim. If an action is created from the Analysis FastTab, the failure code used for analysis will be copied to the card created for this action.
Description	Shows the description of the action as specified on the related action card.
Description 2	Shows the additional description of the action as specified on the related action card.
Status	Shows the status of the action as specified on the related action card.
Action Type	Shows the type of the action as specified on the related action card.
Action Code	Shows the code of the action as specified on the related action card.
Successful	Shows the content of the field from the related action card.
No. of FMEAs	Shows the number of FMEAs entered on the action card.
No. of FMEA Actions	Shows the number of FMEA actions entered on the action card.
No. of Archived FMEAs	Shows the number of archived FMEAs specified on the action card.
No. of Archived FMEA Actions	Shows the number of archived FMEA actions specified on the action card.

Ribbon actions

Based on whether the claim you registered came from a customer, a vendor, or an internal source, the ribbon found on the warranty claim card will display different functions.

To open a customer or vendor card or the contact list, choose Home and the corresponding option.

To retrieve data from a vendor or customer document, choose Get Document and the relevant document.

If a complaint comes from an internal source, some of the functions might be grayed out or might only be available to a limited extent, considering there are no outbound documents to manage.

To change the status of a complaint, choose Status and the relevant option.

To enter text for registration, analysis, or in other situations, choose Actions > Functions > New Text. For more information, see Enter Text.

To print a claim, choose Print > C & C Sheet. You can then fill in the No. of Copies field to specify how many copies of the document you want printed and choose what to include on each by turning toggles on or off.

To create a new action for a claim, choose Create Action on the ribbon. To create a new FMEA, choose Create FMEA.

To reclassify a claim, choose Actions > Functions > Change Classification.

For a list of who created, edited, or deleted entries on a complaint, choose Related > Change Log on the ribbon.

EDIT A CLAIM

To change information on a warranty claim:

1. Choose the Search icon, enter Warranty Claims, and then choose the related link.
2. Select a claim and choose Edit on the ribbon.
3. You can now add details to the document, such as the items named on the document (by filling in the relevant fields on the Issues Reported For FastTab).

If you also want to perform an FMEA (only possible from a claim or an action), choose Create FMEA on the ribbon. For more details on how errors or defects can be analyzed, see Perform an analysis.

When all required data has been entered, the claim can be released by choosing Release on the ribbon.

> **Note**
>
> If the release of the claim requires your signature, you need to sign in the Digital Signature field on the query that appears and choose OK.

The claim is then released. It’s not closed yet.

REGISTER A COMPLAINT

To set up a complaint in the system:

1. Open the card of an existing contact, customer, or vendor for which you want to register a complaint.
2. Choose New Case on the ribbon.
3. Choose Complaint.
4. The data stored for the contact, customer, or vendor is then copied to the complaint automatically. The other fields must be filled in as described in the following table.

> **Note**
>
> This is the only way to register a complaint in the system; you cannot choose New on the ribbon of a complaint list.

General

Field	Description
No.	Shows the number of the complaint document. This number is assigned by the system and cannot be changed manually.
Description	Enter a brief text that describes the complaint.
Type	Specify if the complaint was received internally or from a vendor or customer.
Vendor No. Customer No.	Based on the type of complaint, one of these fields might be filled in automatically. If the wrong vendor or customer has been entered, you must create a new record and close the current case.
Contact No.	This field is always filled in and cannot be changed.
Name Name 2	Based on the type of complaint, these fields show the name and additional name of a vendor, customer, or contact.
Note	Shows if notes have been entered for a customer or vendor.
Justified	Specify if the complaint is justified. **(blank)** The complaint has not been classified yet. **Yes** Is justified. **No** Is not justified. **Goodwill** Is accepted because of a goodwill policy. Classifying the complaint will open an editor where you must enter the reason for the classification. Without entering something there, the complaint cannot be (re)classified.
Justification Text	Filling in the Justified field will open an editor in which you must enter a text to describe why the complaint is justified. Only the first line of text entered in the editor will later be shown in this field, regardless of whether the line comes from a justification or analysis. You can adjust this in the editor. Changes to the text will be added as new versions to the description of the analysis.
Rejection Reason Code	Select a code for why the complaint was rejected. You can only select a code if the Justified field is set to No; you can then close the case if necessary. Changing the Justified field will remove the code in this field.
Rejection Reason Description	Shows a text that describes the rejection.
Status	Indicates the status of the complaint. **Open** The document can be edited. **Released** The document requires only final review.

Field	Description
	If the signature feature has been turned on, the status will not change until the specified signature has been entered.
Source No.	If the complaint was created by converting a warranty claim, this field is filled in with the number of the claim document.
Case Type Code	Choose a code to specify the type of case being handled.
Case Subtype Code	Choose a code to specify the subtype of the case.
Assigned User ID	Select an ID in this field to assign a user to the complaint.
No. of FMEAs	Shows the number of analyses linked to the complaint.
No. of Archived FMEAs	Shows the number of archived analyses linked to the complaint.
No. of FMEA Actions	Shows the number of FMEA actions implemented to resolve the complaint.
No. of Archived FMEA Actions	Shows the number of archived FMEA actions implemented to resolve the complaint.

Reported By

This FastTab shows the person who made the complaint.

If the person has been entered as a contact, data from the contact master is entered automatically on this FastTab. With a CTI system connected to Microsoft Dynamics 365 Business Central[1], you can also call the person from the app.

Other contacts can be entered on the following lines. For people already in the system, this means that each contact linked to the person who made the complaint can be chosen in the No. field.

The details of these contacts are then filled in by the system if automatic contact creation has been turned on in Warranty Claims & Complaints Setup. Else, you need to fill in the line fields manually.

Reported For

This FastTab is used to enter the items, services (resources or G/L accounts), and other things that were named in the complaint and that the person who made the complaint has reported issues with.

You can also have the lines filled in with data from documents available in the system. For more information, see Ribbon Actions.

If you fill in the lines manually, you should do so field by field, starting with the Type field. This ensures that, for example, you can enter things not maintained in the app—for example, because a complaint had not been resolved prior to switching to another software system.

Registration Text

On this FastTab, you can use a plain text editor to note down the conversation that led to registering the case in the system. Choose New Text on the ribbon to make an entry. When you’re finished, the text will be displayed on the tab.

Texts are versioned. For more information on how to enter text here, see Enter Text.

Analysis

On this FastTab, you can document the analysis of the issues named on the complaint document.

Field	Description
Analyzed On Analyzed By	These fields specify who analyzed the complaint and when.
Analysis Reviewed On Analysis Reviewed By	These fields specify who checked the analysis and when. **Note** The user who checks the analysis cannot also be the user who performed it (dual control principle).
Notification Required	Turn on this toggle if the complaint must be reported to the authorities.
Notifications to Authorities	Indicates how many notifications are related to the case. You can select the blue hyperlink to view or enter notifications. **Note** You cannot transmit notifications from Microsoft Dynamics 365 Business Central[1].
Assigned Failures	On this FastTab, you can categorize the errors or defects that were found during analysis by using the failure codes set up in the system. You must fill in the Failure Code field here. The Description and Description 2 fields are filled in from Warranty Claims & Complaints Setup.
Analysis text	Shows the analysis and justification texts that have already been entered in the system.

Assigned Actions

On this tab, you can link preventive and corrective actions to open complaints or create new action cards based on the complaints for use on other documents.

All actions are managed on cards. Actions created or entered for a complaint are transferred along when you archive the document.

Note

You can only close complaints for which all actions have been set to Implemented.

Field	Description
Action Card No.	Specify the action card that you want to assign to the complaint.
Failure Code	Assign a failure code to the complaint. If an action is created from the Analysis FastTab, the failure code used for analysis will be copied to the card created for this action.
Description	Shows the description of the action as specified on the related action card.
Description 2	Shows the additional description of the action as specified on the related action card.
Status	Shows the status of the action as specified on the related action card.
Action Type	Shows the type of the action as specified on the related action card.
Action Code	Shows the code of the action as specified on the related action card.
Successful	Shows the content of the field from the related action card.
No. of FMEAs	Shows the number of FMEAs entered on the action card.
No. of FMEA Actions	Shows the number of FMEA actions entered on the action card.
No. of Archived FMEAs	Shows the number of archived FMEAs specified on the action card.
No. of Archived FMEA Actions	Shows the number of archived FMEA actions specified on the action card.

Ribbon actions

Based on whether the complaint you registered came from a customer, a vendor, or an internal source, the ribbon found on the complaint card will display different functions.

To open a customer or vendor card or the contact list, choose Home and the corresponding option.

To retrieve data from a vendor or customer document, choose Get Document and the relevant document.

If a complaint comes from an internal source, some of the functions might be grayed out or might only be available to a limited extent, considering there are no outbound documents to manage.

To change the status of a complaint, choose Status and the relevant option. To enter text for registration, analysis, or in other situations, choose Actions > Functions > New Text. For more information, see Enter Text.

To print a complaint, choose Print > C & C Sheet. You can then fill in the No. of Copies field to specify how many copies of the document you want printed and choose what to include on each by turning toggles on or off.

For a list of who created, edited, or deleted entries on a complaint, choose Related > Change Log on the ribbon.

EDIT A COMPLAINT

To change information on a complaint:

1. Choose the Search icon, enter Complaints, and then choose the related link.
2. Select a complaint and choose Edit on the ribbon.
3. You can now add details to the document, such as the name and ID of the second person who will be participating in dual-control procedures (by filling in the relevant fields on the Analysis FastTab).

For more information, see Analysis. When all required data has been entered, the complaint can be released by choosing Release on the ribbon.

> **Note**
>
> If the release of the complaint requires your signature, you need to sign in the Digital Signature field on the query that appears and choose OK.

The complaint is then released. It's not closed yet.

CONVERT A CLAIM TO A COMPLAINT

If, when you process a warranty claim, you determine that what you're working on reads more like a complaint than a claim with a legal basis, you can create a complaint from the document that you originally registered in the system as a claim while keeping the information you've already recorded.

To convert a claim:

1. Choose the Search icon, enter Warranty Claims, and then choose the related link.
2. Open the claim that you want to convert into a complaint. The status of a released claim will be reset during this process.
3. On the ribbon, choose Change Classification and choose OK.

The claim is then converted, and all available information is transferred to the complaint. Afterward, the original claim will be closed and archived.

Reclassification is indicated on a claim in the Rejection Reason Code and the Rejection Reason Text fields. For the fields to be filled in, you must have set them up as described under Reasons for Rejecting Cases.

You can open an archived claim that is the source of a complaint by clicking the highlighted portion of the Source No. field on the complaint card. After you've finished filling in the new complaint document, choose OK to exit.

CONVERT A COMPLAINT TO A CLAIM

If, when you process a complaint, you determine that the case you're working on reads more like a warranty claim, you can create a warranty claim from the complaint while keeping the information you've already recorded. To convert a complaint:

1. Choose the Search icon, enter Complaints, and then choose the related link.
2. Open the complaint that you want to convert into a claim. The status of a released complaint will be reset during this process.
3. On the ribbon, choose Change Classification and choose OK.

The complaint is then converted, and all available information is copied to the claim. Afterward, the original complaint will be closed and archived.

Reclassification is indicated on a complaint in the Rejection Reason Code and the Rejection Reason Text fields. For the fields to be filled in, you must have set them up as described under Reasons for Rejecting Cases.

You can open an archived complaint that is the source of a warranty claim by clicking the highlighted portion of the Source No. field on the claim card.

After you've finished filling in the new claim document, choose OK to exit.

CLOSE A CLAIM OR COMPLAINT

Claims and complaints that have been processed and set to Released can be closed and archived by using a ribbon function.

Close a warranty claim

All warranty claims can be closed and archived after processing. To close a claim:

1. Choose the Search icon, enter Warranty Claims, and then choose the related link.
2. Select the claim that you want to close.
3. On the ribbon, choose Close Case and choose Yes to confirm.

If the Justified field on the complaint was set to No, a rejection reason code must be entered before you can close the document. You also might need to enter your digital signature if closing the case requires it.

Archived claims can be viewed on the Warranty Claims Archive page.

Close a complaint

All complaints can be closed and archived after being processed. To close a complaint:

1. Choose the Search icon, enter Complaints, and then choose the related link.
2. Select the complaint that you want to close.
3. On the ribbon, choose Close Case and choose Yes to confirm.

If the Justified field on the complaint was set to No, a rejection reason code must be entered before you can close the document. You also might need to enter your digital signature if closing the case requires it.

Archived complaints can be viewed on the Complaints Archive page.

IMPLEMENT ACTIONS

Actions are recorded on cards, which contain all necessary information, such as contact details and item specifications linked to a case. A Failure Modes and Effects Analysis and a risk matrix can be created based on them as well. For more information about the latter, see FMEA Risk Matrices.

Besides creating and implementing actions because of a claim or complaint, actions can also be created and implemented on their own.

Create an action

To create an action on its own:

1. Choose the Search icon, enter Actions, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following tables.

General

Field	Description
No.	Shows the action number assigned from the series set up for this purpose (see Action Setup).
Action Type	Specify whether the action is corrective or preventive.
Action Code	Choose the code of an action entered on the Case CAPA page. The codes that are available depend on what option has been selected in the Action Type field.
Description	Specify a description for the action.
Description 2	Here you can enter an additional description of the action.
Source Type	Indicates from where the action originates. **(empty)** The action has no source. **Action Card** The action was created as a follow-up to another action. **Complaint** The action was created from a complaint document. **Claim** The action was created from a claim document. **FMEA** The action was created during an analysis.
Source No.	Specify the number of an action card, a complaint or claim document, or an FMEA based on the option you selected in the Source Type field.
Status	Indicates the status of the action card. **Open** The card is ready for editing. **Closed** The action is completed. You can no longer edit or reopen the card.
Successfully Implemented	Shows if the action was successfully implemented. The toggle turns on automatically, for example, when the Success Evaluated toggle is turned on. If the field is set to No when a card is completed, a follow-up action is created automatically if necessary.
Successfully Implemented On	Shows when the Successfully Implemented toggle was turned on.
Successfully Implemented By	Shows who was logged on to the system when the Successfully Implemented toggle was turned on.
Follow-Up Action No.	Specify a follow-up action that you want to implement if the Successfully Implemented field is not turned on when the action card is closed.
Closed On	Specifies when the action card was closed.
Closed By	Specifies who closed the action card.

Risk Assessment

This tab shows the risk assessment texts that were entered by using the New Text function on the ribbon.

Texts are versioned and can only be entered if a card is in the Open status. For more information, see Enter Texts.

Field	**Description**
No. of FMEAs	Shows the number of FMEA lines that are assigned to the action because they were created from it.
No. of Arch. FMEAs	Shows the number of archived FMEA lines assigned to the action because they were created from it.

Evaluate Success

Field	**Description**
No. of FMEA Actions	Shows on how many FMEA lines that have been assigned to the action the Successfully Implemented toggle is turned on.
No. of Arch. FMEA Actions	Shows on how many archived FMEA lines assigned to the action the Successfully Implemented toggle is turned on.
Success Evaluated	This toggle needs to be turned on manually when the success of the action has been evaluated. **Note** You cannot turn on this toggle if a related FMEA has not been completed.
Evaluation Comment	Here you can enter a text to describe the outcome of the effectiveness analysis.
Success Evaluated On	Indicates when the Success Evaluated toggle was turned on.
Success Evaluated By	Shows who turned on the Success Evaluated toggle.

More Information

Field	**Description**
Created On	Indicates when the action card was created.
Created By	Shows who created the action card.
Modified On	Indicates when the action card was last changed.
Modified By	Shows who last changed the action card.

Ribbon actions

Function	**Description**
Edit	Description to follow
Delete *(Icon Recycle Bin)*	Description to follow.
New Text	Used to enter a text describing the risk assessment.
Create FMEA	Creates an FMEA for an action. The FMEA and action cards are then linked through shared data. For more information, see FMEAs.
Close	Case Closes an action card. **Notes:** If the Implemented Successfully field on the action card was set to No, a follow-up action is automatically created so that the card can be closed.
Change Log Entries	Shows the change log of an action card.

Edit an action

To change information about an action:

1. Choose the Search icon, enter Actions, and then choose the related link.
2. This opens a list that shows all actions—both those with and without a reference to a claim or complaint.
3. On the ribbon, choose Edit. You can now add text or create an FMEA or fill in fields that are needed later, such as the fields that will be used to evaluate the effectiveness of a measure.

Create FMEA (action)

Analyzes the current measure. For more information, see FMEAs.

Create a follow-up action

If the Successfully Implemented toggle on an action card hasn’t been turned on, the fields Successfully Implemented On and By will not be filled when you close the card.

Instead, another action will be created automatically, and the number of the new measure is entered on the card of the previous, unsuccessful action in the Follow-Up Action No. field.

You can then use this field to get to the follow-up. The new measure is also shown on the actions list.

On the card of the follow-up action, the source action is shown in the Source Type and Source No. fields.

> **Note**
>
> If an action was created from a claim or complaint, the follow-up measure must be added manually to the Actions FastTab on the claim or complaint.

Close an action

An action can be closed and archived regardless of origin (action list, claim, complaint, or FMEA). The only requirement is that the action is completed.

To close an action card:

1. Choose the Search icon, enter Actions, and then choose the related link.
2. Choose Edit to open an action card.
3. On the ribbon, choose Close.

The Success Evaluated toggle needs to be turned on before you can close the card. The Success Evaluated On and By fields on the Assessment FastTab are then filled in automatically.

Closed actions can be found on the regular action list. To view only those that have been closed, you can filter the list for the Completed status.

FMEAS

An FMEA, or Failure Mode and Effects Analysis, is a method for investigating and preventing potential errors and defects during day-to-day operations.

Multiple definitions exist; the FMEA procedures implemented in KUMAVISION base (BOOSTER) originate from DIN EN 60812:2015-08. According to this standard, there are four types of FMEA:

Process FMEA
Investigates potential weaknesses in production or performance based on the results of a design analysis.

Product FMEA
Examines potential errors and defects of a specific product.

System FMEA
Analyzes the interaction of components within a complex system, such as a machine or piece of industrial equipment, and the interaction of that system with the environment.

Design FMEA
Evaluates a product’s ease of manufacturing and assembly.

The aim is to identify the causes of errors and defects before implementing actions that are demonstrably effective (=CAPA) to eliminate them from the affected processes while using the lessons learned from those experiences for the creation of a knowledge base that can help a company avoid making the same mistakes again in the future.

Individual errors are described and evaluated based on the following criteria:

Effect Probability A
High likelihood of failures occurring is rated at 4, with low probability put at 1.

Failure Effect Severity B
Seen from the customer's point of view. High-priority errors that affect internal or external processes are rated at 4, low-impact errors at 1.

By multiplying A and B, you’ll get priority numbers, which can be mapped to a risk matrix.

After initiating CAPA, another FMEA must be performed to gauge their impact and calculate new risk priority numbers. The lower in priority errors are ranked this time, the more effective the implemented measures have been.

FMEA cards can be used to record and document the analysis process. A card can be created from a complaint or an action, in which case a reference to the original document will be included. However, you can also create FMEAs from the list view, without a reference.

Create an FMEA

To create an analysis on its own:

1. Choose the Search icon, enter FMEA Overview, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	Description
No.	Shows the number of the analysis. This number is assigned automatically and cannot be changed.
Source No.	This field shows the number of a complaint or an action if the analysis was created from one. For standalone FMEAs, the field remains blank.
Type	Specify the type of analysis. Options are: • Process • Product • System • Design
Department	Specify the department or area examined in the context of the analysis.
No. of Risk Matrices	Shows the number of risk matrices created from the analysis. You can select the highlighted value to get to the FMEA Risk Matrix Overview, which will be filtered for entries related to this analysis.

Afterward, choose OK to exit. As no other FastTabs have been filled in, you’re asked if you want to delete the analysis. Choose No.

Lines

The results of the analysis are documented on the lines. Every error or defect needs to be recorded on a separate line as described in the following table.

Field	Description
Failure Location	Specify where the error occurred, for example, as part of a process chain or within a certain department.
Potential Failure	Specify the error or defect that can occur or has occurred.
Failure Effect	Specify the impact of the error or defect.
Cause of Failure	Specify the potential cause of the error or defect.
Verification	Specify a method that can be used to check if the error or defect does, in fact, occur.
Severity	Specify the severity of the damage. For more information, see FMEA Basics.
Effect Probability	Specify how likely the damage will occur. For more information, see FMEA Basics.
Risk Priority	Indicates by color the risk priority. For more information, see FMEA Risk Matrix.

The second part of each line indicates the effectiveness of actions taken:

Field	Description
Recommended Action	Specify the action that should be implemented so that risks can be mitigated or eliminated altogether.
Person Responsible	Specify the person in charge of the measure.
Deadline	Specify when the action has been completed. Filling in this field will open a follow-up document so that you can notify the person responsible for the measure.
Action Taken	Specify the action that has been implemented to mitigate the risk or eliminate the error altogether.
New Severity	Specify the new damage severity if the failure reoccurs after implementing the action. For more information, see FMEA Basics.
New Effect Probability	Specify the new likelihood of failure after implementing the action. For more information, see FMEA Basics.
New Effect Priority	Indicates by color the new effect priority. For more information, see FMEA Risk Matrix.

Ribbon actions

Function	Description
New Text	Used to enter various texts, such as comments and descriptions of (implemented) actions.
Create Action	Creates a new action as part of the FMEA.
Close Case	Closes and archives the analysis.
Risk Matrices	Opens the FMEA Risk Matrix for the current analysis.
Risk Matrix	Previews or prints the FMEA Risk Matrix.
Change Log	Shows tracked changes if the feature has been turned on for the relevant tables in Change Log Setup.

Edit an FMEA

To change information about an analysis:

1. Choose the Search icon, enter FMEA Overview, and then choose the related link.
2. This opens a list that shows all analyses—both those with and without a reference to a claim or complaint.
3. On the ribbon, choose Edit.

The Action Taken field on FMEA cards is used as a counter if an FMEA was created from an action so that the No. of FMEA Actions field is displayed on the related action card.

You can now add a text on the Action Taken FastTab to describe any measure that was implemented. To add text:

- Choose New Text on the ribbon.
- Enter a text and close the editor.

The text is then filled in on the tab. When you choose New Text again, the new description that you enter will be specified as a follow-on version.

The same is true for remarks about the analysis. To enter a remark, choose Related > Comments on the ribbon.

When all necessary information has been filled in, choose OK to exit the card.

Risk matrix

This matrix indicates based on a traffic light system on FMEA lines the risk associated with a certain error or defect. For more information about the general setup of matrices, see FMEA Setup.

Matrices can be printed directly from FMEA cards. What colors will be used on these graphs depends on the values specified in the risk assessment fields on the lines.

Note

Risk matrices can only be created for open FMEAs.

All matrix-related functions and fields found on FMEA cards are described in the following table.

Function/Field	Description
Related > Risk Matrices	Opens the FMEA risk matrix overview assigned to the current analysis.
Reports > Risk Matrix	Prints the current version of the FMEA risk matrix. A white matrix means that no values have been set up yet.
No. of Risk Matrices	Indicates the number of related matrices. Clicking the hyperlink will open the FMEA Risk Matrix Overview page.

FMEA Risk Matrix Overview

This page shows the matrices added to an analysis (along with the status that the matrices are in). Initially, all analyses are created without a matrix.

Ribbon actions

Field	Description
Create New Version	Creates a new version of the risk matrix.
View	Opens the matrix for viewing.
Edit	Opens the matrix for editing.
Print	Prints or previews the matrix.

Create a new version

To create a new matrix:

1. Open the FMEA Risk Matrix Overview page.
2. On the ribbon, choose Create New Version.
3. Fill in the fields as described in the following table.

General

Field	Description
FMEA No.	Shows the number of the analysis for which a matrix is created.
Version No.	Shows the version of the matrix.
Status	Indicates the status of the matrix.
Description Description 2	These fields can be used to describe the matrix.
Reason	You must select a reason in this field when you create a new version of the matrix or change an existing graph.

Evaluate Success

On this tab, you can specify the colors used to indicate the severity of a failure and the likelihood of damage in the form of risk priority numbers. You can also specify colors to show changes in priority after implementing actions.

You can leave a field blank or select yellow or red. Leaving a field blank will result in the use of the RDLC color set up on the Risk Matrix FastTab in FMEA Setup.

More Information

The fields found on this FastTab show when and by whom this matrix version was created or last changed.

Edit a matrix

You can change a graph until the Close function is used. To change a matrix:

- Open the FMEA Risk Matrix Overview page.
- On the ribbon, choose Edit.

A matrix that is in the Invalid or Valid status cannot be edited, and you need to create a new version for editing.

A new version is Under Development until you choose close on the ribbon to turn the graph into a valid risk matrix. The contents of the Evaluation FastTab fields are always copied from one version to the next.

Complete a matrix

The colors used to indicate risk are governed by the matrix that is in the Valid status. When a new version is completed and the close action is run from the ribbon, this version is set to valid, whereas the previous graph is set to Invalid.

The change in matrices then changes the indicators to how they are set up on the FMEA lines in the new version.

Ribbon actions

Field	Description
View	Opens a version for viewing.
Edit	Opens a version for editing.
Delete *(Icon Recycle Bin)*	Deletes a matrix version. You can only delete matrices set to Under Development.
Finish	Sets a matrix version to Completed. The status of the version then changes to Valid, whereas all previous versions are set to Invalid.
Print	Prints or previews the matrix.

Close an analysis

An analysis can be closed and archived regardless of origin (FMEA overview or action). The only requirement is that the analysis has been completed. To close an FMEA card:

1. Choose the Search icon, enter FMEA Overview, and then choose the related link.
2. Choose Edit to open an FMEA card.
3. On the ribbon, choose Close, and then choose Yes.

The FMEA is then closed, archived, and moved to the FMEA Archive Overview.

> **Note**
>
> Archived analyses and matrices cannot be edited. However, you can print an analysis by choosing Risk Matrix on the ribbon of an archived card.

ENTER TEXT

You can specify a wide variety of texts on complaint, claim, action, and FMEA cards. Each text you add is subject to versioning.

As the method for entering texts is identical for warranty claims, complaints, actions, and analyses, except for the type of text that you want to enter (that is, for registration or analysis), the example provided in the following applies to all text entry functions in Complaints Management.

- Open the card on which you want to enter text.
- Choose New Text on the ribbon.
- This opens a text editor. Select the type of text by using the relevant function and specify the text you want in the editor.
- Afterward, the text will be shown on the relevant FastTab, where the description can be changed or supplemented.

Every text is versioned, including new entries and text changes on the relevant pages but also cancelled entries, which will be shown as empty lines. You can see other versions by choosing Previous or Next on the ribbon.

When the Justified toggle is modified on claims and complaints, a text editor opens automatically so that you can enter a reason for the change. This text must be filled in and will be copied to the Analysis Text FastTab as a new text version.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩

Unique Device Identification

OVERVIEW

To simplify the tracking of medical products *(in the case of recalls especially)* and to prevent counterfeit goods from being sold, manufacturers must assign a UDI to every product and its packaging prior to the item entering the market.

With the UDI functionality that can be integrated into Microsoft Dynamics 365 Business Central[1], you can maintain the information you need to meet Unique Device Identification rules and prepare GUDID and EUDAMED reports.

> **Note**
>
> You need a separate license to use this functionality.

ABBREVIATIONS

Acronyms / Initialisms	Description
DUNS	Data Universal Numbering System
EUDAMED	European Database on Medical Devices
GUDID	Global Unique Device Identification Database
GUDID Data Elements Reference Table	(List of UDI data elements as published by the FDA)
UDI	Unique Device Identification
UDI Data Dictionary	(List of UDI data elements as published by the European Commission)
XML	Extensible Markup Language
XSD	XML Scheme Definition

UDI USER SETUP

To configure users’ individual access rights to UDI data:

1. Choose the Search icon, enter UDI Setup, and then choose the related link.
2. Enter or select a user and fill in the fields as necessary.

SET UP EUDAMED

UDI Setup

To set up the UDI-EUDAMED interface:

1. Choose the Search icon, enter UDI Setup, and then choose the related link.
2. On the General and EUDAMED FastTabs, fill in the fields described in the following table.

Field	Description
Default Issuing Entity / Agency Code	Specify the default issuing entity.
Default Manufacturer SRN	Specify the manufacturer’s default SRN.

Actions New DI

Creates a new DI, such as a Basic DI, a UDI-DI, or a Secondary DI.

Related – Base Data

Contains the functions needed to maintain basic EUDAMED data, as described in the European Commission’s UDI Data Dictionary. For more information on a specific field function, see the following table.

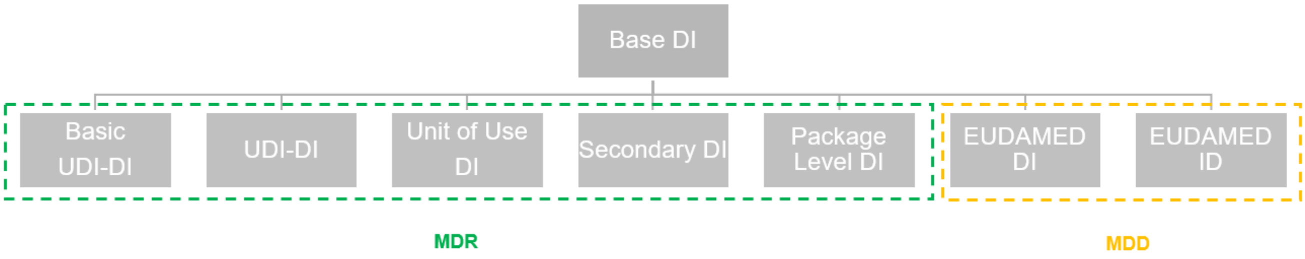
Function	**Description**
CMR Categories	Specifies if the device contains a CMR (carcinogenic, mutagenic, or toxic to reproduction) substance.
Clinical Size Types	Specifies the type of clinical size associated with the device. Sizes can be identified by their type (such as length or width), precision (single value, range, or text), or unit of measure.
Device Certificate Types	Specifies the type of product certificate assigned to the device. This type is part of the data that must be provided when you register products that need to be certified.
Issuing Entities	Specifies the issuing entities tasked by the European Commission with creating EUDAMED DI codes (Basic UDI-DIs, UDI-DIs, Unit of Use DIs, Secondary DIs, and Package Level DIs).
EMDN Codes	Specifies EMDN nomenclature code(s) associated with the UDI-DI.
Measure Units	Specifies the unit used for the clinical size associated with the device. Sizes can be identified by their type (such as length or width), precision (single value, range, or text), or unit of measure.
Multi-Component Devices	Specifies if the Basic UDI-DI refers to a system that is a device itself, a procedure pack that is a device itself in accordance with Article 22(4) MDR, or a kit. This field is applicable only to standard devices, not systems or procedure packs. The Kit option is also only applicable to IVDR devices and systems that are devices themselves. In the case of procedure packs, this field applies only to MDR devices.
Non-Medical Device Types (Annex XVI)	References the intended non-medical purpose of the device (UDI-DI) as described in Annex XVI of the MDR regulation.
Notified Bodies	References the organization that issued the product certificate for the device. The organization’s contact details are part of the data that must be provided when you register products that need to be certified.
Risk Classes	Specifies the risk class of the device that is assigned to the Basic UDI-DI. What risk class the device is put in depends on the legislation applicable to it.
Special Devices	Specifies if the device is of a special type and if so, the type thereof. You cannot use this function if the device is a standard device that has the options of System or Procedure Pack *(devices themselves)* or is a system or procedure pack.
Storage and Handling	References the storage and handling conditions associated with the device *(UDI-DI)*.
Types of Substances	Specifies the type of medicinal substances contained in the device. This includes substances understood as a medicinal product or as a medicinal product derived from human blood or plasma.
Warning Values	Specifies critical warnings or contra-indications linked to the UDI-DI.

Related – UDI

Function	Description
DI List	Shows a list of all DIs, such as Basic DIs, UDI-DIs, and Secondary DIs, including those that have already been assigned.
Product Designers	Specifies the product designer, that is, the company who originally manufactured or designed the device. Also provides data on manufacturers and designers not available in EUDAMED.
Basic UDI-DI List	Shows a list of all Basic UDI-DIs, including those already assigned.
Change Log	Lists the changes made to UDI information.

DI List

This list stores all DIs available in the system, including DIs already in use and those not in use but acquired from issuing entities. The following chart shows the regulations that certain types of EUDAMED data are subject to.



The fields found on each line of the list are described in the following table.

Field	Description
Code	Specifies the relevant UDI-DI, such as GTIN or HIBC.
Issuing Entity / Agency Code	Specifies the issuing entity, such as GS1.
Description	Can be used for a more detailed description of the record. This description will not be copied to EUDAMED (or GUDID).
DI Type	Specifies the type of DI: • None *(placeholder for acquired but not yet assigned DIs)* • Basic UDI-DI • UDI-DI • Unit of Use DI • Secondary DI • Package Level DI • EUDAMED DI • UDI-DI (Legacy)
Used in EUDAMED	Specifies whether the DI is part of a EUDAMED record.
Used in GUDID	Specifies whether the DI is part of a GUDID record.

Actions

Based on the type of DI, you can choose one of the following functions on the ribbon:

Function	Description
Create EUDAMED DI	Creates a new EUDAMED record with a Basic UDI-DI, UDI-DI, or EUDAMED DI.
New	Inserts a new line on the page.
Open DI Card	Opens the EUDAMED record.
Open DI Versions	Opens a list of all versions of the DI.
Open Item Relations	Opens the item relations specified for the record.
Audit Trail	Opens the change log for the record.

Basic UDI Card

You enter Basic UDI-DI data on the Basic UDI-DI Card. To enter new data:

1. On the DI List, select a DI record of type Basic UDI-DI.
2. Choose Open DI Card on the ribbon. To enter data that you previously used in GUDID or haven’t yet used at all, choose Create EUDAMED DI.
3. Fill in the fields according to the UDI Data Dictionary. Fields that aren’t part of the dictionary are listed in the following.

General

Field	Description
Description	Specifies a text to describe the Basic UDI-DI.
Released	Specifies whether this version of the EUDAMED record has been released.
Active	Specifies whether this version is being or has been the last one edited.
Internal Version	Specifies the version of the Basic UDI-DI.

Actions

Function	Description
Create New Version	Creates a new version of the Basic UDI-DI record.
Release Version	Releases the current Basic UDI-DI version.
Open DI Versions	Opens a list of all versions of the DI.
Audit Trail	Opens the change log for the record.

UDI-DI card

You enter UDI-DI data on the UDI-DI Card. To enter new data:

1. On the DI List, select a DI record of type UDI-DI.
2. Choose Open DI Card on the ribbon. To enter data that you previously used in GUDID or haven’t yet used at all, choose Create EUDAMED DI.
3. Fill in the fields according to the UDI Data Dictionary. Fields that aren’t part of the dictionary are listed in the following.

General

Field	Description
Description	Specifies a text to describe the UDI-DI.
Released	Specifies whether this version of the EUDAMED record has been released.
Active	Specifies whether this version is being or has been the last one edited.
Internal Version	Specifies the version of the UDI-DI.

Actions

Function	Description
Create New Version	Creates a new version of the UDI-DI record.
Release Version	Releases the current UDI-DI version.
Open DI Versions	Opens a list of all versions of the DI.
Open Item Relations	Specifies the relation of the UDI-DI to an item or its variant and unit of measure.
Audit Trail	Opens the change log for the record.

Actions - Functions

Function	Description
Copy UDI Data	Copies base data from another UDI record.
Delete Basic UDI	Deletes the assigned Basic UDI.
Delete Secondary UDI	Deletes the assigned Secondary UDI.
Delete Unit of Use DI	Deletes the assigned Unit of Use DI.
Delete Direct Marking DI	Deletes the assigned Direct Marking DI.
Delete Legacy Device	Deletes the assigned Legacy Device.
Delete Product Designer Link	Deletes the link to the Product Designer.

Legacy Device card

You enter EUDAMED DI data on the Legacy Device card. To enter new data:

1. On the DI List, select a DI record of type EUDAMED DI.
2. Choose Open DI Card on the ribbon. To enter data that you previously used in GUDID or haven’t yet used at all, choose Create EUDAMED DI.
3. Fill in the fields according to the UDI Data Dictionary. Fields that aren’t part of the dictionary are listed in the following.

Basic UDI

Field	Description
Description	Specifies a text to describe the DI.
Released	Specifies whether this version of the EUDAMED record has been released.
Active	Specifies whether this version is being or has been the one last edited.
Internal Version	Specifies the version of the DI.

Actions

Function	Description
Create New Version	Creates a new version of the EUDAMED DI record.
Release Version	Releases the current version.
Open DI Versions	Opens a list of all versions of the DI.
Open Item Relations	Specifies the relation of a EUDAMED DI to an item or its variant and unit of measure.
Audit Trail	Opens the change log for the record.

Actions - Functions

Function	Description
Copy from Legacy	Copies base data from another UDI record.
Delete Secondary UDI	Deletes the assigned Secondary UDI.
Delete Unit of Use DI	Deletes the assigned Unit of Use DI.
Delete Direct Marking DI	Deletes the assigned Direct Marking DI.
Delete Product Designer Link	Deletes the link to the product designer.

SET UP GUDID

UDI Setup

To set up the UDI-GUDID interface:

1. Choose the Search icon, enter UDI Setup, and then choose the related link.
2. On the General and GUDID FastTabs, fill in the fields described in the following table.

Field	Description
Default Issuing Entity /Agency Code	Specify the default issuing agency.
DUNS Number	Specify the DUNS number that has been assigned by the FDA to identify the manufacturer. The number is used on documents and for reporting data to the agency.
Export Despite XSD Fail	Specifies if an XML export is possible despite failed XSD validation.
GUDID XSD Validation	Specifies if XSD validation is active *(requires an XSD file)*.
GUDID XSD	Specifies if an XSD file has been stored for validation during the XML export process.

Actions

Function	Description
New DI	Creates a new DI, such as a Basic DI, a UDI-DI, or a Secondary DI.
Import GUDID XSD	Imports a GUDID XSD file.
Delete GUDID XSD	Deletes the stored GUDID XSD file.

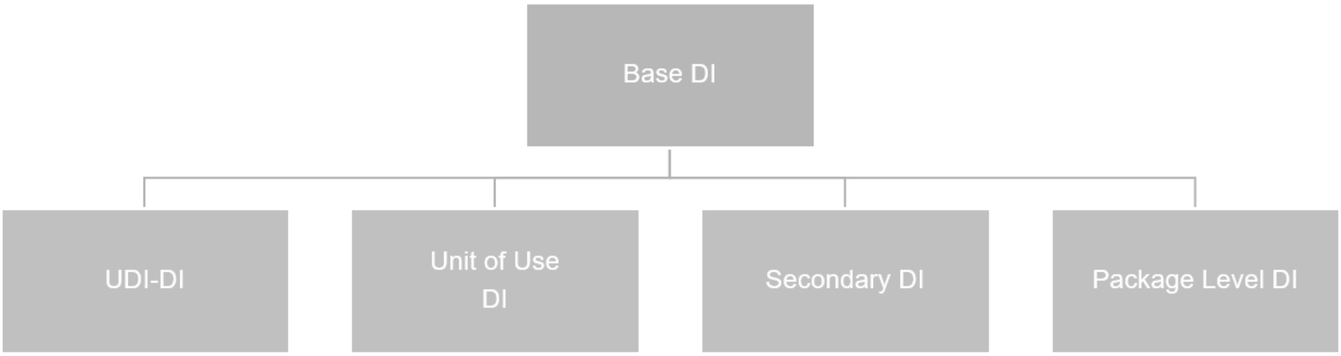
Related – Base Data

Contains the functions needed to maintain basic GUDID data, as described in the FDA UDI system. For more information on a specific field function, see the following table.

Function	Description
Units of Measure	Specifies units of measure used for clinically relevant sizes, as well as storage and handling conditions.
FDA Product Codes	Specifies devices based on FDA categories.
GMDN Codes / FDA Preferred Term Codes	Specifies GMDN or Preferred Term (PT) codes. These are unique five-digit codes used to identify common device types. PT codes are assigned to medical devices and related health care products for the purposes of grouping and categorization.
Clinically Relevant Sizes	Specifies the dimension types for the clinically relevant measurement of the medical device.
Submission Types	Indicates the type of FDA premarket submission. This includes 510(k), De Novo, PMA, PDP, HDE, BLA, ANDA, and NDA.
Storage Handling Conditions	Indicates the storage and handling requirements for the device, such as temperature, humidity, and atmospheric pressure needs.
Sterilization Methods	Indicates the methods of sterilization that can be used for the device prior to use on a patient.

DI List

This list stores all DIs in the system. The DIs relevant to the GUDID database are shown in the following chart.



You set up GUDID data in the same way as you do EUDAMED information. For more details, see here.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Package Labels

OVERVIEW

The Label Interface – LIF functionality provides a way for you to transmit data structures that store item-related information supplied by Microsoft Dynamics 365 Business Central[1] to a label design and print program.

After the structures are imported to the third-party solution, they're used to fill in graphical templates set up there so that you can create (and print) a variety of package labels at any time. The interface can be connected to the following programs:

- Loftware NiceLabel[3] Cloud (Business edition or higher)
- Loftware NiceLabel[3] On-Premises (LMS Enterprise edition or higher)
- Seagull Scientific BarTender[2] (Automation edition or higher)
- BarTender[2] (Cloud)

Interface basics

Two key components help integrate the interface with the standard app:

Label Designer

- NiceLabel[3] Designer – Pro
- BarTender[2] Designer
- BarTender[2] Cloud

Automation / Integration Builder

- NiceLabel[3] Automation Builder – Pro
- NiceLabel[3] Automation Builder
- BarTender[2] Integration Builder

The design component is used to customize label templates and layouts. The builder, on the other hand, helps those working with the functionality to create an automated printing process. This includes everything from setting a trigger (to import data) and opening a template to assigning variables and selecting a print option to feeding back values to the source system.

For a more detailed explanation of these processes, see the NiceLabel[3] Cloud Setup, NiceLabel[3] On-Premises Setup, and BarTender[2] Setup.

Note

The standard NiceLabel[3] Label Cloud API has a limitation of 5 calls per second. That frequency is suitable for the majority of labeling projects.

Sometimes, there are requirements for even faster printing. To satisfy demands for higher print frequency, a new high-throughput Label Cloud API is available. The new API expands the throughput to 30 calls per second and 50,000 calls per hour, whichever is achieved first.

The new API is not included in the Label Cloud subscription by default. You can include it as an add-on for an additional charge. In this case, please contact NiceLabel[3]. (Source: NiceLabel[3] (27.11.2023).

Interface options

The functionality comes with an array of tables, pages, and actions. Above all, however, it provides the configurations needed for multiple printing scenarios. You can choose between the following interface options:

- **KUMAVISION Label Interface – NiceLabel[3] Cloud**
- **KUMAVISION Label Interface – NiceLabel[3] On-Premises Web Service**
- **KUMAVISION Label Interface – BarTender[2] Web Service**
- **KUMAVISION Label Interface - BarTender[2] Cloud**

Another component—called KUMAVISION Label Interface File Extension—can be used to export files via on-premises solutions. As file access is restricted in SaaS environments, a separate app had to be developed for this purpose.

> **Note**
>
> Because the KUMAVISION Label Interface File Extension isn’t compatible with Unicode, the use of this extension can cause an increase in licensing costs for Microsoft products.

General setup

You must set up the label interface before you can transmit information to an external program. You can also set up additional features during this process.

Activate the interface

To turn on the interface:

1. Choose the Search icon, enter KUMAVISION Module Setup, and then choose the related link.
2. On the Settings FastTab, turn on the Label Interface toggle.

> **Note**
>
> You need a separate license before you can use the label interface.

Label position codes

The data structures transmitted to third-party software programs contain a list of values, each coupled with an identifier. These identifiers are the same on all labels, regardless of what the labels will be used for. To set up a value:

1. Choose the Search icon, enter Label Position Code List, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a unique code that can later be linked to a label structure. You can enter a maximum of 20 characters in this field.
Description	Specify a description for the code to clarify the label contents. You can enter a maximum of 80 characters in this field.

Label Interface Setup

To configure the label interface:

1. Choose the Search icon, enter Label Interface Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

General

Field	Description
Printer Position Code	Enter the code that will be used for the printer on this line. The value in this field is automatically copied to label structure lines when you create a new structure.
No. of Copies Position Code	Enter the code that will be used for specifying how many labels you want to create. The value you enter in this field can be transmitted as a variable to a label design and print program for analysis if you set up the variable there. The field has the following impact on the creation of data structures: a) For items without item tracking, the system will create a structure line and enter the No. of Copies value from the source document line there. For lot-tracked items, the system will create a structure line filled in for each lot. The No. of Copies value will be copied from the relevant item tracking line. b) For items tracked through serial numbers, the system will create a structure line with a No. of Copies value of 1 per number. If you leave this field blank, the system will create as many lines as needed to match the quantity entered in the field. A quantity of 100 entered in this field, for example, will add 100 lines to the transfer file.
Log Content File Export	Turn on this toggle if you want the label creation process logged by the system. You can see an overview of all archived print jobs on the Label Print Job Archive List page.
Output Interface	Specify the interface that will be used to create labels. **Note** The KUMAVISION Label Interface File Extension is available as a separate app. Other interface solutions are available on request.

File Export

Available after installing the **KUMAVISION Label Interface File Extension** app.

Field	Description
Structure File Export Path	Specify the directory that will be used to store the structure file you want to export to the label design and print program.
Content File Export Path	Specify the directory that will be used to store the label file you want to export to the label design and print program.
Default Export Separator	Specify the separator that will be required to export label files.
Text Encoding	Specify the type of character encoding that will be used for label files (Windows, UTF8, UTF16, or MSDOS).
Pictograph Export Path	Specify the path that label design and print programs should use to retrieve pictographs stored in KUMAVISION (Booster).
Pictograph File Type	Specify the file type of pictographs (JPG or BMP). **Note** KUMAVISION functionality doesn’t separate pictograph files by type. You should therefore select a type here to avoid errors when working with third-party software.

Note

Depending on what option you selected in the Output Interface field, the page might show additional interface features. For more information, see NiceLabel Cloud Setup, NiceLabel[3] On-Premises Setup, and BarTender[2] Setup.

Label Printers

To set up a device for printing labels:

1. Choose the Search icon, enter Label Interface Setup, and then choose the related link.
2. On the ribbon, choose Label Printer.
3. Fill in the fields as described in the following table.

Field	Description
Label Code	Select the label code that will be used for the printer.
User ID	Specify the ID of the user who will print labels.
Printer Name	Specify the name of the device on which labels should be printed.

One printer can be stored per label code and ID. This is to ensure that external programs transmit the data stored in label structures to the correct printers. A printer can be assigned in the following ways:

1. To a certain label code and user.
2. To a certain label code and all users (that is, the User ID field is blank).
3. To all codes (that is, the Label Code field is blank) but only one user.
4. To all codes and users (Label Code and User ID fields are both empty).

Pictographs (Legacy)

By using pictographs, you can assign symbols to labels in Microsoft Dynamics 365 Business Central[1]. No longer supported by NiceLabel[3] Cloud and BarTender[2] Web Service, the feature remains for legacy reasons.

Instead, pictographs should now be added through external sources. By using parameters *(such as "PAR_*“ codes specified on the Label Position Code List page)* and a certain function, however, you can still choose whether to show a symbol on a certain label.

Label structures

Label structures are representations of the core information used for labeling. Within a structure, you can assign position codes to Microsoft Dynamics 365 Business Central[1] records and fields. The lines of the structure specify the data that you want to show on a label and where this information comes from. The structures can be used for multiple items (none are related to a specific item).

To set up a structure:

1. Choose the Search icon, enter Label Structure List, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	**Description**
Code	Specify a code for the structure. The code must be unique. You can enter a maximum of 20 characters in this field.
Name	Specify a brief description for the structure. You can enter a maximum of 50 characters in this field.
Label Type	Specify the type of label. Options are: • (blank) • Location • Product • Shipment• Whse. Receipt **Note** This field is used for informational purposes only.
Status	Shows the status of the structure. A structure can have one of the following statuses: • New • Certified • Under Development • Expired **Note** You can only create labels from certified structures.
Version Nos.	Specify the number series that will be used to assign version numbers to the label. Filling in this field is optional.
Active Version	Shows the currently active version of the structure. This is the version that is certified and valid on the date on which you open the structure.
From Date	Specify from when the structure should be valid.
To Date	Specify until when the structure should be valid. If this field is left blank, this version of the structure will be used until it is replaced by another active version.

Label structure lines

The structure lines represent the individual positions that should be printed on the label.

Field	Description
Position Code	Specify a unique position code that stands for a value on the label. You can select a code from the list or create a new one. For example, you can select position code ITEM_NO in this field to assign the item number from the item master to the label.
Position Description	Shows the description of the code. The description is copied from the Position Code Label List page but can be changed manually in this field.
Source Type	Specify where the data entered for the code comes from. For example, you can choose Text here if you want the system to use the content of the Source Value field. For more information on how to select a source type and subtype, see Source Type—Subtype Combinations.
Source Subtype	Enter another type that will be used in combination with the Source Type field. For example, for the Item source type, you can specify in this field if you want to use the description or the content (=value) stored in the item master. For more information on how to select a source type and subtype, see Source Type—Subtype Combinations.
Source Field No.	You can only fill in this field for source types linked to a table. The number you enter here identifies the field from which a value or a description is copied from. For more information on how to select a source type and subtype, see Source Type—Subtype Combinations.
Source Code	This field can only be used in the following ways: **Option 1** If the source type is Pictograph and the subtype is Database, you can choose the code of a pictograph from the pictograph master. This option is available for legacy reasons. It is only used for the KUMAVISION Label Interface File Extension (which needs to be installed separately). **Option 2** If the source type is Item Tracking and the subtype Expiration or Production Date, you can format this date in the following ways: <YYYY>: In this format, the year is represented by four digits. <YY>: The year is represented by the last two digits. <MM>: In this format, the month is shown as a number. <MONTH>: The month is written out. <DD>: In this format, the day is written out. *Example 1* <MONTH> <YYYY> will list the date as December 2022. *Example 2* <YYYY>-<MM>-<DD> will list the date as 2022-07-09.

Field	Description
	Option 3 If the source type is Item Attribute, you must assign the attribute that you want to specify for the label (applies to both Caption and Value subtypes). To select an attribute, use the lookup in the field.
Source Value	This field is filled in automatically unless you chose source type Text or source type Pictograph and subtype Path. If you chose Text, enter the text you want printed for the position code. For source type Pictograph and subtype Path—and if symbols are not stored in the system but a directory—specify the path at which the pictograph can be found. This option is only available for legacy reasons and is only used in combination with the KUMAVISION Label Interface File Extension, which needs to be installed separately. For more information on how to select a source type and subtype, see Source Type—Subtype Combinations.
Language Code	Here you can specify different item codes to add translations to the label structure. The field is only used for types Item Translation, EUDAMED UDI-DI, and EUDAMED Legacy in combination with subtype Value, or for type Item Attribute and subtype Caption or Value.

Source type-subtype combinations

The following table shows the subtypes that you can add to a source type and what will happen if you do (=source value).

Source type	Source subtype	Source value
Text	(blank)	None; enter a text that you want printed on a label for the selected position code.
Pictograph	Path	None; specify the file path to a pictograph that will be used for the selected position code. This option exists for legacy reasons. For more information, see KUMAVISION Label Interface File Extension.
Pictograph	Database	The Source Value field is filled in automatically with the name of a pictograph that will be used for the selected position code. This option exists for legacy reasons. For more information, see KUMAVISION Label Interface File Extension.
Item	Caption	The Source Value field is filled in automatically with the caption of an Item table field selected via the Source Field No.
Item	Value	The Source Value field is filled in automatically with the content of an Item table field selected via the Source Field No.
Item Attribute	Caption	The Source Value field is filled in automatically with the caption of an Item Attribute table field selected via the Source Field No. If you select the Name field and have specified a language code, the Source Value field is filled in with the translation entered for the attribute. If no translation is available, the system shows the default name instead.
Item Attribute	Value	The Source Value field is filled in automatically with the content of an Item Attribute table field selected via the Source Field No. If you select the Value field and have specified a language code, the Source Value field is filled in with the translation entered for the attribute. If no translation is available, the system shows the default value instead.
Item Variant	Caption	The Source Value field is filled in automatically with the caption of an Item Variant table field selected via the Source Field No.
Item Variant	Value	The Source Value field is filled in automatically with the content of an Item Variant table field selected via the Source Field No.
Item Translation	Caption	The Source Value field is filled in automatically with the caption of an Item Translation table field selected via the Source Field No.
Item Translation	Value	The Source Value field is filled in automatically with the content of an Item Translation table field selected via the Source Field No. You can use the Language Code field to specify for which language the item translations should be filtered.
Item UOM	Caption	The Source Value field is filled in automatically with the caption of an Item Unit of Measure table field selected via the Source Field No.
Item UOM	Value	The Source Value field is filled in automatically with the content of an Item Unit of Measure table field selected via the Source Field No.
Item Tracking	Serial No.	The Source Value field is filled in automatically with the serial number that was entered for the item assigned to the selected position code.
Item Tracking	Lot No.	

Source type	Source subtype	Source value
		The Source Value field is filled in automatically with the lot number that was entered for the item assigned to the selected position code.
Item Tracking	External Lot No.	The Source Value field is filled in automatically with the external lot number that was entered for the item assigned to the selected position code.
Item Tracking	Expiration Date	The Source Value field is filled in automatically with the expiration date that was entered for the item assigned to the selected position code. You can use the Source Code field to reformat the date.
Item Tracking	Production Date	The Source Value field is filled in automatically with the production date that was entered for the item assigned to the selected position code. You can use the Source Code field to reformat the date.
Customer	Caption	The Source Value field is filled in automatically with the caption of a Customer table field selected via the Source Field No.
Customer	Value	The Source Value field is filled in automatically with the content of a Customer table field selected via the Source Field No.
Vendor	Caption	The Source Value field is filled in automatically with the caption of a Vendor table field selected via the Source Field No.
Vendor	Value	The Source Value field is filled in automatically with the content of a Vendor table field selected via the Source Field No.
Customer Ref.	Caption	The Source Value field is filled in automatically with the caption of an Item Reference table field selected via the Source Field No. This table is prefiltered for customers.
Customer Ref.	Value	The Source Value field is filled in automatically with the content of an Item Reference table field selected via the Source Field No. This table is prefiltered for customers.
Vendor Ref.	Caption	The Source Value field is filled in automatically with the caption of an Item Reference table field selected via the Source Field No. This table is prefiltered for vendors.
Vendor Ref.	Value	The Source Value field is filled in automatically with the content of an Item Reference table field selected via the Source Field No. This table is prefiltered for vendors.
Company Info	Caption	The Source Value field is filled in automatically with the caption of a Company Information table field selected via the Source Field No.
Company Info	Value	The Source Value field is filled in automatically with the content of a Company Information table field selected via the Source Field No.
Barcode Ref.	Barcode	The Source Value field is filled in automatically with an item reference number based on an item number, a variant code, an item UOM, and the reference type Barcode.
Barcode Ref.	Text	The Source Value field is filled in automatically with an item reference number based on an item number, a variant code, an item UOM and the reference type Barcode.

Source type	Source subtype	Source value
Printer	(empty)	The Source Value field is filled in automatically with the printer that will be used for the chosen combination of label structure and user ID.
No. of Copies	(empty)	The Source Value field is filled in automatically with the number of required labels.
Document No.	(empty)	The Source Value field is filled in automatically with the number of the source document if this document triggered the printing process.
Location Code	Value	The Source Value field is filled in automatically with the location code from a document, for example, a warehouse receipt, if this document triggered the printing process.
Location Code	Value	The Source Value field is filled in automatically with the bin code from a document, for example, a warehouse receipt, if this document triggered the printing process.
EUDAMED UDI-DI	Caption	The Source Value field is filled in automatically with the caption of a UDI-DI field selected via the Source Field No.
EUDAMED UDI-DI	Value	The Source Value field is filled in automatically with the content of a UDI-DI field selected via the Source Field No.
EUDAMED Legacy	Caption	The Source Value field is filled in automatically with the caption of a UDI-DI field selected via the Source Field No.
EUDAMED Legacy	Value	The Source Value field is filled in automatically with the content of a UDI-DI field selected via the Source Field No.

Copy structure (action)

Copies an existing label structure. To use this function:

1. On the Label Structure List page, choose New.
2. On the ribbon, choose Copy Structure.
3. In the Copy from Label Code field, specify the code of the structure that you want to copy lines from.
4. Turn on the Copy Incl. Values toggle if also want to copy manual source values (source type Text or source type Pictograph in combination with subtype Path). If you leave the toggle turned off, their source values will be blank, and you need to fill them in again.
5. Choose OK to copy the lines from the selected structure to the new one.

> **Note**
>
> You can also use this function to revise an existing structure by copying lines from another prior to making changes. If you run the function from a structure for which lines exist, the system will delete them before copying the other lines.

Label structure versions

You can create versions of a label structure if you want to use some version of the structure to start being valid on a specified date. To set up this feature:

1. Choose the Search icon, enter Label Structure List, and then choose the related link.
2. Open a label structure.
3. In the Version Nos. field, enter a number series that will be used for the versions of this structure.

You can then see the current structure version in the Active Version field. Data copied from previous, expired versions remains available as well.

The system identifies the active structure version by looking for one where the work date is within the period specified in the Starting Date and Ending Date fields. If this results in more than one search hit, the version with the highest number will be used as the active version.

> **Note**
>
> If you want to work with version numbers, we recommend that you add leading zeros to these numbers, as the Version No. is a code field (which is sorted in alphanumeric order).

Create a new version

To create a new version of a label structure:

1. Choose the Search icon, enter Label Structure List, and then choose the related link.
2. Open a label structure.
3. On the ribbon, choose Versions and then choose New.
4. With the Version Nos. field filled in, you can exit the No. field to have a number assigned automatically. If the Version Nos. field hasn’t been filled in on the structure card, you need to enter a number manually.
5. The work date is then automatically suggested in the Starting Date field. However, you can specify another date if needed.

You can now enter data on the lines manually or choose Copy Structure on the ribbon to copy lines from an existing structure or version.

Version Matrix (action)

Compares structure versions on a matrix. You can specify filters here before you choose Show Matrix on the ribbon.

Change Log (action)

Shows changes to a label structure if structures and versions are tracked. This action extends the standard change log functionality. To include label structures on logs, you must add the following tables in Change Log Setup:

- Table 5488108 - KVSKBALabelStructureHeader
- Table 5488109 - KVSKBALabelStructureLine
- Table 5488116 - KVSKBALabelStructureVersion

For more information about tracking changes, see Auditing changes.

Item-Label Relations

Label structures essentially tell another program where to print lines (position codes) on a label and how to calculate values for them.

All structures are universally valid so that they can be used for multiple items. To assign a structure to an item, choose Item-Label Relations on the ribbon of the relevant structure, item, or item variant.

The Item-Label Relations page stores the links between items and structures, as well as their units of measure, language codes, and customers or vendors. These values are then used to find a label structure or create a new label.

For example, by specifying a unit of measure and a customer number, you can create an OEM label for a certain customer as described in the following table.

Field	Description
Item No.	Specifies the number of the item the structure will be linked to.
Variant Code	Specifies the variant of the item the structure will be linked to.
Label Code	Specifies the code of the structure used.
Item Description	Specifies the item description that will be linked to the structure.
Label Name	Specifies the name of the structure that will be linked to the item.
Item UOM	Specifies the unit of measure in which label data (contents) will be calculated.
Language Code	This field is filled in with the language that has been specified for calculating label contents.
Customer No.	Specifies the customer for which label contents will be calculated.
Vendor No.	Specifies the vendor number for which label contents will be calculated.
Print at Receipt	With the toggle turned on, the label is printed when the item is received at a location.
Print on Prod. Order	If the article linked to the structure is a production article, this checkbox must be activated so that a corresponding label can be printed from the production order.
Print at Shipment	With the toggle turned on, the label is printed when the item is shipped.
Overpack Qty.	This field is used only when the Print at Receipt toggle is turned on and the No. of Copies Position Code field in Label Interface Setup is empty.
No. of Sample Labels	This field can be filled in if labels are printed, for example, as reserve samples. If the field is filled in, the No. of Copies will be increased by the number specified here.

Overpack quantities

The Overpack Quantity field is used when the Print at Receipt toggle is turned on and the No. of Copies Position Code field in Label Interface Setup is blank. When both conditions are met, the number of copies is calculated as follows:

Non-tracked and tracked items

Order Quantity	100
Unit of Measure	Pieces
Overpack Quantity	1
= 100 labels (100 divided by 1)	
Order Quantity	100
Unit of Measure	Pieces
Overpack Quantity	2
= 50 labels (100 divided by 2)	

Label contents and preview

For the most part, labels are created automatically in Microsoft Dynamics 365 Business Central[1] before they’re copied to a third-party solution.

After the labels have been imported, the external program creates the relevant information and sends it to the selected printer. Manual intervention shouldn’t be necessary in this context.

However, to track the generation of label contents in Microsoft Dynamics 365 Business Central[1] and preview labels for revisions, you can choose Show Label Contents on the ribbon of a label structure or the Item-Label Relations page.

When you run this function from the Item-Label Relations page, data is filtered for the selected relations. If you run it from a structure, you can only filter for a label code.

On the Label Contents page, you can fill in values on the header, for example, a serial number or an expiration date. You can also enter other information to see how specific label positions are calculated.

The fields in the following table must be filled in as described:

Field	Description
Item No.	Specify the number of the item for which you want to create a label. This number is also used to determine the contents of source types Item, Item Variant, Item UOM, Item Translation, Customer Ref., Vendor Ref., and Barcode and is set as a filter on values when label data is calculated.
Variant Code	Specify the code of the item variant for which you want to create a label. The code is also used to determine the contents of source types Item, Item Variant, Item UOM, Item Translation, Customer Ref., Vendor Ref., and Barcode and is set as a filter on values when label data is calculated.
Label Code	Specify the code based on which you want to calculate label contents.
Label Name	Shows the name of the label. The name is entered automatically.

You can also enter something in other fields if necessary:

Field	Description
Item UOM	Here you can specify the item unit of measure for which you want to create a label. The unit is also used to determine the contents of source types Item, Item Variant, Item UOM, Item Translation, Customer Ref., Vendor Ref., and Barcode and is set as a filter on values when label data is calculated.
Language Code	Here you can specify the language code that you want to use to create content for source type Item Translation.
Serial No.	Here you can specify the number that you want to use to create content for source type Serial No.
Lot No.	Here you can specify the number that you want to use to create content for source type Item Tracking and subtype Lot No.
External Lot No.	Here you can specify the number that you want to use to create content for source type Item Tracking and subtype External Lot No.
Expiration Date	Here you can specify the number that you want to use to create content for source type Item Tracking and subtype Expiration Date.
Production Date	Here you can specify the number that you want to use to create content for source type Item Tracking and subtype Production Date.
Customer No.	Here you can specify the number that you want to use to create content for source types Customer and Customer Ref.
Vendor No.	Here you can specify the number that you want to use to create content for source types Vendor and Vendor Ref.
Label Printer Name	Shows the device on which labels will be printed. This field is filled in automatically depending on setup.
Document No.	Here you can specify the number of a document.
Location Code	Here you can specify the code of a location.
Bin Code	Here you can specify the code of a bin.
NiceLabel Cloud Trigger API ID	Shows a unique trigger ID that will be used for NiceLabel[3] Cloud. **Note** An ID is only filled in if you selected KUMAVISION Label Interface – NiceLabel[3] Cloud in Label Interface Setup.

Calculate Contents (Action)

Starts in Microsoft Dynamics 365 Business Central[1] the process of calculating line values based on the specified label structure.

Preview Label (Action)

Provides an online preview of labels created in NiceLabel[3] Cloud, BarTender[2] Web Service and BarTender[2] Cloud.

For this purpose, the label design and print program will simulate the standard printing process, store the results as a PDF file, and send the PDF to Microsoft Dynamics 365 Business Central[1].

Note

To distinguish this preview from the printing process itself, an additional parameter called PreviewFormat is passed on to the label design program. This parameter has the value True for each preview, whereas the value is False for actual printouts.

After you run the Preview Label action, the label is shown on the Preview Label FastTab for NiceLabel[3] Cloud and BarTender[2] Web Service. For "BarTender[2] Cloud", the label is showed as a PDF directly in a new page. If desired, it can be printed and downloaded from there.

Create Structure File (Action)

Creates a file that contains all codes and sample values assigned to positions on a label, as a basis for designing new data structures.

After the structure is created, it is stored in the standard Download folder. The file name shows the label code, the ID of the user who created the file, and the date and time of creation.

If you’re using KUMAVISION Label Interface – NiceLabel[3] Cloud or BarTender[2] Web Service, the file extension will be JSON. If you’re using the KUMAVISION Label Interface – NiceLabel[3] On-Premises Web Service, the structure will be in the XML format. File contents are arranged in the same way as in the file sent to the label design and print program.

Create a Label (Manually)

After the label information has been determined for a specific item, label data can be created and transmitted by choosing Create Label File. This will create a file manually.

Create a label (automatically)

Warehouse receipt

If the Print at Receipt checkbox is selected on the Item-Label Relations page, labels will automatically be created for items when you post their receipt at a warehouse.

As an example, you created and ordered in advance multiple items, which are now being received.

You then post their receipt so that a label is created and copied automatically to the relevant label design and print program. The PDF file generated for the label will be three pages long, with each page showing one of the three items listed in the Qty. Received field on the receipt.

NICELABEL[3] ON-PREMISES

Required version or edition

The NiceLabel[3] Web Service requires the Loftware NiceLabel[3] On-Premises LMS Enterprise edition or higher.

NiceLabel[3] On-Premises Setup

Label Interface Setup

On this page, you need to select KUMAVISION Label Interface – NiceLabel[3] On-Premises Web Service in the Output Interface field.

Everything else can be configured in the same way as for the default interface.

Label structure

To transmit data to NiceLabel[3] On-Premises through a web service call, you need to fill in the NiceLabel[3] On-Premises Web Service URL field in the label structure.

Field	Description
NiceLabel On-Premises Web Service URL	Specify the URL of the NiceLabel[3] Automation Builder that will be used for transmitting data to NiceLabel[3].

Note

You can only see this field if NiceLabel[3] On-Premises Web Service has been selected on the Label Interface Setup page.

Using NiceLabel[3] On-Premise

You can take the following steps to integrate Loftware NiceLabel[3] On-Premises with your Microsoft Dynamics 365 Business Central[1] environment.

> **Note**
>
> The setup examples provided with this article are *not* meant to replace NiceLabel[3] documentation nor any training in using the program.

NiceLabel[3] Automation Builder

With the help of filters and triggers provided by NiceLabel[3] Automation Builder, you can set up print scenarios based on data provided by Microsoft Dynamics 365 Business Central[1].

XML Data Filter

Because data is transferred to NiceLabel[3] On-Premises in the XML format, you need an XML filter. Add this filter, and a name, to a new data structure. On the ribbon, choose Import Data Structure to import a structure file from Microsoft Dynamics 365 Business Central[1]. For more information on how to generate the file, see Create Structure File.

To use XML nodes as variables, you can then set the Usage property of every element in the structure to Variable Value.

Create a trigger

Afterward, create a unique trigger that contains the processes that you want to run. Go to the Configuration Items tab, choose Add, and then choose Web Service.

Give the trigger a unique name and assign a port for communication with the web service. The port will be part of the web service URL and will be linked to the label structure in Microsoft Dynamics 365 Business Central[1].

Typically, the label design program is set up in a way so that variables will be read off the labels. Since label integration in this scenario occurs throughout the system and the labels used are transmitted as parameters of a structure, you need to set up integration variables manually by choosing Add > Variable on the Variables tab.

> **Note**
>
> We recommend that, as names, you use the descriptions specified for the variables on the structure lines created in Microsoft Dynamics 365 Business Central[1]. This way, label information will be mapped automatically to the variables.

To respond to preview or printout requests sent from Microsoft Dynamics 365 Business Central[1], you must also add the ResponseData variable. This variable will later be used to return values to the app.

Use Data Filter

Now, assign the NiceLabel[3] parameters to the specified variables by adding the Use Data Filter function to the Actions tab.

Afterward, enter the XML structure as a name on the Filter tab. If the names of the XML variables match the position codes set up in Microsoft Dynamics 365 Business Central[1], choose Auto Map on the Data Mapping tab.

The information stored in the data structure is then assigned to each variable by the system. If names are different, you must create mappings manually.

Open Label

Open the relevant label. As the label name is stored on a data structure line in Microsoft Dynamics 365 Business Central[1], you can again use a variable to get the name. Add the Open Label action, select the Data Source checkbox on the Settings tab, and fill in the Label Name field.

Preview: Print to PDF

To save print information as a PDF file so that you can preview the label, add the Redirect Printing to PDF action, enter a file name, and select the Overwrite File checkbox.

Because this action should only be performed for previewing a label, go to the Show Execution and Error Handling Options tab and add the condition that for this function to work, the PreviewFormat variable must be set to True.

Print Label

Afterward, add the Print Label action and specify that the number of labels to print (=No. of Copies) will be sourced from a variable.

Preview: Read data from file

For previews, the contents of the PDF file must then be read and copied to the ResponseData variable. Add the Read Data from File action. In the properties, set the File Name as explained under Preview: Print to PDF and enter 20 as the Number of Retries.

Because, again, this action should only be performed for label previews, add on the Show Execution and Error Handling Options tab the condition that for this function to work, the PreviewFormat variable must be set to True.

Preview: Set ResponseType PDF

Because the return value for a preview consists of a PDF document, you also need to convert the ResponseType. For this purpose, add another action that sets the variable to application/pdf in the case of previews.

NICELABEL[3] CLOUD

Required version or edition

The NiceLabel[3] Cloud interface requires NiceLabel[3] Cloud Business edition or higher.

NiceLabel[3] Cloud setup

NiceLabel[3] Cloud APIs Using NiceLabel[3] Cloud APIs

Before you can use NiceLabel[3] APIs, you need to log on to the API Developer Portal, create a subscription, and link the subscription to your Control Center. For more information, see Cloud Integrations – NiceLabel[3] Help Center page.

Label Interface Setup

On this page, you must select KUMAVISION Label Interface – NiceLabel[3] Cloud Web Service in the Output Interface field and enter an API subscription key.

Field	Description
NiceLabel Cloud API Subscription Key	Specify the primary key shown on the Developer Portal. This key is used as a component of API authentication, that is, it is included in the header information for HTTP requests as “Ocp-Apim-Subscription-Key.”

Everything else can be set up in the same way as for the default interface.

Label printers

With NiceLabel[3] Cloud, you can store what is known as cloud printers. As they aren’t connected to Microsoft Dynamics 365 Business Central[1], they cannot be selected in the app.

To add them, you need to retrieve printer information through the API from the NiceLabel[3] Cloud by choosing NiceLabel[3] Printer on the ribbon.

You can then choose Update Printer List to connect to the API and get the list of cloud printers stored online.

Label structure

With NiceLabel[3] Cloud, you can set up automated workflows to specify labeling actions and processes. You can also create a single workflow for use in every print scenario by assigning a variety of variables to the parameters available in the NiceLabel[3] Automation Builder.

Automated workflows can be identified by their trigger IDs. To send label data structures from Microsoft Dynamics 365 Business Central[1] to the right triggers, you need to store a NiceLabel[3] Cloud API identifier for each of them.

Field	Description
NiceLabel Cloud Trigger API ID	Enter the unique Trigger Name used by an automated NiceLabel[3] workflow for the label structure.

The content of this field must match the name of the trigger specified in the NiceLabel[3] Control Center.

Use NiceLabel[3] Cloud

You can take the following steps to integrate Loftware NiceLabel[3] Cloud with your Microsoft Dynamics 365 Business Central[1] environment.

Note

The setup examples provided with this article are *not* meant to replace NiceLabel[3] documentation nor any training in using the program.

NiceLabel[3] Automation Builder

With the help of filters and triggers provided by NiceLabel[3] Automation Builder, you can set up print scenarios based on data provided by Microsoft Dynamics 365 Business Central[1].

Json data filter

Because data is transferred to NiceLabel[3] Cloud in the JSON format, you need a JSON filter. Add this filter, and a name, to a new data structure. On the ribbon, choose Import Data Structure to import a structure file from Microsoft Dynamics 365 Business Central[1]. For more information on how to generate the file, see Create Structure File.

To use JSON parameters as variables, you can then set the Usage property of every element in the structure to Variable Value.

Create a trigger

Afterward, create a unique trigger that contains the processes that you want to run. On the Configuration Items tab, choose Add, and then choose Cloud.

Give the trigger a unique name and a unique ID. This ID will be used to trigger cloud services and will be linked to the label structure in Microsoft Dynamics 365 Business Central[1].

Typically, the label design program is set up in a way so that variables will be read off the labels. Since label integration in this scenario occurs throughout the system and the labels used are transmitted as parameters of a structure, you need to set up integration variables manually by choosing Add > Variable on the Variables tab.

Note

We recommend that, as names, you use the descriptions specified for the variables on the structure lines created in Microsoft Dynamics 365 Business Central[1]. This way, label information will be mapped automatically to the variables.

To respond to preview or printout requests sent from Microsoft Dynamics 365 Business Central[1], you must also add the ResponseData and ResponseType variables. These will later be used to return values to the app.

Use Data Filter

Now, assign the NiceLabel[3] parameters to the specified variables by adding the Use Data Filter function to the Actions tab.

Afterward, enter the JSON structure as a name on the Filter tab. If the names of the JSON variables match the position codes set up in Microsoft Dynamics 365 Business Central[1], choose Auto Map on the Data Mapping tab.

The information stored in the data structure is then assigned to each variable by the system. If names are different, you must create mappings manually.

Open Label

Open the relevant label. As the label name is stored on a data structure line in Microsoft Dynamics 365 Business Central[1], you can again use a variable to get the name. Add the Open Label action, select the Data Source checkbox on the Settings tab, and fill in the Label Name field.

Initialize ResponseType variable

Set the ResponseType to application/json. Add the Set Variable action, enter ResponseType in the Name field, and select the application/json value.

Initialize ResponseData variable

The ResponseData variable, on the other hand, must be “{}.” For this purpose, add the Set Variable action, enter ResponseData in the Name field, and enter {}.

Preview: Print to PDF

To save print information as a PDF file so that you can preview the label, add the Redirect Printing to PDF action, enter a file name, and select the Overwrite File checkbox.

Because this action should only be performed for previewing a label, go to the Show Execution and Error Handling Options tab and add the condition that for this function to work, the PreviewFormat variable must be set to True.

Print label

Afterward, add the Print Label action and specify that the number of labels to print (=No. of Copies) will be sourced from a variable.

Preview: Read data from file

For previews, the contents of the PDF file must then be read and copied to the ResponseData variable. Add the Read Data from File action. In the properties, set the File Name as explained under Preview: Print to PDF and enter 20 as the Number of Retries.

Because, again, this action should only be performed for label previews, add on the Show Execution and Error Handling Options tab the condition that for this function to work, the PreviewFormat variable must be set to True.

Preview: Set ResponseType PDF

Because the return value for a preview consists of a PDF document, you also need to convert the ResponseType. For this purpose, add another action that sets the variable to application/pdf in the case of previews.

Set ResponseType and ResponseData

As a last step, open the trigger settings. On the Communications tab, enter ResponseType in the Response Type and [ResponseData] in the Response Data field for use by the cloud trigger.

SEAGULL SCIENTIFIC BARTENDER[2]

Required version or edition

BarTender[2] Web Service requires the Seagull Scientific BarTender[2] Automation edition or higher.

BarTender[2] setup{ #additional-bartender-setup }

Label Interface Setup

On this page, you must select KUMAVISION Label Interface – BarTender[2] Web Service in the Output Interface field.

Everything else can be set up in the same way as for the default interface.

Label structure

To transmit data to BarTender[2] through web service requests, you also need to fill in the following fields on label structure headers:

Field	Description
BarTender Web Service URL	Specify the URL of the BarTender[2] Integration Builder that will be used for transmitting data to BarTender[2].
BarTender Authentication	Turn on the toggle if basic authentication should be required to gain access to BarTender[2].
BarTender Username	Specify the username needed to log on to BarTender[2]. This field is only filled in if Basic has been selected in the BarTender Authentication field.
BarTender Password	Specify the password needed to log on to BarTender[2]. This field is only filled in if Basic has been selected in the BarTender Authentication field.

Note

You can only see these fields if BarTender[2] Web Service has been selected on the Label Interface Setup page.

USE BARTENDER[2]

You can take the following steps to integrate Seagull Scientific BarTender[2] with your Microsoft Dynamics 365 Business Central[1] environment.

Note

The setup examples provided with this article are *not* meant to replace BarTender[2] documentation nor any training in using the program.

BarTender[2] Integration Builder

With the Integration Builder, you can create and manage print scenarios.

When you set up a new scenario, you can also select the trigger that you want to use for interfacing with Microsoft Dynamics 365 Business Central[1]. Choose Web Service.

Service

The name of the scenario will match the name of the web service. However, if necessary, you can change the name on the Integration tab.

Input data

On the Input Data tab, set the input format to JSON Variables and choose New Sample to select the structure file that you created in Microsoft Dynamics 365 Business Central[1]. For more information on how to generate the file, see Create Structure File.

This will transfer the values of the variables set up in Microsoft Dynamics 365 Business Central[1] to BarTender[2] as sample data.

Response

On the Response tab, select the format and the content that you want returned to Microsoft Dynamics 365 Business Central[1].

As an encoded PDF stream is required to preview labels, the response by the app should be copied to a new variable to ensure that this value is filled in by an independent action.

Variables

On the Variables tab, you can change default variables used in print scenarios or add new variables. As neither action is required in this case, you don't need to change anything here for now.

Actions

On the Actions tab, you can store various steps that make up something of a workflow. The program will follow each step as data is received. The actions have been classified as follows:

- Print
- Transform
- Input
- Output
- Execute
- File
- Database

Each action also comes with a subset of steps that can be linked together as needed. For more information, see the BarTender[2]documentation.

Sample task

Have the label design and print program save label data received for preview as a PDF file before transmitting the information to Microsoft Dynamics 365 Business Central[1] in a response stream.

If the data isn't meant for preview, however, have the program print the label information by using the printer specified in the associated data structure.

Solution

1. **Print or preview**
   First, add a Select Case action to perform a check if the action that triggered the printing process is used when previewing labels (that is, if the PreviewFormat variable linked to the action has been set to True). Specify that the next steps in the process will be different for previews and printouts.
2. **Preview**
   Assuming the ETI_DOCUMENT variable will be used to transfer data from Microsoft Dynamics 365 Business Central[1] label structures, the document that you want to open must now be linked to the variable.

   The use of this method will reduce the number of printing scenarios needed, as the data structures already designate the relevant labels.

   Regarding print options, specify that print data should be saved to a PDF and enter the path to the directory where you want to store the file. Afterward, choose Named Data Sources to assign the variables that you want to add to data sources in the Label Designer.

   As a next step, you need to store the PDF file in Base64 format in a variable (to allow a response by the label interface). Add the PowerShell Command action, select Embedded Commands for the Source property, and enter the following:

   [convert]::ToBase64String((Get-Content -path < file name from extended print options > -Encoding byte))

   Afterward, enter the variable that you set up under Response in the Send Command Output and Errors to Variable field.
3. **No preview = print**
   For a label to be printed instead, add the Print Document action. The look of the label remains because the layout is specified by the label structure stored in Microsoft Dynamics 365 Business Central[1].

   As for print options, you can use variables to specify the printer you want to use and the number of labels you want printed based on the label structure created in Microsoft Dynamics 365 Business Central[1]. Variables are specified in BarTender[2] via %< name of variable >% (for example, %TYPE_NO% or %ETI_PRINTER%).

   As a last step, choose Named Data Sources to assign the variables you want transmitted from the relevant print scenario to the named data sources used in the Label Designer.

BARTENDER[2] CLOUD

Additional BarTender[2] Cloud Setup

Label Interface Setup

In order to set up a connection between Microsoft Dynamics 365 Business Central[1] and BarTender[2] Cloud, the relevant field information must be stored in the Label Interface Setup. These fields are only visible if the interface to BarTender[2] Cloud has been selected in the Output Interface field.

Field	**Description**
BarTender Cloud Cluster URI	Specifies the URI of the BarTender[2] Cloud service.
BarTender Cloud Client ID	Specifies the client ID used to authenticate with the BarTender[2] Cloud service.
BarTender Cloud Client Secret	Specifies the client secret used to authenticate with the BarTender[2] Cloud service.
BarTender Cloud E-Mail	Specifies the e-mail address used to authenticate with the BarTender[2] Cloud service.
BarTender Cloud Client Password	Specifies the password used to authenticate with the BarTender[2] Cloud service.
BarTender Cloud Organization DNS Name	Specifies the value of the BarTender[2] Cloud Organization DNS Name field.

Label Structure

If the interface to BarTender Cloud has been selected in the Output Interface field in the Label Interface Setup, the BarTender Cloud Label File Path field is showed in the Label Structure.

This field cannot be edited manually. To change the value, click on the current value of the field. This will show the current templates from BarTender Cloud. Select the desired template and confirm your selection with OK. The value in the field is updated accordingly.

This template uses data to create the label structure. The item codes must correspond to the value names in BarTender[2] Cloud so that they can be filled. The document is then printed according to the BarTender[2] Cloud settings.

The BarTender Cloud Label File Path field does not recognize if a template has been deleted in BarTender[2] Cloud. Instead, an error message appears when the document is printed.

Printer

The printer list can be updated via the Update Printer List action on the BarTender Cloud Printer List. This action downloads a list of all printers in BarTender Cloud and saves the relevant information in the printer overview.

Furthermore, a printer entry called "PDF" is automatically added. This internal printer of BarTender[2] Cloud saves labels as PDF in the Librarian of BarTender without any setup required.

The printer for printing a label can be selected in the "Label printer name" field of the label content.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩
2. BarTender is a registered trademark of Seagull Scientific, Inc. ↩↩
3. NiceLabel is a trademark of the Euro Plus, d.o.o. ↩↩↩

Packages / Carriers: Microsoft Dynamics 365 Business Central extension

OVERVIEW

According to DIN 30781, a carrier is a means to combine items into a unit load. Mainly, it is any piece of equipment, such as a pallet, with which goods can be moved from one place to another at higher speeds and with greater efficiency than if each item were transported on its own. With the Carrier Management extension, you can set up the carriers that you're typically working with and follow their path through the system with ease. Built on the package tracking capabilities provided with Microsoft Dynamics 365 Business Central[1], this extension is a fully integrated alternative to functions such as identifying items by their serial or lot numbers.

> **Note**
>
> You can work with carriers as part of the Dispatch functionality without having to use the standard feature for tracking packages.

INVENTORY SETUP

To set up the feature:

- Choose the Search icon, enter Inventory Setup, and then choose the related link.
- Fill in the fields as described in the following tables.

Package Management

Field	Description
Enable Carriers	Turn on this toggle if you want to work with carriers. The Package Caption field (see Dimensions) is then filled in with the word 'Carrier' while the Carrier Management FastTab appears on the page. Afterward, the following toggles are also turned on automatically for item tracking codes that are used to track packages: • Carrier Info. Inbound Must Exist • Carrier Info. Outbound Must Exist

Carrier Management

> **Note**
>
> This FastTab only appears if the Enable Carriers toggle is turned on (see Package Management).

Field	Description
Dispatch Integration	Turn on this toggle if you want the carriers on warehouse, inventory, or posted documents that are retrieved for a dispatch order to be filled in on the relevant dispatch lines. **Note** Carriers can be used in dispatch without turning on this toggle.

Dimensions

Field	Description
Package Caption	Fill in this field with the word ‘Carrier’ to replace the standard Package caption. When you turn on the Enable Carriers toggle, the field is filled in automatically. **Note** The caption always remains in the language it which it was entered. This means that after a change in system language, the text in this field needs to be adjusted manually.

ITEM TRACKING

> **Note**
>
> As mentioned in the overview, this app extension is based on standard item tracking functionality.

To see what items are in or on certain carriers and in which quantity:

1. Choose the Search icon, enter Item Tracking Codes, and then choose the relevant link.
2. Select a code that will be assigned to items transported by carrier.
3. Turn on the following toggles on the Package Tracking FastTab:
   - [Carrier caption] Specific Tracking
   - [Carrier caption] Info. Inbound Must Exist
   - [Carrier caption] Warehouse Tracking
   - [Carrier caption] Info. Outbound Must Exist

ITEM TRACKING LINES

To make use of the new tracking feature, you also need to fill in the following fields on the standard Item Tracking Lines page.

Header

Field	Description
Default Carrier Code	Specifies the carrier code that will be copied to all lines when you run the Assign Package No. function.

Lines

Field	Description
Carrier Code	Indicates the code that should be assigned to the carrier (package) number on the line. You can use the code from the header for this. When you post to the page, the code is then copied to the related Carrier No. (Package No.) Information Card.

CARRIER NO. (PACKAGE NO.) INFORMATION CARD

A Carrier No. (Package No.) Information Card links a package number created in the standard app to a carrier set up in KUMAVISION base (BOOSTER).

With carrier management turned on in Inventory Setup, a card is (in contrast to standard functionality) automatically created when you post a transaction that includes the carrier.

The fields added to the card for the purpose of handling carriers are described in the following tables.

General

Field	Description
Carrier Code	Specifies the code that was entered for the carrier (package) number on the relevant item tracking line prior to posting.

Dimensions

Field	Description
Length	Specifies the length of the carrier. The value in this field is copied from base data but can be changed manually, if necessary.
Width	Specifies the width of the carrier. The value in this field is copied from base data but can be changed manually, if necessary.
Height	Specifies the height of the carrier. The value in this field is copied from base data but can be changed manually, if necessary.
Weight	Specifies the weight of the carrier. The value in this field is copied from base data but can be changed manually, if necessary.
Net Weight (Item)	Specifies the net weight based on the entered item quantity.
Gross Weight (Item)	Specifies the gross weight based on the entered item quantity.

You can also run a ribbon function to print labels from the data entered on the card.

Note

The caption change from ‘Package’ to ‘Carrier’ doesn’t affect all parts of the program in the same way.

If you want to use the general search function to see the carrier number information cards available and open a card from there, the search term that you need to enter is Package No. Information List, not Carrier No. Information List. When the page opens, the caption then changes to Carrier No. Information List.

PUT-AWAY TEMPLATES

During standard put-away, the system distributes the quantities combined into one unit load (as a set of packages) onto multiple bins.

A field has therefore been added to the Put-Away Templates page so that you can now specify whether the system should only suggest bins that can take up the entire quantity assigned to a carrier (package).

Lines

Field	Description
No Carrier Qty. Split	With the toggle turned on, the system suggests only bins that can take up the entire quantity specified for a carrier (package).

Note

When you’re working with packages in the standard app, the quantity that is assigned to a carrier (via a package number) might end up in more than one bin. The extension gives users a choice in this case, to retain a certain degree of flexibility as required of all Microsoft Dynamics 365 Business Central[1] solutions.

EXTENDED PACKAGE NO. INFO

This list shows you the following carrier information:

- Item No.
- Variant Code
- Lot No.
- Serial No.
- Expired Inventory
- Inventory

You can open the list by using the general search function. You can also use a ribbon function to print labels from the data entered on it.

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[1] Microsoft, Microsoft Dynamics und Microsoft Dynamics 365 sind Marken der Microsoft-Unternehmensgruppe. ↩↩

General Setup

STANDARDIZE DOCUMENTS

Master reports use a standardized format for document creation in Microsoft Dynamics 365 Business Central[1]. Covering all relevant areas, they can simplify the editing process, as changes that are made to the layout of one document will be copied to all others of the same type. The following master reports are available for this purpose:

Purchasing

- Purchase Quote
- Purchase – Order
- Purchase Return Order
- Purchase Invoice
- Purchase Credit Memo
- Purchase – Receipt
- Purchase Return Shipment
- Blanket Purchase Order
- Archived Purchase Quote
- Archived Purchase Order
- Archived Purchase Return Order
- Archived Blanket Purchase Order

Sales

- Sales Quote
- Sales Order Confirmation
- Return Order Confirmation
- Sales Invoice
- Sales Credit Memo
- Sales Shipment
- Blanket Sales Order
- Archived Sales Quote
- Archived Sales Order Confirmation
- Archived Blanket Sales Order
- Archived Return Order Confirmation
- Sales Pro Forma Invoice
- Sales Draft Invoice

Service

- Service – Quote
- Service – Order
- Service – Invoice
- Service Pro Forma Invoice
- Service – Credit Memo
- Service – Shipment
- Service Item Worksheet
- Service – Contract
- Service – Contract Quote

Reminders

- Issued Purch. Order Cnfrmn. Reminder
- Issued Delivery Reminder
- Sales Reminder

Transfers

- Transfer Order
- Transfer Shipment
- Direct Transfer

Dispatch

- Posted Dispatch Order

> **Note**
>
> Before you can work with a master report, it must be added to the relevant report selection.

> **Note**
>
> Do not enter the plus-minus sign (±) on any page available in the system, for example, to indicate tolerances in a drawing. If you do, you might no longer be able to use the Print action on the document linked to the entry.

> **Note**
>
> Please note that the RDLC technology is regulated and cannot adopt all formatting of the Microsoft Rich Text Editor.

To configure the VAT Amount Specification section on these documents, you can use the VAT Code, a standard Microsoft Dynamics 365 Business Central[1] field that originates with VAT Posting Setup.

ADD DOCUMENT DETAILS

A tab has been added to the Company Information page. The tab provides you with an array of options for customizing documents in the system.

1. Choose the Search icon, enter Company Information, and then choose the related link.
2. Go to the Documents FastTab and fill in the fields as described in the following table.

Field	Description
Preprinted Address	Enter your company's address as it should appear within an envelope window.
Text Length (Header) Text Length (Lines)	These fields are only used for the plain text editor. The editor window is then adjusted in size to the values you specify here. However, any text that you enter in the window is later printed across the entire width of a document unless line breaks are added to it manually. Neither field is required when working with the more recent HTML-based text tool.
Line Indent (Pts.)	Specify by how much you want to indent a line to form a bundle or mark the begin-total of a block of lines.
Print on Next Page	Specify if you want to print an available subtotal on the next page of a document. You can select if you want subtotals to appear only at the bottom or at the bottom and top of a page.
Print Alternate Totals	Turn on this toggle to print alternate totals on sales quotes. For more information, see Alternate Quote Lines.
Print Company Letterhead	Turn on this toggle if you want your company's address to be printed in the form of a letterhead.
Default Font	Specify a default font and size for new master documents. The default setting for all is Segoe UI at a size of 9.
Default Font Size	A change in either field affects the entire document *(that is, both the header and the lines)*. For an explanation of how to change fonts on lines only, see Format Lines.
Default Footer Font Size	Specify the size of the font chosen for the footer. The default size is 7.
Heading Right Border Style Heading Line Border Style	Specify a border style for document information shown to the right of or below the address.
Hide Background Color	Turn on this toggle if you want to replace the gray areas on printed documents with a transparent background.
Heading Style	Specify where to show contact information, that is the seller's contact details, on a document. You can display the data in block format on the upper right of a document or as a five-column section below the address.
Separator	Specify if you want more space or a divider added between document lines to serve as a visual aid.
Print External Lot No.	Turn on this toggle to include on printouts the external lot numbers entered for a standardized document. When you print the document, the numbers will be shown on both the relevant lines and available attachments.
Print Expiration Date	Turn on this toggle to include on printouts the expiration dates entered for a standardized document. When you print the document, the dates will be shown on both the relevant lines and available attachments.
Print Production Date	Turn on this toggle to include on printouts the production dates entered for a standardized document.

Field	Description
	When you print the document, the dates will be shown on both the relevant lines and available attachments.
Print Customer EORI No.	Specify if you want printouts of sales invoices and shipments to show your company’s or the customer’s EORI number. With the toggle turned on, a printout shows the number that you were given by the customer whose VAT ID is entered on the document. We recommend that you then put your own number in the footer.
Print VAT Amount Specification	Choose whether you want the VAT Amount Specification section to be shown on standardized documents. **Default** Shows the section when the document contains positive and negative VAT entries that reference the same tax identification number. **When VAT Identifiers Differ** Hides the section if the positive and negative entries that you can see on the document relate to the same ID. **Note** This field only controls VAT displays on documents where the tax identification numbers are identical throughout. Like in the standard app, the section is always shown if a document contains items with different VAT ID numbers.

FORMAT LINES

You can also select a different format for each kind of document line, such as a heading or an alternative line, although you don’t have to. If none is selected, the system will use the default format specified by the designer of the original document.

If you want a different style overall (such as a different font), you can set up a line and enter a report ID of 0. You only need to enter a specific ID if you want a certain type of document formatted in a certain way.

The Default option plays a key role in this. If you want all lines to have the same format, you don’t need to set up more than a line of the Default type.

The font style can also be changed for a document line before printing. In this case, choosing the Default option means that the style will be the same as on a standard line. The system retrieves the format for printouts according to the following sequence:

1. Font style on current sales line.
2. Report ID of document to print and line type to be printed.
3. Report ID of document to print and line type Default.
4. Report ID = 0 and line type to be printed.
5. Report ID = 0 and line type Default.
6. Format according to document design.

Besides the font style, you can specify page breaks on document lines. If you don’t, breaks will be inserted automatically.

Set up a format

To format document lines:

1. Open the Search icon, enter Company Information, and then choose the related link.
2. Choose Document Line Format on the ribbon.
3. Fill in (or change) the fields as described in the following table.

Field	Description
Report ID	Select the report you want to use the format for. If you leave this field blank, the settings you make in other fields are used for all documents.
Report Description	Shows the description of the report. This field is filled in automatically based on the Report ID field.
Line Type	Choose the line type for which you want to specify a format. The following options are available: • Default • Beginning Text (Header) – shown as DocHeaderLine • Ending Text (Header) – shown as DocFooterLine • Beginning Text (Line) – shown as PosHeaderLine • Ending Text (Line) – shown as PosFooterLine • Line Dimension • Standard Line • Line (Not Billable) – shown as NullPositionLine • Alternative Line • Shipping Information Line – shown as ShipmentLine • Comment Line • Heading (Line) – shown as HeaderLine • Begin-Subtotal – shown as SubtotalHeader • Bundle – shown as BundleHeader • End-Subtotal/Bundle – shown as SubtotalBundleFooter • Attribute – shown as ItemAttributeLine • Assembly Line • Reminder Line • Item Tracking Heading • Item Tracking Line • Payment Terms/Shipment Methods – shown as PaymentShipmentTerms • Item (Charge) Lines – shown as ItemChargeAssignmentLine • Formatted Text • Amount Line
Font	Select the font that you want to use on all documents created from this report.
Font Size	Select the font size that you want to use.
Font Color	Select the font color that you want to use.
Font Style	Choose the font style that you want to use: • Default • Normal • Bold • Italic • Bold Italic
Text Decoration	Choose a text decoration if necessary. Options are: • Default • None • Underline • Overline • Strikethrough

Note

The settings you make here only apply to KUMAVISION reports (ID5XXXXXX) that have been included in the relevant report selections.

If, after you have completed the general setup for all line types, you want to use a different format on a certain type of document, you can copy that line format there and change only what you need. To copy the format:

1. Open the Document Line Formats page.
2. Select a line format.
3. Choose Copy Format on the ribbon.
4. Enter the source and target report ID. Choose OK.

TRANSLATE FOOTERS

You can set up footer texts for documents in different languages. To set up a translation:

1. Open the Search icon, enter Company Information, and then choose the related link.
2. Choose Document Text Translation on the ribbon.
3. Choose New and fill in the fields as necessary.

The information given at the bottom of document pages is then printed in the language you stored for the relevant vendor or customer.

Note

You don’t need a language code if you set up a footer in the language that you used to install the app. Instead, you can select the Default Language field on the line.

MANDATORY FIELDS

You can use the mandatory field check to see whether a certain field has been filled in when you add or change base data, such as on a customer order.

Application areas

You can set requirements for field completion across a variety of application areas.

	Setup	Field
Item	Inventory Setup	Item Field Check
Warehouse receipt (header and lines) Warehouse shipment (header and lines)	Inventory Setup	Inventory Field Check
Package No. Information	Inventory Setup	Package No. Information Field Check
Lot No. Information	Inventory Setup	Lot No. Information Field Check
Serial No. Information	Inventory Setup	Serial No. Information Field Check
Customers	Sales & Receivables Setup	Customer Field Check
Sales document (header and lines)	Sales & Receivables Setup	Sales Field Check
Vendor	Purchase & Payables Setup	Vendor Field Check
Purchase document (header and lines)	Purchase & Payables Setup	Purchasing Field Check
Service document (header and lines)	Service Management Setup	Service Field Check
Dispatch header and lines	Dispatch Carrier Setup	Check Mandatory Fields
Actions	Action Setup	Action Data Check
Resources	Resources Setup	Check Mandatory Fields

Make a field mandatory

To make filling in a field mandatory:

1. Choose the Search icon, enter Mandatory Field Setup, and then choose the related link.
2. The page that opens shows how many fields will be checked for completion in every table that is entered on the lines. To see the fields, select the No. of Fields hyperlink on a line.
3. To add a checking routine or change one that is already available, choose New or Edit List on the ribbon.
4. Enter a table number, if needed, and then choose Mandatory Fields on the ribbon.
5. Fill in the lines as described in the following.

Field	Description
Field No.	Specify the number of the field that you want users to fill in.
Field Caption	Shows the name of the field that you entered a number for.
Field No. (Condition)	If the field only needs to be filled in when a certain condition is met, for example, when the type of the related document is set to Order or the customer's posting group to Global, the number entered here refers to the field that the condition will be based on. Afterward, you can use the Condition field to specify the exact requirement.
Field Caption (Condition)	Shows the name of the field that decides whether completing the field in this table will be mandatory.
Condition	Specify a requirement for the condition field to tell the system when to make filling in the field in this table mandatory.
Action	Choose what happens if the field in this table is not filled in. The following options are available: **Cancel** The relevant process cannot be cancelled until the field is filled in. **Notify** The system shows a notification when the field remains empty. Users, however, can still process or release documents that the field has been entered on.

Note

- For technical reasons, you cannot set conditions on primary key fields in the system.
- Conditions set on Boolean fields should be 'True' or 'False' in all cases. Date fields cannot be used as conditions.
- The system also only runs checks on sales, purchase, and service document lines where the No. field is filled in.

Mandatory field checks are run when you use End Update or Release actions, such as the End Item Update function on an item card or the Release function on a shipping document.

On the item, vendor, and customer list, you can also choose Actions > Check Mandatory Fields to have the system check the records that you've selected for having all the necessary fields filled in. Records that can be released will be during this process, whereas all other sets of data remain blocked.

After you've run the End Update action, the relevant record can no longer be edited (although related records, such as comments, can). At the same time, the Update field on the card header is set to Completed.

If you exit a page before all mandatory fields are filled in, you're asked if you're sure that you want to do so. To turn off this message:

1. Choose My Settings on the top ribbon.
2. Select the hyperlink in the Notifications field.
3. Clear the relevant notification field *(Shows a message if a record is being closed without running the mandatory field check.)*.

To change an updated record, you again need to run the edit function from the relevant card.

> **Note**
>
> The mandatory field check integrated into KUMAVISION factory365 differs from the check described here; for more information, see factory365. For a description of how to validate item attributes, see Item Attributes.

BLOCK BASE DATA

You now have even more options to block an item from being used in certain application areas.

1. Choose the Search icon, enter Items, and then choose the relevant link.
2. Open the card of the item for which you want to limit usage.
3. On the General FastTab, turn on one (or more) of the toggles described in the following.

Field	Description
Manufacturing Blocked	With the toggle turned on, the item cannot be added or posted to in manufacturing.
Prod. Consumption Blocked	With the toggle turned on, the item cannot be consumed in manufacturing.
Transfers Blocked	With the toggle turned on, the item cannot be entered on transfer orders.
Assembly Blocked	With the toggle turned on, the item cannot be entered on assembly orders.
Projects Blocked	With the toggle turned on, the item cannot be entered on projects.

Physical inventory
Independent of the toggles, the system will check fields such as Location and Bin to determine whether a certain item is part of a physical inventory order or physical inventory recording, and a message stating as much will appear if an attempt is made to post to the item.

ASSIGNED USER ID

The Assigned User ID field that can be found on sales and purchase documents is a standard Microsoft Dynamics 365 Business Central[1] field used to identify who set up a sales or purchase document or to filter documents for specific IDs.

The KUMAVISION base industry solution fills in this field automatically with the ID of the user who is currently logged in to the system.

ORDER TYPES

In addition to the Service Order Types, the Sales Order Types, Purchase Order Types, Transfer Order Types and Production Order Types are available in KUMAVISION base (BOOSTER).

In the respective Report Selection of Sales, Service, Purchasing, Inventory and Production, other documents can be stored for printing or sending for each order type.

> **Note**
>
> If you're using KUMAVISION factory365, you can see additional options for Production Order Types. For more information, click here.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩

Deprecated Features

Name	**Description**	**Disabled in Release**
Cancel production order release	Standard Microsoft functionality replaces KUMAVISION base (BOOSTER) action for canceling release of production orders.	BC 2026 Wave 1
KUMAVISION Editor Control	Microsoft rich text editor control replaces control provided with KUMAVISION base (BOOSTER).	BC 2026 Wave 1
Posting Codes (known to users as Transaction Codes)	Removal for lack of function. Remain available in healthcare365 and medtec365, where filling them in is mandatory.	BC 2026 Wave 1
Cancellation lines in sales and purchasing	Standard app functionality replaces setup option used to cancel sales or purchase lines ("Extended Undo").	BC 2025 Wave 2
Source locations	New method introduced for finding locations in Dispatch.	BC 2025 Wave 2
KUMAVISION Label Interface File Extension	Web services replace the app, as it lacks Universal Code compatibility.	BC 2025 Wave 1
Bonus Management	Feature discontinued.	BC 2024 Wave 2
Extended Microsoft price calculation (to be discontinued)	Pricing functions in KUMAVISON base (BOOSTER) adapted for use with new default price calculation feature. **Note** Microsoft has repeatedly postponed the removal of the old functionality.	BC 2021 Wave 1

1.2.2 factory365

KUMAVISION factory365

With KUMAVISION factory365, you can easily master the balancing act between costs, resources, logistics and adherence to schedules. Because the integrated industry software is perfectly tailored to the needs of the manufacturing industry and offers all functionalities in one system.

- Continuous connection between design and production
- Project management with concurrent calculation
- Pre-, post- and concurrent article costing
- Transaction-related storage of objects such as documents, drawings and certificates
- Role-based interface
- Order proposal with integrated frame processing
- Demand forecasts for inventory optimization
- Flexible management of all types of storage

Content

- General Business Functionality
- Sales
- Purchasing
- Manufacturing
- Warehouse Management
- Service
- Engineering and Design
- Item Versions
- Scheduling Agreement Management
- Calculation
- Plant Engineering
- General Setup

Note

KUMAVISION factory365 is based on the KUMAVISION base (BOOSTER). The functionalities contained therein are explained in the KUMAVISION base (BOOSTER) section.

General Business Functionality

GENERAL BUSINESS FUNCTIONALITY

The following features expand standard Microsoft Dynamics 365 Business Central[1] functions to provide additional options to those using General Business Functionality.

- Item Attributes
- Subcontracting
- Metal Surcharges

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

ITEM ATTRIBUTES

General

Item attributes are used to classify and retrieve articles based on their characteristics. Characteristics can be assigned to each article. Either individually or via the characteristics preassigned to the article category.

In the following, the functional enhancements of the item attributes in KUMAVISION factory365 are explained in more detail. Basic information on this area is provided in the Microsoft Dynamics 365 Business Central[1] Online Help.

Establishment

Item Attribute

Before you can work with the article attributes, you have to set up the required characteristics and their attributes. To do this, call up the "Article attributes" via the user search. Via "New" in the menu ribbon you can define a new article attribute with the help of the tables below.

Inforegister General

Field	**Description**
Code	Here you can define a unique code for the attribute, by using codes as unique keys you prevent input errors.
Name	Assign a name for the attribute
Type	Specifies the type of attribute. You can choose from the following: • Option • Text • Integer • Decimal number • Date **Note** Please note that by assigning the type, the "Data type" field is automatically pre-populated by the system.
NAV data type	This field is updated when the "Type" field is maintained and sets the data type defined in the database. *
Default value	Define the value with which the attribute value is always pre-assigned.
Sorting	Specify the sort criterion for tabular display here. If you leave the field empty, sorting is based on the Name attribute.

Inforegister unit

Field	**Description**
Unit code	Here you can assign a unit code, by the assignment the field unit is assigned in the background and possibly also overwritten. Only for numeric types, and for option if integer or decimal was assigned here.
Unit	Specifies the base unit in relation to the unit code.

Inforegister Factory Item Synchronization

For a simple and unambiguous recording, values of the article card can be synchronized with the article attributes, so that the data must be maintained only in one place. The necessary setups are made on the "Factory article synchronization" info tab of the respective article attribute. The synchronization setup is described below:

Field	Description
Target field ID	Enter the field of the item that contains the assignment here. For example, the ID 47 field if you want to synchronize data via the customs position.
Field name	Specifies the name of the assigned field in "Target field ID".

When linking a field of the article card *(with a field value)* to selection values of the source table, the field "Type" must be equal to "Option":

Field	Description
NAV Tables ID	In this field you specify which table should be synchronized to the options table. For example, the table ID 260 for synchronization of data from the table Customs position.
Table designation	Specifies the name of the assigned field in "NAV Table ID".
NAV Key Field ID	In this field you specify the primary key of the source table, these are usually "Code" or "No.". This value is transferred to the code field of the item attribute values table. For example, the field ID 1 for the field No. of the table Customs item.
Field name	Specifies the name of the assigned field in "NAV Key Field ID".
NAV Description Field ID	In this field you specify the information field of the source table that you want to synchronize. This value is transferred to the value field of the item attribute values table. For example, the field ID 2 for the Description field of the Customs Item table.
Field name	Specifies the name of the assigned field in "Description field name". After the field assignment, the system automatically determines the "Data type" field.

Note

At this point in the online help, only the additional setup options for item attributes in KUMAVISION factory365 are explained in more detail. You can find the online help for the general setup options here.

Ribbon function Factory Item Synchronization

Update attribute values

Use this call to transfer the data records from the reference table to the article attributes.

If changes are made in the article attribute values table, the new data records or corrections are transferred to the target table.

Note

A maintenance in the reference table does not lead to an automatic update of the article attribute values, these must be taken over via Update attribute values.

Update reference tables

Use this call to transfer the data records from the article attribute values to the reference table.

Synchronization logic

When synchronizing, note the following:

Item
If a field defined in the item attribute card is changed on the item card, this value is transferred to the item attributes; if the item attribute is not yet assigned, the assignment is made by the system.

Item variant
If the affected item has item variants, the changes are also transferred there. Deviating from this are fields that can be maintained in the tables themselves. These are for item variants:

- Description
- Description 2
- Sale locked
- Purchasing locked
- Service locked
- Production locked

Item version
If the affected item has item versions, the changes are also transferred there. Deviating from this are fields that can be maintained in the tables themselves. These are for item versions

- Material
- Drawing no.
- Drawing format
- Manufacturer code
- Finished parts list no.
- Work plan no.

Please note that expired item versions will not be updated.

Attributes maintenance
If you maintain the assignment of the attributes, these changes are transferred to the articles as well as to any existing article variants and article versions in the case of defined synchronization.

Call Usage

The "Usage" call in the ribbon displays the records that currently have the corresponding item attribute assigned in the system. The fields of the "Usage" table are explained below:

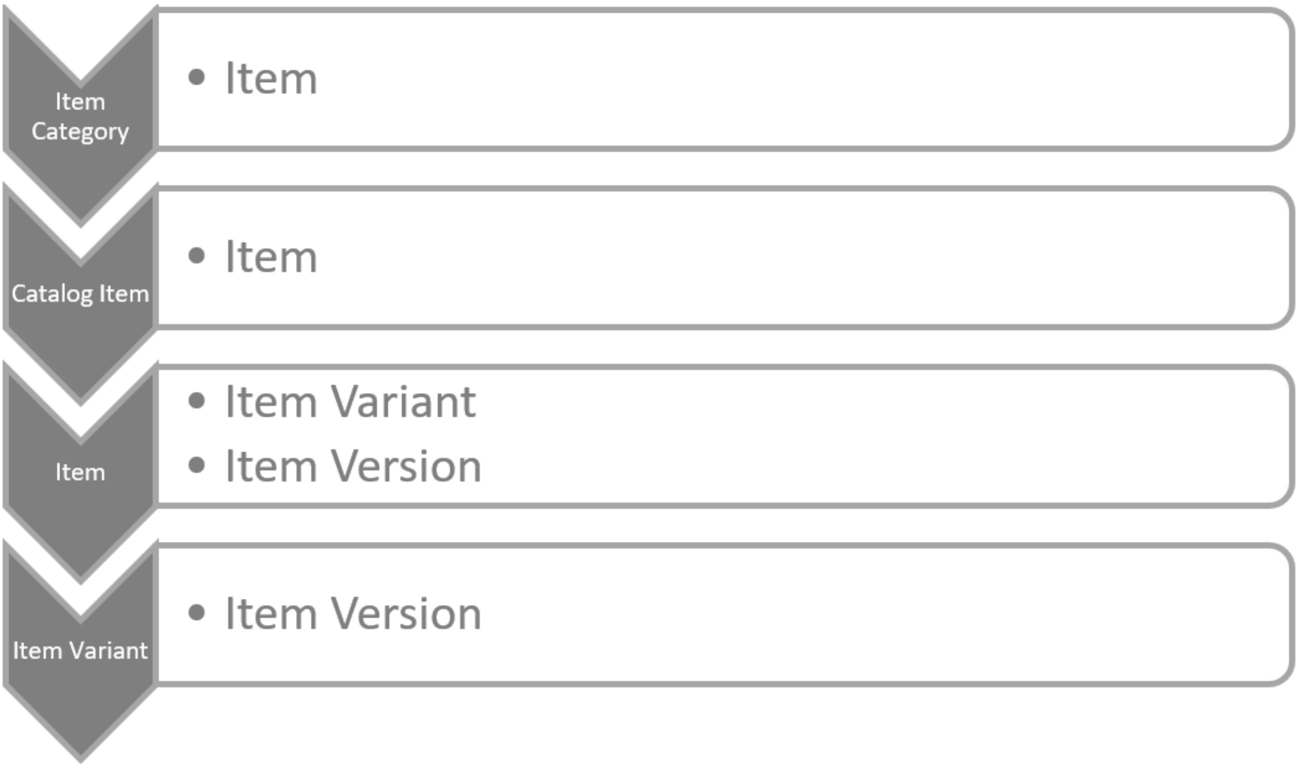
Field	Description
Table	The table ID of the item, item category and item variants or version used by the system. This field is not displayed to you.
No./Code	Indicates the article no. from the article, article variant or article version as well as the code from the article category and the Lfd. No. from the catalog article.
Variant code	The variant code from the article variant or article version. The field remains empty for articles and article categories.
Article version code	Specifies the item version code from the item version. For article, article category, article variant the field remains empty
Description	Specifies the description.

You can display the corresponding map via "Show map" in the ribbon.

Item attributes assignment

KUMAVISION factory365 allows you to use item attributes not only for the item, but also for catalog articles, article variants and article versions and provides the full range of functions here.

The following inheritance logic must be observed:



The diagram shows you horizontally what can be derived from which element and vertically how it is inheritable in itself.

Item

On the item card, you can assign the attributes for the item via the "Attributes" call in the menu ribbon. In the "item attributes" info box on the item card, the data of the assigned attributes are displayed directly.

Item category

On the item category card, you can use the "Attributes" call in the ribbon to assign the attributes for the item category. In the "item attributes" info box on the item category card, the data of the assigned attributes is displayed directly.

If you assign this item category to an item, the attributes from the item category are transferred to the item.

If changes are subsequently made to the attributes of the item category, they will be inherited by the assigned item.

Note

Please note that the attributes of the parent item categories are inherited by the child item categories. However, the inherited attributes cannot be changed in the subordinate item categories. Per item, item variant as well as item version these can always be adapted individually.

Catalog items

On the catalog item card, you can use the "Attributes" call in the ribbon to assign the attributes for the catalog item. In the "Article attributes" info box on the catalog item card, the data of the assigned attributes are displayed directly.

If an article is created from a catalog item, the attribute definitions are taken from the catalog article.

Note

Please note that after the item creation, no more maintenance of the attributes via the catalog articles is possible, but only on the corresponding item card.

If you subsequently assign an article category to the created article, any article attributes stored will be inherited by the item.

Item variant

When creating new item variants, the attribute assignments of the article are transferred one-to-one to the variant and can be adjusted there according to your requirements.

To do this, call up the "Attributes" callup in the ribbon in the article variant in order to assign the type attributes for the variant. The data of the assigned attributes are displayed directly in the "Article attributes" info box.

Note

Changes to the values of the article attributes are not transferred to the variants.

Item version

When creating new article versions, the attribute assignment of the article or variant is transferred one-to-one and can be adjusted there according to your requirements.

To do this, call up the "Attributes" callup in the ribbon in the article version in order to assign the attributes for the article version. In the "Article attributes" info box on the article version, the data for the assigned attributes are displayed directly

Note

In the article version, you cannot define print control for sales.

The transfer of new attributes from the associated article or variant is performed depending on the definition via the "Automatically transfer attributes to versions" field in the Design & Development setup:

Field selection	Description
Not	No attributes are transferred.
New only	New attributes are only transferred to the versions in New status.
Until Certified	New attributes are transferred to the article versions with the statuses New and Certified.
until Certified and reset to New	New attributes are transferred to the article versions with the statuses New and Certified. If the article version has certified, this is reset to New, so that manual editing or checking becomes necessary.
All	Basically the attributes are transferred.

Attribute search

The standard allows to control the overview in the article overview via attribute filters. The extension of the attribute usage to article variant as well as article version make this filter possibility incomplete, because it is not usable for article variant, article version as well as catalog articles, for this reason there is the article attribute search.

You can call the attribute search directly via the user search or accordingly from the documents listed below:

- Assembly parts list
- Assembly order
- Project plan line
- Production parts list
- Request
- Frame order
- Order
- Invoice
- Return
- Purchase credit
- Offer
- Framework order
- Order
- Blanket order
- Take back
- Credit

When calling from the documents, the data of the source line are determined and maintained as header data. If you have not yet made any selection other than setting the type to article, no initialization is performed either.

Note

In the listed documents, you can use the attribute search, filter by article and transfer directly to the document. Please note that the article version is not taken into account for consuming documents.

If you want to transfer a catalog article, you must first create it as the correct article via the catalog article. Afterwards, please start the search again or enter the newly created article directly.

In the header area of the attribute search, you can have the search lines suggested via the fields Article category, Article, Article variant as well as Article version by maintaining the fields.

The maintenance of the fields should be done hierarchically from article category to article version. According to the hierarchy, the sequence selections are restricted.

If you do not enter data hierarchically, the higher data will be determined and filled in by the system. For example, if you start with the article version, the system determines and maintains the article category, article and article variant as defined in the article version.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

EXTERNAL PRODUCTION WITH PROVISION

General

A work process that is outsourced (also called extended workbench) occurs particularly frequently in contract finishing processes and also in the assembly of subassemblies. Outsourcing is also a possible alternative to in-house processing when capacity bottlenecks occur in the company itself. Components are often provided that are required for further processing at the external manufacturer. In most cases, the product already machined is also provided.

In the case of external production with provision, the standard functionality of external production has been extended by a provision. The provision allows you to define the components that are sent along for external production or that are also provided by the external manufacturer. For logistical processing, a stock transfer order can be created for the purchase orders from the external work worksheets. The corresponding logistics documents can be printed out for the posted stock transfers.

When posting the external production order, depending on the setup of the components, the debit is made from the external production warehouse in the corresponding quantity.

Setup

The following sections describe how to set up external production with provision of materials. The basic facilities for manufacturing/production apply as a prerequisite for setting up external production with provision. For more information, please refer to the Microsoft Dynamics 365 Business Central[1] Helpsite. It should be noted that the "work center group" described is synonymous with the term "work center" used by Microsoft Dynamics 365 Business Central[1].

Production bill of material, version Inforegister lines

In the production BOM (version), the fields "Connection code" (this field identifies the component as a raw material provision relevant to logistics) and "Provision type" must be set.

Provision type option	**Description**	**Note**
Empty	No provision (Business Central Standard)	
Order-related	The components are not sent via a stock transfer order until the external production orders are created. The outgoing storage location in the FA components is set to the storage location of the external worker (entered in the work center group under storage locations of origin) when the stock transfer order is created.	Connection code must be maintained. The posting method must be manually changed to "Backwards" or "Commiss. + backwards" in the respective FA component line. The provision item is transferred to the stock transfer order created for the external work.
Neutral	The external processor receives a certain quantity of goods in advance. The stock transfer order required for this must be created manually or via a planning worksheet. When a production order is created, the external processor only receives the order for external processing and, if necessary, a stock transfer of the product already processed. The components to be provided are already at the external processor. Here, too, the posting method of the FA components is changed to "backwards". The issue storage location in the components is already set to the external processor when the production order is created or within the planning (is entered at the work center group under origin storage locations). When using this type of provision, it is recommended to set up storage data for the respective components at the storage location of the external processor.	Connection code must be maintained The booking method must be manually changed to "Reverse" or "Commiss. + backwards" in the respective FA component line. The provision item is not transferred to the stock transfer order created via the external work.
Supplier	Here, the component is only in the production BOM for information ("info section"). The procurement is done by the external processor. This setting is also used when the customer provides parts. Here no stock or issue posting takes place.	The provided item is not transferred to the stock transfer order created via the external labor

Note

A component defined on a production BOM of an item can be linked to a specific operation using connection codes. Thus, it can be defined at which operation an item is needed or consumed. In order to use the functionality of the provision, the connection code must be defined

The connection code must first be stored in the operation before the setting for the component can be made in the production BOM. Otherwise, an error message will be displayed when trying to certify the BOM.

Work plan, versions

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the Microsoft Dynamics 365 Business Central[1] Helpsite.

Information register: lines

Field	Description
Third party article	This field marks the operation as "Provision of semi-finished products" relevant to logistics. The external operation can be transferred to a stock transfer order. The registration takes place in the FA-operation or as booked capacity item with quantity without time and value.
Standard catalog code	The standard catalog code is used for external labor pricing
Connection code	Connection code selection

> **Note**
>
> The connection code must be maintained for the use of the provision in the operations.

Work Center

In the following, only the special features of external production with provision are discussed. As a prerequisite for setting up external production with provision, the facilities for manufacturing/production apply. For further information, please refer to the Microsoft Dynamics 365 Business Central[1] Helpsite.

Usually, the following settings are made when creating a workstation group for external work:

General

In the Work Center Group Code field, the workstation group is assigned to a separate department (e.g. external work).

Posting

On the Work Center, the vendor must be assigned in the Subcontractor No. field that performs the subcontracting.

The Flushing Method must be set to "Manual", as the postings are posted via the external labor order.

In the Gen. Prod. Posting Group, a separate posting group for "external labor" should be set up and assigned to better distinguish the origin of non-cash items in accounting.

> **Note**
>
> The product posting group defines G/L accounts that are posted when sales and purchase postings are made.

You should activate the Specific Unit Cost toggle in the following cases:

- If the cost price calculation type is set to "Piece", as is usual for external labor.
- If you have agreed a different price for each process with the vendor for external work.

> **Note**
>
> If you use the "special cost price" indicator, then you must enter the "Cost price per unit" field in the operations. The cost price in the "Posting" info tab of the work center group is then not taken into account.

Inforegister Planning

The "Unit code" field is usually set to days, since external processing is usually calculated in days.

As a rule, a separate company calendar is created for external processing.

Navigate menu tab

In addition, the external work prices and the origin storage location can be stored via "Belonging" > "Workplace group".

Determination of prices for external work

In Microsoft Dynamics 365 Business Central[1] Standard, a price for the external work (i.e. the price that will later be used in the purchase order) can only be stored on the work center group card or the operation (if the work center group is set up with "special cost price"). Different prices per vendor, per scale quantity, per activity (standard catalog code) or period-dependent prices cannot be maintained.

In KUMAVISION factory365 you have your own price table for the external work orders. The prices for the external work can be stored in different places. Thereby the entries of the external work prices override the prices of the work group card or the work operation.

Third-party work prices Prices (with the option of graduated prices) can be stored for the following combinations via the external work prices:

- Workstation group (MUST)
- Article (MUST)
- Vendor (MUST)
- Standard catalog (external work activity)
- Start and end date
- Minimum quantities (graduated quantities)
- Price units (conversion factor weight share)

The external work prices can be called from the following masks with appropriate filtering:

- Workplace group card / list
- Accounts payable card / list

Note

If more than one operation of an item should be processed via external labor, then you must assign different standard catalog codes in the operations, so that you can also define different prices.

Origin camp location

With the origin storage locations you can control which storage locations should be used for the provided components. For external processing you must use the type "all items".

The call of the origin storage locations is made from the workstation group map/list.

- Type of origin: workplace group
- Origin code: which specific workstation group
- Type: All items or a specific item
- Code: for specific article: Item number
- Storage location code: which storage location is to be controlled

Relocation routes

With the help of the stock transfer routes you have the possibility to create the link between the vendor warehouse (i.e. the warehouse of the external processor) and your own warehouse.

To set up the stock transfer routes, call them up via the user search.

The stock transfer routes overview opens. In the info tab "Stock transfer route matrix" you can now make the assignment for your own warehouse (stock transfer from code = own warehouse (e.g. BLUE)) and the vendor warehouse (e.g. external).

By clicking on the Assist button you get to the transfer route specification on which you enter in the field "Transit Code = Own-LOG". This field must be filled with an appropriate code, the other fields can remain empty if no fixed deliverer is defined.

You can then close the Stock Transfer Route Specification and Stock Transfer Route Matrix windows.

Process of external production with provision

Initial situation: Production is planned and a released FA has been created.

It is possible to start the process of subcontracting via the Subcontracting Worksheet or via E+D order planning.

Outside Work Worksheet Calculate external labor

In the external work worksheets, you can calculate which released production orders are to be sent to the vendor. You can filter on the work center group, the vendor or the FA number, among other things.

The external work worksheet then lists the pending external work calculated according to the filtering.

The vendor is taken from the work center group, the price depending on the stored prices. If there is already external work for an FA, this is not calculated twice.

The external work worksheet shows that a stock transfer order *(for the operation itself or for order-related provisions)* is created for the respective operation.

Work in the external work worksheet

Change of the creditor: The vendor can be changed per line (order), thus the external labor price stored in the new vendor is also used.

Perform event reporting

The proposal line can be converted into an order using the "Execute event message" function and the "Accept event message" checkbox activated.

If the "Create stock transfer order" checkbox is activated in the external works worksheet, a stock transfer is also created. This can be several stock transfers if different storage locations are involved.

Default lines in which the "Accept event message" checkbox is not activated remain in the external work worksheet without an order being created.

Note

In order to subsequently generate the stock transfer order for the materials provided, the external work order must be deleted again and recalculated. Alternatively, it is also possible to create the stock transfer order in the external work order using the "Create stock transfer order to external manufacturer..." function.

E+D Order Planning

In a released E+D order, it is possible to start the subcontracting process via E+D order planning.

Make orders

The fields Create Subcontracting Order, Subcontracting Wksh. Template and Subcontracting Wksh. Name are relevant for the subcontracting process.

If the process is to be carried out via the subcontracting worksheet, the Copy to Subcontrac. Wksh option must be selected in the Create Subcontracting Order field. The selection in the fields Make Purch. Orders and Make Purch. Orders & Print determines in which worksheet is to be created. After confirming with "Ok", a line is created in the corresponding external work worksheet for the previously marked line *("Accept event message")* and the process can be continued via the external work worksheet.

If purchase orders and stock transfer orders for external work are to be generated directly, the option "Purchase orders first" or "Purchase orders first. & print orders" must be selected. After confirming with "Ok", the stock transfer orders and external work orders required for the external work are generated for the previously marked lines *("Accept event message").*

Released production order Pursuit of the foreign work

The tracking of external labor is done at the line level in the production order. To do this, select the corresponding line and call up the "External work tracking" via Line.

The linked documents can be viewed and called up via the window called up by this function.

Order

In the external work order, the activity or operation of the item is ordered. Accordingly, the description of the item line in the purchase order does not contain the name of the item, but the operation description.

The columns FA no., FA line no., work center group no. and operation no. should be shown, as they represent the reference to production.

In the respective order line, you can use the "Line" menu tab to call up the FA components assigned to the operation via the connection code.

The order type FREMD is automatically preset for orders from the external work worksheet, but can be changed manually. This can be used to preset certain data, such as payment terms and other fields.

If the purchase order is delivered, the operation is confirmed at the same time.

Note

If it is the last operation of a production routing, the receipt to stock (item actual message) is posted.

Book delivery

Depending on the setup of the storage location where the production order and thus the external production order was created, the delivery of the external production is to be posted directly via the purchase order or the corresponding logistics documents. The basic process of creating logistics documents or entering delivery quantities is no different for an external production order than for an order for articles.

Note

No stock placements are generated after the goods receipt has been posted, as this is not a stock movement of an article.

As already mentioned, external production is the ordering of activities or operations on an item. Therefore, only a capacity item is generated within the production order when posting. Only if it concerns the last operation an article item (item type "actual message") and thus a stock movement is generated additionally.

If FA components are assigned to the operation or order line as a provision via the connection code, they are automatically posted in the background when the delivery is posted in the corresponding quantity. A special feature here are FA components with article tracking, this must be assigned to the respective FA components. Due to this, as already mentioned, the call of the FA components is available in the purchase order as well as in the logistics documents.

Stock transfer

In the stock transfer header, the field Stock transfer order type indicates that the stock transfer is for external production. If you do not receive a separate message from your external processor about the receipt of the provision at his storage location, you should set the switch "Outbound automatically posts inbound" in the stock transfer order, because otherwise the provision is in transit and you would have to post the stock receipt to the vendor again.

Note

Alternatively, you can perform the setup globally on the corresponding storage location card for third-party manufacturers. To do this, activate the switch "Transfer order output posts automatic input". The switch in the stock transfer header is then preset according to this setup.

The posting of the stock transfer order issue is again done depending on the setup of the storage location either directly via the stock transfer order or the logistics documents (goods issue or warehouse picking).

If the "Order-related" provision type is set in the FA components, the item tracking is automatically inherited when the stock transfers for the provision are posted. If the "neutral" provision type is set, the supplier must report the item tracking used on their delivery documents and this must then be entered accordingly in the FA components before the external production is posted.

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METAL TAX SURCHARGE

General

The app "KUMAVISION Metal Tax Surcharge" for KUMAVISION factory365 enables a simple administration and automatic booking of all stock values in purchasing and sales. Based on the precious metal weight share of an item, with a corresponding base price and possible additional purchase costs, a surcharge/discount value is automatically calculated in the offer and order and also automatically posted in the further process.

In addition, any number of surcharges can be managed per article, since a separate surcharge line is generated for each precious metal component. Furthermore, the precious metal weight of assemblies or products can be easily determined via the parts list using a special function.

Note

Please note that the use of the app requires a possible additional licensing.

Establishment

KUMAVISION Module Setup

The metal control surcharge is an activation module, the use of which is only possible with additional licensing and activation. To activate the module, call up the "KUMAVISION module setup" via the user search and activate the "Activate metal surcharge" button. Provided that you have licensed the module, the functionalities are available to you in the full extent.

Article Surcharges/Discounts

Using the surcharges/discounts, you can map additional costs of an item in Microsoft Dynamics 365 Business Central[1] and thus ensure correct warehouse valuation.

The precious metal costs also belong to the surcharges shown and must be entered in the system in advance. To do this, first call up the "Article surcharges/deductions" via the user search.

Further information can be found in the Microsoft Dynamics 365 Business Central1 Helpsite.

Warehouse facility

An additional info tab "Metal surcharge" has been integrated in the warehouse setup. On this info tab, you can use the "Metal surcharge" field to store the previously defined article surcharge/discount. By the assignment you define the calculation basis of the metal surcharge in the sales and purchase documents.

Article metal list

In the article metal list, all article metals are initially listed with their base prices and percentage delivery costs.

Field	Description
Code	Specifies an abbreviation for the metal.
Description	Specifies a description of the metal.
Base price	Indicates the base price for the metal on which the quotation is calculated.
Delivery costs	Indicates possible delivery costs as a percentage.

Metal quotation

In the metal quotations you manage the current exchange-dependent price quotations for the metals.

Filter area

Field	Description
Current metal code	Selection on the metal code on which the filtering is to be set.

Lines

Field	Description
Metal code	Specifies the corresponding metal code of the record.
Offer date	Specifies the offer date of the record.
Offer price	Specifies the offer price of the record. **Note**
The offer price always refers to 100 kg.	

Article metal content list

You can call the article metal part list on the one hand via the user search or on the other hand via the article card via a lookup in the field "Metal list".

Via the article metal parts list you define which metals an article consists of or which surcharges are to be taken into account for an article for sale/purchase.

Field	Description
Item no.	Indicates the part number to which the metal allocation applies.
Metal code	Specifies the assignment of the corresponding metal code for the item.
Net weight	Indicates the net weight of the respective item, which is indicated on the item card in the "Net weight" field.
Metal weight	In this field you can maintain the metal weight in kilograms.
Start date	Here you can specify a date from which the surcharge is to be taken into account.
Berech. Sales surcharge	Check the box if you want the surcharge to be included in the sales documents.
Berech. Purchase. Metal surcharge	Check the box if you want the surcharge to be included in the purchasing documents.

Surcharges in the sales process

In the sales documents, the overhead rates are calculated using the following formula:

$$\mathit{Surcharge\ Price}\ [\text{€/Unit}] = \text{Metal Weight}\ [\text{kg/Unit}] \times \frac{(\mathit{DEL\ Notice}\ [\text{€/100kg}] + \text{Purchase Costs}) - \mathit{Base\ Price}\ [\text{€}/100kg]}{100}$$

As soon as you enter an article line with a quantity specification in a sales document, the system automatically determines the corresponding surcharge rates for you and automatically inserts them in the sales document in the form of surcharge/discount line(s).

In case of a quantity change of the article line, a quantity change of the surcharge/discount line(s) takes place automatically as well.

If you convert a sales quotation into a sales order, use the "Copy document" function or create a subsequent credit note, the addition/sales lines will also be taken into account.

Surcharges in the purchasing process

In the purchasing documents, the overhead rates are calculated using the following formula:

$$\mathit{Surcharge\ Price}\ [\text{€/Unit}] = \text{Metal Weight}\ [\text{kg/Unit}] \times \frac{(\mathit{DEL\ Notice}\ [\text{€/100kg}] + \text{Purchase Costs}) - \mathit{Base\ Price}\ [\text{€}/100kg]}{100}$$

As soon as you enter an article line with a quantity specification in a purchasing document, the system automatically determines the corresponding surcharge rates and automatically inserts them in the purchasing document in the form of surcharge/discount line(s).

In case of a quantity change of the article line, a quantity change of the surcharge/discount line(s) takes place automatically as well.

If you convert a purchase request to a purchase order, use the "Copy document" function or create a subsequent credit note, the surcharge/discount lines will also be taken into account.

Metal weight across multiple BOM levels

With the action "Calculate metal weight" in the menu ribbon of the part card, the metal weights of the production BOM components in the assemblies can be written into the fields "Metal weight" and "Single-level metal weight" and "Multi-level metal weight" via the production structure BOM.

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Sales

The following features expand standard Microsoft Dynamics 365 Business Central functionality to provide additional options to those working in your organization’s sales department.

SALES & RECEIVABLES SETUP

Check external document

In Microsoft Dynamics 365 Business Central[1], the field Check External Document in the Sales & Receivables Setup determines whether it should be mandatory to enter an external document number in the External Document No. field in the sales header or in a General Journals line.

The function extension in KUMAVISION factory365 checks whether the external document number is entered in the field of the same name and whether it is already used in other documents when a sales document *(order, return, invoice and credit note)* is released.

The Check External Document field in the Sales & Receivables Setup can be used to select whether a warning should be created or an error generated. If the Create Error option is selected, the document can only be released and posted by specifying a unique external document number.

SALES DOCUMENT

Alternate Shipping Address

In Microsoft Dynamics 365 Business Central[1], it is possible to select a alternate shipping address on the Shipping and Billing FastTab in the sales document.

In KUMAVISION factory365 it is possible to customize additional fields in the document depending on the shipping address. For this purpose, the following fields have been added to the Ship-to page for customers:

Field	Description
VAT Bus. Posting Group	A different VAT transaction posting group can be stored for each shipping address.
Gen. Bus. Posting Group	A different business posting group can be stored for each shipping address.
VAT Registration No.	A different VAT identification number can be stored for each shipping address.

If no entries are made in the above fields, the corresponding fields of the customer card are used when selecting the different delivery address in the sales document. If these fields contain a value, this is adopted when the different delivery address is selected in the sales document.

Note

In Microsoft Dynamics 365 Business Central[1], it is possible to store an alternative VAT ID, VAT business posting group and business posting group for a customer for different VAT country/region codes on the "Alternative VAT entry of the customer" page. If a data record is entered here for the country/region code stored in the alternative delivery address, this is relevant for the sales order.

Reservation Structure

The reservations can be showed in the sales order via the line ribbon via Reservation Structure. If reservations exist, this call leads directly to the reservation structure.

Proforma invoice on order

In KUMAVISION factory365 there is the field "Quantity Pro Forma" in the sales order. It is pre-assigned based on the "Quantity" field in the sales line, but can be filled differently for the printout of the pro forma invoice.

The quantity entered in this field is used when printing the proforma invoice if the "Standard" option is selected in the "Quantity field" on the selection page.

Validating the "Sales price" field triggers the calculation of the amounts so that the total amounts, taxes and discounts are displayed according to the "Proforma quantity" field.

However, the change to the quantity and the recalculation of the amounts through the validation of the sales price only happens temporarily so that these values can be printed in the pro forma invoice. The values in the original sales order remain unaffected.

> **Note**
>
> The quantities in the item tracking are based on the quantity in the voucher line. However, the "Quantity pro forma" may differ from the quantity in the document line. This deviating "Quantity Pro Forma" cannot be automatically distributed to the item tracking. It must be decided manually which item tracking should be displayed in which quantity on the pro forma invoice.

> **Note**
>
> This section of the online help only explains the additional functions of the proforma invoice in the order in KUMVISION factory365. The general functionality is described here.

SALES CONDITIONS

Sales conditions allow you to variably calculate a sales price or a line discount in a sales price or sales line discount and thus ultimately a variable price or discount calculation in a sales line.

Sales conditions are first defined and then assigned to one or more datasets in the price list, depending on whether the sales condition is used to calculate a sales price or a line discount %.

The sales conditions functionality of KUMAVISION base (BOOSTER) is extended by KUMAVISION factory365 with the additional calculation base "Price condition (sales price)" and the "Rounding method code".

> **Note**
>
> In the Feature Management you must Feature Update: New Sales Pricing Experience set the Enabled For field to All Users.

Create Sales Conditions

For creating a sales condition can be found in the section: KUMAVISION base (BOOSTER)

In KUMAVISION factory365 there is the option of selecting the "Price condition (sales price)" as the calculation basis. In addition, the rounding method, a sales type *(customer, customer price group, all customers, campaign)* and the corresponding sales code can be selected.

Function Sales Conditions

The calculation basis for the sales condition is determined on the basis of the sales price lists with accrual/deferral to the respective "Sales type" set in the sales condition. Here, too, the price calculation method in the Accounts Sales & Receivables Setup must be taken into account accordingly. The determined sales price then serves as the basis for calculating the defined condition lines.

> **Note**
>
> The lowest sales price is used as the basis for calculation. Further information can be found at Sales conditions - KUMAVISION base (BOOSTER).

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Purchasing

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s procurement department.

TOLERANCE (TIME) IN BOTH DIRECTIONS

In the standard Microsoft Dynamics 365 Business Central[1] a tolerance time can be set for the procurement run to avoid too many change notifications. This refers to the length of time that a requirement cover (e.g. a purchase order) can be received earlier than a requirement originator (e.g. an order) requires this.

The setup is done in Microsoft Dynamics 365 Business Central[1] Standard first centrally in the production setup via the field "Standard tolerance period" and can be overridden article specific in the article or inventory data with the field "Tolerance period".

In KUMAVISION factory365 the standard fields were renamed to "Standard tolerance period too early" and "Tolerance period too early".

Furthermore, the production setup was extended by the "Standard tolerance period too late" and the article or stock data by "Tolerance period too late". Thus, in KUMAVISION factory365 tolerances can be defined in both directions in the replenishment procedure "lot-by-lot".

Note

Basically, the lot accumulation period must be defined if the tolerance period is to be used. Here the rule applies that the lot accumulation period must be larger than the tolerance period.

Tolerance setup

Global

Enter the term "Production setup" via the user search and select the corresponding link.

Via the "Planning" info tab, you have the option of entering the tolerance times in the "Standard tolerance period too early" and "Standard tolerance period too late" fields.

Specific

To set and define specific tolerances, open the desired item or inventory data card for this purpose. On the "Planning" info tab, you can define the tolerances in the "Tolerance period Too early" and "Tolerance period Too late" fields.

Note

The specific tolerances override the global tolerances from the production setup.

OPTIMIZED PLANNING PARAMETERS

In Microsoft Dynamics 365 Business Central[1], reservations must not be used for the planning parameter "minimum stock". Otherwise, this could lead to untraceable proposal lines.

In KUMAVISION factory365, the planning parameters for the replenishment procedures "Fixed order quantity" and "Replenish to maximum stock" have been optimized so that the "Reserve" field is set to "Never" by default.

When the replenishment procedure is changed to "Fixed order quantity" or "Replenish to maximum stock", the system automatically checks whether any reservations still exist. If this is the case, a message appears informing you to delete them.

COLLECTIVE REQUESTS

The function extension "Collective inquiries" is to prevent that as soon as a FA component with reservation reference is given via the order proposal into a purchase inquiry, the reservation reference to the later order is not lost.

The order proposal line with reservation and inquiry reference must not be deleted when the "Calculate planning" function is repeatedly executed. Additional requirements are determined as further order proposal lines.

If the purchase inquiry line is converted into a purchase order, the reservation is inherited to the purchase order from the existing order proposal line, and the additional inquiry lines are deleted or marked as ordered.

To be able to use this functionality, the following settings must be made in advance:

Setup

In the "Accounts Payable & Purchasing", a number series for the collective requests must first be stored in the "Collective request number series" field on the "Number series" info tab.

Procedure

If procurement planning is run for an article via the planning or order worksheet, it is possible to send price inquiries to various vendors for the respective proposal line via the "Generate collective inquiry" function.

To do this, the "Generate price inquiry" checkbox is first set for the corresponding proposal line. For the marked line(s), the desired vendors for generating the purchase requests can be stored via "Related" > "Price request" > "Selection for price request" > "Assignment for current data record" or for "Assignment for marked data record".

For the actual generation of the collective inquiry, subsequently execute the function "Create collective inquiry" under "Related" > "Other".

A subsequent message gives you the information how many inquiries have been created by the system. Furthermore, the order proposal line receives an identifier with the associated collective inquiry number in the "Collective inquiry no." field and the associated line number in the "Collective inquiry line" field.

Collective request

Via the column "Collective request no." of the suggestion line, you have the possibility to get into the collective request by a lookup on the number. Otherwise, you can access the overview via the user search using the search term "Collective requests", from which you can also call up the desired collective request.

Inforegister General

field	description
No.	Indicates the number of the collection request according to the defined number series.
Description	Gives a description of the collection request.
User ID	Indicates the user ID from which the collection request has been created.
Creation Date	Specifies the date when the collection request has been created.
Requested end date	Specifies a requested end date by which the request process should be completed.
Status	Distinguishes between the following statuses: **Requested:** A collection request has the status "Requested", if it is still in the editing process. **Finished:** A bulk request has the status "Finished" as soon as there are no more requests for the bulk request. **Canceled:** A bulk request has the status "Canceled" as soon as the bulk request has been canceled using the "Cancel" function in the matrix.
Number of requests	Indicates the number of requests associated with the collection request. A lookup on the number, you get to the purchase request overview, which is filtered to the associated requests of the collection request.

Inforegister Collective request lines

In the collective request lines you can see the article lines which have been requested.

field	description
Type	Indicates the type of the request line.
No	Indicates the number of the requested line item. This field is related to the "Type" field.
Quantity	Get the quantity that has been requested.
Quantity (base)	Indicates the quantity (base) that has been requested.
Order Quantity	Indicates the order quantity.
Order Quantity (Base)	Indicates the Order Quantity (Base).
Remaining order quantity	Indicates a possible remaining order quantity.
Remaining quantity (base)	Gives a possible remaining order quantity (base).
Unit Code	Indicates how a unit of the item or resource is measured (e.g. pieces or hours).
Variant code	Indicates the variant of an item (if applicable).
Work Type Code	Indicates a work type code.
Storage Location Code	Specifies a code for the storage location where the requested items will be registered.
Finished	The checkmark is set once an order has been created and there is no remaining order quantity.

Matrix

The menu item "Display matrix" takes you to an overview that shows you the requested item(s) with the corresponding vendor requests summarized in one line.

Using the buttons on the "General" info tab, you can select which information is to be displayed in the rows.

In the matrix lines you have the possibility to store the confirmed prices of the suppliers and to compare them with each other.

Otherwise, you can also store the prices directly in the purchase request. The system transfers the prices from the purchase request to the matrix overview and vice versa, automatically.

Create order

As soon as you have chosen a supplier, you can accept the quantity via the matrix by clicking on the quantity of the corresponding supplier.

The "Accept" screen will open where you can accept the quantity via the "Quantity to accept" field. The status for the creditor changes in the line to "Allocated" while the other one gets the status "Not allocated".

You can then use the "Generate purchase order" action in the ribbon to generate the desired purchase order. You will receive a message that the order has been created. The matrix then receives the status "Order/Purchase order". The collective inquiry receives the status "Finished" and the associated order proposal line is deleted.

As long as no orders have been created for a collective request and the collective request is not "Finished", you can cancel the process after distribution. To do this, use the "Cancel" function in the menu ribbon of the matrix rows. Confirm the query with "Yes" to delete all associated requests. The collective request is then set to "Canceled" by the system. The reference to the order worksheet line is also deleted so that the process can be restarted.

Note

If the planning is recalculated a second time, all lines will be recalculated except for the lines that are in a collective request. The lines that are in a collective request remain unchanged in the planning/order worksheet.

PURCHASE CONSIGNMENT PROCESSING

With the purchasing consignment processing you have the possibility to manage a supplier warehouse in KUMAVISION factory365 in order to map possible receipts/issues of consignment items.

Setup

Origin codes

In the origin codes, a corresponding code must be created by specifying a code *(abbreviation)* and a description. This origin code is then assigned in the origin code setup.

Origin code setup

In the origin code setup, you can store the origin code previously set up for consignment processing on the "Purchasing" info tab in the "Consignment withdrawal" field.

field	Description
Consignment Withdrawal	Specifies the origin code for the purchasing process during warehouse withdrawal. Setting up this origin code allows direct posting of purchasing deliveries when posting the purchasing document in conjunction with a "controlled" storage location.

Warehouse Setup

In the warehouse setup, first of all, the field "Einst.-Pr. (averages) Ber.-Art" on the info tab "General" for the cost price calculation must be mandatorily set to the option "Artikel Lagerort und Variante".

Furthermore, for consignment processing, the number series must be set on the "Numbering" info tab and the purchase order type must be set on the "General" info tab.

Field	Description
Consignment Withdrawal Numbers	Indicates the number series for the consignment withdrawal.
	Consignment Withdrawal Numbers
Purchase Order Type Consignment Withdrawal	Indicates the purchase order type for the purchase orders generated from consignment withdrawals.

Storage location

For the consignment storage location, the following fields must also be set up on the storage location card:

field	description
Consignment Withdrawal	Identifies the storage location as a "consignment warehouse" for purchasing. The indicator can only be changed if no "open item items" exist on the storage location. Furthermore, all item items must be settled and in a closed warehouse posting period. **Note:** Please note that the switch is only released for the DACH region.
Vendor No.	Indicates the vendor number of a consignment storage location. The field is a mandatory field if it is a consignment warehouse without storage bins. If the consignment warehouse is set up with storage bins, primarily the vendor number in the respective storage bins will be checked, if no unique assignment is found in the storage bins, the content of this field will be used. Please note: Please note: The field is a mandatory field if it is a consignment warehouse without storage bins.

For consignment storage locations *(switch consignment withdrawal set)* the following has to be considered:

1. the "controlled logistics" and "outgoing logistics documents" (goods issue, picking or warehouse picking) cannot be used and must be deactivated accordingly in the setup.
2. within the warehouse entries, this indicator is checked in particular in connection with cost prices. No stock values may be posted to these marked storage locations.
3. this storage location cannot be used in any outgoing documents (sales, service, stock transfer order, production order, assembly order, projects, purchase credit memo and purchase complaint). The use of consignment stocks is also restricted in the accounting sheets. In the article stock transfer ledger sheets, the consignment warehouse can also be used, but only for internal stock transfers between consignment storage locations or storage bins.
4. withdrawal from this storage location is possible via the inventory process, the article ledger sheet and the "consignment withdrawal" document and the subsequent process.
5. the receipt to this storage location can be posted via the stocktaking process, the article book sheet and a corresponding purchase order or invoice (without value).
6. the "cancel goods receipt" function in the "posted purchase deliveries" for consignment receipts is not available.

Storage bins

The storage bins can still be set up and used. It is also possible to assign the storage bins to a specific vendor via the "Vendor no." field.

Note

The "Vendor no." field can only be used for storage locations with the "EK consignment warehouse" indicator. It is only possible to change the field if there is no storage location content. If the field is not set up, then the vendor number must be stored in the storage location.

Attention

It is technically possible to set up storage locations with different vendor numbers, but special attention must be paid to this in the warehouse organization with regard to ownership.Basically, it is recommended to set up a separate storage location for each vendor.

Warehouse posting setup

Despite a general check that no warehouse values can be posted, it is recommended to set up appropriate separate G/L accounts that are not used in balance sheets or similar in the required "Warehouse posting setup".

Stock data

The following setups must be made for the items that will be handled through this process:

1. within the inventory data card used by a storage location with the "EK Consignment" indicator, the procurement method "Purchasing" must be set up.
2. Furthermore, a corresponding vendor number must be assigned to the inventory data card. In accordance with the Microsoft Dynamics 365 Business Central[1] standard, this is adopted as a default within MRP via the purchase order and planning worksheets. The possible setup of a vendor number in the storage bins of the consignment warehouse have no direct influence within the planning and scheduling.
3. for the storage locations of the consumptions of the consignment articles must be furnished appropriate stockkeeping data with the procurement procedure "transfer" and the appropriate consignment stock as "transfer of warehouse orrcode".
4. the use of the replenishment procedures are not restricted in the inventory data and are basically supported according to Microsoft Dynamics 365 Business Central[1]standard.
5. The stock data card for the consignment warehouse can only be deleted if there are no "open" item items on this combination. Furthermore, all item items must be regularized and be in a closed accounting period.

Note

In connection with the stock issue method "Standard", the "Cost price (fixed)" is immediately set to 0 by the system within the corresponding stock data card and can also not be changed.

Report selection - warehouse

In the "Report selection - warehouse", the additional option "Consignment withdrawals" is available for customer-specific documents.

Carry out consignment processing

The processes for consignment processing are described below:

Receipts Consignment Stock

An entry for a consignment warehouse can be made via the article ledger sheet and via the document types "Purchase order" or "Purchase invoice". The basic rule here is that the document lines with a consignment warehouse have a line amount of "0". Any article surcharge/discount allocations are suppressed.

Surcharges resulting from the "Metal taxation surcharge" module will only be transferred to the following documents in the purchase orders at the time of the consignment withdrawals.

Any checks regarding the line amounts are made during the document release.

In the lines of the purchasing and logistics documents, the vendor number from the storage location(s) is taken into account when assigning or selecting the corresponding storage bins.

Currently, the billing documents for deliveries to the consignment warehouse must be posted directly from the purchase order when posting, or via separate invoice runs when using logistics documents.

Consignment warehouse withdrawals

Withdrawals from the consignment warehouse can be made via the item book sheet and the consignment withdrawal card. To do this, first call up the "Consignment withdrawal overview" via the user search. You can create a new withdrawal using the table below via "New" in the ribbon.

Alternatively, you can create the withdrawal documents from the planning worksheets using the "Execute event message" function.

Inforegister General

field	**description**
No.	Allocation of a consecutive document number from the number series defined in the warehouse facility.
Document date	Indicates the document date.
Assigned Date	Indicates the date when a user was assigned. This field is used as an information field for the logistics processes and is automatically set when a user is assigned.
Assigned Time	Indicates the time when the assignment of a user took place. The field serves as an information field for the logistics processes and is automatically set with the assignment of a user.
Assigned User ID	Indicates the warehouse employee who is processing this document.
Consignment Warehouse Location Code	Indicates the warehouse location of the withdrawals. The selection is limited to the consignment warehouses set up in the system.

Inforegister Lines

field	**Description**
Article No.	Indicates the article number of the item to be withdrawn. To assign article tracking, a corresponding callout is provided in the document lines menu.
Variant Code	Indicates *(if available)* the article variant to be taken.
Description	Indicates the corresponding article description of the article to be withdrawn.
Vendor Code Indicates the associated vendor from the storage location or bin.	
Description 2 Indicates *(if available)* the additional related item description of the item to be taken.	
Quantity	Indicates the total target withdrawal quantity.
Unit Code	Indicates the unit code.
Reserved Quantity	Indicates how many units of the item have been reserved in the row.
Purchased Movement Quantity	Indicates the actual quantity of the withdrawal posted.
Consignment Storage Location	Indicates the consignment storage location. The field is pre-populated with the header information. A LookUp to other consignment warehouses for a manual change is possible.
Consignment storage bin	If the selected consignment warehouse is set up with storage bins, it will be specified in this field.
Storage location code	Indicates the destination storage location.
Storage bin code	Indicates the destination storage bin.
Takeout quantity	Actual takeout quantity *(partial quantity postings)*
can be set via functions and is automatically supplied with the target quantity when the document line is created.	
Date due	Is automatically taken from the planning worksheets during creation and represents the requirement date from planning.

Note

When withdrawal lines are entered, a check is made for the availability of the articles or variants. If the articles are subject to a serial or batch number obligation, the corresponding article tracking must be assigned for each line.

Functions in the menu ribbon Post

This function is used to post the consignment withdrawal. The system generates a purchase order and posts the delivery. The purchase orders generated via consignment withdrawals can be identified via the "Purchase order type".

Note

Only the rows with a transaction quantity will be considered by the posting process.

Fill movement quantity

The field "Movement quantity" in the existing withdrawal lines will be filled with the remaining quantity *(Difference "Quantity" and "Geb. Quantity")*.

Clear movement quantity

Deletes the movement quantity in all withdrawal lines for manual entry by the user *(partial quantity withdrawals or similar)*.

Print

If a document has been stored in the "Report selection - warehouse", it can be printed out here.

Note

The document must be created and set up on a customer-specific basis.

Posted purchase deliveries

The posted purchase deliveries that were generated via the consignment withdrawals receive the number from the number range that is stored in the warehouse facility for the posted consignment withdrawal numbers. These posted purchase deliveries can be identified via the "Purchase order type".

The "Cancel goods receipt" function for posted deliveries for consignment receipts is not permitted and cannot be executed.

The "Cancel goods receipt" function is permitted for posted deliveries for consignment issues and can be executed.

Invoice consignment withdrawals

Invoicing then takes place again in the Microsoft Dynamics 365 Business Central[1] standard processes of the purchase invoice or directly in the purchase order.

Planning / Disposition

Via the setup of the respective replenishment procedures, consignment processing is also taken into account within the purchase order and planning worksheets.

If a proposal line is generated on the basis of an inventory data card with stock transfer from a consignment warehouse, the option "consignment withdrawal" is set instead of the procurement method "stock transfer".

By means of the function "Execute event notification" the order proposal lines with the procurement method "Consignment issue" will be transferred to it, if the option "Create stock transfer orders" is activated. Any reservations *(due to the set replenishment procedure)* are passed on from the order proposal line to the consignment issue line.

Inventory

An inventory is also possible in principle within the consignment storage locations. However, only quantity corrections are possible here. However, it is not possible to post warehouse values

Revaluation

The standard functionality "Revaluation book.sheets" is not available for consignment storage locations.

Intrastat

Attention

With Microsoft Dynamics 365 Business Central[1] version 24.0, the previous Intrastat functionality is outsourced to a standalone app (must be activated via the function management). Within the new Intrastat functionality, deliveries to the consignment warehouse can be excluded via the switch "Skip zero amounts".

Direct deliveries

Since storage locations marked "consignment warehouse" cannot be used in outgoing documents, direct deliveries must first be processed via consignment withdrawal to a sales warehouse. Direct posting out of the consignment warehouse is prevented.

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Manufacturing

GENERAL

The following section explains the additional functions in KUMAVISION factory365 for the Production area. in Microsoft Dynamics 365 Business Central[1].

- Manufacturing Setup
- Fertigungsauftragsarten
- Navigate production BOMs and routings
- Comfort Exchange Production BOM Item
- Operationvalues Preserve
- Secondary operations
- Overproduction
- Capacity Quantities in Production Overview
- Flag insufficient demand
- Automatic item tracking
- Optimized Absence Management
- Dispatch

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

MANUFACTURING SETUP

The following table describes the "Production setup" extensions in KUMAVISION factory365 with links to the topics.

Field	Description
Testing overproduction	Checking deviations from the target production quantity. See Overproduction
Mandatory field check Workstation	If the switch is set, the mandatory field check for workstations is activated. See Mandatory field check
Mandatory field check work center group	If the switch is set, the mandatory field check for workstation groups is activated. See Mandatory field check
Standard tolerance period Too early	Defines the time period for the tolerance period (too early). See Two-way tolerance
Standard tolerance period Too late	Defines the time span for the tolerance period (Too late). See Two-way tolerance
Retain operating cycle values	Activate the switch if you want to retain the work process description. See Retain operating cycle values
Separator Aisle no. Personnel	Define a prefix for the "Personnel" operation. See Set up secondary operations
Basic operation no. Personnel	Define a suffix for the "Personnel" operation. See Set up secondary operations
Separator Operation no. Tool	Specify a prefix for the "Tool" operation. See Set up secondary operations
Basic operation No. Tool	Define a suffix for the "Tool" operation. See Set up secondary operations

Further information can be found at:

Manufacturing | Microsoft Learn

PRODUCTION ORDER TYPES

The Production Order Types are available in KUMAVISION factory365.

> **Note**
>
> For general information about the functionality, see Order Types. This article only describes the additional pages, functions, and fields available for it in factory365.

Field	Description
Calculation Order	Description to follow.
Master Order	Description to follow.
Duration Precision	Assigns the field of the same name in the E+D order with the option: millisecond, second, minute, hour or day before.
Calculate routing	Pre-fills the field of the same name in the E+D order with the selected option. The following options are available: • No • Hide Sec. Rtng. Lines • Show Sec. Rtng. Lines
Structure Explosion	

> **Note**
>
> If a production order type is assigned to the production order, the fields: Duration Precision, Calculate routing and Structure Explosion in the E+D order are filled with the stored values of the production order type. Otherwise, the default values come from the Engineering & Design Setup.

See also:

- Engineering & Design Setup
- E+D Oder Card - FastTab Display

NAVIGATE PRODUCTION BOMS AND ROUTINGS

This feature gives you direct access to the production bill of materials and the routing from an item card, making it easier to find production base data.

Note

For further information see "Navigate production BOMs and routings"

In KUMAVISION factory365, the insight via the Assist button has been extended so that it can also be called at the following pages in the system:

- From E+D order line for the BOMs, routingversions

Von der Konstruktionsüberwachungszeile zur Fertigungsstückliste, Arbeitsplan mit ihren Versionen * From Construction Monitoring line to the production bill of materials, routing with its versions ConstructionMonitoring * From the MRP monitoring line to the production bill of materials, routing with its versions

COMFORT EXCHANGE PRODUCTION BOM ITEM

This function allows to use the "Consider Active Versions Only" option in the "Exchange Production BOM Item" function. Replace item" function to use only active versions for the replacement of an item or a parts list.

OPERATIONVALUES PRESERVE

In Microsoft Dynamics 365 Business Central[1] Standard, when the capacity unit *(Work Center or Work Center Group)* in the production order routings or routings line is changed, individual values such as setup, transport and waiting times *(work center* "*routing setup*"*)* are overwritten in addition to the operation description when the work center is changed.

However, since the description in the operation is the description of the activity to be carried out, but also existing default values are simply changed when the capacity unit is changed, this behavior can be prevented by activating the "Retain operation values" switch in the "Production setup".

To do this, call up the "Production setup" via the search and make this setting.

When a new production order routing or routing line is created, both the description of the respective capacity unit and the default values for the "work centre" capacity unit are adopted.

Note

Activation is particularly recommended when using the standard catalogs or the "etagis Interface" activation module.

Note

Changes in the planning work plan of the planning worksheets remain unaffected by the scope of functions described.

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SECONDARY OPERATIONS

General

In Microsoft Dynamics 365 Business Central[1] it is possible to assign tools and personnel to an operation. However, these assignments are managed by the system for information purposes only.

The secondary operations in KUMAVISION factory365 can be used to manage the capacity and costs of tools as well as personnel assignments.

The primary operation defines the main process of an activity. All dependent personnel or tool assignments are categorized as secondary operations. These are linked to the primary operation via permanently assigned fields. Dates and quantities are managed in the primary operation and automatically transferred to the secondary operations. This means that the secondary operations always run in parallel and within the start and end times of the primary operation.

It is possible to process the secondary operations, for example to load an assistant only 50% (simultaneous load = 0.5) in the case of multiple machine occupancy.

Routing Tools

With this extension, you can manage and post specific tools for a machine in terms of capacity and costing via the operations. Tools can be managed as independent capacities in production planning *(by work center or work center group)*, as items in the locations, in warehouse and scheduling, as assets in the financial area and as cost units for controlling.

Routing Personnel

With this extension, you can manage personnel per operation for specific deployment and capacity planning and management via the operations. Planning at work center group level and confirmation or scheduling at employee work center level is recommended. Each employee is set up as a work center and the work center group as a consolidated calendar.

Industry 4.0

The management of additional production factors such as energy or CO^2 certificates will become increasingly important in the future in order to describe the accompanying processes of production more comprehensively and transparently. With secondary operations, an approach has been found that plans and manages these in a capacity-relevant manner.

Setup

Manufacturing Setup

Open the Production Setup via the search icon and set up the fields of General Fasttab to the following table.

Field	Description
Separator Operation No. Personnel	Primary operation = prefix + separator.personnel + suffix (base operation no.personnel)
Base Operation No. Personnel	Suffix for operation personnel
Separator Operation No. Tool	Primary operation = Prefix + Separator.Tool + Suffix (Base operation no.Tool)
Base Operation No. Tool	Suffix for operation personnel

Routing

To set up the secondary operations, call up the required routing via the item card. If you have not yet created a routing, create one first.

Note

Please note that the routing for the secondary operations must be defined as "Type=Parallel".

Then select the work process line. You can use the line menu to assign the operation accordingly by calling up "Tools" or "Personnel".

Routing Tools

Field	Description
Type	This field defines the capacity selection. Depending on the assignment, a secondary operation is created. • Blank=Standard • Workstation Center • Maschine Center
No.	Depending on the type, the field is filled as follows Blank (default): The field is not editable Workcenter: Specifies the Work Center Code. Maschine Center: Specifies the Maschine Center Code.
Description	Specifies the description of the selected Wirk Center or Maschine Center.

Routing Personnel

Field	Description
Type	This field defines the selection of the capacity. Depending on the assignment, a secondary operation is created • Blank=Standard • Workstation Center • Maschine Center
No.	Depending on the type, the field is filled as follows: • Blank (default): The field is not editable • Work Center: Enter workstation group code • Maschine Center: Enter Maschine Center Code.

These can be viewed via "Secondary operations" in the work plan.

The secondary operations are inserted whose operation number is made up of the primary operation + separator for personnel, tool + current operation no. personnel, tool.

The line values of the primary operation are copied to the secondary operations and can be edited here.

If you enter a routing separately from an item, the secondary operations are set up in the same way.

Standard Tasks

The secondary operations for each operation can be pre-assigned using a standard tasks *(standard operation)*. As soon as a standard task code is inserted in the routing line, the operation page *(Tools, Personnel, Description, Quality Measures)* is updated.

This procedure can be used, for example, to preset tool sets as a standard task.

To set up a standard tasks, open Standard Tasks via the search icon.

Via "New" in the ribbon you can create a new standard task under specification of a code and description.

Via "Std. Task" you have the possibility to assign tools / personnel to the standard catalog.

Then insert the standard task in a parallel routing on the desired line via the "Standard Task" field. Secondary operations are created for the individual tools. In this way, capacity management and cost allocation can be tracked at the desired level of detail for each individual tool.

Secondary operations in the production order

Secondary operations can also be processed directly in a production order. The individual secondary operations can be edited and fine-tuned by production planning. It is important that the scheduling is within the start/end dates of the primary operation.

Using the example of a firmly planned production order, you can call this up via "Routings" in the line menu.

Execute the "Show secondary operations" function in the ribbon under the menu tab to display the secondary operations.

Delete / Insert

To delete a secondary operation or add another one, first select the line of the primary operation.

Then select "Tools" or "Personnel" in the ribbon.

The corresponding page opens, on which you can add a secondary operation via "New" or delete an existing one via "Delete". Confirm your change with "OK".

Edit

If the capacity of a secondary operation is to accompany the process with a certain percentage, proceed as follows:

Change the field: "To be charged at the same time" and the "Processing time" in equal proportions.

This means that the throughput time of the operation remains within the start/end time of the primary operation, the "extended capacity requirement" decreases and the target operation costs are reduced to the percentage share.

> **Note**
>
> Of course, the primary operations can still be processed in addition to the secondary operations. The secondary operations are then automatically assigned the default values of the primary operation.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

OVERPRODUCTION

This functionality allows you to define a permissible percentage deviation from the planned production quantities.

Open the Production setup via the search. On the General FastTab, activate the function Check Over Production.

On the item card, you have the option of specifying the desired percentage for overproduction in the Over Production % field on the Replenishment FastTab.

If the function is activated in the Production Setup, the system checks the Over Production % field on the item card to see whether the completed quantity is greater than the maximum overproduction quantity. If this is the case, an error message appears.

Note

The overproduction quantity is checked per routing. The storage of a routing is therefore a prerequisite.

Example
With a production order quantity of 1000 pieces, the maximum overproduction is 20% = 200 pieces. The tolerance quantity is therefore 1000 to 1200 pieces, and an error message appears from 1201.

CAPACITY QUANTITIES IN PRODUCTION OVERVIEW

The following status fields have been added to the Production Order overviews:

- Allocated Capacity Need
- Actual Time Used
- Remaining Time

These fields are in the overviews:

- Released Production Order *(Microsoft Dynamics 365 Business Central*[1] *Standard)*
- Released E+D-Orders
- Released E+D-Orders (Kalkulation)

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FLAG INSUFFICIENT DEMAND

The Flag insufficient demand in KUMAVISION factory365 extends the production order of Microsoft Dynamics 365 Business Central[1] with the visualization of planning and capacity availability as well as the availability for order picking.

These are available in the production order overviews and in the production order lines *("MRP availability", "Capacitive availability" and "Picking availability")* as well as in the production order components *("MRP availability" and "Picking availability")* and the production order routing *("Capacitive availability")* in the status: Planned, Firmly planned and Released.

The availability traffic light for picking is also available in the Warehouse Shipment List, Warehouse Shipment Lines, in the Pick Worksheets, in the Get Warehouse Documents function, in the overview of Assembly orders and in the Assembly Order Lines.

The "Calculate availability traffic light" function is available in the above overviews to determine the MRP and capacity availability. To determine the availability for picking, the "Calculate availability traffic light" function must be executed with the "Picking traffic light" option.

Note

Please note that availability is not calculated at runtime.

Note

Please note that the calculation is not performed automatically when "Update lines in E+D order".

Setup

Traffic Light Assigment Setups

The availability traffic light is configured by the system. Initial images have been stored for the defined values listed below:

Availability traffic light value	Traffic light symbol, example*
Empty	
Green Check	✅
Blue	🔵
Green	🟢
Yellow	🟡
Yellow Exclamation Mark	❕
Red Exclamation Mark	❗

Note

The traffic light symbol examples have a size of 16x16px.

You can open the "Availability traffic light setup" via the user search.

It is possible to change the screens for the availability traffic light values. In addition, the "Reset traffic light symbols" function can be used to reset the "Availability traffic light setup" to its original state.

Threshold values

Threshold values Minimum Threshold % and Maximum Threshold % can be stored hierarchically at the Maschine Center, Work Center and/or the Work Center Groups.

Open the Maschine Center or the Work Center via the search and open the respective card.

You can store the threshold values Minimum Threshold % and Maximum Threshold % on the Traffic Light Control FastTab.

To store the threshold values in the department, call up the Departments via the search and select Edit list".

Further information can be found under: Set up workstations and workstation groups.

Traffic Light Control

Dispositiv

MRP availability is determined on the basis of item availability by event and reservations.

The "Remaining stock quantity" field has been added to the item availability by event. The field shows the item availability without planned receipts. The quantity includes all requirements, but does not take into account the expected receipt and is used for the subsequent definition.

Assemblies inherit the worst component result.

The definition of the "dispositive availability traffic light" is regulated as follows:

Option	Description	Definition of	Traffic light symbol Example*
Empty	not calculated		
Green	Reservation against stock	Reservation against article items	✅
Green	sufficiently available on date (in stock)	Availability balance: positive or results in 0 Remaining stock: positive or results in 0	✅
Yellow	Reservation against receipt	Reservation against order or relocation	🟡
Yellow	Sufficiently available on date (by receipt)	Availability balance: positive or results in 0 Remaining stock: negative	🟡
Warning	Reservation against receipt with reservation conflict	Reservation against order or stock transfer with reservation conflict	❕
Red	not available on date	Availability balance: negative	❗

Note

* The traffic light symbols can be changed in the "Availability traffic light setup".

Capacitive

Without Threshold values

The basis for determining the capacitive availability is the "capacity" based on the calendar items compared to the "allocated capacity (FA capacity requirement)".

Assemblies inherit the worst component result.

The definition of the "capacitive availability traffic light" without setting threshold values is regulated as follows:

Option	Description "without threshold values"	Traffic light symbol Example*
Empty	not calculated	
Green	"Allocated capacity" is less than or equal to the "Capacity"	✓
Red	"Allocated capacity" is greater than "Capacity"	!

Note

* The traffic light symbols can be changed in the "Availability traffic light setup".

With Threshold values

The basis for determining the capacity availability is the "Capacity (min.)" and "Capacity (max.)", which are calculated using the "Capacity" based on the calendar items and the threshold values "Capacity (min.) %" and "Capacity (max.) %" stored at the department, work center group or work center, compared to the "Assigned capacity (FA capacity requirement)".

The calculation is made with the "Calculate availability traffic light" as follows:

Field	Formula	Example
"Capacity (min.)"	"Capacity" - ("Capacity" x "Capacity (min.) %" / 100)	8 - (8 x 20/100) = 6,4
"Capacity (max.)"	"Capacity" + ("Capacity" x "Capacity (max.) %" / 100)	8 + (8 x 20/100) = 9,6

Assemblies inherit the "worse" component result.

The definition of the "Capacitive availability traffic light" with the establishment of threshold values is defined as follows:

Option	Description "with threshold value"	Traffic light symbol Example*
Empty	not calculated	
Green	"Allocated capacity" is less than the "Capacity (min.)"	✓
Yellow	"Allocated capacity" is equal to or greater than the "Capacity (min.)" and less than or equal to the "Capacity (max.)"	●
Red	"Allocated capacity" is greater than the "Capacity (max.)"	!

Note

* The traffic light symbols must be stored in "Availability traffic light setup".

Warehouse Picks

Note

The "Picking availability traffic light is only calculated in conjunction with a warehouse location.

Pick-Worksheet Get Warehouse Documents function

In the picking selection, the picking Traffic Light is showed with the value from the production order header, assembly order header, or Warehouse Shipments header, provided that the production order, assembly order, or Warehouse Shipments was previously calculated via the "Calculate availability signal light" function, including the "Picking signal light" option.

Pick Worksheet Lines

The picking traffic light is displayed in the picking worksheet lines. To control the "Picking" availability traffic light, the remaining quantity for each component is compared with the quantity available for picking. The traffic light control is based on the following definition:

Option	**Description "with threshold value"**	**Traffic light symbol Example***
Green	"Avail. Quantity for commiss." >= "Residual quantity"	🟢
Yellow	"Avail. Quantity for commiss." < "Residual quantity"	🟡
Red	"Avail. Quantity for commiss" <= 0	🔴

The picking traffic light is calculated manually using the "Calculate availability traffic light" function including the "Picking traffic light" option.

Note

If you are working without reservations, the MRP availability traffic light could indicate that there is no stock available, while the picking traffic light nevertheless indicates that picking is possible.

Production Order Production Order Component

The picking traffic light is showed in the production order component lines and in the E+D order components.

If a component is an assembly *(made-to-order production - not outsourced)*, it is not taken into account during picking and no traffic light symbol is displayed.

If the posting method in the component line is set to "Forward" or "Backward", no picking is necessary and no traffic light symbol is displayed.

If the "Convert the manufacturing flushing method 'Manual'..." function is activated in Feature Management, no flag symbol is showed for the "manual" posting method either.

If no storage location is assigned in the component line, no traffic light symbol appears either. Reservations are taken into account when the picking traffic light is displayed.

The traffic light control is based on the following definition:

Option	**Description**	**Traffic light symbol Example***
Empty	No order picking necessary *(see above)*	
Green Check (fully commissioned)	"Quantity picked" >= "Expected quantity" or residual quantity = 0	✅
Blue (in order picking)	Total quantity picking line *(Total remaining quantity in order picking or warehouse picking)* >= "Expected quantity" - "Quantity picked"	🔵
Green	"Avail. Quantity for commiss." > = *("Expected quantity"* - "*Quantity picked*" - *Total quantity picking line)*	🟢
Yellow	"Avail. Quantity for commiss." < *("Expected quantity"* - "*Quantity picked*" - *Total quantity picking line)*	🟡
Red with exclamation mark	"Avail. Quantity for commiss." = 0 and "Quantity picked" = 0 und Summe Menge Kommissionierzeile = 0	❗

The picking traffic light is calculated manually using the "Calculate availability traffic light" function including the "Picking traffic light" option.

Production Order Line

The picking traffic light is showed in the production order lines and in the E+D order lines. The result from the production order components is inherited in the same way as the availability traffic lights in the production order line.

Production Order Header

The picking traffic light is showed in the production orders list and in the E+D order list . The result of the top production order line / level 0 is passed on to the production order header in the same way as the availability traffic lights.

Assembly Order

Assembly order line with the type: Item

The picking traffic light is showed in the assembly order lines. The calculation for the "value" of the picking traffic light in the assembly order lines is similar to the production order component line, but the "quantity" is used for the calculation instead of the "expected quantity".

The picking traffic light is calculated manually using the "Calculate availability traffic light" function including the "Picking traffic light" option.

Assembly Order Header

The picking traffic light is displayed in the assembly order list. The "worst" result of the picking traffic light from the assembly order lines is passed on to the assembly order header.

Warehouse Shipment Warehouse Shipment Lines Type = Item

The picking traffic light is showed in the warehouse shipment lines. The "value" of the picking traffic light in the warehouse shipment lines is calculated in the same way as the production order component line.

The picking traffic light is calculated manually using the "Calculate availability traffic light" function including the "Picking traffic light" option.

Warehouse Shipment Header

The picking traffic light is showed in the Warehouse shipment list. The "worst" result of the picking traffic light from the warehouse shipment lines is inherited in the warehouse shipment header.

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AUTOMATIC ITEM TRACKING

The Automatic item tracking on release of the production order function comprises the following steps:

- Manually opening item tracking
- Calling up the function to determine the serial number from the item-specific number series
- Closing the "Item tracking" page
- Repeating the steps for each actual message line

Item tracking lines are generated automatically by:

- Status change: item tracking lines are created for released production orders
- Update production order function
- Create production order from planning proposal
- Create production order from sales order

Setup

Item

The items with stored item tracking can be set up for automatic allocation in the Item Tracking FastTab via the Mfg. Auto Create Item Track. Lines field.

Field	Description
empty	No item tracking lines are generated.
Firm Planned	If the item is used in a production order line and the status of the production order is Firm Planned, the application automatically creates item tracking lines to the production order line when one of the events listed below occurs.
Released	If the item is used in a production order line and the status of the production order is Released, the application automatically creates item tracking lines for the production order line when the events listed below are carried out.

Item Tracking

The item tracking is set up using the Microsoft Dynamics 365 Business Central[1] standard.

Further information can be found at: Track items with serial, lot, and package numbers

Automatic Item Tracking

Automatic item tracking only applies to "actual production notifications", not to consumption notifications. It is exclusively related to production.

Serial Numbers
If only serial numbers are selected, an item tracking line with quantity 1 is automatically generated for each serial number.

Lot Numbers
If only Lot numbers are selected, an item tracking line is automatically generated with a lot and the corresponding quantity.

Serial and Lot Numbers
If both fields of the item tracking code are selected, n item tracking lines are created with serial numbers and quantities of 1 each, all with the same lot number.

Note

The serial numbers or lot numbers are always generated from the number series that are stored on the item card ("Serial number" or "Lot number" field). If the number series is missing, a message is displayed.

Workflow

The automatic generation of item tracking lines takes place for all production order lines of the production order for which automatic creation is set in the item. The system always fills up to the maximum possible number of production order lines.

The following applies: Either n lines with serial number and quantity 1, or one line with lot number and the maximum possible quantity, or a combination of both.

The automatically generated item tracking lines can be changed manually at a later date if desired.

A new execution of one of the above-mentioned events, such as a production order status change, will take existing item tracking lines into account, regardless of whether they were created manually or automatically. In this case, additional item tracking lines are automatically created only up to the difference to the maximum possible quantity.

Example:
The production order is created with the status "Planned". The order line contains a quantity of 7 pieces of an item with automatic serial number generation in the "Firmly planned" status. In the "Planned" status, 4 serial numbers are entered manually. After switching to "Firmly planned", the application generates the 3 missing serial numbers.

It should also be noted that

1. manually increasing the quantity in a production order line does not automatically generate item tracking lines.
2. it is not permitted to manually reduce the quantity in the production order line if item tracking lines have already been defined.
3. a manual increase of the quantity in the production order line requires the manual entry of article tracking lines (standard behavior). It is therefore recommended to use the "Update production order" function, as a manual change to the quantity in the production order line also affects other data that is not automatically adjusted.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

OPTIMIZED ABSENCE MANAGEMENT

In the Microsoft Dynamics 365 Business Central[1] process for recording machine downtimes due to maintenance, repairs or similar measures, you first register the downtimes. You then transfer the registered absences as absenteeism items and subsequently update the calendar accordingly.

In KUMAVISION factory365, this process has been optimized so that the individual steps can be executed directly when the function is called. To maintain the absence times in KUMAVISION factory365, proceed as follows:

Call up the Registered Absences via the search.

About Reg.Abs. (from Machine Ctr.) or Reg.Abs. (from Work Ctr.) in the ribbon, you can record the absence times for a maschine center or work center using the table.

The entry screen opens, where you can enter the absences using the table below.

Field	Description
Starting/Ending Time	Enter the start/end time of the absence time
Starting/Ending Date	Enter the start/end date of the absence time **Note** The Ending Date field must be filled in, as the Registered Absences are used to calculate the resource calendar. If the absence is extended, you can change the end date later.
Capacity	Enter the capacity that cannot be used during the downtime. For example, if there are 3 production lines, there will not necessarily be downtime on all lines.
Description	Enter a brief description for the cause of the absenteeism
Overwrite	If this field is activated, the items for the respective time in this workstation group will be overwritten.
Implement	If this switch is activated, the absences are transferred as absence entries.
Update calendar	If this switch is activated, the calendar is updated automatically.

Confirm your entry with "OK". If the "Apply" and "Update calendar" fields have been activated, the registered absences are automatically adopted as absence items and the calendar is updated accordingly.

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DISPATCH

With the Dispatch functionality in KUMAVISION base (BOOSTER), you can create orders that contain item lines, manually created document lines—such as for the simple dispatch of sample parts—and information about the packaging used for delivery.

Orders of this type might contain posted shipments alongside warehouse and inventory documents, such as Whse. Shipment and Inventory Pick.

In KUMAVISION factory365, two essential preparation workflows for dispatch processing can be used:

The first option is to ship components to another location (Building site) where they are assembled at a later date.

The second option allows complex items to be broken down into individual dispatch units after production so that they are ready for dispatch.

Note

At this article in the online help, only the additional functions of dispatch processing in KUMAVISION factory365 are explained in more detail. The basic range of functions is explained here.

Component Dispatch

Setup Transfer Routes

A transfer route must be defined for the locations involved in the transfer routes workflow.

Also See To create a transfer route

Company Information

The Enable Date Conflicts toogle should be activated in the Company Information. This enables the flexible reservation system to create a transfer order despite existing date conflicts.

Transfer of Components Create transfer order from E+D Order

Consumption can only be booked once the components have arrived at the construction site for final assembly. A stock transfer order must be created to ensure that the components arrive at the construction site. The resulting goods issue or the posted stock transfer goods issue is then transferred to a shipping order.

To create a stock transfer order for an E+D order, execute the function "Component dispatch stock transfer orders" in a released E+D order. Create orders" function in a released E+D order. This creates a linked stock transfer order for each component storage location. The production order components then receive the storage location of the construction site.

Only those production order components that are not linked to an existing stock transfer order and belong to the top level (1) may be transferred.

When a stock transfer is created, reservations are made that link the relevant component to the respective stock transfer line.

The linked stock transfer order can be opened directly via the released E+D order via "Component dispatch stock transfer order".

Note

If item tracking was stored for the production order component before the stock transfer order was created, this is passed on to the linked stock transfer order line.

Change and Delete linked lines

Linked production order component and stock transfer lines can no longer be changed or deleted. To do this, the link must first be canceled.

Note

No item tracking can be added, changed or deleted on the linked production order component. This is only possible via the linked stock transfer line.

Cancel linked lines

To cancel a linked stock transfer line, the link must first be removed in the stock transfer order using the "Cancel component dispatch" function. You can select whether only the link *(Cancel link only)* or both the link and the stock transfer order line *(Cancel link and line)* are to be removed. This function can be used for the entire stock transfer order or for individual stock transfer order lines.

When the link is removed, the production order component adopts the storage location and storage bin from the outgoing storage location and storage bin of the stock transfer order line. It is now possible to create a new stock transfer order for this production order component that is no longer linked.

A link can no longer be canceled as soon as a goods issue, picking or warehouse picking exists for the stock transfer or the stock transfer goods issue has been posted.

Note

If item tracking has been stored on the stock transfer order line, it is retained on the linked production order component after the link has been canceled.

Dispatch Unit

When manufacturing complex products, it may be necessary to break them down into dispatch units for dispatch in order to enable efficient transportation. In order to be able to map this process in Microsoft Dynamics 365 Business Central[1], KUMAVISION factory365 supports the management of dispatch units in both production and logistics.

The introduction of dispatch units can currently cover three different scenarios, which are described below.

Setup Engineering and Design Setup

In the Engineering and Design Setup, you have the option of using the Use Dispatch Unit for ED Sort switch on the Execution FastTab to control whether you want to visually display the logistical structure breakdown divided into the corresponding dispatch units in an E+D order. Activate this switch for this option. In the E+D order, the "Logistical" option can then be selected in the process for the visualized display via the "Structure breakdown" field.

Dispatch Unit

Via the Dispatch Unit you can define them in general by assigning a code (abbreviation) and an associated description.

Assignment in master data

Dispatch units can be defined in advance during the planning phase. For this purpose, a dispatch unit code can be entered in the lines in the production BOMs, which does not yet have a fixed reference to a specific production order. This dispatch unit code is then adopted when a production order is created.

Assignment in workflow

If there is an existing production order, dispatch units can be assigned to the components. This assignment can be made both in the component lines and in the released and completed E+D orders in the respective lines. In addition, the project module has been integrated so that the assignment can also be made directly from the project structure.

The fields "Dispatch unit code", "Project-specific dispatch unit", "Component as dispatch unit" and "Transfer quantity to dispatch unit" can be displayed on the respective pages.

Note

In the production order component list, there is only the "dispatch unit code" and "project-specific dispatch unit".

Transfer of components Components combined into higher level dispatch unit

A production order is created in which the components are to be transferred to a production warehouse for assembly. The components are combined into easily transportable dispatch units. These components can be inserted into a transfer order from a released and a completed E+D order.

To do this, first select the desired lines and then execute the "Transfer marked Dispatch Units" function in the line menu.

The system checks whether the components to be transferred have already been consumed. If the components marked accordingly have been consumed, a transfer order is created to transfer the dispatch units from the component location to the production location. The information from the stock transfer route is used for the "In Transit Code". In the production order dispatch unit list, you can now see that the "Quantity in outgoing document" has been changed.

The corresponding dispatch unit item is displayed in the drilldown and you can switch to the corresponding document using the "Show document" function. If the storage locations are subject to goods issue or goods receipt, these can be created and posted according to the standard.

No new item entries are created in the background as the components have already been consumed. The postings create new dispatch unit entries. These can be used to check the status from the dispatch unit overview (opens when you lookup a dispatch unit). Once the receipt has been posted, the order is completed. The dispatch unit can now no longer be dispatched as it has already delivered the full quantity.

Individual Components as dispatch unit

The system checks whether the components to be transferred have already been consumed. If this is the case, a transfer order is created to transfer the dispatch units from the component location to the production location. The information from the transfer route is used for the "In Transit Code". In the production order dispatch unit list, you can now see that the "Quantity in outgoing document" has been changed.

The "Transfer quantity to dispatch unit" field can be used to control whether only a partial stock transfer of the component should take place. The field is pre-assigned with the quantity available for stock transfer. This is the difference between the booked quantity and the quantities already in dispatch or dispatched. It is therefore necessary that at least the quantity of the component to be dispatched is booked as consumption.

If the stock transfer is to take place, you can select the relevant lines in the E+D order or the project structure and transfer them to a stock transfer order using the "Transfer selected dispatch units" function. The rest of the process corresponds to the procedure described in the section "Components combined into a higher-level dispatch unit".

Dispatch units in sales

If a production item is sold, the dispatch units stored in the production order can also be inserted in a goods issue that was created from a sales order. The "Insert dispatch units" function can be used for this in the goods issue.

Note

The "Insert dispatch units" function is only available once you have already inserted corresponding lines in the goods issue using the "Get origin documents / document lines" function.

If the sales line was reserved for a corresponding item entry, the dispatch units from this production order are then automatically inserted. If there is no reservation, a selection of item entries is opened and you can decide which item is to be sold.

After selection, the dispatch units belonging to the item are added to the goods issue.

If the production order associated with the entry has not yet been completed, you must confirm that you wish to continue.

The original line is retained, but the quantities are removed as this item is automatically posted in the background after the dispatch units have been posted. The goods issue is now posted with dispatch units as in the standard system. Once the posting is complete, the original item is also delivered and can be invoiced.

Project specific or production order dispatch units

In conjunction with the plant engineering solution, it is also possible to use dispatch units across production orders within a project. Further information can be found at Shipping preparation.

Dispatch units entries

When inserting a dispatch unit into a document, entries are written. These can have 4 statuses:

- Outgoing (Dispatch): A transfer has been created or a goods issue has been created from a sales order without anything having been posted
- In Transit: The goods have left the warehouse but have not yet arrived, i.e. the (goods) issue has been posted but the (goods) receipt has not
- Receipt: The receipt of the goods has been recorded, but not yet booked.
- Delivered: The goods have been delivered completely. The items are used to track the quantities in the dispatch units overview, even if the posted documents should already be deleted.

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Warehouse Management

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s logistics department.

OTHER LINE TYPES IN LOGISTICS

In Microsoft Dynamics 365 Business Central[1], in the following logistics documents:

- Inventory Put-aways
- Inventory Picks
- Warehouse Receipt
- Warehouse Shipment

only the processing for the line type "item" can be performed. This service area has been extended in KUMAVISION factory365 by the logistics documents for the processing of the other line types from purchasing and sales.

Setup

Warehouse Setup

In the warehouse setup you have the possibility to set up whether additional line types are possible for the Warehouse Receipt and the Warehouse Shipment.

First call up the "warehouse setup" via the user search.

On the "General" info tab via the "Additional Types for Receiving" and "Additional Types for Shipping" switch you can activate the line types.

Location

The single-stage logistics process must be activated on the storage location map either for goods receipt and goods issue or for putaway and picking.

Financial accounting

In Financial Accounting, the G/L account for the purchasing or sales process must be enabled for direct posting in the chart of accounts.

Use in Workflow

After successful activation, the following can now be activated in the sales processes:

- Items
- Items surcharges/discounts
- G/L accounts
- Resources
- WG / asset

and in the purchasing processes:

- Items
- Items surcharges/discounts
- G/L accounts
- Resources
- WG / asset

be processed via the logistics documents. This means that load carriers, freight services, handling costs, services and item-neutral expenses can be sent and collected via delivery bill.

All logistics documents and book sheets are extended by two new columns:

Field	Description
Document lines type	The "Type" voucher line has the same option as in the voucher lines themselves: - blank - G/L account - Item - Resource - WG/asset - Addition/deduction (item) Depending on the type, the document line number then corresponds to a G/L account, item, resource, WG/asset or item surcharge/discount. When creating logistics documents, not only the lines of type = item, but all lines - except text modules (type = empty) and the line types for document structuring (heading, from subtotal, end subtotal/ bundle, bundle) are transferred.
Document lines no.	This corresponds to the field number in the corresponding document

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Service

Description to follow.

Engineering and Design

DESIGN AND DEVELOPMENT

General

Design and development extends the production processing of Microsoft Dynamics 365 Business Central[1] in numerous places.

The following sections describe the use and administration of the "Design and Development" module of KUMAVISION factory365.

The following sections describe how to use and manage the "Design and Development" module of KUMAVISION factory365.

- Setup
- E+D Order
- E+D Mod. Prop. Worksheet
- E+D Order Planning
- Monitoring

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SETUP

Engineering & Design Setup

The "Design & Development Setup" is the central place for the setup of the "Design & Development" module. Call up the "Design & development setup" via the user search and make the necessary settings with the help of the tables below.

General

Field	Description
Variant required	This defines whether in the design & development with article variants must be posted. (If the required article master has variants).
Usable status article version	With this selection you can control which status article versions may be used in the design & development processes. The following selections are available: **All:** The article version can be used independent of the status. **Certified only:** Only certified item versions can be used. Display FA in reservation structure Depending on the selection in this field, the E+D mask or the standard mask is called in the reservation structure in the FA. The following selections are available: **Standard FA:** As soon as the "Display document" function is used in the reservation structure, the production order is called up in the standard mask. **E+D Order:** As soon as the "Display document" function is used in the reservation structure, the production order is called up in the E+D order mask.
Barcode separator	The separator for the barcode in report 5500 - "FA component and routing" is hereby defined. **Example:** **Barcode separator = $** **Barcode in the "FA Component and Routing" report would be for released FA 101031, item 1000, operation 010:** **101031\(1000\)010**
Stepwise E+D Position no.	This facility is required for the determination of a unique E+D position. With this field you can define the step-by-step positioning in the E+D order lines of the "E+D position" field.
Position item separator	This setup is required for the determination of a unique E+D position. With this field you can define the separator for the items in the E+D order lines of the "E+D position" field.
Position phantom separator	This setup is required for the determination of a unique E+D position. With this field you can define the separator for the phantom BOMs in the E+D order lines of the "E+D position" field.
Position operation separator	This setup is required for the determination of a unique E+D position. With this field you can define the separator for the operations in the E+D order lines of the "E+D position" field.
Position common part summary	This facility is required for the determination of a unique E+D position. This field specifies the character for the common parts grouping. If an article is used in several assemblies of a production order, the system combines them and generates a "collective FA line" for this. Such production order lines are marked in the E+D position with the defined character as suffix. **Important:** The system only groups together non-variable parts if no item no. is maintained in the component.
Position Additional costs	Separator This facility is required for the determination of a unique E+D position.

Field	Description
	This field specifies the separator for the additional costs (only with the "Valuation & calculation" module) in the E+D order lines of the "E+D item" field.

PDM Interface

Field	Description
PDM SKU Location Code	Init SKU location code for PDM Interface, when location code is empty.
PDM SKU Config. Template Header	Specifies which Config. Template Header should be used, when create stockkeeping unit record from PDM Interface.

Item Mapping

Field	Description
Automatically transfer attributes to versions	Define here how the system should behave when assigning new attributes to an article: **Not:** Entering new attributes at the article has no effect on the article version. **New only:** Newly entered article attributes are transferred to article versions with the status "New". **to Certified:** Newly entered article attributes are transferred to article versions with the status "New" as well as "Certified". **to Certified and reset to New:** Newly entered article attributes are transferred to article versions with the status "New" and "Certified". If the status of the article version is Certified, it is reset to "New". **All:** Newly entered article attributes are always transferred to the article versions.
Item attribute logistic structure resolution	If the same attribute is stored at the FA component, the E+D order lines are categorized according to the article attribute values for the logistical structure explosion based on the specified article attribute.
Item attribute logistic structure resolution Name	Specifies the name of the assigned value in the "Item attribute logistic structure resolution" field.

Execution

Field	Description
Precision duration	Presets the field of the same name in the E+D order with the option: "millisecond", "second", "minute", "hour" or "day".
Calculate times incl. secondary operations	With the activation of the switch, the secondary operations are taken into account for the calculation of times and completed quantities ("Planned time (ms)", "Consumed time (ms)", "Remaining time (ms)", "Planned time", "Consumed time", "Remaining time", "Consumed time %", "Completed quantity" and "Completed quantity (base)") in the E+D order lines.
Calculate routing in change message through comparison	For the "Reschedule" function in the production order, the planning direction is preset with Forward or Backward.
Shipping units for logistic structure resolution	Specify here whether you want to have the logistic view or the shipping units displayed via an attribute assignment. For more information on this topic, see "Shipping units" and "Item attributes". **Note:** If you activate the switch, the value in the "Item attribute logistic structure resolution" field will be cleared.
Observance of the production type in the D+D order	Use this field to define how the system should behave when calculating production orders with maintained E+D project no. in relation to multi-level production: **Standard** The system checks whether the production order line is set to production type "make-to-order" and procurement method "production order". **Always contract manufacturing** In principle, make-to-order production is implemented regardless of the parameterization to articles or inventory data. **Contract manufacturing according to master data** The system checks whether the component is set to production type "make-to-order" and procurement method "production order". This setting is the default value. In the production order, the production type can again be adapted to the specific order using the function "E+D Change production type".
Procurement type for quantity increase	At this point, define how the system is to behave in the event of quantity changes in the FA: **Enterprise Resource Planning** The system behaves as in the standard **Project management and enterprise resource planning** If component quantities in a production order are increased after they were originally procured, this setting does not include the requirement in the planning worksheet, but it is handled as follows during the FA update: The quantity deviation is implemented by duplicating the FA component with the deviating quantity in the system. In the background, a reserved purchase order is created directly in the purchasing case and a new FA line is created for the duplicated component in the production case.
Autom. update after E+D planning	If the switch is active, the E+D order lines are automatically updated when the E+D order planning has been carried out.
	Specify here whether the quantity should be calculated for other storage locations for information purposes during (E+D) order planning.

Field	Description
Calculate available for relocation in E+D planning	If the switch is active here, the information is not displayed. This field is particularly useful for a large number of storage locations, as it can optimize the runtime.
Planning - Accept event message	The "Accept event message" identifier is preset to "Yes" in E+D planning if the Automatic option is selected. Otherwise, the identifier "No" is preset for Manual.
Structure Explosion	Preallocates the field of the same name in the E+D order with the selected option. You can choose from the following options: • Konstruktiv • Dispositiv • Logistisch
Calculate routing	Preallocates the field of the same name in the E+D order with the selected option. You can choose from the following options: • No • Hide Sec. Rtng. Lines • Show Sec. Rtng. Lines

See also: E+D Oder Card - Display

Monitoring

Field	Description
Max. Finished parts list level	Specifies the maximum finished parts list levels for the plausibility check for design monitoring. If the system determines a higher vertical range of manufacture, the system terminates when the level is exceeded and shows this as a structural error in the result.
Item no. required	Specifies whether the "Position" field in the finished parts list line must be filled. If the switch is active here, the system checks whether the "Position" field in the finished parts list line is filled when the finished parts list is certified.

Traffic Light

Field	Description
Incl. blanket orders in availability	Specifies whether blanket orders should be taken into account when calculating item availability.
Incl. planning proposals in availability	Specifies whether planning proposals for calculating item availability should be taken into account.

E+D ORDER

The engineering and design order is essentially a production order that is converted from a repetitive manufacturing order to a machine and plant engineering order - i.e.: design + development order - by means of a project number. The data from a production order is displayed in an E+D order as a structured BOM, which is supplemented by the following information fields:

- E+D Positions (Position Index),
- Quantities, deadline, status and change traffic light,
- Information about the demand cover and requester

Functions for the specific processing of the FA position round off the whole.

As with a production order, the E+D orders can have the status: Simulated, Firmly planned, Released, Finished. Separate E+D order overviews are available for the different statuses.

In summary, the E+D order is intended to provide a central information hub for reporting the status, processing the respective item and interacting with the upstream and downstream processes of design, work preparation, scheduling, purchasing and warehouse/logistics.

Create

There are two ways to create an E+D order:

1. You create a production order as usual, manually or via the planning worksheets. In the course of this, an E+D order is generated automatically by the system.
2. You create an E+D order manually. In the course of this, a production order is generated automatically by the system.

The status of the E+D order always corresponds to the status of the underlying production order.

E+D Order Card

The structure of the E+D job card is identical regardless of its status "Simulated", "Firmly planned", "Released", "Finished". Depending on the status, some functions cannot be executed.

Screen

Field	Description
Structure resolution	The structure resolution controls the view of the E+D lines with the following options: **constructive:** Depending on the due date, the valid master finished parts lists, routings and versions are displayed. In addition, phantom levels of the construction are displayed. **dispositive:** Displays the current procurement-manufacturing structure of the FA. The constructive phantom levels are exploded, the FA lines, FA operations and FA components can be edited manually. **logistically:** Assembles the lines according to the logistic characteristic (if available- from Design & Development - Setup).
Calculate work plan	**No:** Only the structure BOM is displayed. **Show primary AG** The primary operations and the structural BOMs are displayed. **Display primary and secondary AG** In addition to the primary operations and the structured BOM, the secondary operations for other capacities such as "Tool" and "Personnel" are also displayed.
Precision duration	Formats the duration of the E+D order line rounded up to millisecond, second, minute, hour, day. The value is suggested from the Design & Development setup when you open the page. You can override the default setting.

General

Field	Description
No.	Document number - number range freely definable.
E+D Project no.	The project number can be entered manually from the project list. When executing the planning function "Project order" in the sales order, the project can be preset. Several FAs can thus be combined into one group.
Description	Description of the production order. This is pre-assigned with the description of the article and can be changed manually.
Description 2	Additional description of the production order. This is pre-assigned with description 2 of the item and can be changed manually.
Type of origin	The origin type gives the user an indication of what the production order was created for. The following selection options are available: - Item, - Family, - Sales header, - Project
Origin no.	Number of item / family / sales order or "blank" to be produced. This field is logically related to the origin type.
Search Keyword	Is formed automatically from the first 30 digits of the description and can be changed manually.
Quantity	Number of items to be produced with this production order.
Due date	Date by which the production order should be completed.
Assigned user	Entry of the responsible clerk.
Production order type	For classification of construction contracts. Dimensions can be changed or added depending on the order type.
Locked	If this identifier is active, postings (consumption and actual report) with the FA are not possible.
Corrected on	The date on which the FA was last modified.

Lines E+D Position

The E+D position is formed for the unique identification of individual lines. Each position in a production order is uniquely defined by the E+D position and is thus very helpful for reconciliation or for the coordination of the different departments.

Note

The E+D position has a maximum length of 30 characters, if this is exceeded, the last 3 characters of the 30 characters are displayed with "...".

Note

To determine a unique E+D item, you must maintain the fields "Stepwise E+D item no. ", "Item item separator", "Item phantom separator", "Item operation separator", "Item common parts summary" and "Item additional costs separator" in the Design & Development setup.

Determination of the E+D position no.

The E+D item number is determined by the system when calculating the production order or the planning worksheets as well as when maintaining the item number.

The system proceeds with the determination as follows:

Production order line (producing item)

The system fills the E+D position depending on the creation of the production order:

- Manually or via the planning worksheets, the E+D item no. is preset with the value from the Design & Development setup of the "Stepwise E+D item no. " field.
- In order planning, the E+D item no. corresponds to the item no., the sales item to be covered.
- In project planning, the E+D item no. corresponds to the project task no. of the project plan line to be covered.

Component

The E+D item number corresponds to the E+D item number of the FA line + the item item separator defined in the Design + Development setup and the own item number.

Production order line (assembly)

The E+D position no. of the assembly corresponds to the E+D position no. of the component to be covered.

Operation

The E+D item no. corresponds to the E+D item no. of the FA line + the item operation separator defined in the Design + Development setup and the own operation number.

Additional costs

The E+D position no. corresponds to the E+D position no. of the FA line + the position additional costs separator defined in the design + development setup and the own position no.

Equal parts summary

In the standard system, the same parts are grouped together depending on whether the following fields match:

- Variant code
- Connection code
- Position
- Position 2
- Position 3
- Length
- Wide
- Weight
- Depth
- Unit code

If an article is used in several assemblies of a production order, the system combines them and generates a collective FA component for this article.

The E+D item no. corresponds to the E+D item no. of the FA line + the item same-part summary separator defined in the Design + Development setup and its own item number.

Schedule

Field	Description
E+D Position	The E+D position should describe the exact installation position across all drawing levels. In the case of existing CAD integration, the position should match the designations on the CAD drawing and thus forms search information, e.g. for assembly drawings. **E+D Position Initial value:** In the "Order quantity" replenishment procedure, the E+D item is filled based on the item number of the sales line or based on the project task of the project plan line. If no entry is found here, the step size from the Design & Development setup is assigned. **E+D Calculate position:** The calculation of the E+D position is already done in the planning worksheets and can be shown there in the field "E+D position". In addition, the field is also available in the standard FA documents. **E+D Position manual change:** A manual correction of the initial value is possible in the E+D order via Navigate\lines. All other manual changes are called from the E+D order component/FA component. **E+D Position Forms of presentation:** In the FA components, as well as the E+D order components, the "E+D Position" is combined with the standard field "Position". Here, the field values "E+D Position" and "Position" are separated using the "Position item separator" from the "Design & Development Setup".
E+D Position	**Phantom levels:** Can be identified in the dispositive view with the "Position phantom separator" from the "Design & development uni". In the constructive view, the phantom layer is unfolded with its component. **E+D Contract Work Plan:** In the E+D order routing, the E+D position is formed from the operation number. A change is made in the master data and can be updated via the E+D change synchronization. The "Position operation separator" can be defined via the "Design & development setup". **Tools and personnel:** Can be managed in the secondary operations. For this purpose, the E+D position receives an additional suffix. The separator for tool and personnel is defined via the "Production setup" of the fields "Separator operation no. personnel" and "Separator operation no. tool". The numbering for personnel and tool is defined via the "Personnel basic operation no." and "Tool basic operation no." fields. **Additional costs:** In the E+D order, imputed additional costs can be stored for the FA line. **E+D Position Representation of the outsourced substructure:** By means of the "E+D Planning" function, assemblies can be outsourced to another production order. The outsourced structure is marked in color and is dispositive or dispositive total depending on the structure explosion. **E+D Position Lookup:** From the E+D position, you can branch directly to the edit mask via an AssistEdit call. Type = Windows Article = Show components Workplace /Workplace group = Show work plan Additional costs = Show additional costs
Dispositive availability traffic light	Shows the availability of the component. Assemblies inherit the "worst" result of the components.

Field	**Description**
	see also: - Availability traffic light - Setting up the availability traffic light
Capacitive availability traffic light	Shows the availability of the workstation (group). Assemblies inherit the "worst" result of the components. see also:Availability traffic light -Setting up the availability traffic light
Type	**Type of E+D line:** Article, phantom bill of material, workstation group, workstation, functional level, logistic level
E+D Production type	Specifies the production type of the item taking into account the master data and also stock card (**options:** make-to-order, make-to-stock).
No.	Specifies the number depending on the type.
Description	Specifies the description of the line depending on the "Type" and "Number" fields.
E+D Proposed change available icon	Indicates whether an E+D change proposal exists. The icon is assigned from the "Factory Bitmaps" setup from the "Default line Existing" field.
Finished parts lists Status	Displays the status of the finished parts list. The options are "New", "Certified", "In Development" and "Expired". The icons are obtained from the "Factory Bitmaps" facility.
Routing status	Displays the status of the task list status. The options are "New", "Certified", "In Development" and "Expired". The icons are obtained from the "Factory Bitmaps" facility.
Component quantity	Required quantity to produce one unit of the parent component.
Requirement date	Indicates when the item of the parent level (x-1) is needed. E.g. from goods issue date of VK line, due date FA component.
Quantity required	Indicates the quantity required.
Reserved quantity	Indicates reserved quantity (if in stock or on order) for this line.
Residual requirement quantity	Indicates the demand of the quantities not yet withdrawn or produced.
Storage bin code	Specifies the bin code of the FA component.
Availability balance	For items, the available quantity in stock and demand date is displayed. For work center/work center group the available capacity of the FA work operation from start date/ time to end date/time is displayed. Via drilldown, the calculated items can be called up and analyzed.
Reserved stock (base)	Indicates the reserved quantity (if in stock) for this row.
Due date	Indicates the due date of the FA line when the assembly will be ready according to the FA work plan and calendar model.

Field	Description
	If an assembly is outsourced and scheduled, the due date of the FA line (level x+1) differs from the requirement date of the FA component (level x). **Note** The due date of the FA components can be over-scheduled by entering the lead time shift.
Quantity	Specifies the number of items to be produced.
Finished quantity	Here you can see the already finished quantities.
Quantity in proposal line	Indicates the quantity in the planning/purchase order worksheets. If the procurement documents are triggered from this, then (provided that with the reservation is worked) autm. the field "Reserved quantity" is adapted accordingly.
Duration	The duration is calculated from "End date/time" minus "Start date/time" of the FA operation and the FA line. For FA components with procurement type = purchasing, the procurement time of the item is displayed.
Total duration	The total duration is the cumulative result of the operations sorted in chronological order for one FA line.
Supplied by	Indicates reserved demand deckers. If there is no reserved demand deck, the field is "empty". In case of uniqueness the card is displayed directly and via lookup you can branch directly to the document. If there are (several) demand coverers, you can branch to the reservation items via lookup. Alternatively, you can branch directly to the documents via the line function Requirement originator (component).
Remaining time	Indicates the remaining time. The output "hours", "minutes" or similar depends on the definition in the Design & Development Setup in the "Precision Duration" field.

Functions Change E+D Manufacturing Policy

The production type of the selected item line is changed between make-to-stock production/order-related production. Substructures are set or deleted.

Sub production order

For an FA line with the E+D MRP type Production part, the option is offered to create a separate production order if the FA line is to be produced for the higher level on an order-related basis.

Create link to Production Part

For a stock part a link to a FA line can be created. The FA line is thus the requirement cover of the component and the E+D MRP type is changed from stock part to production part.

E+D Order Planning

Order planning is called up specifically for the selected E+D lines. In the course of this, the demand cover is reserved directly for the originator of the demand.

Reserve (line)

Calling the reservation functionality for the E+D line existing as FA line.

Reserve (components)

Calling the reservation functionality for the E+D row existing as FA component.

Order Tracking (line)

Calling the demand originator functionality for the E+D line existing as FA line.

Order Tracking (component)

Calling the demand originator functionality for the E+D row that exists as an FA component.

Transfer marked dispatch units

This function allows you to transfer the selected shipping units.

Show dispatch units

With this call you can display the shipping units for the respective line.

Item availability by

Displays item availability by event, period, variant, storage location or BOM level. For further information, please refer to the Microsoft Dynamics 365 Business Central1 Helpsite.

Reservation structure

This function allows you to display the reservation structure of a selected document line.

Reservation entries

Displays the items for each reservation made manually or automatically. For more information, see the Microsoft Dynamics 365 Business Central1 Helpsite.

Dimensions

Display or edit dimensions. Further information can be found in the Microsoft Dynamics 365 Business Central1 Helpsite.

Card

Depending on the line type: article, workstation, workstation group, the master data card is called directly.

Routing

Displays the E+D order operations for the selected E+D line. It is also possible to call up the E+D item.

Components

Displays the E+D order components for the selected E+D line. A call from the E+D position is also possible.

Opportunity cost

Additional imputed costs can be entered for preliminary costing. This item is relevant for the "Valuation & Costing" module.

Item tracking lines

Displays the item tracking assigned to the document row. For more information, see the Microsoft Dynamics 365 Business Central1 Helpsite.

Subcontracting tracking

Document navigation to the external work documents "Purchase order" and "Stock transfer".

Shortage list

Call the missing parts list for the selected E+D line.

E+D Modif. Prop. Worksheet

Call the pending proposed changes to the marked E+D line.

E+D Additional charge

Call the markup calculation for the E+D line with level 0.

Long dated items overview

Post consumption and expenses. Further information can be found in the Microsoft Dynamics 365 Business Central[1] Helpsite.

Scheme

Field	Description
Start date	Specifies the start date of the E+D order.
Start time	Specifies the start time of the E+D job.
End date	Specifies the end date of the E+D order.
End Time	Specifies the end time of the E+D job.
Planned time (Current order)	Specifies the scheduled time for the current job.
Planned time (Overall structure)	Specifies the planned time for the overall structure.
Time consumed (Current order)	Indicates the time spent on the current job.
Time consumed (total structure)	Indicates the time spent on the overall structure.
Remaining time (Current order)	Specifies the remaining time for the current job.
Remaining time (Overall structure)	Specifies the remaining time for the overall structure.
Time consumed % (Current order)	Indicates the time used for the current job in %.
Time consumed % (Overall structure)	Indicates the time spent on the overall structure in %.

Posting

Field	Description
Stock posting group	Indicates the stock posting group of the production item. This value is preset with the value from the item card.
Product posting group	Specifies the product posting group of the production item. This value is preset with the value from the item card.
Business posting group	Specifies the business posting group of the production item. This value is preset with the value from the item card.
Global dimension code 1	The "Global dimension 1" is defined in the "Financial accounting setup". This can be the cost center, for example. The value is pre-assigned with the value of the respective dimension from the item dimension..
Global dimension code 2	The "Global dimension 2" is defined in the "Financial accounting institution". This can be the cost object, for example. The value is pre-assigned with the value of the respective dimension from the item dimension.
Location code	Specifies the storage location code.
Storage bin code	Specifies the storage location.

Functions on the ribbon

Refresh tree

The structure of the E+D order lines is updated. This function is executed manually if required, for example, if the status samples of the E+D order lines are to be checked again at the current time.

> **Note**
>
> The availability traffic lights *(dispositive + capacitive)* are not automatically recalculated by the "Structure updated" function.

E+D Order Planning

E+D order planning is called up for the complete production order. In this overview, order-related procurement is carried out.

See also E+D Order planning.

Refresh E+D Order

Has the same functionality as "Update production order..." in FA.

Replan

Reschedules the connected production order lines of the current FA. Other production orders connected to the FA lines are not updated.

If the lead time shift is changed in the FA components, a new due date of the reserved FA line follows.

Calculate net change plan

The "Perform change comparison" function is used to compare production data, taking into account the change flexibility parameter on the E+D order line.

See also "E+D Mod. Prop. Worksheet".

Replan net change plan

The new comparison ignores the change flexibility parameter in the change comparison and thus takes all E+D order lines into account.

Change status

You can use this function to change the status of this document to Fixed planned, Released or Finished.

Copy E+D Order Document

This function is similar to the conventional "Copy voucher" function. With this function you can copy the data from an already existing voucher into a new voucher to be created.

Calculate traffic light entries

This function is used to calculate the availability traffic lights *(dispositive + capacitive)*.

E+D Statistics

Displays statistical data related to the E+D job.

Shortage List

Call the missing parts list as a table or also report.

Reservation Entries Components

Calling the reservation functionality for the E+D lines existing as FA component.

Report

The following reports can be printed out:

- Project Card
- Mat. Requisition
- Shortage List
- E+D Order

Long dated items overview

With this function the long run article overview for the referenced production order can be called. In the case of the E+D order, it is the production order that is listed in the header of the E+D order.

For more information, see "Long-run items: Call for a production order / E+D order".

Update unit cost

This function allows you to update the cost prices across all levels or one level.

Create inventory put away pick movement

With this function you can create picking and putaway / transfer.

Create inbound Whse. Request

This function allows you to request an internal putaway request.

Create Whse. Pick

With this function you can create the picking.

Create Component Shipping Transfer Orders

This function is used to create a transfer order for each component location.

Entries

You can view the following items by selecting "Items":

- Item Ledger Entries
- Capacity Ledger Entries
- Value Entries
- Warehouse Entries

Comments

You can enter remarks for the order via "Remarks".

Dimensions

Displays the dimensions.

Subcontracting Tracking

The external work tracking function is called up for the E+D order planning line. This shows all associated orders and stock transfers (provisions).

Calculation Worksheet E+D

Opens the E+D calculation proposal.

Lines

Opens the E+D order line card for processing.

Dispatch unit

Opens the shipping unit card.

Subcontractor - Dispatch List

In this menu item you can print the foreign worker dispatch list.

Component Shipping Transfer Orders

Opens the linked transfer order.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩

E+D MOD. PROP. WORKSHEET

KUMAVISION factory365 offers the functionality E+D Change Proposal to compare the manufacturing data (FA routings and FA components) of the E+D order with the master data (routings and finished parts lists). If the data of the E+D order differs from the master data, the E+D change proposal suggests a change in the E+D order.

> **Note**
>
> If the change flexibility of the E+D order line is set to "none", this line is ignored in the change comparison.

The mask can be called up both via the user search and directly via the E+D order using the functions "Execute change proposal" and "Execute new comparison".

Field	Description
E+D Position	Position number of the line in the structure of the assemblies.
Type	Definition of the line, the options are: • Article, • Phantom Bill of Materials, • Workstation Group, • Workplace
No.	The number is dependent on the type.
Working aisle no.	Number of the operation, if the type is "work center group" or "work center".
Event message	Indicates the corresponding event message.
Accept event message	The "Accept event message" identifier is preset to "Yes" in E+D Planning if the "Planning - Accept event message" field in the "Design & development settings" is set to "Automatic". If the field is set to "Manual", the identifier is pre-assigned with "No".
Detail. Change notification	Shows the description of the change.
Description	Description depending on the type. (e.g.: article description, operation description)
Age value	Displays the value from the production order.
New value	Displays the value from the finished parts list or routing.
Area	Displays the area where the change is to be made.
FA status	Displays the status of the production order in which the change is to be made.
FA no.	Displays the production order number in which a change is made.
FA line no.	Displays the line no. of the production order in which a change is made.
Change flexibility	Identifier, which allows a line to be excluded from the proposed change. The available options are "Unlimited" and "None". This parameter is set manually by the production management per FA line and FA component.
Comparison date	Displays the date of the comparison.
Variant code (to be manufactured)	Specifies the variant to be manufactured.
Version code (to be fert.)	Specifies the version to be manufactured.
Proposal version code (to be fert.)	Version that would have to be made if the proposed change is executed.
Change notification	Marks the line as a change and the type of change -. • New, • Change, • Remove, • Empty
Accept change message	Here it can be decided line by line which change is accepted by the user. The program will suggest you changes.

Field	Description
Item no. (component)	If the change concerns a component, its article number is displayed here.
Variant code (component)	If the change concerns a component and this has a variant, the valid variant of the article number is displayed here.
Work plan ref. no.	Line number of the production order to which the routing is assigned.
Work plan no.	Displays the job number of the FA line.
Routing version code	Displays the version of the routing assigned in the production order.
Proposal work plan ref. no.	Displays the line number of the production order in which the routing is to be assigned.
Proposal Work plan no.	Displays the task list number that is entered after the change adjustment.
Proposal routing version code	Displays the new valid version of the task list number entered after change matching.
Proposal work plan status	Displays the status that the routing assumes in the FA when the change proposal is executed.
Finished parts list no.	Indicates the production BOM found.
Finished parts list version no.	Indicates the found valid version of the production BOM.
FA- Component line no.	Specifies the component line number in the found production BOM.
Proposal Finished parts list no.	Displays the found and valid production BOM.
Proposal Fert. version code	Displays the valid BOM version that is transferred to the FA during a change comparison.
Proposal Finished BOM status	Displays the status found with the current production BOM. The change proposal lines only have an influence on the E+D order as soon as the Execute change message function is carried out for the selected proposal lines (Accept change message = YES).

Functions in the ribbon

Get Error Log

Opens the E+D error log.

Prod. Order Routing

Opens the FA work plan of the FA line.

Calculate net change plan

The "Perform change comparison" function is used to compare production data, taking into account the change flexibility parameter on the E+D order line.

Calculate regenerative plan

The new comparison ignores the change flexibility parameter in the change comparison and therefore takes all E+D order lines into account.

Carry out action message

The marked lines are accepted/executed with the "Execute event message" function.

Production Order

Opens the production order *(standard view)*.

Prod. Order Components

Opens the FA components *(standard view)*.

E+D-Order

Opens the E+D order (similar to production order).

E+D Order Routing Plan

Opens the E+D order routing *(analogous to FA routing)*.

E+D Order Components

Opens the E+D order components.

E+D Modification Proposal Order Routing

Displays the routing lines of the E+D order line.

E+D Modification Proposal Components

Displays the component lines of the E+D order line.

E+D ORDER PLANNING

E+D order planning is called up for the complete production order. In this overview, order-related procurement is carried out. The person creating the requirement receives a direct reservation with a requirement cover. The following requirements coverers are possible: purchase order, planned/released production order, stock transfer order, assembly order and external work order.

Field	**Description**
E+D Position no.	This field maps the E+D position from the E+D order.
E+D Planning line type	The following types are available: structure heading, stock section and external operation.
Type	The article and workstation group types are possible.
No.	Depending on the type, this field indicates the no. of the item or workstation group.
Description	Depending on the type, this field indicates the description of the item or operation.
Requirement date	Indicates the due date of the item/external operation.
Unit code	Informatively specifies the units from the FA component.
Planning quantity	The target quantity is shown here.
Planning completed	If this identifier is set by the system, this means for the user that the article or the external operation already has a reserved requirements cover.
Procurement quantity	This quantity defines the procurement quantity that is to be transferred to the requirements planner later in the process via the "Create orders" functionality.
Procurement method	Indicates the procurement method of the item. Situationally, the procurement method can be manually changed to purchase, production order, stock transfer or assembly.
Deliver from	Specifies the vendor from which the item/external work is to be obtained.
Reserve	The "Reserve" identifier defines whether the demand cover to be created is to be reserved for the demand originator.
Accept event message	Only E+D order planning lines that have this identifier set will be considered in the "Create orders" function.

Functions in the ribbon

Update Lines

You can use this action to update the lines if changes have already been made in the background, possibly by other users.

Structure disable / enable

If the structure is activated, the components are displayed in the building structure including the assemblies.

Inventory parts disable / enable

Controls whether stock items are displayed or not.

Subcontracting disable / enable

Controls whether external work is displayed or not.

Only unplanned lines / all lines

Controls whether only unplanned rows or all rows are displayed.

Accept Action Message

Activates the "Accept event message" indicator for the selected line.

Refuse Action Message

Deactivates the "Accept event message" indicator of the selected line.

Reserve

Calls up the reservation functionality for the selected line.

Make Supply Requisitions

You can use this action to transfer the marked lines *("Accept event message")* to a planning worksheet.

Make Orders

You can use this action to generate purchase orders, production orders, stock transfer orders, assembly orders or external work orders for the marked lines *("Accept event message")*, depending on the procurement method.

The fields Create Subcontracting Order, Subcontracting Wksh. Template and Subcontracting Wksh. Name are relevant for the process of subcontracting. For more information, see Subcontracting.

Reservation Structure

You can use this function to display the reservation structure of a selected voucher line.

Reservation entries

Displays the items for each manual or automatic reservation. Further information can be found in the Microsoft Dynamics 365 Business Central1 online help.

Requisition lines

Displays the respective order proposal lines.

Subcontracting Order Lines

Displays the respective external work orders *(only for planning line type "External operation")*.

Subcontracting Tracking

External work tracking is called up for the E+D order planning line. This shows all associated orders and stock transfers (provisions).

MONITORING

Execution monitoring is used to get a quick overview of the execution status of the design and development process.

For this purpose, there is the design monitoring for the master data view and the disposition monitoring for the design + development order view (E+D orders). In both monitoring functions, the scope of monitoring can be defined specifically according to articles, sales orders and E+D orders and projects in the case of MRP monitoring.

The MRP monitoring also lists the finished parts lists and operation lines, but compares these with the components and operations of the E+D order or production order. Additionally, information regarding date and quantity as well as procurement is displayed.

Construction Monitoring

Design monitoring allows you to monitor the status of your production master data. Design monitoring lists the finished parts lists and operation lines and displays their processing status.

Note

Please note that the system takes into account the inventory data, if available, when determining the data.

You can call up the "Design monitoring" via the user search.

General

In the "General" area, you can first define what should be checked and how.

Field	Description
Sales order filter	If you want to check the production data for an entire sales order, maintain the order number here. The system determines all articles entered in the order.
Article filter	Enter here the article no. of the article to be checked.
Calculate work plan	Use this field to specify how the system should take the routings into account: **No:** Routings are not taken into account in the calculation and are therefore not included in the result. **Show primary AG** Routings are included in the calculation, but secondary operations are not shown. **Display primary and secondary AG** Routings are fully considered in the calculation, primary as well as secondary operations are shown.
Structure check only	Activate the switch if you only want to see items with notes in the result. This means that you will only see lines whose BOM levels are greater than the value in the "Max. finished BOM level" field in the Design and Development setup.

Lines

The main fields of the display lines are explained in more detail below:

Field	Description
E+D position	This field displays the E+D position. The top level is filled with the "Order position no. " in case of an order reference. Otherwise, the value is initialized according to the Design & Development setup in the "Step size E+D item no. " field. The other levels are calculated according to their definition in Design & Development.
Level	Represents the BOM level.
Sales order no.	In this field the possibly passed order no. is displayed.
Type	**This field shows the type of line:** **(blank):** It is a comment line **Article:** It is an item, the sources are production order line and components. **Note:** Please note that the variant code is maintained when displayed in blue. **Phantom Bill of Materials:** The component is defined as a phantom. **Workstation Group:** This is an operation of the "workstation group" type. **Workplace:** This is a "workstation" type operation. **Additional costs:** This is an additional cost item from the calculation. **Functional Level:** It is an attribute value according to your attribute definition in the Design & Development setup in the "Item attribute functional structure resolution name" field. **Logistical level:** It is an attribute value according to your attribute definition in the Design & Development setup in the field "Item attribute logistic structure resolution name". **Notice:** Please note that the types Additional costs, Functional as well as Logistical level are not used in construction monitoring.
No.	In this field, depending on the "Type", the "No. " field of the respective master data record is displayed.
Description	Depending on the "Type" and "No. ", the description of the source data set is displayed here.
Finished parts lists Status	For the types "Article" and "Phantom BOM", the status of the stored production BOM is displayed here.
Finished parts list no.	For the types "Article" and "Phantom BOM" the production BOM no. of the stored production BOM is displayed here.
Routing status	For the types "Article", "Workstation" and "Workstation group", the status of the stored production parts list is displayed here.

Field	Description
Work plan no.	For the type "Article", the routing no. of the stored routing is displayed here.
Procurement method (master data)	Here you are shown the procurement method from the article master for type=article. For type=workstation group, depending on whether it is external work, at **Outside work:** Purchasing **Internal:** Production order set. In the case of type=phantom bill of materials, "Stock transfer" is displayed.
Production type (master data)	Here with kind=article with the procurement type "production order" the production type from the stockkeeping data is represented to you. **For items with the procurement type "Purchase", a reference to the re-procurement procedure, whereby:** • (empty) is displayed with " ". • Order quantity with order production • the others are shown with make-to-stock production. For type=phantom BOM, " " (empty) is always displayed here. Comment Here the system shows you irregularities of your master data.

Functions Calculate

With this action you perform the calculation according to your calculation settings.

Routing Plan

Use this action to open the displayed routing(s).

Production BOM

With this action you open the displayed production BOM (version).

Item

With this action you open the article card for items.

Disposition monitoring

The MRP monitoring offers a resolved tree structure of the production order. The required quantity and the availability balance of the components and capacities can be viewed here.

Visualization takes place with the dispositive and capacitive availability traffic light.

If there are reserved requirements coverers available for the requirements originators, these can be called up using the info box.

General

In the "General" area, you can first define what should be checked and how.

Field	Description
Sales order filter	A sales order filter can be specified. If there are sales lines for the sales order that are reserved with a production order, the reserved production orders are listed and resolved in the MRP monitoring.
Project filter	The project filter acts here analogously to the sales filter. If production orders are reserved for project task lines, the production orders are listed in the MRP monitoring.
Article filter	If an article filter is specified, the MRP monitoring searches over all production orders for the specified article filter and lists the production orders found in the MRP monitoring.
Production application filter	Enter here a production order no. of the item to be checked.
Calculate work plan	Use this field to specify how the system should take the routings into account: **No:** Routings are not taken into account in the calculation and are therefore not included in the result. **Hide sec AG:** Routings are included in the calculation, but secondary operations are not shown. **Sec. AG Ads:** Routings are fully considered in the calculation, primary as well as secondary operations are shown.
Overall structure	Activate the switch if you want to display the overall structure in the result.

Lines

Field	Description
E+D position	This field displays the E+D position. The top level is filled with the "Order position no. " in case of an order reference. Otherwise, the value is initialized according to the Design & Development setup in the "Step size E+D item no. " field. The other levels are calculated according to their definition in Design & Development.
Level	Represents the BOM level.
FA Status	Indicates the status of the stored production order.
FA no.	Indicates the number of the stored production order.
Sales order no.	In this field the possibly passed order no. is displayed.
Project no.	In this case, the corresponding project number is displayed.
Procurement method (master data)	Here you are shown the procurement method from the article master for type=article. For type=workstation group, depending on whether it is external work, at **Outside work:** Purchasing **Internal:** Production order set. In the case of type=phantom bill of materials, "Stock transfer" is displayed.
Production type (master data)	Here with kind=article with the procurement type "production order" the production type from the stockkeeping data is represented to you. For items with the procurement type "Purchase", a reference to the re-procurement procedure, whereby: • (empty) is displayed with " ". • Order quantity with order production • the others are shown with make-to-stock production. For type=phantom BOM, " " (empty) is always displayed here.
Dispositive availability traffic light	Shows the availability of the component. Assemblies inherit the "worst" result of the components. see also: -Availability traffic light -Setting up the availability traffic light
Capacitive availability traffic light	Shows the availability of the workstation (group). Assemblies inherit the "worst" result of the components. see also: - Availability traffic light - Setting up the availability traffic light
Type	**This field shows the type of line:** **(blank):** This is a comment line.

Field	Description
	Article: It is an item, the sources are production order line and components. **Notice:** Please note that the variant code is maintained when displayed in blue. **Phantom Bill of Materials:** The component is defined as a phantom. **Workstation Group:** This is an operation of the type work center group. **Workplace:** This is a "workstation" type operation. **Additional costs:** This is an additional cost item from the calculation. **Functional Level:** It is an attribute value according to your attribute definition in the Design & Development setup in the "Item attribute functional structure resolution name" field. **Logistical level:** It is an attribute value according to your attribute definition in the Design & Development setup in the field "Item attribute logistic structure resolution name". **Note:** Please note that the types Additional costs, Functional as well as Logistical level are not used in construction monitoring.
No.	In this field, depending on the "Type", the "No. " field of the respective master data record is displayed.
Description	Depending on "Type" and "No. " the description of the source dataset is displayed here.
E+D Proposed change available icon	Indicates whether an E+D change proposal exists.
Finished parts lists Status	For the types "Article" and "Phantom BOM", the status of the stored production BOM is displayed here.
Routing status	For the types "Article", "Workstation" and "Workstation group", the status of the stored production parts list is displayed here.
Requirement date	Indicates when the item is needed.
Quantity required	Indicates the quantity required.
Reserved quantity	Indicates the reserved quantity if in stock or on order for this line.
Residual requirement quantity	Indicates the demand of the quantities not yet withdrawn or produced.
Requested from	Specifies the demand originator for this line.
Availability balance	For items, the available quantity in stock and demand date is displayed. For work center/work center group the available capacity of the FA work operation from start date/time to end date/time is displayed.
Reserved stock (base)	Indicates the reserved quantity if in stock for this line.

Field	Description
Due date	Date by which the production order should be completed.
Quantity	Specifies the quantity of this line.
Finished quantity	Here you can see the already finished quantities.
Duration	The duration is calculated from "End date/time" minus "Start date/time" of the FA operation and the FA line.
Supplied by	Specifies the demand cover for this line.
Comment	Here the system shows you irregularities of your master data.

Functions Calculate

With this action you perform the calculation according to your calculation settings.

Production order

With this action you open the associated production order.

Work plan

Use this action to open the displayed routing(s).

Component

Use this action to open the FA component row overview.

E+D Order

With this action you open the corresponding E+D order

E+D Contract Work Plan

With this action you open the E+D order routing.

E+D order components

Use this view to open the E+D order component overview.

Article

With this action you open the article card for articles.

E+D Proposed change

Opens the E+D change proposal.

TRANSFER OF COMPONENTS

Components combined to form a higher-level shipping unit

A production order is set up whose components are to be transferred to a production warehouse for assembly. The components are grouped into shipping units that are easy to transport. From a released (and a completed) E+D order, these components can be inserted into a stock transfer order.

To do this, first select the desired lines and then execute the "Transfer selected shipping units" function via Lines > Function.

It is checked that the components to be transferred have already been consumed. If the correspondingly marked components have been consumed, then a stock transfer order is created, which transfers the shipping units from the component storage location to the FA storage location. The information from the transfer route is used for the "In Transit Code". In the FA shipping units list you can now see that the "Quantity in Outbound Document" is changed.

In the drilldown the corresponding shipping unit item is displayed and via the function "Display document" it is possible to switch to the corresponding document. If the storage locations are subject to goods issue or goods receipt, these can be created and posted according to the standard.

No new item items are created in the background because the components have already been consumed. New shipping unit items are created by the postings. Via these, the status can be checked from the shipping unit overview (opens by the lookup on a shipping unit). After posting the receipt, the order is completed. The shipping unit can now no longer be shipped, as it has already delivered the complete quantity.

Shipping individual components as a shipping unit

It may be necessary to create suitable logistics documents for the customer or the transport, for individual components of a production order. With the "Component as shipping unit" identifier in the E+D order lines (and the Project structure) you have the possibility to define a shipping unit that is specific for a single component in the production order. If the check mark is set, a shipping unit is automatically created that has the item number of the component as the shipping unit code and corresponds to the FA component line in terms of quantity, unit and description.

The "Transfer quantity to shipping unit" field can be used to control whether only a partial transfer of the component is to take place. The field is preset with the quantity available for stock transfer. This is the difference between the posted quantity and the quantities that are already in shipping or have been shipped. Therefore, it is necessary that at least the quantity of the component to be shipped is posted as consumption.

If the stock transfer is to take place, you can enter the corresponding lines in the E+D order or the Project structure and transfer them to a stock transfer order using the "Transfer selected shipping units" function. The rest of the procedure is the same as that described in the section "Components combined to form a higher-level shipping unit".

Item versions

GENERAL

The item versions in KUMAVISION factory365 extend the item management of Microsoft Dynamics 365 Business Central[1].

An item version can be used to map the product life cycle of an item.

The item versions are an informal summary of an item or an item variant and its production master data *(bill of materials and routing)*.

The determination of the production master data is not changed by the item version, i.e. the production master data *(bill of materials/routing)* is determined via the item or stock data card.

Note

Please note, item versions are not stocked.

The following sections describe how to use and manage item versions in KUMAVISION factory365.

SETUP

Item version type

The item version types are used to classify the item versions later on. To define these first, call up the "Article version type" page via the user search.

Via "New" in the menu ribbon, you can define a new item version type by entering the "Code" and "Description".

Item version

The "item version" allows you to map the product life cycle of an item. By assigning an "item version type", the item versions can be classified so that they can be distinguished from one another.

To define a new item version, call up the "Article version" page via the user search. You can define a new item version using the table below via "New" in the ribbon:

Field	Description
Item No.	In this field, enter the item number for which you want to create a version.
Variant Code	If the selected item is variant-managed, you can define the variant of the item for which you want to create a new version here.
Version Code	Enter an "abbreviation" for the item version to be created.
Description	Gives the description of the selected item.
Item Version Type	By assigning an item version type, you have the option of classifying the item version.
Material	Here you can assign a material to the item version.
Status	Indicates the status of the item version. Three statuses are assigned here: **New** The item version is currently being edited. **Certified** The item version has a released status. No changes can be made in this status. **Expired** The item version is no longer valid. You can change the status via the ribbon by selecting "New", "Certified" and "Expired".
Version Starting Date	Specifies the start date of a version.
Drawing No.	Enter a drawing number *(if available)* for the version.
Drawing Format	Specify a drawing format *(if available)* for the version.
Drawing Index	Enter a drawing index *(if available)* for the version.
Manufacturer Code	Enter a manufacturer code *(if available)* for the version.
Manufacturer Item Code	Enter a manufacturer item number *(if available)* for the version.
Delivery Standard	Enter a delivery standard *(if available)* for the version.
Norm	Specify a standard *(if available)* for the version.
Production BOM No.	Enter the production BOM number.
Production BOM Version Code	Enter the production BOM version code.
Routing No.	Enter the work center number.
Routing Version Code	Enter the routing version code.

The item including item version can be specified in the procurement process.

An item version is automatically determined by comparing the production BOM number, the production BOM version code, the routing number and the routing version code of the item version with the item or the stock data.

Note

The production BOM number, the production BOM version code, the routing number and the routing version code stored in the item version are not transferred to the production order. These are only used to determine the item version.

Note

Please note that the item version type of the consuming item is checked to ensure that it matches the item version type to be reported.

The item version does not differentiate the stock level of the item. If it is necessary to differentiate the stock on the item at item version level, the item variant can be managed in addition to the item version. This means that the stock level is taken into account for the item variants and therefore also for the corresponding item version.

Functions in the ribbon New, Certified, Expired

These functions set the item version to the status of the same name.

Where used

This functionality is used to determine in which assembly/production item the component is located.

Structure

Microsoft Dynamics 365 Business Central[1] uses this to display the production structure/tree structure of the production item based on the specified production BOM and routing.

Quantity explosion of bom

The structure parts list is output as a report.

Rolled up cost shares

The costs of the production item are calculated on the basis of the production bill of materials and the routing and output as a report.

Cost Shares

The costs are mapped in a tree structure as in Microsoft Dynamics 365 Business Central[1] Standard.

Detailed calculation

The costs are displayed as in Microsoft Dynamics 365 Business Central[1] Standard Detailed Costing.

BOM cost share distribution

The cost shares *(material, capacity, external labor, capacity & production overheads)* are displayed graphically in a report.

Attributes

This menu item is used to assign item attributes to the item version.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩

Scheduling Agreement Management

The module "Delivery schedule management" includes the areas: "Sales delivery schedule" and "Purchasing delivery schedule".

Note

The scheduling agreement management is an unlock module, the use of which is only possible with additional licensing and activation.

Sales delivery schedule

For series production, delivery schedules with preview quantities and production-related JIT delivery schedules are sent to the suppliers, mostly electronically. On the other hand, the suppliers send delivery note data to the manufacturers, which in turn are already available to the customer at the time of physical goods receipt. Payment can then be settled either via invoices or via the credit memo procedure.

Delivery schedules serve as the central core for processing. They form a symbiosis between sales orders and sales planning. Together with master scheduling agreements, they also form an extension of order control. They offer similar functions to orders, but when order quantities and deadlines change dynamically, special functions come into play. The dynamics results from the so-called delivery schedules or JIT delivery schedules, which are usually received periodically.

The quantities and dates mapped in the scheduling agreements are taken into account in inventory planning and logistics for shipping. The quantities and dates are entered in the scheduling agreements via the "Incoming documents". All group-wide scheduling agreements with price information can be displayed in the outline scheduling agreements.

Purchasing delivery plan

With the "purchasing scheduling agreement" a functional extension of the procurement process in Microsoft Dynamics 365 Business Central[1] was realized.

While the standard of Microsoft Dynamics 365 Business Central[1] knows the processing of purchase orders with or without recourse to blanket purchase orders, it does not know the processing of scheduling agreements *(often also known as* "*call orders*"*)* so.

In the case of scheduling agreements, a framework agreement is agreed between the customer and the supplier for each article. Based on a fixed framework agreement, which describes the general contract modalities and must not be confused with the framework order in Microsoft Dynamics 365 Business Central[1], the current date and quantity information is exchanged between the customer and the supplier in day-to-day business. Here, an essential difference to the "normal" purchase orders is that the latest transmission of date and quantity information always replaces the last information and only the latest information is valid. All known date and quantity information is also always exchanged, so that, as a rule, dates from today to dates that are only several years away can be transmitted.

In order to be able to map this process in Microsoft Dynamics 365 Business Central[1], the "purchasing scheduling agreement" has been created. With this, the so-called scheduling agreements can be defined and managed. There is always exactly one valid purchasing delivery schedule in Microsoft Dynamics 365 Business Central[1] for each master agreement. The recurring transmission of the date and quantity information is called a forecast delivery schedule. The "Purchasing scheduling agreement" can be used to generate and send these forecast delivery schedules.

As described before, the schedule and quantity information is updated and transmitted from time to time and then the current delivery schedule always applies. Due to the usual transport times in goods traffic, it can happen in practice that deliveries from the supplier still refer to the previous delivery schedule, but the new delivery schedule is already active at the customer. For a correct allocation of quantities on the schedule line, the management of cumulative quantities is used. A cumulative delivered quantity is managed on the supplier side and the cumulative received quantity is managed on the customer side. The "purchasing scheduling agreement" supports users in managing these cumulative quantities.

SALES DELIVERY SCHEDULE

Establishment

Roll Center

A corresponding role center was designed for managing the scheduling agreements. This gives users a direct overview of their worklist and allows them to conveniently navigate to the corresponding overviews.

The role "Delivery schedule editor" can be assigned via "My settings". The role center is available after confirming with "Ok".

Scheduling Template

Using the scheduling template, it is possible to define which type of call-off quantities are to be taken into account in logistics or production.

Note

The combination of JIT delivery schedule with preview or delivery schedule is not possible. JIT delivery schedules dominate over delivery schedules and preview quantities. JIT call quantities within the same date range replace preview quantities.

Field	Description
Type	The following selections are available: **Planning code** With the selection "Planning code" you define a scheduling template for production. You use the selection in the "Production Code" field in the scheduling agreement to control which quantities in the scheduling agreement are relevant for production. **Logistics code:** With the selection "Logistics code" you define a scheduling template for logistics. You use the selection in the "Logistics code" field in the scheduling agreement to control which quantity in the scheduling agreement is relevant for logistics.
Code	At this point, assign a meaningful abbreviation for the scheduling template.
Description	Provide a brief description for the scheduling template.Planned Check the box if you want the planned quantities ("Quantity preview" field) to be included in the delivery schedule.
Retrieval	Place a check mark if the released quantities ("Delivery schedule quantity" field) are to be taken into account in the scheduling agreement.
Daily call-off	Place a check mark if the quantities finely called off (field "Quantity finely called off") are to be taken into account.
Disposition method	You use the MRP method to specify how "Floating Goods" (goods that are on their way to the customer) are determined when a new forecast delivery schedule is copied into a scheduling agreement. The following options are available: **Empty** This option only applies to the production code. For logistics code, one of the other three options must always be selected. **Date basis without residual quantity allocation:** The quantities of the new delivery schedule replace the previous values. Quantities already delivered on a date are not taken into account and are omitted. **Date offset with residual quantity offsetting:** The quantities of the new delivery schedule first the previous values. But delivered quantity to a date remain and are added to the new delivery schedule quantities corresponding. **Cumulative Quantity:** The quantities of the new forecast delivery schedule replace the previous values. The difference between own cumulative quantity and customer cumulative quantity is considered as "floating goods" and is deducted from the first forecast delivery schedule quantity accordingly.

Article reference

The customer article numbers are mapped via the article references. Under Reference type referring numbers for vendor as well as customer can be entered. The reference type barcode can be used to define barcodes, e.g. for the EAN number.

To set the article references, call up the desired article card. You can access the article references via the ribbon by selecting "Related" > "Articles". For more information on article references, see the Microsoft Dynamics 365 Business Central1 Helpsite.

Delivery schedule facility

In the "Delivery schedule setup" the basic setup of the delivery schedule management is made, which will be explained to you in more detail below:

Inforegister General

Field	Description
Min. diff. Cumulative quantity for zero setting	Specifies the minimum difference that must be reached for zeroing the cumulative quantities.
Progress ct. Proposal Name for zero position	In this field you define a default sheet, which will be preset for zeroing in the cumulative quantities proposal.
Default In Transit Code	In this field, a transit storage location must be specified as the default for consignment processing.
Hierarchy type code Group assignment	Defines a hierarchy type code for the group assignment.
Mandatory field check	The use of the mandatory field check for scheduling agreements can be activated separately at this point. Further information on setting up mandatory field checks can be found here.

Numbering

The number series for the delivery schedule management are defined on the "Numbering" info tab.

Group hierarchy

The master scheduling agreement is primarily used for a corporate group and the conventional scheduling agreements for plants. Therefore, it is essential for the system to know which customer (as a plant) belongs to which customer (as a group).

For this purpose, a group hierarchy is used via the hierarchies in the system. Which hierarchy type is used for the group assignment. Specify in the Hierarchy Type Code Group Assignment field in the scheduling agreement setup. A hierarchy type can be used with the customer as the origin and destination.

The group assignment itself is made via the customer and the here archie relationship..

Scheduling Agreements

Contrary to a sales order, a scheduling agreement always refers to a customer and an article or an article variant. Therefore, the article number is not in the lines, but in the header.

To create a new scheduling agreement, call up the "Scheduling agreements" via the user search. The following table explains the fields of the scheduling agreement in more detail.

Inforegister filter representation

Using the filter area, you can change the display of the delivery schedule for clarity:

Field	**Description**
Display details	The quantities preview, forecast delivery schedule, JIT delivery schedule, PUS are displayed summarized in the lines as daily, weekly, monthly, quarterly or annual quantities, depending on the selection.
Preview / Retrieval	You can filter the display to a specific version of the type=preview. **Note** Only the versions of the type=preview are available in the selection.
Daily call-off	You can filter the display to a specific version of the type=fine call. **Note** In the selection, only the versions of the type=fine call-off are available.
PUS	You can filter the display to a specific version of the type=PUS. **Note** Only the versions of the type=PUS are available in the selection.
Rounding factor	This allows you to display the quantities (preview, forecast delivery schedule, JIT delivery schedule and PUS) rounded. The following selection options are available: **None:** The quantities are displayed without rounding **1** The quantities are displayed rounded to whole numbers **1000** The quantities are displayed to you /1000.
Optimized display	Activate the switch if you only want to display lines with actual quantity values. Otherwise, depending on the display details filter, you will also be shown days, weeks, months, quarters or years for which no requirement quantities are available.

Inforegister General

Field	Description
No.	This field is used to identify the scheduling agreement. The number must be unique and can be up to 20 characters. The number field can be set to the default value by using the number series option in the delivery schedule setup. However, it can also be created manually.
Sales to customer no.	This field contains the customer number that you have assigned for it in your system.
Delivery to code	Indicates the address to which the products will be delivered. With this field you can enter a different delivery address.
Item no.	This field contains the article number of the customer article that you have assigned for it in your system.
Variant code	This field contains the code of a variant of the item, if any.
Article description	Indicates the description of the selected item.
Item description 2	Specifies an additional description for the selected item.
Customer item no.	This field contains the customer item number. For this purpose, it must be created as an article reference beforehand in order to be selected here (see Setting an Article reference).
Supplementary part number	Indicates a supplementary part number. This field serves only as an information field.
Customer item no. export option	Indicates the customer item no.
Accept incoming document	Use this field to specify how Incoming Receipts can be accepted. You can choose from the following options: **Manual** The incoming receipts must be accepted manually. Typically, when an electronic processing is newly set up, and each receipt must be tested again beforehand to be on the safe side. **Automatic** Incoming documents are processed automatically when they are processed electronically. Typically, when the electronic processing is running securely and user intervention is no longer required. **Locked** An incoming document cannot be accepted and leads to an error message there. Typically, when there are problems in the delivery schedule and further reading of incoming documents must be prevented.
Locked	This field controls the possible use of the scheduling agreement in stock planning (also called MRPII run) or logistics. This can prevent further processing in the event of incorrect data within the scheduling agreement. The following options are available: **Empty** This option is the default value. Here the scheduling agreement is visible and usable in the inventory planning as well as in the logistics. **Inventory planning** The scheduling agreement is not visible in inventory planning (both purchasing and production) and no longer triggers any requirements there. However, stocks can still be delivered via logistics. **Logistics** This option is the strongest lock. The scheduling agreement does not trigger requirements in stock planning, nor can stock be delivered via logistics.
Status	

Field	Description
	A scheduling agreement can assume the following statuses: **New** Is the initial status for new scheduling agreements. It indicates that not all fields are correctly defined yet. Therefore, it is neither demand-triggering nor can a logistics document be created for it. Likewise, no incoming documents can be accepted yet. **Open** After a scheduling agreement has been completely set up, this status is necessary for each change of modifiable fields. As with a sales order, this only affects the creation or posting of logistics documents. For this, the status must be set to Released. **Share** In this status, the delivery schedule is read-only. **Ends** Once a scheduling agreement has been completed, it can be archived via this status. It then also no longer triggers any requirements, no logistics document can be created for it, and no incoming documents can be accepted. If the status of a scheduling agreement is changed from "New", a check is carried out to see whether an incomplete scheduling agreement already exists for the uniqueness criteria. This is important so that only one scheduling agreement can be found via the incoming documents. The criteria are thereby: - Sales to customer no. - Delivered to code - Item no. - Variant code - Usage key - Status [Open to Released]
Outline delivery schedule no.	If the scheduling agreement was created from an outline scheduling agreement, this field contains the outline scheduling agreement number.
Logistics code	This field is used to define a scheduling template for logistics. It controls which quantities are relevant for logistics.
Production code	This field is used to define a scheduling template for production. It controls which quantity is relevant for production.
Cost center code	Specifies the code for the cost center (dimension 1) that you have set up in the "Financial accounting setup".
Cost unit code	Specifies the code for the cost object (dimension 2) that you have set up in the "Financial accounting setup".
Plant	Indicates a possible plant at the customer. This field is an information field.
Unloading point	Indicates a possible unloading point. This field is an information field.
Point of consumption	Indicates a possible consumption point. This field is an information field.
Storage location at customer	Indicates the storage location at the customer. This field is an information field.
Usage key	This field is used to define which use the item has. It is used to distinguish uniqueness when the same item is sent to the same customer to the same delivery address, e.g. once as serial parts and once as spare parts. The following options are supported:

Field	Description
	- blank - Series - Replacement general - Series and use - Try - Pilot - Additional requirements - Initial sample - Pattern - Other This field is an information field.
Contract/Order No.	This field corresponds to the document or order number. It is entered in the "External document number" field in the created sales order when a delivery is made.

Inforegister lines

The lines of a scheduling agreement do not really exist. Rather, the different quantity types from the items are displayed to the user at runtime similar to the sales lines. However, there is not only one quantity column, but four and the actual quantity field, which represents the relevant quantity depending on the logisitkcode.

Field	Description
Delivery date	Specifies the date on which the goods are to be delivered.
Planned goods issue date	Specifies the date when the goods are to be shipped from the warehouse.
Goods issue date	As in the sales order, this date corresponds to the due date in the warehouse as a requirement and is therefore relevant when creating the logistics documents.
Outgoing Stock cycle time	Specifies the time needed to prepare the goods from the storage location for goods issue.
Transport time	Specifies the time required for delivery of the goods to the customer.
Quantity preview	These quantities are used as preview e.g. in monthly rhythm.
Quantity delivery schedule	These quantities correspond to a finer subdivision of preview quantity. Therefore, they replace preview quantity within the same date period. E.g.: this quantity is made on days.
Quantity JIT call-off	These quantities are usually sent on a daily basis. They do not replace any preview or delivery quantities, but exist in parallel.
Quantity PUS	This quantity is filled in the special call-off PickUp Sheet. For this purpose, sales order lines already exist before delivery in exactly the same quantities. PUS quantities do not replace each other in new call-offs, but are always additive.
Target cumulative quantities	Starting from the cumulative quantity received from the customer, the target cumulative quantity is determined here using the relevant forecast delivery schedule quantity.
Quantity	This quantity depends on the logistics code and shows the actual relevant quantities.
Quantity supplied	This field indicates the quantity delivered from the set.
Remaining order quantity	This field displays the remaining delivery schedule quantity as the difference between the quantity and the quantity delivered.

Note

If an overdelivery takes place, this is offset in the remaining delivery schedule quantity and the next quantity is already reduced.

Inforegister delivery

Field	Description
Delivered to code	Specifies the address to which the products will be delivered. With this field you can enter a different delivery address.
Delivered to Name	Specifies the name of the recipient of the delivery.
Delivered to name 2	Specifies additional name information of the recipient of the delivery.
Delivered to address	Specifies the delivery address.
Delivered to address 2	Specifies additional address information.
Delivered to zip code / city	Specifies the postal code of the associated city of the delivery address.
Delivered on site	Specifies the location of the associated delivery address.
Location code	Specifies the storage location from which stock items are to be delivered to the named customer by default.
Storage bin code	Specifies the bin location from which stock items are to be delivered to the named customer by default.
Delivery code	Specifies the code for the delivery agent transport type used for this customer.
Carrier transport type code	Specifies the code that represents the default carrier shipment type code that you use for this delivery schedule.
Transport time	Indicates the time between the delivery of goods from the warehouse to the delivery.
Outgoing Stock cycle time	Specifies a date formula for the time required to make items from this storage location ready for delivery.
Ames-T	This switch serves as information. With the help of AMES-T (Advanced Mobility Engineering and Services for Transportation), the procurement process within the Volkswagen Group is improved. You receive this information from your customer via the incoming documents.
Consignment processing	Specifies that the scheduling agreement is consignment processing.

Framework delivery schedule

Outline scheduling agreements are a combination of several scheduling agreements. Therefore, it is well suited for later evaluations, since all existing scheduling agreements with the respective plant are mapped for one article. For this reason, an outline delivery schedule is primarily created for corporate groups.

The master scheduling agreement takes on another important meaning when the agreed prices and planned quantities are determined. Therefore, one and the same scheduling agreement can occur several times in a master scheduling agreement with different prices and planned quantities. The fields "From date" and "To date" are used to determine which line is then valid.

To create an outline delivery schedule, call it up via the user search. Via "New" in the menu ribbon you can define a new framework scheduling agreement with the help of the table below.

Inforegister General

Field	Description
No.	This field is used to identify the framework delivery schedule. The number must be unique and can be up to 20 characters. The number field can be set to the default value by using the number series option in the scheduling agreement setup. However, it can also be created manually.
Customer no. (Group)	This field contains the customer number that you have assigned for it in your system.
Delivered to Name	Specifies the name of the recipient of the delivery.
Item no.	This field contains the article number of the customer article that you have assigned for it in your system.
Variant code	This field contains the code of a variant of the item, if any.
Article description	Indicates a description of the item.
Item description 2	Indicates a further description of the item.
Customer item no.	This field contains the customer item number.For this purpose, it must be created as an article reference beforehand in order to be selected here (see Setting an Article reference).
Status	A master scheduling agreement can assume the following statuses: **New** Is the initial status for new framework scheduling agreements. It indicates that not all fields are correctly defined yet. **Open** After a master scheduling agreement has been completely set up, this status is required each time modifiable fields are changed. **Share** In this status, the delivery schedule is read-only. **Ends** Once an outline delivery schedule is complete, it can be archived using this status.
Logistics code	This field is used to define a scheduling template for logistics. It controls which quantities are relevant for logistics.
Production code	This field is used to define a scheduling template for production. It controls which quantity is relevant for production.
Cost center code	Specifies the code for the cost center (dimension 1) that you have set up in the "Financial accounting setup".
Cost unit code	Specifies the code for the cost object (dimension 2) that you have set up in the "Financial accounting setup".

Inforegister lines

Field	Description
Delivery schedule no.	Specifies a scheduling agreement number associated with the master scheduling agreement.
Customer no. (plant)	Specifies the customer number (plant) defined in the associated scheduling agreement.
Delivered to code	Specifies a possible alternate address for the associated scheduling agreement.
From date	Specifies the date from which the plan line is valid.
Until date	Specifies the date until when the plan line is valid.
Planned quantity	Specifies the agreed quantity for the framework scheduling agreement line.
Price origin	Which price is actually used for the scheduling agreement is determined by the Field Price origin fixed: **Invoice to debtor** The standard pricing for the invoice debitor from the Delivery schedule. **Sales to debtor** The standard pricing for the sales debitor from the scheduling agreement applies. **Framework delivery schedule** The price from the Price (MW) field is valid, for the from date and Until date valid frame delivery schedule line.
UK price (MW)	Indicates the determined sales price.

Inforegister delivery

Field	Description
Delivered to Name	Specifies the name of the recipient of the delivery.
Delivered to name 2	Specifies an additional name of the recipient of the delivery.
Delivered to address	Specifies the delivery address.
Delivered to address 2	Specifies additional address information.
Postcode code / place	Specifies the postal code of the associated city of the delivery address.
Delivered on site	Specifies the location of the associated delivery address

Creation of scheduling agreements via master scheduling agreements

To create a scheduling agreement from an outline scheduling agreement, call up the "Create scheduling agreement" function in the menu ribbon of the outline scheduling agreement.

Note

The system determines all plants and their delivery addresses via the group hierarchy. In the "Unloading point selection", all combinations of these are displayed for which there is not yet a scheduling agreement.

Assignment of existing scheduling agreements to master scheduling agreement

To assign an existing scheduling agreement to a framework scheduling agreement, first call up the corresponding framework scheduling agreement. Enter the scheduling agreement number in a new line in the "Scheduling agreement no." field. This assigns the scheduling agreement.

Incoming documents (Incoming call-off)

The incoming documents are transferred to the concrete documents, the scheduling agreements, in this area. They can be transferred manually or directly via EDI interface. EDI is the technical Basis for the transfer of incoming documents. Since setting up the EDI interface is not part of this section, the manual transfer of the documents is explained here. In this process, the delivery schedules are transferred to the scheduling agreements and scheduling agreement items. The document for the Pick Up Sheet (PUS) is the sales order. Credit memos and stock reports can be processed without documents. The shipment data represents the entry of consignment material.

Incoming documents are:

- Call-offs
- Daily call-offs
- "PICK UP SHEET" (PUS)
- Credit note display
- Transport data.

After receipt of a forecast delivery schedule, it must be entered in the system. For this purpose, you have on the one hand the possibility to enter the entry directly via the scheduling agreement using the function "Item direct entry" or usually to generate a corresponding incoming document (forecast delivery schedule / JIT delivery schedule etc.).

Incoming call off

In the incoming call-offs, you are informed of the customer's requirement quantities over a longer period of time, so that you can plan these requirements accordingly in your procurement / production.

Via the user search, you can call this up by entering "Incoming call-off" and manually enter a new one or, if you are working with an interface, open a call-off transmitted by the interface.

Note

A forecast delivery schedule always refers to a scheduling agreement. The delivery schedule concretizes the delivery plan.

The fields of the call-off card are explained in more detail below:

Inforegister General

Field	Description
No.	This field is used to identify the incoming call-off. The number must be unique and can be up to 20 characters. The number field can be set to the default value by using the number series option in the delivery schedule setup. However, a manual number can also be created.
Delivery schedule no.	Selection of the associated scheduling agreement. In this view, only the scheduling agreements with the status "Open" and "Released" are displayed. However, you can only select scheduling agreements with the status "Released".
Debtor no.	This field contains the customer number that you have assigned for the customer in your system. Usually this data is filled automatically from the related scheduling agreement.
Delivered to code	Specifies the address to which the products will be delivered. You can use this field to enter a different delivery address. As a rule, this data is automatically filled from the associated delivery schedule.
Delivered to Name	Specifies the name to which the products are to be delivered.
Item no.	This field contains the article number of the customer article that you have assigned for it in your system. As a rule, this data is filled automatically from the associated scheduling agreement.
Variant code	If necessary, this field contains the code of a variant of the item. As a rule, this data is automatically filled from the associated scheduling agreement.
Article description	Specifies the description of the selected item. As a rule, this data is automatically filled from the associated scheduling agreement.
Item description 2	Specifies an additional description for the selected item. Usually this information is filled automatically from the related delivery schedule.
Customer item no.	This field contains the customer item number. For this purpose, this must be created beforehand as an article reference. As a rule, this information is automatically filled from the associated scheduling agreement.
Error description	If you execute the "Change status" or "Complete and check" function and the document contains incomplete or incorrect data, these errors will be displayed in the text field.
My supplier no.	Indicates the supplier number that your customer has assigned for you. This information is communicated to you via the incoming documents. This field serves only as an information field.
Call-off no. New	Specification of the current forecast delivery schedule. This field must be filled for the transfer of the delivery schedule into the scheduling agreement.
Call date new	Specification of the current call-off date. This field must be filled for the transfer of the delivery schedule into the scheduling agreement.
Plant	Indicates a possible plant at the customer. This field is an information field.
Unloading point	Indicates a possible unloading point. This field is an information field.
Point of consumption	Indicates a possible consumption point. This field is an information field.
Warehouse customer	Indicates a possible customer warehouse. This field is an information field.
Usage key	This field is used to define which use the item has. It is used to distinguish uniqueness when the same item is sent to the same customer to the same delivery address, e.g. once as serial parts and once as spare parts. The following options are supported: - blank - Series - Replacement general - Series and use

Field	Description
	- Try - Pilot - Additional requirements - Initial sample - Pattern - Other This field is an information field.
Contract/Order No.	This field corresponds to the document or purchase order number. It is entered in the "External document number" field when a delivery is made in the created sales order.
Status	An incoming call can take the following statuses: **Open** The incoming call-off can be edited / recorded. **Accepted** The incoming call-off is confirmed. With the status change, the requirements are taken into account in the associated scheduling agreement. **Rejected** The incoming call-off is not confirmed and is deleted with the status change.
Incorrectly documented	If you execute the "Change status" or "Complete and check" function and the document contains incomplete or incorrect data, the switch is activated and you can get detailed error information from the "Error description" field.

Inforegister lines

Field	Description
Type	Specifies the type "item" of the demand. The selection "empty" is not accepted.
Quantity	Indicates the number of demand.
Requirement type	**blank** The quantity is regarded as a call-off quantity and is transferred to the Delivery call-off quantity column in the scheduling agreement. **No need** This is an informational quantity only and will no longer be included in the delivery schedule. **Backlog** If no requirement date is entered, the current date is used as the requirement date. **Instant demand** If no requirement date is entered, the current date is used as the requirement date. **Preview** The quantity is viewed as a preview quantity and transferred to the Preview quantity column in the scheduling agreement.
Requirement date	Specifies the date when the customer needs the goods. KW call-off Specifies a call-off period from which calendar week the goods are required.
Call off until KW	Specifies a call-off period by which calendar week the goods are required.
Demand month	Indicates the month when the goods are needed.
Demand year	Indicates the year in which the goods are required.
Requirement status	The status "B" indicates that FAB data must be taken over from previous transfers as constant from you as supplier until this date. This field is an information field.

Inforegister delivery

Field	**Description**
Delivered to code	Specifies the address to which the products will be delivered. You can use this field to enter a different delivery address. As a rule, this data is automatically filled from the associated delivery schedule.
Delivered to Name	Specifies the name of the recipient of the delivery.
Delivered to name 2	Specifies an additional name of the recipient of the delivery.
Delivered to address	Specifies the delivery address.
Delivered to address 2	Specifies additional address information.
Zip code / Place	Specifies the postal code of the associated city of the delivery address.
Delivered on site	Specifies the location of the associated delivery address.
Delivered to country/ region codes	Specifies the country code of the associated delivery address.
Delivery interval	Specifies a possible interval for the delivery. This field is an information field and has no effect in the system. The following options are available: -blank - According to expiration date - Daily - Weekly - Monthly
Appointment key	Specifies a possible appointment key. This field is an information field and has no effect in the system. The following options are available: - blank - Arrival date customer - Shipping date supplier - Arrival date PAB - Planning preview - Daily scheduling - Short term information
Kanban no.	Indicates a possible Kanban number. This field is an information field.
Production release	Specifies a date for the production release. This field is an information field and has no effect in the system.
Production release end date	Specifies an end date for the production release. This field is an information field and has no effect in the system.
Material release	Specifies a date for the material release. This field is an information field and has no effect in the system.
Material release end date	Specifies an end date for the material release. This field is an information field and has no effect in the system.

Information register cumulative quantity

Field	Description
Progress number customer	Indicates the cumulative quantity that the customer has listed for this transaction.
Last delivery quantity customer	Indicates the last delivered quantity that the customer has listed with him for this operation.
Last delivery note no. Customer	Indicates the last delivery note number that the customer has listed for this transaction.
Date last delivery bill customer	Specifies the date of the last delivery bill that the customer has listed for this transaction.
Arrival date customer	Indicates the arrival date that the customer has listed for this transaction.
Zeroing date cumulative quantity received	Specifies the zeroing date of the cumulative quantity received, which the customer has set for this operation.
Cumulative quantity reached for zeroing	Indicates the number of cumulative steps reached, which the customer has listed for this transaction.

With the accept the lines are taken over into the scheduling agreement and become scheduling agreement items. The function call offers two further functions, on the one hand the call can be checked for completeness and on the other hand there is the possibility to have a suitable scheduling agreement identified. After acceptance, the delivery schedule with quantities and dates is available to logistics and production for further processing.

Incoming daily call-off

The entry of a daily call-off is analogous to the incoming call-off. JIT delivery schedules dominate call-offs and previews. The JIT delivery schedule must be set in the logistics code and/or production code. The codes are stored in the scheduling agreement.

Via the user search, you can call this up by entering "Incoming daily call-off" and manually enter a new one or, if you are working with an interface, open a daily call-off transmitted by the interface.

The fields are analogous to those of the "Incoming call-off".

Note

Depending on the base calendar, the individual JIT delivery schedule quantities are combined in the date. This always ensures timely demand triggering and delivery.

Incoming Pick Up Sheet (PUS)

The "Pick Up Sheet" (PUS) is also recorded in the same way as a call-off or JIT delivery schedule. In contrast to the call-offs, each PUS is a separate binding order, i.e. a PUS does not replace a previous PUS, but supplements the whole. Pick up sheets may not be combined. Only the notified quantities in the corresponding packaging are picked up at the time of collection or delivery.

Therefore, when accepting incoming PUS, not only the delivery schedule is updated, but also a corresponding sales order is created.

To create a Pick Up Sheet, call up the "Incoming PUSes" via the user search. Via "New" in the menu ribbon you can create a new PUS.

Inforegister General

Field	Description
No.	This field is used to identify the incoming PUS. The number must be unique and can be up to 20 characters. The number field can be set to the default value by using the number series option in the delivery schedule setup. However, a manual number can also be created.
Delivery schedule no.	Selection of the associated scheduling agreement. In this view, only the scheduling agreements with the status "Open" and "Released" are displayed. However, you can only select scheduling agreements with the status "Released".
Debtor no.	This field contains the customer number that you have assigned for the customer in your system. Usually this data is filled automatically from the related scheduling agreement.
Delivered to code	Specifies the address to which the products will be delivered. You can use this field to enter a different delivery address. As a rule, this data is automatically filled from the associated delivery schedule.
Delivered to Name	Specifies the name of the recipient of the delivery.
Item no.	This field contains the article number of the customer article that you have assigned for it in your system. As a rule, this data is filled automatically from the associated scheduling agreement.
Variant code	If necessary, this field contains the code of a variant of the item. As a rule, this data is automatically filled from the associated scheduling agreement.
Article description	Specifies the description of the selected item. As a rule, this data is automatically filled from the associated scheduling agreement.
Item description 2	Specifies an additional description for the selected item. Usually this information is filled automatically from the related delivery schedule.
Item code	Specifies the unit code used when selling the item.
Customer item no.	This field contains the customer item number. For this purpose, this must be created beforehand as an article reference. As a rule, this information is automatically filled from the associated scheduling agreement.
Error description	If you execute the "Change status" or "Complete and check" function and the document still has incomplete or incorrect information, the error descriptions will be displayed in this field.
My supplier no.	Indicates the supplier number that your customer has assigned for you. This information is communicated to you via the incoming documents. This field serves only as an information field.
Call-off no.	New Specification of the current PUS. This field must be filled for the document to be accepted.
Call date new	Specification of the current call-off date. This field must be filled for accepting the document retrieval.
Plant	Indicates a possible plant at the customer. This field is an information field.
Unloading point	Indicates a possible unloading point. This field is an information field.
Warehouse customer	Indicates a possible customer warehouse. This field is an information field.
Point of consumption	Indicates a possible consumption point. This field is an information field.
Usage key	This field is used to define which use the item has. It is used to distinguish uniqueness when the same item is sent to the same customer to the same delivery address, e.g. once as serial parts and once as spare parts. The following options are supported: - blank - Series - Replacement general - Series and use - Try

Field	Description
	- Pilot - Additional requirements - Initial sample - Pattern - Other This field is an information field.
Contract/Order No.	This field corresponds to the document or order number. It is entered in the "External document number" field when a delivery is made in the created sales order.
Status	A PUS can assume the following statuses: **Open:** Is the initial status for new PUS. It indicates that not all fields are correctly defined yet. Therefore, it is neither demand-triggering nor can a logistics document be created for it. **Accepted:** By changing the status to "Accepted", the incoming requirements are accepted. The status change creates the corresponding sales order. **Rejected:** Changing the status to "Rejected" deletes the incoming document.
Document incorrect	If you execute the "Change status" or "Complete and check" function and the document still has incomplete or incorrect information, the switch is activated. Further information is displayed in the "Error description" field.

Inforegister lines

Field	**Description**
Type	Indicates the type of demand.
Quantity	Indicates the number of demand.
Requirement type	**blank:** The quantity is considered as a release quantity and is transferred to the quantity PUS column in the scheduling agreement. **No need:** This is an informational quantity only and will no longer be included in the delivery schedule. **Backlog:** If no requirement date is entered, the current date is used as the requirement date. **Immediate Need:** If no requirement date is entered, the current date is used as the requirement date. **Preview:** The quantity is viewed as a preview quantity and transferred to the Preview quantity column in the scheduling agreement.
Requirement date	Specifies the date when the customer needs the goods.
KW call-off	Specifies a call-off period from which calendar week the goods are required.
Call off until KW	Specifies a call-off period by which calendar week the goods are required.
Demand month	Indicates the month when the goods are needed.
Demand year	Indicates the year in which the goods are required.
Requirement status	The status "B" indicates that FAB data up to this date must be taken over from previous transfers as constant from you as supplier. This field is an information field.

Proposal Incoming call-off documents

The proposal incoming call-off documents shows you all call-off documents of the type "Incoming call-off", "JIT call-off" as well as PUS in an overview. By means of the filters you can filter this overview individually.

Field	Description
Status filter	This filter allows you to filter on a specific status of the documents. You can choose from the following: **blank** All document statuses are displayed **Open** All documents of the "Open" status are displayed to you **Accepted** All documents of the status "Accepted" are displayed to you **Rejected** All documents of the "Rejected" status are displayed to you
Document filter	This filter allows you to filter on a specific document type. You can choose from the following: **blank** All document types are displayed **Retrieval** All documents of the "Incoming calls" are displayed. **Daily call-off** All documents of the "Incoming JIT delivery schedules" are displayed to you **PUS** All documents of the "Incoming PUS" are displayed to you
Debtor filter	With this filter you can filter on documents of a specific customer.

Document actions

With the "Voucher actions" function, you can quickly process incoming vouchers by accepting or rejecting them via the action. To do this, first check the "Selected document" box in the lines for which the function is to be executed. Then execute the desired action.

Open

With the action "Open" the respective document is opened

Incoming credit advice

The credit advice note is a possible settlement type to settle delivered quantities from scheduling agreements. Here, no invoice is sent to the customer (manufacturer), but the manufacturer creates a so-called credit advice based on all delivery bills. This is entered in the system in the same way as the other documents against the corresponding delivery bills, scheduling agreements and completed by setting the status to Accepted.

Note

Please note that the self-billing document in the system is a kind of "information document" and does not replace the billing document of the traditional sales process. Nevertheless, the posted sales amount should match the credit advice amount.

Incoming transport data

This area is used to enter the documents for consignment material. The following document types are available:

- Incoming message
- Damage/Loss
- Return
- Stock
- Departure notification
- Delivery notification

A corresponding scheduling agreement number is recorded as a reference. If a document Incoming transit data is accepted, the system creates a new sales invoice for delivery of the quantity from the consignment warehouse and later billing.

Delivery schedules and logistics

Deliveries cannot be made directly from a scheduling agreement as in a sales order. Logistics documents are always necessary for this. Normally, however, these are not posted directly either, but are transferred to a shipping order. There, the packaging regulations come into play and, depending on the delivery quantity, the number of load carriers and packaging materials is shown as a regulation.

Shipping & Load Carrier

The Shipping & Load Carrier Management module in KUMAVISION factory365 provides the possibility to process packaging. The packaging can be recorded unspecifically or specifically in the shipping processing order. In addition to the logistics documents warehouse picking, goods issue and / or picking, posted documents such as posted sales delivery bills, posted stock transfer outgoing goods and posted return delivery bills can also be transferred to the shipping processing order. When posting a shipping order, the logistics documents are posted and the interfaces are addressed, e.g. a sales order is automatically generated by the posting. The load carriers themselves can be disposable or reusable packaging and can therefore be managed with or without inventory management. In addition, the load carriers can be stored as packaging instructions for the articles. The packaging instructions are transferred to the shipping orders.

Note

Please note that the Shipping & Load Carrier Management module is an activation module that requires additional licensing.

Establishment

For the scope of functions, some settings must first be made in advance, which will be discussed in more detail below.

Shipping & Load Carrier Setup

The number series must be stored in the shipping & load carrier setup. To do this, call up the "Shipping & load carrier setup" via the user search.

Field	Description
Shipping order number	In this field, a series is entered from the number series for the numbers of the dispatch processing orders.
Output existing shipping	Activate this switch if you want to receive a message when selecting a logistics document in a shipping order if it already exists in a shipping order. Otherwise nothing will happen.

Shipping processing parameters

The dispatch processing parameters are used to decide which interface is used with which deliverer or their transport type. In addition, other important control parameters can be set here.

Field	Description
Interface	This field defines which interface is addressed during shipping. For scheduling agreements only the option "EDI" is to be used.
Delivery code	This field defines the deliverer to which the parameters and interface apply. **Note** The delivery agent and the delivery agent transport type are used to define the shipping processing parameters and thus the interface together with all other sterilization parameters.
Carrier transport type code	If different transport types are used, these can be specified here.
Sticker only	After booking, the shipping label is generated. (Only possible in conjunction with a shipping cut).
Do not create file	No file should be created when posting the delivery.
Invoice	After posting the delivery, invoicing is also carried out immediately.
Print deliveries	When sending, not only the sales order or stock transfer order is created, but also the document is printed after posting the delivery.
Print invoices	After invoicing, the receipt is also printed.
DHL Product ID	Parameterization DHL as a deliverer.
DHL Services	Parameterization DHL as a deliverer.
DPD Services	Parameterization DPD as a deliverer.
DPD export parcel type	Parameterization DPD as a deliverer.
DPD Collection type	Parameterization DPD as a deliverer.

Note

From version 14.0 on, all interfaces are delivered without additional licensing, but are not further supported or updated. This is due to the fact that the interfaces were changed spontaneously in the past and KUMAVISION was often not informed about this change on the part of the deliverer. In order to be put into operation, each feeder is now tested individually and project-specifically. This may require some effort in terms of customization. A project-specific connection to Beo or ecovium (Vlog) is possible.

Thanks to these control parameters, employees in the shipping department no longer need to worry about how the posting is to take place. They simply select the carrier and, if necessary, the mode of transport and press "send".

Load carrier

Load carriers are all packages in which articles can be shipped. Via the user search you can call up the "load carriers" and define them.

General

Field	Description
Code	Enter a code for a load carrier here. A number series is not available.
Description	Enter the description of the load carrier here.
Load carrier type	Specify a type of load carrier. You can choose from: - Single - Master - Addition single - Addition master
Reusable load carrier	Activate the switch as soon as a returnable load carrier (e.g. Euro pallet) is involved.
Label ID	This field is the same as the report selection in sales or purchasing. It controls which report will be printed for the load carrier.
Stock	Indicates, if the load carrier is inventory managed, the current stock level of the item.
Item no.	Indicates the article number, if the load carrier is inventory-managed.
Item Template Code	Specifies, if the load carrier is inventory managed, the appropriate configuration template for the associated item.
Unit	Specifies the unit of the charge carrier.

Dimensions

Field	Description
Length	Specifies the length dimensions of the load carrier
Wide	Indicates the width dimensions of the load carrier
Height	Indicates the height dimensions of the load carrier
Weight	Indicates the weight of the load carrier

Inventory managed load carriers

Load carriers that are inventory managed must be created as articles. To create a load carrier as an article, select the appropriate article category code and unit and then execute the "Create article" function in the ribbon.

Packing instruction group

Similar to the suppliers of an item, several different packing instruction groups can also be defined for the instruction types:

- Internal
- Debtor
- Vendor

To define the packing instruction group, call it up via the user search. Via "New" in the menu ribbon you can create a new packing instruction group with the help of the table below.

Field	Description
Packaging specification group	This field defines the code for the group.
Packing instruction type	There are the options: **Internal** This group is used internally. There is currently no use for it. **Debtor** This group is used for debtors. **Vendor** This group is used for creditors
Packaging instruction code	Depending on the packing instruction type, this field defines a concrete customer or vendor.
Item no.	This field defines the article for the regulation group.
Start date	This date can be used to define from when this group is valid.
End date	This date can be used to define until when this group is valid.
Standard	One group per packing instruction type can be defined as the default. This is then automatically used when transferring logistics documents to a shipping processing order.
Description	Here the group can be described.

Packing instruction

The actual regulations, i.e. which load carriers are to be used in what quantity, are defined in the packaging regulations.

To define the packing instructions, call them up via the user search.

The "General" area initially contains, among other things, filter options which you can use to filter for specific packaging regulations.

Field	Description
Item no. Filter	This filter allows you to filter on a specific item number.
Packing prescription type filter	This filter allows you to filter on a specific packaging prescription type. You can choose from the following options: - Internal - Debtor - Vendor - None
Packing instruction code filter	This filter allows you to filter on a specific packing instruction code.
Packing instruction group	This filter allows you to filter on a specific packing instruction group

According to the filtering in the "General" section, the corresponding records will be displayed in the rows.

Field	Description
Packing instruction type	Specifies the packing instruction type. The following are available for selection: **Internal** This group is used internally. There is currently no use for it. **Debtor** This group is used for debtors. **Vendor** This group is used for creditors
Load carrier type	Specifies the type of load carrier. The following option types are available: **Single** Corresponds to a charge carrier and is used either individually in a group or several times in combination with a master. **Master** Corresponds to a load carrier that represents the lowest unit, such as a pallet. Is defined only once for a group. **Addition single** Corresponds to additional packaging for a single such as a lid on a KLT (small load carrier). **Addition master** Corresponds to additional packaging for a master such as a false bottom or wrapping the entire pallet.
Quantity	This field contains the quantity of the charge carrier for the group.
Rounding factor quantity	This field can be used to round the load carriers. **Example:** The quantity is 4, because 4 singles are placed on one pallet. However, up to three levels can be placed on one pallet. To ensure that each level is always filled with 4 load carriers (and possibly also empty load carriers) for stacking, the rounding factor Quantity is also set to 4. This means that there are either 4.8 or 12 single load carriers on a pallet.
Item quantity per load carrier	This field defines the quantity of items that a load carrier contains.
Label ID	This field can be used to define the report for the label for exactly this regulation, in contrast to the "Label ID" field of the load carrier.

Consignment processing

If the "Consignment processing" field is set on a scheduling agreement, a transfer order is created instead of a sales order when a delivery is made via Logistics. The following facilities are required in advance for this:

Delivery schedule facility

For this purpose, a transit storage location must be specified as a default in the "Default in Transit Code" field in the scheduling agreement setup. Call this up via the user search.

Origin storage locations

Origin storage locations define different storage locations such as consignment stores. They are defined for debtors, creditors and possibly for work center groups for external work and articles for the different business transactions.

Create logistics documents

Logistics documents are always required for an outbound delivery on scheduling agreements. Depending on the settings of the storage location, these are:

- Warehouse picking
- Outgoing goods
- Outgoing goods and picking

The only difference from the standard is that the scheduling agreement is another source document for selecting origin documents.

Shipping processing order

The shipping order does not replace the logistics documents goods issue and warehouse picking, it supplements them. It primarily serves to enable a clean recording and presentation of the load carriers for a goods issue. Different load carriers can be recorded and displayed for each item listed.

A new shipping order is entered by calling up "Shipping order" via the user search. After creating a new order, the logistics documents can be transferred either via the function "Get goods issue" or "Get warehouse picking".

Then the delivery condition code is entered. The "Delivery code" and "Delivery transport code" selections are used to define the shipping processing parameters. The "Pickup date" and the "Pickup time" can be entered under the "Additional information" info tab.

Note

The field "Pickup date" is used on the EDI labels for the goods tag. If this field is empty, it will also be empty on the labels.

If the quantity of the articles is corrected here again, the packing instructions must be recalculated and taken over via the function "Determine packing instructions".

The actual dispatch then takes place via "Send order". The system first checks whether all requirements have been met. With the EDI interface, the necessary numbers of package tracking numbers are now drawn from the number series for each load carrier. If a label has a label report stored in the "Label ID" field, the label is printed out.

The logistics documents are then posted. If the source origin is still a scheduling agreement, either a sales order or, in the case of consignment processing, a stock transfer order is created and posted as a delivery.

Finally, the shipment processing order itself is archived and, if necessary, the reports for the goods receipt/issue slip and bill of lading/shipping order are printed.

Cumulative Quantity Management

Cumulative Quantities Management is used to manage cumulative quantities and thus extends the scope of delivery schedules. The cumulative quantity management enables a transparent display of the current processing status of scheduling agreements. Logistics can thus be controlled on the basis of the difference between the company's own cumulative quantity and the customer's cumulative quantity. A reset or correction can be made at any time or periodically.

Progress figures Proposal

The cumulative quantities proposal shows the current statuses of scheduling agreements. The displayed scheduling agreements can then be corrected or zeroed out. You can limit the display accordingly by using appropriate filter criteria. You can call up the cumulative quantities proposal using the search term of the same name via the user search.

You can assign your own proposal names to indicate what type of proposal it is. The name will appear later in the journal. After selecting the template, the actual proposal window appears.

Using the "Generate proposal" function, you can now filter out the scheduling agreements that need to be corrected. For this purpose, another window is available in which you can set defaults accordingly.

On the "Options" tab, you can set a date filter. This takes into account all customers who have entered a zero date cumulative quantity on the customer card under the "Scheduling agreement" info tab in the period entered.

After corresponding input and acceptance with "OK", the scheduling agreements are displayed.

After editing the scheduling agreements, they must be registered. You can perform the registration via the menu item "Register".

Progress Notes Journals

All registered cumulative quantities are listed in the journals. You can access the individual cumulative quantity items by using the LookUp function in the "From current no." and "To current no." fields.

PURCHASING DELIVERY SCHEDULE

Setup

Purchasing delivery schedule setup

In the Purchasing Supply Schedule Setup, the basic setups are made.

General

field	**description**
Plant	In this field the plant number of the client can be stored. The value is used as default for the new creation of a purchase delivery schedule.
Unloading point	In this field the unloading point of the client can be stored. The value is used as default for the new creation of a purchasing scheduling agreement.

Information register numbering

Field	**Description**
Supply plan numbers	This field can be used to store the number series for the supply plans on the purchasing side.
Delivery schedule numbers	This field can be used to store the number series for the delivery schedules on the purchasing side.

User setup

In the user setup, the following settings related to the purchasing delivery schedule can be maintained per user:

Inforegister General

field	**description**
Purchasing delivery schedule changed reset	If this facility is activated for a user, the user can manually override the "Changed" check mark in the purchasing scheduling agreement.
Delete active purchase scheduling agreement items	In the purchase scheduling agreement, the function "Delete purchase scheduling agreement lines" can be used to control whether all active purchase scheduling agreement items for this purchase scheduling agreement should be deleted. This function can only be executed by users who have been authorized to do so at this point.

Master data

Vendor

On the vendor card, the following must be defined for the processing of purchase scheduling agreements on the "Purchase scheduling agreement" info tab:

field	**description**
Purchasing scheduling agreement preview quantity week	In the standard of Microsoft Dynamics 365 Business Central[1], requirements are always defined exactly to one day. In the preparation of delivery schedules, it is common to provide more distant requirement dates with the specification of calendar weeks or month specifications. In the field can be defined therefore with a classical date formula, starting from which date the requirements are represented summarized on week level in the forecast delivery schedule. The value of the field is inherited with the new creation of a purchase scheduling agreement after selection of the vendor number and can be changed in the purchase scheduling agreement, if desired, manually.
Purchasing Scheduling Agreement Preview Quantity Month	In the standard of Microsoft Dynamics 365 Business Central[1], requirements are always defined exactly to one day. In the preparation of delivery schedules, it is common to provide more distant requirement dates with the specification of calendar weeks or month specifications. In the field can be defined therefore with a classical date formula, starting from which date the requirements are represented on month level summarized in the forecast delivery schedule. The value of this field is inherited with the new creation of a purchase scheduling agreement after selection of the creditor number and can be changed in the purchase scheduling agreement, if desired, manually.
Production release period	When delivery schedules are transmitted to a supplier, a so-called production release period is specified. The specification in Microsoft Dynamics 365 Business Central[1] can be defined with a classic date formula. The value of the field is inherited when a new purchase scheduling agreement is created after the vendor number is selected and can be changed manually in the purchase scheduling agreement if desired. The value of the field is inherited when a new purchase scheduling agreement is created after the vendor number is selected and can be changed manually in the purchase scheduling agreement if desired. The value of the field is inherited when a new purchase scheduling agreement is created after the vendor number is selected and can be changed manually in the purchase scheduling agreement if desired.
Material release period	When transmitting delivery schedules to a supplier, a so-called material release period is included. The specification in Microsoft Dynamics 365 Business Central[1] can be defined with a classic date formula. The value of the field is inherited when creating a new purchasing scheduling agreement after selecting the vendor number and can be changed manually in the purchasing scheduling agreement, if desired. The value of the field is inherited when creating a new purchasing scheduling agreement after selecting the vendor number and can be changed manually in the purchasing scheduling agreement, if desired. The value of the field is inherited when creating a new purchasing scheduling agreement after selecting the vendor number and can be changed manually in the purchasing scheduling agreement, if desired.

Item

On the item card, the following must be defined on the "Stock" info tab for the processing of purchase scheduling agreements:

field	description
Quantity in Purchase Scheduling Agreement	In this field it is possible to see on the item card if there are purchase scheduling agreement lines for this item. The field displays the total of all purchase scheduling agreement lines with a view to the "Remaining scheduling agreement quantity" field.

Purchasing scheduling agreement

When creating a purchasing scheduling agreement, the following fields can be maintained or are visible.

General

field	description
No.	The number for a purchasing scheduling agreement is taken from the stored number series when it is created. If it is defined in the facility, the number can also be entered manually or overwritten manually.
Depos. from credit no.	In this field the vendor number is selected, with which a corresponding contract is defined.
Article no.	This field is used to select the article number for which a corresponding contract is defined.
Article Description	This field displays the article description from the article card.
Article Description 2	This field displays the article description 2 from the article card.
Article No. 2	If a second article number is maintained for the article, this number will be displayed here.
Purchase unit code	The purchase unit code from the article card is displayed in this field.
Variant Code	If variants are defined for the article, the appropriate variant for this purchasing delivery schedule can be selected in this field.
Credit item no.	In this field, the vendor article number required for this purchasing supply plan can be stored. In this case it is necessary to refer to the article reference overview. I.e. only numbers defined in the table can be selected.
Storage location	In this field, the storage location can be stored for which the determined requirement is to be assigned.
Storage bin code	In this field the storage bin code can be stored, on which the goods receipt or the stock placement is to be booked in. This value is only a template and can be overwritten in the respective logistics documents.
Vendor Order No.	The order number of the scheduling agreement on the supplier side can be stored in this field.
Plant	The field "Plant" is preset when creating a purchasing scheduling agreement based on the purchasing scheduling agreement setup. The value can be changed manually.
Unloading point	The "Unloading point" field is preset based on the purchasing delivery plan setup when a purchasing delivery plan is created. The value can be changed manually.
Status	A purchasing delivery plan can have the following statuses: **New** The status "New" is automatically preassigned if a new purchasing delivery plan is created. **Open** The status "Open" must be selected manually using the "Change status" function. This is necessary, for example, if subsequent changes are to be made to the purchasing scheduling agreement. **Released** The status "Released" must be selected manually via the "Change status" function. This is necessary because only purchasing scheduling agreements with the "Released" status are processed. **Note:** In the "Released" status, the fields in the purchasing scheduling agreement cannot be changed. Two exceptions apply here. The "Locked" and "Problematic" fields can also be changed in the "Released" status. **Exited** Purchasing scheduling agreements that are no longer to be processed by the system can be set to the "Exited" status.

field	description
Language Code	In the field, the language code "DEU" or "ENG" can be used to control whether the report for the forecast delivery schedule is to be output in German or English.
Blocked	A purchasing scheduling agreement can be manually set to "Blocked". A purchasing scheduling agreement that is marked as blocked will not be considered in the order proposal. No forecast delivery schedule can be generated for a purchasing scheduling agreement that is marked as blocked. Requirements from a purchasing scheduling agreement that is marked as blocked will not be included in the item availability.
Changed	This field keeps track of whether there has been a change in the requirements after the last delivery schedule creation. If so, the field is enabled. This field can be manually changed, provided that a corresponding facility is enabled for users in the user facility. **Note:** Manually overriding the field should only be done in exceptional cases and with caution.
Changed by	This field keeps track of which user created a change for this purchasing scheduling agreement.
Changed on	This field keeps track of the day on which a change was created for this purchasing scheduling agreement.
Problematic	A purchasing scheduling agreement can be flagged as problematic. A purchasing scheduling agreement marked in this way will also receive a corresponding marking in the processing in the order worksheet.
Production Release Period	The value of the field is inherited when a new purchasing scheduling agreement is created after the vendor number is selected and can be manually changed in the purchasing scheduling agreement, if desired. It is specified in Microsoft Dynamics 365 Business Central[1] using a classic date formula.
Material Release Period	The value of the field is inherited when a new purchasing scheduling agreement is created after the vendor number is selected and can be manually modified in the purchasing scheduling agreement, if desired. The specification in Microsoft Dynamics 365 Business Central[1] is made with a classic date formula.
Date of Last Outbound Delivery Schedule	This field records the date when the last delivery schedule was changed from "Shipped" to "Shipped" status. **Note:** A field is also available in the background in which the time is also recorded.
Purchaser Code	The value of the field is inherited when a new purchasing supply plan is created after the vendor number is selected and can be manually changed in the purchasing supply plan, if desired.
Assigned User ID	The value of the field is filled with the user ID when a new purchasing supply plan is created and can be changed manually in the purchasing supply plan if desired.
Preview quantity (week)	

field	description
	The value of the field is inherited when a new purchasing supply plan is created after the vendor number is selected and can be manually modified in the purchasing supply plan, if desired. It is specified in Microsoft Dynamics 365 Business Central[1] using a classic date formula.
Preview quantity (month)	The value of the field is inherited when a new purchase delivery plan is created after the vendor number is selected and can be changed manually in the purchase delivery plan, if desired. The specification in Microsoft Dynamics 365 Business Central[1] is done with a classic date formula.
Creation Date	This field records when the purchasing scheduling agreement was created.
Valid until	In this field, a date can be stored until which the corresponding contract is valid. **Note:** This field has only an informative character. I.e. as long as the status is set to "Released", the purchase scheduling agreement would continue to be considered in the purchase order worksheet, even if this date has been exceeded.
Target Quantity	This field can be used to store the target quantity for this contract.
Automatic release of outgoing delivery schedules	This field can be used to define whether a created delivery schedule should be released automatically.

Lines

Note

The lines in the purchasing scheduling agreement are for user information only. Manual creation of lines is not provided for in the purchasing scheduling agreement. Also a change on field level in the lines is not intended. The lines are created or updated, if necessary, by processing in the purchase order worksheet.

Field	Description
Expected Goods Receipt Date	This field displays the expected goods receipt date. The date will be passed from the purchase order worksheet line to the purchase delivery schedule line.
Desired Goods Receipt Date	This field displays the desired goods receipt date. The date will be transferred from the purchase order worksheet line to the purchase scheduling agreement line.
Quantity	This field displays the quantity. The quantity is transferred from the purchase order worksheet line to the purchase delivery plan line.
Quantity collected	The goods collected via goods receipt or stock placement with reference to the purchasing delivery plan are offset against the purchasing delivery plan lines and displayed per line. Thus it can be recognized per line whether the respective line was not delivered at all, partially or completely.
Remaining order quantity	This field displays the remaining delivery schedule quantity. The field is calculated by the formula "Quantity - Quantity delivered"
Target cumulative quantity	This field displays the expected target cumulative quantity. This field is calculated line by line. The first purchase scheduling agreement line calculates the value "Act. Cumulative Quantity + Remaining Scheduling Agreement Quantity". In the following lines, the field is calculated as follows: "Target cumulative quantity previous line + remaining delivery plan quantity".
Manually Created	This field indicates whether the line has been created manually in the purchase order worksheet. **Note:** For lines that have been created automatically by the purchase order worksheet, this field will also be checked if a manual correction has been made in the "Quantity" field.

Delivery

field	description
Incoming. Stock lead time	This field is used to define the existing stock lead time. The value of the field is inherited when a new purchasing delivery schedule is created after the storage location code has been selected and can be changed manually in the purchasing delivery schedule if desired. The value of the field is inherited when a new purchasing delivery schedule is created after the storage location code has been selected and can be changed manually in the purchasing delivery schedule if desired.
Procurement time	This field is used to define the procurement time. The default value of the field is inherited after updating the fields: Item number, storage location, variant and can be modified manually if desired.
Sec.-Zuschl. Beschaff.	This field is used to define the safety surcharge procurement period. The value of the field is inherited when a new purchasing scheduling agreement is created after the article number has been selected and can be changed manually in the purchasing scheduling agreement if desired. The value of the field is inherited when a new purchasing scheduling agreement is created after the article number has been selected and can be changed manually in the purchasing scheduling agreement if desired.

These fields are required for scheduling due dates in the purchase order worksheet. The calculation is done as usual in the standard of Microsoft Dynamics 365 Business Central[1].

Infoboxes

The following infoboxes are available for a purchasing delivery schedule:

Purchase cumulative quantities.

The following fields are displayed in the infobox:

Field	description
Last Delivery No.	This field displays the last delivery note number *(posted purchasing delivery)* that has been posted to this purchasing scheduling agreement.
Last Ext. Delivery No.	This field displays the last external delivery note number that has been posted to this purchasing scheduling agreement.
Last Delivery Date	This field displays the posting date from the associated posted purchasing delivery.
Last Delivery Quantity	This field displays the last delivery quantity.
Current cumulative quantity	This field displays the current cumulative quantity. This is the total of all quantities received for this purchasing scheduling agreement, taking into account any manually maintained cumulative quantity corrections.
Last cumulative quantity sent	This field displays the cumulative quantity that was sent to the vendor with the last forecast delivery schedule.

Price Information

The following fields are displayed in the info box:

Field	Description
EK-Price	The EK-price is displayed.
Line discount %	The percentage line discount is displayed.
Currency Code	The currency code is displayed.
Stock	The stock for the combination item/variant/storage location is displayed.

Note

For the determination of the values, the system creates a temporary purchase order for the combination vendor/article/variant with the quantity 1 and on the work date.

Note

The calculation or update is always done when the purchasing scheduling agreement is released.

Storage data

The following information of the inventory data card is displayed in the info box:

field	description
Storage Location	The stored storage location for this purchasing supply plan.
Stock level	The stock level for this item or variant at the respective storage location.
Safety Stock	The stored safety stock on the inventory data card.

Management purchase delivery schedule

Status change

A status change can be called up via the "Change status" function in the menu ribbon. A purchasing scheduling agreement has different statuses:

status	description
New	A newly created purchasing delivery plan is initially given the status "New".
Open	If a change is to be made to a purchasing scheduling agreement that already has the status "Released", the status must be reset to "Open". Only then can changes be made.
Released	In the "Released" status, the purchasing scheduling agreement is active. On the one hand, this means that no changes can be made to the fields in this status. Two exceptions apply here. The fields "Blocked" and "Problematic" can also be changed in the status "Released". Further, the status "Released" is important for the interaction with the logistics documents. As with conventional purchase orders, only purchasing scheduling agreements can be brought into a goods receipt or warehouse putaway if the status is "Released". The "Released" status is also important for requirements determination. Requirements determination in the Purchase Order Worksheet only checks against purchasing scheduling agreements with the status "Released". If no suitable purchasing scheduling agreement with the status "Released" is found for the lines created in the purchase order worksheet, the requirements are not created as forecast delivery schedules, but as "normal" purchase orders.
Finished	If a purchasing scheduling agreement is no longer needed, the status can be set to "Finished". **Note:** A created purchasing scheduling agreement for which items already exist cannot be deleted. I.e. also such purchase scheduling agreements must be set to the status "Finished". Once a purchase scheduling agreement has been set to the status "Finished", the status can no longer be changed back to one of the other statuses.

Uniqueness of scheduling agreements

When the status changes to "released", a uniqueness check is performed. According to the rule for forecast delivery schedules, a forecast delivery schedule must refer to the following order terms

- plant customer
- Customer part number
- Contract/order number
- unloading point

be clearly identifiable.

Note

The closing/order number is the number of the purchase scheduling agreement.

If an error is detected during this check, the following note message is issued: "Purchasing scheduling agreement xxxxx already exists with the same uniqueness criteria. Finish the other one first."

Note

Since requirements determination in Microsoft Dynamics 365 Business Central[1] takes place on a storage location basis, if there are different storage locations, there may be corresponding purchasing scheduling agreements for which the previously mentioned ordering terms are identical.

Delivery schedule text

A delivery schedule text can be defined for a purchasing delivery schedule using the "Purchasing delivery schedule text" function in the menu ribbon.

Note

Further processing or output of these texts is not provided for the time being.

Delivery schedule text

For the delivery schedules generated from a purchasing scheduling agreement, a delivery schedule text can be defined using the "Delivery schedule text" function in the menu ribbon.

This text will then be printed on the paper document "Purchasing delivery schedule".

Note

A transfer of these texts to the EDI message "Delivery instruction" is not provided in the solution.

Purchasing Delete scheduling agreement lines

Requirements are only ever transferred to the purchasing scheduling agreement via the purchase order worksheet. There is no provision for manual editing at line level in the purchasing scheduling agreement.

In rare cases, it may happen that the requirements are no longer needed. Provided users have the appropriate authorization, the "Delete purchasing scheduling agreement lines" function can be used to delete all active scheduling agreement lines for this purchasing scheduling agreement. The authorization can be controlled via the button "Delete active purchasing scheduling agreement items" in the user authorization.

Outgoing documents

Via the call "Outgoing documents" in the menu ribbon, all created purchase delivery schedules for the respective purchase delivery schedule can be displayed.

Dimensions

If dimensions are to be used on the purchasing side, the desired dimensions for the respective purchasing scheduling agreement can be viewed or maintained via "Dimensions".

Change cumulative quantities

In some cases, it may be necessary to manually adjust the cumulative quantity of a purchasing scheduling agreement. For example, a running cumulative quantity must be predefined if a purchasing scheduling agreement is newly created in the system but has already been delivered to. Or a manual correction of the cumulative quantity must be made if incorrect purchasing deliveries are made. The correction or pre-entry can be made using the "Change cumulative quantities" function.

Open purchase orders

The "Open purchase orders" call displays all purchase orders that have not yet been deleted and that exist for the selected purchasing scheduling agreement.

Deliveries

The call "Deliveries" displays all posted purchase deliveries that exist for the purchase delivery plan.

Invoices

The call "Invoices" displays all posted purchase invoices that exist for the purchase delivery plan.

Active purchasing scheduling agreement items

The "Active Purchasing Scheduling Agreement Items" call can be used to view detailed information about the current purchasing scheduling agreement lines.

Non-active scheduling agreement items

The "Inactive Scheduling Agreement Items" call can be used to view all historical scheduling agreement items for the selected purchasing scheduling agreement.

Purchase prices

The call "Purchase prices" displays the stored prices for the combination vendor/article/variant.

Purchasing line discounts

The call "Purchase line discounts" displays the stored line discounts for the combination vendor/article/variant.

Item availability by

From the purchasing delivery schedule, the "Article availabilities by" known from the standard of Microsoft Dynamics 365 Business Central[1] can be called up.

Manage cumulative quantities

Cumulative quantity management

The cumulative quantity in Microsoft Dynamics 365 Business Central[1] is automatically managed for each purchasing delivery schedule. With each posted purchase delivery that references a purchase delivery plan, a cumulative quantity item is automatically created for that purchase delivery plan. The total of all cumulative quantity items is displayed in the "Cumulative quantity" field on the information page for a purchasing supply plan.

Corrections to cumulative quantities

From time to time, the cumulative quantity of a purchasing scheduling agreement may need to be adjusted. For example, because the current cumulative quantity needs to be carried forward for an ongoing purchasing delivery schedule that is created in Microsoft Dynamics 365 Business Central[1]. Or for a purchasing scheduling agreement that has been running for a long time, the cumulative quantity is to be zeroed out on a key date.

> **Note**
>
> A manual correction of the cumulative quantity is also necessary for an accidentally posted purchasing delivery bill with reference to a purchasing scheduling agreement. Even if it is still possible to cancel the line or lines in the posted purchasing delivery, the cumulative quantity items formed are not automatically corrected.

Transfer of cumulative quantities

When a forecast delivery schedule is created for a purchasing scheduling agreement, the cumulative quantity valid at that time is transferred to the forecast delivery schedule. The cumulative quantity is then *(along with some other information)* sent to the vendor on the printed or EDI delivery schedule. The supplier then uses this information to determine the "goods in transit" and can use the information to allocate the requirements in his ERP system.

Transfer requirements to the purchasing scheduling agreement via the purchase order worksheet

Determining requirements for the purchasing scheduling agreement via the purchase order worksheet

To determine current requirements, the purchasing scheduling agreement uses the standard purchase order worksheet. This means that the determination is used via the replenishment procedures or replenishment parameters of the articles or the inventory data card known in the standard system.

When calculating the current requirements, Microsoft Dynamics 365 Business Central[1] takes into account the existing requirements planners. The existing purchasing scheduling agreement lines naturally also represent requirement coverers. Therefore, the calculations of the requirements have been changed so that the existing active purchasing scheduling agreement items are also included in the calculation as requirement coverers.

However, since the standard of Microsoft Dynamics 365 Business Central[1] does not recognize purchasing scheduling agreements, the function has been extended in such a way that after the determination of the requirements per line, it is checked whether a released purchasing scheduling agreement exists for the combination "vendor/article/variant/storage location". If this is the case, a reference to the respective purchasing scheduling agreement is created for the line.

When the "Execute event notification" function is executed, no new purchase order is created or existing purchase order lines are changed or deleted for this line; instead, new or changed lines are created for the specified purchasing scheduling agreement.

Enhancements to the purchase order worksheet for the purchasing scheduling agreement.

The purchase order worksheet has been enhanced with respect to purchasing scheduling agreements as follows:

field	**description**
Purchasing Scheduling Agreement No.	The purchasing scheduling agreement number is displayed in the field if a purchasing scheduling agreement is found for the line.
Ref. Order Type	The field Reference Order Type has been extended by the entry "Purchasing Scheduling Agreement", so that it can be recognized in the field whether the line is a purchasing scheduling agreement.
Problematic	If the line refers to a purchasing scheduling agreement that is marked as "Problematic", the value "Yes" is entered in this field. This allows MRP controllers to filter on these rows and manually check MRP suggestions.
Manually created	If lines for a purchase delivery schedule are created manually, or if a calculated line is manually changed in quantity or date, this is documented in the field "Manually created".

In the purchase order worksheet, the information page "Purchasing delivery schedule information" can also be called up.

In the info box, line information from the purchasing scheduling agreement is displayed for each selected order worksheet line.

The info box is only calculated if the selected line in the purchase order worksheet is a line with reference to a purchasing scheduling agreement.

In the info box, the fields "Desired goods receipt date", "Quantity", "Quantity delivered" and "Remaining order quantity" of the purchasing scheduling agreement lines are displayed.

Handling manual requirements

As previously described, manual maintenance is not possible at the purchasing scheduling agreement line level.

However, if desired, requirements can be manually adjusted and transferred to a purchasing scheduling agreement. In the purchase order worksheet, all calculated requirements can be manually adjusted or requirements can be manually added. These manually created purchase order worksheet lines are also checked by the system for reference to a purchasing scheduling agreement and assigned.

> **Note**
>
> As in the standard system, manual maintenance in the purchase order worksheet should only be used with caution, since the next calculation of a purchase order worksheet usually results in these manual adjustments being suggested as cancellations.

"Execute event message" function

The function "Execute event message" has been adapted so that no purchase orders are created or changed for purchase order worksheets with the reference type "Purchasing scheduling agreement", but new lines are generated in the purchasing scheduling agreement or existing lines are adjusted or deleted.

Furthermore, when lines are changed in the purchasing scheduling agreement, the "Changed" indicator is activated in the purchasing scheduling agreement header.

Handling reservations

As on the scheduling agreement page in sales, requirements cannot be reserved in the purchasing scheduling agreement.

Therefore, items used for a purchasing scheduling agreement should not be planned with the "Order" replenishment procedure. Even if an article has the "order" replenishment procedure, no reservations are generated for the purchasing scheduling agreement lines.

Create and manage delivery schedules

Generate delivery schedule

The creation of a forecast delivery schedule is always done manually by the user. In doing so, users can choose whether a forecast delivery schedule should be created for only one or for multiple purchasing scheduling agreements by using the filter options known in Microsoft Dynamics 365 Business Central[1]. In practice, it is usually filtered to one vendor and all new purchase delivery schedules are created for one vendor.

Note

Regardless of the filtering, new delivery schedules are only created for purchasing scheduling agreements for which the "Changed" field in the header of the purchasing scheduling agreement is activated. This avoids that "new" delivery schedules are sent by mistake, where the quantities and date information are identical to the previous delivery schedule.

If you want to deliberately create a new "identical" forecast delivery schedule, the "Changed" field in the purchasing scheduling agreement must be activated.

If a new forecast delivery schedule is created for a purchasing scheduling agreement, the "Changed" field in the header of the purchasing scheduling agreement is deactivated again afterwards.

Edit delivery schedules

Note

The delivery schedule is referred to as an "Outgoing document". If the "Automatic release of outgoing delivery schedule" switch is not activated in the purchasing scheduling agreement, the generated delivery schedule is first created with the status "Pending". Among other things, fields are created in the forecast delivery schedule. Except for changing the status, no changes can be made in a delivery schedule. The delivery schedule can be viewed like a "posted document" in Microsoft Dynamics 365 Business Central[1].

General

field	description
No.	The number for a delivery schedule is drawn from the stored number series when it is created.
Call date new	This field is used to select the vendor number with which a corresponding contract is defined.
Call-off no.	The respective call-off number is mapped in this field for each purchasing delivery schedule. I.e. the value is set to 1 with the first created call-off and then always increased by the value "1".
Supply schedule number In this field the purchase delivery schedule number is recorded, to which this delivery schedule refers.	
Supplier Order Address Code Ind. of Name Article No. Variant Code Article Description Article Description 2 Article Unit Code Vendor Article No. Plant Unloading Point Your Reference Target Quantity	The fields are taken from the respective linked purchasing delivery schedule and displayed.
Status	The status is changed manually. A delivery schedule has the following statuses: **Pending** A newly created delivery schedule usually receives the status "Pending". **Shipping** The forecast delivery schedule can then be manually set to the status "Shipping". In the status, the forecast delivery schedule can be sent as paper or a transfer via EDI can be performed. **Note:** Sending via EDI is to be implemented on a project-specific basis and is not a component of the Scheduling Agreement Management module. **Sent** The forecast delivery schedule has been sent. **Rejected** If a forecast delivery schedule has been created incorrectly, the forecast delivery schedule can be set to the "Rejected" status. The forecast delivery schedule can be set to the "Rejected" status.
Created on	The date when the delivery schedule was created is recorded.<br
Created by	The user code that created the delivery schedule is recorded.
Status change on	

field	description
	The date when the status of the delivery schedule was last changed is recorded.
Status change from	The user code that last changed the status of the delivery schedule is recorded.
Sent on	The date when the delivery schedule was sent is recorded.
Sent by	The user code that sent the delivery schedule is recorded.

Lines

Field	Description
Quantity	The quantity of the delivery schedule line is displayed.
Requirement type	The solution distinguishes the following requirement types: **empty** Any "normal" requirement receives the requirement type "empty". This means all requirements that are in the future at the time of creation of the delivery schedule but are not defined as preview. **Backlog** All requirements that have an expected goods receipt date "smaller" than the work date at the time of creation of the delivery schedule are marked as backlog. **Immediate requirements** All requirements are marked as immediate requirements, which have an expected goods receipt date equal to the work date at the time of creation of the forecast delivery schedule. **Preview (week)** At the time of creation of the forecast delivery schedule, it is checked whether the goods receipt date is greater than the date from "work date + date formula preview quantity week from EK delivery schedule ". Further the date may not be however also larger than the date "work date + date formula preview quantity month". If this applies, the line is set to the requirement type "preview (week)". In this case, the requirements are displayed totaled from the week. **Preview (month)** At the time of creation of the delivery schedule, it is checked whether the goods receipt date is greater than the date from "Work date + date formula preview quantity month from EK delivery schedule ". If this applies, the line is set to the requirements type "Preview (month)". Thereby the requirements are shown summed up from the month.
Requirement date	This field displays the requirement date of the respective line.

Delivery

The fields on the "Delivery" info tab are taken from the respective linked purchasing delivery plan and displayed.

Cumulative quantities

The fields are taken from the respective linked purchasing scheduling agreement and displayed when the delivery schedule is created.

Manage delivery schedules

A delivery schedule can be manually changed to various statuses. To do this, the "Change status" function can be called up manually.

Send delivery call-offs

A delivery schedule in the status "in dispatch" can be printed out conventionally on paper or sent as a PDF attachment by e-mail.

Note

Dispatch via EDI is provided for via the EDX module, but must be implemented on a project-specific basis.

Post goods receipt or warehouse storage

Analogous to the sales scheduling agreement, it is not possible to collect requirements for a purchasing scheduling agreement directly in the purchasing scheduling agreement.

The collection must therefore take place via a standard logistics option in Microsoft Dynamics 365 Business Central[1]. The determination of which method is to be used is made via the control indicators on the storage location map.

This means that in both putaway and goods receipt, the "Scheduling Agreement Management" module has been extended so that collection is also possible on the active scheduling agreement items.

When posting the putaway or the goods receipt, a suitable purchase order document with reference to the respective purchase scheduling agreement item is created and posted in the same way as the sales scheduling agreement. Thus, the addition of the items takes place via the standard routines of Microsoft Dynamics 365 Business Central[1].

Process purchase invoices for purchasing scheduling agreements

Purchase invoices for purchasing scheduling agreements can be created and posted as usual either directly via the purchase order or via the purchase invoices and the "Get goods receipt lines" function.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩↩↩↩↩ ↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩↩

Calculation

GENERAL

With the help of the calculation you can make the following business evaluations and calculations directly in KUMAVISION factory365:

- Regular item costing with highlighting of variances.
- Quotation costing
- Development calculation
- Co-calculation
- Calculation up to the target price
- Access protection of the calculation data
- Separate reporting of costs
- Calculation with planned values
- Extension to include cost elements in the single-level as well as multi-level area (e.g. "material overhead")

> **Note**
>
> You need separate licenses before you can use Calculation function.
>
> The module cannot be activated if Include Non-Inventory Items to Produced Items and/or Load SKU Cost on Manufacturing or Allow Finishing Prod. Order with no Output activated in the Manufacturing Setup.

Production costing

The production costing is primarily used to determine the production costs / cost of goods sold as well as the sales price for an article. These values can then be transferred to the corresponding price fields on the article card.

The result of this calculation can also be used for the valuation method "Standard" for the bearing valuation.

Furthermore, simulations can also be carried out in the cost of goods manufactured in the event of changes in purchase prices, labor time prices or overhead rates.

Development calculation

When creating new products, not all parts list items or work plan items are always known or their prices have not yet been determined. However, it is necessary to know the approximate manufacturing costs at an early stage and also to determine a sales price.

To make this possible, a "Simulated production order (cost estimate)" can be created manually for such an article. The known information from the routing and bill of materials is used. These values can then be changed as desired.

In addition, there is the possibility to manually. "Additional costs" with quantities, times and prices and, if required, the "Overhead rates" can be adjusted or supplemented.

Quotation costing

For make-to-order manufacturers, the challenge is to perform calculations for individual customer orders as efficiently and accurately as possible. Therefore, KUMAVISION factory365 can provide the calculations for similar projects or articles as a basis via the Smart Start packages. Based on this, employees can calculate different variants without having to start from scratch. This means a significant time saving compared to before. This also comes into play for old, already expired offers. A new calculation can be created with just a few entries, as only the new prices need to be transferred. For contract manufacturers, transparency is another important factor. With the old calculations stored, sales staff can explain to customers, item by item, why there is a price difference compared to previous quotations. This is also important for projects that run over a longer period of time: If deviations from the original quotation occur during the course of the project, the customer can be told in detail what the causes are at the touch of a button. This is because the concurrent costing does not use the theoretical planned values, but the current actual values.

Bearing evaluation

The material overhead costs can be entered separately with the use of the costing solution. This means that costing can now also activate the material overheads based on consumption. This makes the inventory values transparent and traceable and also ensures clarity in the balance sheet. Thus, these additions to the Microsoft Dynamics 365 Business Central[1] standard not only make the calculation of sales prices more comprehensible.

Cost types

In Microsoft Dynamics 365 Business Central[1], there are a wide variety of cost types. These fields are visible in several masks. The explanation of these will now take place at this point. Basically, Microsoft Dynamics 365 Business Central[1] distinguishes between single-level costs and multi-level costs.

Single level costs

Single-level costs are costs that are incurred only for this item. This means that for the calculation only the respective cost price of articles from the bill of materials or the prices and overhead costs are taken directly from the routing. No structures are exploded in the process.

Example:
An assembly in the bill of materials, is shown with the cost price in the material costs.

Multilevel costs

Multi-level costs, are costs that are broken down to the lowest level and then presented in the respective cost pools.

Example:
An assembly in the bill of materials is not shown with the cost price in the material costs, but is broken down further to the purchase item. Only the purchase item is shown as material cost, the rest is capacity/external labor or production cost.

Consumption-capitalized material overheads

The material costs can be included directly in the cost price of the raw material at the time of stock receipt, but also as consumption-capitalized material costs that are not included in the product until production.

The overhead and consumption capitalized costs can be mixed on the item card and in the costing condition lines.

Hierarchy of Consumption Capitalized Overhead:
a) Calculation conditions consumption activated
b) Calculation condition line
c) Article

Hierarchy Overhead:
a) Calculation conditions not consumption activated
b) Calculation condition line
c) Article

Note

Overhead costs and consumption activated overhead costs can be used in parallel. The only difference is that you can only define either a costing condition or a consumption activated costing condition. Both do not work.

Cost types

Below you will find an overview of the cost types that exist in Microsoft Dynamics 365 Business Central[1] in connection with KUMAVISION factory365:

Field	Description
Single-level material costs	All costs (cost price - overhead) that come from the bill of material.
Single-Level Material Overhead	All overhead costs resulting from purchased items in the bill of material.
Single-level capacity costs	All costs (cost price - overhead) that come from the routing.(No external labor operations)
Single-level capacity overhead	All overhead costs that come from the item's routing. (No outside labor operations)
Single-Level Production Overhead	Production overhead stored with the item being costed.
Single-level external labor costs	All external labor costs (cost price - overhead) of external labor operations, from the corresponding routing.
Single-level external labor overhead	All overhead costs of external labor operations, from the corresponding routing.
Multi-level material costs	All material costs (cost price - overhead) of purchasing items totaled over all levels.
Multi-level material overhead	All material overhead costs of purchase items summed over all levels.
Multi-level capacity costs	All capacity costs (cost price - overhead) from all routings summed over all levels.
Multi-level capacity overhead	All capacity overhead costs of all operations summed over all levels.
Multi-level production overhead	All production overhead costs of all items summed over all levels.
Multi-level external labor costs	All external labor costs (cost price - overhead) of all external labor operations summed over all levels.
Multi-level external labor overhead	All external labor overhead costs from all external labor operations totaled across all levels.

Note

The totals of the single-level and multi-level prices only match as long as no bookings or price changes are made. As soon as bookings have taken place, these values diverge. They can then be made equal again by means of a new cost price calculation across all levels. (Depending on the settings)

ESTABLISHMENT

Evaluation & calculation facility

In the "Valuation & Costing Facility", the basic facilities for controlling the operation of the costing facility are defined first.

Inforegister General

Field	Description
Basic Std.price calculation (make-to-stock)	The selection you make here is only used for items with the production type "make-to-stock". The following selections are available: **Cost price:** The value of the "Cost price" field from the item's master data is used. **Cost price (latest):** The value of the "Cost price (latest)" field from the item's master data is used.
Basic Std.price calculation (order production)	The selection you make here will only be used for items with the production type "order production". The following selections are available: **Cost price:** The value of the field "Cost price" from the master data of the item will be used. **Cost price (latest):** The value of the "Cost price (latest)" field from the item's master data is used. **Purchase price (purchase prices):** If the article has the procurement method "Purchase", first the purchase price valid for the vendor no. of the article is determined from the table Purchase price and the valid line discount % from the table Purchase line discount (both best price determination according to calculation date and quantity to be calculated). The combination of both fields results in the cost price to be used. If the item has the procurement method "Production order", the determination of the cost price to be used is based on the option value of the field "Basis Std. cost price calculation (make-to-stock)" of the Valuation and Costing Setup.
Default Transfer of cost price (fixed)/ target price Adopt proposal	At this point, you can decide whether the results of these calculations are written back for the respective articles. The following selection options are available: **One level:** The cost price (fixed) is only written back at the article for which the calculation was performed. **All levels:** The cost prices (fixed) are written back at all assemblies / components that were determined by the calculation.
Unit price decimal places	This is where you specify the minimum and maximum number of decimal places to be specified for unit prices in the calculation. **Example:** 2:5 means: minimum 2 decimal places and maximum 5 decimal places. For further information, use the Microsoft Dynamics 365 Business Central[1] Helpsite on the topic "Unit price decimal places field". .
Quantity Decimal Places	At this point you define how many decimal places should be specified in the calculation minimum and maximum for the quantities. **Example:** 2:5 means: Minimum 2 decimal places and maximum 5 decimal places.

Field	Description
	For further information use the Microsoft Dynamics 365 Business Central[1] Helpsite on the topic "Unit price decimal places field".
Fixed costing sheet name for costing proposal (E+D)	This setting applies to the costing sheets matrix that can be called up from the costing proposal (E+D) - i.e. via the production orders. With this field you have the option of specifying a standard costing sheet. If you enter a schema at this point, the user can only work with this schema and no longer select another (lock function). If the user should have the option to select other calculation schemas, then do not put anything in this field.
Calculate E+D Order (Sales)	This field refers to the calculation from a sales quotation or a sales order. The following options are available: **Calculate only:** The system creates the calculation, but does not perform any further action afterwards. If you want to display the newly created Simulated E+D Order, you must call it up manually. **Calculate+Display:** After the system creates the calculation, the created Simulated E+D Order is displayed directly in a window. **Calculate+Apply:** If the calculation proposal could be created without errors, the value of the "New target price" field of the executed calculation proposal will be applied to the "Sales price" field of the sales line.

Assuming that **consumption-based items (make-to-stock)** are procured on a regular basis, the cost price or delivered price (latest) provides a good basis for costing because the prices usually represent realistic values.

The *cost price* is - except for the stock issue method standard - an average value over all cost prices of the quantities currently in stock.

The *Current price (latest)*, on the other hand, is not an average price. It refers to the last value at which the item was added. For a more detailed definition of the cost price fields on the item card, please use the Microsoft Dynamics 365 Business Central[1] Helpsite.

Items that are procured **on an order basis (make-to-order production)**, on the other hand, can either also be costed on the basis of the cost prices, or - and this makes sense especially for articles that are procured infrequently - on the basis of the currently valid purchase prices. If there is no current purchase price for the article, a planned value can also be entered in the preliminary costing.

Note

The cost prices are always "adjusted" prices, i.e. freight costs or precious metal surcharges entered per article surcharge/discount are added, purchase discounts or similar are deducted. The purchase price, on the other hand, is the pure purchase price without taking into account any surcharges, discounts or rebates. The final costing always calculates only with the cost prices.

Note

A production type must be stored for each article - even for pure purchase articles, for which the production type is irrelevant by default.

Inforegister numbering

Field	Description
Calculation Default Numbers	Enter the code of the number series to be used to assign records to the Calculation Default Numbers table.
Calculation Condition Numbers	Enter here the code of the number series to be used to assign records to the Calculation Condition Numbers table.

Note

If you want to use more than one number series for this table, you can set up a connection between the corresponding series in the "Connections" call in the number series. This way you can use one code for two or more number series.

Inforegister Assembly

Field	Description
Costing item direct costs (resource assembly)	Select here a costing item from the costing item plan to which the direct costs incurred when a resource is used in an assembly order are allocated.
Description Costing element Direct costs (resource assembly)	Specifies the description of the selection in the "Costing item direct costs (resource assembly)" field.
Costing element overhead costs (resource assembly)	Select a costing item from the costing item plan here, to which the overhead costs incurred when a resource is used in an assembly order are assigned.
Description of costing element overhead costs (resource assembly)	Specifies the description of the selection in the Costing Item Overhead (Assembly Resource) field.

Costing components plan

The costing components plan is the foundation of the costing and is comparable with a chart of accounts. It takes over the task of standardizing and grouping the components of a cost estimate and thus ultimately making them comparable with each other. This applies to both article costing and quotation costing.

In principle, the costing sheet is structured in the same way as the chart of accounts in the Financial Accounting application area.

KUMAVISION factory365 can already provide you with a set up costing element plan via the Smart Start packages. You can either use this directly in the form or further adapt it to the requirements of your company. Of course, you also have the option to create your own complete component plan.

Note

If you want to use more than one number series for this table, you can set up a connection between the corresponding series in the "Connections" call in the number series. This way you can use one code for two or more number series.

Field	Description
No.	The "No. " field is used to identify the costing element. You can enter up to 20 characters, both numbers and letters. Each number may be assigned only once. You can set up as many costing items as you like. **Note:** Choose sufficient intervals between the numbers of the individual costing components. This will allow you to insert additional costing items later if required. For example, you could assign only the end digits 00 to all account groups and only the end digits 0 to all accounts.
Description	Here you can enter any text to describe the content of the costing element.
Cost range	Articles and capacities are later assigned to the costing items table via the costing conditions. The Cost area field indicates the application area of the respective costing item. The following selection options are available: **Cost of materials and material overheads:** The costing items with these options are used in costing conditions of the type "Material" (procurement method of the item = purchase). Material costs describe the direct costs (from the field EK price (latest)). Material overhead describes the indirect costs (from the fields Cost %, Overhead rate, Cost % (consumption capitalization), Overhead rate (consumption capitalization)). **Capacity costs and capacity overhead:** The costing items with these options are used in costing items of the type "Capacity".Capacity costs describe the direct costs (field EK price of the used work center or work center group). Capacity overhead describes the indirect costs (cost %, overhead rate) of the work center or work center group used. **Outside labor costs and outside labor overhead:** The costing items with these options are used in costing items of the type "Capacity" if it is an external labor work center group (or assigned external work center) (Vendor number field is not equal to). External labor costs describe the direct costs (field EK price of the used external work center group or the assigned external work center). External labor overhead describes the indirect costs (cost %, overhead rate) of the external work center group used or the assigned external work center.
Cost range	**Production Overhead:** The costing items with these options are used in costing conditions of type "Production" (procurement method of the item = production order). Costing items of the cost area production overhead describe the indirect costs (fields cost %, overhead rate) of the used article (production article or assembly). **Sales overhead, administrative overhead, risk/profit, commission, discount, rebate:** The costing items with these options are used in costing conditions of the type "markup". Costing items of these four cost areas describe the non-capitalizable costs of an article, i.e. the difference between the sales price and the cost price of the article.
Type	With this field you specify the type of record. You can choose from the following: **Costing component:** This option is used for the actual calculation components. The later assignment is only done via these data records. **Headline:** A heading for a group of costing components. **Sum:** The Sum option is used if you want the application to sum up individual costing items. Please then enter a filter text in the Sum field to specify the costing components to be included. **From-total / To-total:** The From-total option marks the beginning of a continuous series of costing items to be totalized. The end

Field	Description
	of this series is a costing item of the type To-Sum. In this case, please also enter a filter text in the Totalization field to specify the costing items to be included.
Counting up	Here you can now specify the interval or other filter specification of numbers of the costing elements. The results of the specified costing elements are added to a total balance. For the type "Calculation component", "From-total" or "Heading" this field must remain empty. For the "To total" type, the field is automatically filled when the chart of accounts is indented (function in the ribbon). Only the costing items that lie between a From total and a To total are added together. For the "Sum" type, you must manually specify the costing items to be added together.

Note

You must assign a cost range to each record in the Costing item table with the type Costing item. For all other costing items (headings, totals, from-totals or to-totals), the Cost range field remains empty.

Supplied Costing Components Plan:

No.	Description	Cost area	Type	Counting
1	Energy overhead	Material overhead	Costing item	
10000	manufacturing costs		from-total	
10001	Material costs		From-total	
10010	Direct material costs	Material costs	Costing element	
10011	Direct material costs 2	Material costs	Costing item	
10020	Special direct costs material	Material overhead	Costing item	
10030	Material overhead	Material overhead	Costing item	
10040	Material surcharges	Material overhead	Costing element	
10045	Freight costs	Material overhead	Costing item	
10046	handling costs	material overheads	costing element	
10049	Total material costs		To-total	10001 ..10049
10100	Capacity costs		From-total	
10110	individual costs elm	capacity costs	costing element	
10120	Single cost worker	Capacity cost	Calculation item	
10130	individual costs machine	capacity costs	costing element	
10150	Overhead costs elm	Capacity overhead	Costing element	
10160	overhead labor	capacity overhead	costing element	
10170	machine overhead	capacity overhead	costing item	
10180	electricity/buildings	capacity overhead	costing element	
10210	Individual costs external labor	External labor costs	Costing item	
10250	Overhead costs external labor	External labor overhead	Costing element	
10299	Total capacity costs		To-total	10100 ..10299
10300	Individual costs assembly res.	Capacity costs	Calculation component	
10305	Overhead assembly res.	Capacity overhead	Costing element	
10310	Tools	Production Overhead	Costing Item	
10320	Certifications	Production Overhead	Costing Item	
10400	Total cost of goods sold		To-total	10000 ..10400
10410	Shipping	Sales overhead	Costing item	
10420	Quality Control	Sales Overhead	Costing Item	
10430	Sales	Sales overhead	Costing item	
10510	Administration	Administrative overhead	Costing item	

No.	Description	Cost area	Type	Counting
10520	Special direct costs of technology	Administrative overhead	Costing item	
10600	Selbstkosten		Summe	10000..10599
10610	Risk/profit surcharge	Risk/profit	Calculation component	
10620	Special direct costs other	Risk/profit	Costing item	
10700	Mindestrichtpreis		Summe	10000..10699
10710	Commission	Commission/Discount	Calculation Item	
10720	Discounts	Commission/Discount/ Discount	Calculation Item	
10730	Discounts	Commission/Discount	Calculation Item	
10800	Richtpreis		Summe	10000..10799
10810	Rounding income/costs	Commission/discount/ discount	Calculation component	
10900	Guide price (rounded)		Sum	10000 ..10899

Actions via the ribbon Indentation of the component plan

By executing the "Component plan indentation" function, the filter text in the "Totalization" field is automatically determined by the system for the costing components of the "To total" type.

Comments

Date-dependent information can be stored for the respective costing element via the remarks.

Calculation conditions

The costing conditions establish the link between the master data tables such as article, work center group, etc. and the costing components, thus enabling the results of a costing to be assigned to an account.

In the header of a costing condition the assignment to the costing element costs and the costing element overhead costs is made. The lines of the costing condition allow you to define the costing costs more precisely over any number of lines. This applies to both direct costs (field EK price) and indirect costs (fields Cost %, Overhead rate) of the respective master data table.

A distinction is made in the following calculation condition types:

Costing condition (material)

The calculation condition is used in records of the table Article calculation condition with the calculation type Material. That is, you define here costing conditions that you subsequently assign to some of your articles. The condition is taken into account in the calculation when it comes to the calculation of raw materials (purchase items).

Inforegister General

Field	Description
No.	Number of the calculation condition
Description	Description of the calculation condition
Costing element costs	Select the appropriate costing item in the "Costing items costs" field. For the costing condition "Material", this is usually the material direct costs.
Description costing element costs	Specifies the description of the selected costing item from the Costing Item Cost field.
Costing element overhead costs	Select the appropriate costing element in the "Costing element overhead" field. This is usually the material overhead for the costing condition "Material".
Description costing element overhead costs	Specifies the description of the selected costing item from the Costing Item Overhead field.

Inforegister lines

Field	**Description**
Description	Here you enter a description of the content of your calculation condition line.
Costing item	A costing item is assigned to each costing condition line. In principle, a costing item with any cost range can be assigned to a costing condition line. However, you should make sure that you use a costing item whose cost range corresponds to the intended application area of the respective costing condition.
Calculation Component Description	This field is automatically filled by the selection of the costing component.
Heading no.	The Rubric No. field is used to relate calculation condition rows to each other in order to define a calculation base for percentage surcharges.
Calculation	The field is a choice field and controls with its option value the meaning of the field Value: **Amount:** If you select Amount, then the specification in the field Value is understood as absolute number input. So you have here the possibility to store fixed values, which will be taken into account in the calculation. In addition, you can provide this line with a rubric number to refer to this line in another line with the setting Percent - so, for example, to take into account an additional overhead. **Percent:** If you select Amount, then the specification in the Value field is understood as a percentage number entry. If the line has been assigned a rubric no., then the basis of the percentage is the sum of all calculation condition lines of the same calculation condition with the same rubric no. and calculation amount. **Note:** If the line is not provided with a rubric no., the application uses either the purchase price of the origin line of the corresponding calculation value or (if available) the sum of all calculation condition lines of the same calculation condition with the calculation value as basis for the percentage. The rubric no. of these lines will then be ignored.
Value	The meaning of the field depends on the value you have selected in the Calculation field. **Amount:** In this case, the field contains an absolute amount. Depending on the selected costing element, this amount is part of the EK cost or part of the overhead rate. **Percent:** In this case, the Value field contains a percentage value. The basis of the percentage value is the sum of all calculation values with the same rubric no. If the row was not assigned a rubric no., the application uses as a basis either the purchase price of the origin row of the corresponding calculation value or (if available) the sum of all calculation condition rows with calculation value and specification of any rubric no. (but only if these calculation condition rows were interpreted as part of a purchase price).

KUMAVISION factory365 can provide you with predefined costing conditions (material) for use or further individual additions via the Smart Start packages:

Material (single) and material (single2):

Field	Material (simple)	Material (simple2)
No.	KK0000	KK0010
Description	Material (simple)	Material (simple2)
Calculation item costs	10010	10011
Description of costing element costs	Direct material costs	Direct material costs 2
Costing item overhead	10030	10030
Description Costing Item Overhead	Material Overhead	Material Overhead

Material (complex) and material (complex2):

Field	Material (complex)	Material (complex2)
No.	KK0011	KK0001
Description	Material (complex)	Material (complex2)
Calculation item costs	10010	10010
Description of costing element costs	Direct material costs	Direct material costs
Costing item overhead	10030	10030
Description Costing Item Overhead	Material Overhead	Material Overhead

Field		Material (complex)			
Description	Handling	Freight	Overhead costs	Special direct costs	Material surcharges
Kalkulationsbestandteil	10046	10046	10046	10046	10046
Costing Item Description	Handling Costs	Freight Costs	Material Overhead	Special Direct Costs Material	Material Surcharges
Heading no.		R1+R2		R1	R2
calculation/value	7 .00 MW	6.00 %	4.00 %	5.00 MW	2.00 MW

Field		Material (complex2)	
Description	Handling	Freight	Overhead costs
Kalkulationsbestandteil	10046	10045	10030
Costing Item Description	Handling Costs	Freight Costs	Material Overhead
heading no.			
Calculation / Value	1 .00 MW	6. 00 %	4.00 %

Calculation condition (production)

The calculation condition is used in records of the table Article calculation condition with the calculation type Production. This means that you define calculation conditions here which you then also assign to some of your articles. The condition is taken into account in the calculation if it is about the calculation of products (production items).

Inforegister General

Field	Description
No.	Number of the calculation condition
Description	Description of the calculation condition
Costing element costs	Select the appropriate costing item in the field "Costing item costs". In the case of the costing condition "Production", these are usually the direct material costs or the special direct costs of production.
Calculation Item Cost Description	Indicates the description of the selected costing item from the "Costing Item Cost" field.
Costing element overhead costs	Select the appropriate costing item in the "Costing item overhead" field. In the case of the costing condition "Production", this is usually the cost of tools, special direct costs, etc.
Description costing element overhead costs	ISpecifies the description of the selected costing item from the Costing Item Overhead field.

Inforegister lines

Field	Description
Description	Description of the calculation condition
Costing item	A costing item is assigned to each costing condition line. In principle, a costing item with any cost range can be assigned to a costing condition line. However, you should make sure that you use a costing item whose cost range corresponds to the intended application area of the respective costing condition.
Calculation Component Description	This field is automatically filled by the selection of the costing component.
Heading no.	The field "Rubric no. " is used to relate calculation condition rows to each other in order to define a calculation basis for percentage surcharges.
Calculation	The field is a choice field and controls with its option value the meaning of the field Value: **Amount:** If you select the option "Amount", then the specification in the field Value is understood as absolute number input. So here you have the option to enter fixed values that will be taken into account in the calculation. In addition, you can provide this line with a rubric number to refer to this line in another line with the setting Percent - so, for example, to take into account an additional overhead. **Percent:** If you select Amount, then the specification in the field "Value" is understood as a percentage number entry. If the line has been assigned a rubric no., then the basis of the percentage is the sum of all calculation condition lines of the same calculation condition with the same rubric no. and calculation amount. **Note:** If the row was not provided with a rubric no., the application uses as the basis for the percentage either the EK price of the origin row of the corresponding calculation value or (if available) the sum of all calculation condition rows of the same calculation condition before the current row with the calculation value. The rubric no. of these lines will then be ignored.
Value	The meaning of the field depends on the value you have selected in the Calculation field. **Amount:** In this case, the field contains an absolute amount. Depending on the selected costing element, this amount is part of the EK cost or part of the overhead rate. **Percent:** In this case, the Value field contains a percentage value. The basis of the percentage value is the sum of all calculation values with the same rubric no. If the line has not been assigned a rubric no., the application will use as a basis either the EK price of the origin line of the corresponding calculation value or (if available) the sum of all calculation condition lines before the current line with calculation value and specification of any rubric no. (but only if these calculation condition lines have been interpreted as part of an EK price).

KUMAVISION factory365 can provide you with predefined calculation conditions (production) for use or further individual additions via the Smart Start packages:

Field	Production (simple)	Production (complex)
No.	KK1000	KK1001
Description	Production (simple)	Production (complex)
Calculation item costs	10011	
Description of costing element costs	Direct material costs 2	
Costing item overhead	10310	10320
Description costing component overhead	Tools	Certifications

No further information is defined in the calculation condition lines of the condition "Production (simple)".

Field		Production (complex)
Description	Tool	Certification
Calculation component	10310	10320
Calculation component description		Certification tool
Category no.		
Calculation / Value	2.00 %	5.00 MW

Costing condition (capacity)

The costing condition is used in data records of the Work center costing condition table. This means that you define costing conditions here which you then assign to your capacities (work center groups and work centers). The condition is taken into account in the calculation as soon as a capacity is addressed (e.g. because a routing is stored for a production article).

Inforegister General

Field	Description
No.	Number of the calculation condition
Description	Description of the calculation condition
Costing element costs	Select the appropriate costing item in the field "Costing item costs". For the costing condition "Capacity", this is usually the direct production costs.
Calculation Item Cost Description	Gives the description of the selected costing item from the "Costing Item Cost" field.
Costing element overhead costs	Select the appropriate costing element in the "Costing element overhead" field. This is usually the production overhead for the costing condition "Capacity".
Description costing element overhead costs	Indicates the description of the selected costing item from the "Costing Item Overhead" field.

Inforegister lines

Field	**Description**
Description	Here you enter a description of the content of your calculation condition line.
Costing item	A costing item is assigned to each costing condition line. In principle, a costing item with any cost range can be assigned to a costing condition line. However, you should make sure that you use a costing item whose cost range corresponds to the intended application area of the respective costing condition.
Calculation Component Description	This field is automatically filled by the selection of the costing component.
Heading no.	The Rubric No. field is used to relate calculation condition rows to each other in order to define a calculation base for percentage surcharges.
Setup time	This field is only included in costing conditions of the type capacity or external labor. It can be used to define costing elements that only refer to the setup time in their calculation.
Share %	The content of the field is used as a percentage share in the formula for calculating the Costing price field of the costing value.
Calculation	The field is a choice field and controls with its option value the meaning of the field Value: **Amount:** If you select Amount, then the specification in the field Value is understood as absolute number input. So you have here the possibility to store fixed values, which will be taken into account in the calculation. In addition, you can provide this line with a rubric number to refer to this line in another line with the setting Percent - so, for example, to consider an additional overhead. **Percent:** If you select Amount, then the specification in the Value field is understood as a percentage number entry. If the line has been assigned a rubric no., then the basis of the percentage is the sum of all calculation condition lines of the same calculation condition with the same rubric no. and calculation amount. **Note:** If the row was not provided with a rubric no., the application uses as the basis for the percentage either the EK price of the origin row of the corresponding calculation value or (if available) the sum of all calculation condition rows of the same calculation condition before the current row with the calculation value. The rubric no. of these lines will then be ignored.
Value	The meaning of the field depends on the value you have selected in the Calculation field. **Amount:** In this case, the field contains an absolute amount. Depending on the selected costing item, this amount is part of the EK cost or part of the overhead rate. **Percent:** In this case, the Value field contains a percentage value. The basis of the percentage value is the sum of all calculation values with the same rubric no. If the line has not been assigned a rubric no., the application will use as a basis either the EK price of the origin line of the corresponding calculation value or (if available) the sum of all calculation condition lines before the current line with calculation value and specification of any rubric no. (but only if these calculation condition lines have been interpreted as part of an EK price).

KUMAVISION factory365 can provide you with predefined calculation conditions (capacity) for use or further individual additions via the Smart Start packages:

Field	**Capacity (Energy)**	**Capacity (Simple)**	**Capacity (Complex)**
No.	01	KK2000	KK2001
Description	Capacity (energy)	Capacity (simple)	Capacity (complex)
costing item cost		10130	10130
Description of costing item cost		Individual costs machine	Individual costs machine
Costing item overhead	1	10170	10170
Description of costing element overhead costs	overhead costs energy	overhead costs machine	overhead costs machine

No further information is defined in the calculation condition lines of the conditions "Capacity (energy)" and "Capacity (simple)".

Field		**Capacity (complex)**			
description	machine	worker	scrubber	apprentice	GK machine
Kalkulationsbestandteil	10130	10120	10110	10120	10170
Costing component description	Individual costs machine	Individual costs worker	Individual costs elm	Individual costs worker	Individual costs machine
Rubric No.	M1	A	A	M1	A
armament		Yes			
share %	100.00	100. 00	100. 00	100.00	100. 00
calculation/value	2 .20 MW	1. 20 MW	1. 50 MW	0 .90 MW	20. 00 %

Field	**External labor (simple)**	**External labor (complex)**
No.	KK2050	KK2051
Description	Foreign work (simple)	Foreign work (complex)
Costing item costs	10210	10210
Description of costing item costs	individual costs external labor	individual costs external labor
Costing item overhead	10250	10250
Description of costing element overhead costs	Overhead costs external work	Overhead costs external work

No further information is defined in the calculation condition lines of the condition "External labor (simple)".

Field	**External labor (simple)**	**External labor (simple)**
Description	Freight	Overhead costs
calculation component	10250	10250
Calculation Item Description	Overhead Costs External Labor	Overhead Costs External Labor
heading no.		
armament		
Share %	100 .00 %	100. 00 %
Calculation / Value	5 .00 %	15. 00 %

Calculation condition (markup)

The calculation condition is used in records of the table Article calculation condition (cannot be activated) with the calculation type markup. This means that you define calculation conditions here which you then assign to some of your articles. The condition will be taken into account in the calculation if it is the calculation of "end products". Here you no longer define the cost price of the article, but the markup up to the target price.

Inforegister General

Field	Description
No.	Number of the calculation condition
Description	Description of the calculation condition
Takeover guide price	In an article calculation you can transfer the determined target price from a calculation proposal into the master data of the calculated article. You specify here, in which field of the master data the determined target price should be transferred: **None:** There is no transfer. **Target price:** The value is transferred to the field target price of the article (table article). **Sales price:** The value is taken over into the field Sales price (table article). **Sales price:** The value is taken over into the sales price table of the article. The entry is made taking into account the sales type and sales code. **Price + Sales Price:** The value is transferred to both the Price field (Article table) and the Sales Price table record.
Sales Type	This field is taken into account when entering the target price in the sales price table. The following selection options are available: • Debitor , • Debitor price group, • All debtors • Campaign It can only be edited if the option "Sales price" or "Target price+sales price" has been selected in the Transfer target price field.
Sale code	This field is also taken into account when entering the target price in the sales price table. What you can select here depends on what you have specified in the "Sales type" field. For example, if you have selected customer price group there, all your customer price groups will be displayed for selection in the "Sales code" field. This makes it possible to define individual markup calculations for special customer groups, campaigns or even for individual customers.

Inforegister lines

Field	Description
Heading no.	The field "Rubric no. " is used to relate calculation condition rows to each other in order to define a calculation basis for percentage surcharges.
Description	Here you enter a description of the content of your calculation condition line.
Calculation	The field is a choice field and controls with its option value the meaning of the field "Formula/Code": **Empty:** If the field is left empty the line has no influence on the execution of the calculation. For example, it can be used for a heading or explanation line. **Value:** If you select "Value", the "Formula/Code" field will contain an absolute number entry. In addition, you can assign a heading number to this line to refer to it in another line with the Percent setting. **Formula:** If you select Formula, the Formula/Code field contains an arithmetic formula. The parts of the formula refer to the heading no. of other costing condition lines. **Costing Item:** If you select Costing Item, the Formula/Code field contains a costing item. Thus, this setting allows you to determine a markup line based on the costing values of a specific costing component. This costing item can also be a to-total. **Project Planned Line:** If you select Project Planned Line, the Formula/Code field contains a project task number.
Formula/Code	The meaning of the field depends on the value you have selected in the "Calculation" field. **Empty:** In this case, the "Formula/Code" field is also empty. The calculation condition line has no influence on the execution of the calculation. For example, it can be used for a heading or explanation line. **Value:** In this case, the field contains a constant (decimal number). You can use this constant also, in which you provide the line with a rubric no. and in another calculation condition line with the calculation formula reference to this line. **Formula:** In this case the field contains an arithmetic formula. A rubric no. can also be used here to determine the calculation basis. In the arithmetic formula, the basic arithmetic operations +, -, , /, *multilevel brackets () and the two special characters % and § can be used.* *% stands for "percent of one hundred".* *Example:* *5% A means "5 percent of the sum of all markup lines with rubric no. A". Suppose the total is 100, then the markup is 5 (100/100*5) § stands for "percent of one hundred". **Example:** 5 § B means "5 percent from the total of all markup lines with rubric no. B". Let's say the total is 100, then the markup is 4.76 (100/105*5).* _Calculation Item:_* In this case, a calculation item is selected. If this line is used in a calculation, the application will calculate the calculated field "Multi-level amount per 1 unit". For example, the Costing Ingredient option value allows you to calculate a markup line based on the costing values of a specific costing ingredient. This costing item can also be a to-total.

Field	Description
Rounding Method Code	The field specifies whether the costing price of the costing value that will be created when applying the costing condition in a costing proposal is to be rounded.The type and manner of the desired rounding is thereby controlled with the help of a rounding method defined in the master data. This table is a standard table. You have the option to always round up or down amounts or to round them up or down commercially (in this case, amounts are only rounded up if the digit to be rounded is >=5. For further explanations on how to set up the rounding methods, please use the Microsoft Dynamics 365 Business Central1 Helpsite.
Costing item	A costing item is assigned to each costing condition line. In principle, a costing item with any cost range can be assigned to a costing condition line. However, you should make sure that you use a costing item whose cost range corresponds to the intended application area of the respective costing condition.
Guide price	Tick this field only in the line that should determine your guide price.
Bold	The Bold field controls the visual highlighting of the row in the E+D Order markup calculation window.
Error text	If you specify an incorrect formula, the corresponding error message appears in this field.

KUMAVISION factory365 can provide you with predefined calculation conditions (markup) for use or further individual additions via the Smart Start packages:

Field	Impact	Impact Calculation
No.	AUFSCHLAG	KK3000
Description	Surcharge	Surcharge Calculation
Takeover target price	Target price	Target price
Sale	Debitor	Debitor
sale code		

No further details are defined in the calculation condition lines of the condition "Surcharge".

Heading no.	Description	Calculation	Formula / Code	Rounding code	Lime. Component	Lime. Comp Descr
HK	Manufacturing costs	Calculation b .	10400			
	Shipping	Formula	HK * 0,5/100		10410	Shipp
	Quality control		Formula	00 .70% HK		10420
	Sales overhead	Formula	03 .00 % HK	10430	Sales	
	Administration		Formula	02 .50 % HK		10510
	SEK d. Technik	Calculation b .	10520			
SK	Self cost	Calculation b .	10600			
	risk	formula	02 .00 % SK		10610	Risk/p surcha
	Profit	Formula	30 .00 % SK		10610	Risk /
MRP	Minimum Indicative Price	Calculationb .	10700			
	commission 1	formula	03 ,00 § MRP	10710	Provision	
	commission 2	formula	01 ,00 § MRP	10710	Provision	
	Saccount	Formula	03 ,00 § MRP	10720	Account	
	Discount	Formula	10 ,00 § MRP	10730	Discount	
RP	Guide Price	Calculationb .	10800			
RPG	Directive price rounded	Calculationb .	10800	PRICE		
	Rounding	Formula	RPG-RP		10810	Round incom
	Guide price (incl. rounding)	Calculationb .	10900			

Calculation scheme

The "Costing" application area allows you to evaluate the results of item costing and job costing in so-called costing sheets. Costing schemes have the form of a matrix with a freely definable row layout and a freely definable column layout and are comparable to the account schemes (Microsoft Dynamics 365 Business Central[1] Standard).

A costing sheet can basically follow the structure of the costing sheet, but it is usually presented in somewhat less detail by grouping certain items together. For example, you can display the total material costs in the chart of accounts; without subdividing them into direct material costs and material overhead costs. This is possible because when you create a costing proposal, the application automatically assigns each costing value to a costing item.

Any number of calculation schemes can be created. Two calculation schemas are already included in the basic setup of the calculation - namely the standard calculation schema and the overview schema. Of course, these schemes can be further customized according to your requirements.

You can call up the overview using the search term "Kalkulationsschemanamen".

Via "New" in the ribbon you can define a new scheme using the table below.

Field	Description
Name	In this field, assign a name for the calculation schema.
Description	In this field, specify a description for the calculation schema.
Standard column layout	The field "Standard column layout" is used to define the criteria for the calculation in the column view. The column layout stored there will always be used as the basis for the calculation.

Via "Calc. Edit scheme" in the ribbon you have the possibility to define the scheme in detail.

Field	Description
Heading no.	Enter a rubric number for a unique description of the row or to be able to use this row later for a calculation.
Description	Here you specify a description for the line.
Totalization type and totalization	The Totalization type field is a choice field. It determines which records will be included: **Ingredient Sum:** The sum is formed from the amounts taking into account the costing elements of the costing element type. To do this, specify an expression in the Total field to filter the costing components to be used. **Example:** The Total field contains the expression 10100..10299. Specifying this causes the costing sheet row to display amounts resulting from the costing components in the range 10100 to 10299. Only costing items of the type costing item are taken into account. **Total:** The total is formed from the amounts taking into account the costing items of the type total or to-total. To do this, specify an expression in the Total field to filter the costing items to be used. **Example:** The Total field contains the expression 10100..10299. Specifying this causes the costing sheet row to display amounts that result from the costing items in the range 10100 to 10299. Only costing items of the type Total or To total are taken into account. **Formula:** The total is formed from the calculated amounts in other lines of the same costing sheet. To do this, specify an arithmetic formula in the Total field. When doing this, use the Heading No. field to refer to the other rows in the schema in the formula. **Example:** The Add Up field contains the expression A+B. The amounts from all other spreadsheet rows in the same schema that have the value A or B in the Heading No. field are added together.
Display	This field is relevant for the Costing Sheet report. You have the following choices: **Yes:** The row will be printed in the report. **No:** The row will not appear in the report. For example, you can use this option to define a calculation scheme row that contains subtotals of a longer calculation scheme. **If a column is not 0:** The row will only be printed in the report if it is not 0. Thus, rows without an amount will not be printed at all.
New page	If you mark the calculation schema line with a check mark, the report will make a page change at this point.
Bold	If you mark the calculation scheme row with a check mark, the row will be displayed in bold in the report.
Cursive	If you mark the calculation scheme line with a check mark, the line will be displayed in italics in the report.
Underlined	If you mark the calculation scheme row with a check mark, the row will be underlined in the report.
Reverse sign on	

Field	Description
	If the field of the calculation scheme row is checked, all calculated amounts of the row will be displayed in the Calculation scheme matrix window with reversed sign.

Delete

You can delete the calculation schema via the "Delete" menu item.

Print

Via the menu item "Print" you have the possibility to print the calculation schema considering a defined column layout and the specification of at least one calculation proposal line.

Set up account

The "Insert accounts" function transfers the records of the Costing item table to the present book sheet, creating exactly one costing item row for each costing item. The no. of the costing item is then placed in the Totals field of the costing sheet row.

You can select the costing elements to be transferred individually after starting the function. All costing elements are displayed in an overview. Select the data records you want in the window and then click OK to start the transfer.

Set up column layouts

Via the menu item "Set up column layouts" you have the possibility to define a column layout for the defined calculation schema.

KUMAVISION factory365 can already provide you with two predefined calculation schemes for use or further individual additions via the Smart Start packages:

Calculation scheme standard:

Heading no.	Description	Counting type	Counting	Advertisements
10010	Direct material costs	Inventory total	10010	Yes
10011	Direct material costs 2	Inventory total	10011	Yes
10020	Special direct costs material	Inventory total	10020	Yes
10030	Material overhead	Inventory total	10030	Yes
10040	Material surcharges	Component sum	10040	Yes
10045	Freight costs	Inventory sum	10045	Yes
10046	Handling costs	Inventory sum	10046	Yes
10049	Sum of material costs	Sum total	10049	Yes
		Component sum		Yes
10110	Individual costs elm	Component sum	10110	Yes
10120	Single cost worker	Summary	10120	Yes
10130	Individual costs machine	Inventory total	10130	Yes
10150	Overhead costs elm	Component sum	10150	Yes
10160	Overhead labor	Component total	10160	Yes
10170	Overhead machine	Components	10170	Yes
10180	Electricity/Building	Component sum	10180	Yes
10210	Individual costs external labor	Individual costs	10210	Yes
10250	Overhead costs external labor	Inventory total	10250	Yes
10299	Sum capacity costs	Sum total	10299	Yes
		Component sum		Yes
10300	Individual costs assembly res.	Component sum	10300	Yes
10305	Overhead assembly res.	Component sum	10305	Yes
		Component sum		Yes
10310	Tools	Components	10310	Yes
10320	Certifications	Inventory	10320	Yes
		Component sum		Yes
10400	Total cost of goods sold	Sum total	10400	Yes
		Component sum		Yes
10410	Shipping	Inventory	10410	Yes
10420	Quality control	Component sum	10420	Yes
10430	Sales	Inventory	10430	Yes
10510	Administration	Component total	10510	Yes
10520		Inventory total	10520	Yes

Heading no.	Description	Counting type	Counting	Advertisements
	Special individual costs engineering			
	(Sales overhead)	Inventory total	10400 ..10499	Yes
	(Administrative overhead)	Component total	10500 ..10599	Yes
10600	Self cost	Sum total	10600	Yes
10610	Risk/profit surcharge	Component sum	10610	Yes
10700	Minimum reference price	Sum total	10700	Yes
10710	Provision	Component sum	10710	Yes
10720	Discounts	Inventory	10720	Yes
10730	Discounts	Inventory	10730	Yes
	(Commission/Discount/ Discount)	Cumulative total	10710 .. 10799;10810	Yes
10800	Guide price	Sum total	10800	Yes
10900	Guide price (rounded)	Sum total	10900	Yes
		Component sum		Yes
		Component sum		Yes
	Summe Aufschläge	Bestandteilsumme	10401..10499 10501..10599 10601..10699 10701.. 10799 10810	Ja

Calculation scheme overview:

Heading no.	Description	Counting type	Counting	Advertisements
MAT	Sum of material costs	Sum of components	10010 ..10048	Yes
KAP	Sum of capacity costs	Sum of components	10110 ..10199	Yes
FREMD	Total external labor costs	Component total	10210 ..10298	Yes
PROD	Total production overhead	Inventory total	10300 ..10399	Yes
	Sum of material costs	Sum total	10049	Yes
		Component sum		Yes
10410	Shipping	Inventory	10410	Yes
10420	Quality control	Component sum	10420	Yes
10430	Sales	Inventory	10010	Yes
10510	Administration	Inventory	10010	Yes
10520	Special individual costs engineering	Inventory total	10010	Yes
10600	Self cost	Sum total	10600	Yes
10610	Risk/profit surcharge	Component sum	10610	Yes
10700	Minimum reference price	Sum total	10700	Yes
10720	Discounts	Inventory	10720	Yes
10730	Discounts	Inventory	10730	Yes
10900	Guide price (rounded)	Sum total	10900	Yes
		Component sum	10010	Yes
	Summe Aufschläge	Bestandteilsumme	10401..10499 10501..10599 10601..10699 10701.. 10799 10810	Ja

Article card

Article Calculation Conditions

The article calculation conditions can be called up via the article card. With this mask you can define the calculation conditions specifically for a certain article or a species group for the later calculation.

The "General" area of the article calculation conditions mask initially contains filters that you can use to control your view. When you open the mask, the filters are initially always preset to the article from which you have called up the mask.

Field	Description
Sales Type Filter	Using the sales type filter, you can limit your view to lines of a specific costing type or none. The following selections are available: • Material • Production • None
Species filter	Using the species filter, you can limit your view to rows of a specific type. The following selections are available: • Article • Article category • Product booking group • Stock booking group • All articles • None
Code filter	You can use the code filter to further restrict your view in addition to the species filter on a specific article or similar.
Start date filter	Use the start date filter to narrow your view to specific validity lines.

Using the rows you can directly define the calculation conditions with the help of the table below.

Field	Description
Calculation type	In this field you define for which calculation type you want to define the line.You can choose from: **Material:** The condition is taken into account in the calculation, if it is the calculation of raw materials (purchase items). **Production:** The condition is taken into account in the calculation, if it is the calculation of products (production items).
Type	Using the "Type" field, you have the option of defining the condition line for an article or for faster entry of a type group. The following options are available: • Article • Article category • Product booking group • Stock booking group • All articles
Code	You can limit each selection in the "Type" field to a specific article number or species group number in this field.
Indirect Cost Rate	Enter the indirect cost of the item as an absolute amount at this point. **Note:** If you are working with costing, it is recommended that you do not maintain the default field on the item card.
Indirect costs %	Indirect costs of the item as a percentage value. **Note:** This field is identical to the field on the item card. However, if you are working with costing, it is recommended that you do not maintain the standard field on the item card, but only this one instead.
Overhead Cost Rate (Consumption Capitalization)	Enter the consumption capitalized overhead as an absolute amount at this point. **Note:** Overhead and consumption capitalized overhead can be used in parallel. The only difference is that only either a Costing Condition or a Costing Condition Consumption Activated can be defined. Both do not work.
Cost % (Consumption Activation)	Indicate the consumption-activated costs as a percentage value at this point.
Calculation Condition No.	Enter the appropriate calculation condition.
Start date	Indicates the date from which the calculation line is valid.
End date	Indicates the date until when the calculation line is valid.

Via "Manage" > "Delete" you can delete a selected calculation row.

Article calculation conditions (cannot be activated)

The article calculation conditions (not activatable) can be called up via the article card. This screen allows you to define the non-activatable costs (costs that are not included in the cost price) specifically for a particular article or species group for later costing.

In the "General" area of the article calculation conditions (cannot be activated) mask, there are initially filters that you can use to control your view. When you open the mask, the filters are initially always preset to the article from which you have called up the mask.

Field	**Description**
Sales Type Filter	Using the sales type filter, you can limit your view to lines of a specific costing type or none.The following selections are available: • Markup • Special Direct Cost • None
Type filter	Using the type filter, you can limit your view to rows of a specific type. The following selections are available: • Article • Article category • Product posting group • Stock posting group • All articles • None
Code filter	You can use the code filter to further restrict your view in addition to the species filter on a specific article or similar.
Start date filter	Use the start date filter to narrow your view to specific validity lines.

Using the rows you can directly define the calculation conditions with the help of the table below.

Field	Description
Costing type	In this field you define for which costing type you want to define the line. You can choose from: **Surcharge:** The condition is taken into account in the calculation, if it is the calculation of "end products". You define here no longer the cost price of the item, but the markup up to the target price. **Special direct costs:** The condition is defined the costs that are incurred for a product, but are not quantity-dependent.
Type	Using the "Type" field, you have the option of defining the condition line for an article or for faster entry of a type group. The following options are available: • Article • Article category • Product booking group • Stock booking group • All articles
Code	You can narrow down each selection in the "Type" field to a specific article number or species group number in this field.
Calculation Condition No.	Indicates the corresponding calculation condition.
Calculation Condition Description	Gives the description for the calculation condition selected in the "Calculation Condition No." field.
Calculation condition no. (E+D)	Indicates the corresponding calculation condition (E+D).
Calculation Condition Description (E+D)	Gives the description for the calculation condition selected in the "Calculation Condition No. (E+D)" field.
Start date	Indicates the date from which the calculation line is valid.
End date	Indicates the date until when the calculation line is valid.
Special direct costs	Indicates possible special direct cost values.
Quantity per unit	Indicates the quantity per unit.
Special direct costs per unit	Indicates the special direct costs per unit.
Costing item no.	SEK Specifies the costing item for the special direct costs.
SEK Costing Component Description	Indicates the description for the costing component selected in the "SEK Costing Component No." field.
Project no.	Indicates a possible project number.

Via "Manage" > "Delete" you can delete a selected calculation row.

Calculation specifications

You can use the "Costing specifications" to specify different lot sizes in advance for the cost of goods manufactured simulations, which are then taken into account in the subsequent costing.

Field	Description
No.	This is assigned automatically on the basis of a stored number series.
Item no.	This is automatically assigned with the article number from which you started the call.
Description	Corresponds to the item description.
Start date	From when should this costing specification apply.
End date	To when is this costing specification valid.
Lot size	Indicates the lot size number.
Standard	This field is queried when calculating the cost price. If this is set and the checkbox "Only standard costing specifications" is also set in the function "Costing price (fixed)/Calculate target price for item", then only lot sizes that have the checkmark set in the costing specifications are used.

Job costing conditions

You call up the Costing conditions mask work center via the work center group card. Via this mask you can define the costing conditions you want to assign to your capacities (work center groups and work centers). The condition is taken into account during costing as soon as a capacity is addressed (e.g. because a routing is stored with a production article).

In the "General" area of the Calculation conditions mask workstation, there are initially filters that you can use to control your view. When you open the mask, the filters are always preset to the workstation group from which you called the mask.

Field	Description
Type filter	Using the type filter, you can restrict your view to lines of a specific type or none.The following selections are available: • Department • Workstation group • Workstation • Workstation line • None
Code filter	You can use the code filter to further restrict your view in addition to the type filter on a specific workstation group or similar.
Start date filter	Use the start date filter to narrow your view to specific validity lines.

Using the rows you can directly define the calculation conditions with the help of the table below.

Field	Description
Type	Using the "Type" field, you have the option of defining the condition line for a workstation group or similar. The following options are available: • Department • Workstation group • Workstation • Work plan lines
Code	You can limit each selection in the "Type" field to a specific workstation group or similar in this field.
Version code	Specify the appropriate version code.
Operation No.	Indicate a corresponding operation.
Indirect cost rate	Enter the indirect costs as an absolute amount at this point.
Indirect costs %	Enter the indirect costs as a percentage value at this point.
Calculation Condition No.	Enter the appropriate calculation condition.
Calculation Condition Description	Indicates the description for the calculation condition selected in the "Calculation Condition No." field.
Start date	Indicates the date from which the calculation line is valid.
End date	Indicates the date until when the calculation line is valid.

Via "Manage" > "Delete" you can delete a selected calculation row.

ARTICLE CALCULATION

The costing proposal is used for the cost of goods manufactured calculation. You can call this up directly from the respective article card via the menu ribbon.

Calculation proposal

In the costing proposal lines, historically already preceding costings are displayed (if available).

Field	Description
Warning	**Blank:** The proposal line does not contain any errors and can be accepted if necessary. **Errors:** The proposal line contains errors that can be viewed and corrected via the error log. After correction, the proposal must be run through again.
Calculation Run Seq. No.	Indicates a sequential number per proposal line. For proposal lines that contain different article costing specifications (lot sizes), these are displayed with the same sequential number.
Calculation Run Description	Indicates the description that has been specified for the respective calculation run.
Item no.	Indicates the article number for which the suggestion line was calculated.
Description	Indicates the description of the item.
Procurement method	Indicates the stored procurement method of the item.
Status	Indicates the status of the proposal line. A distinction is made here between: • Empty • Preferred • Rejected • Transferred For more information, see the section "Change status".
Lot size	Indicates the lot size on which the proposal line was costed. **Note:** Please note that the lot sizes on the item card as well as in the costing specifications can be used for costing.
Calculation date	Indicates the date when the proposal line was calculated.
Cost Price (Fixed)	Indicates the deposited "Cost Price (Fixed)" on the item card.
New cost price (fixed)	Specifies the new cost price (fixed) of the proposal line.
Cost % (Consumption Activation)	Displays , (if available) the "Cost % (Consumption Activation)" determined from the costing definitions.
Overhead rate (consumption capitalization)	Displays, (if available) the "Overhead rate (consumption capitalization) determined from the costing definitions.
Guide price	Indicates the previous guide price.
New target price	Indicates the recalculated target price.

Calculate set price (fixed)/direct price for article

When this function is executed, the cost price for the corresponding item(s) is calculated.

Field	Description
Calculation date	Specifies the calculation date. This is used to take into account the start and end dates of purchase prices, costing conditions or even bills of materials and routings for costing.
Calculation Run Description	This input is a mandatory input and defines what kind of calculation it is.
Standard costing specifications only	Here it can be defined whether the lot size of the article to be calculated is to be drawn from the article card or the calculation specification. If the switch is not activated, the stored lot size of the costing specification (if available) is treated with priority than that of the article card. If the switch is set, only the stored lot size with the identifier=standard (if available) is treated with priority than that of the article card. **Note:** This applies only to the first level, that is, the article to be costed.
Costing Proposal Name (Plan)	Specification of the costing proposal (plan) if simulations are performed. **Note:** In order to determine the correct cost price based on the structure, which is then also written back to the item card, this field must not be filled in.

Change status...

This function allows you to set the status of the costing proposal line according to the selection (Preferred or Rejected) in the "Status" field.

The status is relevant for the function execution "Accept costing proposal (preferred)". Only costing proposal lines with the status "Preferred" are adopted.

When the price is accepted, the "Status" field is set to "Accepted".

Adopt costing proposal (preferred)

Using this function, the values from the costing proposal lines with the status=Preferred are taken and transferred to the article card.

When executing the function, it is also possible to perform a revaluation at the recalculated price for the items that are still open.

Field	Description
Posting date	Required for the revaluation ledger sheet. Corresponds to the valuation date
Fill revaluation book.sheet	Will be selected if you want to revaluate the currently still open article items. Depending on the selection of the field "Transferred from" either the whole structure can be revaluated or only the article from the calculation proposal. The revaluation book sheet can still be controlled afterwards. It must always be posted manually.
Voucher no.	Indicates which voucher number is to be written to the revaluation ledger sheet.
Article Book. sheet template	Indication of the revaluation bookb sheet
Article Book. sheet name	Revaluation book sheet name
Transfer from	**One level:** Only the prices from the item from the costing proposal line will be updated. The items in lower levels will not be updated. **All levels:** All prices and price fields of all items that occur in the structure will be updated.

Article costing specifications

The "Article costing specifications" can be used to carry out manufacturing cost simulations with different batch sizes. As a rule, these defaults are already defined in advance in the "Costing defaults" on the respective article card and displayed accordingly at this point. If required, changes and/or entries can be made here.

Note

This always only affects the article that is currently being costed. If costing specifications are also defined for assemblies in subset levels, these are not taken into account. Here, the lot size is always taken from the article card.

Field	Description
No	This is assigned automatically on the basis of a stored number series.
Article No.	This is automatically assigned with the article number from the data record of the calculation proposal line.
Description	Corresponds to the item description.
Start date	From when this calculation specification should apply. Reference date is the "Calculation date" when executing the function "Calculate set price (fixed)/Directive price for article".
End date	To when is this calculation specification valid. Reference date is the "Calculation date" when executing the function "Calculate set price (fixed)/Directive price for article"
Standard	This field is queried when calculating the cost price. If this is set and also at the function "Calculate cost price (fixed)/Directive price for article" the hook "Only standard costing specifications" is set, then only lot sizes are used, which have the hook set in the costing specifications. **Note:** Lot size from the article is not used, if valid costing specifications were found.
Remark	Indicates whether a remark exists for this calculation specification. Remarks can also be stored here.
Corrected on	Set by the system when the record is created or corrected.

Note

If there are several valid entries, the system automatically creates a separate calculation for each valid entry.

Costing proposal (planned values)

With the costing proposal (planned values) you can simulatively calculate proposals with modified planned values and also transfer them via batch processing. Since the basis for the cost of goods manufactured calculation is always the master data, the exchange of the articles is not possible at this point. Only amount values and cost values can be changed (no times and no component quantities).

Via the calculation proposal (plan values) mask you can first select an already created proposal for editing via the "Name" field or define a new one via "New" by entering "Name" and "Description".

You can use the function calls "Propose article costing condition", "Propose capacity unit price (costing)", "Propose article unit price (fixed) (costing)" and "Propose costs according to structured BOM" to redefine the respective stored planned values in batch processing.

The function call opens a mask on which you can define new plan values in the option areas and limit your change project to certain criteria by means of the filter area.

Fixed factor:
These radio buttons allow you to define fixed values for your changes, which will be taken into account over the run and written into the "New value fields" provided for this purpose.

Correction factor:
You can use these option fields to specify factor values that are to be multiplied by the original values. Via the run, these results are also written into the "New value fields" provided for this purpose.

Via the menu item "Accept costing proposal (plan values)" you can finally accept the new plan values.

> **Note**
>
> Please note that only valid condition values are considered for replanning. For example, if an end date of an item calculation condition is in the past, no change value will be written into the "New value field" for this record.

Costing proposal (planned conditions)

With the costing proposal (planned conditions) you can change the costing conditions defined in the system via batch processing. The logic here corresponds to that of the costing proposal (planned values).

Retrieve error log

The error log lists all errors that occurred during the calculation. By clicking on the integrated lookups or the call "Display" in the menu ribbon, the errors can be edited directly from the mask.

> **Note**
>
> Please note that you will need to recalculate the costing after you fix the error.

Calculation values (matrix)

In this view the rows of the account scheme are superimposed with the columns of the column layout. According to the filters entered, the values are displayed. By selecting a predefined column layout for comparison, a comparison of two calculation proposals is possible at this point.

Costing values (structure)

In this view you see all considered costing values in a structure detailed on cost type level. Thereby you have the possibility to view the origin documents on row level via the call of the same name.

Structure list

Using the structure list, you can view a costing proposal aggregated over all costed levels and their costs.

Field	Description
Calculation proposal 1 Filter	Select a calculation proposal that you want to have displayed.
Including overhead costs	Activate the check box if you want to consider the overhead costs included in the respective costs.
Material only	Activate the check box if you only want to view the material costs.
Cost selection	You can use the cost selection to specify the BOM depth over which you want to display the costs. **Single-level:** Displays the costs of the top level of the BOMs. **Multi-level:** Displays the costs multi-level, broken down to the last assembly/component. **Multi-level:** Displays the costs multi-level, broken down to the last assembly/component.

Structure list comparison

With the help of the structure list comparison you can directly compare two costing proposals. This structure list comparison allows you to see at a glance, through visualized representation in the "Symbol Deviation" fields, at which level a change to the previous proposal has taken place.

Field	Description
Calculation Proposal 1 Filter	Select a calculation proposal that you want to compare with another proposal.
Calculation Proposal 2 Filter	Select another calculation proposal that you want to compare with the one already selected from the "Calculation Proposal 1 Filter"
Including overhead	Activate the check box if you want to consider the overhead included in the respective costs in the comparisons.
Material only	Activate the switch if you only want to compare the material costs.
Cost selection	You can use the cost selection to specify the BOM depth over which you want to display the costs. **Single-level:** Displays the costs of the top level of the BOMs. **Multi-level:** Represents the costs multi-level, broken down to the last assembly/component.

After your selection, you then execute the "Compare" function in the ribbon to compare the values in the row display.

QUOTATION COSTING

In a quotation, you can transfer the corresponding article lines for customer-specific inquiries into a calculation in order to modify them according to customer-specific requirements and to calculate them separately. The calculated cost price and sales price can then be transferred to the offer.

Calculate manufacturing costs

With the "Calculate production costing" function, you first initiate the costing for the selected article line. When the function is executed, a "Simulated production order" is automatically created. Depending on the setting in the "Valuation and calculation setup", the production order will then also open automatically or not.

For item rows for which a calculation has already been created, the row in the "Calculation tracking rows available" field has the "Yes" identifier. By clicking on the identifier, the costing lines can be viewed.

Calculation tracking lines

This call opens the costing trace lines. The links between the production order and the quotation/order are displayed in the calculation tracking lines. Several production order lines can be linked to one quotation line.

Field	Description
Status	Indicates whether the quote line is linked to a calculation. When selected, the calculation tracking lines will be opened.
FA No.	Displays the FA number. This can be an FA in "Simulated", "Firmly Scheduled", "Released" or "Finished" status.
FA line number	Indicates to which FA line number the offer / order line number is linked.
Project no.	Indicates which project it is
Project task no.	Indicates which project task no. is involved.
Project plan line no.	The project plan line number is shown here.
E+D project no.	Indicates which E+D project number was entered in the production order.
Production order type	Displays the production order type from the production order.
Article No.	Displays the article number from the production order.
Variants Code	Displays the variant from the production order.
Description	Display the description from the production order.
Number of costing proposals (E+D)	Number of costing proposals (E+D) Indicates how many different costings have been carried out for this production order. There is no differentiation between target and actual costing.

Delete

By executing the "Delete" function in the ribbon, you can delete a calculation line. If there are no more calculation lines after executing the function, the sales line will be marked with "No" in the "Calculation tracking lines available" field.

Display E+D order

With this call you can display the corresponding E+D order. At this point, the structure of the E+D order is omitted and only the fields/calls relevant for the calculation are explained in more detail. Further information about the E+D order can be found here.

Additional costs

Additional costs" allows you to take into account customer-specific quotation requests for the calculation. In addition to general additional costs, you can also include additional resources, articles or similar. Via the call "Costing condition" you establish the connection between the additional cost line and the costing elements and thus enable an account assignment of the results of a costing.

Components

Via the "Components" you have the possibility to change prices and quantities, exchange items and add overhead costs if necessary.

Work plan

Through the "Routings" you have the possibility to change prices, swap operations and add overhead costs if necessary.

Add calculation tracking manually

With this function you can manually add already calculated E+D order lines and take them into account for the current sales line if required.

E+D markup calculation

If the customer asks for certain discounts, the function "E+D markup calculation" is especially helpful, this allows you to run through possible markup calculations for an offer.

Costing proposals (E+D)

The costing proposals (E+D) are structured in the same way as the conventional costing proposals. In addition, you can use them to create a simultaneous cost estimate.

To do this, you use the function "Calculate unit price/price for unit order" in the costing proposals (E+D). By specifying the costing base, actual/actual *(Posted quantity)* and target/actual *(Expected quantity)* comparisons are available.

You can use the "Change status" and "Adopt costing proposal (Preferred)" functions to adopt the calculated values for the sales line.

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Plant Engineering

OVERVIEW

Projects in Microsoft Dynamics 365 Business Central[1] are dynamic business transactions that extend over a longer period of time. These can be planned, controlled and invoiced in detail with the help of activities and budgets.

You can track the utilisation of working hours, machine running times and materials for individual projects. This is managed via project tasks and their associated project plan lines, which are used to manage expenses and income.

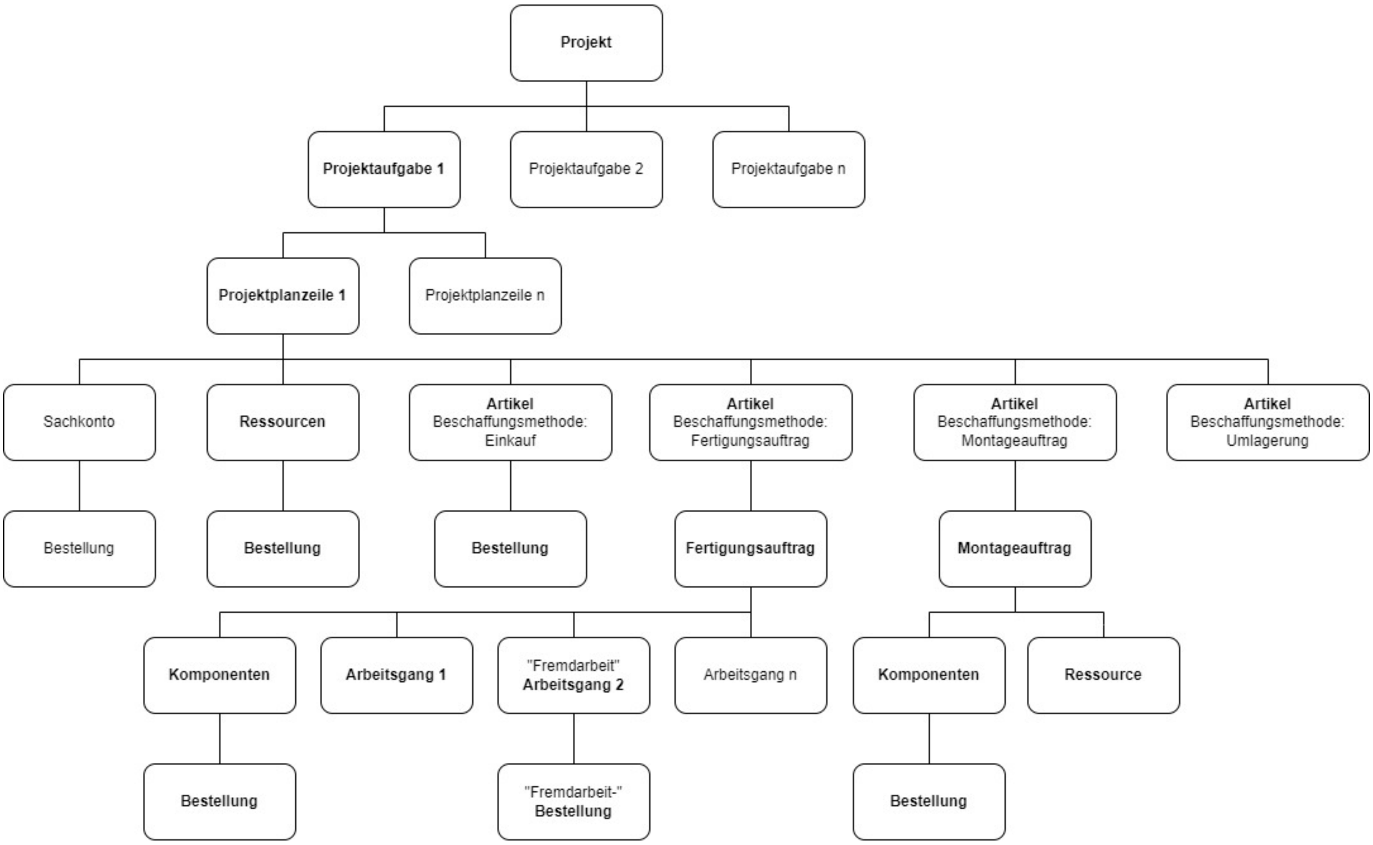
A project consists of a three-level structure:

Level	Description
Project	Bracket with the essential key data.
Project tasks	Project tasks subdivide the project into different tasks, such as project management, ancillary project costs, design and development, production, but also, for example, meetings.
Project plan lines	Project plan lines represent the means for task fulfilment such as articles, resources or articles

The development of a project can thus be tracked down to the smallest detail.

In addition, integrated invoicing in the Accounts Receivable & Sales and Accounts Payable & Purchasing areas allows all associated income and expenditure to be recorded.

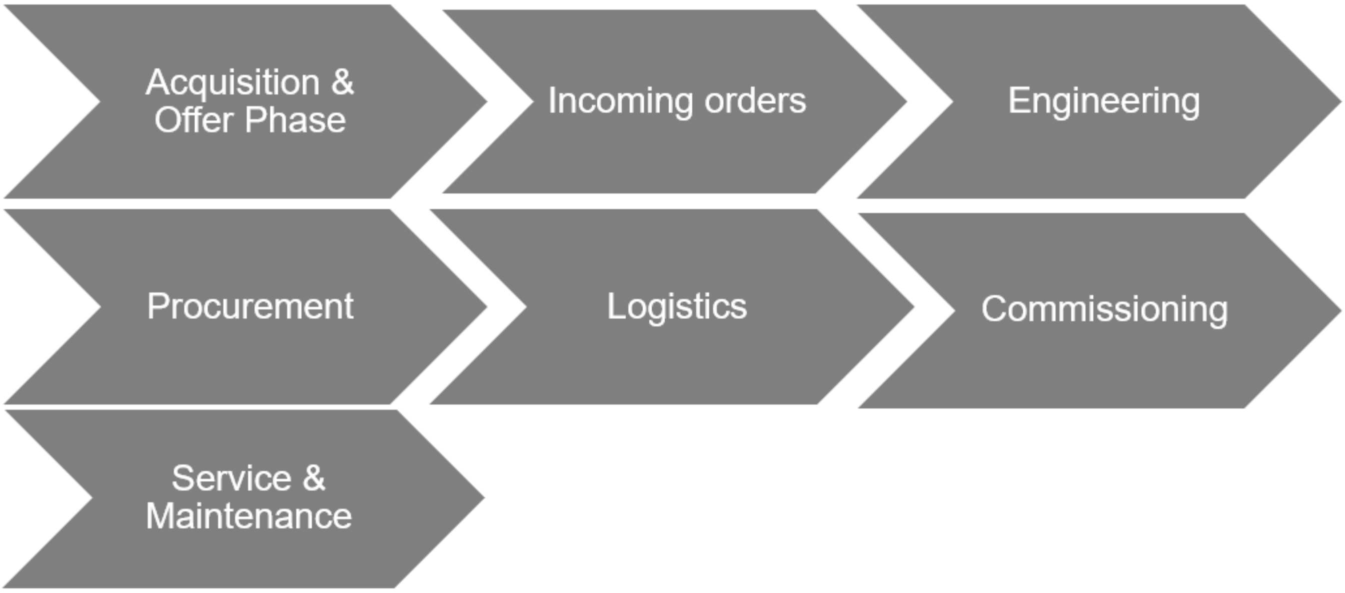
The project structure and its processes are shown in a diagram below:


Projekt
Projektaufgabe 1
Projektaufgabe 2
Projektaufgabe n
Projektplanzeile 1
Projektplanzeile n
Sachkonto
Ressourcen
Artikel Beschaffungsmethode: Einkauf
Artikel Beschaffungsmethode: Fertigungsauftrag
Artikel Beschaffungsmethode: Montageauftrag
Artikel Beschaffungsmethode: Umlagerung
Bestellung
Bestellung
Bestellung
Fertigungsauftrag
Montageauftrag
Komponenten
Arbeitsgang 1
"Fremdarbeit" Arbeitsgang 2
Arbeitsgang n
Komponenten
Ressource
Bestellung
"Fremdarbeit-" Bestellung
Bestellung

For plant and machine builders, the "Plant engineering" service extension makes it possible to track the complex production and scheduling processes in all phases of a project according to costs and deadlines. The KUMAVISION "Plant engineering" function extension describes additional features to the standard Microsoft Dynamics 365 Business Central project[1]. The following is discussed in more detail:

- Project plans with phases, milestones, tasks and responsibilities
- Project progress and commercial project evaluation can be called up in real time
- Clear management of internal and external resources
- Versatile controlling: budget, material and time expenditure, schedule, quality

The following diagram illustrates the plant construction process from the quotation phase through to the service and maintenance phase:


Acquisition & Offer Phase
Incoming orders
Engineering
Procurement
Logistics
Commissioning
Service & Maintenance

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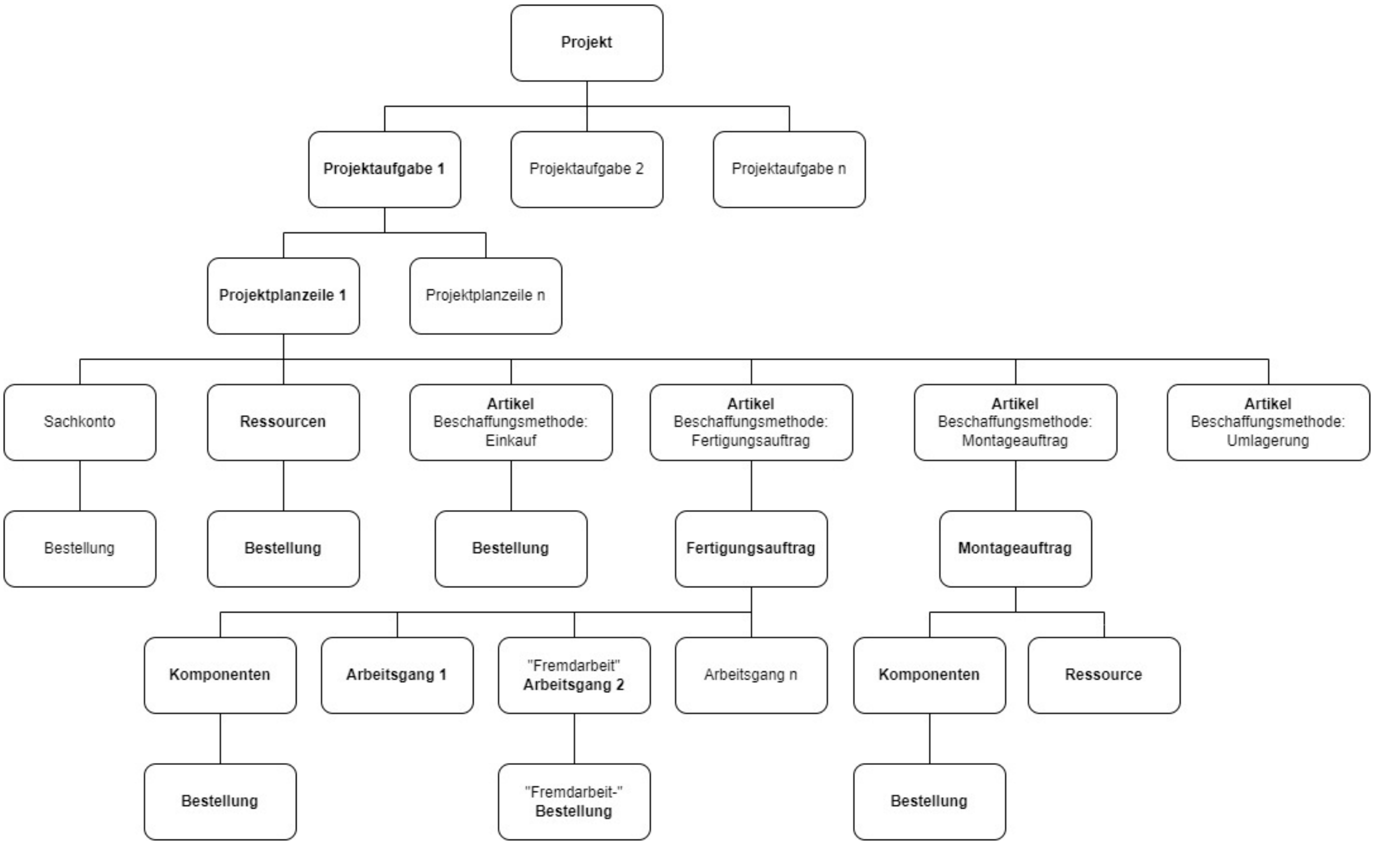
PROJECT BASIC SETUP


Projekt
Projektaufgabe 1
Projektaufgabe 2
Projektaufgabe n
Projektplanzeile 1
Projektplanzeile n
Sachkonto
Ressourcen
Artikel Beschaffungsmethode: Einkauf
Artikel Beschaffungsmethode: Fertigungsauftrag
Artikel Beschaffungsmethode: Montageauftrag
Artikel Beschaffungsmethode: Umlagerung
Bestellung
Bestellung
Bestellung
Fertigungsauftrag
Montageauftrag
Komponenten
Arbeitsgang 1
"Fremdarbeit" Arbeitsgang 2
Arbeitsgang n
Komponenten
Ressource
Bestellung
"Fremdarbeit-" Bestellung
Bestellung

Jobs Setup

In the "jobs-setup" the necessary settings for the later project creation and implementation are made.

KUMAVISION factory365 - Plant Engineering extends the Projects facility of Microsoft Dynamics 365 Business Central[1] with the fields described below:

FastTab Numbering

Field	Description
Project Location Number Series	Specifies the number series to be used for assigning the project storage locations.

FastTab Plant Engineer

Field	Description
Project Type Dimension	If you define a dimension here, you can define in the project types which dimension value for the dimension should be assigned to a project by the system when assigning the project type. By setting project type dimensions, you can create analyses about your projects according to the dimension value.
Check Resource Qualification	When entering a resource in the project plan lines, the system checks whether the necessary qualifications for an activity type are available. The following selections are available: **No** check is made when resources are used **Planning onlyWhen** maintaining project plan lines, the resource is checked against the necessary qualifications **Booking onlyIt is** checked for the sufficient qualification at the time of booking **Planning and BookingCombination of** Planning Only and Booking Only
Allow Synchronisation from Sales	Defines whether the synchronisation of a project plan line from sales is permitted.

FastTab Dispatch

Field	Description
Create Project Location	For the procurement and logistics processes, you use this to specify whether the system should create a project storage location for each project. The project storage location hereby represents the place of performance of the project.
Standard Project Location	Defines the template project storage location, which can be selected from the "Storage locations" overview.
Standard Transfer-from Location	The field is a selection list of all regular storage locations *(no project storage locations)*. It specifies the stock transfer route and is transferred to the "Stock transfer from storage location code" field on the "Invoice and dispatch" info tab of the project card.

FastTab Outlook ToDos

Field	Description
Step CRM task	If you are working without a project outline, use this field to specify the increment for creating new project tasks.
Separator CRM task	If you work without a project breakdown, use this field to specify the separator for creating new project tasks.
Counter CRM task	If you work without project breakdown, set the counter for creating new project tasks in this field.

Project accounts

In the projects for plant construction, consumption and sales postings are displayed on a project chart of accounts, which is used for project controlling. The selection of the corresponding project accounts is controlled via the project account setup.

Project Chart of Accounts

The project chart of accounts is used for project controlling and contains all sales and cost accounts that are to be used for a differentiated project view. The project chart of accounts is not dependent on the FIBU chart of accounts.

In the "Account type" field you can choose between five options:

Field	Description
Account	A bookable account can be selected.
Headline	Text line in which a heading can be entered as a structure feature.
Total	A sum defined by the "Total" field.
From-Sum	An initial marker for a totaling project account series that ends with the To Total account type.
To-Sum	An end marker for a totalizing project account series that starts with the From Total account type. The total is defined using the Totalization field.

After you have set up the project account, select "Actions" > "Indent Chart of Accounts" in the ribbon. Then select the "Yes" option in the message window.

Project account setup

The procedure is almost identical to setting up the posting matrix in the financial accounting area.

The project account setup determines the project accounts to which consumption and revenue are posted or budgeted in plant construction. The project account setup is a matrix that defines the consumption and sales accounts for product posting groups.

The project type is taken from the project card when accessing the project account setup. The activity type, on the other hand, is taken from the project task line.

If no match is found using the project type, activity type and product posting group, an error message appears.

Each project item is assigned either a consumption account or a sales account depending on its item type (consumption or sales). The field contents of the project item are used to determine the project account.

Project Roles

The project roles define in the later projects which role (e.g. project manager) the resource takes in the respective project.

To define the project roles in advance, call them up via the user search. Via "New" in the menu ribbon you can create a new project role with the help of the table below.

Field	Description
Code	Assign a meaningful abbreviation for the project role.
Description	Assign a description for the project role.
Type	**Assign an applicable type. You can choose from the following:** • Responsible • Project Manager • Sale to contact no. • Invoice to contact no.

Service type

It is important for the later task planning in the projects to set up the activity types. To do this, call up the activity types via the user search.

Via "New" in the menu ribbon you can define a new service type with the help of the table below.

Field	Description
Code	Assign a meaningful abbreviation for the activity type.
Description	Assign a description for the service type.
Type	Specifies the type that the record is. You can choose from the following: • Account • Headline • Total • From-Sum • To-Sum
Counting up	Here you can now specify the interval or other filter specification of numbers of the service type. The results of the specified service type are added to a total balance. For the From sum or Heading type, this field must be left blank. For the To-total type, the field is automatically filled when the chart of accounts is indented. Only the types that are between a From total and a To total are added together.
Qualifications	Indicates the number of qualifications required for the service type. Via a LookUp on the number, qualifications can be assigned to the activity type and already existing ones are displayed to you. Further information on the subject of qualifications can be found in the section of the same name.
Usage	**NoneThere is** no task scheduling, the fields are not editable in the project task. **Task planningYou** can enter planning directly in the project tasks. **ForecastThere is** no task planning, the fields are not editable in the project task. **BothYou** can enter planning directly in the project tasks.
Type planning	Via the type of planning you determine the type with which the task planning is to be entered in the planning line. **You can choose from the following:** - Resource - Article - G/L account
Planning no.	Via the planning no. you determine, depending on the type of planning, with which account the task planning is to be displayed in the planning line.
Work type code	Specifies the work type code for the activity type.
Art Forecast	Specifies the type forecast for the service type. You can choose from the following: • Resource • Article • G/L account
Forecastnr.	Specifies the forecast no. in the context of the "Type Forcast" field.

Field	Description
Forecast work type code	Specifies the forecast work type code.
Cross country skiing articles	Identifies a project task with the assigned activity type as a "long-run item".

Project types

When creating a new project, you can define the type of project by assigning a "project type". Here you can already enter some data such as a project template, order type or similar.

To define the project types in advance, call up the project types via the user search. Via "New" in the menu ribbon you can define a new project type with the help of the table below.

Stage	Description
Code	Assign a meaningful abbreviation for the project type.
Description	Enter a description for the project type.
Project booking group	Enter the project booking group for the project type to be used when assigning the project type. Please note that if the "Template project no." is maintained (see below), this information is ignored. (see below) this information will be ignored.
Project number series	Specify the project number series for the project type to be used when creating a project and assigning the project type.
Template Project No.	Specifies the project no. to submit the project for the project type.
Project type Dimension value	Specifies the dimension value for the project type.
Dimension code	Specifies the dimension code.
Dimension Value Prefix	Specifies the dimension value prefix.
Task breakdown	Specifies a task breakdown for the project type. **Please note** that if the "Template project no." is maintained (see above), this information is ignored. (see above) this information will be ignored.
Reserve	Specifies the reservation method for the project type. The following are available for selection: • Never • Optional • Always
Order type	In the project type, you can set up an order type for the creation of sales documents, if required. This will be used when creating the documents.

Project breakdown

> **⚠ Warning**
>
> Function discontinued with BC2026 Wave 1.

The project structure helps you to enter and maintain your project tasks quickly and efficiently with predefined numbering.

Call up the "Project outline" via the user search.

Via "New" you can create a new project outline using the table and procedure below.

Field	Description
Code	Define a unique code for the record here.
Description	Define a short description for the outline here.
Status	Indicates the status of the outline. The following are available for selection: • New • Certified • In development • Expired **Note** Please note that only project members with the status "Certified" can be used in the processes.

To define the outline for the created dataset, call up the "Outline structure" menu item via the ribbon.

Field	Description
Level	Level or indentation of the task.
Description	Enter a description for the layer here
Increase	Define with which intervals the system should assign tasks, 1 for one step, 10 for ten steps etc. Based on the increment, the Counter field is initialized.
Counter	Here you can define with which value the level should be started and how wide the level can be. For example, enter 001 if the layer can reach a maximum value of 999. Please note that the Project task field only has a maximum width of 20 characters.
Separator	Define a separator here, e.g. period, comma, hyphen
Count type	• Numeric • Alphanumeric please specify alphanumeric if your counter contains letters.
Bookable	Specify whether it is possible to post on the level
Example	Represents the current definition, as a project task.

Project Document Text Template

For easy editing/creation of the document texts in the projects, you can define project text templates in which you specify how and when which data record is to be printed in which document.

> **Note**
>
> Please note that pre- and post-texts on the project tasks are not passed on to subsequent documents. This is only possible with texts on project plan lines.

To do this, call up the "Project document templates" via the user search.

Via "New" you can create a new project document template using the table below.

Field	Description
Project table	Use this field to specify for which table the definition is valid. **The following selection is available:** • Project Task • Project planning line
Line type	Use this field to specify for which line type the definition is valid. **The following selection is available:** • Budget • Invoiceable • Budget and Invoiceable
Position	In this field, specify how the definition is valid for which position. **The following selection is available:** • Pretext • Post text
Service Contract Offer	Printing In this field, specify whether the text should be printed on Service contract offer.
Service contract printing	Use this field to specify whether the text should be printed on the service contract.
Service offer printing	Use this field to specify whether the text should be printed on the service offer.
Service Order Printing	Use this field to specify whether the text should be printed on the service order.
Service Geb. Invoice Printing	Use this field to specify whether the text should be printed on the service invoice.
Service Geb. Credit Print	Use this field to specify whether the text is to be printed on the service credit note.
Service Geb.	Delivery Print In this field, specify whether the text is to be printed on the service delivery.
Service work ticket printing	In this field, specify whether the text should be printed on service work ticket.
VK offer pressure	In this field, specify whether the text should be printed on VK offer.
VK Order Printing	Use this field to specify whether the text should be printed on VK Order.
VK Geb. Invoice Print	Use this field to specify whether the text should be printed on VK Geb. Rechnung.
VK Geb. credit print	Use this field to specify whether the text should be printed on VK Geb. Gutschrift.
VK Blanket order printing	Use this field to specify whether the text should be printed on VK Blanket Order.

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RESOURCE MASTER DATA

Resources include employees or machines. Resource management allows you to plan capacity and deployment in detail and for an unlimited period of time.

Furthermore, resources can be grouped into resource groups. Purchase and sales prices can be recorded in detail and budgeted and invoiced for resources and resource groups.

Establishment

To create a resource in KUMAVISION factory365, the following setups have to be done in advance:

Number series for resource

Set up the number series for the resources so that when a new resource is created, the system automatically assigns a sequential identifiable number for the resource.

To do this, call up the "Number series" via the user search. You can create a new number series via "New" in the menu ribbon.

Afterwards, the created number series is stored in the "Resources setup" in the "Resource numbers" field.

Further information can be found in the Microsoft Dynamics 365 Business Central[1] Helpsite.

Units

Set up the "Units" table according to your individual requirements to be able to make the assignment when creating a resource (base unit code).

Call up the "Units" via the user search and create the units according to your requirements (for resources it is recommended to set up the unit "Hour").

Further information can be found in the Microsoft Dynamics 365 Business Central[1] Helpsite.

Basic calendar

The "Base calendar" can be used for several processes in KUMAVISION factory365. In connection with the resource, you can store a corresponding base calendar, with the help of which, for example, the different holidays in a (federal) country can be taken into account.

Example:
In Germany, January 6 (Epiphany) is viewed completely differently - while in Baden-Württemberg and Bavaria, for example, this is handled as a normal holiday, in North Rhine-Westphalia it is a normal working day. With the help of the stored calendar, resource availability can be calculated accordingly.

To create a base calendar, call up "Base calendar" via the user search. You can create a new base calendar via "New" in the menu ribbon.

The assignment of the possible different base calendars is done when the resource is created on the respective resource card.

Further information can be found in the Microsoft Dynamics 365 Business Central[1] Helpsite.

Qualifications

Qualifications can be stored in the resources according to your skills. To define the qualifications, first call them up via the user search.

Via "New" in the ribbon you can create a new qualification with the help of the table below.

Field	Description
Code	Assign a meaningful abbreviation for the qualification.
Description	Assign a description for the qualification.

Further information can be found in the Microsoft Dynamics 365 Business Central[1] Helpsite.

Working Time Template

The working time templates allow you to store the different working time models of your employees in the system. Call up the "Working time templates" via the user search.

Via "New" in the menu ribbon, you can define a new working time template that can be assigned to a resource when it is created. Further information can be found in the Microsoft Dynamics 365 Business Central[1] Helpsite.

Capacity units

Resource management and capacity determination of production work with different unit tables. For linking the units, the resource unit is assigned to the capacity unit.

To do this, call up the capacity units via the user search. Via the menu item "Edit list" in the menu ribbon you can edit already existing capacity units and thus link the resource unit of the capacity unit in the field "Resource units".

Resources

To create a new resource in the system, first call up the "Resources" via the user search. Via "New" in the menu ribbon you can create a new resource with the help of the table below.

Inforegister General

Field	Description
No.	Specifies the number of the resource according to the specified number series. Alternatively, a manual assignment can be made.
Name	Specifies the name of the resource.
Name 2	Specifies the name 2 of the resource.
Type	Indicates what type of resource it is. Choice between "Person" or "Machine".
Base unit	Specifies the base unit of the resource e.g. "hour", "piece".
Number of text modules	Specifies the number of stored text modules. The text modules are stored in the ribbon - Navigate - Text modules. Further information on the topic of "Text modules" can be found in the section of the same name.
Search Keyword	Specifies an alternative name / abbreviation that you can use to search for the record. The system will automatically preset the field with the field content "Name", a manual change is possible.
Res. group no.	Specifies the resource group assigned to the resource.
Locked	If active, the resource cannot be used in the processes
Privacy lock	Specifies whether to restrict access to data of the data subject in daily operation.
Locked (user)	Field that activates the lock of the master record (as before). However, the field can now no longer be changed directly.
Care	This indicates whether the record is currently in maintenance or not.
Status mandatory field check	This field displays whether the mandatory field check was not performed (no check), completely checked, or incompletely checked. The lookup on the field can be used to view the missing mandatory fields.
Locked from	This shows whether the record is locked by the mandatory field check or by the user.
Corrected on	Date of the last correction.
Specific calendar	Indicates that the base calendar was used, for a custom calendar.
Working Time Template	By assigning a working time template, the capacity quantity per weekly working day is determined when creating the resource capacity. If no working time template is assigned, this is skipped when the capacity creation function is executed.
Use timesheet	If the switch is activated, the resource is available for bookings via the timesheets.
User ID of the time sheet owner	Specifies the user ID of the timesheet owner.
User ID of the timesheet approver	Specifies the user ID of the timesheet approver.
Workplace type	Defines the type of linking of the resource. The link is taken into account in the resource utilization. **The following options are available:** *Workstation group* when the resource is linked to a workstation group.

Field	Description
	Workplace when the resource is linked to a workstation group. *Resource* if the resource is not linked.
Job no.	Defines the linked workstation (group) depending on the workstation type.
External resource	Marks the resource as External so that it can also be used in the procurement process.
Vendor no.	Specifies the vendor to which the external resource belongs. The system automatically determines the company contact number by entering the vendor number.
Company Contact no.	Indicates the company contact to which the resource belongs.
People contact no.	Specifies the person contact number to which the external resource belongs.

Invoicing information register

Field	Description
EK price	Specifies the purchase price of a unit of the resource.
Indirect costs %	Indicates the percentage of the last purchase price of the resource from which indirect costs arise, such as freight/travel costs or similar associated with the purchase of the resource.
Cost price	Indicates the cost of one unit of the resource.
VK Price / DB Calculation	Indicates the relationship between the fields "Cost price", "Sales price" and "DB %". The choices are: • DB=VK-EP • VK=EP+DB • No reference
DB %	Specifies the profit margin at which you want to sell the resource. You can enter a contribution margin manually or have it entered according to the "VK Price / DB Calculation" field.
UK price	Indicates the price of one unit of the resource. You can enter the price manually or have it entered according to the "VK Price / DB Calculation" field.
Credit delivery valuation group code	Specifies the item group code for the supplier rating. Further information on the topic of supplier evaluation can be found in the section provided for this purpose.
Product posting group	Specifies the product type of the resource to perform transactions for this resource with the corresponding G/L account. VAT - Product booking group Specifies the VAT details of the involved resource to perform transactions according to the posting matrix.
Standard Accrual Template	Specifies how revenues and expenses are accrued from periods.
Automatic. Text module	Specifies that a text module is added to the documents for this resource.
IC partner Deposit G/L account no.	Specifies the number of the IC G/L account in your partner's company to which the amounts of the respective resource are posted.
Product Commission Group Code	Specifies the product commission group. With the help of commission groups, resources can be grouped and commissioned separately. This classification into commission groups is inherited in the sales process in the posted documents. For further information, please refer to the "Commission management" section.

Inforegister Personal Data

Field	Description
Function	Specifies the function of the resource.
Address / Address 2	Specifies the address of the resource.
Location	Specifies the location of the address of the resource.
Zip code	Specifies the postal code of the resource's address.
Country/Region Code	Specifies the country/region of the resource's address.
Social security no.	Specifies the social security number of the resource (person).
Training	Indicates the education of the resource (person).
Convention	Specifies the convention for the resource (person).
Date of employment	Indicates the date when the resource was hired.

Qualification

On the respective resource card, you have the option of assigning a qualification to the respective resource via "Qualifications" in the menu ribbon. If no qualifications have been set up in the table of the same name, they must be created beforehand.

Depending on the "Projects setup" in the "Check resource qualification" field, the system checks whether the necessary qualifications for an activity type are available when a resource is entered in the project plan lines.

Set capacity

The capacity of a resource is the amount of work that can be done within a defined period of time (one day). To calculate and define the capacities of the resource, call up the "Define capacity" function via the menu ribbon in the "Navigate" menu tab.

The "Calculate Res. Capacity" mask opens on which the filtering of the resource is already preset. By specifying the start/end date, the capacity items can be determined and defined.

Note

The capacity is calculated on the basis of the assigned base calendar and the assigned working time template on the respective resource card.
If no allocation of one/both fields has been made, no calculation of capacity can be made.

Note

If capacity items already exist for the calculated resource, the Calculate Res. Capacity application deletes them and creates new items.

Resource capacity

By calling up "Resource capacity" via the user search, you have the option of viewing the capacity of the resources.

The "Set capacity" function is also available via the "Planning" menu selection on the "Resource capacity matrix" info tab.

The difference between the call on the resource map and the call in the resource capacity is that when calling from the resource map a pre-filtering is set on the resource. The call via the resource capacity is not, so that the capacity can be calculated over all available resources.

Create timesheet

Via the function "Create timesheet..." in the menu ribbon under the menu tab "Actions" you can create a timesheet for the respective resource.

To do this, enter the start date from which the timesheet is to be created. As well as the number of periods.

Using the timesheets, the resource can record and submit for your projects, the corresponding project tasks and the times for the corresponding period.

Further information on this topic can be found in the Microsoft Dynamics 365 Business Central[1] Helpsite.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩↩

PROJECT PLANNING

Project planning is presented below. It shows how a project can be structured and organized and how planned values can be stored.

Project (card)

The structure of the project card is identical regardless of the status: Planning, Offer, Open, Completed. Depending on the status, some functions cannot be executed.

KUMAVISION factory365 extends the project(s) card of Microsoft Dynamics 365 Business Central[1] with the fields and functions described below:

General information register

Field	Description
Project type	Specifies the type of project. If the following data has already been stored in the project type, it is adopted when
the project type is assigned to the project: - Project booking group - Project number series - Template project no. - Project type dimension code - Dimension code - Dimension value prefix - Task structure - Reserve - Order type See project types	
Task breakdown	Specifies the task structure to be used for the project. The project task structure helps you to record and maintain your project tasks quickly and efficiently with predefined numbering. See project breakdown.

Information register Tasks

See project tasks.

Information register Invoice and shipping

Field	Description
Storage location code	The field is pre-assigned from the Projects setup by the standard project storage location *(if available)*. If no default project storage location is stored in the setup, a selection list of the regular storage locations appears here. **Note** If "Create project storage location" is active in the Projects setup, the newly created storage location is entered in this field. The field is used when creating a project plan line of type "Article" to fill the "Storage location code" field in the project plan line.
Stock transfer from storage location code	The field is pre-assigned with the field of the same name from the Projects facility *(if available)*. If no "Stock transfer from storage location" is stored in the setup, a selection list of all regular storage locations *(no project storage locations)* appears here. The field is used when changing the procurement method to "Stock transfer" in a project plan line to fill the "Stock transfer from storage location" field in the project plan line.

Information register Dates

Field	Description
Display forecast by	Options: - Day - Week - Month - Quarter - Year - Accounting period
WIP date	End date of the WIP evaluation. Later project bookings are no longer taken into account.

Functions in the ribbon

Function	Description
Start area	
Project task lines	Displays the task lines including the forecast matrix.
Project scheduling	Executes the "Project scheduling" function.
Duplicate project tasks	Starts the dialog for selecting the project tasks to be duplicated.
Project Gantt Viewer	Opens the Gantt Viewer and displays the visualization of the project tasks including the stored predecessor/successor link and project plan lines. See Project Gantt Viewer
Project chart of accounts	Displays the project chart of accounts.
Project chart of accounts	Displays the overview of the project account schemes.
Create activity	Starts the "Create activity..." dialog.
Receipts	Displays the list of project documents per document type and their number.
Update commitment items	Updates the commitment items. See commitment itemsUpdate.
Register forecast item project	Registers the forecast items. see Forecast registration.
Project area	
Project plan lines	Displays the project plan lines of all project tasks.
Navigate area	
Project plan lines	Displays the project plan lines of all project tasks.
Project plan lines Dispo	Displays the project plan lines of all project tasks, filtered to the line type "Budget" and "Budget and billable" of the project plan line.
Project plan lines Sales	Displays the project plan lines of all project tasks, filtered by the line type "Billable" and "Budget and billable" of the project plan line.
Project plan lines Purchasing	Displays the project plan lines of all project tasks, filtered to the "Budget" line type of the project plan line.
Actions area - Copy	
Insert outline structure	This function inserts a new outline structure at the end of the structure details.
Insert outline structure to bookable	This function inserts an outline structure up to and including the first bookable outline structure. See project outline.
Area Belonging	
Shipping unit	Opens the shipping units.
Cross-country articles overview	Opens the cross-country skiing article overview. See cross-country skiing articles overview.
Tasks	Opens the overview of tasks *(task list)*.

Function	Description
Postponed activities	Shows an overview of the activities on hold.
Project team	Opens the overview of the project teams. See project team.
Create project storage location	For the procurement and logistics processes, you use this to specify whether the system should create a project storage location for each project. The project storage location represents the place of performance of the project. See project storage location.
Risk management	Opens the risk management lines. See Risk Management.
Inventory overview	Opens the stock overview with filtering to the storage location of the project.
Time sheets	Opens the working time items filtered to the respective project.
Activity log	Opens the activity items filtered to the respective project.
Project Forecast	Opens the project forecast items filtered to the respective project.
Commitment items	Opens the commitment items filtered to the respective project.

Project task

The project tasks that are/will be planned in the project are first defined on the "Tasks" information tab of the project card. This is where the "rough planning" for the project takes place for the first time.

KUMAVISION factory365 extends the project tasks of Microsoft Dynamics 365 Business Central[1] with the fields and functions described below:

Field	Description
Type of service	In this field, assign the activity type for the project task in the case of an account. You use the activity type to influence project account determination and have the option of influencing the maintenance of the project plan lines. See activity type.
Status	Indicates the current status of the project. The following options are available: - Planning - Offer - Open (order) - Completed These are pre-assigned from the project (header) and can be changed at project task (level). The status of the project task is inherited by the project plan lines. **Note:** A change to the project task status "Open" requires that the project status is "Open". When the project status is changed, all project tasks with the same initial status are changed to the new status of the project (header). If the status in the project is set to "Completed", the status of all project
tasks is also set to "Completed".	
Cross-country articles	A project task is identified as a task for cross-country items by the "cross-country item" label. See cross-country items.
Project task for forecast	This field enables account assignment of the forecast items to a project task with the type: "Posting". This allows forecast values to be entered on global totals lines and differentiated later.
Forecast cost price	See Forest post table.
Forecast sales amount	See forecast item table.
Remaining order amount	See remaining order amount *(order commitment)*
Stock cost amount (expected)	See warehouse cost amount (expected) *(warehouse commitment)*
Stock cost amount (actual)	See warehouse cost amount (actual) *(warehouse commitment)*
Production Cost amount (expected)	See production Cost amount (expected) *(production commitment at target costs)*
Production Cost amount (actual)	See production cost price (actual) *(production commitment at actual cost)*
Assembly Cost price (expected)	See assembly Cost amount (expected).
Working time Cost price (expected)	See working time commitment.
Total exposure	Sum of the above individual exposure values grouped according to the respective exposure type with drill-down to the exposure items.
Number of previous tasks	Shows the number of predecessors of the current project task(s), as several predecessors can be defined for a project task in order to organize the project

Field	Description
	tasks chronologically. **Note:** The predecessors/successors are displayed in the "Project task dependencies" info box.
Number of subsequent tasks	Displays the number of successors of the current project task(s), as several successors can be defined for a project task in order to organize the project tasks chronologically. **Note:** The predecessors/successors are displayed in the "Project task dependencies" info box.
Planned start date	Indicates the planned start of the project task and represents a target for the detailed planning in the planning lines. The field can be calculated using the "Project scheduling" function. See "Project scheduling".
Planned end date	Indicates the planned completion date of the project task and represents a target for the detailed planning in the planning lines. The field can be calculated using the "Project scheduling" function. See "Project scheduling".
Duration	Duration of the planned activity of a project task.
"Fixed" milestone	Indicates the "Planned end date" of the project task as a milestone *(fixed point)*.
Statistics area	
Initial commissioning Amount (MW)	Represents the sales amount of the initial order. Filtering the project plan lines according to the order type: "Initial order".
Follow-up order(s) Amount (MW)	Represents the sales amount of the follow-up order. Filtering the project plan lines according to the order type: "Follow-up order"
Deviation(s) Amount (MW)	Filtering the project plan lines according to the order type: "Deviation" Allow synchronization from VK
Only the marked project tasks can be selected / linked in the sales document.	
Default line type	When linking from a sales document, project plan lines of the default line type *("Budget and billable" or "Billable")* are automatically created.
Task	Description will follow shortly.
Tasks Status	Description will follow shortly.

Functions in the ribbon

Field	Description
Project task statistics	Displays the project task statistics by resource, article, G/L account and total.
Project task card	Opens the project task card.
Project chart of accounts	Opens the project chart of accounts.
Project charts of accounts	Opens the project chart of accounts. See Project chart of accounts and Project account setup.
Engaging/disengaging	The "Move in/out project tasks" function only works with a defined task structure in the project card and project task type account. You can call up the "Indent/outdent" functions via the "Tasks" info tab using the "Line" menu selection. **Indent** When the "Indent" function is called up, the current line is indented one level down and bracketed by a from-total and a to-total line. The description of the indented line is assigned to the from/to total line. The new project task receives the description from the default. The plan lines already entered are also assigned to the new line. **Outdent** When the Outdent function is called up, the current line is moved up one level. If it is not the last position of the task block, the next number of the upper area is used. If it is the last position, the task block is deleted and the task number is assigned to the "from total".
Register forecast item project	See Forecast registration.
Task numbering	Task determination is based on the outline structure and depends on the current item and project task type of the line. If a line is inserted between existing items, the system inserts a continuation line for the top line. If a line is inserted at the bottom, the next project task number is inserted based on the top line.
Tasks	Opens the overview of tasks *(task list)*.
Create tasks	You can use "Create tasks" to create tasks or Outlook tasks such as a meeting invitation. When you create a task, a project task is created for you in the background. The project task is created within the From task you have selected. You can create the tasks in the project area via "Tasks" in the project card, project tasks and from the project team. **Note:** Please note that the creation of an Outlook task is only possible with the corresponding setup. Further information on the connection / setup can be

Field	Description
	found in the Microsoft Dynamics 365 Business Central1 online help. **Note** The plan lines can only be changed via the CRM task *(contact tasks)*. In the "Projects setup", use the "CRM task increment", "CRM task separator" and "CRM task counter" fields to define how the project task number is created. Further information can be found here. Alternatively, you also have the option of creating
a task directly from a contact card by entering a project number.	
Create sales offer	You can create a sales quotation directly from the project using the project plan lines. See sales offer.
Create sales order	If the customer has already commissioned the project, you can also create a sales order directly from the project via the project plan lines. See sales order.
Display sales documents	Displays a sales document linked to the project.
Receipts	Displays an overview of the documents associated with the project.
Postponed activities	Displays an overview of the activities on hold.
Activity log items	Opens the activity items filtered to the respective project.
Project forecast items	Opens the project forecast items filtered to the respective project.
Overview of requirements	Opens the requirements overview.
Cross-country articles overview	The "Long-running item overview" is used to display the links of the available quantities to the long-running item project plan lines for the FA components. See Long-running items.

Project plan lines

KUMAVISION factory365 extends the project plan lines of Microsoft Dynamics 365 Business Central[1] with the fields described below:

Field	Description
Type of assignment	**Initial order** When the first sales order is created, the order type is set to initial order. **Follow-up** order When a follow-up order is created, the order type is set to follow-up order. **Deviation** When maintaining the forecast, the project plan lines created during the forecast release (archiving) are marked as a deviation. **Plan line** Initial value when creating a new plan line.
Duration	Represents the duration in days, calculated from the start date/planning date.
Start date	Represents the start date of the project plan line. **Note:** The start and planning date is pre-assigned from the project task.
Planned delivery date	Specifies the planned delivery date of the item linked to the project planning line. For a resource, the planned delivery date is the date on which the resource is used for the project.
Cross-country articles	If the "Long-running item" indicator is active for the project task to which the project plan line belongs, the items of the "Item" type are automatically assigned the "Long-running item" indicator. See Cross-country items.
Long-running article Linked quantity (basis)	Shows the linked quantity (base) and links to the cross-country item link items. See Handling of cross-country article links.
Article Version code	If you are working with article versions, define the article version for procurement here.
Stock transfer from storage location code	Is taken from the "Invoice and shipping" information tab if the procurement method in the planning line is set to "Stock transfer".
Reserved by	Displays the document reserved for the project plan line.
Vendor no.	For the rapid procurement of your project requirements, the option has been created to transfer items directly from the project plan lines to the planning proposal, inquiry, order, invoice and credit note. Use this field to specify the vendor from whom you would like to procure this item.
Type of service	This field shows you the transferred activity type from the project task. See activity type.
Sales account no.	You will see the sales account determined by the system in this field.
Consumption contr.	You will see the consumption account determined by the system in this field.
Procurement method	If you set the procurement method to "Stock transfer", the system creates a stock transfer route from the standard storage location to the storage location of the project planning line, if this is different; if a stock data card already exists, it is updated based on the specification. With the "Simulation" procurement method, a costing production order is created in the background. If you want to trigger a purchase order for the item, set the procurement method to "Purchasing" and the inventory data for the item and storage location will be updated.
	Specifies the document type of the sales document.

Field	Description
Sales document Document type	
Sales document no.	Specifies the sales document number of the sales document.

Functions in the ribbon

Function	Description
Create sales offer	You can create a sales quotation directly from the project using the project plan lines. See Project - Sales offer
Create sales order	If the customer has already commissioned the project, you can also create a sales order directly from the project via the project plan lines. See Project - Sales order
Create sales complaint	If a customer complains about the delivered goods, the complaints process can be started from within the project. See Project - Complaint.
Create purchase request	You can use the "Create purchasing request" function to send the request to the supplier directly from the project plan line. See Project - Purchasing complaint.
Create order	You can use the "Create order" function to directly create a purchase order for the project plan line. See Project - Purchase order.
Create purchase invoice	You can use the "Create purchase invoice" function to create a purchase order directly from the project plan line.
Create a purchase credit note	You can use the "Create purchase credit note" function to create a purchase order directly from the project plan line.
Receipts	The "Project vouchers" overview shows an overview of the vouchers associated with the project.
Pre-text / post-text	You can describe a project plan line in detail using a long text. See Project plan line document texts.
Cross-country articles overview	The "Long-running item overview" is used to display the available quantities for the long-running item project plan lines for the FA components for the links. See Long-running items.
Create activity	You can use "Create activity" to create activities and/or communications from Microsoft Dynamics 365 Business Central[1]
to create activities and/or communications and store associated documents. The Microsoft Dynamics 365 Business Central[1] online help provides you with further information on the topic of "Creating activities".	
Display sales document	Displays a sales document linked to the project.
Display purchase receipt	Displays a purchasing document linked to the project.

Project Gantt Viewer

In KUMAVISION factory365, a Gantt Viewer is available to you within a project.

The functions within the Gantt Viewer are described below:

Function	Description
Zoom (+)	Zooms into the image section of the Gantt Viewer.
Zoom (-)	Zooms out of the image section of the Gantt Viewer.
Full screen	Shows the Gantt Viewer in full-screen view.
Go to Today	Moves the display so that the current date is within the display.
Refresh	Re-imports the data from the project.
Expand totals rows / collapse totals rows	You can use this toggle function to expand and collapse the totals rows of the Gantt.
Expand plan lines / collapse plan lines	This toggle function allows you to expand and collapse the plan lines of the Gantt.

Project Document texts

Document texts project header

You can describe a project in detail using a long text.

To define a document text for a project, select "Pre-text" or "Post-text" in the ribbon.

The project document text card opens.

Call up the "Format Editor" via the ribbon and enter your desired text in the editor text field. After confirming your entry with "OK", your text will be displayed in the "Preview" field.

Note

Please note that pre- and post-texts on the project header and project tasks are not passed on to subsequent documents. This is only possible with texts on project plan lines.

Document texts Project tasks

You can describe a project task in detail using a long text.

To define a document text for a task, first select the desired task line from the "Tasks" info tab.

Then select the menu item "Document text" via the "Line" menu selection on the "Tasks" info tab.

You can now decide whether you want to enter a prefix or suffix for the line.

The project document text card opens.

Call up the "Format Editor" via the ribbon and enter your desired text in the editor text field. After confirming your entry with "OK", your text will be displayed in the "Preview" field.

Note

Please note that pre- and post-texts on the project header and project tasks are not passed on to subsequent documents. This is only possible with texts on project plan lines.

Document texts Project plan lines

You can describe a project plan line in detail using a long text. This long text is printed on the documents you have defined.

Call up the project plan lines via the desired project task using the call of the same name on the "Tasks" info tab.

Select the project plan line for which you want to enter a document text. Then call up the "Document texts" menu selection via the ribbon. You can now decide whether you want to enter a pre- or post-text for the line.

The pre- and post-texts are entered in the same way as the tasks. Further information can be found in the "Task document texts" section.

The reports listed here print the project texts depending on the "Show additional text" button:

- Project plan lines
- Project analysis
- Budget comparison project
- Account proposal project
- Project offer

Cross-country items

Long-running items can be used for long-running planning and management. Article items with a long procurement time are created as project plan lines in the project. These items can later be used as components in project-related production orders. In this way, the requirements for these long-running items are triggered directly from the project, even if a production order does not already exist or the position of the component in the production order is not known. If the production order is then created and the components are defined in the order, the requirements coverage of the component can be linked directly to the long lead time article in the project.

Setup

Cross-country items are set up in the project via the project tasks. Separate tasks should be created in the project for cross-country items. A project task is identified as a task for a cross-country ski item by ticking the "Cross-country ski item" box.

Note

Checking the "Cross-country item" box in a project task means that only project plan lines of the type "Item" and "Text" can be created for this project task. The lines with the type "Article" represent the cross-country items. The lines with the type "Text" can be used for groupings or notes.

If project plan lines are now entered for the project task, the items with the type "Article" are automatically assigned the "Long-running article" indicator.

Note

The transfer of project plan lines that are marked as "long-running items" to project book sheets or the posting of these lines is not permitted and is intercepted by corresponding error messages.

After creating the project plan lines for the corresponding long-running items, procurement documents / procurement processes can be triggered for these project plan lines in order to achieve corresponding requirements coverage for these long running items.

Note

The procurement documents created should always be reserved for the project plan lines. On the one hand, the quantity in the procurement document is then considered reserved, and on the other hand, only reserved procurement quantities can be transferred from the project plan line "Long-running item" to the corresponding FA component. Only the quantity that is already covered by the procurement documents can be assigned to an FA component, regardless of the quantity of the project plan line itself.

Cross-country items as components in the production and E+D order

If a long lead time article has been defined in the project, it can also be viewed in production orders belonging to the project. The "Long-running item" label is managed in the FA components in the "Long-running item" field itself.

The following criteria must be met for a component to be recognized as a long-running item in the production order and in the E+D order:

- Project number must be set as the project reference in the FA component.
- The article number, variant code and storage location code must match between the project plan line marked as a long run item and the FA component.

In addition, the quantity that has already been linked / used for this FA component by a long-running article project plan line can be viewed in the "Long-running article linked quantity (basis)" field.

The fields "Long-running item" and "Long-running item linked quantity (basis)" can also be viewed accordingly in the lines of an E+D order.

Although it is possible to directly display whether an FA component or E+D order line is a long-running item, the available quantity of the long-running item cannot be displayed directly. This is due to the fact that this is calculated on the basis of the reservations for the long-running project plan lines, taking into account the due date of the FA component and the planning date of the project plan lines. In addition, a long-running item project plan line can serve several FA components, but there can also be several long-running item project plan lines for one item. The available quantity of a long running item is therefore always calculated at runtime. This is done in the "Long-running item overview" screen. This overview can be called up from the FA components and E+D order lines.

To do this, call up the cross-country ski article overview via the "Line" > "Line" > "Cross country ski article overview" info tab.

The "Long-running item overview" screen is not only used to view the quantity available for assignments. This screen is also used to set or cancel links between FA components and long-running item project plan lines. As a result, the procurement quantity already reserved for the project plan line is transferred to the FA component or written back from the FA component to the project plan line when it is canceled.

> **Note**
>
> The "Long-running item overview" screen can be called up not only for FA components or E+D order lines. It can also be displayed for the entire production order / E+D order. The overview can also be used from the project. Here it can be called up for project plan lines, project tasks and the entire project. The information and handling of the "Long running item overview" screen is described in the following sections.

Cross-country articles Overview

The "Long-running item overview" shows the quantities available for links to the long running item project plan lines for FA components. This page also offers the option of setting direct links between FA components and long-running article project plan lines and thus transferring the already reserved quantity from the project plan line to the FA component. It is also possible to delete these links here.

The structure of the cross-country article overview, the individual calls and functions of the screen are described below.

Address of origin

The "Called from" field at the top of the cross-country skiing article overview shows the location from which the cross-country skiing article overview was called up.

The long-running item overview can be called up for FA components and project plan lines. It can also be called up for FA lines, production orders, project tasks and the entire project.

The calls are described below and the structure of the overview items for each call is explained.

Call	Description
FA components / E+D order lines of the MRP type "Stock item"	The "Long-running item overview" can be called up for FA components and
E+D order lines of the MRP type "Stock part" using the "Long-running item overview" action. In both cases, the long run item overview is called up for the respective, referenced FA component. Here you can now view the possible, requirement-covering long-running	
item project plan lines for the component and create or delete a link between the FA component and the project plan line.	
FA components / E+D order lines of the MRP type "Stock item"	The "Long-running item overview" page can be called up for FA components and E+D order lines of the MRP type "Stock part" using the "Long-running item overview" action. In both cases, the long run item overview is called up for the respective referenced FA component. Here you can now view the possible, requirement-covering long-running item project plan lines for the component and create or delete a link between the FA component and the project plan line.
FA lines / E+D order lines of the MRP type "Production part"	The "Long-running item overview" page can be called up for FA lines and
E+D order lines of the MRP type "Production part" using the "Long-running item overview" action. In both cases, the long-running item overview is called up for the referenced FA line. In this call, the MRP components of the respective MRP line that have	
been identified as long run items are displayed as main items. The project plan lines are displayed as sub-items for the respective FA components, which can be used as requirement cover if necessary. If the "Set link" or "Delete link" actions are used when calling up an FA line, the displayed FA components are run through one after the other and the selected functionality is carried out for each individual FA component.	
Production order / E+D order	The "Long-running item overview" page can be called up for an entire production order or an E+D order. In both cases, the long run item overview is called up for the referenced production order. In the case of the E+D order, it is the production order that is listed in the header of the E+D order.

Call	Description
	All FA components of the production order that have been identified as
long run items are displayed as main items in this call. The project plan lines are displayed as sub-items for the respective FA	
components, which can be used as requirement cover if necessary. If the "Set link" or "Delete link" actions are used when calling up the entire production order, the displayed FA components are run through one after the other and the selected functionality is carried out for each individual FA component.	
Project plan line	The "Cross-country item overview" page can also be called up for a project plan line. To do this, the respective project plan line must be marked as "Cross-country item". The corresponding project plan line is displayed as the caller in the called
up cross-country ski item overview. The corresponding project plan line is displayed as the main item in this overview. The FA components that could be covered by this project plan line are displayed as sub-items for this project plan line. If the "Set link" or "Delete link" actions are executed from this view, they do not refer to the project plan line as the main item, but to the individual FA components as sub-items. This means that the individual FA components are run through one after the other and the selected action is executed for each individual component. The assignment of the long-running item therefore always takes place from the component's point of view.	
Project task	The "Cross-country item overview" page can also be called up for a project task. To do this, the respective project task must be marked as a "Crosscountry item". The corresponding project task is displayed as the caller in the crosscountry item overview. The corresponding project plan lines for this task are displayed as main items in this overview, which are marked as "Cross-country items". The respective FA components that could be covered by this project plan line are then displayed as sub-items for each main item. If the "Set link" or "Delete link" actions are executed from this view, they do not refer to the project plan lines as main items, but to the individual FA components as sub-items. This means that the individual FA components are run through one after the other and the selected action is executed for each individual component. The assignment of

Call	Description
	the long-running item therefore always takes place from the component's point of view.
Project	The "Cross-country article overview" page can also be called up for an entire project. The corresponding project is displayed as the caller in the cross-country ski item overview. All project plan lines for this project that are marked as "Cross-country items" are displayed as main items in this overview. The respective FA components that could be covered by this project plan line are then displayed as sub-items for each main item. If the "Set link" or "Delete link" actions are executed from this view, they do not refer to the project plan lines as main items, but to the individual FA components as sub-items. This means that the individual FA components are run through one after the other and the selected action is executed for each individual component. The assignment of the long-running item therefore always takes place from the component's point of view.

Overview entries

The overview items are displayed in the line area. The overview items are created on the basis of FA components and project plan lines and are created as main items and sub items. If the long-running item overview is called up from a production order or E+D order, the main items are created on the basis of FA components. The associated sub items are created on the basis of the project plan lines, which are possible requirements coverers for these long-running items. If, on the other hand, the long-running item overview is called up from a project, the main items are created on the basis of project plan lines and the sub-items are created by the FA components as possible requirements originators.

Note text

In this area, a short note text is displayed for the selected item. *(If a note is available for this item)*.

Post details

The details of the respective item are displayed in the info box area. The item origin *(FA line / project plan line)*, the item type *(main item / sub-item)*, item and variant information as well as the due date and the storage location where the item is required are displayed. The quantity information and whether the item is to be regarded as "available" are also displayed here. The quantity display in the overview items is explained below.

Quantity display in the cross-country article overview

The aim of the long-running item overview is to show how FA components can be covered by the long-running item project plan lines already in the MRP. For this purpose, the quantities of the long-running items must also be displayed accordingly. The presentation of the quantities in the long-running item overview depends on whether they are main items or sub-items. In addition, there are separate fields for each reference *(FA component, project plan line)* that display the quantities. In principle, the sum of the sub-items is also formed for each main item.

Example:

If the main item is an FA component, the sum of the quantities of its sub-items *(project plan lines)* that can be used to cover the requirements of the FA component is also formed for this main item. If, in turn, the main item is a long-running item project plan line, the FA components that could be covered by this project plan line are shown as sub-items.

The quantity fields basically have the following meaning:

Quantity fields FA component

Field	Description
Residual quantity (basis)	Displays the remaining quantity of the FA component line for the base unit. The remaining quantity represents the unused portion of the expected component quantity.
Reserved quantity (basis)	The quantity in base unit that has already been reserved for the component line from procurement documents or warehouse stock is displayed here.
Linked quantity (base)	This field displays the quantity in base unit that has already been linked to project plan lines for long run items.
Open quantity (basis)	The "Open quantity" for the base unit is displayed here. The open quantity is the quantity that still needs to be covered by reservations or links to long-running item project plan lines in order to ensure procurement for the remaining quantity of the
FA component. Open quantity = remaining quantity - reserved quantity	

Quantity fields Project plan line

Field	Description
Quantity (base)	This field displays the quantity of the project plan line as a long run item for the base unit. This field is purely informative and shows the planned quantity of the project plan line.
Linked quantity (base)	This field displays the already linked quantity of the project plan line with FA components.
Available quantity (base)	This field displays the quantity of the project plan line available for links to the base unit. The available quantity is the reserved quantity of a project plan line, as only the quantities that are reserved for procurement documents or warehouse stock can be transferred to an FA component.

> **Note**
>
> Sub-items can be displayed for a main item (FA component or project plan line) that have the "Unavailable item" checkbox ticked. These items cannot be covered or used to cover requirements.

An item is marked as "not available" if there is a date conflict between the FA component and the planning line. This means that the FA component cannot be covered in time on the basis of the planning date of the project planning line. Another reason would be if the quantity of the FA component is already completely covered *(the remaining quantity is completely reserved)* or if there is no available quantity in the project planning line. Although these items are then no longer used to cover requirements, they are still displayed to provide an overview of the existing links between the project plan lines and FA components and to indicate date conflicts. These items are marked accordingly and provided with a note text.

Functions in the ribbon

The "Cross-country item overview" screen has actions that can be used to control the view of the screen, but also to create or delete links between cross-country item project plan lines and FA components.

The individual actions are described below:

Action	Description
Recalculate	This action is used to recalculate and display the data in the screen. This action is used to update the screen.
Set link	This action sets links between the long-running item project plan lines and the corresponding FA components.
Delete link	This action deletes the links between the long-running item project plan lines and the corresponding FA components.
Show posts	This action can be used to display the existing links between the project plan line and the FA component for an item/item.

Setting and deleting cross-country item links

The setting and deletion of links between cross-country item project plan lines and the corresponding FA components is triggered from the cross-country item overview. The "Set link" and "Delete link" actions are used for this purpose.

The setting and deletion of links is explained below using the cross-country ski item overview for an FA component. The reason for this is that the setting and deletion of links always starts from the FA component, regardless of how the "Cross-country article overview" screen was called up. Depending on the call, only the corresponding FA components are filtered, which are then processed one after the other by setting or removing the links accordingly.

Setting links

When setting a long-running item link for an FA component line, the system checks whether this component corresponds to a long-running item in project plan lines. To do this, the system checks whether the component has a project reference and whether these project plan lines marked as long run items have the same item / variant / storage location combination. If this is the case, the corresponding project plan lines are used as possible default lines. The planning date of the project plan lines is filtered so that it is before or matches the due date of the component. The date filtering is important so that the demand-covering documents for the project plan line can also be used for the FA component line. The link can now be set until the "open quantity" of the FA component is 0 (zero) or there is no more available quantity in the filtered long-running item project plan lines.

The link is set using the "Set link" function for the FA component line.

Once the link has been set, a corresponding "Long-running item link item" is also created. This item records which FA component was linked to which project plan line with which quantity. The "Linked quantity (basis)" fields in the FA component and the project plan line are also calculated on the basis of these items.

The linking items can also be viewed in the cross-country skiing article overview.

The link transfers the reservation (proportionate to the linked quantity) from the project plan line to the FA component. This also creates a direct link between the demand covering document (e.g. a purchase order) and the FA component.

However, the link also has a direct effect on the project plan line. To reduce the requirement for the long-running item for the project accordingly and to minimize redundancy of the requirement between the FA component and the project plan line, the quantity of the project plan line itself is also reduced.

Deleting

links Deleting link items has two integrated steps. The first is to reset the existing link according to the cross-country item link item. The second is to transfer the reservation without the cross-country article link.

In the first step, the link is undone using the long run item link items by moving the reservation in the amount of the linked quantity from the FA component to the project plan line listed in the item.

In the second stage, the system checks whether there is still a reserved quantity for the FA component beyond the link. This means that after deleting the link, there is still a "reserved quantity" for the FA component, which may have been set by manual reservations. If this is the case, the reservation is also transferred to the first suitable project plan line. The aim of this transfer is to always concentrate the existing requirements coverage for the long-running items of a project on the long-running item project plan lines. If the surplus reservation quantity were only to be canceled in this way, it would then be available for other projects/consumption. However, the transfer ensures that the requirements cover remains reserved for the project.

The link for the FA component is deleted again using the "Delete link" function.

By deleting the link, the long-running item link item is deleted and the linked quantity in the FA component and the corresponding project plan line is reduced / set to 0 *(zero)*.

Furthermore, the "Open quantity (basis)" is also set high again in the FA component, as there is no longer any requirement coverage for the remaining quantity of the FA component.

On the other hand, the quantity and the available quantity in the project plan line and the available quantity in the project plan line are increased. As a result, the reservation for the requirement cover is transferred from the FA component to the project plan line and the requirement cover is still available to the project.

Handling of long-running article links

This section describes the handling of long-running article links for different actions in the processing of production orders / E+D orders and in the project.

As part of the production order / E+D order processing

Outsourcing and reintegration of separate production orders

In E+D orders, individual sub-assemblies can be outsourced to separate production orders or reintegrated from a separate production order. The noted requirements coverage *(reservations)* is also outsourced or reintegrated. Therefore, the long-running article link items are also outsourced or reintegrated with the separate production order.

Deleting an FA component

When a FA component is deleted, the system checks whether it is a long-running item. If this is the case and there are reservation items for the FA component, the reservation is transferred to the corresponding long-running item project plan line before the component is deleted.

Further information can be found in the section "Deleting cross-country article links".

Deleting a production order/individual FA lines

When deleting the entire production order or individual FA lines, the system checks whether the entire production order or the corresponding FA line contains components that are marked as long-running items. If this is the case, the reservations are transferred to the corresponding long-running item project plan lines before these components are deleted.

Further information can be found in the section "Deleting an FA component".

Reducing the quantity in an FA component

If an FA component is marked as "long-running" and a quantity reservation exists for this component, the existing reservation is converted to a long-running item project plan line before the quantity is reduced. After reducing the quantity, the system restores the reservation for the FA component according to the following scheme:

If the new "Expected quantity (base)" is smaller than the originally reserved quantity, then the reservation is only made according to the new "Expected quantity (base)". If, on the other hand, the new "Expected quantity (base)" still exceeds the originally reserved quantity, the reservation is set back to the originally reserved quantity.

This ensures that after the quantity reduction, the portion of the reservation that is no longer required is assigned to a corresponding project long runner and the component retains its reservation up to the maximum previously reserved quantity.

Cancellation of the reservation from an FA component

If an FA component is marked as a "long-running item", it is not possible to cancel the reservation for this component manually *(call up the reservation cancelation directly from the FA component)*. This is due to the fact that the reservations for slow-moving items in the production order are not simply canceled and made available again for all consumptions, but are moved to the corresponding slow-moving item project plan lines. As a result, the reserved requirement covers remain linked to the project.

Cancellation of the reservation for an FA component that is marked as a long-running item is therefore canceled with an error message. Instead, the "Delete link" function in the "Long-running item overview" should be used to transfer the existing reservation to a corresponding long-running item project plan line.

If the reservation has been transferred to the project plan line, it can be canceled there for the respective project plan line. This then represents a conscious decision, so that the reserved requirement cover for the long run item is to be decoupled from the project.

Cancellation of the reservation from the demand checker

If a FA component is marked as a "long-running item" and has a reservation for the requirement cover, the reservation cannot be canceled directly from the FA component.

However, it is possible to cancel the reservation from the demand-covering document. This is due to the fact that it must be possible to make changes to the demand-covering document. For example, if the planned delivery date cannot be met.

If a reservation is canceled in a demand-covering document that refers to a FA component for a long-running item, the long-running item link for this component is also adjusted accordingly.

Consumption booking of a FA component

After booking the consumption for a FA component that is marked as a "long-running item", the long-running item link is adjusted to the reserved quantity again. This is due to the fact that the reserved quantity may be consumed with the consumption booking *(reservation on stock)*. The long lead time article link must therefore also be reduced accordingly.

Status change in the production order

When status changes are made in the production order, the long-running article links for this production order must also be taken into account accordingly. There are two options that must be taken into account:

Change from "Firmly planned" to "Released":

With this status change, the long-running article link items must also be moved from the firmly planned production order to the released production order in parallel with the reservations.

Change from "Released" to "Finished":
if a production order is finished, all existing (unused) reservations for long-running items linked to the production order are redistributed to the corresponding long-running item project plan lines and are therefore still available in the project.

As part of the processing of project plan lines

When processing project plan lines that are marked as "long-running items", the system must carry out corresponding checks and actions in relation to long-running item links (long-running item link items). These are described below.

Creating book sheets for long-running items project plan lines

It is not possible to create project book sheets for project plan lines that are marked as "long-running items". This is prevented by a corresponding error message. The purpose of this is to prevent project plan lines for cross-country items from being posted. A project plan line for slow-moving items offers the option of generating requirements in advance for parts that are required for production and have a long procurement time. It only serves as a trigger for procurement, the actual consumption takes place as a component in the production order.

Posting long lead time items project plan lines

Posting project plan lines that are marked as "long lead time items" is not permitted. A project plan line for long lead time items offers the option of generating requirements in advance for parts that are required during production and have a long procurement time. It therefore only serves as a trigger for procurement; the actual consumption of the component takes place in the production order.

Deleting long-running article project plan lines with link items

If a project plan line that is marked as a "long running article" is deleted, the long-running article links of this project plan line to the corresponding FA components are also deleted. However, the reservation that has already been transferred to the requirement cover remains in the FA components. If it was the only long-running item project planning line for the item / variant / storage location combination, then the "long-running item" checkmark is also removed from the corresponding FA components, as there is no longer a reference to a long-running item in the project.

Project scheduling

With the help of project scheduling, you have the option of creating a rough schedule at any point in the project. Scheduling can be defined both at project level and at project task and project plan line level. Forward, backward and midpoint scheduling is possible.

Project tasks using predecessor and successor structure

Project tasks can be related by means of predecessors/successors. To create a predecessor/successor structure, click on the number in the "Predecessor/successor" field of the respective project task line. The "Project task dependencies" page opens on which you can assign the predecessors/successors to the project task via "New" in the "Project task dependencies" selection field.

Set project task duration

Enter the expected duration of the respective project task in the "Duration" field. You can enter this information in the following fields:

- T = Tag(s)
- WT = Weekday(s)
- W = week(s)
- M = month(s)
- Q = Quarter(s)
- J = Year(s)
- L = the current time unit based on the date

Terminate

Using the "Project scheduling" function in the ribbon, you can calculate the planned start date and the planned end date of the project tasks based on the predecessor and successor structure and the duration of the project task.

When the function is executed, the "Project scheduling" option window opens.

Field	**Description**
Termination direction	You can use the field to specify the termination direction. The following options are available: - Forward - Backward - Center point scheduling
Termination type	The scheduling fixed point is selected in the field. The options "Project" or "Project task" are available. If you select the "Project task" option, the additional "Scheduling task" field appears, which you can use to select the corresponding task.
Scheduling task	The field is visible as soon as you have selected the "Project task" option in the "Scheduling type" field. You can select the corresponding task here.

Confirm your selection to perform the calculation.

Note

Scheduling does not shift any existing planned start or end date of project tasks with the "Milestone" indicator.

Tipp

It is a good idea to create a project template for similar projects, which you can use to transfer a project task structure, a predecessor and successor structure, as well as the project task duration to a new project. Only a fine adjustment is then made in the project. Only predecessors and successors that exist in the original project template are transferred. New relationships to existing project task lines are not taken into account.

Procedure Termination direction

Forward scheduling

Starting from the scheduling fixed point, all project tasks are scheduled as follows:

Project task planned start date + duration = planned end date Planned end date of predecessor = planned start date of successor tasks

Backward scheduling

Starting from the scheduling fixed point, all project tasks are scheduled as follows:

Project task planned end date - Duration = planned start date Planned start date successor = planned end date of predecessor

Center point scheduling

Starting from the scheduling fixed point *(only possible for project tasks)*, all successors are scheduled forwards and all predecessors are scheduled backwards.

Note

When scheduling on the basis of the project, the planned start date of all project tasks without predecessors is set to the project start date.

Project tasks of the From total type receive the earliest planned start date of the subordinate tasks of the Booking type as the planned start date and the latest planned end date of the subordinate tasks of the Booking type as the planned end date.

Only the self-contained predecessor and successor structure is calculated for a midpoint termination.

Project location

For the correct presentation of the transfer of risk, goods are transferred from their production site to the construction site or to the customer and not delivered directly and thus consumed. The project is then debited upon acceptance through a deliberate consumption posting.

A project storage location is always created for a project. This can be a storage location for several projects or a storage location explicitly for one project.

In the latter variant, a new storage location is created based on the "Sale to customer no.".

Setup

In the "Projects setup" you can control whether you want to create one project storage location per project or use one storage location for several projects.

Project storage location per project:

If you opt for the automated creation of project storage locations for each project, you also have the option of storing a storage location template from which the necessary facilities for the newly created project storage location are pre-assigned. The following facilities are copied from the template storage location:

- Storage locations,
- Warehouse booking facility,
- Stock transfer routes,
- Storage location map (register)

Note

An event is available for project-specific extensions, which can be used to copy additional points such as dimensions or warehouse employees if required.

It is recommended to create a storage location only for the templates and not to use the template storage location as the actual storage location.

Field	Description
Create project storage location	For the procurement and logistics processes, you use this to specify whether the system should create a project storage location for each project. The project storage location represents the place of performance of the project.
Standard stock transfer-from storage location	The field is a selection list of all regular storage locations (not project storage
locations). It specifies the stock transfer route and is transferred to the "Stock transfer from storage location code" field on the "Invoice and shipping" info tab of the project card.	

Project storage location for multiple projects:

If you decide against the automated creation of a project storage location, you have the option of storing an existing storage location that is to be used by default for the projects.

Note

This option is only available to you if you have decided against one project storage location per project.

Field	Description
Standard project storage location	The field is a selection list of the storage locations available in the system. It specifies the default project storage location for all projects and is automatically transferred to the "Storage location code" field on the "Invoice and shipping" info tab. **Note:** The field is only used if "Create project storage location" is deactivated.
Standard stock transfer-from storage location	The field is a selection list of all regular storage locations *(not project
storage locations)*. It specifies the stock transfer route and is transferred to the "Stock transfer from storage location code" field on the "Invoice and shipping" info tab of the project card.	
Project storage location Number series	Is used when manually creating a new project storage location.

Manual system

In addition to the automatic creation of a project warehouse, you also have the option of manually creating a project warehouse location for each project.

To create a project storage location, click on the project card in the "Related" > "Setup" > "Create project storage location" ribbon.

When the function is executed, a query opens where you can decide whether you want to use the number for the storage location from the number series from the Projects facility or whether you want to assign a manual number.

Note

Please note that this function is only available if the "Create project storage location" switch is deactivated in the Projects setup.

Inventory data

When creating an article item in the project plan line, if a storage location is found, a storage data card is created directly in the background for the article and the corresponding project warehouse.

In the project plan line, the procurement method can then be defined directly on the stock data card via the "Procurement method" field.

If the "Stock transfer" procurement method is selected, a stock transfer route is created directly in the background for the standard warehouse in accordance with the settings in the "Projects setup".

Project team

A project team can be defined for each project. The definition takes place on the project card in the ribbon under "Project team".

Create the project team members using the table below:

Field	**Description**
Project no.	Specifies the number of the project to which the project team is assigned. This field is filled in automatically.
Kind	Here you specify the type of project member. You can choose between resources *(internal and external employees)* and contacts *(project members of the customer or further project participants)*. If you select Type=Contact, the "Company no." field is filled by the system using the customer number of the project card, from which the company name is also derived.
No.	Here you can select depending on the type of member. Type=Resource: Selection of the respective resource no. Type=Contact: Selection of the respective contact no. Type=User: Selection of the respective user ID
Roll code	Specifies the role of the project team member. To assign code to the roles, the roles must first be set up in the
table of the same name.	
Role	Specifies the name of the roll.
Start date	Specifies the start date for the use of the resource. The start date is automatically preset with the start date of the project
and can be changed manually.	
Name	Specifies the name of the resource, contact or user.
e-mail	Specifies the e-mail address of the resource, contact or user.
Telephone no.	Specifies the telephone number of the resource, contact or user.
Cell phone no.	Specifies the cell phone number of the resource, contact or user.
End date	Specifies the end date for the use of the resource. The end date is automatically preset with the end date of the project and can
be changed manually.	
Company no.	Specifies the company number of the contact as soon as the field Type=Contact
Company name	Specifies the company name.
Business relationship	Indicates the business relationship.
Seller code	Indicates the seller of your company.
Persons Contact no.	Specifies the person contact no.
Planned quantity	Specifies the planned quantity of the project team member.
Quantity of plan lines	Specifies the number of plan lines for the project team member.
Remaining quantity Plannable	Indicates the remaining quantity that can be planned for the project team member.
Time quantity	Indicates the amount of time already recorded for the project by the project team member.
Project quantity	Specifies the project quantity for the project team member.

Field	Description
Total consumption	Indicates the total consumption of the project team member.
Remainder of plan lines	Specifies the remaining quantity of plan lines for the project team member.
Rest plan	Indicates the remaining plan quantity of the project team member.

Note

If the "Responsible" and / or "Project manager" fields are maintained on the project card, the project team data records are also created with the Responsible / Project manager role.

If you maintain a resource in the project plan lines, project team data records are also generated for this.

Please note that when creating from the project plan line, the team record is not deleted when the resource is changed or the record is deleted.

Archive project versioning and project status

The project planning in Microsoft Dynamics 365 Business Central[1] is always updated and corrected so that it is not possible to compare different planning statuses. In the plant engineering solution, you can version the project planning in order to have access to older planning statuses and to compare two planning statuses with each other.

Project version

To create a project version, execute the "Release version" function in the respective project via the ribbon. The current version of the complete project status has thus been archived and can be viewed via the number of the "Archived versions" field on the "General" info tab or via the ribbon under the "Project archive" menu item.

The archived project statuses contain a complete copy of the project map with the following additional information on the "Version" information tab:

Field	Description
Version no.	Specifies the version number of the archived project status.
Archived from	Indicates who created the version.
Archived on	Indicates the date when the version was created.
Archived at	Indicates the time when the version was created.
Archiving note	If an archiving note has been stored during archiving, this will be displayed here.
Last consecutive no. Project item	Specifies the number of the last project item at the time the version was created.
Last article items Lfd. No.	Specifies the number of the last article item at the time the version was created.
Last consecutive no. Value item	Specifies the number of the last value item at the time the version was created.
Last consecutive no. Resource item	Specifies the number of the last resource item at the time the version was created.
Last serial no. Capacity item	Specifies the number of the last capacity item at the time the version was created.

Project structure version

The project structure version can be viewed via the "Project structure" menu item in the project version ribbon. This corresponds to the project structure at the time of archiving with the additional identifier of the version number.

Note

When archiving from the project structure, the project card is also always archived.

Shipping preparation

When manufacturing complex items, the situation can often arise in shipping that the manufactured item needs to be disassembled and packed for shipping. In connection with the plant engineering solution, it is also possible to use shipping units across all FAs within a project. This requires that the production orders have a project reference, e.g. by being generated by the requirements planning in the project.

Project-specific shipping units can now be assigned to these production orders by checking the "Project-specific shipping unit" box in the component lines. This is set for all component lines of the production order.

Shipping units can now be assigned. They are no longer FA-specific, but can be assigned in all FAs that have the corresponding project number.

The assignment can also be assigned from the "Material structure" in the project. All FAs linked to the project plan lines are directly visible here. If the corresponding lines are transferred to a sales order, the shipping units can be used in the goods issue. The "Insert project-specific shipping units" function is used for this in goods issue. To do this, all lines belonging to FAs that use project-specific shipping units are selected.

The goods issue can then be posted normally. Once the shipping units have been posted in full, the original lines are automatically posted in the background and the sales delivery is completed. When inserting the project-specific shipping unit, the system checks whether each production order that uses one of the shipping units is also linked to this goods issue. If this is not the case, the system terminates with an error and refers to the FA. You can find basic information about shipping units here.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩↩

RISK MANAGEMENT

Risk management allows you to calculate, monitor and counteract project risks. Using the task management within the risk line, you can define preventive measures.

To calculate and monitor the project risks, call up the "Risk management" via the menu ribbon. The corresponding fields are explained in more detail below:

Field	Description
Comments	This field indicates whether a comment of the risk line is deposited.
Risk no.	This field must be filled. It controls the position of the risk line and thus the clarity of the entire risk list.
Description	This field can be used to store a description for the risk.
Risk type	In this field you enter the type of risk. **This field offers the following options:** - RiskIndicates the risk - HeadingSpecifies a heading - SumWith this option you can create a sum over several risk rows. You define the range using the "Total" field. - From-totalAs in the chart of accounts, you can create a from-total - to-total over several rows in Risk Management. - To-totalAs in the chart of accounts, you can create a from-total - to-total over several rows in Risk Management.
Counting up	This field specifies which risks are added together. This field works for the "From-total", "To-total" and "Total" risk types. When using the "From-total" and "To-total" risk types, the system automatically fills the "Add up" field of the row with the "To-total" risk type.
Number of open tasks	Indicates the number of open tasks (measures) generated by the task creation.
Entry date	In this date field, you store the date on which the risk may occur.
Responsible	In this information field a user can be assigned as responsible for this risk.
Damage (MW)	This field is used to specify the amount of damage.
Cum. Damage (MW)	This field is automatically filled based on the "Damage (MW)" field and indicates the cumulative damage.
Probability %	In the "Probability %" field, the probability of the risk that could occur is indicated.
Cum. Damage assessed (MW)	This field is automatically filled based on the calculation of the "Damage (MW)" and "Probability %" fields.
Damage n. Completion (MW)	This information field can be used to specify the damage after the completion of the project.
Cum. Damage n. Completion (MW)	This field is automatically filled with the cumulative value of the field "Damage n. Completion".
Prob. n. completion %	This information field can be used to indicate the probability of the risk after completion of the project.
Cum. Damage assessed n. closure (MW)	This field is automatically filled based on the calculation of the fields "Damage after completion (MW)" and "Probability after completion %". It describes the assessed damage after completion of the project.

Field	Description
Active	This identifier controls whether the risk is active or not.
Identified by	This field is automatically filled with the user name that entered the risk line.
Identified on	This field is automatically filled with the working date on which the risk line was created.
Cause Description	A description of the cause can be stored here.
Damage description	A description of the possible damage can be stored in this field.
Measure costs (MW)	The measure costs of the risk can be entered here.
Cum. Measure costs (MW)	This field is automatically populated based on the "Measure Costs (MW)" field and indicates the cumulative measure costs.
Damage Actual (MW)	In this field you enter the actual damage.
Cum. Damage Actual (MW)	Based on the "Damage Actual (MW)" field, this field is automatically filled.

PROJECT EFFORT

In the following, the individual areas are explained in more detail, through which the project, effort and consumption can be assigned.

Thus, on the one hand, the expenses of the resources are recorded in the form of working hours, and on the other hand, article consumption is recorded via stock or project purchasing.

This results in the actual values of a project. Subsequently, these actual values are compared with the planned values.

Personnel / benefit expenses

The implementation of projects includes consumption as well as sales. Project consumption primarily includes the expenditure of resources. Resources can be employees, machines and subcontractors.

Resource expenditures are always made in the resource base unit via the timesheet. All person resources should have this code as the base unit on the resource card.

Record timesheet

Using the time sheet, the resources can record their expenses with a corresponding description on the projects. For each resource, the time sheet must have been created beforehand for the corresponding period. For more information, see "Creating timesheets" or the Microsoft Dynamics Business Central™ Helpsite (F1).

Release of the transmitted working times

The submitted working times of the employees are then approved by the timesheet approver.

To release the transferred working times, call up "Time sheet for manager" via the user search.

The time sheet for manager card opens on which the transferred working times are listed. Via the menu ribbon you have the possibility to approve or reject the transmitted working times via the calls "Approve"/"Reject".

Further information on this topic can be found in the Microsoft Dynamics 365 Business Central[1] Helpsite.

Project book sheet

The time sheet is used to record the project time consumption. To ensure that the projects are also debited with the posted project time items, i.e. the project time items are transferred to so-called project items, the posted time consumptions must be entered via the project book.sheet.

The project posting sheet is used to post project items of all types. For example, material from the warehouse can also be posted here as project consumption. At this point, only the transfer of project items from the project time items will be discussed.

The menu item "Suggest project book. sheet lines" creates an input mask in which the filters for the retrieval can be set specifically.

This function is used to retrieve project time items that have not yet been transferred to project items. As a rule, each project manager retrieves the project time items for which he is responsible. For this purpose, each individual project can be edited or the "Responsible" filter can be used.

The call fills the project book.sheet with all necessary data from the project time item. One book.sheet line is created per project time item.

After updating, the project book sheet is empty again and the corresponding project items have been created.

External resources

External resources can be purchased via purchasing documents.

For external resources, a vendor can be specified on the resource card. This creditor is the invoicing party, e.g. a personnel service provider. In the case of a freelancer, the freelancer must be created as a resource and as a vendor and linked accordingly.

If an external resource is entered in the project plan lines, this vendor is transferred to the field of the same name in the project plan line. Thus, a cost price determination can be carried out specifically for the combination resource / vendor. Also a creation of a purchase order of the external resource from the project plan line takes place with the creditor of the project plan line.

In addition to cost prices, sales prices and purchase prices can also be defined for external resources.

Cost of materials

In addition to the time spent on resources, projects also have material costs. This is managed via articles. The demand is defined and planned in the planning lines. The missing parts are ordered or produced via purchasing or production.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

PROJECT PURCHASING

Plant engineering allows you to trigger purchasing documents directly from the project plan lines.

Create purchase request

Using the "Create purchase request" function, you can send the request to the supplier directly from the project plan line.

The following requirements must be met:

- it is not a position already transferred
- for each line a vendor no. is maintained
- the project is not in the "Locked" status
- if it is an item without a planning date, it must be a comment line

Otherwise, a corresponding message appears.

After a successful check, a window will open where you can make the following decisions:

Field	Description
Create new document	Specify whether you want to create a new document or attach the items to an existing purchase request.
Document date	Specify which document date the purchase request should receive.
Attach to document	If you want to add to an existing purchase request (Create new document = No), you can specify the document to be updated here. Determine to which document you want to assign the selected lines. A list of possible documents is displayed for this purpose.
Lines outline	Specify here whether a row outline should be created when a new document is created. When adding documents, you will not be offered the choice and the outline type of the existing document will be kept.

Confirm your selection with "Ok".

Subsequently, all selected lines marked on the line type "Budget" or "Budget and Invoiceable" are transferred to the purchasing request. In addition, the project no. in the header of the purchasing document is maintained with the project no. from the project from which it was generated. The requested quantity corresponds to the remaining quantity of the project planning line minus the quantity already reserved for it.

The document number of the generated request is displayed in the "Purchasing document number" field. By clicking on the number you can open and view the document.

You can convert the purchase request to a purchase order later in the process. In doing so, the "Purchasing document number" field in the project plan line is adjusted with the number of the purchase order.

If one of the following fields is changed in the project plan line, the system tries to transfer the change to the purchase line as well:

- Description
- Description 2
- Type
- No.
- Work type
- Variants code
- Quantity
- Unit code
- Cost price
- UK price (MW)
- Line discount %
- Planned delivery date
- Storage location
- Stockyard
- Currency code

Note

Please note that the new currency code must match the currency code of the purchase document, if not, an error message will appear.

Create order

Using the "Create Purchase Order" function, you can directly create a purchase order for the project plan line out.

The following requirements must be met:

- it is not a position already transferred
- for each line a vendor no. is maintained
- the project is not in the "Locked" status
- if it is an item without a planning date, it must be a comment line

Otherwise, a corresponding message appears.

After a successful check, a window will open where you can make the following decisions:

Field	Description
Create new document	Specify whether you want to create a new document or attach the items to an existing purchase order.
Document date	Specify which document date the purchase order should receive.
Attach to document	If you want to add to an existing purchase order (Create new document = No), you can specify the document to be updated here. Determine to which document you want to assign the selected lines. A list of possible documents is displayed for this purpose.
Lines outline	Specify here whether a row outline should be created when a new document is created.

When adding documents, you will not be offered the choice and the outline type of the existing document will be kept. Confirm your selection with "Ok".

Subsequently, all selected lines marked on the line type "Budget" or "Budget and Billable" are transferred to the purchase order. In addition, the project no. in the header of the purchasing document is maintained with the project no. from the project from which it was generated. The quantity to be ordered corresponds to the remaining quantity of the project planning line minus the quantity already reserved for it.

Depending on the maintenance of the field "Reserve", the order line will be created in such a way that the project no. as well as the project task will be taken over from the plan line into the purchase line when reserving "Never". By posting the document, the position is directly debited to the project.

From Reservation "Optional" onwards, the fields (Project no. and Project task) are not filled and the project consumption must be done manually.

The project line type is always set to Budget.

Note

KUMAVISION factory365 specific referencing fields are filled in the background, so that the purchase order item is considered in the project chart of accounts or also in the commitment consideration.

If one of the following fields is changed in the project plan line, the system tries to transfer the change to the purchase line as well:

- Description
- Description 2
- Type
- No.
- Work type
- Variants code
- Quantity
- Unit code
- Cost price
- UK price (MW)
- Line discount %
- Planned delivery date
- Storage location
- Stockyard
- Currency code

Note

Please note that the new currency code must match the currency code of the purchase document, if not, an error message will appear.

Planning proposal

Alternatively, you can generate the purchase requisition/purchase order conventionally via the planning proposal. To do this, select the "Planning proposal" function via the respective project plan line.

PROJECT MANUFACTURING

As for project purchasing, plant engineering offers the possibility to trigger the manufacturing or assembly processes directly from the project plan lines. The following options are available for this purpose:

Planning proposal

Using the "Planning proposal" function, you have the option of generating a production order via the planning proposal.

The production document number is displayed in the "Reserved by" field. By clicking on the number you can open and view the document.

Assembly order

Microsoft Dynamics 365 Business Central[1] enables an assembly order for an assembly item to be generated from a sales order via the so-called "order assembly". In the course of the sales delivery, the corresponding assembly order is posted in the background.

This functionality has been transferred to plant engineering. This means that you can enter the assembly item directly in a project plan line and generate the assembly order accordingly via the fields "Quantity for order assembly" and "Quantity for order assembly (basis)". The document number of the generated assembly order can be seen in the "Reserved by" field and the document can be called up directly from this point.

If a sales order with the corresponding item already exists in the system, it can be viewed via the fields "Sales document type = order" and "Sales document no. ".

Otherwise, they can be created from the project card via the "Tasks" > "Line" > "Documents" > "Create sales order..." info tab.

As soon as the sales line of the related assembly item is delivered via the order, the assembly order is posted.

Please refer to the Microsoft Dynamics 365 Business Central[1] Helpsite for the maintenance and handling of assembly items.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

PROJECT ACCOUNTING

The sales document forms the commercial basis vis-à-vis the customer. From the project tasks, the sales calculation can be transferred into a quotation and / or order.

General behavior

Project type

In the project type, you can set up an order type for the creation of sales documents, if required. This will be used when creating the documents.

Status

When creating documents, it should be noted that this is only possible from the project tasks / project plan lines if the project has the required status:

1. Quotation can be created only with project status "Quotation" as well as "Order".
2. Order as well as complaint can be created only with project status "Order
3. An offer can only be converted into an order if the project status is "Order".
4. Only project plan lines with the Billing item "Yes" flag (line type "Budget and Billing" as well as "Billing") can be transferred to a sales document.

Document quantity

The documents can be created from the project plan lines as well as from the project tasks. The system uses the field "Quantity to be transferred to invoice" to determine the quantity of documents (offer, order, invoice, credit note and complaint).

Address data

The sales header takes over the address data from the project header. This means the sales to information of the project is transferred to the sales to information of the offer or order the same with the invoice to data. The delivery address is derived from the sales to address.

Position numbering

The item numbering in the sales documents depends on the creation of the plan lines as well as on the task breakdown.

Task planning

If you have used the task planning, the position number is filled with the planning project task.

Use of the project outline

The position numbering is based on the project task. The from line has the project task as item no., the plan line supplemented by the extension of the next level of the project outline.

Consecutive numbering

If there is no project structure, the item number is determined on the basis of the project task no. '.' and the consecutive number. If the maximum length of 20 characters is exceeded, the project task will be shortened so that the sequential number can be added up to the maximum value of 99. When the consecutive number reaches 100, an error message appears.

Order type

The order type represents whether the order is the initial order or a follow-up order. If, when creating a new sales document, it is determined that a document already exists, the system switches the order type to follow-up order.

Updating the vouchers

The project is the leading bracket in plant engineering and thus allows updating sales documents from within the project.

An update from the sales documents and thus an indirect change of the project plan by the order department is not possible. However, a maintenance of order specific data such as the assignment of the article tracking is allowed.

The project plan is updated by posting results, which are made by the system in the background.

Posting result depending on the line type

Please note that only lines with the line type "Billable" and "Budget and Billable" will be included in the sales document.

Billable lines do not create any items in case of deliveries, in case of billing they create a project item with the item type "Sales".

Budgetable and billable lines also generate project items with the item type "Consumption" for deliveries.

Function support

Below you will find the functional support for VK documents generated from a plant engineering project in tabular form:

Function call via	Function	Support
Manage rows	Attribute search	Disabled
Lines Article availability according to	Event	Active
Lines Article availability according to	Period	Active
Lines Article availability according to	Variant	Active
Lines Article availability according to	Storage location	Active
Lines Article availability according to	BOM level	Active
Rows\Line\Related information	Reservation item	Reference to project plan line
Rows\Line\Related information	Item tracking lines	Reference to project plan line
Rows\Line\Related information	Select replacement item	Disabled
Rows\Line\Related information	Dimensions	Reference to project plan line
Rows\Line\Related information	Comments	Active
Rows\Line\Related information	Article Allocation of additions/ deductions	Disabled
Rows\Line\Related information	Delivery date commitments	Reference to project plan line
Lines\Row\Linked information\Order assembly	Program production lines	Disabled
Lines\Row\Linked information\Order assembly	Calculate multilevel price	Disabled
Lines\Row\Linked information\Order assembly	Calculate multilevel costs	Disabled
Rows\Line\Related information	Document line tracking	Active
Line\Line	Calculation tracking lines	Disabled
Rows\Line\Related information	Incoming orders	Active
Lines\Row\Linked information\Document texts	Pretext	Active
Lines\Row\Linked information\Document texts	Post text	Active
ROW FEATURES	Get price	Disabled
ROW FEATURES	Retrieve line discount	Disabled
ROW FEATURES	Unfold parts list	Disabled
ROW FEATURES	Insert text modules	Active
ROW FEATURES	Reserve	Reference to project plan line
ROW FEATURES	Demand creator	Reference to project plan line

Function call via	Function	Support
ROW FEATURES	Select catalog item	Disabled
ROW FEATURES	Calculate manufacturing cost estimate	Disabled
Line order direct delivery	Order	Disabled
Line order special order	Order	Disabled

Offer for sale

You can create a sales quotation directly from the project via the project plan lines. The function calls can be found on the one hand on the project map via the "Tasks" info tab and on the other hand via the project plan lines.

If the document creation is triggered from the project plan line, the system tries to transfer all selected project plan lines to the sales quotation.

When creating from the project tasks, all the billable lines of the tasks are transferred to the sales document.

If you want to create a sales quotation for all lines, the "Tasks" info tab can be used to call up the quotation. By means of the row selection you can control which task rows are to be considered.

Note

Please note that only project tasks of line type="Budget and Billable" or "Billable" can be transferred in a UK document

Sales documents are created at the project customers. For this purpose, the information stored in the project is used. Thus, sales to customer, invoice to customer, the delivery address and the payment terms of the project are used to create the sales documents.

After commissioning, the sales quotation can be converted into an order in the system as usual using the "Create order" function.

Sell order

If the customer has already ordered the project, you can also create a sales order directly from the project via the project plan lines. The function calls can be found on the one hand on the project map via the "Tasks" info tab and on the other hand via the project plan lines.

If you want to create the sales order over all lines, the call via the "Tasks" info tab is suitable at this point. By means of the row selection you can control which task rows are to be considered.

Sales documents are created at the project customers. For this purpose, the information stored in the project is used. Thus, sales to customer, invoice to customer, the delivery address and the payment terms of the project are used to create the sales documents.

The order processing corresponds to the standard order processing.

Delivery

Maintain the quantity to be delivered in the "Quantity to be delivered" field. In case of an activated item tracking please maintain the concerned serial no. or batch no. via the item tracking. Item tracking maintenance from the order is the same as item tracking maintenance from the project plan lines.

Invoice

Maintain the quantity to be invoiced in the "Quantity to invoice" field. Please note that if item tracking is enabled, no item tracking can be specified for the billing case.

Dimension expansion

For easy evaluation of the projects, the creation as well as assignment of dimensions has been optimized.

Dimension specification by the activity type

Dimension specifications can be assigned to the activity type, so that when the activity type is selected in the project task, the dimension is assigned to the task.

Project type

In the project setup you can define that for reporting purposes a dimension Project type is maintained and assigned to the system in parallel to Project type.

Project Chart of Accounts

For effective project controlling, all project movements can be assigned and evaluated via a separate chart of accounts.

Down payment accounting

Within financial accounting, KUMAVISION's "Down Payment Accounting" module enables the simple planning, creation and management of down payment invoices. The add-on module is fully integrated into the standard processes of accounts receivable and accounts payable, such as dunning and payment transactions, and can likewise be used for plant engineering in KUMAVISION factory365.

Note

Please note that the "Down payment accounting" module is an add-on module that requires additional licensing. If you do not have this license integrated in your solution, the following functionality from this section will not be available to you.

The following adjustments were made for this purpose:

Down payment plan

The following fields have been added to the down payment plan in KUMAVISION factory365:

Field	Description
Project task no.	Contains the project task number you assigned.
Maintenance	is possible only for projects.
Milestone	Define herewith that when completing a milestone, the defined down payment invoice is generated by the system in the background. The FiBu department then only has to post and send this.

You can access the down payment plan for projects as well as project tasks via Down payment plan in the project card.

By maintaining the project task, you specify that you want to set the down payment schedule at the project task level.

Note

Please note that if you select a project task defined as a milestone, the system will also activate the milestone billing functionality (the Milestone field defined with a check mark). A combination of the source types Project as well as Project task is not allowed.

Down payment plan by milestone

If you have assigned a milestone for invoice creation in the down payment plan, the down payment invoice is created when the status of the milestone changes to completed.

For more information, see "Down payment accounting".

PROJECT CONTROLLING

In this section, the possibilities of project controlling are presented. It will be discussed how project results with multi-level contribution margin accounting can be presented in the Projects module with the help of the project chart of accounts. In addition, the project information that can be called up immediately is presented.

Project controlling is basically based on budgeted and actual values. The realization should correspond to the planned values. In order to be able to manage the project properly and promptly, a comprehensive evaluation of the planned values and the actual values incurred, related to the stored time periods, is immensely important. Microsoft Dynamics 365 Business Central[1] offers this evaluation.

The project items show the actual values that are charged to the project from daily work. These are usually goods or time postings. The plan values are defined via the project tasks and its project plan lines. This enables a target/actual comparison of certain cost types. On the basis of this project chart of accounts, evaluation schemas can be formed, with which, combined with correspondingly generated column layouts, specific information can be formed from the values. The procedure corresponds to the account evaluation in the financial accounting area.

Data basis and structure

The creation of the project account framework is fundamental for project controlling via Microsoft Dynamics 365 Business Central[1]. This contains the most important areas (cost types and revenue types) that are important for the company for the evaluation of projects. The level of detail of the accounts can be freely selected. Thus, a very compact or also a very elaborate project chart of accounts can be the basis.

Based on this, the project items or plan values are formed. These items are combined using a project account scheme.

Project chart of accounts and project account setup

All project entries can be posted to project accounts via the project account setup, similar to the G/L items in financial accounting. This enables evaluation possibilities to an undreamt-of extent.

The project account and the project chart of accounts have already been explained in the section "Project setup", so only the project account setup will be discussed in detail here.

Project account determination is based on the combination of product posting group, project type and activity type. Each combination is assigned a consumption and sales account from the project chart of accounts.

The information is used to determine the respective project account as follows:

Field	Description
Product posting group	From the consumed or invoiced item, resource, G/L account. The product posting group is the only mandatory field in the matrix.
Project type	From the project
Service type	From the addressed project task to which the consumption or revenue was posted or planned.

With the above information can be e.g.

- the resource expenditure for project management on research projects with internal resources
- the cost of small materials for assembly on site
- the travel times of external employees on major projects
  can be determined.

Depending on what is to be evaluated later, the project chart of accounts and especially the matrix must be set up accordingly.

Project items = actual values

With each posting where a project is addressed, the system creates a project item. Project items form the basis for project settlements (expense items) and reflect the revenues of these settlements (revenue items). Project valuation is also built on the project item.

For project controlling, the project item provides all ACTUAL information from consumption and from sales.

As soon as a project booking is made, a project account is assigned to the resulting project items via the matrix mentioned above. In this way, actual consumption and actual sales can be used directly for project controlling.

Down payment plan / payment schedule

Both options behave the same. The only difference is the data source. While the payment plan is a general payment plan for projects, the down payment plan is a part of the down payment accounting module.

Project account schemeta

As soon as project plan lines and bookings are formed, projects can be evaluated. How and according to which criteria these projects are evaluated on the basis of this data is mapped in the project account schemes. The thinking and procedure of these project account schemes corresponds completely to the procedure in financial accounting with the account schemes on the basis of the G/L accounts and G/L items there.

To set up the project account schemes, call up the "Project account schemes" via the user search.

Several structures can be defined via the project account schemes, which can be used to throw different views on the project results. E.g. internal projects should be evaluated differently than customer projects. The project account scheme defines the structure of the rows. In the following the setup fields are explained in more detail:

Field	Description
Code	Specifies a meaningful abbreviation of the project account scheme.
Description	Specifies a description of the project account scheme.
Standard column layout	In the field "Standard column layout" you can define the criteria for the evaluation in the column view. The column layout stored there is always used as a basis when calling up a project account scheme. However, it is possible to assign a different column layout at any time.

Project account schemes lines

A report structure is set up in the project account scheme itself, in which the corresponding project accounts are assigned to the individual lines. Totals lines or formulas can also be entered.

The important fields are:

Field	Description
Heading no.	A logical line numbering is to be stored in the field "Rubric no.".
Description	In the "Description" you have to enter which area you want to display in this line.
Counting type	In the "Totals type" field, specify whether an account total, a grand total or a formula should be stored. When specifying the account total, the values of one or more accounts are displayed. If the Totals selection is activated, totals lines from the project chart of accounts can be taken into account. If the Formula type is selected, a formula can be defined within the project accounts scheme.
Counting up	In the "Totals" field, according to the previously defined type, project accounts, totals rows or calculation formulas can be specified.
Line type	This field can be used to define whether the line is a main line or an auxiliary line.
Hide row	This field can be used to control whether the line should be shown/hidden.
Line color	By means of the selection it can be indicated whether the line is to be printed "black" or "blue".
Boldface	The check mark can be used to specify whether the line should be printed in bold.

Project account schemes column layout

When you call the "Set up column layouts" function, the Column layout project page is opened. Among other things, the column layout TARGET - ACTUAL is stored in the database.

Field	Description
Column no.	In the "Column no. " an identification of the line is to be indicated.
Column heading	In the field "Column header" you have to enter the name of the column as it should appear in the printout.
Column type	**In the "Column type" it is possible to specify what will be done in the column:** **Formula:** Calculations are performed between the columns. **Motion:** Pure transaction data is displayed.
Item type	In the field "Item type" the respective item type (depending on the field "Column type=Movement) must be specified.
Archive source	Depending on the "Item type" field, the archive source must be specified if necessary.
Document type	The type of document is defined in the Document type field. This field depends on the item type. E.g. Item type=Purchase line can be defined as document type "Offer".
Amount type	The "Amount type" field specifies what type it is, e.g. "Cost amount".
Assignment type filter	In this field, a filter can further narrow down this line.
Comparison date formula	In the "Comparison date formula" field, you can define which comparison period is to be displayed. The entry is made in relation to the time period specified in the date filter in the report requests. Entries can be made with the known time specifications (T, TW, W, M, Q, J).
Formula	In the "Formula" field, the formula can be entered if the column type is the Formula selection.
Rounding factor	In the "Rounding factor" field, you can specify whether and if so how to round. This allows large values to be displayed clearly.
View	The "Display" field can be used to define whether the column • always, • never, • if positive • If negative is displayed.
Red color	The display is in red color.
Green color	The display is in green color.

Project account schemes matrix

You can call it up via the menu item "Matrix". It shows you the values resulting from the defined rows of the account scheme and the columns of the column layout.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

REKLAMATION UND GUTSCHRIFT

Complaint and credit note

Complaint

Should the case arise that a customer complains about the delivered goods, the complaint process can be started from within the project.

To do this, select the corresponding project plan line and execute "Create sales complaint" via the menu item.

A window will open where you can make the following decisions:

Field	Description
Create new document	Specify whether you want to create a new document or attach the items to an existing claim.
Archive existing document	If the document is to be attached to an existing document, it is recommended to activate the "Archive existing document" button. The existing document is archived again beforehand when activated.
Document date	Specify which document date the complaint should receive.
Attach to document	If you want to add to an existing complaint (Create new document = No), you can specify the document to be updated here. Determine to which document you want to assign the selected lines. A list of possible documents is displayed for this purpose.
Lines outline	Specify here whether a row outline should be created when a new document is created. When adding documents, you will not be offered the choice and the outline type of the existing document will be kept.

Confirm your selection with "Ok".

Credit

Detached from a complaint process, you also have the option to create a value credit note via a project plan line.

To do this, select the corresponding project plan line and call up the menu item "Create sales credit memo".

A window will open where you can make the following decisions:

Field	Description
Create new credit note	Specify whether you want to create a new document or attach the items to an existing credit note.
Posting date	Specify which posting date should receive the credit note.
Attach to credit memo no.	If you want to add to an existing credit note (Create new credit note = No), you can specify the document to be updated here. Determine to which document you want to assign the selected lines. A list of possible documents is displayed for this purpose.

WORK IN PROGRESS (WIP) EVALUATION IN PLANT CONSTRUCTION

general

The following sections describe the Work in Progress (WIP) Valuation module. The determination of the valuation as well as the execution and the posting process will be explained in short form. Finally, archiving and evaluation in project valuation are addressed.

WIP Valuation can determine project values based on planned project budget items and posted project items. Project accounts are used to assign these items to specific line items and are stored as information on the line items. The project accounts are determined via a setup based on project type, activity type and product posting group separately for sales and consumption and assigned to the items.

Via so-called project account schemes with variable column layouts, the values on these project accounts can be evaluated for each project. The flexible structure of the schema makes it possible to display actual and planned values for the different project accounts. Using formulas and if-then conditions, the values can additionally be linked or compared so that the relevant amounts for the WIP evaluation can be displayed. Specially marked rows and columns determine which values are subsequently transferred as a posting to financial accounting.

setup

This section gives an overview of the necessary setups. It explains which master data must be set up for project evaluation in general so that projects can be evaluated automatically. The following master data must be set up in order to use project evaluation:

- WIP Valuation Setup
- Fibu integration codes
- Project chart of accounts
- Project account scheme for WIP valuation
- Column layout project account scheme for WIP valuation

In order to perform the valuation runs, some basic specifications and setups must be made in advance. This section describes which setups need to be made.

wip evaluation setup

In the WIP Valuation Setup, general parameters for the project valuation are defined. The posting of the valuation figures is done from the valuation proposal using a recurring Fibu Buch. sheet.

field	**description**
Fibu Book	Here the book. sheet template and name for the posting of the project valuation can be stored. The ledger sheet must be a recurring ledger sheet.
Book Sheet Name	Here you can define the accounting sheet template and name for posting the project evaluation. The ledger sheet must be a recurring ledger sheet.
Prefix Document no.	When posting the valuation proposal to the accounting system, the document number is composed of this prefix and *MM/YYYY* of the valuation date.
Posting description	Enter here a posting description for the posting to the financial accounting. The description will be completed with *MonthName/YYYY* of the valuation date when posting the valuation proposal to the Fibu.
Prefix Reversal	When posting a new valuation proposal to the general ledger, the existing posting will first be reversed. The document number for the reversal is composed of this prefix and *MM/YYYY* of the valuation date.
Project evaluation approved as of	Here you can specify the permitted posting period for project valuation postings.
Project valuation allowed until	The allowed booking period for project valuation bookings can be specified here.
Repetition rate	Since a recurring ledger sheet is used for posting the valuation proposal to the financial accounting, you must specify here which recurrence applies. e.g. +1T+1M-1T

wip fibu integration code

WIP Fibu integration codes are assigned in the project account schemes for the lines whose amount is to be posted to the financial accounting. In the WIP Fibu integration codes the debit and credit accounts for the capitalization are defined.

For the different valuation items *(e.g. expenses, down payments)* and methods *(e.g. Local GAAP, IFRS)* separate WIP Fibu integration codes must be set up for each posting record. The codes must be assigned to the respective lines in the project chart of accounts.

Field	**Description**
Code	Unique identifier of the Fibu integration code
Description	Description of the accounting integration code
Debit account activation	The debit amount of the relevant project account scheme line is posted to this account when the activation is posted
Credit account Activation	The credit amount of the relevant project account scheme line is posted to this account when the activation is posted.

project chart of accounts

A project chart of accounts must be set up so that the corresponding project values can be evaluated using a project chart of accounts. For more information on the project account scheme, see here.

project chart of accounts

This section explains the specifics of the project account schema as it relates to WIP assessment. Basic information on setting up project account schemas and the associated column layouts can be found here.

A project account scheme must be set up for each of the valuations to be determined, e.g., one scheme each for IFRS and Local GAAP. The fields in the project account scheme that are additionally relevant for the WIP valuation must be filled as follows:

Field	**Description**
Count	A new option If can be selected here. This option can be used to compare row values using arguments and conditions.
Argument 1 Condition Argument 2 Argument 3 Argument 4	These fields must be filled if the summation type, If is used. The fields must be filled according to the following logic: If Argument 1 Condition Argument 2, then Argument 3 other Argument 4 **Note** In the arguments, only rubric no. and arithmetic operators or numbers may be contained in the arguments. Options for condition: - Empty - < - > - = - <= - >= For all other types of summation, the fields remain empty.
Fibu Integration Code	A WIP Fibu Integration Code must be specified here if a posting to Financial Accounting is to be generated for this row. For this entry, the accounts stored in the WIP Fibu integration code will be used. **Note** Only amounts from lines with the "Line value types" Valuation, Valuation correction and Received down payments can be entered into the Fibu
Line Value Type	This field specifies the line value heading in the WIP valuation proposal. Options are: - Expenses - Down Payment Invoices - Revenues - Valuation - Down Payments Received - Valuation Correction Lines with the "Valuation Correction" option usually do not show a calculation, the line can be used later in the valuation proposal for manual correction.
Calculation in column	As values are displayed in different columns in the column layout, it can be defined here which value is relevant in which row and column. For example, planned revenues are to be displayed in one row and actual revenues in another, whereby it can only be defined in the columns whether the values are planned or actual values.

project account scheme column layout

In the column layout assigned to the project account scheme, exactly one column must be marked as the relevant column for determining and displaying the valuation amounts.

field	**description**
Column WIP	Set a check mark here in the column that is relevant for the project valuation. **Note** Since planned and actual values - as well as revenues and costs - can only be displayed in different columns, a totals column with the column type "Formula" is usually used to combine these values and is also used as the column for the WIP.

example of a wip valuation scheme

The following example is intended to show the structure of a WIP valuation scheme and to illustrate the options for calculating and displaying the valuation.

example of a project account scheme

Rubric No.	Description	Counting up value	Counting up	Calculation in column	Line value type	Argu
R0010	Plan values	Project accounts				
R0020	Revenue	Project accounts	No. of relevant project accounts	SP040		
R0030	Expenses	Project accounts	No. of relevant project accounts	SP030		
R0040	Planned expenditure in %	Formula	R0030/R0020	SP050		
	Project accounts					
R0050	Actual values	Project accounts				
R0060	Down payment invoices	Project accounts	No. of relevant project accounts		Down payment invoice	
R0070	Revenues	Project accounts	No. of relevant project accounts	SP020	Revenues	
R0080	Sum of services	Formula	R0060..R0070	SP050		
	Project accounts					
R0090	Construction	Project accounts	No. of relevant project accounts	SP010		
R0100	Production	Project accounts	No. of relevant project accounts			
R0110	External services project accounts	No. of relevant project accounts	SP010			
R0120	Travel expenses	Project accounts	No. of relevant project accounts	SP010		
R0130	Other Expenses	Project Accounts	No. of Relevant Project Accounts			
R0140	Total Expenses	Formula	R0090..R0130	SP050	Expenses	
R0150	Effort adjusted	Formula	R0140+ (R0040*R0070)	SP050		

Rubric No.	Description	Counting up value	Counting up	Calculation in column	Line value type	Argu
R0170	HZ: Valuation correction	Project accounts		Valuation correction		
R0180	HZ: down payments received	Project accounts	No. of relevant project accounts		DOWN PAYMENT RECEIVED	

example of the corresponding column layout

column no.	column header	column type	item type	amount type	amount type	formu
SP010	Actual: Expense	Movement	Project item	1	Asset amount (MW)	
SP020	Actual: Revenue	Movement	Project item	2	Amount sold (MW)	
SP030	Plan: Expense	Movement	Project plan line	1	Cost amount (MW)	
SP040	Plan: Revenue	Movement	Project plan line	2	Sales amount (MW)	No
SP050	Sum column	Formula			SP010..SP040	Yes

posting procedure project valuation

In this section, the posting flow of project valuation is explained in more detail.

The following points are addressed:

- What is the WIP valuation proposal.
- How the valuation lines are calculated
- Posting the WIP valuation proposal us effects on financial accounting.

fill valuation proposal

The actual valuation is done in the WIP valuation proposal. The function "*Calculate valuation lines* " is used to fill the valuation proposal.

Folgende Optionen müssen hier gesetzt werden:

Feld	Beschreibung
Bewertungsperiode	Hier muss das Startdatum der relevanten Buchhaltungsperiode ausgewählt werden. Für die Buchung selbst wird anschließend der Monatsletzte der Periode verwendet.
Bewertungsschema	Wählen Sie hier den Namen des Projektkontenschemas aus, mit dem Sie die Bewertung durchführen möchten. Vor der Berechnung der Werte wird geprüft, ob alle notwendigen Einstellungen im Projektkontenschema vorhanden sind. Dies sind: • Für jede "Zeilenwert Art“ muss eine Zeile im Schema vorhanden sein. • Im Spaltenlayout muss eine Spalte als "Spalte WIP“ definiert sein.

Zusätzlich können die zu berücksichtigenden Projekte ausgewählt werden. So haben Sie die Möglichkeit bestimmte Projekte / Projektgruppen mit einem anderen Projektkontenschema zu bewerten. Sollten Sie Projekte parallel nach unterschiedlichen

Bewertungsgrundsätzen bewerten (z.B. IFRS / Local GAAP), so muss die Berechnung je Projektkontenschema erneut aufgerufen werden.

Es werden nur Projekte berücksichtigt deren Enddatum noch nicht gefüllt ist bzw. deren Enddatum nach dem Bewertungsdatum liegt.

Bei jedem Aufruf der Funktion wird pro Projekt eine Zeile im WIP Bewertungsvorschlag erzeugt.

wip valuation proposal

The fields in the "WIP valuation proposal" are filled as follows when calculating:

field	**description**
OriginNo.	This field indicates the project to which this evaluation line applies.
Description	This field displays the project description.
Valuation Date	This is the date (last day of the month of the valuation period) that the entry will be made in the financial accounting system.
Total Expenses	Amount determined by the calculation of the project chart of accounts for this project in the rows marked as "Expenses".
Total of down payment invoices	Amount determined by the calculation of the project chart of accounts for this project in the rows marked as "Down payment invoice".
Total of partial and final invoices	Amount determined by the calculation of the project chart of accounts for this project in the rows marked as "Revenues".
Valuation	Amount determined by the calculation of the project chart of accounts for this project in the rows marked as "Valuation".
Valuation correction	A manual value for the valuation correction can be entered in this field. The value must be positive and must not exceed the valuation amount.
Valuation Adjustment Integration Code	The value from the Valuation Adjustment field will be posted to the accounts of this Valuation Integration Code.
Adjusted valuation	This field is calculated as follows: - Valuation - Valuation correction
Prepayments Received	Amount determined by calculating the project chart of accounts for this project in the rows marked as "Prepayments Received".
passive accrual received down payments	This field is calculated as follows: - if "received down payments" is higher than "adjusted valuation": "received down payments" - "adjusted valuation" - _otherwise this value is 0
Fibu integration code passive accrual received down payments	On the accounts of this Fibu integration code the value from the field "passive accrual received down payments" is posted to the Fibu.

posting a valuation proposal

The following steps are performed when posting the valuation proposal:

- First, the system checks whether a posted valuation already exists for the project with this valuation date and project chart of accounts used to calculate the line. Already posted valuations are archived in the "WIP Valuation Archive" with a sequential number.
- If a valuation has already been posted under these premises, it is first reversed.
- Subsequently, the valuation proposal is posted and stored in the archive with the next consecutive number.
- Optionally, a printout of the valuation can be made.

The posting of the valuation proposal takes place via a recurring book. sheet with the repetition type "Reverse variable". This means that the valuation is booked in on the valuation date and booked out again on the following day. Thus, with each new valuation in the following month, the accumulated value is always posted. With the previous month's values already booked out on the first of the month, the development of the amounts can thus be tracked.

A possible reversal cancels both the postings on the valuation date and the write-off postings on the following day.

Posted are the values from the following columns with the accounts of the respective WIP Fibu integration code of the assigned project chart of accounts row:

- Valuation Adjustment
- Adjusted valuation
- Liabilities accrual received down payments

The document no. and the description for the posting will be set according to these specifications:

- Document no.: The respective prefix.
- Description: The posting description from the "WIP Valuation Setup" is completed with month name/YYYY of the valuation date.

A new ledger is created with the corresponding G/L items and a new entry is created in the "WIP Valuation Archive". In the archive all information from the "WIP Valuation Proposal" is available, in addition a sequential number is assigned per combination of project no./valuation date/project account scheme. The valuation with the highest sequential number indicates which are the currently posted values in the financial accounting.

print valuation proposal

The WIP Valuation module includes a report for printing and proving the valuation proposal.

Lines generated in the "WIP Valuation Proposal" can be printed in a report before or with posting. The values generated in the valuation proposal are listed in tabular form. In addition, a total is calculated for all valuation lines.

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OBLIGO

Commitments are expected future binding costs resulting from follow-up documents such as purchase orders, stock levels, production or assembly orders and time records within a project.

This initially creates target costs, which become actual costs after the delivery is posted. These are dissolved as commitments through invoicing and consumption on the project task and subsequently debit the project with actual costs.

In Microsoft Dynamics 365 Business Central[1] Standard, the project task displays the commitments "Order backlog" and "Unbilled delivery amount" by default. These values include direct assignments to follow-on documents, but reservation references are not taken into account at this point.

In KUMAVISION factory365, the commitments "Order backlog" and "Uninvoiced delivery amount" have been extended by "Remaining order amount" and "Stock purchase amount (expected)".

The remaining order amount includes the calculation of the "order backlog" plus possible reservation relationships to an associated purchase order line. The "Stock cost price (expected)" includes the calculation of the "Uninvoiced delivery amount" plus possible reservation relationships to a purchase order line as well as delivered but not invoiced stock values directly in the project plan line.

In addition, the commitment values "Production, assembly and labor cost amount" are available to you. Depending on the booking progress, the cost price amounts are divided into expected or actual amounts and together form the total commitment.

Obligos in project task

The commitments described below are displayed in the project task lines of a project as cost price amounts. Clicking on the respective value opens the "Commitment items" page, which is already pre-filtered for the respective project and the corresponding project task.

Remaining order amount

The order commitment of a project task represents the remaining order amount of a purchase line that is linked to a corresponding project plan line of this project task. The order commitment is the sum of the "Order backlog" field plus the remaining order amount of the reserved purchase line for the associated project plan line.

Note

Items with a reservation for a production order or assembly order line are valuated via the production or assembly commitment and do not form an additional purchase order commitment.

External operations for external work center groups for a production order operation are also valuated via the production commitment and do not form an additional purchase order commitment.

Stock purchase amount (expected)

The warehouse commitment *(warehouse purchase amount (expected))* comprises the value from the "Uninvoiced delivery amount" field supplemented by the valuation of external resource deliveries and the expected purchase price of the item items with direct reservation on a project plan line.

Note

The article item is created by posting a goods receipt, posting an actual report from production with a reservation on a project plan line or by a manual reservation on the article item. It is valued at the current net cost price of its document origin line.

Stock purchase amount (actual)

The warehouse commitment (warehouse cost amount (actual)) comprises the actual valued amount of an invoiced item (cost price (actual)) with a direct reservation for a project plan line.

This value is determined by invoicing the purchase order line, completing the production order line for this actual message, posting an assembly order or manually posting an item ledger sheet. All revaluations or additions/deductions in purchasing affect the actual cost amount. Continuous stock adjustments can therefore be made depending on the stock issue method.

> **Note**
>
> Invoicing an order line with a direct project relationship represents a direct project consumption for external resources or a direct article issue. This posting therefore constitutes a direct project expense and dissolves the value of the "Uninvoiced delivery amount" and the "Stock purchase amount (expected)".

The "Update project item prices" function can subsequently correct the project consumption after the stock adjustment of the item issue item. Further information can be found under: Information on inventory cost accounting.

Production cost price (expected)

The production commitment *(production cost amount (expected))* comprises the target costs *(values of the FA components and FA operations)* of a reserved production order line for a project plan line.

If a multi-level structure is added to the production order line, these FA components and the FA operation costs are also included. As a result, multi-level target FA costs are calculated.

In addition to the value approach, the liability items are also formed:

- the type of origin for FA components for FA operation
- the due date and quantity (basis) of the FA components
- the end date/time and the sum of the setup and processing time of the FA operations. The time quantities are calculated as a base time unit in accordance with the "Display capacity in" production setup.

A project plan line can be assigned to several production orders, just as several project plan lines can be assigned to a single production order.

In addition, surplus quantities can be produced in the production order line that are not reserved and therefore count as neutral stock receipts. This is also tracked at several levels in the substructures.

The assignment of project plan lines to production orders is clearly defined by the system in reservation items. This allows the target and actual costs of the production order to be analyzed in a targeted and multi-level manner along the reservation tracking for each project plan line.

In KUMAVISION factory365, this multi-level value analysis can be used for both make-to-order production and make-to-stock production through an extended reservation relationship *(link to the production order line)*. This creates a fully logistical and capacitively usable order network that can be analyzed flexibly.

> **Note**
>
> The reservation structure of a project plan line can be extended to include a reservation for stock transfer issue or receipt, as the stock transfer document does not generate any further target and actual costs. In order to record all costs correctly, a completed production order is required so that the stock receipt amount is (actually) shown correctly and no unadjusted residual values remain in the production commitment.

Production cost amount (actual)

The posting of article consumption, capacity consumption and article actual reports form the amount "Production cost amount (actual)" or the FA target costs.

Capacity posting

The posting of capacity consumption creates actual costs from the perspective of the production commitment, which increases the commitment "Production cost amount (actual)" and the target costs of the "Production cost amount (expected)" are reduced proportionately.

The target capacity costs are set to zero if the operation is marked as completed or the sum of the actual costs and actual quantities exceeds the target values. A negative value is not possible. If more actual costs than target costs are posted, the "Production cost amount (actual)" increases.

By forming the actual costs and allocating the target costs, further detailed items are formed.

Consumption posting

The target consumption costs are allocated pro rata until they are zero. If the actual consumption costs are greater than the target consumption costs, the target costs are valued at zero.

> **Note**
>
> We recommend creating a task queue to update the cost price: *(update all levels and reservations = YES)*.

Completing a production order excludes further FA capacity, consumption postings or actual reports. The article item of the actual declaration is updated by the stock control and the actual cost price is determined. As no further postings are possible, any remaining commitments are canceled.

Assembly cost price (expected)

The "Assembly cost amount (expected)" shows the single-level target costs of planned consumable items and resource times. The posting of an assembly actual message forms a stock receipt amount (actual) and is linked to the article consumption and capacity costs of the resources.

Working time commitment

Resource times can be recorded, transmitted and approved directly via time sheets on project tasks.

These capacity quantities are multiplied by their cost price on the resource card and valued as a time commitment. The final project consumption posting of the working time details forms the project consumption and dissolves the time commitment proportionately.

In the case of external resources, billing takes place via the purchase order or purchase invoice.

Commitment item

On the "Commitment item" page, the source document line is viewed with the quantity, value and date and changes to the value, quantity and date compared to the last item are evaluated. This valuation takes place on a valuation date that is set to the current working date by default.

The value progression takes place through booking processes such as delivery, invoicing, consumption, capacities, actual report, assembly report, working time approval until a project consumption takes place.

Along these processes, the values are accompanied by functions such as: Update cost prices, stock adjustment, update project item prices. The value progress is also documented via detailed items with reversal accounting.

The commitment items are always only a recording at the time of evaluation and document the progress compared to the last recording.

Change events and their effects Quantity change

The quantity change can be caused either manually or by the E+D change reconciliation for growing BOMs. As a result, the amount is adjusted and determined as an additional detail item.

Price change

The price change can be triggered either manually or using the "Update cost prices" function. This changes the amount, which is recorded as an additional detail item.

Date change with item cancellation and readjustment

The commitment items monitor date changes in the documents that result from planning processes. This allows the commitment values to be viewed on an accrual basis and analyzed in the forecast matrix.

The relevant fields for the date change are

- "Expected goods receipt date" of the purchase order line
- "Due date" of the purchase order line
- "Due date" of the FA component
- "End date/time" of the FA operation

Actual message for make-to-order production

Planning level 0

In multi-level make-to-order production, the cost values of the production order lines that are reserved directly for the project planning line are displayed as stock commitment cost amount (expected).

Planning level > 0

For sub-assemblies in multi-level make-to-order production, the cost prices of the actual article declarations are not interpreted as commitment items.

Update commitment items

The "Update commitment items" function is available in the menu ribbon of a project.

The function calculates the obligation values using the following elements:

- Article item
- Shopping street
- Assembly line
- Time sheet details
- FA component
- FA work process

The quantities, purchase amounts, the expected due date, the multi-level components and capacities are determined for each document line and saved in new commitment items. The calculation can be updated manually or via a task queue. The current document values are checked against the existing commitment item and, if there is a discrepancy, the original item is canceled by a correction item and the new valued item is set.

The items have additional fields for the origin of the document line, the assignment to a project task, project account determination, the valuation date and system information.

It is advisable to have the calculation of the commitment items carried out automatically in short time intervals by a task queue.

Note

Automatic processing can be interrupted by missing project account settings or table locks of other processes. Regular maintenance of this task queue is therefore required.

Update project article prices

The cost prices of an item can subsequently change due to stock control. The standard function "Update project item prices" corrects this change in value on the project item.

Note

It is recommended to activate the "Automatic update of project item prices" function in the "Projects setup"

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RUN A FORECAST

The recording of unplanned costs and revenue changes is understood as a forecast.

These plan changes are initially presented as comprehensible proposals and can then be converted into binding plan budgets and plan revenues or reversed if necessary.

The forecasting process is an approval procedure that ranges from the recording of unplanned events to their planned and accepted budget effectiveness and, if necessary, back again.

In Microsoft Dynamics 365 Business Central[1] the plan values in project plan lines are differentiated according to their line type: budget and billable to G/L accounts, items and resources and cost/sales amounts.

The forecast item table corresponds to their structure and therefore forms a rudimentary project plan line. In KUMAVISION factory365, these forecast items are supplemented by the project accounts in the same way as the project plan lines and can also be called up and edited in the project account schema.

Project Forcast post

You can access the "Project forecast items" page via the hyperlink in the forecast fields of the project tasks or in the project chart of accounts. Alternatively, you can open it via a function call in the ribbon of the project plan lines.

Project forecast items are consecutive items that form a cost or sales amount as difference items per project, project task by line type: budget or billable for G/L account, item and resource with respective number and description.

Depending on the project account setup and type of line, project accounts for sales or consumption are determined. These can be edited. A forecast item is considered an unplanned value as long as it has not been registered.

Field	Description
No. No.	Specifies a consecutive number for the respective item.
Line type	Indicates the line type of the items. A distinction is made between "Budget" and "Billable".
Project no. Project task no.	Indicates the respective project number / project task number from which the item was created.
Project contract item no.	Specifies the project contract item number of the project plan line during registration.
Accept	The checkbox is deactivated for an active unplanned forecast. The item is therefore freely editable. As soon as the item is registered, it can no longer be edited. If the project plan line is deleted, the checkbox is deactivated again and the
item is freely editable again.	
Kind	Specifies the type that was set up in the activity type of the project task as the default value in the field: Use = Forecast and planning type: Article, G/L account, resource and forecast no..
No.	Specifies the number of the article, G/L account, resource. **Note:** A project account setup is required for the project type, activity type and product posting group used.
Forecast purchase price	Is determined from the difference value to the previous cell value. The subsequent project plan line receives this value as the cost price (MW) with quantity.
Forecast sales amount	Is determined from the difference value to the previous cell value. The subsequent project plan line receives this value as the sales price (MW) with quantity = 1.
Forecast date	Is initialized from the period start date of the forecast matrix. The planning date of the subsequently registered project plan line follows from this.
Description for argumentation	Specification of an argumentation. The argumentation is necessary for the registration of the item.
Consumption contr.	Is preset according to the project account setup for the line type: "Budget" and is freely editable.
Consumption account Name	Specifies the name from the field in the project account plan.
Sales account no.	Is preset according to the project account setup for the line type: "Invoiceable" and is freely editable.
Sales account name	Specifies the name from the field in the project chart of accounts.

Forecast Matrix

Open the project task lines in the project via the ribbon. You can find the forecast matrix on the "Project task lines" page in the "Project forecast matrix" info tab.

The values in the matrix are filtered values from the project task. In the matrix, new forecast values can be entered or changed for the "Forecast budget" and "Forecast sales" matrix rows.

The value change of a matrix cell is determined as a further forecast item with the key to the project task, its activity type and the forecast type and number found there according to the date of the matrix cell. This results in a new forecast item by type and number, date and difference amount on a pre-assigned project account of the project task. The item is then freely editable and can also be registered individually after entering the reason.

Forecast registration

The "Register project forecast items" function is available both in the project ribbon and on the "Project forecast" page for selected forecast items. To register, you need an argumentation and a project account.

Registering forms, groups several forecast items into a project plan line, sets the forecast item as accepted and writes the project contract item number of the plan line to the registered forecast items. The newly formed project plan line receives the order type "Deviation" and now forms the accepted plan change.

The registered forecast items have been accepted, have received a link to the project plan line and can neither be edited nor deleted. These items are now available as archive items.

The new project plan line remains editable and can be changed or deleted. Deleting the project plan line resets the forecast items, they are editable again and can also be deleted.

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PDM-Interface

Description to follow.

General Setup

GENERAL

For general information about how to configure Microsoft Dynamics 365 Business Central[1] for first use, see Overview of Tasks to Set Up Business Central.

The following articles only describe the additional pages, functions, and fields available for configuration in factory365.

- Mandatory Fields
- Flexible Reservation System

See also:

- KUMAVISION base (BOOSTER) - General Setup

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MANDATORY FIELD CHECK

You can use the mandatory field check to see whether a certain field has been filled in when you add or change base data, such as on a customer order.

KUMAVISION factory365 extends the mandatory field check of KUMAVISION base (BOOSTER) with the option of restricting the field to be checked and the condition. The comparison value is only checked if the condition is fulfilled.

At this point in the online help, only the additional functions of the mandatory field check in KUMAVISION factory365 are explained in more detail. The online help for the general business functions - mandatory field check of KUMAVISION base (BOOSTER) is described here.

Mandatory field check setup

The use of the mandatory field check can be activated separately for the individual areas - analogous to the KUMAVISION base (BOOSTER):

Area	Facility	Field
G/L accounts	Financial accounting institution	mandatory field check G/L account
workstation groups workstations	production setup	mandatory field check workstation group mandatory field check workstation
Delivery schedule headers	Delivery schedule setup	Compulsory field check

Note

At this point of the online help, only the additional setup options of the mandatory field check in KUMAVISION factory365 will be explained to you in more detail. The general mandatory field check setup options are described here.

Setup mandatory fields

The mandatory fields are defined via the user search "Mandatory fields setup tables".

When called up, the "Mandatory fields setup tables" are opened. In this list, the corresponding tests can be viewed for each table.

You can define the mandatory fields for the corresponding exam record via the "Mandatory fields" menu item.

Field	Description
Field No.*	Specifies the field that is to be set as a mandatory field.
Field Caption*	Specifies the name of the field that is to be set as a mandatory field. The "Field no." is automatically filled when assigned.
Compare Type	This field field is used as a comparison operator with which the value of the field in the data record is checked against the value from the "Comparison value" and / or "Comparison value maximum" fields. The following comparison operators are available: • <> • = • > • < • >= • <= • >= **Note** Depending on the definition of the "Compare Value" and "Compare Value Max" fields, the selection of the comparison operator may be restricted.
Compare Value	This field checks the value of the field in the data record in relation to the "Compare type" field.
Reference Value Text	Gives the description of the selection in the Comparison Value field.
Compare Value Max	This field checks the value of the field in the data record depending on the Compare type field when the comparison type is selected ">=<=". This makes it possible to define from-to areas. The "Comparison value" field takes on the "from role" and the Compare Value Max field takes on the "to role". **Note** This input is only intended for calculable operands.
Max. Reference Value Text	Specifies the description of the selection in the Compare Value Max field.
Action*	This field is used to control the type of check. The following selection options are available: **Notify** If the check is defined as a Notify, users receive a hint message when the mandatory field check is processed. However, this notification does not affect the release of master data or documents. Rather, it should be seen as information that users can use to add data that may be informative but is not absolutely necessary for processes. **Cancel** If a check is defined as Cancel, an abort message is sent when the mandatory field check is processed. This means that the release of master data or documents cannot be completed because process-relevant information is missing.
Field No. (Condition)	Specifies the field for which the condition is to be checked.
Compare Type	This field field is used as a comparison operator with which the value of the field in the data record is checked against the value from the "Condition" and / or "Condition value maximum" fields. The following comparison operators are available: • <> • = • >

Field	Description
	• < • >= • <= • >=<= **Note** Depending on the definition of the "Condition" and "Compare value maximum" fields, the selection of the comparison operator can be restricted.
Condition	This field checks the value of the field in the data record depending on the "Compare Type Condition" field.
Condition Value Text	Specifies the description of the selection in the "Condition" field.
Condition Max Value	This field checks the value of the field in the data record depending on the "Comparison type condition" field when the comparison type is selected ">=<=" is selected.This makes it possible to define from-to areas. The "Condition" field takes on the "from role" and the "Maximum condition value" field takes on the "to role". **Note** This input is only intended for calculable operands.
Condition Text	Specifies the description of the selection in the "Compare Value Max" field.

* = KUMAVISION base (BOOSTER)

Note

When checking and/or setting conditions with reference to a text field, the SQL sorting must be observed.

The field length of a text field, for example, is not intended for checking and/or setting conditions.

Note

At this point of the online help, only the setup of the check fields of the mandatory field check in KUMAVISION factory365 will be explained to you in more detail. The general setup is described here.

FLEXIBLE RESERVATION SYSTEM

With the help of the flexible reservation system, you can allow date conflicts in the reservation items, so that the links between the requirement originator and the requirement coverer are basically preserved, contrary to the Microsoft Dynamics 365 Business Central[1] standard.

The date conflicts are also taken into account within the planning and remain despite "date conflict". A date conflict occurs in a reservation item as soon as the "Expected goods receipt date" is after the "Goods issue date".

> **Note**
>
> Basically, date conflicts within reservations should only exist for a short period of time and should be resolved promptly by date reconciliation and updating.

Company data

You can activate or deactivate the flexible reservation system function in the company data via the "Allow date conflicts" switch.

> **Note**
>
> Please note that existing date conflicts must be cleared before deactivating the functionality.

> **Note**
>
> For an individual extension *(e.g. user authorization)* corresponding event triggers are available in the [Onlinehilfe: TechDocs - KUMAVISION factory.

Rolecenter

The number of existing date conflicts is displayed in the Sales, Purchasing, Service, Projects and Production role centers. Via the function call within the respective batch, the reservation items are displayed and the documents can be called up and edited via the standard functionality of the reservations.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Deprecated Features

Name	Description	Disabled in Release
Project structure	Function discontinued. The functionality of the template projects and the copy function of the project tasks/plan lines are available for this purpose.	BC 2026 Wave 1
ECLASS (vormals eCl@ss)	Function discontinued.	BC 2025 Wave 1

See also KUMAVISION base (BOOSTER)

1.2.3 healthcare365

KUMAVISION healthcare365

Note

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General Business Functionality

GENERAL BUSINESS FUNCTIONALITY

Note

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OUTPUT AND PRINTING OF SALUTATIONS

Note

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MARKETING COCKPIT

Note

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As a result, the web help describing the solution is currently available in German only.

CONTACT SHORTCOLL

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

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PARTNER ROLES

Note

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RESUBMISSIONS

Note

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As a result, the web help describing the solution is currently available in German only.

HEALTHCARE+ SUCHE

Note

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As a result, the web help describing the solution is currently available in German only.

ITEM TRACKING

Note

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BLOCK ITEMS WITHOUT VARIANTS

Note

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As a result, the web help describing the solution is currently available in German only.

CONTACT WARNINGS

Note

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As a result, the web help describing the solution is currently available in German only.

SPECIAL NOTES

Note

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Financial Management

Note

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As a result, the web help describing the solution is currently available in German only.

Sales

SALES

Note

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MARKETING COCKPIT

Note

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CUSTOMER

Note

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ABOUT ITEMS

Note

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As a result, the web help describing the solution is currently available in German only.

ADDITIONAL FIELDS IN SALES

Note

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As a result, the web help describing the solution is currently available in German only.

SALES QUOTE

Note

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SALES ORDER

Note

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As a result, the web help describing the solution is currently available in German only.

BLANKET SALES ORDERS

Note

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As a result, the web help describing the solution is currently available in German only.

GROSS AMOUNTS ON RECEIPTS TAXABLE

Note

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DELIVERY NOTE CANCELLATION

Note

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SALES CREDIT MEMO

Note

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MANUAL RESERVATION

Note

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NEGATIVE ITEM LISTING

Note

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As a result, the web help describing the solution is currently available in German only.

SHIPPING LOT SIZE

Note

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COLOR INDICATORS

Note

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Purchasing

PURCHASING

Note

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VENDOR

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

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ABOUT ITEMS

Note

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As a result, the web help describing the solution is currently available in German only.

ZUSATZFELDER IM EINKAUF

Note

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TIME LIMIT BLANKET ORDERS

Note

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BLANKET ORDERS RESIDUAL QUANTITY

Note

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MINIMUM ORDER VALUE AND FREIGHT LIMITS

Note

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As a result, the web help describing the solution is currently available in German only.

SPECIAL NOTES REQUISITION WORKSHEETS

Note

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OPTIMIZED ORDER

Note

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REORDERING POLICY

Note

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As a result, the web help describing the solution is currently available in German only.

STOCKKEEPING UNIT

Note

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As a result, the web help describing the solution is currently available in German only.

Assembly Management

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

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Manufacturing

MANUFACTURING

Note

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REPORTS AND DOCUMENTS

Note

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COMFORT ACTIONS

Note

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DEFAULT LOCATION CODE AND BIN CODE FROM ITEM

Note

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MULTI ORDER SUBCONTRACTS

Note

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BATCH CLEAN PRODUCTION

Note

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EQUIPMENTTRACKING

Note

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SUBCONTRACTING

Note

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Warehouse Management

WAREHOUSE MANAGEMENT

Note

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TYPES OF ITEMS

Note

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INVENTORY OVERVIEW

Note

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LOCATIONS, BINS

Note

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LOGISTICS PARAMETERS

Note

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PERMISSION LOCATIONS

Note

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POSTING CODES, DELIVERY HIERARCHY

Note

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WAREHOUSE RECEIPT

Note

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WAREHOUSE SHIPMENT

Note

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INVENTORY

Note

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TRANSFERS

Note

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SLOW SELLER MANAGEMENT

Note

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TOUR-AND TECHNICIAN PLANNING

Note

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WAREHOUSE COMFORT FUNCTIONALITY

Note

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Rezeptabwicklung Teil 1

RECIPE PROCESSING PART 1

Note

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DELIVERY SCHEDULE

Note

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BILLING SCHEDULE

Note

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PROCESSES

Note

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CONTRACTS

Note

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PURCHASE WITH RECIPE PROCESSING

Note

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FLATE RATE WITH RECIPE PROCESSING

Note

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CALORIE FLAT RATE

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

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INVOICING MULTI MONTH DELIVERY

Note

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As a result, the web help describing the solution is currently available in German only.

REUSE

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

As a result, the web help describing the solution is currently available in German only.

PROCESS EXTENSION

Note

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Rezeptabwicklung Teil 2

RECIPE PROCESSING PART 2

Note

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As a result, the web help describing the solution is currently available in German only.

ELECTRONIC COST ESTIMATE

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

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ADDITIONAL FIELDS

Note

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As a result, the web help describing the solution is currently available in German only.

ELECTRONIC BILLING TO §300

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

As a result, the web help describing the solution is currently available in German only.

ELECTRONIC BILLING TO §302

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

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FAST ENTRY MASK

Note

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EBOX DOKUMENTENVERARBEITUNG

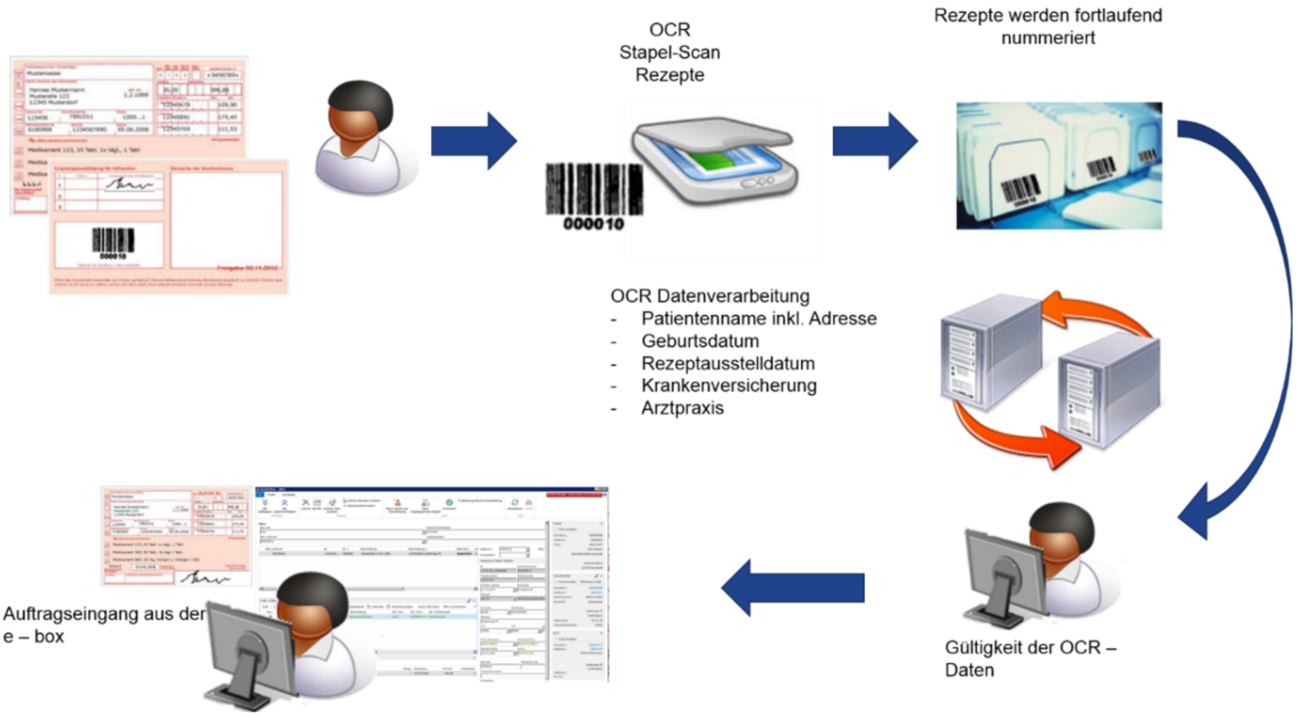
Die eBox ist in KUMAVISION healthcare365 eine zentrale Stelle zur Bearbeitung des aktuellen Arbeitsvorrates. So können hier Team und personenbezogen die folgenden Prozesse bearbeitet werden:

- Eingehende Dokumente (Rezept, Kostenvoranschläge und sonstige Dokumente)
- Bearbeitung von Fehlern aus Stapelbuchungsvorgängen
- Bearbeitung von manuellen Entscheidungen bei Verlängerung von Verträgen (Stapelverarbeitung)
- Bearbeitung von Wiedervorlagen

Die eBox unterstützt Sie dabei mit der Bereitstellung aller benötigten Funktionen, Informationen und Verzweigungen in den offenen Prozess, so dass Sie direkt aus der eBox Ihren Prozess starten/weiterbearbeiten können.

In diesem Abschnitt werden Struktur und Funktionen der eBox dargestellt. Da die eBox in andere Prozesse eingebunden ist, werden einzelne Funktionen zum Teil im Rahmen dieser Prozesse beschrieben.

In der folgenden Grafik wird schematisch die Bearbeitung eines "Muster16" im Scanprozess dargestellt.


OCR
Stapel-Scan
Rezepte
000010
Rezepte werden fortlaufend nummeriert
OCR Datenverarbeitung
- Patientenname inkl. Adresse
- Geburtsdatum
- Rezeptausstelldatum
- Krankenversicherung
- Arztpraxis
Gültigkeit der OCR – Daten
Auftragseingang aus der e – box

1. Dokument kommt ins Haus und wird auf der Rückseite mit einem eindeutigen Barcode versehen. An dieser Stelle kann eine Sortierung für die entsprechenden Teams erfolgen. Nach der Sortierung erfolgt ein getrennter Scan nach Teams.
2. Nach dem Scannen der Muster16 erfolgt eine chronologische Ablage anhand der Barcodenummer. Dies ist notwendig, um die Originalverordnung für die Abrechnung schnell wieder zu finden.
3. Wenn die Muster16 gescannt wurden, erfolgt im Hintergrund die Schrifterkennung und im Anschluss werden die Daten an das System übergeben *(DI-IM Dokument)*.
4. Vorbearbeitung in eBox "Dokument ungeprüft“ durch den /die erste/n SachbearbeiterIn -> Abschließen in der eBox
5. Abschließende Bearbeitung in eBox "Dokument“ durch den /die zweite/n SachbearbeiterIn -> Vorgang zuordnen / Vorgang anlegen, archivieren, Vorgang bearbeiten.

Einrichtung

DI-Dokumententypen

Das Einscannen erfolgt gemäß den festgelegten DI-Dokumententypen. In den "DI-Dokumententypen" sind die jeweiligen Einrichtungsdetails enthalten.

Das Feld "IM Dokument Status“ sorgt dafür, dass bestimmte Dokumente nach dem Einscannen direkt archiviert werden *(sofern der Barcode erkannt wird)*. Es erfolgt kein eBox-Eingang im "eBox-Status" offen und eine manuelle Bearbeitung ist nicht erforderlich.

Der Dokumententyp "LS-Rückläufer“ setzt zudem die vorhandene Informationsanforderung auf den Status "Info OK“.

Vertriebsteams

BenutzerInnen, die, die Dokumente eines Teams bearbeiten sollen müssen diesem Team zugeordnet werden. Richten Sie hier über die "Vertriebsteams“ zunächst die gewünschten Teams ein. Erstellen Sie einen neuen Eintrag über den Funktionsaufruf "Neu“, ordnen Sie nun die gewünschten MitarbeiterInnen über den Aufruf "Benutzer“ im Menüband zu. Es öffnet sich die "Team Benutzer“-Übersicht in der Sie die zugehörigen BenutzerInnen über die Benutzer ID auswählen können.

Hinweis

Ist ein/e BenutzerIn mehreren Teams zugeordnet, kennzeichnen Sie ein Team als primäres Team.

Kommunikationsbelege

Über die Einrichtung der Kommunikationsbelege definieren Sie welche Dokumententypen zu welchen Seiten *(Debitor, Informationsanforderung etc.)* archiviert werden und ob sich nach dem Ausführen der Funktion "archivieren“ noch eine Vorgangs- oder Kundenbezogene Seite für die Weiterbearbeitung öffnen soll.

Ablauf

Aufrufen der eBox

Über den Aufruf "eBox“ auf der Startseite, unter Aktionen, öffnen Sie die “eBox“. Es öffnet sich die Seite "eBox Arten“.

Wählen Sie die für die Bearbeitung gewünschte eBox Art aus und bestätigen diese mit "OK".

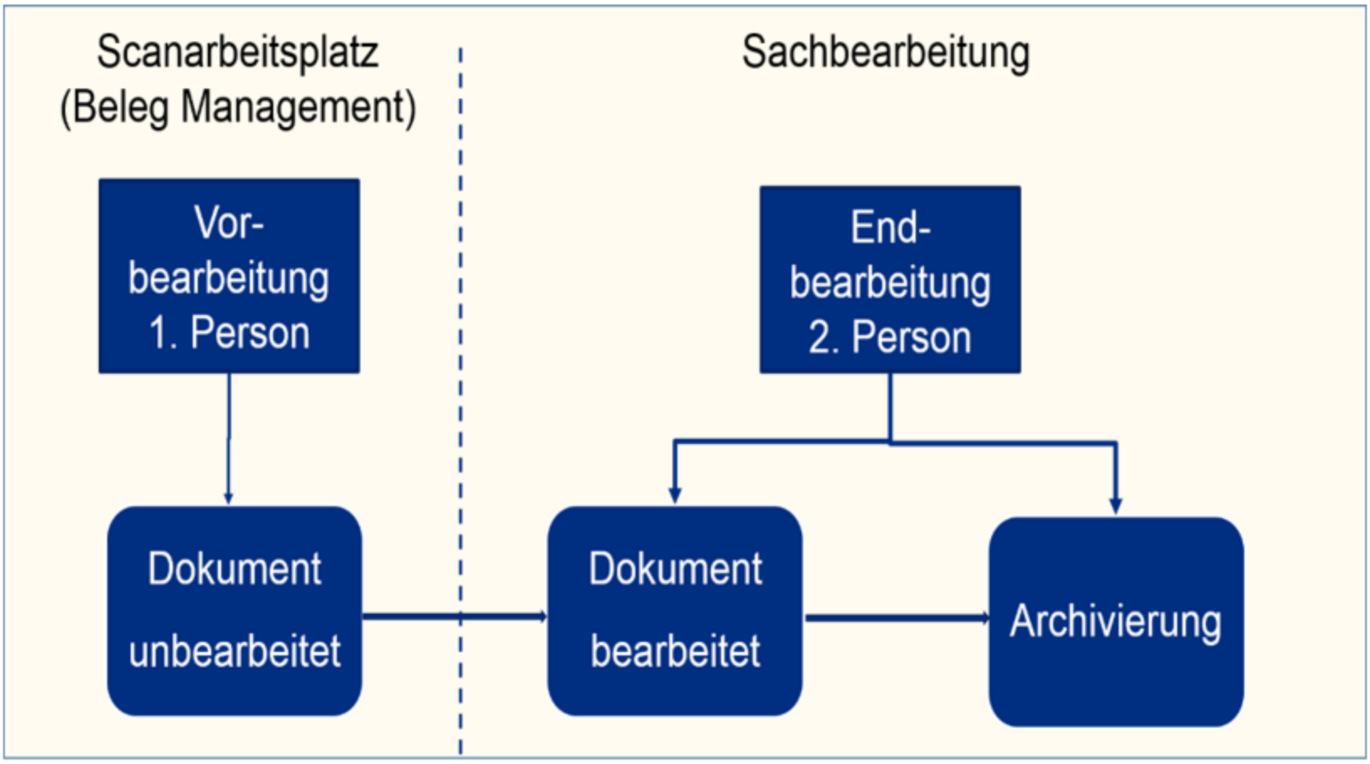
Für die hier geschilderten Fälle sind folgende eBox Arten relevant:

- Dokument ungeprüft
- Dokument

Mit diesen beiden eBox Arten werden im Prozess die gescannten Dokumente weiterverarbeitet und den weiteren Prozessen in KUMAVISION healthcare365 zugeführt.

In der folgenden Abbildung wurde grafisch die Trennung der Bearbeitung von "Dokument ungeprüft“ und "Dokument“ dargestellt.

Die erste Person macht die Vorbearbeitung, Kontrolle der Informationen und Datenvorerfassung. Die zweite Person kontrolliert noch einmal die Daten, ergänzt diese und führt die weiteren Arbeitsschritte durch.



Je nach ausgewählter "eBox-Art“ wird Ihnen, Ihre persönliche benutzerbezogene eBox angezeigt. Die Ansicht ist gefiltert auf die eBox-Art und Ihren Benutzer.

Sind noch keine Dokumente vorhanden so ist der Inhalt dieser Seite leer.

Abrufen von Dokumenten zur Bearbeitung

Unterhalb der Filter befindet sich die Funktion zum Abrufen von Dokumenten. Durch die Anwendung von "Abruf“ öffnet sich die "Dokumenten-Auswahlliste. Es werden nun alle Dokumente angezeigt, die sich noch im eBox Status "offen“ befinden und somit unbearbeitet sind. Die Ansicht ist auf Teamebene vorgefiltert.

Grundsätzlich werden Ihnen hier zum einen alle unbearbeiteten Dokumente angezeigt, die noch keinem Team zugeordnet sind sowie die Dokumente für ein Team, welches Sie als Benutzer zugeordnet sind.

Hinweis

Einträge werden nicht angezeigt, wenn sie von einem/einer anderen BenutzerIn in dessen persönliche eBox gezogen wurde.

In der Dokumentenauswahlliste besteht die Möglichkeit, die Ansicht anders zu strukturieren. So ist es möglich die Sortierreihenfolge zu ändern.

- Suchbegriff, Scandatum
- Scandatum, Suchbegriff
- Es ist auch eine Filterung nach dem Zusatzfeld möglich.

Markieren Sie die gewünschten Dokumente, die Sie bearbeiten möchten, und bestätigen die Auswahl mit "OK". Damit befinden sich die abgerufenen Einträge in Ihrer persönlichen eBox und sind somit für andere UserInnen beim Abrufen nicht mehr sichtbar.

Filtern von Dokumenten in der persönlichen eBox

Je nach Menge der zu bearbeitenden Dokumente oder Unternehmensprozesse, ist es Sinnvoll, die Dokumente entsprechend Ihrer Dokumentenart zu filtern. Wählen Sie hierzu die gewünschte Dokumentenart im Filterfeld "eBox Unterart“ aus. Im Ergebnis werden Ihnen nur die Dokumente der ausgewählten Dokumentenart angezeigt. Dokumente einer anderen Art sind somit über den Filter ausgeblendet. Gleiches gilt beim Abruf von Dokumenten.

Des Weiteren haben Sie neben den Filtermöglichkeiten im oberen Bereich zudem auch die Möglichkeit, sich die gewählten Dokumente über die Sortierung zu einzelnen Spaltenüberschriften auf- oder absteigend zu sortieren um mehrere Dokumente zu einem Debitor untereinander stehen zu haben.

Hinweis

Mit der Auswahl der eBox Unterart ändert sich auch die Darstellung der Seite da je nach Dokumentenart verschiedene Felder relevant sind.

Dokument einem anderen Team zuweisen

Stellen Sie im Laufe der Bearbeitung fest, dass der Beleg zum falschen Team gescannt wurde, kann dieser einem anderen Team zugewiesen werden. Hierzu gehen Sie wie folgt vor:

1. Datensatz auswählen
2. Aufruf "Anderes Team zuweisen"
3. Das gewünschte Team zuweisen
4. Mit "OK" bestätigen

Damit ist der Eintrag aus der persönlichen eBox entfernt und befindet sich wieder in der "Dokumentenauswahlliste“ mit dem neuen Teamcode.

Dokument andere BenutzerInnen zuweisen

Stellt Sie im Laufe der Bearbeitung fest, dass der Beleg von einem/einer bestimmten BenutzerIn bearbeitet werden soll, kann dieser direkt entsprechend zugewiesen werden. Hierzu gehen Sie wie folgt vor:

1. Datensatz auswählen
2. Aufruf "Anderen Benutzer zuweisen"
3. Benutzer zuweisen
4. Mit "OK" bestätigen

Damit ist der Eintrag aus der persönlichen eBox entfernt und befindet sich in der persönlichen eBox des neuen Benutzers.

Dokumente aus der persönlichen eBox löschen

Mit der Funktion "Löschen" kann ein Eintrag aus der persönlichen eBox entfernt werden. Damit wird der Eintrag nicht wirklich gelöscht, sondern zurück in den Arbeitsvorrat gegeben. Andere BenutzerInnen können ihn dann wieder in die persönliche eBox ziehen.

Dokumente "ungeprüft“ bearbeiten (Vorbearbeitung)

Die Bearbeitung in der eBox erfolgt in zwei Stufen.

1. Die erste Bearbeitungsstufe mit der eBox Art "Dokumente ungeprüft“ dient der Vorerfassung von Daten -> erste Bearbeitung bzw. Kontrolle und Ergänzung der gelesenen Daten.
2. In der zweiten Bearbeitungsstufe mit der eBox Art "Dokumente“ findet die abschließende Bearbeitung statt -> Kontrolle und weitere Vorgangsbearbeitung.

Somit wird jedes Dokument zwei Mal bearbeitet, was Fehler vermeidet (vier-Augen-Prinzip).

Bearbeiten von Dokumenten Typ: MUSTER16 (Vorerfassung)

Abgleich der durch die OCR-Schrifterkennung gelesenen und an KUMAVISIOIN healthcare365 übergebenen Daten, ggf. Korrektur. Bei A4 Rezepten ist keine Schrifterkennung möglich, hier müssen die relevanten Felder manuell im Rahmen der Vorerfassung hinterlegt werden.

Bearbeiten von Dokumenten Typ: SONSTIGE (Vorerfassung)

Im Viewer lässt sich erkennen, um was für eine Dokumentenart es sich handelt. Somit kann die gewünschte Belegart in der eBox auswählt werden. Als nächsten Arbeitsschritt muss eine Belegnummer ausgewählt wählen. In diesen Fall handelt es sich um die Kontaktnummer. Um welche Belegnummer es sich handelt, wird durch die Belegart vorgegeben. Dies ist in der Einrichtung der Kommunikationsbelege hinterlegt und somit parametrisierbar.

Lieferscheinrückläufer

System Lieferscheine werden automatisch der Info. Anforderung zugewiesen. Dies geschieht unter Erkennung des Barcodes auf dem Lieferschein. Der Barcode entspricht der Info.-Anforderungsnummer. Wurde der Barcode nicht erkannt, so ist eine automatische Zuweisung nicht möglich und das Image wird als "nicht erkannt" in die DI-IM Dokument geschrieben und ist somit in der "Dokumentenauswahlliste“ verfügbar.

Barcodevormerkung

Die Barcodevormerkung besteht aus drei getrennten Arbeitsschritten.

1. Barcodevormerkung erstellen, es entsteht eine leere "Dokumentenhülle“
2. Scannen der vorgemerkten Dokumente über den Stapel "Barcodevormerkung“
3. Es erfolgt die automatische Zuordnung des Dokuments, die "Dokumentenhülle“ wird befüllt. *(Wird der Barcode nicht erkannt, wird das Image des Dokumentes in die eBox übergeben und muss dort manuell weiter bearbeitet werden)*

Vorverarbeitung abschließen

Wurde das Dokument in der ersten Stufe geprüft, wird die Vorverarbeitung des Dokuments über die Aktion "Geprüft“ abgeschlossen und der Eintrag wird aus der persönlichen eBox entfernt. Der Eintrag geht damit wieder in den Arbeitsvorrat und steht nun für die eBox mit der eBox Art "Dokumente“ zum Abruf in der "Dokumentenauswahlliste“ zur Verfügung.

Es ist nun nicht mehr möglich, das Dokument in die eBox mit der eBox Art "DOC UNG“ abzurufen.

Dokumente bearbeiten (Endbearbeitung)

Das Abrufen aus dem Arbeitsvorrat erfolgt analog zum Prozess des Abrufs für die eBox Art "Dokumente ungeprüft“. Siehe hierzu Abschnitt "Abrufen von Dokumenten zur Bearbeitung".

Es öffnet sich die Seite "IM Dokumentenauswahlliste" (Arbeitsvorrat). Es bestehen die gleichen Filter- und Sortiermöglichkeiten wie unter der eBox Art "Dokumente ungeprüft“.

Bearbeiten von Dokumenten (Endbearbeitung)

Gemäß dem Vier-Augen-Prinzip erfolgt der erneute Abgleich der Daten.

Je nachdem ob es bereits einen Rezeptvorgang gibt oder ob ein neuer angelegt werden muss erfolgt nun die weitere Bearbeitung.

Neuen Vorgang und ggf. neuen Debitor anlegen

Ist der Vorgang noch nicht im System angelegt, so kann dieser direkt aus der eBox heraus angelegt werden. Eine Vorgangsanlage ist nur möglich, wenn der Debitor ebenfalls im System vorhanden ist.

Die Neuanlage eines Debitors erfolgt direkt aus der eBox heraus über die Funktion "Neuer Debitor aus Kurzerfassung“. Nutzen Sie hierfür, wenn vorhanden, ein Dokument des Typen "MUSTER16", da hier die meisten gelesenen Daten erfasst sind. Die gelesenen Daten werden automatisch in den neuen Debitor übertragen und müssen nicht mehr manuell erfasst werden, ggf. weitere zusätzliche Felder die Ihnen über die Pflichtfeldprüfung vorgeschlagen müssen manuell ergänzt werden.

> **Hinweis**
>
> Legen Sie analog dazu auch fehlende Verordner über diese Funktion an. Hier werden die Betriebsstättennummer sowie die Arztnummer ebenfalls direkt an den neuen Debitor übergeben.

Über die Funktion "Neue Vorgangsperiode anlegen“ legen Sie nun aus der eBox heraus einen neuen Vorgang an.

Nachdem Sie den Vorgang angelegt und wieder geschlossen haben, erscheinen die zugehörigen Informationsanforderungen, an welchen die Dokumente archiviert werden müssen.

Hinweis

Über die Funktion "Abrechnungsaufteilung Befreiung“ können Sie eine eventuelle Befreiung direkt zum Kunden hinterlegen.

Bearbeiten der Informationsanforderungen und Archivierung der Dokumente

Auf dem Inforegister "Info.-Anforderungen“ werden Ihnen die Informationsanforderungen angezeigt, zu denen noch Dokumente fehlen. Diese Ansicht ist vorgefiltert auf den Dokumententyp sowie den "Anforderungsstatus“. Es werden nur die notwendigen Informationsanforderungen angezeigt. Informationsanforderungen die bereits im Status "Info OK“ sind, werden durch den Filter in der Ansicht ausgeblendet.

Wählen Sie anhand des Ihnen angezeigten Dokuments die entsprechende Informationsanforderung aus. Achten Sie hierbei zwingend auf die "Anforderungsqualität“ und setzen den Haken im Feld "Hauptbeleg“ in der höchsten Qualität. Nach Auswahl des Hakens im Feld "Hauptbeleg“ wird der Haken im Feld "Auswahl“ automatisch vom System mitgesetzt. Es ist an dieser Stelle nicht notwendig einen weiteren Haken in der Informationsanforderungszeile mit der geringeren Qualität zu setzen, die Verarbeitung der geringeren "Anforderungsqualität“ erfolgt automatisch.

Setzen Sie nun zunächst den entsprechenden Info-Anforderungsstatus über den zutreffenden Status "Info nicht OK“ oder "Info OK“. Je nach Dokumentenart und Einrichtung öffnet sich eine neue Seite die zu prüfen und ggf. zu ergänzen ist. Mit "OK" bestätigen Sie Ihre Eingabe. Der Status zur Informationsanforderung ist somit aktualisiert.

Archivieren Sie nun das Dokument zur Informationsanforderung über die Funktion "Archivieren“. Je nach vorgenommener Einrichtung öffnet sich nach dem Archivieren des Dokumentes der Vorgang (dies ist individuell zu Parametrisieren).

Dokumente zum Debitor archivieren

Je nach erfolgter Einrichtung der Kommunikationsbelege, können Dokumente auch direkt zum Debitor archiviert werden (Vorgangsunabhängig) und sind dann im Marketing Cockpit sichtbar. Dies empfiehlt sich z.B. für Befreiungsausweise, Kundenbriefe oder nicht notwendige "überflüssige“ Rezepte.

Wählen Sie, entsprechend Ihrer Einrichtung, den Dokumententypen und die Belegart aus und wählen anschließend im Feld "Belegnummer" den Kunden aus. Über den Funktionsaufruf "Archivieren“ wird das Dokument zum Debitor archiviert.

Funktion "zurück in die eBox"

Sollte in Folge der Scanbearbeitung das Dokument an einer falschen Stelle abgelegt worden sein, so besteht die Möglichkeit, dieses Dokument für eine neue Zuordnung zurück in die eBox zu senden.

Die Funktion "zurück in die eBox“ steht auf verschiedenen Seiten zur Verfügung.

Die Funktion wird über den Aufruf "Zurück in die eBox“ gestartet.

Es öffnet sich die Seite "Auswahl der Archiveinträge“. Je nachdem ob die Funktion aus dem Rezeptvorgang "Vorgangsperiodenkarte“ oder "Vorgangskarte“ ausführt oder aus dem "Marketing Cockpit“ des Debitors werden alle Belege angezeigt, welche dem Vorgang zugeordnet sind oder welche dem Debitoren, Vorgangsunabhängig, zugeordnet sind. Aus dieser Liste wählen Sie den gewünschten Beleg über das Aktivieren von "Auswahl“ aus.

Hinweis

Zu den einzelnen Datensätzen wird hier nicht das Image des Belegs angezeigt. UserInnen müssen den korrekten Datensatz anhand der eingetragenen Werte identifizieren.

Anschließend wird der Dokumententyp ausgewählt, dem der Beleg entspricht. Dieses Feld ist gleichbedeutend mit der eBox Unterart. Mittels setzen eines Hakens im Feld "Index übernehmen“ wird der Debitor im folgenden mit in die eBox übernommen.

Führen Sie die Funktion "zurück in die eBox“ aus.

Nachdem die Funktion ausgeführt wurde, ist das Dokument nicht mehr dem Vorgang oder Debitor zugeordnet. Das Dokument findet sich nun in der persönlichen eBox des Users, welcher die Funktion aufgerufen hat. Eine erneute Zuordnung ist nun möglich.

EKV Rücklauf verarbeiten

Sofern keine automatische Verarbeitung im System eingerichtet ist, erfolgt die Verarbeitung von Kostenvoranschlag-Rückläufern zum EKV manuell über die eBox oder Alternativ bei abweichend genehmigten Einrichtungen. Siehe auch hierzu Abschnitt "EKV Ablehnungsgründe" Einrichtung EKV.

Wurde der EKV vom Kostenträger abgelehnt, werden die zugehörigen Informationen wie Änderungen oder Textinformationen auf dem Inforegister "EKV Änderungen“ angezeigt. Der Genehmigungsstatus wird in dem zugehörigen Feld "Status“ angezeigt, eventuell seitens des Kostenträgers übermittelte Nachrichten werden Ihnen über das Feld "Textinformation“=Ja angezeigt. Sie können mittels Klick auf das "Ja“ die entsprechende Textinformation einsehen.

EKV Ablehnung nachbessern und erneut einreichen

Die zugehörige Informationsanforderung über welche der EKV versandt wurde, ist automatisch markiert. Führen Sie die Funktion "Info nicht ok“ aus. Je nach Einrichtung haben Sie im nachfolgenden Fenster "Komm. Status Vorlagenzeilen“ die Möglichkeit, einen Ablehnungsgrund auszuwählen. Markieren Sie die zutreffende Zeile und bestätigen diese mit "OK". Der Status der Infoanforderung ändert sich auf "abgelehnt“. Im zugehörigen Rezeptvorgang wurde eine neue Infoanforderung für eine eventuelle Neueinreichung, erzeugt.

Sie haben die Möglichkeit, über die Infoboxen auf die Vorgangsbeteiligten wie Versicherter, Kostenträger oder Verordner zuzugreifen und evtl. fehlerhafte oder fehlende Daten zu erfassen wie z.B. die Versichertennummer.

Auf dem Inforegister der Informationsanforderungen befinden sich die Aufrufe, um direkt den zugehörigen Vorgang bzw. Liefer- oder Abrechnungsplan aufzurufen um dort eventuell erforderliche Anpassungen vorzunehmen.

Hinweis

Unabhängig davon, ob Ihnen ein Dokument seitens des Kostenträgers mit übermittelt wurde, archivieren Sie den eBox Eintrag.

EKV Genehmigung verarbeiten

Es wird zwischen zwei verschiedenen Status-Meldungen für einen Genehmigungsrücklauf unterschieden:

1. Status "genehmigt“: Genehmigt wie eingereicht
2. Status "teilgenehmigt“: Genehmigt mit Änderungen

Das Genehmigungskennzeichen sowie Datum wird auf dem Inforegister "Antwort Details“ angezeigt. Der Genehmigungsstatus wird im zugehörigen Feld "Status“ auf de, Inforegister "EKV Änderungen" ausgewiesen. Dort werden auch eventuell seitens des Kostenträgers vorgenommene Änderungen ausgegeben. Sie sehen an dieser Stelle zum einen Ihre eingereichten Daten und zum anderen die vom Kostenträger übermittelten Daten.

Das Genehmigungsdokument wird Ihnen über den Viewer angezeigt und kann hier nochmals verglichen werden.

Die zugehörige Informationsanforderung über welche der EKV versandt wurde, ist automatisch markiert. Führen Sie die Funktion "Info ok“ aus. Je nach Einrichtung öffnet sich nachfolgend der Rezeptvorgang, über diesen Sie weiterführende Schritte wie z.B. Anpassung von geänderten Daten wie z.B. Zuzahlung durchführen können.

Archivieren Sie nun noch das Genehmigungsdokument über die Funktion "Archivieren“ in der eBox.

Weitere Funktionen in der eBox Betriebsstundenerfassung

Sie haben die Möglichkeit, direkt aus der eBox heraus die Betriebsstunden zu hinterlegen. Führen Sie hierzu die Funktion "Betriebsstundenerfassung“ aus. Der Prozess zur Betriebsstundenerfassung ist separat beschrieben.

Zuzahlungsbefreiung hinterlegen

Sie haben die Möglichkeit, direkt aus der eBox heraus die Zuzahlungsbefreiung für einen Debitoren zu hinterlegen. Führen Sie hierzu die Funktion "Abrechnungsaufteilung Befreiung“ aus.

BATCH

Note

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As a result, the web help describing the solution is currently available in German only.

BILLING SPLITS

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Rezeptabwicklung Teil 3

RECIPE PROCESSING PART 3

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ADVANCED PRICING

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PROCESS REPLACE

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SALESPERSON CONTROL

Note

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CUTBACK DOCUMENTATION

Note

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HEALTH INSURANCE COMPANIES MERGE

Note

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Consultation Supplies incl. Practice Supplies

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Customized Production

Note

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Technology & Maintenance

TECHNOLOGY & MAINTENANCE

Note

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REPAIR AND MAINTENANCE CONTRACTS

Note

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REPAIR AND MAINTENANCE CONTRACTS OSP

Note

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REPAIR AND MAINTENANCE OSP WORKFLOW

Note

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WORKFLOW AND NOTIFICATION MANAGER

Note

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Document Characteristics

Note

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Medical Device Regulation Document Control

Note

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Workflow and notification manager

Note

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Web Order API

Note

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General Setup

ADMINISTRATION

Note

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As a result, the web help describing the solution is currently available in German only.

KUMAVISION HEALTHCARE365 ROLECENTER

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TRANSACTION CODES

Note

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DUPLICATE CHECK

Note

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MANDATORY FIELDS

Note

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SCAN CONTROL ADDIN

Note

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Deprecated Features

Note

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1.2.4 project365

KUMAVISION project365

Although project-centric businesses come in many shapes and sizes, their goals are always the same: They need to deliver on time, on budget, and within scope, and be able to respond quickly to changes in the market.

Thanks to sophisticated workflows based on industry-specific, tried-and-tested functionality, KUMAVISION project365 can help these companies—which operate in sectors as diverse as service and repair, IT, equipment rental, engineering, consulting, and architecture—make the most of their resources and drive success.

Fully integrated into Microsoft Dynamics 365 Business Central[1], project365 empowers you to:

- keep track of your projects and resources with ease.
- make decisions based on sound data.
- identify risks early on and respond in time.
- stay on top of things when working across departments and locations.
- improve customer satisfaction thanks to reliable, effective scheduling.
- control costs at every step of a project.
- exchange data with Microsoft Office at a moment’s notice.
- reduce administrative overhead.
- record times and travel expenses online—in any internet browser.

Topics

- HR Cockpit
- About Resources
- About Items
- Project Setup
- Create a Project
- WBS and Scheduling
- Resource Planning
- Guarantees
- Time & Materials
- Project Item Consumption via Sales Shipment
- Billings
- Create Projects from Sales Documents
- Service Package
- Intercompany Work
- Control Costs
- Alternate Currencies
- WIP Accounting
- German HOAI Fees
- Financial Management
- Service
- Price Lists
- General Setup
- Administration

Note

KUMAVISION project365 basiert auf KUMAVISION base (BOOSTER). Die darin enthaltenen Funktionalitäten werden im Bereich KUMAVISION base (BOOSTER) erläutert.

Get KUMAVISION project365 from Microsoft AppSource

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

HR Cockpit

OVERVIEW

In Microsoft Dynamics 365 Business Central[1], staff data typically needs to be stored in the Employee, Resource, and Salesperson/Purchaser tables. Sometimes, however, data also needs to be available elsewhere in the app. For example, you might need to add information to the Vendor table to reimburse employees for travel expenses.

Hiring a new staff member or updating staff data might therefore have a ripple effect throughout the app. The HR Cockpit was designed to offer you an easy way to create and update information across all tables at once.

Information is stored in the cockpit temporarily so that you can add or update data in the tables that include a certain staff member. For example, if you want to change an employee’s home address, changing the relevant HR cockpit field updates the field in all tables linked to this employee. Removing data from the cockpit, however, doesn’t delete the information elsewhere.

After you added or updated the relevant data, you will be asked if you want to keep or delete the HR cockpit record. We recommend that you keep it, but—as a precaution—run the Get Data action when you are about to perform the next update. This function retransfers all data related to a certain staff member, ensuring that the cockpit also shows changes made to individual tables in the meantime.

SETUP

You can set up default values for some staff-related fields. Choose the Search icon, enter HR Cockpit Setup, and then choose the related link.

This opens a page where you can set up a general template or a distinct combination of values for each person working in HR. These default values are then entered in the resource record that is created when you register new staff.

If you want to specify default values for vendor-related information, you need to have the Continia Expense Management app installed.

Default no. series

You can also choose in HR Cockpit Setup what number series you want staff-related tables to use. For example, you can choose if you want a field in the resource record to keep the number that you used to create the employee record.

For each table, two fields are available for setting up a series.

Resource No. Series Setup

Field	Description
Resource No. Series	Fill in this field if you want new data records to use a number from this series.
Resource Nos. Prefix	Fill in this field if you want to add a prefix to the employee number when you set up new data records with that number.

Examples

Employee and resource number are identical.
Employee=1235 and Resource=1235

Resource No. Series
Resource Nos. Prefix

The resource uses a number from another series.
Employee=1235 and Resource R58456

Resource No. Series	**ResourceNoSeries**
Resource Nos. Prefix	

Resource and employee number are identical, except for the prefix.
Employee=1235 and Resource=R1235

Resource No. Series	
Resource Nos. Prefix	**R**

Delete HR Cockpit

This field can be used to specify how to proceed with the HR Cockpit record after the data transfer from the HR Cockpit to the linked tables. Specifically, it determines whether the HR Cockpit record is deleted or not. If it is deleted, a new record must be created for the employee if data is changed later. If it is not deleted, the record can continue to be used; however, it is advisable to update it with the data from the linked tables using the function provided for this purpose. There are three options to choose from:

Always ask	You will be asked whether the HR Cockpit record should be deleted.
Always delete	The HR Cockpit record is deleted without a query.
Dont delete	The HR Cockpit record is retained for later use.

HR Field Check

On this page, you can specify which cockpit fields must always be filled in. To open the page, choose the Search icon, enter HR Field Check, and then choose the related link.

Turn on the toggle if you want the system to check whether employees can be assigned in sales.

As for the other fields, except for the Employee No. and Initials fields, which cannot be edited *(considering the role they play in creating master records)*, the options you can choose in each field are described in the following table.

Option	**Description**
Ignore	Prompts the system to ignore the content of this field.
Required	Requires the user to enter something in this field. If the field is left blank, no data is copied to tables associated with the employee record.
Ask	Asks the user whether to continue with processing information if the field is empty.

> **Note**
>
> Due to their use when creating master data, the fields "Employee No." and "Initials" are permanently set to "Required" and cannot be changed.

HR COCKPIT CARD

The cockpit provides you with a central location to add and update staff data.

Register a new employee

1. Choose the Search icon, enter HR Cockpit, and then choose the related link.

2. On the ribbon, choose New and fill in the fields as described in the following tables.

General

Field	Description
Type	Shows the type of data record, for example, New.
Employee No.	Serves as a unique reference to the new data record. Numbers are assigned based on the series stored in HR Cockpit Setup. To create a new cockpit record, go to any other field and choose Yes on the dialog page that appears. A number is then assigned automatically. **Note** If you follow these instructions, an HR cockpit record is created before a new employee record.
User ID	Choose an ID to link the employee to a user. **Note** The user must already exist.
Initials	Specify initials for the employee.
Gender	Specify the employee’s gender.
First Name	Enter the employee’s first name.
Last Name	Enter the employee’s last name.
Name	Combines the First Name and Last Name fields.
Address Address 2	Enter the employee’s (second) home address.
Post Code	Enter the ZIP code of the location where the employee lives.
City	Shows the city or town associated with the ZIP code.If the field is empty, fill in a location manually.
County	Specify a county if necessary. You need to unhide this field before you can enter a value.
Country/Region Code	Shows the country or region associated with the ZIP code. If the field is empty, fill in a code manually.
Birth Date	Enter the employee’s date of birth.
Record Created On	Shows the date on which the record was created.
Record Created By	Shows the ID of the user who created the record.
Registered On	Shows the date on which the employee was added.
Registered By	Shows the ID of the user who added the employee.
Last Imported By	Shows the ID of the user who last imported the data record.
Last Imported On	Shows the date on which the data record was last imported.
Last Updated By	Shows the ID of the user who last updated the employee record.
Last Updated On	Shows the date on which the employee record was last updated.

Contact Details

Here you can enter an employee's contact information.

Employee

Field	Description
Status	Select the employee’s status. You can choose between Active, Inactive, and Terminated.
Project Title	Specify the employee’s role in the company.
Employee Posting Group	Specify the group that will be used to post the employee’s business transactions to the relevant account in the general ledger.
Project Manager	Turn on this toggle if you want to create a project journal and assign it to the employee.
Separate Invoicing	With the toggle turned on, a separate invoice suggestion is set up for the employee. If the employee is specified as a project lead (see previous field), this toggle turns on automatically (but you can turn it off again, if necessary).
Trainee	Turn on this toggle if the employee is a trainee.
Social Security No.	Enter the employee’s social security number.
Employment Date	Specify the starting date of employment.
Inactive Date	Enter a date in this field if the employee is unavailable for a relatively long period of time.
Cause of Inactivity Code	Select a reason for the employee’s inactivity, such as parental leave.
Termination Date	Enter a date in this field if the employee’s contract came to an end.
Grounds for Term. Code	Select a code that explains why employment ended. For example, the employee might have been let go or might have retired.
Emplymt. Contract Code	Shows the type of contract stored for the employee with HR.

Base Data

Field	Description
Create Salesperson	Turn on this toggle if you want to create a salesperson record for the new employee.
Salesperson Code	Instead of creating a new data record, you can also enter the code of an existing salesperson here.
Create Resource	Turn on this toggle if you want to create a resource for the new employee.
Resource No.	Instead of creating a new data record, you can also enter the code of an existing resource here.
Create TE Employee	Turn on the toggle to set up a staff member for whom you want to post travel expenses (known as a TravelExpense Employee). This field is only shown if you installed the Continia Expense Management app.
TE Employee No.	Instead of creating a new data record, you can also enter the number of an existing TE employee here. This field is only shown if you installed the Continia Expense Management app.
Create Vendor	Turn on this toggle to link a vendor to the new employee. This field is only shown if you installed the Continia Expense Management app.
Vendor No.	Instead of creating a new data record, you can also enter the number of an existing vendor here.This field is only shown if you installed the Continia Expense Management app.

Resource

Field	Description
Resource Group No.	Fill in this field if you want to assign the employee to a resource group.
Base Calendar Code	The code in this field determines how much capacity the resource has available. If you want capacity to be calculated automatically, turn on the Create Capacity toggle (also found on this card).
Available in Sales	Turn on this toggle if you want to use the data record for sales documents.
Show on Schedule	Turn on this toggle if you want to utilize the resource in planning.
Direct Unit Cost	Specify the resource’s unit cost.
Unit Price	Specify the resource’s unit price.
Work Hour Template	Choose a template for the resource’s weekly working hours.
Product Commission Group	This field helps group and commission products individually.
Blocked	Turn on this toggle if you want to block use of the resource.
Create Capacity	Creates resource capacity entries automatically. To use this feature, you need to choose a Base Calendar Code, a Work Hour Template, a Capacity Starting Date, and a Capacity Ending Date. Capacity entries cannot be created for periods that precede the staff member’s date of employment or follow dates of inactivity. If a new Inactive Date is specified, any existing entries that go beyond that date are also deleted automatically, regardless of whether the toggle is turned on.
Capacity Starting Date	Specifies the starting date of capacity planning.
Capacity Ending Date	Specifies the ending date of capacity planning.

Bank

Here you can specify an employee’s bank account information.

Setup

Field	Description
Gen. Prod. Posting Group	Specify a general product posting group.
No. Series Vendor	Specify a number series for vendors.
Vendor Posting Group	Fill in this field if you want to map the resource to a G/L account for posting purposes.
Payment Terms Code	Enter the agreed terms of payment.
Payment Method Code	Select how payment is made, for example, by bank transfer.
Application Method	Specify how you want to apply payments for items.
Gen. Bus. Posting Group	Used to determine the relevant G/L account in VAT Posting Setup.
VAT Bus. Posting Group	Used to determine the G/L account on the VAT Posting Setup page when you post the resource.
Responsibility Center	Shows the responsibility center, such as a purchase office, to which the employee is assigned.

Dimensions

On this tab, you can specify dimensions for the staff member. These are then copied as default dimensions to the Employee and related tables (for example, Resource).

Depending on what you entered in General Ledger Setup, this FastTab includes up to eight fields: Global Dimension 1 and 2 and Shortcut Dimension 3 through 8. You can add more default dimensions by selecting the Dimensions action on the ribbon.

TempVision

Fill in this tab if you use the Tempras app for employee management.

Travel Expenses

Fill in this tab if you use Continia Expense Management.

Note

To connect either solution to your system, you need what is known as a bridge app; for more details, please ask your KUMAVISION contact.

Transfer Data

Use this action on the ribbon to create new data records in the Employee, Resource, and Salesperson/Purchaser tables, as well as the Vendor and TE Employee tables if you installed the Continia Expense Management app.

You can then choose to keep or delete the HR Cockpit data.

Update staff data

When you use the HR Cockpit card to register new staff members, data will be linked throughout the Employee, Resource, and Salesperson/Purchaser tables—and the Vendor and TE Employee tables if you installed the Continia Expense Management app.

When you close the card, you will be asked if you want to keep or delete the data that you created.

Keep the HR cockpit record

If you choose to keep the information, the card is retained in the system so that you can take another look at the data later. To ensure that the information shown on the card includes all changes users made to related data in the Employee, Resource, and Salesperson/Purchaser tables in the meantime, go to the ribbon and run the Get Data action before your next update.

Changes to employee data can be tracked by using the Type field. If the information related to an employee has been changed, the field is set to Updated. The Updated By and Updated On fields show who last updated the fields and when this happened.

To replace what is stored in the associated tables with new information, reopen the relevant card and rerun the Transfer Data action when you’re finished updating. You can then again decide if you want to keep or delete the cockpit record.

Delete the data record

If you decide to delete the data record, you need to retrieve all relevant information each time you want to look up an employee.

1. On the HR cockpit card, choose the New action.
2. In the Employee No. field, select the number of the data record that you want to update instead of having the system assign a new number to the card.

When you choose an Employee No., the program will copy to the card all information related to the employee, that is, all data stored for the staff member in the Employee, Resource, and Salesperson/Purchaser tables (and, if you installed the Continia Expense Management app, the TE Employee and Vendor tables). At the same time, the Type field will be set to Updated.

To replace what is stored in the related tables with new data that you entered on the card, go to the ribbon, and select the Transfer Data action. Following the update, you can again decide if you want to keep or delete the data record.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

About Resources

OVERVIEW

Resources are the people and machines performing the activities of a project.

With the help of a budget, you can easily define their deployment and availability on multiple capacity-related pages within the system. You can also record their impact on a company’s revenues and expenses, either independently or as part of projects and sales (which creates a link to Finance).

Resources can be part of resource groups. You can use both resources and resource groups to budget and bill highly sophisticated purchase and sales price structures.

As the resource and project functionalities are closely intertwined, the following sections will also cover some of the basics of project management, with explanations of:

- Resources and resource groups
- Units and types of work
- Unit costs and sales prices
- Resource and project journals
- Capacities
- Flextime summaries

RESOURCES SETUP

Before you can register and post to resources, you need to set up the functionality.

1. Choose the Search icon, enter Resources Setup, and then choose the related link.
2. On the KUMAVISION project365 FastTab, fill in the fields as described in the following table.

Field	Description
Resource Calendar Type	You can choose between two options in this field: **Base Calendar** The standard calendar. This calendar is only available if you have a Premium license and use the Services functionality. **project365 Calendar** The calendar for users with an Essentials license, which precludes access to the standard version.
project365 Calendar Code	Fill in this field if you selected the project365 resource calendar. The standard and the project365 calendar both offer the same features. The standard version, however, is only included with a Premium license.
Resource Base Unit of Measure	Specify a base unit of measure for resources. A typical unit is Hour.
Default Break Time Setting	Specify the minimum break time on the daily working time. The standard break time is set in this field. For resources with different break time, a corresponding selection can be made in the field of the same name on the resource card.*
Dimension Integration	Enter a dimension that you want to link to new resources. When you later enter a resource in the Person Responsible field on a project card, the dimension is assigned as a project dimension to the resource. This way, you can evaluate the work of project managers across projects.
Auto Close Res. Costs Auto Close Res. Prices	Turn on these toggles if you want the system to fill in ending dates when you select another unit cost or price with a more recent starting date. This is only useful if you work with Extended Pricing (something that we strongly recommend) and if the relevant tables include both starting and ending dates.
Resource Planner Start Resource Planner End	Specify a period that you want to transfer to visual resource planning **Note** Specifying a period that is too small makes planning impossible. A period that is too large has a negative impact on performance. **Example** -1W to 2M = one week back from the current week to 2 months into the future.
Night Differential Start Night Differential End	Fill in these fields to calculate a night differential. For more information, see Flextime Summaries.

* To specify a new Break Time Settings, open the page via the search icon. Use New to assign a meaningful abbreviation in the Code field and a description in the field provided. Via Break Time per Break Setting on the ribbon, you can then define the minimum break times depending on the maximum working time achieved.

Register a resource

1. Choose the Search icon, enter Resources, and then choose the related link.

2. On the ribbon, choose New > New to register a resource and fill in the fields as described in the following tables.

General

Field	Description
No.	Serves as a unique number to identify the resource. Numbers are assigned from the series stored in Resources Setup. To assign a number to the resource automatically, go to any other field on the FastTab.
Name	Enter a name for the resource.
Type	Specify the type of resource. The Person option is used for employees and contractors alike. Machine covers everything else, including vehicles and equipment.
External	Select this field if the resource is not an employee of your company or a machine you own. Services provided by external resources are added to a project by using a purchase order.
Base Unit of Measure	Also specified in Resources Setup. The unit you choose must be the same for all resources. We recommend you use Hour, even if you bill services on a per-day basis.
project365 Calendar Code	Each resource can have its own calendar. The calendar is later used to set up capacity. If you leave the field blank, the relevant calendar code is copied from Resources Setup.
Work-Hour Template	Select a code to specify standard hours per workday in capacity planning.
Ignore Resource Planning Warning	Activated this toggle for dummy resources without capacities so that no superfluous planning warnings arise when planning resources for these special resources.
Break Time Setting	The break time determines the minimum break duration depending on the daily working time. The standard break time setting is specified in the resource setup. For resources that require a different break time, a corresponding selection can be made in this field.
Default Break	Specify the length of the resource’s work break that is entered when you post times on CTC cards. If you leave the field blank, the system copies the default break from the work hour template that you selected for this resource.The Default Break is merely a recording aid in time recording and can be changed there. The Break Time Setting defines a minimum break.
Employee No.	Shows the employee number associated with the resource.
Time Manager	Specify who (instead of the project lead) should approve the time entries created from the resource’s recorded hours. For more information, see Project Journals.
Substitute Time Manager	Specify who (instead of the project lead) should approve the time entries created from the resource’s recorded hours if the time manager is not available. For more information, see Project Journals.
No. of Extended Texts	Shows the number of extended texts stored for the resource.
Search Name	Enter a term that can be used to search for the resource, for example, an employee’s initials.
Resource Group No.	Each resource can be assigned to a resource group. This assignment is how a group receives capacity. You can then use the group, for example, to create a rough project budget before devising a more detailed schedule for individual resources. A resource can only be part of one group at a time. You also cannot post an entire group but only individual resources.
Billing Resource	Turn on this toggle if you want to include the resource on sales invoices. A resource linked to billing cannot be budgeted.
Available in Sales	With the toggle turned on, the resource can be used on sales documents. Typically, this applies only to billing resources.

Field	Description
Use in Resource Planning	Turn on this toggle if you want to include the resource in planning. Turn it off if the resource is used in billing or for other special purposes.
Default Project Team Role	Specify a role that will be filled in automatically when the resource is added to a project team. **Note** Do not enter a role marked as Unique to Project in this field. If you do, an error message appears every time you try to add to the team another resource whom the same default role has been specified for.
Blocked	Turn on this toggle to block use of the resource.
Blocked for New Sale	In contrast to the previous toggle, this block affects entries on sales orders only. With the toggle turned on, you can no longer add the resource to a sales line but can still invoice lines on which the resource was entered prior to the block.
Privacy Blocked	Turn on this toggle to limit access to the resource’s data in day-to-day operations.
Last Date Modified	Shows the date on which the resource record was last modified.
Use Time Sheet	Turn on this toggle if you want to use a time sheet. Leave it turned off for other methods of time tracking.

Invoicing

Field	Description
Personnel Cost Rate Personnel Cost % Personal Ovhd. Cost	These fields provide information on labor costs and determine the unit cost. All of them might be empty, as the unit cost can also be filled in manually.
Direct Unit Cost	Specifies the direct cost of one unit of the resource. This field has a lower priority than the same field in the Resource Cost table. It is only used if the system cannot find a valid direct unit cost in that table.
Indirect Cost %	Specifies the indirect cost associated with the resource. This amount is added to the direct unit cost to make up the unit cost.
Unit Cost	Specifies the cost of one unit of the resource. This is the cost budgeted and billed to a project when you post expenses.
Price/Profit Calculation	Choose if and how you want to fill in the Unit Price or Profit % fields.
Profit %	Shows the resource's profit margin. You can enter a margin or have the field filled in automatically based on the Price/Profit Calculation field.
Unit Price	Shows the resource's unit price. This field has a lower priority than the same field in the Resource Price table and is only used if the system cannot find a valid price in that table.
Gen. Prod. Posting Group	You must specify a general posting group before you can post to a resource. This also applies to postings in project or resource journals, even if entries, as in the resource journal, include no reference to Finance.
VAT Prod. Posting Group	Select the VAT product posting group that you want to use for transactions.
Default Deferral Template	Select a template that governs how to defer revenues and expenses to the periods when they occurred.
Automatic Ext. Texts	Turn on this toggle to add an extended text to sales and purchase documents that include the resource.
IC Partner Purch. G/L Acc. No.	Select a G/L account in this field if you want to post intercompany invoices to a partner company. For more information, see Intercompany Work Intercompany Work.
Product Comm. Grp. Code	Select a code that you want to use for billing resources if salespersons receive commissions.
Vendor No.	For an external resource, enter a vendor number in this field. This number is then copied to budget lines in planning, where the vendor can be used to perform price calculations and process purchase orders.
Use Purch. Invoice Entries	If external resources post work hours in the same way internal resources do, you need to ensure that a purchase invoice includes the times spent on a project only once. A check for duplicate entries can be run with the help of the project ledger entries that are created when you post time summaries. To have this check performed automatically, turn on the toggle.
Service Package	Turn on this toggle if you want to designate the resource as a service package. To help distinguish these packages from human resources, we recommend that you select Machine in the Type field. For more information, see Service Packages.
	This field determines to which work package this service package is transferred when a work breakdown structure is created from a sales document. After selecting the target work package, the

Field	Description
Target Work Package Code	work type is transferred from there to the "Service work type" field. If no work type has been entered, the work type of the target work package is transferred. If a work type already exists, it must match that of the selected target work package.
Service Work Type	If the resource is designated as a service package, the work type that will be used for packages is copied to this field automatically.
Invoice Qty.	Enter 1 in this field if the resource is designated as a service package, that is, the resource will be billed based on time and materials.
Invoice Unit of Measure	This field is filled in automatically if you mark the resource as a service package and cannot be changed.
Planned Qty.	If the resource is designated as a service package, that is, work will be billed by time and materials, specify here—in hours—the effort required to complete it. However, the work type is transferred from there at the latest when a target work package is assigned.
Planned Unit of Measure	This field is filled in automatically if you mark the resource as a service package and cannot be changed.
Unit Cost / Planned Qty.	This field is also filled in automatically and indicates the estimated unit cost per hour for resources designated as service packages—the result of dividing the cost of the chosen package by the planned quantity.

For more information, see Service Packages.

Personal Data

Shows the personal data stored for an employee.

Employee Equipment

This kind of equipment (which includes software) is maintained on employee cards, to which many users have no access. However, staff members should at least be able to view what has been distributed to them.

For this reason, a page named Employee Equipment can be opened from the Resources page and resource cards, describing the equipment assigned to a resource.

> **Note**
>
> Users can only see the devices and software given to them by their employer unless the Show All Staff Equipmt. field is selected on a line in User Setup. Users for whom the field is selected can remove the equipment filter altogether or gain access to the devices and tools assigned to another resource.

Units, work types, and alternate costs and prices

After you have entered key resource information, you can create units, work types, alternate costs, and alternate prices for the resources you work with.

Set up a unit of measure

1. Choose the Search icon, enter Units of Measure, and then choose the related link.
2. On the ribbon, choose New to create a resource unit such as Hour.
3. Fill in the fields as described in the following table.

Field	Description
Code	Enter a code that uniquely identifies the unit of measure.
Description	Enter a description for the unit.
International Standard Code	Enter the code of the UN/CEFACT-Rec20 unit that you want to use when you submit sales documents in electronic form.
Type	Select a unit of time.
Time in Minutes	Fill in this field so that you can convert between different units of time.
Inv. Qty. Rounding Precision	Specify the decimal precision for invoice quantities.

Work types

Work types describe various ways of rendering and selling services. They allow you to set up structures that, for example, account for the difference in cost between an hour spent working on a project and an hour of travel.

All types are closely linked to alternate resource costs and prices. As part of a project or sales transaction, the work type has a significant influence over both.

When you register a resource or a resource group, you can assign a cost and a price to each type of work.

A work type can also be assigned to more than one unit of measure to differentiate between the use and billing of resources. For example, you can define that employees record times spent on a project in hours but that their work is billed on a per-day basis.

Set up a work type

1. Choose the Search icon, enter Work Types, and then choose the related link.
2. On the ribbon, choose New to create a work type.
3. Fill in the fields as described in the following table.

Field	Description
Code	Enter a code that uniquely identifies the type.
Description	Enter a text to describe the type of work.
Unit of Measure Code	Specify the unit of measure used by the resource.
Invoice Unit of Measure Code	Specify the unit of measure used to invoice work done by the resource.

Examples:

Code	Description	Unit code	Billing unit code
PROGRAM	Software programming	Hour	Hour
INSTALL	Network installed for customer	Hour	Hour
CONSULT_STD_D	Consulting work billed in days	Hour	Day

EXTENDED RESOURCE COSTS

General setup

If you want to work with the extended cost and price tables instead of the standard tables included with Microsoft Dynamics 365 Business Central[1], you need to turn on the Extended Pricing feature.

1. Choose the Search icon, enter Purchase & Payables Setup, and then choose the related link.
2. On the KUMAVISION tab, in the Extended Pricing field, choose Yes.

Set up alternate costs

You set up alternate costs for resources and their groups on the Extended Resource Cost page. When you invoice items, the values shown on this page take priority over those specified on resource cards.

1. Choose the Search icon, enter Extended Resource Cost, and then choose the related link.
2. On the ribbon, choose New to set up a unit cost for a resource.
3. Fill in the fields as described in the following table.

Field	Description
Type	You can choose between the following resource cost types: **Resource** The unit cost will be used for the resource entered in the Code field. **Group (Resource)** The unit cost will be used for the group of resources entered in the Code field. **All** The unit cost applies to all resources regardless of their resource group.
Code	Based on the Type field, you can select a resource, a group, or nothing here.
Work Type Code	This field plays a crucial role in cost and price calculations. It specifies both the resource’s unit of measure, such as hours, and activity, such as travel or software development. **Examples** *Line* 1 Type = Resource Code = MICHAEL Work Type Code = INSTALL Cost Type = Fixed Direct Unit Cost (Base) = 80 Unit Cost (Base) = 120 *Line 2* Type = Resource Code = MICHAEL Work Type Code = PROGRAM Cost Type = Fixed Direct Unit Cost (Base) = 100 Unit Cost (Base) = 150 *Line 3* Type = Resource Group Code = TECHNICAL Work Type Code = INSTALL Cost Type = Fixed Direct Unit Cost (Base) = 110 Unit Cost (Base) = 160 *Line 4* Type = Resource Group Code = TECHNICAL Work Type Code = PROGRAM Cost Type = Fixed Direct Unit Cost (Base) = 80 Unit Cost (Base) = 120 *Line 5* Type = ALL Code = " " Work Type Code = CONS Cost Type = Fixed Direct Unit Cost (Base) = 90Unit Cost (Base) = 90
	Fill in these fields if you want to set up period-specific costs.

Field	Description
Starting Date Ending Date	
Cost Type	Specify how you want the system to calculate the cost. Resource costs aren’t linked to a currency code. The local currency is used instead. You can select Fixed, % Extra, or LCY Extra. Fixed copies the unit cost from the Extended Resource Cost table; the other options add charges to the cost that you enter on resource cards.
Personnel Cost Rate	Specifies the cost rate for work done by the resource.
Personnel Cost %	Specifies the percentage of costs for work done by the resource.
Personnel Ovhd. Cost	Specifies the labor overhead for work done by the resource.
Indirect Cost %	Indicates the percentage of indirect costs for work done by the resource.
Direct Unit Cost (Base)	Specifies the direct cost of a resource unit.
Unit Cost (Base)	Specifies the cost of one unit of work performed by the resource.
Unit of Measure (Work Type)	Shows the unit stored for the assigned work type code.
Direct Unit Cost (Work Type) Unit Cost (Work Type)	Shows the (direct) unit cost associated with the chosen work type.

Find resource costs

Resource costs are retrieved in the following order:

1. From a resource in the Extended Resource Cost table if both the resource and its work type are valid within the specified period.
2. From a resource group if the group and its work type are valid in the specified period.
3. From a resource with the All option if the resource and its work type are valid in the specified period.
4. From the Unit Cost field on a resource card.

Work types and costs

Unlike customer billing, cost calculation doesn’t distinguish between activities, as it doesn’t matter what resources spent their time on. Whether they travel or hold a workshop at a customer site, their pay is unlikely to change (at least when it comes to your own staff members).

If no unit cost can be found for a work type and period, a universally applicable entry linked to a blank Work Type field will be copied from a unit cost table.

This avoids having to specify the same unit cost in cost tables over and again. The entry will then use a resource’s base unit (the typical unit being Hour).

Prices for external resources

It should be noted that external resources can also be brought on for projects, and that they have their own, separate list of costs.

EXTENDED RESOURCE PRICES

You set up alternate prices for resources and their groups on the Extended Resource Prices page. You can specify multiple prices per work type.

Resource prices are retrieved when you schedule resources, enter a price on a sales line, or post resource consumption (as a time and materials entry might contain not only a unit cost but also a unit price that can be used to measure project progress or bill work done on a project).

General setup

If you want to work with the extended cost and price tables instead of the standard tables included with Microsoft Dynamics 365 Business Central[1], you need to turn on the Extended Pricing feature.

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the General tab, select Never in the Find Best Price field.
3. On the KUMAVISION tab, in the Extended Pricing field, choose Yes.

Set up alternate prices

Resource prices and costs are set up in similar ways, with prices being assigned to resources and work types on the Extended Resource Prices page.

You can create alternate prices for individual resources, resource groups, or (most conveniently) all resources at once.

To add alternate resource or resource group prices:

1. Open the relevant resource card or the Resource Groups list. On the ribbon, choose Related > Prices > Prices.
2. If you don’t want to set filters on resources or groups, choose the Search icon, enter Extended Resource Prices, and then choose the related link.

This opens a list of all alternate prices stored for each resource and group. It’s also the only way to enter universally applicable prices.

To specify validity periods for prices, fill in the Starting and Ending Date fields on the Extended Resource Prices page.

Examples

Type	Code	Work Type Code	Unit Price (Base)
Resource	GUIDO	CONSULT	90
Resource	MARKUS	INSTALL	80
Resource	MICHAEL	CONSULT	80
Resource	MICHAEL	INSTALL	100
Resource Group	TECHNICAL	INSTALL	75

Pricing options

You have more than one option for setting up detailed unit prices for resources.

For one, you can create special project-specific prices by opening a project card and choosing Related > Prices > Resource.

What you see on this page—which looks almost exactly like the Extended Resource Prices page—has been copied from the project card.

You can also turn on the Use WBS Res. Prices toggle on a project card. With the toggle turned on, a resource price isn’t retrieved the usual way when you post project usage or create a sales line manually but is copied directly from the related WBS line.

Where to use resource prices

You can enter alternate unit prices for resources during various stages of a project.

Planning
You can run a function to fill in extended unit prices when you schedule resources with the help of a budget. You can then change these prices manually if necessary.

Sales
When you create a sales document such as a quote or an order in project planning, the resource prices on WBS lines are transferred to this document alongside other project information.

Should you create a new sales line, however, the price on that line might be retrieved from elsewhere in the system.

Time tracking
When a resource posts hours spent on a project, the alternate unit price is added to the time and materials entries created during this process.

The price can then be used to measure project progress or see an estimated price total for unbilled services.

Purchasing
For the same reason as in time tracking, a unit price is added to project ledger entries for an external resource when you post consumption from a purchase document.

Find resource prices

Prices are added to a resource or resource group in the following order:

1. If you turned on the Use WBS Res. Prices toggle, unit prices are copied from a WBS. Based on the posting or link level, a price might be copied from a budget line or a work package. It is, however, only retrieved if
   - it is stored with a resource or a group (not an item).
   - its work type and unit codes are identical to the those of the project.

   This type of setup makes sense if there’s a certain latitude in how you can budget a project, that is, a unit price can be specified during planning (on the spot) and isn’t copied from a list. Turning on the toggle ensures that there are no differences in price between time and materials entries created for project usage, planning and sales.
2. If the toggle mentioned under 1) is turned off, the system will try to find a suitable price among the resource prices specified for a project.
3. If no project-specific price is available for the given period, the system will try to find one in the Extended Resource Price table.
4. If that table contains no valid price either, the price will be copied from the resource card.

For any table, the system runs through the following sequence:

1. Find a price for a resource.
2. Find a price for a resource group.
3. Retrieve a universally valid price.

A price is considered valid if it has the same work type (a blank field is not taken to mean that a price is universally valid), uses the same currency and is valid between the starting and ending dates specified in the table.

Sales transactions

As part of sales transactions, resources are billed according to their work types and relations to projects. The entry type created in this context is always Sale, as resource postings on sales documents represent project revenues. Posting revenue for a project doesn’t create consumption.

For the use of project-specific prices in sales, turn on the Use Project Prices on Sales Doc. toggle in Projects Setup. With the toggle turned off, prices are retrieved from resource cards only.

> **Note**
>
> If you want to enter a resource on a sales document, you must turn on the Available in Sales toggle on the relevant resource card.

RESOURCE CAPACITY

Resource capacity represents a resource’s work hours available for planning.

To limit these hours, you can use the calendar that you chose in Resources Setup. You can specify in this calendar the public holidays, weekends, and other days on which employees aren’t at work.

You can also set up resource-specific versions to account for differences in the number of holidays observed in different states and regions.

Alternate base calendar

The standard calendar functionality is part of the Microsoft Dynamics 365 Business Central[1] Premium license. Customers with an Essentials license can use the calendar that comes with KUMAVISION project365.

> **Note**
>
> You must turn on the alternate calendar in Resources Setup before you can use it in place of the standard calendar on the setup page and for individual resources.

To turn on the project365 calendar:

1. Choose the Search icon, enter Resources Setup, and then choose the related link.
2. On the KUMAVISION project365 tab, in the Resource Calendar Type field, select project365 Calendar.
3. In the project365 Calendar Code field, choose a calendar.

View and set capacity

To see the capacity of a resource, choose the Search icon, enter Resource Capacity, and then choose the related link.

This opens a page that lists capacities by day, week, and month. Capacities can be specified for several resources at once. Be aware of filters applied to the list.

To specify resource capacity:

1. Open the Resource Capacity page.
2. Go to the Resource Capacity Matrix section. On the ribbon, choose Planning > Set Capacity.

As a rule, capacity is scheduled for long periods in advance. No time sheet template needs to be specified if all filtered resources have one when you run the function. A template is only needed for resources that don’t.

You can also set capacity for individual resources:

1. Open the Resource Capacity page.
2. Select a resource.
3. On the ribbon, choose Planning > Set Capacity for Resource.

Group capacity

Resource groups don’t have capacities, nor can you specify capacity for them.

Instead, the total number of hours that you can schedule for a group equals the capacities available for all resources within that group.

Time summaries

Time summaries show you the monthly work hour totals of resources for whom you set up capacities.

These entries are mainly used for flextime arrangements but might also be linked to scenarios that involve night differential pay or bonuses for working on holidays.

Set up time summaries (flextime) Resources setup

If you want to add a premium for night shifts, fill in the Night Differential Start and Night Differential End fields in Resources Setup.

Holidays

To set up holidays:

1. Choose the Search icon, enter Base Calendars, and then choose the related link. Select a calendar.
2. On the ribbon, choose Actions > Functions > Maintain Base Calendar Changes.
3. Select the Holiday checkbox for each day that you want to specify as a holiday.

Causes of absence

For flextime summaries to be calculated correctly, you must ensure that the Paid Absence checkbox is selected on the Causes of Absence page for lines that don’t affect time tracking in a negative way, such as lines used to record absence due to illness.

Essentially, the checkbox must be selected for all kinds of causes, except for reductions in flextime. A code for reductions isn’t strictly necessary, as work hours that aren’t posted to a project are subtracted from flextime summaries automatically. Nevertheless, the reductions might need to be logged for documentation purposes.

Example
You set up sick leave, vacation, and flextime as causes of absence, flextime being the only category that the Paid Absence field isn’t selected for. You then post as many hours in the system as shown in the following table.

Day	Daily Capacity	Hours Posted	Absence and Quantity	Flextime Hours	Flextime Total
1	8	9.5		+1.5	1.5
2	8	0	Illness – 8	0	1.5
3	8	4	Flextime – 4	-4	-2.5
4	8	0	Flextime – 8	-8	-10.5
5	8	6		-2	-12.5

As said previously, registering flextime absence isn’t what causes a reduction. A lack of postings on certain days is. In other words, the registration is for documentation purposes only, whereas the time staff members aren’t working due to vacation or sick leave doesn’t affect the numbers at all.

Note

In the Time Statistics FactBox on the CTC card, absences are divided into paid and unpaid absences.

Starting summaries

To use time summaries:

1. Choose the Search icon, enter Time Summary Journals, and then choose the related link.
2. Record all existing flextime summaries of employees. Each entry must start with the last day of the prior month—such as 11/30/2023—if summaries are implemented on 12/01/2023.
3. When you recorded all summaries, go to the ribbon, and choose Post to copy all entries to the Posted Time Summary Journals.

The last step is crucial, as you cannot create starting summaries if you have already set up individual summary entries for employees. You also cannot reset a summary.

The starting summaries are then posted automatically when you choose the Create Time Summary Entries action on the Time Summary Entries page.

Time summary entries

You can create time summary entries by running the Create Time Summary Entries function on the Time Summary Entries page. To avoid inaccuracies in time tracking, we recommend that you generate these entries at the close of every month.

A time summary entry contains all information required to fill in the Flextime, Night, Saturday, and Sunday and Holiday Summary fields per resource and month.

But whereas a flextime summary is calculated regularly from the times recorded by a resource the prior month, the other fields show mere snapshots of data. This means that they are used for informational purposes only; their contents aren't incorporated into other functions, such as updates of project estimates.

All totals are calculated from a resource's (that is, an employee's) capacity, posted work hours and periods of inactivity, with the system using the calendar and related fields specified in Resources Setup to determine night shift and holiday totals from the hours posted.

> **Note**
>
> Once created, entries cannot be changed.

For later postings (of times recorded or periods of absence), you need to rerun the Create Time Summary Entries function.

Summaries are always created for the month prior to the work date.

Example
Work date = 05/02/2023 = System calculates summary for April 2023.

Corrective postings

To post adjustments to Saturday, holiday, nighttime, or flextime work hours:

1. Choose the Search icon, enter Time Summary Journals, and then choose the related link.
2. Select the resource number of the relevant employee.
3. Fill in the Quantity field. In the Reason Code field, choose a reason.
4. On the ribbon, choose the Post action to post the journal.

For tracking purposes, the relevant journal is then copied to the Posted Time Summary Journals page. This creates an entry combining a resource's latest summary and the data you entered.

PROJECT TIME JOURNALS

Create a time journal template

1. Choose the Search icon, enter Project Time Journal Templates, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as necessary.
4. Select a template. On the ribbon, choose the Batches action.
5. You can now fill in resources and their user IDs. If you assigned a journal to a user in User Setup, the correct journal is chosen automatically when you open the journal selection.

> **Note**
>
> A journal must be created for each resource who needs it. An error message appears if a user cannot be assigned to a time journal.

Only users for whom the Other Res. in Time Tracking checkbox has been selected in User Setup can edit other resources' journals, for example, to post times. When you assign a resource to a journal, the number of the resource is entered automatically on all journal lines.

Note

If employees and their resources are registered on the HR Cockpit, a time journal is created automatically. Although there are other options available—specifically, time sheets and CTC time tracking—every resource should have a journal, as it is the only means by which you can correct time postings.

EXTERNAL RESOURCE PRICES

To set up a price for an external resource:

1. Select the External option in the Type field on the relevant resource card.
2. Enter a Vendor No. so that you can open the Resource Purch. Prices page from the resource or the vendor card.

What external resource prices, resource unit prices and resource unit costs have in common is that they can only be retrieved if the right work type has been specified.

You can specify external resource prices as early as creating budget lines for a project. This is because you can already store basic vendor data for an external resource on a resource card. This data is then copied to a budget line when you enter a resource on it, and a price is determined based on the vendor and work type specified on that line. When you later run the Create Purchase Document function from the budget line, the pricing function enters a suitable price on the document—that is, unless you entered a price manually or selected the Manual Purchase Price checkbox on the budget line, in which case the price on that line is copied to the document instead.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩

About Items

OVERVIEW

The standard item master has been extended in functionality, as described in the following article.

For general information about how to use items in the app, see Register New Items - Business Central | Microsoft Learn and Purchasing: KUMAVISION base (BOOSTER).

SET UP A MASTER RECORD

The following fields have been added to item cards:

Field	Description
Blocked for New Sale	In contrast to the Blocked toggle, this block affects entries on sales orders only. With the toggle turned on, you can no longer add the item to a sales line but can still invoice lines on which the item was entered prior to the block.
Target Work Package Code	When you create a WBS from a sales document, you can set up sales lines for later use as project budget lines. For the function to work, you must specify in this field the work package that new budget lines should be set up from.
Qty. on Sales Order without Project No.	Shows the quantity entered on order lines that do not contain a reference to a project.
Project Inventory	Shows how much inventory has been assigned to projects. The reference essentially reserves the stock for these projects. It can be created by making project-related purchases *(without immediate consumption)* or transfers to project inventory *(for example, by using the Take function on the budget line ribbon)*.
Qty. on Project Budget	Shows the quantity entered on project budget lines.

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Project Setup

OVERVIEW

In Microsoft Dynamics 365 Business Central[1], business transactions that occur over a relatively long period of time and might involve frequent changes to requirements and expenditures are grouped into projects. With the help of budgets and line activities, and phase, task, and step codes, you can plan, manage, and invoice these projects with ease.

At the heart of each project is a work breakdown structure (WBS). The structure is used to track sales and costs and provide the project team with a highly granular view of past, present, and future staff, machine, and material needs. Work packages related to a project can additionally be split into budget line activities, which you can assign as subtasks for specific resources to complete.

Thanks to integrated billing, you can also record the revenues and expenses posted to a project in Sales and Purchasing. However, to work with projects, you need to set up the functionality first.

BASICS

Projects Setup

This is where you specify number series and default values for projects.

1. Choose the Search icon, enter Projects Setup, and then choose the related link.
2. Fill in the fields as described in the following tables.

General

Field	Description
Automatic Update Project Item Cost	Turn on this toggle if you want usage costs in project ledger entries updated automatically to match changes in negative inventory adjustments. In other words, this field determines if cost changes are adjusted when you run the Adjust Cost – Item Entries function. The adjustment process and its results are the same as when you run the Update Project Item Cost batch job.
Document No. Is Project No.	Specifies that the project number is also the document number in the ledger entries posted for the project. Like the No Project Journal Doc. No. Check, this field affects project journals. But unlike the other toggle, it also affects item consumption postings to these journals.
Use Deferral	With the toggle turned on, the system creates project ledger entries in addition to G/L entries when you post a line with a deferral code and a project number on a purchase or sales invoice or in the general journal. **Example** A sales invoice created for a project needs to be deferred over a period of three months. Initially, the entire invoice revenue is added on the posting date. Afterward, the process is reversed, and the amount that you billed is distributed over three months according to the deferral schedule.

Numbering

This FastTab stores the most important number series for managing projects. To set up a series, use the lookup next to a field or choose Alt + Down Arrow. Both approaches will lead you to the No. Series table, where you can create a new series.

> **Note**
>
> Number series required for processing projects, for example, in the purchase, sales, and resource areas, must be selected directly from their setup pages.

Project Management

Field	Description
Project Posting in Quote Status	Turn on this toggle if you intend to post consumption of time and material as early as the quote stage. After the toggle is turned on, you can set the work status on WBS lines to In Progress or Open while the project is still on Quote. Leave the toggle turned off if you want to post expenses only after the status of the project has been set to Open on both the project card and the relevant WBS lines.
Auto PTS Code	With the toggle turned on, the system uses the internal number assigned to a WBS line to designate a phase, task, or step. This might help to create a more unique line descriptor when a work package is entered on multiple WBS lines. All new WBS lines must be unique. A line is made unique by combining the codes of a work package, a phase, a task, and a step.
Lock Auto PTS Code on WBS	Turn on this toggle if you want to prevent manual changes to phase, task, or step codes that are created by the system after you activate the Auto PTS Code toggle. Leave the toggle turned off if turning on the Auto PTS Code feature is only meant to help speed up code creation.The setting you make here also applies to project templates.
Budget Filter on Time Posting	Sets a filter when you want to link budget lines to a time journal. With the toggle turned on, only resources specified in the project budget can post to budget lines when you choose Budget as the time posting level on a project card. You must turn on this toggle if you want to use line activities.
Budget Filter on Documents	Sets a filter when you want to link budget lines to purchase or sales lines. Turning on the toggle limits posting to items and resources that are included in the project budget when Budget is chosen in the Project Doc. Posting Level field on a project card.
Budget Filter in Project Journal	Sets a filter when you want to link budget lines to project journal lines. With the toggle turned on, only items and resources added to the project budget can be used to post consumption when Budget is chosen in the Gen. Journal Posting Level field on a project card.
No. Project Journal Doc. No. Check	Turn on this toggle if you do not want the system to check for document numbers when you post to a project journal. This way, project ledger entries can be created, for example, for work hours entered by a staff member, without having to tie the employee to a document.
Check Team at Time Release	Before time entries are released, they are copied to a journal for editing. Turn on this toggle if you want the system to check if a user is authorized for this process.
Auto Resource Budget Allocation	Turn on this toggle to have resource capacity determined based on a project budget, that is, have the system distribute planned work in linear fashion between the starting and ending dates of a budget line. With the toggle turned off, you must trigger the process manually or run the relevant function. Without allocation, the entire resource capacity is assigned to the starting date entered on the line.
Default Budget Allocation Period	Specify the default period for distributing project work. You can change this period when you run the allocation function from a budget line.

Field	Description
	Amounts can be distributed on a daily, weekly, or monthly basis throughout the planned duration of a project.
Multi-Use Budget Resources	Turn on this toggle if you want to assign a resource or a resource group to more than one budget line on a WBS line. The toggle has no influence over how many activities you can assign to both types of lines, however. You must turn on this toggle if you want to use budget lines for completing activities. Items and G/L accounts can be budgeted on any number of lines.
Auto Budget Relation at Posting	Establishes a link to a budget line when you post project ledger entries if no link has been created by a user or a function before posting. The link can then be used for budget-to-actual comparisons on the budget line. For a link to be created, the line must contain a unique type-number combination that is associated with certain revenues or expenses on the related WBS line.
Calculate Work Package BOM	With the toggle turned on, the budget assigned to a bill of materials is multiplied by the quantity specified on a WBS line if you enter a work package related to the BOM on the budget lines that have been set up for the WBS line.
Confirm WBS Update from Budget	Turn on this toggle to request confirmation when a user attempts to copy new budget values to a WBS line after changing the budget and closing the associated budget lines. This confirmation dialog only appears if the WBS line is set up for storing a budget line total *(that is, the Copy Budget checkbox is selected on the line)*.
No Posting Date Check on Project Ledger Change	Typically, project ledger entries can only be changed in the posting period that is specified in General Ledger Setup. Turn on this toggle to forgo the posting date check.
Project Status Reset on Final Invoice	With the toggle turned on, a project is no longer blocked when a final invoice has been created for it.
No Project Accounts	Turn on this toggle if you want to start working with the project365 industry solution but do not have a clear idea of the kind of project accounts you want to use. This prevents an error message about non-existent or incomplete accounts when you budget and post to a project. After you create the accounts and set up the related matrix, you can use a batch job to add any existing ledger entries and budget lines.
Project Field Check	Turn on this toggle if you want users to fill in certain fields before they can proceed with a project. For more information, see Mandatory Field Check.
Guarantee Field Check	With the toggle turned on, certain fields on the Projects page must be filled in before you can use a guarantee. For more information, see Mandatory Field Check
Project Completion Reason Required	Turn on this toggle if you want users to specify a reason for why a project is set to Completed.
Auto Project vs. (Advance) Pmt. Plan Check	With the toggle turned on, the system checks if the amounts on a project-related payment plan match the budgeted sales amounts. To put it another way, the system checks if plan prices differ from the prices entered on the WBS. This toggle is only relevant when you bill projects based on invoice suggestions. Turning it on prevents situations in which the WBS related to a plan was changed (or a WBS line quantity

Field	Description
	reduced) but the change was never copied to the plan (in other words, you would invoice too little or too much by using the original payment schedule).
Project Budget Name (Main WBS)	Select the name of a project budget if you want to specify an active WBS version linked to the budget as the target structure to which to copy the results of calculations and change orders. **Note** You cannot use this function if rolling wave planning is turned on *(the Forecast or Distribution feature, or both)*.
Keep Invoice Qty. Separate	With the toggle turned on, invoice quantities that have been entered on lines for transfer to a main WBS are not totaled but replaced with a quantity of 1 each. The toggle does not affect fields showing total costs and prices.
Work Type (Service Package)	For more information, see Service Packages.
Sales Price List (Service Package)	For more information, see Service Packages.
Auto Update Sales Price List (Serv. Pckg.)	For more information, see Service Packages.
Purch. Price List (Service Package)	For more information, see Service Packages.
Auto Update Purch. Price List (Serv. Pckg.)	For more information, see Service Packages.
Disable Indicators in Project List	With the toggle turned on, the budget and profit value fields and indicators on the Projects page are deactivated. **Note** The Projects page needs to be closed for the toggle to take effect. This option might be useful for performance reasons, for example, as turning on the toggle not only hides the fields when they are not needed, but they are also not calculated when you open the page.
Batch Copy Change Requests from Sales to WBS	With the toggle turned on, the Create WBS/Lines action that you can run from a sales document adds lines to a work breakdown structure as a block, enclosed by a Begin-Total and an End-Total line. For a better overview, the number of the sales document is then entered on the Begin-Total line.

Project Billings

Field	Description
Fixed Sales Budget when Ordering	With the toggle turned on, you can set a project to Open without affecting the sales budget of the project's active WBS.
Use Project Prices on Sales Doc.	With the toggle turned on, a price entered for a project also applies to sales documents that the project is entered on. This way, you can create quotes and orders both from a WBS and manually by using project-specific unit prices.
Check Team at Invoice Suggestion	Select this field to have the system check if a user has permission to create invoice suggestions for a certain project. Only users that are part of the project team can create suggestions.
Sales Project Budget Sync.	Turn on this toggle if you want data synchronized automatically to ensure that certain sales line changes are also copied to project planning.
Sales Project Budget Sync. Error Handling	If you turn on the synchronization feature (see the previous field), you can use this field to specify what you want the system to do when synchronization fails. **Cancel** You see an error message while the process is canceled, that is, the sales line remains unchanged. Choose this option to ensure the highest level of synchronization between projects and sales, with the focus put on first correcting the issue you encountered. **Ask** You are asked if you want to change the sales line. Choose No if you want to cancel the entire process and restore the original line.Choose Yes if you want the sales line changed but not the project itself. At the same time, the problem is logged. **Notify** You are only informed about the problem, without synchronization, and the change is only made on the sales line. The issue will be logged, however.
Sales Project Budget Sync. Notification	Turn on this toggle if you want the system to tell you whether synchronization was successful. With the toggle turned off, no feedback is provided, except in the form a log entry.
Performance Date Formatting	When you bill services based on time and materials, the invoice includes a service period. This period can have the following format: • [month]/[year] • [month]/[day]/[year] • [month spelled out] [day], [year]
Setup Customer Change Despite Revenue	Typically, the customer of a project can be changed only if project ledger entries of type Sale have not been posted to the project yet. To be able to replace the customer even after posting revenue, you need to change the value in this field. Options are: **No** Changes are not possible after project ledger entries have been created in the system. **All** Every authorized user can replace a customer. **Selected** Only those authorized for the process in User Setup can change customers.
Qty. to Invoice vs. Invoice Entry Check	Turn on this toggle if you want to ensure that the invoice quantities on sales order and invoice lines match those stored for the related invoice entries so that an invoice does not list quantities other than those on the associated proof of performance document.

Field	Description
	A quantity check, however, is only run if the Billing Type on a line is set to Time & Materials.
No Separate Pmt. Plan Invoices	Turn on this toggle if you want the system to create one instead of two direct invoices from an invoice suggestion by including invoice lines from a payment plan and lines marked for direct billing. If the toggle is turned off, direct invoices are created separately for payment plan lines, which simplifies final invoice creation (if you are working with final invoices, that is).
Posting Date on Pmt. Plan Invoices	Specify if the planning or work date should be used as the posting date when you create an invoice from a payment plan line (whether by using the action on the payment plan ribbon or an invoice suggestion). **Note** You cannot choose the Planning Date option if the No Separate Pmt. Plan Invoices toggle is turned on, as invoices then contain suggestion lines for direct billing and payment plan lines, so the posting date is set automatically to the work date.
Purch. Deferral Line Amt. Type	Specify the project ledger entries that you want to copy line amounts to when posting deferral transactions from purchasing. **Source Entry** The line amount is stored on the original project ledger entry created for the purchase document, which makes it the only entry relevant to time and materials invoicing. **Distributed** The amount is distributed in equal parts onto multiple entries within the deferral period, and you can then bill these partial amounts on a time and materials basis.
Copy WBS Description to Sales Lines	With this field, you can specify whether the WBS description should be copied to the sales lines, if assign an acitivity to a sales line. **Always (with Dialog)** There is always a query as to whether the description from the project planning should be transferred to the sales line. **If Default Description Exists (with Dialog)** If the default description *(description from the item master data)* is entered in the sales line, it is possible to replace this with the description from the selected WBS line or budget line by means of a system query. **Never** The description is never transferred to the sales line, nor is there a system query.

Purchase

Field	Description
Default Purchase Document Type	Specify the type of document that you want to create when you run the Create Purchase Document function from a WBS. You can change the type again on the related request page, if necessary.
Default Req. Wksh. Template	Specify the template that you want to use when you run the function for creating requisition worksheets from a project budget.
Default Req. Wksh. Name	Specify the worksheet that you want to use when you run the function for creating requisition worksheets from a project budget.
Type Filter to Create Purchase Orders	Specify the default filter that you want to use when you run the Create Purchase Document function from a WBS. In most cases, the default setting, Item, is sufficient. **Note** Users can change the content of this field on the WBS at any time.
Purchase Request Workflow Code	You must fill in this field if want to work with purchase requests. The system then uses the value entered here when you create a request from a project. For more information, see Create a Request.
Use Purch. Invoice Entries	Turn on this toggle if you want the system to select the toggle with the same name on the cards of new external resources (where you can also clear the field again manually). With the field selected, resource-related purchase documents can only be posted with the help of invoice entries. The toggle is needed when external resources can post times to a project, as purchase receipts might then lead to duplicate postings.
Allow Moving Project Ledger Entries with Purchase Invoice Entries	This setting controls if Project Ledger Entries with Purchase Invoice Entries can be moved. **No** Moving to another WBS line or budget line is not possible. **Within WBS-Lines** Moving is only permitted within the same WBS line, to another budget line. **Within Project** Moving is possible within the entire project, i.e. also to other WBS lines.
Copy WBS Descr. to Purch. Line	Specify if and in what way the description of a WBS or a budget line should be copied to a purchase document when running the Get Work Package function. **Always (with Dialog)** You see a dialog asking you if the description should be copied from scheduling to the associated purchase line. **If Default Description Exists (with Dialog)** Provided a description exists on the purchase line, for example, because it was retrieved from the item master, you are asked if you want to replace it with the description that is entered on the related WBS or budget line. **Never**

Field	Description
	WBS and budget line descriptions are never copied to purchase documents, and you also never see a dialog box asking about a text transfer.
Default Shipping Address in Purchase	Specify the default purchasing address in the WBS function Create Purchase Document. This default value can be changed manually in the function. **Default (Company Address)** No separate delivery address is entered in the purchasing document, so that deliveries are made to the client address from the Company Information. **Location** The delivery address of the corresponding location is specified in the purchasing document. This means that the function separates the purchasing documents according to the different locations. **Ship-To Project Address** The delivery address of the project is entered in the purchasing document.

Manufacturing and Warehouse

Field	**Description**
Project Purchase Incl. Inventory	With the toggle turned on, an item is posted to inventory when you post its receipt. This doesn’t cover consumption, which must be posted manually at the appropriate time. **Warning** This is an extremely sensitive toggle. Please contact your Business Central partner before changing it.
Project Item Consumption via Sales Shipment	Turn on this toggle if you want to use the function Project Item Consumption via Sales Shipment. It is also essential to turn on the function Project Purchase Incl. Inventory.
Auto Assign Project Inventory	Turn on this toggle if you want all item receipts linked to a budget line through order tracking or reservations *(assembly and production output, receipt and purchase, and transfers)* to be posted to the location and bin assigned to the line. The relation to the line is then stored with the item ledger entry.
Post ILEs on Project Correction	Turn on this toggle if you want to reclassify an item stored at a location without bins when you remove the link between the related item ledger entry and project. With the toggle turned off, the system will only delete project-related fields from the entry. If a location has bins, the item will be reclassified regardless.
Default Location Non-Project Inventory	Specifies the target location when reclassifying items from a cancelled project.
Default Bin Code Non-Project Inventory	Specifies the target bin when reclassifying items from a cancelled project.
Default Prod. Req. Wksh. Template	Specifies the worksheet template that will be used when you create a production order from a budget line. **Note** This field is only available to users who have purchased the premium edition of Microsoft Dynamics 365 Business Central[1].
Default Prod. Req. Wksh. Name	Specifies the worksheet name that will be used when you create a production order from a budget line. **Note** This field is only available to users who have purchased the premium edition of Microsoft Dynamics 365 Business Central[1].
Prod. Order Status for Budgets	Specifies the status of a production order created from a budget line for an item with a production BOM. **Note** This field is only available to users who have purchased the premium edition of Microsoft Dynamics 365 Business Central[1].
Return Shipments to Project Inventory	This feature only applies to items. When you post a return shipment to a project—that is, when you post negative consumption, credit the project, and then post the item back to inventory—the toggle determines if an item is returned to the general inventory or to the inventory specific to the project.

Dimensions

Field	Description
Dimension Integration (Project)	Specify the dimension that a value should be created for automatically when you set up a new project, with the value matching the number of the project. **Example** To integrate the Cost Object dimension into project 1000, cost object 1000 will be created for the project.
Dimension Integration Prefix (Project)	The dimension specified for integration into projects can be given a prefix in this field. **Example** A project with the number 1000 will show a dimension value of P1000 if the prefix entered in this field is P.
Dimension Integration (Main Project)	Specify the dimension that a value should be created for automatically when you set up a new main project, with the value matching the number of the main project. **Example** To integrate the Cost Object dimension into project 1000, cost object 1000 will be created for the main project. The dimension is then passed on to all projects assigned to the main project. Those projects, however, will not be updated should you later decide to change the dimension.
Dimension Integration Prefix (Main Project)	The dimension specified for integration into main projects can be given a prefix in this field. **Example** A main project with the number 1000 will show a dimension value of P1000 if the prefix entered in this field is P.
Main Project as Dimension Total	Turn on this toggle if you want the system to add a total line to the dimension entered in the Dimension Integration (Main Project) field. The Totaling field on the line then lists the numbers of all projects linked to the main project. With this feature, you can easily analyze, for example, the cost objects assigned to a main project. **Note** Like most other setup toggles, this toggle does not apply retroactively. This means that total lines will be created only after the toggle is turned on and another project is linked to the main project.
Use WBS Line Dim. as Default	With the toggle turned on, the WBS line dimensions used in project planning are copied to *(sales, purchase, and project)* documents and to *(time, project, and G/L)* journals when you assign a unique identifier to a WBS line. This way, you can copy manual dimensions from planning to ledger entries. Leave this toggle turned off if you want dimensions entered automatically based on the project number, the relevant work package, and other data, such as the number of a resource or an item.
Use Budget Line Dim. as Default	Works in the same way as the previous toggle, the difference being that the system will copy manually created dimensions from budget lines instead of WBS lines.
Update Project Dimensions from Resource	Turn on this toggle if you want the system to transfer to a project the dimensions stored for the relevant project manager resource. These dimensions are then copied to the project when you fill in the Person Responsible field on the project card.
Project Type Dimension Code	Specify the dimension that a value should be created for automatically when you set up a project type, with the value matching the code of the type.

Team Roles

Here you can specify up to 10 team roles that you want to show on the project list or project cards. This way, you can see immediately who works on which project in what area or capacity (for example, as the architect or as someone in billing or cost control).

> **Note**
>
> The roles you specify need to be marked as Unique to Project *(because roles that aren't make it impossible for the system to choose the name of a team member)*.

Contact Roles

Used to specify the roles that will be assigned to project contacts. If set up, a role is then filled in on the project card after the contact associated with the customer is.

Field	**Description**
Bill-to Project Customer Contact Role	Specifies the organization contact assigned to the bill-to customer on a project.
Bill-to Project Contact Role	Specifies a contact person if one is assigned to the bill-to customer on a project.
Sell-to Document Contact Role	Specifies the contact assigned to the sell-to customer on a project sales document *(see Project No. field on the header)*.
Bill-to Document Contact Role	Specifies the contact assigned to the bill-to customer on a project sales document *(see Project No. field on the header)*.
Buy-from Document Contact Role	Specifies the contact assigned to the buy-from vendor on a project purchase document *(see the Project No. field on the header)*.
Pay-to Document Contact Role	Specifies the contact assigned to the pay-to vendor on a project purchase document *(see the Project No. field on the header)*.

Measurement

For more information about the fields on this FastTab, see Project Measurement.

Indicators

Used to set up indicators that change color based on project performance.

Field	**Description**
Budget Indicator Green	Specifies up to which consumption level the light in the Budget field will be green. At higher consumption levels, the light will turn yellow.
Budget Indicator Yellow	Specifies up to which consumption level the light in the Budget field will be yellow. At higher consumption levels, the light will turn red.
Profit Indicator Green	Specifies the margin up to which the light in the Budget field will be green. At lower margins, the light will turn yellow.
Profit Indicator Yellow	Specifies the margin up to which the light in the Budget field will be yellow. At lower margins, the light will turn red.
Disable Budget & Profit Indicator Calculation in Project List	Description to follow.

Time Tracking

Here you can set up your preferred method for recording time in the system. Many companies pick one method for all employees to use.

Nevertheless, we recommend that you leave the project time journals turned on even if you opt for CTC time tracking or time sheets. The journal is still the easiest way for you to post corrections to time entries.

Field	Description
Time Comments on Customer Doc.	With the toggle turned on, the Print on Customer Doc. checkbox is selected automatically for each comment created in time tracking. Comments marked in this way are later printed on proof of service statements that need to be sent to customers when billing by time and materials. You can clear the checkbox again manually if you want to exclude certain comments from those statements.
Use Project Time Journal	Turn on this toggle to add project time journals to the role center page (recommended).
Check by Time Manager	With the toggle turned on, resource hours must be approved by a time manager (not the project lead). A time manager needs to be specified for each resource individually. For more information, see Project Journals.
Team Filter on Time Posting	Turning on this toggle limits the available resources in time tracking to members of the project team. **Note** The Check Team at Time Posting toggle must also be turned on for the relevant project.
Strict Team Filter	This toggle expands on the preceding field. If turned on, it prevents users who are not authorized to post to a certain project from doing so even if they fill in the No. field manually. Projects that the Check Team at Time Posting toggle is turned off for are commonly considered shared projects. They do not require you to set up a team and can be posted to by all resources.
Auto Fill Unique Hit from Project Search	With the toggle turned on, a project is entered in a time journal or on a CTC card by the system when it is the only project found with the help of the Project Search feature. With the toggle turned off, you need to select the project manually.
General Time Recording Resource	Specifies a dummy resource for budget lines and budget line activities that are not tied to a certain resource or group. As a special resource, it is included automatically on all time tracking pages at budget line level so that every user can post to it.
Use CTC Time Tracking	Turn on this toggle to add CTC time tracking to the role center page.
CTC Posting As	Specify how CTC card entries should be posted to projects. **Time Entry** Project leads must first post and release the card entries before project ledger entries can be created. **Ledger Entry** Only project ledger entries are posted. Note: Without time entries, some resource-related analyses will no longer be available. **Time and Ledger Entries** Both entries are posted at the same time. This means that project leads no longer need to retrieve and release time entries from CTC cards, although the entries might still prove useful when analyzing project performance, for example.
CTC Time Tracking Incl. Start/End Times	With the toggle turned on, you need to specify a start and an end time instead of filling in the Qty. field on a CTC line.

Field	Description
Check Break Total in CTC	With the toggle turned on, the amount of time that is specified in the Break (Hours) field at the top of a CTC card must be distributed across the lines by filling in the fields with the same name there.
Deactivate Break Minimum	Turn on this toggle if want the system to skip the check for minimum breaks.
New Invoice Qty. in Time Tracking	Typically, the Invoice Qty. field is filled in from the Quantity field. A different invoice quantity can only be entered if services are billed based on time and materials and this toggle is turned on. Additionally, when time is posted to budget lines, the line you want to change the quantity on must be billable in full. In other words, the Billable checkbox needs to be selected on the line and the Invoice Qty. % field cannot be filled in with a value other than 100. If the time cannot be invoiced in full, the amount that you can bill will depend on the specified line activity.
Confirm Invoice Qty. Variance	Turn on this toggle if you want a user who runs time entry checks to have to approve any variance between the quantity (=the amount of work performed) and the invoice quantity on project journal lines before the lines can be posted. This option is relevant only if you set up journal lines by running the Create Project Time Entries function. On WBS lines that are set to No Billing, the two quantities always differ (the Invoice Qty. being 0). As a result, these lines are released automatically.
CTC Reversal Template	Select a time journal template that will be used (temporarily) to cancel CTC lines.
CTC Reversal Batch	Select a time journal that will be used (temporarily) to cancel CTC lines. The journal cannot be linked to a resource. After the lines have been edited and posted, they are deleted from the journal automatically.
Use Time Sheets	Turn on this toggle to add time sheets to the role center page.
Time Sheet Mgt. Approval	Turn on this toggle if you want an employee's time sheet released—that is, checked by a resource manager—before a batch job can be used to post time or project ledger entries from the time sheet.
Time Sheet Posting As	Specify how time sheet entries should be posted to projects. **Time Entry** Project leads must first post and release the sheet entries before project ledger entries can be created. **Ledger Entry** Only project ledger entries are posted. Note: Without time entries, some resource-related analyses will no longer be available. **Time and Ledger Entries** Both entries are posted at the same time. This means that project leads no longer need to retrieve and release entries from time sheets, although the entries might still prove useful when analyzing project performance, for example.
Auto Archive Time Sheets Older Than	Enter a formula to specify when you want the system to archive time sheets. For example, -1Y means the system will archive all time sheets older than a year.

Field	Description
	The actual process is performed by the Move Timesheets to Archive batch job in the task queue.
Post Neg. Time Sheet Qty. as Correction	With the toggle turned on, an attempt is made to post a reversal entry when you enter a negative quantity in a time sheet. More specifically, the system will search for a reversal entry that matches the number, WBS line, budget line activity, date, and quantity of the project for which the time sheet was created. Alternatively, you can cancel quantities through the time journal.

CTC Calendar Colors

Stores colors and styles that are used in CTC time tracking to visualize the progress of time capture on different calendar days.

Archiving

Field	Description
Auto Archive Completed Projects	With the toggle turned on, a project is automatically moved to the archive when it is set to Completed. **Note** As archived projects are shown in a separate window, the related card is closed when the project is moved, as it is no longer within the filters on the Projects page.

Specify posting groups

Before you can include a project in your financial reports, you need to specify posting groups and accounts for it.

General Posting Setup

You record WIP and recognize revenues from a project by posting consumption and sales to different G/L accounts in Finance. To set up two of these accounts:

1. Choose the Search icon, enter General Posting Setup, and then choose the related link.
2. Fill in the fields shown in the following table.

Field	Description
Project Sales Adjmt. Account	**(Sales)** In the context of the Post Project Work In Process to G/L batch job, the balancing (P&L) account to the WIP Sales (balance sheet) account. You post to this account income from services rendered but not yet billed during an accounting period.
Project Costs Adjmt. Account	**(Consumption)** In the context of the Post Project Work In Process to G/L batch job, the balancing (P&L) account to the WIP Costs (balance sheet) account. You post to this account items that were consumed during an accounting period but haven’t been posted as expenses (through a purchase invoice).

Of course, both accounts are also used when you recognize revenues and expenses by running the Post Project Recognition to G/L function.

Project posting groups

The project posting groups contain other accounts through which you can post project-related WIP and recognition amounts to Finance. To add accounts to these groups:

1. Choose the Search icon, enter project365 Project Posting Groups, and then choose the related link.
2. Fill in the fields shown in the following table.

Field	Description
WIP Costs Account	**(Consumption)** Stores the costs of unfinished projects.
WIP Sales Account	**(Sales)** The account to which unit prices are credited when you Post Work in Process to G/L and debited when you Post Project Recognition to G/L. When you record WIP, the Project Sales Adjmt. Account from General Posting Setup is used as the balancing account to this account. For revenue recognition, that role is assumed by the Project Sales Account.
Project Costs Account	**(Consumption)** An income account to which unit costs are debited when you run the Post Project Recognition to G/L batch job.
Project Sales Account	**(Sales)** A P&L account to which unit prices are credited when you run the Post Project Recognition to G/L batch job.
G/L Expense Account	Used when posting to project-related G/L accounts. Amounts are credited to the account when project usage is copied to sales lines.
WIP Profit Account	Stores prorated profits according to the percentage of completion (POC) method as defined by IAS.
WIP Profit Applied Account	Contra account to the WIP Profit Account.

For more information, see Project Measurement.

Set up project types

You can use project types as filters on projects, for example, during analyses. The types are also crucial to setting up project accounts and cost-only (that is, internal) projects, where services aren’t billed to customers.

To create a type:

1. Choose the Search icon, enter Project Types, and then choose the related link.
2. Specify default settings as necessary, including for posting levels, internal projects, and fixed time periods.

To specify additional default values, you need to create a project template, which you can then link to a project type.

Use project templates

By using project templates, you can have multiple fields filled in automatically during project creation.

You will want to set up at least one template for each kind of project you might work on. The template provides basic information that will be entered on every new project you create from it.

1. Choose the Search icon, enter Project Templates, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	Description
Code	Specify a code for the template.
Description Description 2	Specify the description that will be copied to new project cards.
Language Code	Specify the code of the language that should be used by default. If you do not, the system will retrieve the code from the relevant customer card. The code determines, for example, the language in which text appears on new sales documents and on items entered for a project.
No. Series	Select the number series that will be used to create projects from the template.
Formula Sales Project Acc. Entries	Enter a formula for dates. For example, entering +1M specifies that revenue estimates will be recorded for cost control purposes one month after expected consumption of an item or a resource.
Start on Active WBS	Turn on this toggle if any new project created from the template should start on an active WBS. Because active structures do not need to be released, you can start posting to the project right away.
Project Type	Choose the type that you want to assign to new projects by default (see Project Types).
Status	Select the status that a project created from this template will start with. The status field that exists on WBS template lines can be used for a similar purpose. With it, you can specify, for example, that the project and most WBS lines should be set to Order, but that some lines should be optional and start on Open. Like on an actual WBS, no WBS line in a template can be set to Order if the status on the template header is Open.
Dimension Integration	Specify the default dimension that should be created and assigned to new projects automatically.
Dimension Integration Prefix	Specify a prefix to distinguish the dimension integration value entered in the preceding field from the number used for a new project. For example, choosing IT as the prefix will create cost object IT2365 for project 2365.
ICP Ships to Customer Address	Specify if the shipping address of a project created from the template should be copied as the delivery site to the service company selected for IC transfers. With the toggle turned off, services rendered will be delivered to the business billing them—in other words, to the customer address that is entered in the company to which the project is transferred.
WBS Line Batch to Auto Insert	If needed, specify another template that WBS lines should be copied from automatically and inserted at the start or end of a WBS created based on the current template. This way, general-purpose cost lines only need to be set up once for them to be entered by the system on all other templates where they are required. The line batch is then added when creating a WBS in the usual way, by using the relevant project ribbon function, or when doing so from a sales document. In the latter case, this feature is useful if the cost lines were not transferred to the document but must be included on the WBS.
WBS Line Batch Position	Specify the position of the line batch, which can be put before or after the WBS lines copied from the current template.

The remaining fields are described in other help articles (see Create a Project).

Posting

The fields on this FastTab are described in other help articles (see Create a Project).

Project Billings

The fields on this FastTab are described in other help articles see (see Create a Project).

Lines

On this FastTab, you can set up a WBS that you want to copy to new projects so that you can specify structural elements such as begin- and end-totals early on. You can store one WBS per template.

As for the Expand Budget Lines field, you can use it to specify that when you run the Create Lines from Project Template function to set up document lines in sales and one of the Copy to Sales Doc. Field on the relevant template is set to WBS Line, the system should also copy the budget lines from the template to the new structure.

For more information on how to set up a WBS, see Work Breakdown Structure.

Distribution

If you are using the activation module "Rolling planning (distribution)", this info tab is visible. Further information on the fields can be found in the section Project templates - Distribution info tab.

Actions on the lines ribbon Project Budget Line Template

You can also create budget lines for work packages entered on a template WBS. But unlike actual projects, templates don’t include a pricing and dimension functions. This means that a work package line entered in a template isn’t updated when you create budget lines for it.

To set up budget lines:

1. Open a project template.
2. Go to the Lines FastTab and select a WBS line.
3. On the ribbon, choose Line > Project Budget Lines.

For more information about the fields found on budget lines, see Budget Lines.

Predecessors / Successors

You can link a WBS or a budget line to both preceding and following lines in a template. These relations are later retained when you create work breakdown structures from the template.

See also Line Dependencies.

Dimensions

In the template, dimensions can be specified for the project, for individual WBS lines and for individual budget lines. It should be noted that there is a dimension determination in the subsequent project. Dimensions are transferred from the master data used *(customer, work package, item, resources)* to the project, WBS line or budget line. Dimension determination does not take place in the project template. Only additional dimensions that do not originate from the master data are defined in the project template.

Actions on the ribbon Copy From Template

Copies the template WBS, dimensions, extended texts, measurement methods, and other data from an existing to a new template. This function can only be used, however, if you haven’t yet created a WBS for the new template.

Assign Position Nos.

Adds a position number to every line of the work breakdown structure.

Renumber Lines

All WBS lines are automatically given internal numbers in 10 000 increments so that you can insert more lines between them. For example, the first line you add between 10 000 and 20 000 will be assigned internal number 15 000.

Done too often in one place, however, the line numbers will eventually go outside the integer range, and insertion will no longer be an option. To create the space required for inserting more lines, you can use this action to reassign the numbers throughout the work breakdown structure.

Create Template from Project

You can use this action, found on the ribbons of project cards and the project list, to copy a project and its work breakdown structure to a new project template.

When you run the function, a dialog page shows the project number and the active WBS version that are copied by default. You can, however, choose another version if necessary.

You can then enter a unique template code on the page. The system will check whether this code already exists and will show an error message if it does. You can also use multiple toggles here to specify the project-related data that you want transferred.

Example
The Copy Project Data option tells the system to transfer the contents of all fields that are—or can be made—visible on project cards.

Specify project accounts

Consumption and sales that you post to projects are shown on a chart of project accounts. This chart provides you with both cost estimates and analytical tools for monitoring project progress and performance. The accounts available on the chart are specified in Project Accounts Setup.

Note

When you start using the project365 industry solution but have yet to decide on the structure of your chart, turn on the No Project Accounts toggle in Projects Setup. This will avoid an error message because of non-existent or incomplete project accounts when you budget and post to projects.

After you created the accounts, and set up the related matrix, you can use a batch job to add ledger entries and budget lines that already exist. For more information, please contact your Business Central partner.

Chart of project accounts

The account chart is used for cost control and provides you with a detailed view of all project-related revenue and expense accounts. None of them are related to the chart in Finance. To set up the chart:

1. Choose the Search icon, enter Chart of Project Accounts, and then choose the related link.
2. Enter a number and name for the account.
3. In the Account Type field, select one of the options shown in the following table.

Option	Description
Posting	Specifies an account to which you can post.
Heading	Specifies a line of text for structuring a chart.
Total	Specifies a sum derived from totaling project account fields.
Begin-Total	Specifies from where to start totaling account lines. Calculation extends from the Begin-Total to the End-Total field.
End-Total	Specifies the point up to which account lines should be totaled. Calculation starts in the Begin-Total field. The overall sum is shown in the Total field.

1. On the ribbon, select Actions > Indent Chart of Accounts.
2. You are then asked to confirm that you want to indent the chart. Choose Yes.

Comments

Allows you to add information not included in the Project Account card fields. To enter a comment, select a line, and choose Related > Account > Comments on the ribbon. Each comment can have a maximum of 80 characters.

Project Accounts Setup

This page looks almost exactly like a posting matrix in Finance. Here you can assign revenue and expense accounts to general product posting groups. You can then use these accounts to budget and post project usage and sales.

You can specify what accounts are selected for posting with the help of project types or work packages, or both. A project ledger (or budget) entry is then assigned to an account according to its entry type (Sale or Usage). The following fields stored with all entries are later used to find an account:

- **Gen. Prod. Posting Group**
  Shows the general product posting group of a posted resource or a posted item.
- **Project Type**
  Shows the type selected for a posted project.
- **Work Package Code**
  Shows the code from a posted WBS line.

Project operations

Project work is typically broken down into different sections called work packages. These packages are then assigned to stages of a project by using phase, task, and step codes.

Work packages

Work packages (packages of services or material) are among the most important components of any work breakdown structure. You can assign budget values to a work package, post to the package, or use it in cost control.

You can also split a work package into subtasks, known as budget line activities in project365.

Each time you enter a package on a WBS, the system copies the same basic data for fields with the same name from the Work Package table. In most cases, you can then change their contents again if necessary.

For more information about work packages, see WBS Lines. The following table will describe only those work package fields that you cannot find on the WBS.

Field	Description
Billing Base	Specifies the base for billing a project. This base is used if the work package, that is, the WBS line, is copied to a sales document, such as a quote or an order (with resource being the most common choice here).
Blocked	The work package code can no longer be used on WBS lines. The block, however, doesn’t affect lines that already contain the code.
Billing No.	Depending on the selected billing base, this field shows the number of a resource, an item, or a G/L account that you want to use on sales lines. Often, a special billing resource and not a person is entered here. If an item is selected, only items in the Type= "Inventory" can be used.
Info BOM Total Cost (LCY)	If a bill of materials has been specified for the work package, this field shows the total unit cost value of that BOM.
Info BOM Total Price (LCY)	If a bill of materials has been specified for the work package, this field shows the total unit price value of that BOM.
Last BOM Recalculation	Shows when the work package BOM was last recalculated.
Use in Resource Planning	Specifies if the work package is available in resource planning. With the toggle turned off, the package contains only material costs.
Budget Type Resource	With the checkbox selected, you can budget the work package on a WBS that includes resources.
Budget Type Item	With the checkbox selected, you can budget the work package on a WBS that includes items.
Budget Type G/L Account	With the checkbox selected, you can budget the work package on a WBS that includes G/L accounts.
Budget Allowed	This checkbox needs to be selected if you want to assign budget lines to a WBS line created from the work package.

Example:

Code	Description	Working type code	Unit code	Type for billing	Billing no.	Billin
AP007	Training	DL	HOUR	Resource	BILL0001	Time Mater
AP008	Support (T&M)	DL	HOUR	Resource	BILL0001	Time Mater
AP009	Introduction	DL	HOUR	Resource	BILL0001	Time Mater
AP010	Services	DL	HOUR	Resource	BILL0001	Time Mater

Work package texts

Work packages can include additional text. To add text:

1. Choose the Search icon, enter Work Packages, and then choose the related link.
2. Select a work package. On the ribbon, choose Edit.
3. This opens a page where you can edit the package. On the ribbon, choose Extended Texts.

When you enter a work package with extended texts on a WBS, the texts are copied alongside other data to the relevant line. When you later create sales documents, such as quotes and orders, from the WBS, the texts are copied to these new documents as well. By selecting one of the Print checkboxes on extended text lines, you can specify on which kind of document you want to print the text that you entered.

Alternative sales texts

When you enter a work package on a WBS, the Description and Description 2 fields stored with the package are copied alongside other data to the relevant WBS line, where they can be changed again manually if necessary.

Both fields are also copied to sales lines when you create sales documents. If you, however, want documents to show another description than the one used in-house, you can specify an alternative sales text for the package.

To specify an alternative description:

1. Choose the Search icon, enter Work Packages, and then choose the related link.
2. Select a work package. On the ribbon, choose Edit.
3. This opens a page where you can edit the package. On the ribbon, choose Alternative Sales Texts.

All packages offer a default setting for alternative descriptions and support various language codes for texts relevant to sales. These are then copied to the Description in Sales and Description in Sales 2 fields on WBS lines depending on what language is used for the project.

Work package BOM

For each work package on the Work Packages page, you can specify a simple bill of materials that can be used as the default BOM for detailed planning. This BOM is later copied to the budget lines that you set up for lines containing the package.

Work package info

You can track the consumption of work packages across projects and document types in the purchasing, sales, and projects areas with the help of a FactBox. This FactBox indicates how often a package has been retrieved so that you can, for example, identify and delete unused packages. To see the FactBox:

1. Choose the Search icon, enter Work Packages, and then choose the related link.
2. Select a work package. On the ribbon, choose Edit.
3. This opens a page where you can edit the package. On the ribbon, choose Related > Work Package > Info.

Phases, tasks, and steps

Project activities can be divided into phases, tasks, and steps. Additional levels can be set up for work packages on the WBS.

Phases and tasks specify inter-project structures. Steps group all activities specified for a certain project.

Project budget names

You can define several budget names and manage, side by side, several budgets for a project. However, only one of these budgets can be active at any given time. To set up a budget:

1. Choose the Search icon, enter Project Budget Names, and then choose the related link.
2. Choose New to create a name for the budget.
3. Fill in the fields as necessary.

You can also select a default name here and block certain budgets across projects.

Journal templates

Project journal templates

Every project manager must be assigned a separate project journal. It is enough to use a project journal template named PROJECT for this.

From the template, you can then create journals for employees who will post to projects. Creating one journal per project manager and per person responsible for project-related HR matters should be sufficient. For more information, see Project Time Journals.

To specify journals for users:

1. Choose the Search icon, enter Project Journal Templates, and then choose the related link.
2. On the ribbon, choose New to create a template. After filling in the fields, use the Batches action on the ribbon to assign users.

You are then directed to the journal assigned to you when you open the Project Journals page. A user for whom no journal has been created will see an error message.

Project time journals

Employees are assigned to project time journals in the same way as to project journals. The difference is that instead of a user ID, resource numbers are used for the assignment process. These numbers are also added to journal lines when times are recorded.

Project measurement journals

These journals are set up like journals in Finance, which also means that you cannot assign employees or users to them. Creating a template is sufficient here.

Invoice suggestions

These are best created per person to bill. You cannot assign employees or users to suggestions. You need to use the Search icon and go to the Invoice Suggestion page manually the first time you want to create a suggestion.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩

Create a Project

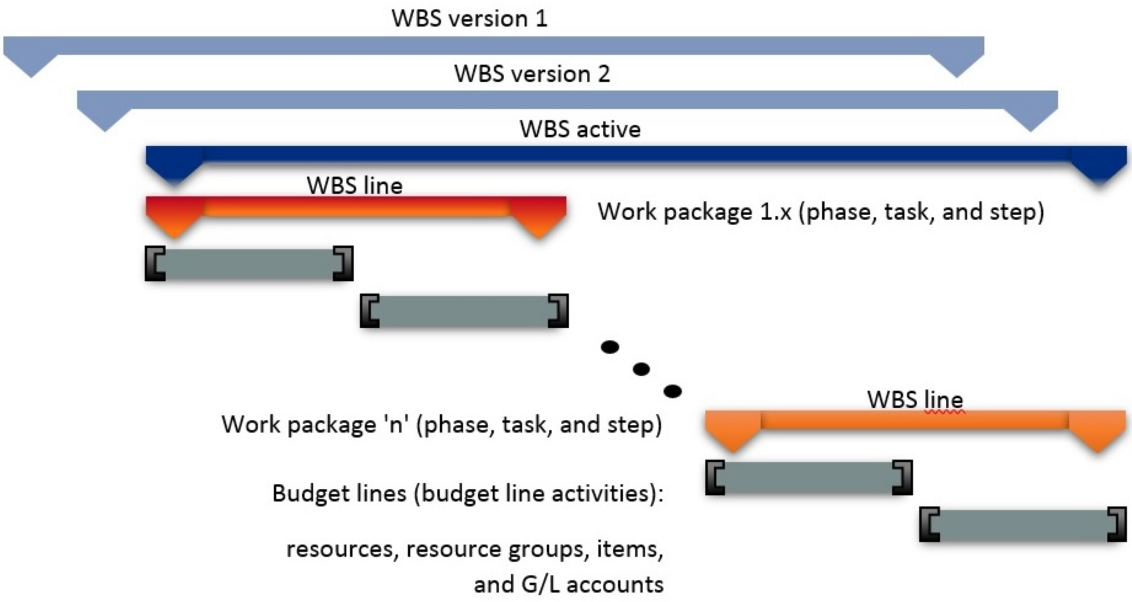
OVERVIEW

A detailed work breakdown structure (WBS) can be a great help in project management.

For this reason, you can enter both a work package code and a group of phase, task, and step codes on the WBS lines of a project. Combined, the four codes not only provide you with a more granular view of your project but uniquely identify each WBS line. As a result, you can enter the same package on more than one line if at least one of the other codes differ.

You can then create budget lines for WBS lines that store work packages and—if you need an even deeper breakdown of project activities—use these budget lines to keep track of tasks assigned to individual resources.

If, on the other hand, you don’t want to work with budget lines (that is, with a budget view), you can schedule activities directly on the work breakdown structure. You can also assign a project to a main project. The following chart shows you how projects are structured within project365:


WBS version 1
WBS version 2
WBS active
WBS line
Work package 1.x (phase, task, and step)
WBS line
Work package 'n' (phase, task, and step)
Budget lines (budget line activities):
resources, resource groups, items, and G/L accounts

FILL IN BASIC PROJECT DATA

To set up basic project information:

1. Choose the Search icon, enter Projects, and then choose the related link.
2. On the ribbon, choose New > New to create a project.
3. Fill in the fields as necessary.

See the following tables for more information about the most important fields on project cards. Some are filled in automatically when you use a project template (as noted in the Description).

General

Field	Description
No.	Uniquely identifies the project. You can enter both numbers and letters or have the system assign a number from a series automatically. (This field might be filled in from a project template.)
Customer No.	Shows the number of the customer for whom you want to create quotes and orders (unless the project has been specified as internal according to its project type, in which case this field remains blank).
Sell-to Contact No. (Cust.)	Shows the number of the person or company entered in the Customer No. field. If the project is set to Quote, you can select a contact who hasn’t been made a customer yet. As in the sales area, however, a contact must be turned into a customer before a quote can be converted into an order.
Sell-to Customer Template Code	If a project in the Quote stage is set up for a contact who has yet to be made a customer, the code you select here will be used to fill in the fields that are needed to create quotes for the project. The code is also used when you turn a contact into a customer.
External Project No.	Specifies a document number that refers to the customer's numbering system. **Note** This number is only available on the project card and isn’t copied to sales documents created from the project.
External Document No.	Specifies a document number that refers to the customer's numbering system. When you create a sales document, this number is copied to the document field with the same name.
Your Reference	Specifies the customer’s reference. When you create a sales document, the value in this field is copied to the document field with the same name. It will also be printed on the document.
Status	Indicates the status of the project. A status must be assigned. You can choose one of the following options: • Planning • Quote • Open • Completed The status has an impact on many parts of the app; for example, a customer invoice cannot be created if the project is set to a status other than Open. Some status changes might also be blocked by the system, such as when open documents still exist for a project that you want to set to Completed. A status change might additionally be copied from the WBS lines *(that is, work packages)* of one document to the lines of another, such as from a quote to an order. Typically, when a project’s status changes to Completed, its work packages change to Finished automatically, as can be seen in the Work Status fields on the relevant WBS lines. If neither costs nor sales were posted to the packages, however, the lines will be set to Canceled instead. *(This field might be filled in from a project template.)*
Final Invoice Created	

Field	Description
	Part of the end stage of a project. Turned on, the toggle confirms you created a final customer invoice so that the project can now be posted to G/L. The project is then set to Completed.
Person Responsible	Indicates who manages the project. When you fill in this field, the project is added to the My Projects list of the person linked to the selected resource. The system then copies to the project the dimension values entered for this resource in the Dimension Integration field in Resources Setup, allowing you to evaluate cross-project performance. The resource in this field is also used as a filter when time entries are posted to the project journal. This way, a change in who manages the project will only affect new time postings.
Fill-In for Person Responsible	Enter the deputy project manager. This field has no functionality besides providing textual information.
Project Type	Enter a classification code for the project. The type plays an important role in setting up accounts for monitoring project progress and performance. For example, you can use the type to analyze the cost and profit margins of certain types of projects. (This field might be filled in from a project template.)
Use WBS Res. Prices	With the toggle turned on, the resource prices stored on WBS or budget lines are used for pricing. For more information, see About Resources. (This field might be filled in from a project template.)
Manual Update on Opening WBS Lines	With the toggle turned on, fields on total lines aren’t updated when you open a work breakdown structure. This might be necessary if the process is causing performance issues.
Responsibility Center	Like selecting a responsibility center for a sales or purchase document, selecting a center for projects limits a user’s view to projects that fall under the specified area of responsibility.
Blocked	Prevents users from posting to the project in the following ways. **Posting** Blocks postings of both revenues and expenses but permits changes to basic project information and planning data. **All** Blocks both postings and changes to project planning (WBS and budget). **Times** Blocks time recording, for example, in time journals and on CTC cards. Allows postings elsewhere, including in project journals, on purchase credit memos, and on sales credit memos. Also allows changes to basic data and work breakdown structures.
Main Project Assignment	Shows the number of main projects that the project is assigned to or, if it is assigned to only one, the description and code of the main project. You can click the field to see the card of a main project or to set up one if none has been assigned.
Contact No. for Time Tracking	Specifies if and how contact numbers should be entered for recording time spent on sales and marketing projects (which do not require that you fill in a customer number). Options are: **(blank)**

Field	Description
	No support of time tracking and no requirement for filling in a contact number. **Optional** Partial support of data entry by showing you a list of all company contacts stored in the system when you enter the number of the project. However, no requirement for picking a contact from the list. **Required** Same as Optional, except you must choose a contact number; without it, times cannot be posted to the project. You can use this feature, for example, in combination with BI tools to analyze the sales and marketing expenses allocated to a contact. When hours recorded by a contact are posted to the project, the number of the contact is copied along with other data to the time entries created for the project and from there to the project ledger entries.

Posting

Field	Description
Time Posting Level	Specifies the level at which times can be posted by resources. This field is used on time sheets, CTC cards, and intercompany orders. **WBS** Hours are posted at the work package level (via WBS lines) to an active work breakdown structure. **Budget** Hours are posted at the budget line level. Additionally, the related line activity numbers are retrieved for use in budget-to-actual comparisons. **Note** When time is posted, the Budget option also posts the entries to WBS lines if no budget lines exist. This is because some WBS lines, such as those to record travel times, are not fine-planned so that no budget lines are available for them. (This field might be filled in from a project template.)
Purchase Posting Level	Specifies the level at which costs are allocated to purchase documents. See the Time Posting Level field for an explanation of the options that you can choose here. (This field might be filled in from a project template.)
Project Doc. Posting Level	Specifies the level at which costs are allocated to a project document, such as a project (vendor) shipment. See the Time Posting Level field for an explanation of the options that you can choose here. (This field might be filled in from a project template.)
Gen. Journal Posting Level	Specifies the level at which postings are assigned to general journals. See the Time Posting Level field for an explanation of the options that you can choose here. (This field might be filled in from a project template.)
Project Journal Posting Level	Specifies the level at which costs are allocated in project journals. See the Time Posting Level field for an explanation of the options that you can choose here. (This field might be filled in from a project template.)
Sales Posting Level	Do not worry if this field does not show. It is not strictly necessary, as every WBS line includes a checkbox (Copy to Sales Doc.) to specify how the line should be posted to sales.
Check Team at Time Posting	With the toggle turned on, only the team specified for the project can post to it. The project will also be hidden from anyone who is not a member of the team. This field becomes active after you turned on the Team Filter on Time Posting toggle in Projects Setup. If the toggle is turned off, the project is assumed to be shared so that all resources can post to it. (This field might be filled in from a project template.)
Strict Time Budget	With the toggle turned on, resources cannot exceed the time budgeted for them. Entering more than the budget allows will result in an error message. A crucial factor in this context is the level at which times are being recorded. The WBS budget is

Field	Description
	used as the baseline when hours are recorded on WBS lines, that is, for work packages. If they are not, the values on the budget lines (the line activities) are used to compare the amounts budgeted to the amounts posted and the times captured but not yet posted. **Note** A check is only performed for budget or WBS line quantities greater than 0. (This field might be filled in from a project template.)
Location Code	Specifies the code of the location that items for this project should be removed (posted) from. The code is copied to all WBS lines by default and from there to the related budget lines. When you create a purchase document or a project (vendor) shipment from a budget line, the location is retrieved from that line. You can specify a location as early as creating a project template.
Bin Code	Specifies, based on the location, the code of the bin that items for this project should be removed (posted) from. The code is copied to all WBS lines by default and from there to the associated budget lines. When you create a purchase document or a project (vendor) shipment from a budget line, the location is retrieved from that line. You can specify a bin as early as creating a project template.

Invoice and Shipping

Field	Description
Bill-to	Shows the customer whom you want to invoice. This customer can be different from the person or company entered in the Customer No. field. The Bill-to field also determines the invoice currency that is copied to the project. However, you can still change the currency manually if necessary.
Bill-to Contact No. (Cust.)	Shows the customer contact to whom invoices are sent. This contact can be different from the person or company entered in the Customer No. field. If a project is set to Open, you can also choose a contact who isn’t a customer yet.
Bill-to Code	An alternative billing address for the customer can be selected here. These invoice addresses are defined at the customer. These are usually invoice departments or other departments of the customer responsible for invoice processing. The customer can define one of these billing addresses as the "default billing address", which is then automatically used in the projects and sales documents.
Payment Terms Code	Filled in automatically based on the Bill-to field but can be changed manually. The code in this field is also copied to sales documents created from the project.
Payment Method Code	Filled in automatically based on the Bill-to field but can be changed manually. The code in this field is also copied to sales documents created from the project.
Gen. Bus. Posting Group	Filled in automatically based on the Bill-to field but can be changed manually. The group in this field is also copied to sales documents created from the project.
VAT Bus. Posting Group	Filled in automatically based on the Bill-to field but can be changed manually. The group in this field is also copied to sales documents created from the project.
Payment Plan Level	Creates a payment plan for an entire project or for individual WBS lines.
Ship-to Code	Contains the code of a shipment address that you want to store with the customer.
[Other Ship-to fields]	These fields show the exact address for project shipments. Nearly all of them can be changed manually.
Invoice Currency Date	Specifies the date that will be used to convert budgeted prices into the invoice currency. The exchange rate calculated on this date is then stored in the Invoice Currency Factor field.
Invoice Currency Factor	Specifies the exchange rate that will be used to budget sales amounts on the WBS. The rate is copied from the associated exchange rate table but can be changed manually. Depending on whether the unit price is in local currency or in the invoice currency (after having been entered manually or by the pricing function), the other price is calculated based on the factor given in this field.
Use Invoice Currency Factor on Sales Docs.	Turn on this toggle if the rate specified in the Invoice Currency Factor field should be used for both the project budget and on sales documents. Otherwise, the current exchange rate will be used when a document is created.
Use Invoice Currency Factor in Usage	Turn on this toggle if the rate specified in the Invoice Currency Factor field should be used for both the project plannings and on consumption postings. Otherwise, the current exchange rate will be used when a document is created.

Duration

Field	Description
Starting Date	Indicates the date on which work on the project started. This field must be maintained manually.
Fixed Starting Date	With the toggle turned on, planning cannot occur before this date.
Ending Date	Indicates the date on which work on the project is expected to end. This field must be maintained manually.
Fixed Ending Date	With the toggle turned on, you can no longer schedule something on the WBS after this date.
Ending Date on Order	Shows when the project was set to Open. This makes it possible to check later if the originally planned ending date changed throughout the duration of the project.
Creation Date	Shows the date on which the project was created.
Closing Date	Shows when the project was set to Completed.

Planning

Field	Description
Planning Direction	Specifies the planning direction for automatic planning.
Sales Project Acc. Entries From	When you monitor project progress and performance, project account entries represent the budget of a project, with time and materials entries time-linked to this budget. Sales budget values, on the other hand, can be linked to either the budget or a payment plan. Choosing Payment Plan copies the plan stored with the project to cost control in the form of a revenue plan. Choosing Project Budget in this field copies the sales budget instead. You can then use the following two fields to decouple sales from consumption over a certain period.
Base Sales Project Acc. Entries	If you choose Project Budget in the preceding field, you can select in this field whether you want the system to use the expected date of consumption to create analysis entries or a formula based on that date.
Formula Sales Project Acc. Entries	If you choose Project Budget in the Project Sales Project Acc. Entries From field, fill in this field with a formula to decouple budgeted sales from consumption. For example, if you’re expecting an item to be used in June, the revenue generated from it can be moved to July by using the formula +1M. The formula applies to an entire project; you cannot decouple consumption for individual entries.
Active Project Budget Name	Shows the name of the project budget used for the active WBS.
Active Version No.	Shows the version number of the active WBS.
Fixed Time Period	With the toggle turned on, times posted by resources are checked against the periods specified on the WBS or for the budget line activity (depending on which time posting level you selected). If CTC cards are used to post time spent on projects, the check is performed when a card is released.
Cost Status	This field, set by the project manager, shows the project's cost performance. It is part of multiple role centers, such as Project Accountant. The system uses the following colors to indicate performance: • On Budget = Green • Warning = Yellow • Alarm = Red
Time Status	This field, set by the project manager, shows the amount of time spent on the project. The system uses the following colors to indicate whether projects are on track: • On Time = Green • Warning = Yellow • Alarm = Red
Scope Status	This field, set by the project manager, shows how the project is progressing. The system uses the following colors to indicate if projects are on track: • In Scope = Green • Warning = Yellow • Alarm = Red

Internal Information

Field	Description
Cause of Absence Code	Specifies for special projects to which codes users can post inactivity.
Last Date Modified	Shows when the project was last modified.
Project Template Code	When you create a project, you can select a project template to have several fields filled in automatically. For more information, see Create Project Templates.
Copy WBS From Template	Specify from which project template you want to create the WBS. This field is filled in automatically with the template used to create the project. You can choose a different template in this field after you set up a project but before you create a WBS.
IC Partner Ship-to Customer Address	Description to follow.

Dimensions

Field	Description
Global Dimension Code 1	Specify a global dimension that will be posted to the lines.
Global Dimension Code 2	Specify a second global dimension that will be posted to the lines.
[Other fields]	All these fields contain other shortcut (default) dimensions from the Dimensions table. Fill them in if you want to use certain dimensions and values from the standard table as the default for making postings that include this project. For more information about dimensions, see the Microsoft Dynamics 365 Business Central[1] documentation.

Project Billings

On this FastTab, you can specify if and how you want proofs of services to be printed when you bill work based on time and materials.

All fields on this tab also show up on sales documents such as orders and invoices. The values in these fields are copied there from the project card.

You can, however, edit them again in the sales area.

Field	Description
Print Attachment	With the toggle turned on, an attachment—which provides proof of services rendered—is printed alongside an invoice. Leave the toggle turned off if you want users to decide whether to print the attachment.
Print Hours Worked	With the toggle turned on, documents show both the services rendered and the hours spent providing those services.
Print Not Billable	With the toggle turned on, documents show services that aren't billed.
Print Grouping	Specifies according to which criteria you want to group services rendered: • Resource • Resource/Line Activity • Line Activity • Line Activity/Resource
Print Document No.	Turn on this toggle if you want printouts to show document numbers—for example, from purchase invoices—together with the services rendered.
Print Item Lines	Turn on this toggle if you want item lines printed on attached documents. Proof is often only requested for services.
Print Resource Name	With the toggle turned on, attachments show the names of employees who worked on the project. Leave the toggle turned off if you want proofs of services to show only the resource numbers and descriptions of activities.

Intercompany

Field	Description
No. of IC Partners	Specifies the number of IC partners to which the project was sent.
Source IC Partner Code	Indicates if the project was created by another company and then copied from there.
Source IC Partner Project No.	Shows the number given to the project by the company that set up the project. This field is blank if the project wasn't created by another company.
IC Review Status	Projects transferred from other companies must still be processed by using the IC Review action. This field shows if the review has already occurred.
IC Review Res. Prices Open	Indicates if new resource prices were transferred from a partner and require review.
IC Review WBS Lines Open	Indicates if new WBS lines were transferred from a partner and require review.
IC Review Budget Lines Open	Indicates whether new budget lines were transferred from a partner and need review.
ICP Ships to Customer Address	Specifies if you want the shipping address entered for the project copied as the delivery site to a service company during IC transfers. With the toggle turned off, the project is delivered to the business billing the service, that is, the customer address entered in the company the project is copied to. **Note** This field might already be filled in from a project template.

PROJECT STATUS

The status options are crucial to determining the next steps you need to take when managing a project.

Planning
Preliminary estimates can be created. You can also specify the project structure, that is, you can choose work packages and phase, task, and step codes. You can then add budget lines to WBS lines of the work package type. You, however, cannot post anything at this point. Strictly speaking, this status isn't required, and most projects start on Quote.

Quote
Services can be offered to customers. Preliminary estimates are again possible as well. You can also change the structure and budget of the project.

However, unless the Project Posting in Quote Status toggle is turned on in Projects Setup, you still cannot post anything to the project.

Open (=Order)
When the project is set to Open, you can record and post times and purchase costs and use sales invoices and credit memos to post revenues. WBS lines can also still be changed at this point. And if you didn't turn on the Project Posting in Quote Status toggle in Projects Setup, this is the only project stage in which you can post something.

Completed
You can no longer edit the project structure and budgets. This status is used to perform post-project calculations. Actual project costs can then be compared to budgeted amounts. You cannot post to completed projects.

CREATE A PROJECT FROM A TEMPLATE

There are two ways to create a project from a template:

1. Choose the Search icon, enter Projects, and then choose the related link. On the ribbon, choose New > New. Alternatively, open a project card and—on the ribbon—choose New.
2. Go to a project card or the project list. On the ribbon, choose New > Walkthrough.

Both methods are explained in the following.

Use the New action

Choosing the New action on the project list or card creates a new record with a blank No. field.

You can now enter a number from a series, or you can exit the field.

Exit the field. You are asked if you want to use a project template. Choose Yes and then choose a template so that a number can be assigned automatically.

The template will also fill in multiple fields on the new project card. The rest needs to be filled in manually.

Additionally, if the Check Mandatory Project Fields toggle in Projects Setup is turned on, the project will be blocked until you entered something in all fields required for new projects. For more information, see Mandatory Field Check.

Use the wizard

Choose the Walkthrough action on a project card or the project list if you want help in setting up a project.

A wizard will then guide you through the steps required to fill in basic project data. This includes when the project is set to start, who will manage it, and who the customer will be.

For the wizard to work, a project template is required. At the end of the process, you're asked whether you want to import the work breakdown structure that has been set up for the template. You can forgo this step if you want to add the WBS later.

> **Note**
>
> If you select a template that is specified as internal via the Project Type field, filling in a customer (or a contact in the quote stage) isn't required. It is, however, for creating any other kind of project.

Edit projects

Not every field can be changed at any point throughout the life of a project.

For example, you can no longer switch to another customer after revenues are posted (unless you allow this kind of alteration by choosing the corresponding option in Projects Setup, in the Setup Customer Change Despite Revenue field).

A change in dimensions can also create issues. Because posted project ledger entries aren't updated during this process, an analysis by dimensions might no longer produce accurate results.

If the Projects Setup toggle Check Mandatory Project Fields is turned on, you need to select the Edit Project action (found on project cards) before you can alter project information. Other users are then blocked from editing the data.

Delete projects

You can no longer delete a project to which you have posted something, for example, project ledger or project time entries or WIP Accounting. The system also checks for cross-references to document lines before deleting the project.

Selected actions explained

Create WBS from Project Template

Creates a work breakdown structure for a project from the template stored in the Copy WBS from Template field. The field is filled in automatically together with the Project Template Code field when you create a project from a project template.

You can no longer choose this action after you've added a WBS to the project.

If a WBS Line Batch is specified for the template, the batch (which consists of WBS lines from another template) is automatically inserted at the beginning or end of the new structure, depending on your setup. See also Project Template.

Change Project

Opens a page that shows some of the fields available on a project card. The page can be used by those who aren't authorized to create projects but need to edit certain fields on a card (provided they 'indirectly' have permission to edit fields on project cards).

> **Note**
>
> The Edit Project action on the ribbon has an entirely different purpose, namely to make the current project card available for editing. This function is used mostly to set up mandatory field checks.

Create Interaction

Creates an interaction. This function mostly relates to customers and their contacts but might also cover marketing campaigns.

An interaction can be tailored to a specific project and work package.

Update Addresses

Updates the sell-to, bill-to, and ship-to addresses on a project card from base data. The relevant address is retrieved, for example, from a second customer card if a different bill-to customer is specified or from the ship-to address list set up for the customer of the project.

> **Note**
>
> This function cannot be used for custom (bill-to and ship-to) addresses.

Copy Project to IC Partner

Copies a project to an intercompany partner. This function is used to review a project transferred by an intercompany partner.

Create User Task

Creates a user task associated with a project.

This function uses the Related Table and Related Record fields to connect a task to a project.

Change Project Budget Status

Opens a list of all budget lines of a project.

This action provides a way for you to edit the status of each line in the budget, for example, to set more than one task (line activity) to completed at the same time, without having to drill down on the relevant WBS lines.

Archive Completed Project

Moves a completed project to the archive.

Archived projects are separated from active projects through filters and can only be opened by running the Archived Projects ribbon function. This helps declutter the standard list of projects to have it focus on *(currently)* relevant tasks only.

As for where project data is stored, both active and archived projects can be found in the same table so that analytical tools (such as Business Intelligence) don’t require access to multiple tables in the system.

Project Project responsibility centers

You can assign responsibility centers to projects just like you can to sales and purchase documents.

To assign a center to a project:

1. Choose the Search icon, enter User Setup, and then choose the related link.
2. Choose a code in the Projects Resp. Ctr. Filter field.

If you fill in one of the other fields but leave the Projects Resp. Ctr. field blank, you will see only sales, purchase, or service documents associated with a particular center but all projects with and without a center.

The Project Resp. Ctr. Filter affects all pages related to a project and cannot be changed by users on those pages. The filter can also be set on some cost control reports.

> **Note**
>
> The responsibility center filter is unavailable for time tracking, given that members of one center might work on projects of another. You can still restrict the selection by using the project team feature.

However, because of the special nature of project-related pages, users will not be able to open the project card or view other data of a project from time tracking.

Advertising groups

Extended texts that you enter for an advertising group are copied to a project if the group is set up as a general-purpose group or if it has been assigned to the customer of the project. This works in much the same way as when you copy extended advertising group texts to sales documents.

You use extended texts to store general information such as notes on trade shows, special offers, and company holidays.

Dimensions

The following options are available if you select Dimensions on the project list; else, the associated dimensions can be viewed on the project card.

Dimensions-Single
Shows the dimensions entered for the selected project. You can also enter new ones or change and delete existing dimensions here.

Dimensions-Multiple
Shows the dimensions that have been filled in for the selected projects. Also shows the dimension value codes, which are the same for identical fields.

Statistics

Shows the budgeted and actual amounts stored for a project, including budgeted values on the WBS.

Comments

Available for entering comments. These are used internally within a company and aren’t copied to subsequent documents created from a project.

Beginning and ending text

Beginning and ending texts are copied to sales documents created from a project and can be printed there as well. As the name implies, beginning texts are shown before, ending texts after sales lines on printouts.

Online Map

Opens the map service that you specified in Online Map Setup to show where a project is located.

Sales doc. project budget change log

Shows a log of all sales document changes copied to projects.

Interaction log entries

Shows a list of logged correspondence, such as printed cover sheets or sales orders, letters sent and received, phone calls made, and meetings held. Entries are filtered based on the page on which you selected the action. For example, if you select the action on a project card, the log contains all correspondence logged for this specific project.

User tasks

Shows all user tasks associated with a project.

Documents

Shows all documents available for a project. Purchase and sales documents are listed separately, as are open and posted documents.

To view a document, select one and then choose Show on the ribbon. Alternatively, use the lookup on the selected line.

Opportunities

Gives you access to opportunities that were automatically or manually linked to a project through a sales quote.

Steps

Used to manage project-specific partial activities. Steps are set up for every single project, whereas phase and task codes are the same for each of a company’s projects.

Contacts

Used to enter information about the people and companies you’re expected to be in frequent contact with during the duration of a project. You can also assign one of them to a WBS line (for informational purposes).

When you set up a project, the customer selected for it will be entered on the Project Contacts page automatically. The same will be done with contacts specified on sales and purchase documents if the number of the project is entered on the document header.

Additionally, if all lines of a purchase document are assigned to the same line on a work breakdown structure, the WBS line will be linked to the relevant project contact when you release the document.

You can also assign roles (such as customer and vendor) to project contacts. Some of them might be filled in automatically on the project (see Projects Setup).

Project Team

For more information, see Project Teams.

Budget line activities

Shows work package-related activities at the WBS line or work package level. For more information, see Budget Line Activities.

Project IC Partners

Shows a list of all IC partners related to a project. For more information, see Intercompany Work.

Project measurement

Shows the options for measuring project progress and performance.

For a true representation of a company’s scope of services in accounting, revenues and expenses must be compared from period to period.

Project Bank Accounts

Bank Accounts can be specify for each project in both the vendor *(purchasing)* and customer *(sales)* areas. This also applies at WBS lines and budget lines.

Furthermore, a bank account can be specifically for individual vendors and customers. This information is later taken into account in payment transactions (only with Continia Banking App).

The Project Bank Accounts are specified on the page of the same name. You can open the page via the ribbon in the project or via the line ribbon of the WBS/budget lines.

Use the Type field to determine which project bank accounts are involved. The following options are available to you here:

Own Account (Purchase)
These project bank accounts can later be taken into account in the vendor payment proposal. For each vendor voucher to be paid, the separate bank account from which this voucher is to be paid is determined. The payment proposal is then automatically split between the individual bank accounts (only with Continia Banking App).

Own Account (Sales)
In the Sales & Receivables Setup, standard text codes can be selected in the "Project Bank Account Text and Purpose of Use Text fields. When a sales document with a project reference is released, the system checks whether a project bank account exists. If this is the case, a follow-up text is automatically inserted for the document based on the standard text code selected in the Project Bank Account Text field. The following placeholders in the text are replaced by the corresponding values from the bank account:

Placeholder	Replaced by
#NAME#	Name of the bank account
#IBAN#	IBAN of the bank account
#BIC#	SWIFT code of the bank account
#AMOUNT#	Payment amount

If an invoice is posted from a sales document, the same applies as above, but the text from the Purpose of Use Text field is used and transferred to the posted invoice.

Vendor
This option will be available in future with the Continia Banking App.

Customer
This option will be available in future with the Continia Banking App.

Note

If several project accounts are stored for a project, which are in competition with each other in a sales document *(e.g. two WBS lines are referenced in a sales document, each of which has a different bank account)*, a message appears when the sales document is released that the document must be split accordingly. The document can only be released when the project bank account is unique.

History

Shows project ledger entries, time entries, and posted invoice entries.

Payment plan

To specify under which conditions and at which times you want to invoice a project, go to the relevant project card and, on the ribbon, choose Related > Project > Payment Plans > Payment Plan.

Billing can include fixed partial amounts or a percentage of the total. You can also invoice by milestones. Plan entries are used when you create invoice suggestions.

Resource prices

Whereas item and resource costs are maintained independently of a specific project, the unit prices for items, resources, and other expenses (overhead) can be stored for each project individually.

Unit prices can be set up for items, resources, and G/L accounts. For each, you can enter a distinct unit price or specify a surcharge on unit costs in percent (=unit cost factor). You can also enter a percentage-based line discount.

Additionally, resources can have different unit prices depending on the type of work being performed.

As for unit costs, they aren’t typically maintained for G/L accounts. But you can still store costs you would typically expect for them on the Project G/L Account Prices page. This can be useful in budgeting a project.

You can also specify resource prices per project and IC partner. When a project is later transferred to a partner, the prices are copied to the partner’s Project Resource Prices page. When you then review the transfer, they are assigned to the budget fields on copied WBS lines.

Likewise, they will be added to the times posted by IC partners so that the partners can later bill their services at agreed-on prices.

Planning

Includes all options for project planning. For more information, see WBS and Scheduling.

WBS (Work breakdown structure)

Work breakdown structures divide a project into individual stages. They are used to plan, budget, manage, and monitor projects. A WBS can be created from a stored project template and customized.

Budget line list

Lists all budget lines created for a project.

Budget line activities overview

Lists line activities (=budget lines set up for resources and resource groups) by work package.

Budgeted resources

Lists all resources and resource groups set up for a project. Entries are aggregated per resource or resource group.

WBS scheduling

Used in project planning. For more information, see WBS Scheduling.

Budget vs. actual

Performs a budget-to-actual comparison based on current project data.

Reports

Shows you a list of project reports. As a rule, these are filtered based on the current project.

Documents

Shows all documents for projects related to the main project.

Budget Line Activities

Shows the line activities that have been set up on the work breakdown structures of projects related to the main project.

Project teams

You can create one project team for each of your projects by combining some of the resources available in the system. Every resource can be assigned to a project only once.

To set up a team:

1. Open a project card.
2. On the ribbon, choose Related > Project > Project Team.
3. Fill in the fields as needed; in the Job Title field, choose Project Manager, Deputy Project Manager, Secretary, or Subproject Lead, or leave the field blank.

A team is changed or amended when you:

- Enter a *(deputy)* project manager on a project card.
- Enter a subproject lead on a WBS line *(=work package)*.
- Set up a resource budget line *(=line activity)*.

In each case, a resource will be added to the team and, if needed, the role of *(deputy)* project manager or subproject lead assigned or changed. The Time Posting checkbox is selected for all members that are added automatically to the team, the Invoice Suggestion checkbox for everyone, whether entered by the system or a user.

Besides manual and automatic entries *(such as when the system transfers a project manager to a project card)*, you can run the Add Resource Team action to integrate entire groups of resources into a project team.

The Resource Team field on a Project Team Setup line then shows the group that a resource belongs to, the Source field how the resource was added *(for example, manually, by inserting a whole team, or via a resource budget line)*.

In addition to providing details about its members, the project team feature governs access to:

- Time entries *(to post to a project)*
- Project ledger entries *(to release posted times)*
- Billing *(to create invoice suggestions for a project)*

For a quick and easy overview of all team members, you can unhide a FactBox on project cards or the project list.

Time entries

To control the posting of times through project teams, you must:

1. Turn on the Check Team at Time Posting toggle so that only certain resources can post to a project.
   With the toggle turned off, all resources can post to a project, as it is considered a general-purpose project.
2. Maintain a project team after turning on the Check Team at Time Posting toggle.
3. Set up resources who post times to a project as project team members and select the Time Posting field for them on the Project Team Setup page.
4. Turn on the Team Filter on Time Posting toggle in Projects Setup.

   This ensures that the filter on the project list in time tracking is tailored to the relevant resource (=user) and lists mainly projects for which the resource has been authorized.

   It also shows the projects to which all resources can post. If the toggle isn't turned on, an employee can see all projects. A check against the project team will only be carried out later, during posting.
5. Turn on the Strict Team Filter toggle in Projects Setup.

   This ensures that when a project is set to Check Team at Time Posting, but a certain resource isn't part of the project team, the related user can't enter a project number (that is, without using the projects list) in time tracking.

   Any attempt to post resource hours to projects for which the user hasn't been set up will then prompt an error message and posting will be blocked.

Billing

To control which resource is allowed to start a billing proposal for a project, the following must be set up:

1. The general setup in the Proj.team field at Abr.proposal in the project setup must be set.
2. There must be at least one entry in the Project Team table for the project, otherwise each resource may perform billing!
3. Each resource (user) that is to create billing proposals for a project must be created as a project team member and the switch in the Billing proposal field must be active.

> **Note**
>
> During the check, the resource is matched to users who are part of the project team to determine if a user has permission to invoice the project.

If the project is part of the team filter but the current user isn't authorized to bill the project, a message appears when an attempt is made to create a suggestion, noting the lack of permission. The user can then display the projects blocked for posting.

Resource teams

Not unlike a template, the Resource Teams page allows you to set up a group of resources for later addition to a project team. All members of the team can then be assigned to a project at the same time by running the Add Resource Team function from the Project Team Setup page.

When you add a resource team to a team set up for a project, a note about the origin of the resources will be shown in the Resource Team fields on the lines.

To copy resources to an existing resource team and from there to one or more projects:

1. Choose the Search icon, enter Resource Teams, and then choose the related link.
2. Select the team you want to add members to and click the No. of Members field on the line.
3. On the ribbon, choose New, and fill in the fields as necessary.
4. Again, on the ribbon, choose Add to Project Teams.

Note

You can only add resources to a project team if at least one of the existing resource team members is already linked to it.

Project team roles

The roles that you can assign to members of a project team are limited to the default project team roles available on resource cards. An individual extension will be required if you want to add more role options.

There is, however, an alternative solution that can be used to customize a role:

1. Choose the Search icon, enter Project Team Roles, and then choose the related link.
2. Fill in the fields described in the following table for each role you want to assign to a resource.

Field	Description
Code	Specify a unique code for the role.
Description	Enter a description for the role.
Responsible for Billing	Select this field if you later want to filter invoice suggestions based on the people in charge of billing.
Unique to Project	Select this field if you want the role to be assigned no more than once to a project, Project Lead being an example. Only roles unique to a project can be selected on the Team Roles FastTab in Projects Setup.

For example, you can specify a role named Architect on the page and link this role to the Subproject Lead, one of the standard options on the resource card:

Field	Description
Default Project Team Role	Shows the role that will be assigned by the system when the resource becomes a member of a project team. What you can choose here depends on how you set up the Project Team Roles page, where each new role you create is linked to a standard team member role available in the system.

Following on from our example, the role of architect is assigned to a resource. If added to a project team, the resource is then filled in as not only the architect but also the subproject lead for this project.

In Projects Setup, you can specify up to 10 team roles that you want to show on the project list or on project cards. This way, you can see immediately who works on which project in what area or capacity (for example, as the architect or as someone in billing or cost control).

Tipp

As invoicing is a crucial business process, you can use the Billing Responsibility Filter function on the Projects page to filter the page to projects where a resource has been marked as being responsible for billing.

Team overview

To see what teams are assigned to certain projects, run the Project Teams action from the Project Lead role center. You can set a filter on any field of the page.

My Projects and profitability chart

The My Projects tab in the Project Lead role center can be maintained manually. But the tab is also filled in automatically when you enter a resource as a Person Responsible (that is, as the project manager) on a project card.

Related to the My Projects tab is the Project Profitability chart. This chart shows all the projects listed under My Projects unless their Exclude from Business Chart field is filled in.

Main projects

Main projects sum up multiple projects. They are essentially a higher-order category. If you filled in the fields for main project dimension integration in Projects Setup, the system creates and adds a dimension to a new main project automatically. It will also copy that dimension to any project that you later assign to the main project.

> **Note**
>
> A dimension assigned to a project through a main project will not change after replacing the dimension in the main project.

To see a list of all main projects:

1. Choose the Search icon, enter Main Projects, and then choose the related link.
2. On the ribbon, choose Related > Main Project and one of the following actions.

Statistics

Shows a budget-to-actual comparison for all projects assigned to the main project.

Comments

Used to enter notes about the main project.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

WBS and Scheduling

WBS AND SCHEDULING

Overview

Each project requires at least one work breakdown structure (WBS).

You can use this structure, in conjunction with a graphical planning tool, to allocate staff to a project according to available capacity and to budget the consumption of resources and items on its lines.

Work breakdown structure

A work breakdown structure organizes a project into smaller components, making it more manageable. The smallest element of a WBS is often called a work package.

In some cases, a package might again be divided into subtasks, which are known as budget line activities in the system. These are assigned to individual resources.

You can enter one package code on each line. The system then combines this code with a phase, a task, and a step code to create a unique identifier for a line. You can therefore use a package multiple times for the same WBS if at least one of the other codes differ. What you assign as a phase, a task, or a step code is solely a matter of company organization.

If you want the system to create phase, task, and step codes for you, you can turn on the Auto PTS Code toggle in Projects Setup.

Each WBS consists of a header, where you see the General FastTab, and lines. You can assign multiple structures to each project. To view a WBS set up for a project:

1. Choose the Search icon, enter Projects, and then choose the related link.
2. Open a project.
3. On the ribbon, choose Project > WBS or WBS Incl. Budget View.

Set up a WBS

There are several ways to set up a work breakdown structure for a project:

Copy a WBS

A convenient way for you to create a WBS is to copy a structure from another similar or sample project. The copy function is also used to create new versions of a WBS. For more information, see Copy WBS.

Create a WBS from a template

Another easy way for you to create a WBS is to copy all relevant fields from a project template.

For more information, see Create Project Templates.

Insert a block from a project template

Block-type WBS lines can be used to copy a group of field values from a project template to any part of the structure. We recommend that you set up special project templates for this purpose, as the entire WBS is copied as a block from the template.

After you selected Block on a WBS line, you can choose in the No. field the template from which you want to copy a structure. You then explode (copy) the block by using the Explode Block function on the WBS Lines FastTab.

WBS header

On the header, you can see the number of the project for which you created the WBS, the name of the related project budget, and the version of the work breakdown structure. All structures are managed based on these three fields.

For a complete list of WBS header fields, see the following table.

Field	Description
Project Budget Name	Shows the name of the project budget tied to the work breakdown structure. This field is filled in with the default name specified on the Project Budget Name page, although you can change the name here if necessary. For each project, you can set up any number of work breakdown structures with different or identical project budget names. A name included more than once in the same project will receive a version number, which is incremented every time the name is reused for the project.
Version No.	Shows the version number of the WBS. The number is assigned automatically.
Project Description	Shows the content of the Description field from the project.
Description	Shows a text that describes the WBS.
Blocked	With the toggle turned on, the WBS is blocked for all users
Sales Budget Blocked	Turning on the toggle keeps the current sales budget fixed. Whereas unit costs can still be changed, budget lines can no longer be added to the project, as they provide sales prices automatically. If the Fixed Sales Budget when Ordering toggle is turned on in Projects Setup, this toggle is turned on automatically when you set the project status to Open.
Active	Specifies the WBS that is currently active. If the toggle is turned on, the WBS is in use. You must release a WBS before you can set it to Active, and you cannot have more than one active WBS per project.
Budget Status	Specifies if the work breakdown structure and its budget entries are pending approval, have been released, or have been rejected.
Released By Released On	These fields show who released the structure and when. Users can only post to a project and an active WBS upon release.
Main WBS	For more information, see Main WBS.

Lines

The lines of a work breakdown structure are set up with certain project criteria, such as deliverables or phases, in mind. For each line, you can specify whether to make it a Work Package, a Heading, a Begin-Total, an End-Total, or a Total. The Block option, on the other hand, isn’t used as a structural element but is a function to copy a group of fields from a project template to an active WBS.

A begin-total marks the beginning of a series of line values to be totaled, the result of which is given as the end-total. Calculations enclosed by begin- and end-totals might be nested inside one another. The sum of all calculations is then shown on a line of the total type. This line, in turn, is linked to the heading entered above the first begin-total. To budget and post revenues and expenses to a project, you need lines of the work package type.

The most important line fields are explained in the following table.

Field	Description
Position No.	Shows the number of the WBS line. When you create a WBS, you can use a series to have numbers added automatically by choosing Actions > Functions > Assign Position Nos. on the ribbon.
Type	Specifies the nature of the WBS line. **(blank)** The line contains text only. **Work Package** The No. Field specifies a work package for the project. **Heading** The Description field contains a heading, shown in bold on printouts. **Begin-Total** The line marks the starting point for totaling numbers and amounts. **End-Total** The line shows the result of adding up numbers or amounts starting from a Begin-Total. **Note** Begin-total and end-total calculations might be nested. **Total** The line shows the sum of all subtotals. **Note** Total fields cannot be nested. To have the system calculate a total, you need to run the Assign Position Nos. function first. **Block** Fills in the line with a group of project template values.
No.	Specifies a number if Work Package or Block is selected in the Type field.
Starting Date	Shows, if Work Package is selected in the Type field, when the project usage budgeted on the line is supposed to start. This field is filled in automatically with the starting date of the project but can be changed, if needed.
Ending Date	Shows, if Work Package is selected in the Type field, when the project usage budgeted on the line is supposed to end. This field is filled in automatically with the ending date of the project but can be changed, if needed.
Billing Type	Indicates how services included in a work package are billed to customers. **(blank)** Treats the line as if it were set to No Billing. Used for lines structuring the WBS view (headings, begin-totals, end-totals, and totals). **Time & Materials** Invoices the line based on unbilled costs, for example, because hours were posted to it. For each project ledger entry, you can also enter an invoice quantity that is different from actual expenditures. **Fixed** Copies the value entered on the line as a fixed price to invoice suggestions. For installments, the price

Field	Description
	suggested is a portion of the total price. We recommend this option for WBS lines that are linked to sales lines or payment plans, but you can also use it for other billing sources. **No Billing** Posts the line without billing a quantity. **Milestone** Bills the line at agreed-on rates as part of a milestone-based payment plan. The related plan line is copied to an invoice suggestion when the Milestone Reached checkbox is selected on the payment plan. You can set up milestone plans for individual WBS lines or an entire project. **POC** Bills the line at agreed-on rates based on the Project Completion % field. The suggested invoice total is proportionate to measured progress, minus the amounts already billed for the project. **TE Flat Rate** Specifies a lump sum for travel expenses. You can only use this option if you installed and (set up) the Continia Expense Management app. The line that contains the TE flat rate must show the total price on which you agreed with the customer. You do not need to plan anything here. The WBS might also contain other work packages with app-related travel expenses. However, these should be set to No Billing unless, for example, you want to additionally invoice a customer for miles travelled. Posting travel expenses through the Continia Expense Management app posts the expenses to TE work packages and copies a project ledger entry with no unit cost—but with the specified rate—to the TE Flat Rate package. When you settle the associated invoice, this rate is then suggested for each business trip on an invoice. **Package Invoice** Bills the line based on work package costs whenever project effort is of a different nature. This includes travel expense scenarios in which you cannot simply add up times and routes and multiply them by a line amount but where you need to collect receipts, such as for parking fees and hotel bills. During billing, all expenses you want to charge to the customer are entered in sum with a quantity of 1 on an invoice line. On the proof of performance document, however, the expenses are itemized, as usual. Because expense items are often difficult to budget—as you do not know how many package invoices you will need for a certain project and what price you will have to set on each invoice—having one order line refer to the work package is enough in this context. The line does not require a quantity or a price, as the invoice suggestion feature ensures that the correct amount is billed. Meanwhile, the quantity on the order is increased by 1 so that you can rebill the order as often as you want.
Ignore Payment Plan	If selected, decouples the line from being billed based on a payment plan. For example, despite a payment plan covering the entire project, you can select this field to bill travel costs on invoice suggestions based on the actual costs incurred. These costs are then excluded from

Field	Description
	the final invoice. This field is only relevant if you use a payment plan for the project and have set the Payment Plan Level field on the project card to Project.
Suspend Billing	Selecting the field removes the line from invoice suggestions temporarily but retains the original billing type. This option is used in milestone billing.
Copy to Sales Doc.	Specifies what information is copied to sales documents. **WBS Line** Copies the values stored on the current line. **Budget Lines** Copies the values stored on the budget lines related to the current line. **No Transfer** Ignores the line in transfers. This option is primarily selected for WBS lines that are used for informational purposes only or that have been transferred previously.
Copy as Bundle	If this checkbox is selected and the Copy to Sales Doc. field is set to Budget Lines, the system will transfer all relevant budget values in the form of a bundle to sales documents instead of placing them between a begin-subtotal and an end-subtotal on the lines. If you select the checkbox on a WBS line of type Begin-Total, on the other hand, the bundle in sales will consist of all values that were added directly to the structure (between the begin-total and the end-total on the project document).
Billing Integration	Specifies if a fixed-price entry was copied to a sales document from the WBS or from an associated budget line so that the system knows at which level to include the entry in an invoice suggestion after billing has occurred. Essentially, the billing level is already indicated in the Copy to Sales Doc. field. The difference is that you might set a filter there for when you create follow-on orders. For example, when you create an order with only new WBS lines, you need to select No Transfer in the Copy to Sales Doc. field on existing lines before running the Create Sales Document action. This means, however, that information required for billing will be lost. The value in the Billing Integration field, on the other hand, matches that of the Copy to Sales Doc. field unless you select the No Transfer option. You cannot edit this field manually.
Status	Shows the status of the line. A line can be set to Quote or Open. This field is inextricably linked to the Status field on the project header. If the status there is set to Open, the status in this field changes to Open as well. But when the status on the header is Planning or Quote, the status of this line cannot be Open. When you create a sales order from a quote, the status of both the project and the WBS line is set to Open. Lines with work packages must be filled in immediately.
Work Status	Specifies the status of a work package. Resource consumption can only be posted to a package that is set to In Progress. Purchase order and inventory usage, on the other hand, can be recorded in any status. Statuses only differ in the information that they provide to the project manager. They have no other purpose.

Field	Description
	Note The work status can only be set to In Progress when the status of the project is Open. The following options are available in this field: **(blank)** Used for lines that structure a WBS view. This includes headings, begin-totals, and end-totals. **Open** The line has been set up. **In Progress** The line can be filled in. **Postponed** The line has been filled in but put on hold for project-related reasons. **Finished** Work on the line has been completed. **Accepted** Work on the line has been accepted by the customer. **Canceled** The related work package has been canceled for project-related reasons.
Blocked	If selected, the line is blocked, and budget values can no longer be changed. You can still post to the line, however. Deselect the field to unblock the line for editing.
Requisition	Specifies if items on related budget lines are included in purchasing. Select this field if you want the system to check to what extent these items are available for purchase or up to when they are via an order.
Phase Code	Indicates the level of a work package line on the WBS. Phase codes are set up across projects. Among other things, they can help you create work breakdown structures from sales documents. The combination of work package, phase, task, and step codes on the WBS must be unique, as it will be used as a reference on all document lines and entries that you create from the structure. A line or entry with this reference can then no longer be changed unless it is entered on sales quote or order lines only *(in which case code changes will be copied to them)*. If the code is specified as an Auto PTS Code in Projects Setup, this field is filled in automatically and you might no longer be able to change it.
Task Code	Indicates the level of a work package line on the WBS. Task codes are set up across projects. Among other things, they can help you create work breakdown structures from sales documents. The combination of work package, phase, task, and step codes on the WBS must be unique, as it will be used as a reference on all document lines and entries that you create from the structure.

Field	Description
	A line or entry with this reference can then no longer be changed unless it is entered on sales quote or order lines only *(in which case code changes will be copied to them)*. If the code is specified as an Auto PTS Code in Projects Setup, this field is filled in automatically and you might no longer be able to change it.
Step Code	Indicates the level of a work package line on the WBS. Step codes are set up across projects. Among other things, they can help you create work breakdown structures from sales documents. The combination of work package, phase, task, and step codes on the WBS must be unique, as it will be used as a reference on all document lines and entries that you create from the structure. A line or entry with this reference can then no longer be changed unless it is entered on sales quote or order lines only *(in which case code changes will be copied to them)*. If the code is specified as an Auto PTS Code in Projects Setup, this field is filled in automatically and you might no longer be able to change it.
Copy Budget	The Copy from Budget function transfers the sum of all unit costs and total prices from the project budget to certain WBS lines. Clear this field if the current line should not be part of that transfer. As a result, the unit price or unit cost specified for the billing resource on the work package is not multiplied with a budget line value but with the quantity or invoice quantity that you enter here.
Description Description 2	These fields describe the line. Headings, begin-totals, and end-totals are shown in bold. Work package descriptions (which are retrieved when you select a package) are displayed in normal font. When you create a WBS from a project template, both descriptions are copied from the template but can be changed manually, if necessary. They are also copied to sales quotes and orders that you create from the WBS by running the Create Sales Document function (unless you filled in the sales description fields as well).
Description in Sales Description 2 in Sales	These fields contain alternate descriptions for use in sales. They specify notes that are shown to customers so that you can use the standard description fields for internal comments. When you enter a work package on the line, translations that exist for the package are copied to these fields by default. You can fill in the fields as early as creating a project template.
Project Completion %	The project manager can use this field to specify how far the project on the line has progressed in relation to overall project performance. What you enter here has an impact both on the completion values in project statistics and on the calculation of earned values and variances in budget-to-actual comparisons. The field is also used on invoice suggestions for time and materials billing.
Posting Progress %	Shows how much of the project budget has already been used. The calculation is based on the following formula: Posting Progress % = Usage Total Cost (LCY) * 100 / Unit Cost You cannot change this field manually.
Line Activity Progress %	If a work package includes budget line activities, an employee can report in time tracking how far a certain activity has progressed.

Field	Description
	This progress is weighted when a package contains more than one activity. The line then shows the average value across all activities. You cannot change this field manually.
Comments	Indicates the number of comments that are stored on the line. This field cannot be changed manually. To see or edit a comment, choose Related > Texts > Comments on the ribbon.
Beginning Text	Specifies whether text lines have been created for the line. Beginning texts are used, for example, as headings for work packages. To create a text, choose Related > Texts > Beginning Text on the ribbon or use the drill-down option. You can only create and edit text for the selected line. With the help of checkboxes, you can also specify the types of documents you want to print this text on.
Ending Text	Specifies whether text lines have been created for the line. Ending texts are used, for example, as additional work package descriptions. To create a text, choose Related > Texts > Ending Text on the ribbon or use the drill-down option. You can only create and edit text for the selected line. With the help of checkboxes, you can also specify the types of documents you want to print this text on.
Work Type Code	Shows the work type of the line. This field is filled in from the work package by default but can be changed manually. The code is also copied to available budget lines for the detailed planning of resource budgets. Work types are used to post consumption and sales, for example, to a project, a resource journal, or a sales document. They specify the kind of work a resource can be tasked with, such as overtime or transportation. For example, you can link work types to prices for budgeting or for posting project usage based on the kind of activity performed by a certain resource or resource group. Each type comes with its own unit of measurement, although you can assign several units to a resource or group.
Cost Center Code	Specifies the first global dimension to which the line is assigned. The field is filled in with a cost center code. Choose the lookup next to the field to see the codes that you have set up for this dimension.
Cost Object Code	Specifies the second global dimension to which the line is assigned. The field is filled in with a cost object code. Choose the lookup next to the field to see the codes that you have set up for this dimension.
Subproject Lead	Specifies the subproject manager in charge of the chosen work package. This field is used for informational purposes only. After you enter a manager, the relevant project team is automatically expanded to include the new resource.
Quantity	Specifies the planned quantity per unit for a work package. Multiplied by the cost and price per unit, the value in this field results in the amounts budgeted for the

Field	Description
	line. For a lump-sum amount, we recommend that you enter a quantity of 1, especially if you use the Copy from Budget action to fill in the line with budget line values through detailed planning. If the WBS and the budget lines use the same unit, such as hours, the function also transfers the budgeted quantity to the WBS.
Unit of Measure Code	Shows the unit of measure for the entered quantity. If you need to set up multiple types of budget lines, such as resource group, item, and G/L account lines, we recommend that you choose a unit that can be used to enter a line quantity of 1. Rerunning the Copy Values from Budget action then refreshes the associated price data.
Location Code	Specifies the code of the location where items shown on the line are stored. Choose the lookup to the right of the field to select a code. This field can additionally be filled in with a default value to maintain item lines sourced from a project budget.
Direct Unit Cost (LCY)	Specifies the unit cost for the line if you use a work package to enter items or resources. If you work with detailed planning, the direct unit costs are stored on budget lines and are not copied to this line.
Unit Cost (LCY)	Specifies the unit cost. This field can be filled in manually. If you work with detailed planning and have entries copied to this line, the field is filled in with the average unit cost, which is calculated by dividing the sum of the unit costs on the budget lines by the WBS line quantity. If detailed planning includes multiple units of measurement—such as hours and pieces—a quantity of 1 is entered for this work package line and the unit cost is equal to the cost amount.
Total Cost (LCY)	Shows the result of multiplying the quantity with the unit cost.
Invoice Qty.	The value in this field is copied from the Quantity field but can be changed manually, as the usage quantity that has been budgeted might differ from what you quote or bill to the customer. When you use detailed planning, the invoice quantity is copied from the budget lines after running the Copy Budget action (provided the unit of measure stored there is identical to the quantity on this line).
Invoice Unit of Measure Code	Specifies the unit of measure in which services are billed. This unit might differ from the unit in which services are rendered. For example, work might be recorded in hours but invoiced in days. **Note** The unit of measure is retrieved based on the work type entered for this line. You must change the work type if you want to use another unit.
Billing Cap	Specifies an amount by which you can exceed billing by time and materials. Select this field if you agreed with the customer on a billing cap. This cap is then used on invoice suggestions.
Billing Cap %	Specifies the billing limit as a percentage. If you enter 0, a bill cannot exceed the sales budget, that is, the total price on this WBS line. If you enter 10, invoices can include amounts that exceed the budget by up to 10%.

Field	Description
Cost Factor	This field must be filled in manually. It is used by the system to modify the unit price. If the cost price changes, the sales price is also recalculated. A new sales price is not determined by changing the quantity or the start date. The cost factor therefore protects the calculated sales price. The sales price can only be changed by changing the cost factor or by making a direct manual change. See also the Copy Budget field
Manual Sales Price	If a manual sales price is entered in the WBS line, this field is automatically set to YES. This prevents a new sales price determination from taking place if the start date or settlement quantity is changed. The "Manual sales price" field can also be changed manually in order to influence the execution of sales price determination. See also the Copy Budget field.
Unit Price (LCY)	Shows the unit price. This field can be filled in manually. If you work with detailed planning and choose to copy budget values to a WBS, the total price is averaged according to the following formula: total budget price / sales quantity on the WBS line. If a work package is budgeted with a quantity of 1 because detailed planning includes differing units, such as hours and pieces, the price for a unit equals the total price.
Total Price (LCY)	Shows the result of multiplying the invoice quantity with the unit price and then subtracting the line discount. This field cannot be changed manually.
Line Discount %	Shows the line discount in percent. This field is used to calculate the total price and is copied to a quote or order line. If you use detailed planning and choose to copy budget values to the WBS, the field shows the percentage average of all discounts on the associated budget lines.
Line Discount Amount (LCY)	If you use detailed planning and choose to copy budget values to the WBS, this field shows the average of all discounts on the associated budget lines.
Budget Lines Quantity	Shows the total quantity budgeted (in detail) on the line. This field cannot be changed manually. For more details, select the entry to open the Project Budget Entries page.
Budget Lines Total Cost (LCY)	Shows the total unit cost budgeted (in detail) on the line. This field cannot be changed manually. For more details, select the entry to open the Project Budget Entries page.
Budget Lines Total Price (LCY)	Shows the total unit price budgeted (in detail) on the line. This field cannot be changed manually. For more details, select the entry to open the Project Budget Entries page.
Usage Qty. (Base)	Shows the quantity consumed on the line so far. This field cannot be changed manually. For more details, select the entry to open the Project Ledger Entries page.
Usage Total Cost (LCY)	Shows the total unit cost consumed on the line, that is, how much time and how many materials budgeted for the project have been spent. The sum of all usage cost fields on a WBS equals total project usage. This field cannot be changed manually. For more details, select the entry to open the Project Ledger Entries page.

Field	Description
Usage Total Price (LCY)	Shows the unit price of project ledger entries consumed on the line. This field cannot be changed manually. For more details, select the entry to open the Project Ledger Entries page.
Sales Qty. (Base)	Shows the quantity sold (billed) to the customer on outgoing invoices. This field cannot be changed manually. For more details, select the entry to open the Project Ledger Entries page.
Sales Total Cost (LCY)	Totals the unit cost of sold quantities. This field cannot be changed manually. For more details, select the entry to open the Project Ledger Entries page.
Sales Total Price (LCY)	Totals the unit price of sold quantities per line, that is, the sales generated on this line. The sum of all WBS lines equals total project sales. This field cannot be changed manually. For more details, select the entry to open the Project Ledger Entries page.
Profit Profit %	Shows in number and percent the profit margin expected for the line.
Current Profit Current Profit %	Shows in number and percent the profit margin achieved on the line so far. This field is only relevant if, in addition to consumption, sales are posted to the line.
Rem. Total Price Calc. Base	Specifies based on the billing type of the line how the system calculates the value in the Unbilled Work field. Basically, this field is only relevant if you bill by time and materials. For every other billing type, it serves informational purposes only. **Fixed** *Calculation base: Budget - Invoice* The total price stored on the work package, that is, the WBS line, is compared to the amount billed for the package so far, with the difference between them shown in the Unbilled Work field. To compare the values, the system retrieves the total price from a sales line linked to the WBS line. If none is available, the budgeted total price entered on the WBS line is used. **No Billing** *Calculation base: (blank)* The Unbilled Work field shows 0. **Time & Materials** *Calculation base: Usage - Invoice or Invoice Entries* If you choose the first option, invoice entries will not be considered. Choosing the second only makes sense if you do work with invoice entries; otherwise, the Unbilled Work field will remain unchanged throughout the life of the project. Invoice entries are meant to document on which invoice and when you billed a certain usage quantity so that no entry is billed twice. *Calculation base: Usage - Invoice* Actual consumption for a WBS line (total price of a usage entry) is compared to the quantity for billing to ensure that you bill neither too little nor too much. In short, the value in the Usage Total Price (LCY) field is compared to that of the Sales Total Price

Field	Description
	(LCY) field. If an invoice does not match the exact expenses, however, the field might never go down to zero. **Example** (a) Consumption of 10 hrs. at $100 = total price of $1,000 (b) Consumption of 10 hrs. at $120 = total price of $1,200 Invoice total: $1,960 Total price remaining = $240 *Calculation base: Invoice Entries* The system checks every consumption entry included in a work package for whether an invoice entry has been created for it, that is, if the entry denoting usage has been billed. It does not matter in this context if the usage entry was invoiced at a higher or lower price (or based on more or fewer hours) than previously recorded. Only project ledger entries without invoice entries are added up in this field. (a) Consumption of 10 hrs. at $100 = $1,000 (b) Consumption of 10 hrs. at $120 = $1,200 Invoice: (a) Ledger entry of 10 hrs. at $100 = $1,000 (b) Ledger entry of 8 hrs. at $120 = $960 (changed on invoice) Invoice total = $1,960 Total price remaining = 0 **Milestone** *Calculation base: Milestone* The payment plan set up for a WBS line is understood as a milestone plan. All plan lines that have not been invoiced but that the Milestone Reached checkbox is selected on are considered billable and their total is copied to this field. **Percentage of Completion** *Calculation base: Budget * Percentage of Completion - Invoice* Calculates a value based on a formula that links the budgeted total price to project progress (the percentage of completion) and then subtracts the amount billed so far. The system retrieves the total price from a sales line related to the WBS line. If none is available, the budgeted price from the WBS line is used. **TE Flat Rate** *Calculation base: Invoice Entries* Calculates, based on invoice entries linked to a TE work package, what can still be billed using this work package. **Package Invoice** Calculation base: Invoice Entries Calculates, based on invoice entries, what billable costs remain.
Unbilled Work	Shows the difference between consumed and billed amounts based on the Rem. Total Price Calc. Base field.
Sell-to Customer No.	Shows an invoice recipient who is not the customer of the project. A recipient can be entered but only if you selected WBS Line in the Billing Integration field as the level at which to create sales documents. Alternatively, you can fill in the field on the budget lines (if billing integration is available there).

Field	Description
	If this field is filled in, the system creates separate documents when you set up a sales document or an invoice suggestion for the WBS.

Note

The following fields on a begin-total line are filled in automatically on all subsequent work package lines until the end-total to help ensure data consistency in your app: Work Status, Status, Phase Code, Task Code, Step Code, Copy to Sales Doc., and Billing Type.

For example, changing the work status on a begin-total line also changes the status on all other lines before the end-total line (provided they contain work packages).

WBS functions Assign Position Nos

Adds a position number to every line of the work breakdown structure.

Renumber Lines

All WBS lines are automatically given internal numbers in 10 000 increments so that you can insert more lines between them. For example, the first line you add between 10 000 and 20 000 will be assigned internal number 15 000.

Done too often in one place, however, the line numbers will eventually go outside the integer range, and insertion will no longer be an option. To create the space required for inserting more lines, you can use this action to reassign the numbers throughout the work breakdown structure.

Calculate Predecessors

Requires the Milestone, No. of Predecessors and Predecessor Position Nos. fields, which specify WBS line dependencies. Predecessors can be assigned to WBS lines that were selected as milestones, and you can enter more than one predecessor on each line manually. Running this function then fills in the Predecessor Position Nos. field for informational purposes.

Update Totals and Unbilled Work

Refreshes the totals and the Unbilled Work value if, after opening the WBS, you have made changes to the structure—for example, by posting something or by creating an invoice. Continuously updating the data stored on a WBS isn't a sensible strategy for performance reasons.

Entries are updated, however, each time the structure is reopened.

Create Sales Document

Creates a sales quote or order from the WBS.

You can specify the information you want transferred to the document in the Copy to Sales Doc. field on individual lines. You can select there whether to copy values from the WBS line, transfer information from its budget lines, or ignore the line altogether.

Create Purchase Document

Helps with project purchases. You can create both requisition worksheets and purchase orders from the WBS to procure the items and external services that you specified in the project budget. For more information, see External Resources.

Create Project Shipment

For more information, see Project Shipments.

Create Project Vendor Shipment

For more information, see Project Vendor Shipments.

Create User Task

Creates user tasks associated with the current project. The function connects a task to the project through the TableRelation property and Record.Relation method.

Copy WBS

Copies a structure from the same or another project.

Budget values from the WBS template can be copied as well. This function is mainly intended for the creation of new WBS versions. We recommend that you set up new projects from a project template.

You can transfer an entire WBS or only selected lines. To copy a group of lines, turn on the Selected Lines Only toggle, and then choose OK to specify the lines you want transferred. You can also use this option to copy part of the current WBS onto itself.

If you transfer to a WBS that already has lines, the new lines are moved to the end of the structure. However, you must turn on the Auto PTS Code toggle in Projects Setup to ensure that the function creates unique work package lines in this case.

Copy WBS is most often used to create a new version of a work breakdown structure so that an ongoing project can be frozen. The new WBS is based on the same up-to-date values as the old one—except for project budget entries, which need to be managed separately. For posted ledger entries, only a relation is created.

A WBS line can no longer be deleted after you have posted something to it. For data security reasons, this remains true even if the related work breakdown structure was copied by mistake, and the line must be set to Finished instead.

Copy from Budget

Copies to a WBS line the values from its budget lines, in effect totaling them at the work package level.

This function is only used on lines on which the Copy Budget field has been selected.

Update Project Account Entries

Updates project account entries. If you change quantities or prices on WBS lines, the budget entries used to monitor the project will change as well.

This action is also available unfiltered on the projects list.

WBS Incl. Budget View

Shows the entire WBS in detail. For more information, see WBS Incl. Budget View.

Statistics

Shows the WBS budget from two different perspectives.

1. The WBS Budget FastTab indicates the values stored on all WBS lines by adding up their Total Price and Total Cost fields.
2. The values entered on budget lines, on the other hand, are shown on the Detailed Planning FastTab, where they’re broken down by budget type. Any WBS line without dedicated budget lines, that is, with no detailed plan, will not be included here. The values on this tab are identical in content to the sum of the project's Budget Lines Total Cost and Budget Lines Total Price fields.

Comments

Shows comments about the WBS. You can also use this action to create new ones.

Documents

Shows all open and posted documents for the project.

You can view a document by selecting an entry from the list.

Budget vs. Actual

Compares project targets to actuals.

For more information, see Budget to Actual Comparisons.

Project Account Entries

All budget values entered in projects are turned into project account entries. Stored with the chart of accounts, these values can be used to perform additional analyses based on a variety of criteria and your own methods of tracking project progress.

The function considers all account entries in each WBS version related to the current project. Like in finance, however, posting procedures must be set up in advance.

Project-Account-Entries

Opens a graphical project planning view. The WBS lines and their budget lines are shown in a chronological display. In addition to the work packages, the from-total blocks and milestones are also visible. If relationships have been defined between WBS lines or budget lines, these links are also displayed. As this is a viewer, no graphical planning changes can be made.

Line actions Work Package Card

Provides detailed information about a WBS line. For a better overview, the data is arranged into FastTabs, with a subpage showing the related budget lines.

The aim of the card is to make it easier for you to maintain the wide variety of field values available on each line of the structure. The card also provides you with all the actions that can be run on single WBS lines (and not the structure as a whole) so that, for example, you can see what texts and comments were added to the line or retrieve values from the project budget.

Move Line

Rearranges WBS lines. You need to select a line before you run this function. Once you have started the process, you need to choose OK to see a list of all lines related to the current project.

On this list, you can then decide above which line you want to insert the one that you selected at the beginning. To move it, choose Yes again.

Afterward, you must run the Assign Position Nos. function to ensure that all position numbers on the WBS are in the right place.

Change Dates

Moves the starting and ending dates of a WBS line by a period of your choosing.

Formula Calculation

Specifies what other WBS lines you want the system to use for determining budget values on the selected line automatically. You can specify a formula as early as creating a project template.

Fill in the Use as Calc. Base and Use as Calc. Base (Total Price) fields if you want the calculation of the Budget Lines Total Cost and Budget Lines Total Price on the line to be based on different sets of values.

You can then enter a percentage in the Share to Allocate % and Share in Total Price % fields, for example, to cover a scenario where maintenance costs stored on a WBS line were determined to be 15 % of the total value that you entered on two other lines representing the cost of production and procurement.

You can also specify in the Auto Assign New WBS Lines to Purchase Calc. and Auto Assign New WBS Lines to Sales Calc. fields whether you want to link every other part of the WBS in this scenario to a special line that you set up for this purpose while the entered formula will be used on new lines automatically.

Skills

Stores qualifications needed to fulfill a work package. These can be set up as early as creating a project template.

The skills are later used to filter for suitable resources when you run the Assign Skill-Specific Resource function.

Dimensions

Shows the dimension values assigned to the selected WBS line.

Work Package Info

Shows the documents that contain the work package of the project.

To open a document, select an entry from the list.

Interaction Log Entries

Shows entries that are generated when you create interactions.

If you turned on the synchronization feature to update a project from sales documents, you can choose Related > Project > Sales Doc. Project Budget Change Log to see a list of all changes made to interactions.

Texts

This action provides the following options:

Beginning Text / Ending Text

Beginning and end texts are copied to project sales documents, on which they can also be printed. Whereas beginning texts are printed before sales lines, end texts appear after the lines.

Comments

Stores line-related comments.

> **Note**
>
> None of these comments are copied to documents created from the WBS.

(Advance) Payment Plans Milestone Definition

A WBS line defined as a milestone can be assigned to other WBS lines. This is relevant for milestone billing. See also Milestone billing.

Sales Amount vs. Payment Plan

Compares the total amount of all payment plan lines with the sales amounts of all work package lines *(WBS lines)*, regardless of the payment plan level of a project.

Update Payment Plans

Create or update the payment plans for the project. At payment plan level at project level *(=project)*, this affects the entire project; at payment plan level at WBS line level *(= WBS line)*, it affects the payment plans of all work package lines *(WBS lines)*.

Update Payment Plan (Current Line)

Creating or updating the payment plan for the current work package line (WBS line). This function is only available if the payment plan level on the project card is set to "WBS line".

Update Project Milestone Plan

Creating or updating the payment plan based on the milestone WBS lines if the overall project is billed according to the milestone plan. See also Milestone billing for a project.

Payment Plan

Opens the payment plan. The "Project" payment plan level is the payment plan for the entire project. At the "WBS line" payment plan level, the payment plan refers to the current work package line *(WBS line)*.

Budget lines

WBS lines help you create a project budget. You can later compare the target values on these lines to the actual numbers that are being generated over the course of the project.

You can also budget a project in detail. This means that you can allocate the quantities required for project completion to the lowest planning level, where you assign them directly to resources or resource groups, items, or G/L accounts.

Some of the values are then also used as a basis for scheduling capacity, for example, when you later assign a task to a certain staff member.

Although each time you budget, only a single work package is involved, you can open a special page to get an overview of the budget lines set up for all project-related packages. For more information, see WBS Incl. Budget View.

Use budget lines

To be able to use detailed planning in a meaningful way, you might need to adjust the WBS line that you want to create budget lines from.

Copy Budget
Select this field on the WBS line so that you can copy to it the sum of all values from the Total Cost and Total Price fields on the associated budget lines.

If the WBS and its budget lines use the same unit of measurement, the system also transfers all planned quantities from the work breakdown structure to the budget view to show the average total cost or price.

Copy to Sales Doc.
Specify if the WBS line or one or more budget lines should be copied to a sales quote, a sales order, or a sales invoice.

Regardless of the option you choose in this field, you can still record expenses, for example, from time tracking, on the WBS and the budget lines.

Set up budget lines

To create budget lines:

1. Open a project card.
2. Choose Project > WBS Incl. Budget View on the ribbon. If you’ve already opened a work breakdown structure without the view, choose Related > WBS Incl. Budget View on the header.
3. You can also open a WBS without a budget view first and choose Related > Budget Lines on the WBS Lines FastTab.

The fields found on budget lines are described in the following table.

Field	Description
Budget Type	Specifies what is being budgeted on the line. **Resource** Includes in the budget a resource that is not a billing resource. **Item** Covers materials and finished goods. **Group (Resource)** Includes a resource group in the budget. This group can later be replaced with a specific resource. **G/L Account** All costs not covered by the previous categories are budgeted with the help of G/L accounts. You can use any account for this provided the Direct Purchase on the related G/L account card is turned on.
No.	Specifies the number of a resource or a resource group, an item, or a G/L account, depending on the option selected in the preceding field.
Item Reference No.	Contains a reference assigned by the customer to help you find a specific item.
Starting Date	Shows the planned start of the line. This field is filled in from the WBS line but can be changed manually.
Ending Date	Shows the planned end of the line. This field is filled in from the WBS line but can be changed manually.
Description Description 2	These fields describe the item, resource, or account entered on the line. The descriptions are copied from a table containing base data (for example, the Item table) but can be changed manually. Both are also copied to sales or purchase quotes or orders that you create from the structure by running the Create Sales Document or Create Purchase Document action—unless you also fill in either the Description and Description 2 in Sales or Purchase fields.
Description in Sales Description 2 in Sales	These fields contain alternate descriptions for use in sales. They specify notes that are shown to customers so that you can use the standard description fields for internal comments. When you enter an item or a resource on the budget line, translations that exist for the item or resource are copied to these fields by default. You can fill in the fields as early as creating a project template or edit the descriptions here manually.
Description in Purchasing Description 2 in Purchasing	These fields contain alternate descriptions for use in purchasing. They specify notes that are shown to vendors so that you can use the standard description fields for internal comments. When you enter an item or a resource on the budget line, translations that exist for the item or resource in the vendor’s language code are copied to these fields by default. You can fill in the fields as early as creating a project template or edit the descriptions here manually.
Language Code (Vendor)	Shows the language code of the vendor entered on the budget line. The code is used to find item or resource translations for filling in the Description in Purchasing and Description 2 in Purchasing fields.

Field	Description
	If changing vendors also leads to a change in languages, the system will search for translations in the new language. You can then decide which of these should be copied to the budget line.
Work Type Code	This field is filled in from the WBS line if you select Resource as the budget type on the line. It cannot be used for items or G/L accounts. Work types are used to post consumption and sales, for example, to a project, a resource journal, or a sales document. They specify the kind of work a resource can be tasked with, such as overtime or transportation. Depending on the work performed, the types can help you in setting up a variety of prices and units of measure for the consumption and billing of resources and resource groups.
Copy Budget Text to Purch.	If this field is selected, the system copies all budget text (lines) to purchase orders that you create from this line.
Copy Budget Text to Sales	If this field is selected, the system copies all budget text (lines) to sales documents that you create from this line.
Customer Price Group	Specifies the code of a customer price group.
Quantity	Specifies the quantity planned for the line. If you press Enter to confirm the quantity in this field, project budget entries are created automatically.
Quantity (Base)	Gives the quantity in the base unit of measure. This field cannot be changed manually, as quantities are budgeted in the unit of measure specified for the Quantity field.
Reserved Quantity	Shows the item quantity reserved for this line. The quantity is reserved through a purchase requisition workflow that includes all budget line items the Requisition checkbox is selected for.
Requisition	If this field is selected, the item on the line will be requisitioned during a planning run.
Buy-from Vendor No.	Shows the vendor from an item card (or a resource card in the case of an external resource). This field is filled in automatically if you select Item or Resource in the Budget Type field but can be changed, if necessary. It can later be edited again should you run the Create Purchase Order function from the WBS.
Qty. on Purch. Quote (Base)	Shows the quantity available on purchase quotes related to this line (a link to the field is created when you use the Create Purchase Document action to make project purchases).
Qty. on Purch. Order (Base)	Shows the quantity available on purchase orders related to this line (a link to the field is created when you use the Create Purchase Document action to make project purchases).
Qty. Received (Base)	Shows the line quantity already delivered by the supplier.
Usage Qty. (Base)	Shows the quantity consumed on the line. Quantities from posted project ledger entries are shown in this field regardless of their source. This means they might originate with a project purchase, stock consumption (for items), or a time posting (for resources).

Field	Description
Outstanding Qty. (Base)	Shows the result of subtracting the quantity planned for the line from the quantity consumed on it so far.
Unit of Measure Code	If you select Resource or Item as the budget type, this field is filled in with the base unit of measure specified on a resource or item card. The field can be changed for items but not for resources, as the unit of measure of a resource depends on the work type that you choose for the resource.
Location Code	Shows the code of the location where an item entered on the line is stored. You can choose the lookup to the right of the field to select a code from the Location page.
Bin Code	Shows the code of the bin where a possible line item is stored. To make use of this field, you must select a location on the line.
Variant Code	Specifies an item variant.
Direct Unit Cost (LCY)	Shows the direct unit cost as calculated by the pricing functionality for a resource or a resource group, an item, or a G/L account when the No. field has been filled in. You can, however, change this field manually, if necessary.
Unit Cost (LCY)	Shows the unit cost as calculated by the pricing functionality when the No. and Type fields have been filled in. You can, however, change this field manually, if necessary. **Note** If you change the Direct Unit Cost (LCY) on a resource line, the value in this field is recalculated based on the group of indirect costs specified for the resource (if available).
Total Cost (LCY)	Shows the result of multiplying the quantity with the unit cost. This field is part of the Project Budget Entries page and is copied from there.
Invoice Qty. %	If the Billable checkbox is selected and the associated WBS line is invoiced by time and materials, you can specify here how much of the line activity you want to bill. For example, instead of 100, you can enter 50 if you want to bill only half of the work performed on this line to the customer. After you fill in the field, the quantity to bill is determined from the value entered in the Quantity field. Unlike clearing the Billable field on the line, setting this quantity to 0 means project ledger entries that are not invoiced are still shown on proof of performance documents with the actual quantities worked. A later change in the value of this field will not affect ledger entries that already exist.
Billable	Specifies whether the time and materials entries that you want to set up for the line can be invoiced to the customer if the associated WBS line is billed by time and materials. This means that you need to clear the field if you do not want the created project ledger entries included on proof of performance documents. A later change in the value of this field will not affect project ledger entries that already exist.
Invoice Unit of Measure	Specifies the unit in which invoice quantities will be budgeted.

Field	Description
	The base unit of the item is filled in automatically here, although you can change the unit, if necessary. You cannot change it for resources, however, as theirs depends on a work type.
Invoice Qty.	This field can be filled in if the customer receives sales quotes and invoices for quantities that differ from budgeted expenses. In all other cases, the line quantity and the quantity to invoice will be identical.
Invoice Qty. (Base)	Gives the quantity to bill in the base unit of measure. You cannot change this field manually. **Note** The quantity is budgeted in the unit specified in the Invoice Unit of Measure field.
Unit Price	Shows the unit price specified for a resource or a resource group, an item, or a G/L account as stored on the relevant card or as set up for the project. You can also fill in this field manually.
Line Discount %	Like the Unit Price field, shows a value from a card or a project-specific price. This field cannot be changed manually.
Line Discount Amount	Filled in based on the line discount in percent. This field cannot be changed manually.
Total Price	Shows the result of multiplying the invoice quantity with the unit price. The field is also used to create in the background project budget entries that match the calculated value.
Custom Unit Price	Specifies if a unit price has been changed manually. This ensures that the price entered on the line is not replaced when a price-relevant field, such as Date or Resource No., is changed. You can select and clear the field to control when to update the price. However, some field changes require a price update even if this field is selected. For more information, see Custom Unit Prices.
Cost Center Code	Specifies the first global dimension to which the line is assigned. This field is filled in automatically with the dimension specified for a resource, an item, a work package, or the project itself. It is also renamed to match the name of the dimension that is chosen. You can change the field, if necessary. To see the codes set up for the dimension, use the lookup to the right of the field.
Cost Object Code	Specifies the second global dimension to which the line is assigned. This field is filled in automatically with the dimension specified for a resource, an item, a work package, or the project itself. It is also renamed to match the name of the dimension that is chosen. You can change the field, if necessary. To see the codes set up for the dimension, use the lookup to the right of the field. The FactBox that appears on the page at the bottom *(when you use the Budget Lines action)* or on the right *(when you choose WBS Incl. Budget View)* shows you the total costs and prices for resources, for items, and for budget lines posted directly to G/L accounts from the lines.

The FactBox that appears on the page at the bottom (when you use the Budget Lines action) or on the right (when you choose WBS Incl. Budget View) shows you the total resource, item, and budget line costs and prices that have been posted directly to G/L accounts from the lines.

Calculate unit prices

Typically, a unit price is copied from a price list or entered manually on a budget line. The third option is to have the price calculated based on the unit cost entered for the item. You can then add up to three surcharges or reductions to the total.

For this purpose, you need to unhide certain fields on the budget lines and fill them in as described in the following:

Field	Description
Unit Cost (LCY)	Specifies the base value that will be used to calculate the unit price. You can change the value manually if necessary.
Calc. Extra 1 %	Specifies the first calculated surcharge or reduction on the unit cost in percent.
Factor 1	Specifies the first calculated surcharge or reduction as a factor on the unit cost.
Calc. Extra 1	Specifies the first calculated surcharge or reduction in local currency.
Base Amount for Calc. 2	Specifies the base of the second surcharge or reduction according to what is entered in the Unit Cost (LCY) and Calc. Extra 1 fields.
Calc. Extra 2 %	Specifies the second calculated surcharge or reduction on the base amount in percent.
Factor 2	Specifies the second calculated surcharge or reduction as a factor on the base amount.
Calc. Extra 2	Specifies the second calculated surcharge or reduction in local currency.
Base Amount for Calc. 3	Specifies the Unit Cost (LCY) without surcharges or reductions as the base for the third calculated charge.
Calc. Extra 3 %	Specifies the third calculated surcharge or reduction on the unit cost in percent.
Factor 3	Specifies the third calculated surcharge or reduction as a factor on the unit cost.
Calc. Extra 3	Specifies the third calculated surcharge or reduction in local currency.
Unit Price (LCY)	Shows the result of combining the Unit Cost (LCY), Calc. Extra 1, Calc. Extra 2, and Calc. Extra 3 field values.

Note

If the unit cost and unit price are retrieved by the price function, the difference between cost and price is entered as Calc. Extra 1 on the budget line; manual changes to either will update the extra calculation value. See the following for an example of how all three values are used:

Unit Cost (LCY)	100
Calc. Extra 1 %	10
Factor 1	1.1
Calc. Extra 1	**10**
Base Amount for Calc. 2	110 [100 + 10]
Calc. Extra 2 %	15
Factor 2	1.15
Calc. Extra 2	**16.50**[15 percent of 110]
Base Amount for Calc. 3	100
Calc. Extra 3 %	20
Factor 3	1.2
Calc. Extra 3	**20**
Unit Price (LCY)	**146.50** [100 + 10 + 16.50 + 20]

Charges 1 and 2 are added one after another, whereas charge 3 is added independently.

Note

If a budget line of type Item or Resource uses the same extra calculation values for a project, you can also fill them in on the Project Budget Calculation Defaults page. If you enter a new item or resource line for the project, the Calc. Extra 1, 2, and 3 values stored there are then entered on the line by the system. With the unit cost filled in, the automated unit price calculation is also started right away.

Custom unit prices

Budget Type	Type	No.	Quantity	Work Type	Starting Date
Resource Group	Type changes from one resource to another: No Changes to item or G/L account: Yes	No	Yes	No	
Item	Yes	Yes	No	n/a	No
G/L Account	Yes	No	No	n/a	No

The FactBox on the right of the page shows the total costs and prices for resources, for items, and for budget lines directly posted to G/L accounts from the lines.

The resource section also includes the total number of hours spent on project activities, as seen on the related WBS line.

Additionally, all sections show the discounts for the relevant budget type, the profit, the profit in percent, and the actual amounts in local currency.

Line activities

For rough planning, budget lines can be assigned to resource groups. This kind of budgeting includes the expected number of hours it will take to complete a certain work package.

However, budget lines can also be used to assign project activities to specific resources or their groups. By providing a detailed structure for activities, these lines are then no longer just planning lines but also contain budgeted activities, which resources and resource groups can use to record the time they spent on the project.

A unique number is assigned to each activity from the series that was chosen for this purpose in Projects Setup. This number cannot be changed manually.

Basically, line activities provide you with a highly granular project budget. Whereas the rough planning capabilities provided by the system might be sufficient in the early stages of a project (while quoting and costing), long-term projects in particular might become increasingly difficult to manage over time.

In this case, you can use the Split Line action to create a resource-specific activity from a budget line that belongs to a resource group. If you cannot assign a certain activity to a specific resource, it can also remain with the group.

To see all activities for a certain project:

1. Open a project card.
2. Choose the Search icon, enter Budget Line Activities Overview, and then choose the related link.

The fields required for line activities are described in the following table.

Field	Description
Line Activity No.	Consecutive numbers are assigned to activities performed by a resource or a resource group on budget lines. As a result, each activity number created within a company is unique. This field is filled in with a number from the relevant series entered in Projects Setup and cannot be changed manually.
Priority	Indicates task priority. This field is used for informational purposes only.
Status	Shows how far the line activity has progressed. Each new activity is set to Not Started. The status changes to In Progress when you post to the activity for the first time. Employees can use only these statuses to post work hours; activities in a different status aren’t visible to them in time tracking. An activity is set to Completed when the resource working on the activity reports it as completed. All other statuses are set by the project manager, who can also reset a task from Completed to In Progress so that it can be posted to again. **Note** Budget lines of type Item or G/L Account are set to In Progress automatically when consumption is posted for them. The project manager can also change their status manually. When an attempt is made to set these budget lines to Completed, the system will check for unfulfilled commitments (reserved and open quantities, as well as open purchase, time, and inventory commitments) to ensure that the lines can still be posted to. If the check fails, the lines cannot be set to Completed.
Completion %	In time tracking, staff can record the progress of their activities in percent or by using the Qty. to Complete field. Filling in one of these fields will fill in the other field on the budget line, as well as the Estimated Total Qty. and Estimated Total Amount (LCY) fields, based on the budgeted quantity and the hours posted by staff, that is, the values in the Usage Qty. (Base) and Time Commitment Qty. (Base) fields. If a budget line shows a progress of 99%, this may have been caused by the "Change Budget Line" function. In such a case, a project item has been moved from one budget line to another, with the progress being recalculated for both the target and source budget lines. If the new progress is ≥ 100%, the task would be automatically closed. To prevent this, the function limits the progress to a maximum of 99%. A manual closure of the budget line is required if the task has actually been completed.
Quantity	Shows the quantity budgeted for the line activity.
Usage Qty. (Base)	Shows the hours spent on the activity and released by the project manager.
Time Commitment Qty. (Base)	Shows the hours posted to the project but not released by the project manager.
Qty. to Complete	Shows a quantity that was calculated automatically, as in the Completion % field, or was entered by an employee in time tracking.
Estimated Total Quantity	Shows a quantity calculated automatically. See the Completion % field.
Estimated Total Amount (LCY)	Shows a quantity calculated automatically. See the Completion % field.
	Shows the profit margin budgeted for the activity.

Field	Description
Profit Profit %	
Current Profit Current Profit %	Shows the current profit margin for the activity. This field is only used if, in addition to expenses, sales are posted to the line.
Sell-to Customer No.	Shows an invoice recipient who isn’t the customer of the project. A recipient can be entered but only if you selected Budget Lines in the Billing integration field as the level at which to create sales documents. If this field is filled in, the system will create separate documents when you create a sales document or an invoice suggestion for the line.

Find line activities

To find a line activity by its number across all projects:

1. Go to the Project Lead role center, and then choose Find Budget Line Activity on the Actions ribbon. Alternatively, open the page by running the general search function.
2. Fill in the Line Activity No. field.
3. Choose Find to run the action.

The system then searches for the specified activity in all available projects and opens the relevant Budget Line Activity Card if it finds a match.

The function only looks through active WBS versions unless you also turned on the Include Inactive WBS Versions toggle on the request page.

Turning on the toggle can be useful if different versions of the same structure contain different line activities, for example, because a finished activity wasn’t copied along to a more recent version. You see a selection window should the same activity be part of multiple versions.

Actions Explode BOM

Adds a line for each component of a bill of materials that has been assigned to the budgeted work package on the Work Packages page.

Note

You can use this function for more than one work package line at the same time by selecting multiple lines on the upper part of the WBS Incl. Budget Lines page.

Explode Assembly BOM

Adds a line for each component of an assembly bill of materials assigned to an item on a budget line. This involves removing the original budget line and distributing the component quantity across the new lines.

Allocate Qty

Distributes the line quantity evenly over the period between the starting and ending date entered on the line. You can choose whether you want the quantity distributed across weeks, months, or a day. A default interval can be specified in Projects Setup.

The budget entries set up for the project are adjusted when you run this function. This means that a quantity of 20 is broken up into quantities of 10 a month over a period of two months.

Split Line

Assigns to a resource part of a line activity that has been roughly budgeted for a resource group. In other words, you can use this function to divide a task into two and distribute the quantity entered for it among different resources or change data in other ways (by entering a new completion date, for example).

For a better estimate of how much work can be split off, the function will list all line-related quantities. After you have specified in the New Type and New No. fields the resource or resource group to whom a portion of the task should go, you can enter a quantity in either the Distributed Qty. New Line field or Remaining Qty. Old Line field, with the system filling in the value in the other based on the total quantity budgeted on the line.

Note

You cannot increase a line quantity in this way but must do so following the split.

To have the system assign identical numbers to both the old and the new line, turn on the Keep Line Activity No. toggle before you choose OK. This might be useful, for example, if a line pairing needs to be considered in combination at some future date.

If you fill in another starting date, the Recalculate Prices toggle is turned on automatically on the new line so that the associated unit costs or prices are recalculated.

Note

If the resource or resource group on the new line differs from the resource or group entered on the source line, the unit costs or prices are recalculated in any case.

Change Work Package

Copies the budget line, and entries posted to it, to another WBS line. To move more than one budget line, you can select multiple lines on the upper part of the WBS Incl. Budget Lines page and run the Change Work Package Multiple function.

Note

Moving a budget line in this way might lead to a change in prices.

Update Total Cost (=Moving Average)

The more time a budgeted task needs, the more likely it is that you will see an increase in the costs of items or services required for its completion.

One solution to keeping costs up to date is to split the relevant line activity so that you can enter a new cost value on a second budget line. As an alternative, you can also run the Update Total Cost function to change costs mid-project.

To be able to run this function, the budgeted quantity that you want to change the cost for needs to be available across the planning period set on the budget line.

In other words, before you can update costs, you need to create project budget entries with the help of the Allocate Qty. or Allocate to Dates action so that the task quantity is distributed across the period between the starting date and the ending date found on the budget line. You also must have entered the new unit cost with a starting date on all price lists related to the line.

When running the update function, you can then decide from when you want project entries to be updated. This field is set to the work date by default so that the system updates all budget entries created on or after that date (but you can change the filter, if necessary).

After you choose OK on the request page, the system recalculates the costs of all project budget entries in the filter period and copies the new unit cost to the specified line.

Example
On 01/01, the cost of an item that you need for a year-long project is USD150. The item is budgeted with a quantity of 12 throughout the year, with one item expected to be bought per month. In total, that makes USD1800.

Starting on 10/15, however, the cost increases to USD170. But you’ve known about that increase since 05/08, so you enter ‘05/08..’ in the Date field.

When you run the function, the previously budgeted unit costs remain in effect from 01/01 to 10/01; only those specified for 11/01 and 12/01 are updated by the system to USD170. This results in a new total cost value of USD1840 and a unit cost of USD153.3333, with the latter being copied to the budget line.

Additionally, the following fields are updated on the line:

Field	Value
Moving Average	Specifies whether the unit cost has been updated over the course of the project.
Unit Cost Updated On	Specifies when the Update Total Cost function was last run.
Unit Cost Updated By	Specifies who last updated the cost.
Last Unit Cost	Shows, based on the starting date, the most recent unit cost that the budget entry was updated with. In our earlier example, the value in this field would be 170.

Note

After the function is run, the unit cost on the budget line can no longer be changed manually.

Order Tracking

Checks if line demand is met, for example, by a purchase order.

Running this function opens the Order Tracking page, where you can see the supplier who meets demand originating from the budget line. This line, in turn, can be seen by choosing Order Tracking on the related purchase order.

Search for Attributes

Searches for items based on certain attributes, a feature also available on purchase and sales documents.

Send to Calendar

Sends a line activity as an Outlook task to a staff member.

This function requires that a valid email address has been stored for the employee (resource) in User Setup. After you hit Send, the employee receives an email with a calendar event and the relevant

- Line Activity Description
- Starting Date
- Ending Date
- Project No.
- Line Activity No.
- Project Manager Name
- Customer Name
- (Customer) Company Phone No.

If a line activity is canceled or put on hold, the calendar task is deleted from Outlook automatically.

Change Dates

Reschedules a budget line.

When you run this function, you are asked to specify by way of a formula the amount of time that the line should be moved up or back.

The formula must include at least one mathematical operator and a time expression such as D = day(s), W = week(s), M = month(s), Q = quarter(s), or Y = year(s).

A message appears if you make an incorrect entry, explaining the reason why.

You can use this function, for example, to adjust a project budget because of a change in shipping dates for the project. The starting and ending dates of the affected budget lines are then edited automatically to match the new schedule.

Allocate to Dates

Opens a matrix that shows the budget lines set up for the project, with activities broken down on each line based on the interval you chose in the Period field on the header. All project work is initially put on the starting date.

You can use this matrix to budget quantities in detail, specifically at the budget entry level, that is, you can schedule quantities for resource and item lines on the calendar in steps that go from 24 hours to a year.

Each time you assign a budgeted quantity to a resource or an item in a calendar field on the page, the system will create project budget entries. These entries are the smallest elements of a project budget and the basis for planning resource capacity (see Capacity Planning).

Change Type & No

Allows some flexibility in planning. Typically, you can change the Type and No. fields until hours have been posted to a budget line.

To move a resource from one line onto another, you can simply change the No. field on the lines themselves. However, to move a line from a resource group to a specific resource, you must run this function for technical reasons.

After hours have been posted, you need to use the Split Line action to assign part of a quantity to a new line type and number.

Reserve

Creates a reservation on the line for tracked supplies, for example, from inventory or a purchase order.

Take

Assigns stock to the project from non-reserved quantities. Stock that has been assigned previously can be identified by its filled-in Project No. field. This function can only be run from item-type lines.

Running the function opens a page on which you can see the project inventory items you specified on the line and assign new item entries. Entries you want to remove from a location entered on the line must contain a positive value and be open. Moreover, the entries cannot be reserved or assigned to a project. You can clear the project number filter should you want to move items from one project to another.

You can then specify how many items you want to remove from the warehouse. The number of items you take can, of course, not exceed the total number held onsite.

Choose OK to post the selected quantities to project inventory. A reference to the project (or, more specifically, to the budget line) is then added to each item entry that you move in this way. Afterward, you need to create a project shipment to post consumption of the item while removing it from the stock assigned to the project.

Assign Project Ledger Entries

Typically, when you post usage for a project, the number of the budget line from where consumption originates is assigned to the related project ledger entries automatically.

Sometimes, however, a number might need to be assigned manually, for example, if you entered an item on more than one budget line created from the same WBS line.

You can then use this function to assign all project ledger entries stored on the WBS line to the budget line provided one of the following criteria is met:

- If a resource has been stored on the budget line, consumption entries must refer to the same resource.
- If a resource group has been stored on the line, consumption entries must refer to the same resource group (with the resource for whom consumption is posted being a member of that group).
- If an item has been budgeted on the line, all entries must refer to the same item number.
- If a G/L account has been budgeted on the line, selected G/L account lines must refer to the same account.

Connect
Assigns all selected entries.

Disconnect
Deletes existing assignments (as indicated in the Budget Line No. field).

Card

Opens the line activity card.

Item Availability

Provides multiple item availability lists designed for the same purpose and function as those used for sales documents.

Dimensions

Shows the dimensions assigned to the line.

Reservation Entries

Shows the items reserved for the line.

Predecessors / Successors

Assigns predecessors or successors, or both, to work scheduled on the line.

Beginning Text / Ending Text

Specifies line-related texts, which can be copied to sales or purchase documents.

Comments

Stores internal comments regarding the line.

Navigate to Line Activity

Indicates where a line activity is being used.

Line activity numbers are stored on purchase and sales documents, with project ledger and time entries, on CTC lines, and in time sheets.

Resource by Project

Shows the budget entries created for the WBS and resource. Making another WBS the active structure will change these entries on printouts.

Choose the lookup if you want to see more details on an entry. You cannot edit the entry on that page, however.

Resource Group by Project

Identical to Resources by Project, except that this function filters for resource groups, not individual resources.

Capacity Plan

Shows the capacities assigned to resources. You can fill in the fields on the Options FastTab to filter for a specific resource if necessary. The page includes all capacity-related values stored on the active WBS. For more information, see Capacity planning.

Assign Skill-Specific Resource

Copies resources with certain qualifications to the budget.

This function requires that you have assigned skills to the relevant resources. These skills can then be assigned to work packages, that is, WBS lines, or you can set them as filters manually. Resources are indicated with their capacity values, including their overall capacity, their times of absence, and their quote and order entries.

For a quick and easy way to include resources in a budget, you can select a resource, navigate to the Values FastTab, and then choose Manage > Quick Assignment on the ribbon. Afterward, you can use the budget lines to plan a resource’s capacity in more detail, for example, by entering quantities.

You can also choose Detailed Assignment on the same ribbon to open a page where you can budget resource hours per week.

Set Service Package Qty.

Used to adjust the quantities specified for service package resources, as those cannot be changed on the budget lines themselves. For more information, see Use on Budget Lines (Service Package).

WBS Incl. Budget View

This function shows the active work breakdown structure of a project in combination with the budget lines set up for the project.

Information about the structure itself can be found on the header, whereas the other parts of the page show text lines, comments and, most of all, the budget lines set up for a WBS line. All entries always relate to the currently selected WBS line.

The line statistics on the right show the planned resource quantity, key values broken down by budget type, and the total cost and price of the WBS line. Budget entries are added up under Budget Line Total. You can compare these to the values found under WBS Line, which allows you to immediately spot differences in amounts between the work breakdown structure and the detailed budget.

The Usage section, on the other hand, indicates usage based on total cost and price, whereas Billings shows the amount invoiced so far and the amount that you have yet to invoice to the customer based on project progress and the billing type of the WBS line.

The actions on the WBS Incl. Budget Line page are the same as those described for the individual WBS and Project Budget pages.

Main WBS

To track the impact of additive and deductive change orders on initial cost estimates, you can create what is called a main WBS.

This involves setting up non-active versions of a structure so that you can log negative and positive adjustments to a project. When you release those versions, their values are then merged and transferred to a WBS version that serves as the main—and active—structure for the project.

This feature can only be used to copy values changed on WBS lines; detailed schedules with budget lines must be created from the main WBS.

> **Note**
>
> You cannot use this function if rolling wave planning is turned on *(the Forecast or Distribution feature, or both)*.

Set up a main WBS

1. Choose the Search icon, enter Projects Setup, and then choose the related link.
2. On the Project Management FastTab, fill in the fields described in the following table.

Field	Description
Project Budget Name (Main WBS)	Select the name of a project budget to specify an active WBS version linked to this budget as the target structure to which to copy the results of calculations and change orders. You must fill in this field before you can use the Main WBS feature.
Keep Invoice Qty. Separate	With the toggle turned on, invoice quantities found on lines copied to a main WBS will not be totaled but replaced with a quantity of 1. The toggle does not apply to sales amounts and unit costs.

Main WBS

This toggle shows whether a structure is used as a main WBS. Found on the WBS header, it turns on automatically if the budget name specified for the project is identical to the name entered in the Project Budget Name (Main WBS) field on the Projects Setup page.

> **Note**
>
> You can only see the toggle if you filled in the Project Budget Name (Main WBS) field in Projects Setup.

Copy Structure Only

You can select this toggle when you run the Copy WBS function *(found on the ribbon of work breakdown structures)*.

With the toggle turned on, the function copies the main WBS to a new structure but leaves the quantity fields blank so that you can edit WBS lines that already exist (see the following example).

Example

You set up a new WBS, enter Default as the budget name, and perform a calculation in one or more versions. None has been released yet.

After the customer places an order, you set up another structure with a budget called Main WBS, the name entered in the Project Budget Name (Main WBS) field in Projects Setup. You release the structure and turn on the Active toggle on the header.

You then release the ordered version with the Default budget name so that its lines are copied to the main WBS. (You could have also run the calculation on the main WBS, but that would have meant no version of the base calculation would have been archived.)

The result is a released and active structure to which you can post.

Afterward, you set up a WBS for a change order, entering Additive as the budget name. You run the Copy WBS function from the main WBS and, on the dialog page, turn on the Copy Structure Only toggle to copy the WBS lines without quantities to the new version. You then specify the details of the change order:

- You enter a quantity on an existing WBS line, with a positive quantity representing an increase and a negative quantity a decrease in what is being ordered.
- You add WBS lines and calculate their values.
- You keep or delete the WBS lines that remain unchanged from the new version (lines deleted here aren’t deleted from the main version).

You release the order. The adjustments you made will be copied to the main WBS as follows:

- Quantities changed on existing lines will be adjusted.
- Lines created on the non-active WBS will be added to the main WBS.
- New descriptions will replace the old ones.

Changes to quantities and prices that you made to existing WBS lines will be copied as well. For example, if a line used to contain 100 hours at a rate of USD80, but the change order includes 20 hours at EUR100, the main structure will show 120 hours at an average rate of USD83.33 following the update.

As a result, the latest changes to the project have now been incorporated into the main WBS. You can view the original estimate by opening the Standard project budget and the adjustments through the Additive budget.

The Additive budget name can also be reused later to set up another non-active version for an additive change order.

Note

When updating a main WBS, the system always includes all versions of the work breakdown structure. Therefore, none of them should be deleted. Please also note that manual changes you make to the main WBS will be discarded during the next update.

Capacity planning

Capacity planning can help outline your company’s resource needs by setting limits on the time employees can spent on projects.

Only after you have set a total number of hours that employees are available overall and assigned part of their daily, weekly, or monthly capacity to one or more projects will you be able to draw meaningful conclusions from the data presented here.

For more information on how to specify resource availability at the resource (group) level, see View and Set Capacity. Each resource, or collectively, each resource group, has a limited supply of hours, which you can assign to lines on a WBS. These hours, the differences between resource availability and utilization, and the demand left for projects can then be shown on a capacity plan.

Assuming you have specified enough capacity for all resources working on a certain project, setting up such a plan provides a way for you to quickly implement changes to a rolling wave schedule. The feature also uses a base calendar to account for time off, such as on weekends and holidays. You can open plans from:

- Resources
- Projects (Resources > Capacity Plan on the Project Budget FastTab)
- Budget lines

Depending on where you run the function from, the Date Filter field might be filled in by default. Resources are shown on a plan by resource group, with the total capacity of a group being displayed as well. Resources with no assignment to a group will be the first on the list.

The following table describes the fields found on every capacity plan.

Field	Description
Capacity	Shows the capacity entries available for the resource. Total lines are also created per resource group.
Absence	Shows a resource's non-work hours based on absence registrations.
Net Capacity	Specifies the net capacity of the resource.
Budget (Quote) Budget (Order)	Show for which project the system has already created budget entries. All data is displayed at the resource level. A line added for each project shows how many hours the resource is expected to spend on a project. The status of the project determines in which of the fields the budget value is entered.
Project Time Posted	Shows how many hours spent on a project have been posted for the resource.
Utilization	Shows the resource’s (target) utilization.
Variance	Indicates available resource hours. Based on how you set up the variance filter, the lower area of the page shows one of the following: **Net Capacity – Budget** Shows available capacity (total capacity less absence, for example, vacation or flextime) minus all budget values. **Net Capacity – Time Posted** Shows the difference between net capacity and hours recorded so that you can determine whether a resource is still expected to post time to a project. **Capacity – Time Posted** Same as before, except that you see the difference between how high the total capacity is for the resource and the hours the resource worked on projects. Can be useful when posting certain kinds of absence, such as vacation, to a special project. **Budget – Time Posted** Shows the total budget value minus the work hours recorded. When you change the variance filter, you need to exit the page, choose OK, and then reopen the plan to refresh the budget values. Reopening it also resets the filter so that values are again shown as described for the first option.

To export the plan values to an Excel workbook, choose Export to Excel on the ribbon and select a date filter.

Work sequence

Whereas project planning has so far been discussed only in terms of quantities and line values, the following paragraphs will focus on the scheduling feature that is part of project365. This feature uses starting and ending dates, durations, fixed dates, and task dependencies on WBS and budget lines to provide you with several options for indicating the time and sequence of project activities.

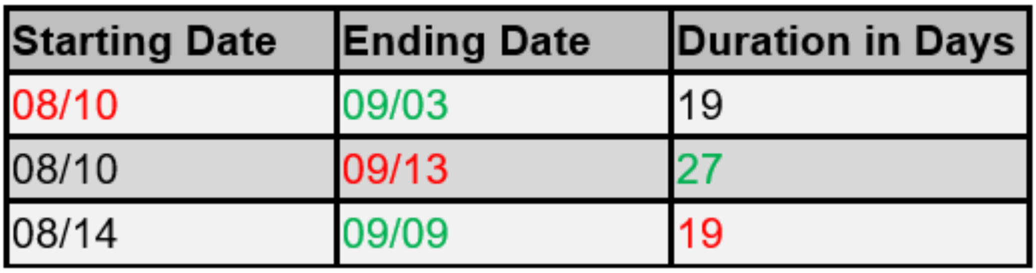
Line dependencies

The relationships between activities are the basis for project scheduling. They can be set up at either the work package or budget line level.

To specify how one line activity is related to another based on its type and duration in days, you can use the Assign Predecessor and Assign Successor actions on the Project Budget or WBS Lines FastTab. The types are modelled after those used for task dependencies in Microsoft Project.

Duration in Days

In addition to starting and ending dates, you can maintain a duration in days on both work package and budget lines. If you store this information, starting and ending dates are calculated automatically from the workdays available over the course of a project. For an example, see the following table, where red means changed by the user and green calculated by the system.



Starting Date	Ending Date	Duration in Days
08/10	09/03	19
08/10	09/13	27
08/14	09/09	19

Fixed starting and ending dates

You can also set fixed starting and ending dates on both WBS and budget lines.

Note

The values entered in these fields aren’t checked until they are included in a planning run.

Ignore in Planning

Shown on WBS lines, this field can be selected to exclude from project planning work packages that are used solely to collect receipts, such as for travel expenses and license fees, that is, those for which capacity cannot be budgeted.

Scheduling Direction

In this field found on project cards, you can set the scheduling direction of a project to forward or backward.

WBS Scheduling

Actual scheduling is performed on a separate page. To view the page, open a work breakdown structure and choose WBS Scheduling on the ribbon.

A schedule shows the WBS and budget lines created for a certain project, as well as the information required for indicating the start and end of project operations. Activities are planned on both types of lines at the same time.

If a schedule already exists for a WBS, you see a message that asks if you want to overwrite current planning data. Choosing Yes will delete all entries from the page.

The values shown are used to simulate a requested planning scenario. Following a review and potential revisions to the schedule, you can choose Accept Planning on the ribbon to copy the data from the page to the related work breakdown structure.

The simulated entries are stored in the Planned Starting Date, Planned Ending Date, and Planned Duration (Days) fields on a schedule and can be edited manually. You can identify the status of each entry by its color and style. The following indicators, explained in the system by way of a legend, are available for this purpose:

- **Red and bold**
  Indicates that the scheduled values exceed the starting or ending date of the project (as specified on the project card).
- **Red**
  Indicates that, according to the schedule, the line should be in progress, but the work status is still set to Open.
- **Green**
  Indicates that the value was changed manually or during a planning run.
- **Blue**
  Indicates that the value can be changed neither manually nor during a planning run.

Scheduling a project manually only makes sense after the first automated planning run. However, you can already prepare for manual entry on the relevant work breakdown structure by specifying the duration, fixed starting and ending dates, and line activity relationships relevant to your situation, as every automated planning run is based on these WBS or budget line fields.

To start a planning run, choose Start Planning on the ribbon. This puts each WBS line and its budget lines onto the plan based on the duration, the fixed dates, and the line dependencies set up for the line. The results of the simulation are then entered in the Planned Starting Date, Planned Ending Date, and Planned Duration (Days) fields.

Depending on what option you selected in the Scheduling Direction field, the system will begin to schedule activities from the starting date or the ending date entered for the project.

ROLLING WAVE – BUDGET DISTRIBUTION

General

An iterative method, rolling wave planning helps you minimize the uncertainty associated with scheduling complex projects by providing you with quick and regular updates on their status and progress and multiple ways to respond to changing demands.

One option for integrating the rolling wave technique into project365 is to use the Distribution feature, which will offer you suggestions on how to get the most out of your project budgets. Each of these suggestions can then be tailored to meet your company’s exact needs.

> **Note**
>
> Whether you intend to plan in "waves" or schedule project tasks in the usual way, you can always do so on either WBS or budget lines.
>
> Although they work well in concert, you can use the Distribution functions without also installing the Forecast feature. You, however, need to ensure you have a valid license before you can work with either functionality.

Setup

Projects Setup

To set up the budget distribution feature:

1. Choose the Search icon, enter Projects Setup, and then choose the related link.
2. Fill in the fields as described in the following tables.

Rolling Wave – Budget Distribution

Field	Description
Distribution Active	Turn on this toggle to activate the Distribution feature.
Distribute Invoice Qty.	Specify how you want invoice quantities to be distributed across budget items. **Relative to Budgeting** With this option, you can, for example, set a ratio of 1:2 so that a budgeted quantity of 10 is billed as one of 20. **Until Budget Exhaustion** This option puts the ratio of budgeted quantity to invoice quantity at 1:1.
(Adv.) Payments in Budget	Turn on this toggle if you want invoice quantities distributed based on a payment plan *(provided one exists for the project)*.
Color – Plan Color – Actuals Color – Suggestions	Specify the colors for distribution graphs. **Note** The graphs are currently hidden.
Graph Type	Specify how values will be shown in FactBoxes that are used for instant budget distribution. Options are Line, Bar, or Radar.
Over- and Under-Plan Handling	Specify what will happen if you over-plan or under-plan. Options are None, Notify, or Cancel *(which exits the process)*.
Capacity Shortage Handling	Specify what will happen if you plan based on more capacity than can be supplied. Options are None, Notify, or Cancel *(which exits the process)*.
Budget Handling on WBS Line Completion	Specify which of the following values will be copied to the Budget Remainder field when a WBS line is set to completed. The field is used for informational purposes only. **Retained** The remaining budget is kept for meeting demand elsewhere. **Not Needed** The rest of the budget is longer required. **Redistributed** The remainder will be reallocated to other WBS lines.
Update Actuals	Turn on this toggle if you want to run a codeunit with the job queue to update the actuals associated with each budget.
Fill Job Queue Gaps (Interval)	Specify how often budget changes should be saved. The default value in this field is 500, which means changes are saved *(to the database)* after every 500 checks of project budget entries.
Create Distribution Archive	Turn on this toggle if you want to run codeunit KVSPSADistrActual with the job queue to aggregate the budget values for each project once a month.
Ignore Budget and Billing Constraints	With the toggle turned on, any budgeting suggestion or invoice quantity that runs into the red *(as too much has been posted already)* will not be shown on a distribution matrix.
WBS Work Status Filter	Specify the WBS lines that will be excluded from status updates, to increase app performance. Examples are finished or canceled lines. The filter only applies to actions that update values on more than one WBS line.
Ignore Invoice Changes on Blocked Sales Budget	Turn on this toggle if you want to suppress the notification that appears when you try to edit an already distributed invoice quantity while the project’s sales budget is blocked. Any change you make is then ignored as well. This field is only relevant if the distributed quantity to bill differs from the invoice quantity on

Field	Description
	the budget or WBS line. When both quantities are identical, the message is not shown, regardless of whether this toggle is turned on or off.
Quick Distribution – WBS Work Status Fltr.	Specify the filter that you want set on the Work Status field in the Quick Distribution view. With this filter, you can, for example, exclude finished or canceled lines from the view so that you can see immediately which WBS lines are available for distribution.
Quick Distribution – Line Activity Status Fltr.	Specify the filter that you want set on the Line Activity Status field in the Quick Distribution view. With this filter, you can, for example, exclude finished or canceled lines from the view so that you can see immediately which budget lines are available for distribution.
Unit Cost Update Method	Specify if you want to restrict the impact of changes made to unit costs on WBS or budget lines to a certain period, to prevent these changes from affecting the entire distribution process.
Cost Update Starting Date	If the Unit Cost Period Type is set to Fixed Date, enter a date in this field to specify from when unit costs should change.
Cost Update Period Start	If the Unit Cost Period Type is set to Formula, enter a formula in this field to have the system calculate *(based on the work date)* from when unit costs should change.
Actuals Update Method	Specify whether you want to limit the number of actuals that will be reviewed automatically so that the system does not always need to run checks on all revenues and expenses that are posted to a project.
Actuals Update Starting Date	If the Actuals Period Type is set to Fixed Date, enter a date in this field to specify from when the actuals should be updated.
Actuals Update Period Start	If the Actuals Period Type is set to Formula, fill in a formula in this field to have the system calculate *(based on the work date)* from when the actuals should be updated.
Actuals Check Date Range	If needed, specify a range of dates that the system should check beyond the actuals period set up in the previous fields. Before this check can be run, you need to add Report 5548341 – Check Postings Prior to Set Date to the job queue. Only projects that the Check Distributed Actuals toggle is turned on for will be considered by the report. The lines to check will be visible in a tile in the Project Lead role center.
Job Queue Update Interval	Specify how often the status and progress of large projects will be updated via the job queue *(for example, 2W = every 2 weeks)*.
Archive Duration	Specify for how long each budget plan created for an individual project will be archived.
Delete Archive When Duration Expires	Turn on this toggle if you want the system to delete the detailed budget plans after the period set for them in the previous field.
Archiving Interval	Specify at which intervals the detailed budget plans will be archived.
Archive – Historical	Specify how far into the past the plans will be archived.
Archive – Future	Specify how far into the future the plans will be archived.
Deviation (%)	Enter a percentage by which you want to compare budget plans that are archived through the job queue. A deviation that exceeds the threshold entered will be shown as specified in the Style – Deviation field.

Field	Description
	Note You can only select one type of deviation *(percentage or value)* to appear as a warning in this context.
Deviation (Value)	Enter a value by which you want to compare budget plans that are archived through the job queue. A deviation that exceeds the threshold entered will be shown as specified in the Style – Deviation field. **Note** You can only select one type of deviation *(percentage or value)* to appear as a warning in this context.
Critical Deviation (%)	Enter a percentage by which you want to compare budget plans that are archived through the job queue. A deviation that exceeds the threshold entered will be shown as specified in the Style – Critical Deviation field. **Note** You can only select one type of deviation *(percentage or value)* to appear as a critical warning in this context.
Critical Deviation (Value)	Enter a value by which you want to compare budget plans that are archived through the job queue. A deviation that exceeds the threshold entered will be shown as specified in the Style – Critical Deviation field. **Note** You can only select one type of deviation *(percentage or value)* to appear as a critical warning in this context.
Style – Deviation	Specify the style that you want to use to show deviation warnings *(for example, to indicate "Needs checking")*.
Style – Critical Deviation	Specify the style that you want to use to show critical deviations *(for example, to indicate "Needs urgent review")*.

Rolling Wave – Defaults

Field	**Description**
Planning Type	Specify the planning type that will be set in the distribution wizard by default *(Budget, WBS Line, or Mixed)*.
Skip Type Selection	Turn on this toggle to hide the planning type selection in the distribution wizard.
Activate New Version	Turn on this toggle if you want the New Version toggle to be already activated when you run the wizard used for adjusting budget plans.
Activate Distribution Update	Turn on this toggle if you want the Update Budgeting toggle to be already activated when you run the adjustment wizard.
Distribute Differences	Specify the selection that will be provided in the Distribute Differences field shown in the adjustment wizard.
Activate Actuals Update	Turn on this toggle if you want the Update Actuals toggle to be already activated when you run the adjustment wizard.
New Version Past Initial Plan	Turn on this toggle if you want a new WBS version to be set up by the system when the distribution wizard is completed and mark this WBS as the active version.
Budget Adjustment View	Specify the WBS view that will be opened when you run the Adjust Budgeting function.
Can Select Version	Specify if WBS versions can be changed in the adjustment wizard.
WBS Version for Budget Adjmt.	Specify the WBS view that will be opened when you run the Adjust Budgeting function.
Can Select View	Specify if the WBS view can be changed in the adjustment wizard.
Hide Budget Update	Specify if you want to hide the Update Budgeting toggle in the adjustment wizard.
Rounding Precision – Item or G/L Acc.	Specify the number of decimal places that distributions on budget lines of type Item or G/L Account will be rounded to.
Rounding Precision – Resource or Group	Specify the number of decimal places that distributions on budget lines of type Resource or Group (Resource) will be rounded to.

Budget distribution formulas

To specify how values will be distributed across budget items:

1. Choose the Search icon, enter Budget Distribution Formulas, and then choose the related link.
2. Alternatively, open Projects Setup and use the lookup in the Distribution Formulas Setup field.
3. On the ribbon, choose New.
4. Fill in the fields as described in the following table.

Field	Description
Code	Enter a code for the formula.
Description	Enter a description for the formula.
Formula Type	Select the type of formula that you want to use. Options are: **Linear** Distributes values evenly across the times allocated *(but excludes public holidays)*. **Parabola** Plots a U-shaped or an inverted U-shaped curve or an increasing or decreasing slope. **Exponential** Displays exponential increases or wave-shaped patterns *(with the base value being -1)*. **Logarithmic** Visualizes decreases over time. **Mixed** Combines multiple formulas into one. For more details, see Mixed Formulas.
Parameter 1 Parameter 2 Parameter 3 Calc. Base	These fields can be filled in to further adjust the graph that you have set up. For an explanation of the impact of each parameter, choose Formula Details on the ribbon.
Starting Value	Enter the value that budgeting should start with.
Use Request Page	Specify whether you want to see a request page when choosing a formula so that you can change graph settings on a per-line basis.
Mixed Formulas Code	If needed, enter the code of a formula combining multiple calculation methods. For more information, see Mixed Formulas.

If you make changes to a formula, you need to run the Update Projects action from the ribbon to replace it on each project affected by the change. However, only projects the Distribution Active toggle is turned on for will be updated with this function.

For a preview of the graph that will be created, you must also fill in the Demo Data (Preview) FastTab. After you select a line, you can then see this graph in the FactBox on the right-hand side of the page.

Mixed formulas

A mixed formula combines multiple calculation methods into one function.

For this purpose, the period in which to distribute budget values is divided into several, equally long phases, with their shares of the total quantity specified in percentages. Afterward, you can enter a different formula for each phase.

To set up a mixed formula:

1. Choose the Search icon, enter Mixed Formulas, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following tables.

General

Field	**Description**
Code	Set up a code for the formula. The code must be unique.
Description	Specify a description for the formula.
Status	Shows the status of the formula. Only released formulas can be used. To release one, you must distribute the entire quantity to the lines and then run the Release Formula action from the ribbon.
Distributed	Shows the percentages already distributed to the lines.

Lines

Field	**Description**
Phase No.	Set up a code to uniquely identify the phase.
Percentage	Specify, in percent, the share of the total quantity that should be distributed during this phase.
Distribution Formula Code	Specify the formula that will be used during this phase.

Work Package Distribution Mappings

You can open this page by choosing the lookup in the Work Package Mapping Setup field in Projects Setup or by using the general search function.

On it, you can select for each work package the types of lines you want to see in budget distribution matrices.

For example, you can use this feature to hide matrix lines on which the invoice quantity is zero, that is, where a work package was set up for services that are rendered in-house *(and therefore cannot be billed)*.

If you change a mapping, you need to run the Update Projects action from the ribbon to replace it on each project affected by the change. However, only projects the Distribution Active toggle is turned on for will be updated with this function.

Budget distribution templates

You can use these templates to specify how you want the system to distribute budget values for certain work packages by default. To set up a template:

1. Choose the Search icon, enter Budget Distribution Templates, and then choose the related link.
2. Alternatively, open the Projects Setup page and use the lookup in the Distribution Templates Setup field.
3. On the ribbon, choose New.
4. Fill in the fields as described in the following table.

Field	**Description**
Work Package Code	Specify the work package that this setup should apply to.
Work Package Description	Shows the description of the package entered in the previous field.
Distribution Formula Code	Select a formula for budget distribution.
Period Type	Specify the period based on which budgeting will be performed *(Week, Month, Quarter, or Year)*.
Distribution Level	Specify if you want budget values to be distributed on the WBS *(that is, work package)* or line activity level.
Distribution Base Type	Select if you want to distribute quantities *(for example, for resource budgeting)* or amounts *(for example, for G/L account postings)*.
Distribute Differences	Select this field if you want what remains of a budgeted quantity after consumption to be redistributed to the following periods.
Keep Total Qty.	This field can only be selected if the previous field is selected as well. If the field is activated, the total quantity budgeted remains the same throughout the planning process. This means that any quantity not consumed in one period will be redistributed to the following periods. With the field deactivated, the system ignores quantities that have not been used up, to avoid over-planning.
Use Resource Cap.	This field is only relevant to distributing resource quantities. With the field selected, the specified quantity will be distributed based on available resource capacity *(without the system checking if some of it has already been allocated elsewhere)*. Capacity, however, will not be reserved evenly but with an eye on using as much as possible at the beginning of the budgeting period. **Example** Between 01/01/2025 and 04/30/2025, a resource is budgeted with 50 hours. The resource, however, can only start with a 40-hour week from calendar week 3 on so that the hours will be distributed as follows: 40 in CW 3 and the rest (*10 hours)* in CW 4.
No Budgeting	Specify if the line should be ignored when budgeting a project.

Update Projects

This action—which can be run from the Work Package Distribution Mappings or the Budget Distribution Formulas ribbon—will copy changes that you make to the package mapping or distribution formula setup to all affected projects.

You can transfer the values of only one setup with this function or update the data for both at the same time. However, only projects where the Distribution Active toggle is selected will be updated.

WBS Version Options

On this page—which can be opened from the Projects Setup ribbon—you can specify the values that will be entered on the Copy WBS report by default.

Project templates

Some of the key fields used by the Distribution feature can already be filled in when you create a project template.

For an explanation of these fields, found on either the Lines or Rolling Wave – Budget Distribution FastTab, see the following table.

Lines

Field	**Description**
Distribution Formula Code	Specifies the distribution formula that will be used on the line *(for example, Linear)*. The formula that is entered here replaces the formula specified on the distribution formula template. For more details, see Setup Field Priorities.
Period Type	Specifies the period based on which budgeting will be performed *(Week, Month, Quarter, or Year)*.
Distribution Level	Specifies if budget values will be distributed on the WBS *(that is, work package)* or line activity level.
Distribution Base Type	Specifies if the values that should be distributed will be quantities *(for example, for resource budgeting)* or amounts *(for example, for G/L account postings)*.
Keep Total Qty.	This field can only be selected if the previous field is selected as well. If the field is activated, the total quantity budgeted remains the same throughout the planning process. This means that any quantity not consumed in one period will be redistributed to the following periods. With the field deactivated, the system ignores quantities that have not been used up, to avoid over-planning.
Use Resource Cap.	With the field selected, the specified quantity will be distributed based on available resource capacity *(without the system checking if some of it has already been allocated elsewhere)*. Capacity, however, will not be reserved evenly but with an eye on using as much as possible at the beginning of the budgeting period. **Example** Between 01/01/2025 and 04/30/2025, a resource is budgeted with 50 hours. The resource, however, can only start with a 40-hour week from calendar week 3 on so that the hours will be distributed as follows: 40 in CW 3 and the rest *(10 hours)* in CW 4.
No Budgeting	Specifies if the line should be ignored when budgeting a project.
Distribute Differences	Select this field if you want what remains of a budgeted quantity after consumption to be redistributed to the following periods.

Rolling Wave – Budget Distribution

Field	**Description**
Distribution Active	With the toggle turned, the distribution feature can be used on projects created with this project template.
Distribution Template Code	Specifies the template that will be used for distribution. This template tells the system—based on the calculation formulas selected for the project *(for example, Linear)*—how to distribute the WBS lines for a certain work package. See also Distribution Templates.
Period Type	Specifies the period based on which planning will be performed *(Week, Month, Quarter, or Year)*.
WBS Line Distribution Only	The Distribution Active, Distribution Template Code, and Period Type fields also exist on WBS lines and their templates. With the toggle turned on, the use of budget distribution will depend on these fields alone so that you can exclude certain WBS lines from the process. See also Setup Field Priorities.
Check Actuals	If turned on, the project will be checked for whether actuals have been posted outside the specified period. For more information, see Project Setup.
Create Detailed Distribution Archive	With the toggle turned on, the entire budget plan will be archived once a month via the job queue *(with the help of report KVSPSA Archive Distribution)*.

Work packages

You can also fill in the distribution setup fields in the work package master, as described in the following table.

Field	Description
Distribution Formula Code	Specifies the distribution formula that will be used on the line *(for example, Linear)*. The formula that is entered here replaces the formula specified on the distribution formula template. For more details, see Setup Field Priorities.
Period Type	Specifies the period based on which budgeting will be performed *(Week, Month, Quarter, or Year)*.
Distribution Level	Specifies if budget values will be distributed on the WBS *(that is, work package)* or line activity level.
Distribution Base Type	Specifies if the values that should be distributed will be quantities *(for example, for resource budgeting)* or amounts *(for example, for G/L account postings)*.
Keep Total Qty.	This field is only relevant to distributing amounts. When the field is selected, the quantity budgeted on the line will be the same before and after the system distributes the amount associated with it.
Use Resource Cap.	With the field selected, the specified quantity will be distributed based on available resource capacity *(without the system checking if some of it has already been allocated elsewhere)*. Capacity, however, will not be reserved evenly but with an eye on using as much as possible at the beginning of the budgeting period. **Example** Between 01/01/2025 and 04/30/2025, a resource is budgeted with 50 hours. The resource, however, can only start with a 40-hour week from calendar week 3 on so that the hours will be distributed as follows: 40 in CW 3 and the rest *(10 hours)* in CW 4.
Rounding Precision	Specifies if the line should be ignored when budgeting a project.
No Budgeting	If this toggle is turned on, quantity differences will be redistributed automatically.

Setup field priorities

As described above, certain fields used to set up distributions can already be specified in the work package master, on project templates, or on distribution templates.

The setup that is then used by the system when you create a project depends on how and where you've filled in these fields. Settings you specify on a WBS line are also copied to its budget lines, where you can change the fields again manually, if needed.

When a WBS line is created from a project template, the settings are retrieved from the relevant template line if the fields are filled in on it *(that is, a formula is specified, at least)* and the WBS Line Distribution Only toggle is selected on the Distribution FastTab.

If the toggle is turned off, the system fills in the required field values from the distribution template that is copied from the project template. If a distribution template doesn't exist, the values from the work package master are used.

The order in which records are evaluated for whether to retrieve their values is therefore:

1. Project template
2. Distribution template
3. Work package master

If you manually add a work package line to the new project, the setup is again transferred from either a distribution template (if one is available) or from the work package master.

Tip

To simplify work processes, we recommend that you avoid setting up distributions in the work package master or on project templates but always use a distribution template for this purpose.

User Setup

Field	Description
Can Edit Formulas	Specifies if calculation formulas can be changed.
Can Set Source Budgets	Specifies if a WBS version can be marked as the source version.
Can Edit Source Budgets	Specifies if the WBS version that is marked as the source budget can be changed.

Default values at project creation

When you run the (Create) New Project wizard, you can already fill in some of the fields that will be used for budget distribution. You can later change them again on the project card, where they're found on the Planning FastTab.

Because certain analyses might result in budget values being aggregated, we recommend you update the Distribution Formula Code and Period Type fields on the card instead of maintaining them on a work breakdown structure or in the work package master. Ideally, both fields have been filled in on a project template, which you can select on the first wizard page.

If you also create a work breakdown structure with the wizard, the fields used for budget distribution are likewise copied from the selected WBS template to the new structure *(but these, too, can be changed manually)*.

One field that isn't filled from a template is the Budget Remainder field. It tells you what should be done with the portion of the budget that remains when the WBS line it was used for is completed. The Hide Note field on the WBS header, on the other hand, suppresses—if turned on—the notification that data relevant to distribution is still missing on a certain line.

Most of the setup fields are available on budget lines as well, with their values sourced from the associated WBS line.

To check how the system will distribute the budget, you can use the WBS line or budget line fields described in the following table.

Field	Description
Qty. Assigned	Shows the quantity that has already been distributed. If you change the budget plan and let the system handle distribution, the value in this field will match the quantity budgeted on the line. The quantities might differ, however, if you adjust values manually.
Qty. Unassigned	Shows the quantity that is still available for distribution.

Note

For the distribution feature to be used, you need to have turned on the Distribution Active toggle on the Rolling Wave – Distribution FastTab included on the WBS.

Distribution views

On the project card ribbon, you can choose between two distribution cockpit views that resemble those available for standard work breakdown structures *(where the ribbon actions are WBS and WBS Incl. Budget View)*. Both include a matrix as described in the following.

Distribution matrix

This matrix is the core component of all distribution views.

In the WBS Distribution View, it references the currently selected WBS line.

By contrast, if you choose WBS Distribution Incl. Budget, you see the values of a WBS line or a budget line in the matrix, depending on the distribution level that is specified for the structure.

If the level is set to WBS Line, the lines of the work breakdown structure are shown in the upper area and the matrix right underneath, whereas choosing Budget Line puts the budget lines underneath the WBS lines, with the matrix found below both.

You can use either view to see values such as the quantity budgeted on a line, broken down by the time specified in the Period Type field *(for example, week or month)*. Which lines will be shown depends on the work package mappings that you've specified.

Most matrix fields are self-explanatory or will be described elsewhere, so the following table includes only the few that aren't.

Field	**Description**
(Plan line)	As the first line in the matrix, it is used for the actual budgeting process and shows the current distribution values. Additionally, it also contains any descriptive text that is stored on the related budget or WBS line. All values in the matrix are created from distribution entries and can be changed manually, if needed. The changes are later copied to the project as project budget entries.
Distribution Suggestion	Provides a new suggestion for distribution. A suggestion is created automatically when you reenter the old or fill in a new quantity on the related WBS or budget line, edit a budget-relevant field on it, or reset the budget plan. The suggested values are again created with the help of distribution entry filters. None can be changed manually, however. You can then run the Copy Suggestion to Plan action to transfer them to the first matrix line.
Actuals	Displays the actuals, created from the project ledger entries in each budgeting period after the Update Actuals function is run.

Ribbon functions

Three ribbon actions must be run in the matrix, in the following order:

1. Update Actuals
2. Copy Suggestion to Plan
3. Update Invoicing

Alternatively, you can use the Update Distribution function to have the system run them one by one and in the correct order automatically.

Update Actuals

Updates the actuals shown in the matrix based on the project ledger entries that have been created.

With this action, unspent budget is automatically distributed to later periods so that any new suggestion for distribution no longer contains quantities for completed periods.

See also Update Sequence after Task Completion.

Copy Suggestion to Plan

Following the update of the actuals, copies the suggestion created from them to budgeting.

See also Update Sequence after Task Completion.

Note

With this function, values are distributed not to the current period but to the following periods.

Update Invoicing

Updates the invoice quantities on the new plan after the suggestion is copied to it.

See also Update Sequence after Task Completion.

Update Distribution

Merges the three actions explained previously, running them one after another as part of a single function call.

Reset Plan

Redistributes the budget values that were entered by users, based on the field setups for automated distribution *(while ignoring any manual settings)*.

Distribution

You can distribute values in two ways, by quantity or amount. Both methods will be described in the following.

By quantity

If you, for example, create a budget line on the WBS Distribution Incl. Budget page and enter a starting and ending date, the quantity budgeted on the line will be distributed automatically across the matrix according to your setup if the Quantity option is selected in the Distribution Base Type field.

An example of this would be a monthly linear distribution of quantities from 11/01 to 06/30.

The first line in the matrix *(the budget line description)* then shows the quantity that will be budgeted, which should match the quantity that you can see on the suggestion line after all budget values have been distributed by the system.

Afterward, you can change the values on the first line, if needed. Those on the suggestion line, however, will remain as they are.

By amount

The amount option also automatically takes account of the distribution setup fields and distributes values throughout the matrix after all data is filled in. In contrast to the quantity option, however, it allocates amounts, such as costs that are assigned to a G/L account with a quantity of 1 and for which the unit cost is entered on the budget line.

If setup requires the total quantity to be kept *(see the Keep Total Qty. field)*, it is split up in a way that, based on the rounding precision, the sum of all distribution entries is again 1. It’s not the quantity that is relevant here but the amount.

Field updates

If you change budget-relevant fields, such as Unit Cost or Starting Date, on a line, you’re asked whether you want to update the distribution. Choose Yes if you want redistribution to take place automatically following the changes.

Distribution entries

Distribution entries are structured like project budget entries. Creating the latter from the former represents the first step in setting up a budget plan.

To see the entries created by the distribution feature, use the lookup in the Qty. Assigned field.

You can run one of the following actions, each with a slightly different focus, to transfer distribution entries to the project budget:

Update from Distribution Entries

Synchronizes distribution and project budget entries. Existing budget entries will be replaced.

With this transfer, the integration of the distribution into standard project365 planning processes is complete. You can then continue as described in WBS and Scheduling.

Update Distribution

Updates the distribution on the selected line or all WBS lines.

This function goes beyond the previous action, copying the distribution entries created for the budget lines to the project’s budget entries *(with the help of the Update from Distribution Entries action)* and then transferring the updated values to the associated WBS lines.

Workflow

Budget line distribution

(Bottom-up approach)

When you set the distribution level to Budget Line:

1. Set up budget lines with the fields relevant to distribution filled in, especially the quantities. This creates a distribution suggestion.
2. If needed, edit the plan manually.
3. If that changes the quantity on a budget line—that is, the value in the Quantity field differs from what has been distributed to the line—run the Update from Distribution Entries action to transfer over the new quantity.

Budget adjustments

Line activities that have already been budgeted are adjusted after the close of a month *(or another standard period type)* based on the actuals recorded in the previous period.

1. Open the WBS Distribution Incl. Budget view.
2. Run the Update Actuals function.
3. Choose Copy Suggestion to Plan on the ribbon to transfer the suggested distribution to planning.
4. Run the Update from Distribution Entries function to transfer the new total quantity to the relevant budget lines.
5. Copy the budget values from the line activities to the WBS lines.

You can use a certain function to have the system run these actions in the correct order one after another. For more information, see here.

WBS line distribution

(Top-down approach)

When you set the distribution level to WBS Line:

1. Create a rough plan on the WBS line. This creates a suggestion for distribution.
2. Plan in more detail (if needed).

Update sequence after task completion

The following provides you with an example of how the distribution update process works in practice.

On a budget line, 600 hours must be distributed in a linear fashion over six months.

The starting month is January, the last month included in the distribution is June. The initial budget plan set up and copied to the project is made up of the following values:

January	100
February	80
March	120
April	80
May	120
June	100

In January, no more than 80 hours are posted by resources *(which means 20 fewer than anticipated)*. It’s February now, so January needs to be wrapped up and the plan updated for the remainder of the project.

By running the Update Actuals function, the 80 hours recorded in January are copied to the distribution matrix and the system creates a new suggestion for distribution that takes account of the completed month by including it at zero hours and distributing the 20 hours across the remaining months.

	Suggested	Hours Worked
January		80
February	85	
March	122	
April	85	
May	125	
June	103	

You want to accept this suggestion, so you run the Copy Suggestion to Plan action from the ribbon. However, as the new plan values haven’t been turned into budget entries yet, each can still be changed manually, if needed.

You also run the Update Invoicing function from there, as you want to adjust the invoice quantities on the new budget plan as well.

Afterward, you use the Update from Distribution Entries action on the Budget Lines FastTab to have the system update the project budget entries from the new distribution entries.

ROLLING WAVE – FORECAST

General

An iterative method, rolling wave planning helps you minimize the uncertainty associated with scheduling complex projects by providing you with quick and regular updates on their status and progress and multiple ways to respond to changing demands.

With the Forecast feature, you can compare past and expected *(and current)* project performance based on multiple versions of a WBS, giving you a good idea of where things are headed, as well as the opportunity to readjust the structure to get a project back on track.

> **Note**
>
> Although they work well in concert, you can use the Forecast functions without also installing the Distribution feature. You, however, need to ensure you have a valid license before you can work with either functionality.

Setup

Projects Setup Forecast

The fields that are grayed out on this FastTab show whether you've set up the specified forecast options *(namely, comparisons and WBS version creation)*.

For changing them, click a field value to get to the corresponding setup page.

Field	Description
Forecast Active	Turn on this toggle to activate the Forecast feature.
Can Edit Source Budgets	Turn on this toggle if users should be able to change the values of a source version in a forecast view, and therefore, the original version.
Style – First Version	Specify the style that will be used for the first WBS version selected in the comparison matrix.
Style – Second Version	Specify the style that will be used for the second WBS version selected in the comparison matrix.
Style – Third Version	Specify the style that will be used for the third WBS version selected in the comparison matrix.
Style – Change Orders	Specify the style that will be used to visually set apart the original lines of a source budget from the change orders, that is, the WBS lines, copied to it from other versions.
Display Comparisons	Specify how you want values to appear in the comparison view. Side by Side means the same fields—such as the output quantities entered for all three versions—are shown next to each other. If you choose By Category, on the other hand, you see the quantity fields first *(starting with version 1)*, followed by the unit costs, and then the other matrix fields.
Create WBS Version – Type	Specify the version that will be shown by default when you run the Create WBS Version action. In most cases, we recommend you select New Version, as it is the only option that can be used immediately.
Create WBS Version – Page	Specify the page that will be opened and set to the version entered in the prior field when using the Create WBS Version action.

The remaining fields on this FastTab specify at what point cost overruns or underruns will be highlighted in forecast views and how they'll be formatted.

Example

When a budget is exceeded by 5%, the costs associated with it will be shown in light red *(style property Attention)*. They'll be dark red *(style property Unfavorable)* if the overrun is 10% or more.

Note

You need to fill in all style fields to be able to run the forecast views from a project card.

Rolling Wave – Comparison Field Setup

On this page, you specify the fields you want the Forecast Comparison Matrix to show.

When using the setup for the first time, the default configuration is entered by the system, and you only need to manually fill in any field that is left blank.

You can also assign fields to a group if By Category is selected in the Display Comparisons field in Projects Setup so that they're shown in the matrix sorted by certain criteria.

The values in the Sequence No. fields indicate the order in which fields will appear on the page. With a total of 10 ranks available, a new field can easily be inserted between the existing fields. The lower the number, the further to the left the field will be.

The Cross-Version checkbox is selected for fields that are specified once and are then shown on every version that you've set up in the system *(an example being the Description field)*.

Create WBS - Version options

Here, you specify the request page fields that will be visible when you choose Create WBS Version on the ribbon of a project card.

We recommend that you keep this page slimmed down.

Ideally, no fields that need to be filled in will appear on the page, not even the field used to select a WBS version *(source version)* for copying. With this field not visible, values are copied from the version that is currently active.

User Setup

Field	Description
Can Set Source Budgets	Indicates if the user can specify a WBS version as the source version by turning on the toggle with the same name on the WBS header. Source versions typically cannot be edited.
Can Edit Source Budgets	If selected, allows the user to modify the WBS version that is marked as the source version.

Project creation

After you've created a project with or without the (Create) New Project wizard and *(if needed)* distributed the budget for it, two new WBS versions will be set up by the system: a source version, which typically cannot be changed, and an active version that you can post to.

Forecast views

On the project card, you can then choose either one of the two forecast views that resemble those available for standard work breakdown structures *(where the ribbon actions are WBS and WBS Incl. Budget View)* or a budget view that is filtered to all active WBS lines *(open work packages)*.

Besides fields you're familiar with, the views include some that are specific to forecasts, as described in the following table.

Field	Description
Quantity	Shows the quantity that has been budgeted for the current WBS version *(corresponds to the Quantity field in regular WBS views)*.
Remaining Quantity	Shows the budget remaining for the current WBS version, minus consumption and commitments.
Quantity (Source)	Shows the quantity budgeted in the source version.
Time Commitment (Qty.)	Shows the number of time postings entered but not yet copied to project ledger entries with the help of the project journal *(see the corresponding field in regular WBS views)*.
Usage Qty. (Base)	Shows the total usage quantity stored on project ledger entries *(as the corresponding field in regular WBS views does)*.
Qty. (Actual) and Committed	Shows the result of adding up the Time Commitment (Qty.) and Consumption (Base) field values.

The same fields exist for unit costs. Additionally, you can see the invoice quantities and total prices entered for the project.

Create WBS Version

Sets up a new WBS version with the help of the Copy WBS function. Based on your setup, the action might be run with a very slimmed-down selection page.

You don't need to enter a source WBS on the request page. Not choosing one means that the active WBS version will be regarded as the source version for copying purposes.

Note

The created version is automatically set to Active.

Open Source Budget

Opens the WBS version marked as the source version.

WBS Forecast Comparison

Compares up to three different WBS versions.

On the header of the request page, you can specify the versions you want the system to display. In the Show Cost and Show Sales fields, you can select if you want to compare quantities or amounts, or both, in the matrix.

To see the values of all WBS versions, go to the Forecast Comparison Matrix FastTab. For a neater overview, the values of each structure will be shown in another style, as specified in setup. Comparisons are made at WBS line level.

Note

The validity period that was set for each version determines what consumption and commitment values will be shown in the matrix.

Example
Version 2 was valid until 06/15/25, at which point version 3 was created and released *(by running the Create WBS Version function)*.

Up until this date, a total of 120 hours were posted. From the 15th on until now, another 30 hours were specified as committed. In version 2, consumption was therefore 120 hours. Version 3, by contrast, includes 150 hours, which you can see in the Qty. (Actual) and Committed field.

Change orders

Change orders are a common occurrence in project management industries, and their impact must often also be accounted for in the budget.

Typically, these orders are created in the active WBS version, from where the budget modifications can be copied to the source version, if needed. Whether it makes sense to copy a certain order to the source budget depends on what changes were requested.

Whereas lines added to a work breakdown structure are treated as a change order by the system, budget lines that are attached to existing WBS lines are regarded as a simple planning adjustment. This means changes to contracts requested by customers must always be set up in the form of new WBS lines.

Copy Order Changes

This WBS line checkbox is selected automatically if a new line is created in a WBS version that isn’t specified as the source version.

With the Copy New Line to Source Budget function on the Lines FastTab, you can still copy the line *(and its line activities)* to the source budget, however.

To copy an entire group of *(selected)* lines, choose Copy New Lines-Multiple.

Open Source Budget

You can run this function to open the source budget for a project and identify WBS lines that were transferred there from another WBS version by checking if the fields described in the following table are filled in.

Field	Description
Change Order On	Indicates when the change order was created.
WBS Change Order – Description	Shows the description of the version that the change order was copied from.
WBS Change Order – Budget Name	Specifies the name of the project budget that the order was copied from.
WBS Change Order – Version	Specifies the number of the WBS version the order was copied from.

Change order lines are shown in a style different than those belonging to the source budget *(=source WBS lines)*. The style that will be used is specified in Projects Setup in the Style – Change Orders field field.

New WBS version as source version

Instead of copying change orders to the source version, you can also turn the version they’re created on into the new source version.

Which option you choose depends on your overall approach to budgeting and the status of the affected versions.

Versions in cost control

When creating financial reports for projects, you can also set up flexible cost control overviews that will take account of project budgets.

On the Edit Column Definition page, in the WBS Version field, you can choose between the active, previous, or source WBS version belonging to a project to specify what version should be used to compare financial data retrieved from rolling wave planning.

For example, you can compare the budget plan that is specified for the source and the plan set up for the active WBS version of the project.

This layout setting only applies when budget values will be shown in column definitions, that is, if the Entry Type field is set to Project Account Entries.

Resource Planning

OVERVIEW

After a project has been scheduled, resources must be assigned to it. This can be done by using a graphical planning tool to link resources to line activities or by adding resources to a project without specifying tasks for them to complete.

GRAPHICAL (LINE ACTIVITY) PLANNING

To schedule line activities (budget lines), you can use the graphical resource planner that has been integrated into the system.

In graphical planning, line activities can be moved on the timeline or dragged onto other resources on Gantt charts.

However, before you can work with this feature, you need to make some settings on the pages described in the following.

Projects Setup

Select Day in the Default Budget Allocation Period field.

Resources Setup

In the Resource Planner Start and End fields, specify the period you want to copy to the chart. Choose a period that you’re comfortable scheduling with. The longer this period is, the greater its drag might be on tool performance and resource utilization.

Example
-1W / 2 M means that the data copied to the chart includes all information available for scheduling from the prior week until 2 months into the future.

Resource card

Only resources and resource groups for which the Use in Resource Planning toggle has been turned on will be copied to the chart. To copy resource capacity, you also must specify at least a planning period.

Line activities

Budget lines must meet the following requirements for inclusion:

- The project must have been set to Quote or Order.
- The WBS line must have a work status of Open or In Progress.
- The budget line must be of the resource or resource group type.
- The budget line must be Not Started or In Process.
- The budget line must have a starting and an ending date (and at least a 1-day difference between them).

Absences

Absence registrations are automatically copied over, which means that additional settings aren’t required here.

Open graphical planning

To open the scheduling tool:

1. Choose the Search icon, enter Resource Planner, and then choose the related link.
2. Alternatively, open a budget line view. On the Project Budget FastTab, choose Resources > Resource Planner on the ribbon.

Rough planning

Graphical resource planning starts on the Initial Planning page, with multiple weeks being visible at once.

For performance reasons, resource utilization isn’t shown at this point. Instead, you see an overview of all activities related to a project. To show resource use, you need to switch to Detailed Planning and choose the refresh spinner.

Detailed planning

On the Detailed Planning page, you can see resource utilization per week. You can also use the ellipsis in the upper-right corner to show resource deployment during other weeks.

Visual information

On the left of the chart, you can see a list of all project-related resources, broken down by resource group. On the timeline to the right, bars in different shades of blue show the activities assigned to the related resource or group. Activities that have been started are in dark blue. Line activities in parentheses belong to a project that is still in the Quote stage.

A yellow background indicates the degree of resource utilization on a given day. An example of an event that lowers daily capacity is vacation, where yellow is filling out the day entirely.

By selecting a bar, its utilization values will be shown in a FactBox on the right-most side of the view. Areas of overscheduling are displayed in red.

Hovering the mouse over an activity bar shows a FactBox that describes the activity.

Reschedule

To reschedule activities, you can drag them on the timeline or move them from one resource line onto another.

Warning

There is no preview for this function. As a result, the new schedule will be copied to the relevant budget line immediately.

Reduce / extend activity time

You can also use the mouse to reduce or extend the time that a resource will spend on an activity by dragging the ends of the relevant bar to the left or right.

Filter project

By using the right mouse button on an activity bar, you can open a context menu to set a filter on the activity, limiting the planning view to a certain project.

Split lines

The Split Line action works in the same way on the chart as it does on budget lines.

RESOURCE PLANNING (WITHOUT LINE ACTIVITIES)

In an ideal world, resource schedules would align perfectly with the goals you have for your business. Unfortunately, experience shows that allocating the right amount of capacity can be a very time-consuming task.

This is because it might take a while before you can schedule resource hours at the budget line level, that is, at the level of line activities, and it can take even more time to update these plans regularly.

To provide you nevertheless with a reasonable degree of control over the time that you have available, you can use an alternate project-based plan that is decoupled from individual activities.

Requirements

Before you can schedule in this way, you must have

- set capacities for the required resources.
- created one or more projects on which you want them to work.

Setup

Besides the requirements already mentioned, only a few settings might need to be made before you can work with project-level resource planning.

Resource Planning Setup

On this card, you can specify which fields must be filled in before you can schedule resources for a project. You can also turn on one or more toggles on the Filter FastTab to set filters on the Resource Planning page. Additionally, you can choose if you or the resource who will work on a resource request should be notified by email when the request is completed.

If you want to copy absences to planning, you need to fill in the Resource Absence Project Name field on the Planning FastTab. You can enter any name in this field. The name of an actual project isn't required, as the label is only used to group absences on the Resource Planning page.

Planning Types

Planning types help you distinguish between different kinds of resource scheduling. For example, you can use them to separate the hours budgeted for internal projects from those spent on customer projects.

They also make it easy for you to spot absence, such as the time a certain resource will be on vacation, immediately. You can specify in which order entries appear on a resource schedule and assign a style to a type on the Planning Types page.

The styles you can choose on the page serve the same function as elsewhere in the system.

Copy absence to resource planning

Resources' sick time or time off can be copied to scheduling with the help of the Planning Type field, which can be found on the Causes of Absence page.

Each cause set up with a planning type is copied to the schedule. A shared type is often enough. You only need to create more than one if, for example, absence due to vacation must be separated from other causes.

On the Resource Planning page, you can then use a ribbon function for the retrieval of non-working time.

Note

This function, called Insert Absence Registrations, can only be found by users who are entered as resource managers in User Setup.

Overscheduling Setup

On this page, you can specify the resources for whom you want to display a warning message in the case of overplanning, that is, if the work hours scheduled are greater than the resource capacity remaining. You set up the warning for every department to which resources are assigned.

This can be also set up on the individual resource card using the Ignore Resource Planning Warning toggle. This is recommended for Dummy resources without capacities.

Resource Planning page

The core element of project-level resource scheduling is a matrix that shows the number of hours budgeted per week. On the lines, a schedule can be broken down by project and planning type. The types are shown in different colors (and styles) to make it easy to differentiate between them.

Options

For a better overview, filters can be set on the schedule. If the user who opens the Resource Planning page has been linked to a resource, the department assigned to that user is filled in automatically, based on the assumption that schedules created by one's own department are of the most interest in this situation.

You can also turn on the No Date Filter field on the header if you want the system to show what resources aren't included during the selected period but have been in the past or will be in the future.

Values

This FastTab initially shows one line for each resource scheduled for a project. You can, however, expand the lines section to view a more detailed breakdown of employees' work schedules. The columns on the right indicate the number of hours allocated to the resource for tasks per week.

Resource lines

The resource-type line represents the upper-most level of the section. At this level, the fields on the right show the quantity and total capacity set for resources during the week specified in the relevant column. This helps you gain a quick overview of their availability and detect overscheduling.

Planning types

The second level in the hierarchy covers scheduling by planning type. Ideally, these types can be distinguished by their color and style (see Setup).

Projects

The lowest line level contains schedule items related to individual projects. The lines are in the same color as the planning type to which they have been assigned.

Requests

The Requested By, Requested On, and Request Type fields at the bottom of the page can be used as a template to create more schedules.

Actions and overview

Insert Absence Registrations

Before you start planning your next project, we recommend that you use this action to copy all current absences to the Resource Planning page.

> **Note**
>
> Only resource managers see this feature. Transferred absences are updated automatically when you change them or remove them altogether.

New

Before you choose this action, you need to ensure that you have selected the correct line on the page, as the resource related to that line will be suggested for scheduling.

When you run the function, the values in the Default FastTab fields are copied to the new schedule automatically. The default planning period is the current week.

You can then enter a number or a starting date to specify the week during which you want to add the resource to the schedule; an ending date isn’t relevant here. You can also turn on the Fixed Date toggle if the starting and ending dates that you specified on the tab should be included when you reschedule project activities. However, the fixed dates can be changed later if necessary.

On the Base Data tab, you must enter a type and project number; filling in the other fields is optional. A new schedule that leads you to allocate too much work to a resource in a week will prompt a warning message if you chose this option when you entered the resource’s department in Overscheduling Setup

Distribute

On this page, you can create several schedules at once. The total budget needs to be entered in the Distributable Hours field. These hours are then reduced by the amount of time planned on the lines, and the result is shown in the To Distribute field.

Overplanning on this page will prompt a warning message. However, you can choose Yes on the dialog that appears to raise the value in the Distributable Hours field.

Show Time Available

This function displays for each resource the available capacity per week, calculated by subtracting a resource’s total capacity from the hours scheduled for the resource in that time.

(Planning) Overview

On this page, you can not only filter planning entries according to your requirements, but you can edit them as well, which provides you with a quick and easy method for changing more than one entry in resource planning. You can also choose New on the ribbon to draw up another schedule.

Alternatively, you can run the Overview function from a line on the Resource Planning page to filter entries for a specific week and resource (and potentially planning types and projects).

General Planning

Creates a regular workload for resources over a longer period, for example, to offset unexpected events.

Planning Resource Matrix

Shows resource planning from the perspective of resources, that is, how many hours have been scheduled for a resource in a certain week.

You can set filters on the Matrix Options FastTab to see, for example, only the projects a specific resource has been assigned to work on and at what time.

Project Planning Matrix

Same, but from the perspective of projects. You can again use the filters on the FastTab to see who will work when on a project.

Plan own resource

As a rule, all those with read/write access to resource management can see and edit resource activities in the system. Typically, however, the task of creating a plan for a week-by-week breakdown of these activities falls to one or more resource managers.

But there are also companies where at least some staff members can set their own hours. By selecting the Plan Own Resource field in User Setup, these employees not only gain read/write access to scheduling but also prevent other users from adding them to their resource schedules.

Where am I needed?

This page, which is built into the Project Lead role center, shows logged-in users to which project schedules they’ve been added over the next three weeks.

Selecting a number on the page and drilling down will then open the planning entries related to a specific project.

Resource requests

Requests for resources are typically created by a project manager. Each request is then forwarded to a resource manager, who will reserve the hours required based on available resource capacity.

Once scheduling is completed, an email will be sent to the resource scheduled for a project and the person who created the request (if the relevant toggles have been turned on; see the following).

Resource Planning Setup (resource requests)

If the project manager or the scheduled resource should be notified by email after a request has been handled by the resource manager, you must use one or both of the toggles that can be turned on for this purpose in Resource Planning Setup.

Field	**Description**
Email User at Request Completion	With the toggle turned on, the person who submitted the request will be notified by email upon its completion.
Email Planned Resource at Request Completion	Selecting Internal in this field will send an email only to internal resources after requests have been handled. Choosing All will do so for both internal and external resources.
Sender Address	Specifies the email address from which notifications are sent.

Each email sent to the project manager or resource contains information about who has been scheduled to work on which project task, as well as the effort estimated for completing the activity, and the starting and ending date of work.

Create a request

Project managers can only see requests they’ve created, whereas resource managers see all requests from every department. To create a request:

1. Choose the Search icon, enter Resource Planning, and then choose the related link.
2. Choose Actions > New Resource Request.
3. Fill in the fields as necessary.

Key fields found on the request page are described in the following table.

Field	Description
Project No.	Specifies the project for which a request is made.
Requested Resource No.	Specifies the resource requested for the project. If the field blank is left blank, the Requested Resource Group No. Field should be filled in instead.
Requested Resource Group No.	If the preceding field is left blank, a resource group should be entered in this field.
Planner	Specifies a resource manager. You don’t need to fill in this field, as planners retrieve open requests on their own *(as described later)*.
Planning Department Code	This field is only filled in if you work with planning departments.
Planning Location Code	This field is only filled in if you work with planning locations.
Line Activity No.	Specifies a concrete line activity from the project. However, when you work with resource planning decoupled from line activities, you don’t need to select an activity here.
Work Package Code	Specifies the number of a work package (WBS line) used in the project. However, resource planning decoupled from line activities requires neither a concrete activity nor a work package.
Planning Type	Specifies the planning type. This type determines where on the Values FastTab (on the Resource Planning page) the resource schedule is inserted. You can use planning types to distinguish between internal and customer projects, for example.
Estimated Effort in Hours (Total)	The value in this field is probably the most important piece of information a resource manager requires for scheduling.
Planning Comment	This field is typically filled in by the resource manager but can also be used by the project manager to recommend a certain resource.
Description	Describes the requested work so that the resource manager knows what resource might be suitable for the project.
From Week	Specifies the week when a resource should start working on the project. The week is determined automatically based on the current date. **Example** The current calendar date is part of CW49. 50 = CW50 of the current year 10 = CW10 of the following year The system will enter the Monday of CW50 as the starting date.
Starting Date	Specifies the Monday of the requested starting week. The date is entered automatically when you fill in the From Week field. Changing the date manually will also change the value there.

Field	Description
	Note The starting date must be a Monday.
From Year	Specifies the year of the starting week.
To Week	Specifies the week when a resource should finish working on the project. The week is determined automatically based on the current date. **Example** The current calendar date is part of CW49. 50 = CW50 of the current year 10 = CW10 of the following year The system will enter the Friday of CW10 in the Ending Date field.
Ending Date	Specifies the Friday of the requested end week. The date is entered automatically when you fill in the To Week field. Changing the date manually will also change the value there. **Note** The ending date must be a Friday.
To Year	Shows the year of the ending week.
Fixed Date	With the toggle turned on, the request needs to be fulfilled in the time stated.

Once all necessary fields have been filled in, a request can be submitted through the Release Planning function on the ribbon, after which the data entered on the page can no longer be changed.

A request not yet handled by a resource manager can be cancelled by the project manager at any time through the Cancel Planning function.

Handle a request

A resource manager (who might not yet be specified as one in the system) begins handling a request by opening it and choosing Start Planning.

This fills in the Planner field with the resource manager’s user ID and assigns the schedule immediately to the manager’s page views *(by adding the plan to the relevant filter)*.

On the Lines FastTab, one or more resources can then be allocated throughout the requested period. One line is created per resource and calendar week.

Example
A line activity is budgeted at 40 hours of work performed by two resources over two weeks, which results in a schedule as described in the following table.

Resource No.	(Calendar) Week	Quantity
R100	5	10
R200	5	15
R100	6	15

The page provides resource managers with ample information, including a resource’s current utilization status on calendar week lines.

The Planning in Requested Period FactBox on the page shows the availability of a resource in the relevant period if a resource was specified in the request. Additionally, the Show Planning action can be used to open the Resource Planning page from a request, with all lines already filtered for the staff member.

After allocating hours to resources and calendar weeks, the resource manager can choose End Planning on the ribbon to finalize the schedule. The system then creates resource budget entries from the lines and notifies the budgeted resource(s) and project manager(s) by email.

To suspend planning temporarily and take it up again later, a resource manager can choose Cancel Planning on the ribbon.

Resource Request Worksheet

This worksheet—which you can get to from the work breakdown structure—is the central interface between project schedules and resource plans, providing you with a quick overview of the WBS and budget line resources requested for a certain project. Only lines that the Use in Resource Planning field is selected for in the work package master are visible in the worksheet.

You can use the Create Request ribbon function to create demand on selected lines. For a budget line, the resource and the resource group specified on it are copied along automatically.

Each new request is based on information retrieved from the work breakdown structure or the budget and must be reviewed and released for planning by the requester.

Information about the progress of a request can be found in the line fields that are described in the following table. This information can then be used to fulfil demand.

Field	Description
Scheduled Qty.	Indicates the quantity scheduled by the resource planner. The hours in this field are copied in their entirety from the Requested Qty. field, regardless of how many of them are ultimately used.
Requested Qty.	Shows the quantity that has been released but has not been scheduled yet.
Open Request Exists	Indicates whether one or more resource requests must still be processed. Only following release will an outstanding quantity be considered a requested quantity.

You can click a field to see the ask that was made in relation to the selected worksheet line.

Guarantees

OVERVIEW

You store background information about letters of guarantee on the following pages:

- Guarantee Types
- Guarantee Status
- Guarantee Posting Groups

The pages are for informational purposes only and don’t affect other areas of Microsoft Dynamics 365 Business Central[1]. You can fill in the fields on them in any way you want.

SETUP

Before you can work with guarantees, you also need to set up a number series for them. To set up a series:

1. Choose the Search icon, enter Projects Setup, and then choose the related link.
2. On the Numbering FastTab, select the series that will be used for letters of guarantee.

REGISTER A LETTER OF GUARANTEE

To register a guarantee in the system:

1. Choose the Search icon, enter Guarantees, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
No.	Exit the field to have a number assigned automatically from the series that you set up for this purpose.
External Guarantee No.	Specify the number that the bank uses on the letter of guarantee.
Description	Specify a description for the guarantee.
Guarantee Type	Select the type of guarantee.
Guarantee Type Description	Shows the description of the type of guarantee.
Guarantee Posting Group	Specify the posting group that will be used for the guarantee.
Guarantee Status	Specify the status of the guarantee. You can set up statuses on the Guarantee Status page.
Guarantee Direction	Choose if you received a guarantee or had one issued for a certain vendor or customer.
Account Type	Specify if the account that a bank guarantee was applied for was set up in the name of a customer or vendor.
Account No.	Specify the number of the account.
Account Name	Shows whom the account belongs to.
Issuing Bank (Contact No.)	Specify the name of the person who you can talk to at the bank that provided the guarantee.
Issuing Bank (Contact Name)	Shows the name of the contact person.
Starting Date	Specify from which date the guarantee will be valid.
Ending Date	Specify when the guarantee will expire.
Amount (LCY)	Specify the guarantee amount (in local currency).
Commission Amount (LCY)	Specify the commission fee that the bank will receive for the guarantee.
Commission %	Specify the commission fee in percent.
Project No.	Specify the number of the project that the guarantee is for. **Note** If you want to see all guarantees registered for a project, open the relevant project card and choose Related > Project > Guarantees on the ribbon.
Document Type	Specify the type of the purchase that the guarantee is for.
Document No.	Shows the number of the purchase document created from the project. **Note** If you want to see all guarantees registered for a purchase document, open the relevant document and choose Related > Guarantees on the ribbon.

Actions

To enter notes about a guarantee, select a line on the page and choose Related > Comments on the ribbon. To open the purchase document or project related to a guarantee, select a line and choose Related > Open Purchase Order or Open Project.

Field Check

If the Guarantee Field Check toggle is turned on in Projects Setup, you need to release guarantees before you can use them for a project.

Guarantees are released by running the End Guarantee Update action from the ribbon. The system then checks the fields that must be filled in to proceed and shows an error message if they aren’t.

Only after all the required fields are filled in can the record be used. Afterward, you can no longer edit the guarantee. If you need to, choose Edit Guarantee on the ribbon to reopen the record.

During editing, the record is blocked in the system. To make it available again, rerun the End Guarantee Update action.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Time & Materials

OVERVIEW

Project usage can be recorded in several ways. Whereas the hours worked on a project can be entered in time journals and on CTC cards, the consumption of items can be specified through adjustments to inventory and project purchases.

By using budget-to-actual comparisons, you can then compare the amount of time and materials spent toward a project to the number of hours and items budgeted for it.

STAFF COSTS

Following customer approval, you can start posting usage and sales for a project. Usage primarily refers to resource consumption. Resources might be employees, machines, or contractors. This article will focus on time tracking for employees.

A resource's work hours are entered in time sheets and on other time tracking pages in the base unit chosen in Resources Setup. All resources representing actual people should have the same unit stored on their resource cards.

The most common base unit for these resources is Hour. For types of work typically billed in a different unit, such as Day, the system will hold off on converting a posted time entry into the billing unit until the entry is released through a project journal.

This way, employees can continue to think and post in hours, and the system will do the rest.

TIME TRACKING LEVEL

In the Time Posting Level field on project cards, you can specify how time spent on a project will be recorded. The options are:

1. **WBS**
   A rough listing of tasks at the level of work packages.
2. **Budget**
   A detailed capture of tasks at the budget line (or line activity) level.

> **Note**
>
> This field might already be filled in from a project template.

- Whereas no restriction is placed on WBS line resources (each resource can post to all WBS lines), the selection for budget lines is limited to a user's own resource or group. With the Strict Team Filter toggle turned in Projects Setup, you can even prevent the filter from being removed under any circumstances. Neutral budget lines (that all resources can post to) can be set up by using a general time recording resource.
- A project might contain work packages that aren't planned at budget level, as there's no need to divide them into subtasks that will be assigned to specific resources (travel cost being one example). However, for obvious reasons, you might still want to post to these WBS lines despite the posting level being set to Budget, so they'll be shown on the selection page regardless.

Both levels are valid for all time tracking methods explained in the following.

TIME JOURNALS

A project time journal records the time that a resource spends on a project. All resources require a journal of their own (see Resource Capacity).

For the correct time entries to be retrieved when a user opens the Project Time Journals page, the user must first be assigned to a resource and to a journal in User Setup. The selected resource is then entered on all journal lines automatically.

Users whom the Other Res. in Time Tracking checkbox is selected for in User Setup can also edit other resources' journals. A message appears if a user cannot be assigned to a journal.

The following table describes the most important fields found in time journals.

Field	Description
Resource No.	Shows the resource who records time. This field is filled in by default, as each a journal is specific to a resource.
Posting Date	Specifies the day that time is being recorded for.
Project No.	Specifies the number of the project for which time is being recorded.
Project Search	Finds projects based on common filter criteria provided with Microsoft Dynamics 365 Business Central. This feature is meant as an alternative to drilling down on the value in the Project No. field. Projects that match the text you entered are shown when you exit the field so that you can select the project that you want to see filled in on the line. A second dialog page shows the WBS or budget lines that you can post to. Besides numbers and letters, you can use symbols such as * and @ to limit search results. For more information about filter criteria, see Sorting, Searching, and Filtering Lists - Business Central. Specifying a filter such as @ *introduc* would yield the following (case-insensitive) results, for example: Introducing Business Central; Reintroduction of CRM fields Searches cover the Project No., Description, Description 2, and Search Description fields of projects.
Line Activity No.	Shows the activity number of a budget line. When filling in the Project No. field, a user can choose a budget line (=activity) if the time posting level on the related project card is set to Budget. This includes any line to which the user’s resource is assigned through the Person Responsible field or the relevant resource group, unless the activity has been completed. To record time for a completed activity, the status of the activity must be set back to In Progress. When a budget line is selected, the work package and the phase, task, and step code fields on the journal line are filled in automatically. This means that the work hours recorded by resources are posted not only to the budget lines but to the associated WBS lines as well. This field can also be used to switch to another activity or—if the time posting level is set to WBS—another work package specified for the project.
Work Package Code	Specifies the work package that is assigned to the WBS line to which time needs to be posted. This field is filled in automatically when a line activity is selected.
Description	Describes the activity that was performed by the resource. The description can have a maximum of 50 characters.
Project Time Comment	Stores additional remarks about the time posting.
Start Time End Time	Specifies when work on a certain activity started and ended. Filling in these fields is not required but helps employees estimate the duration of a task.
Break (Minutes)	Specifies a work break in between two time periods, in minutes. This field might be used by the system to fill in the Break and Quantity fields.
Break	Specifies a work break, in hours. This field might be used by the system to fill in the Break (Minutes) and Quantity fields.

Field	Description
	Whichever break field is filled in last will be used to determine the length of the break taken by the resource.
Quantity	Shows the quantity of work performed by the resource, in hours. This field is filled in based on start, end, and break times but can be changed manually.
Line Activity Progress %	This field is only relevant if budget lines store time spent on activities. To report the status of a line activity, a user can choose this field or the Line Activity Progress % field. Either will be sufficient for the system to fill in the Estimated Total Quantity and Estimated Total Amount fields on the selected budget line.
Billing Type	Copied from the related WBS line. This field cannot be changed manually.
Invoice Qty.	Typically, the Invoice Qty. field is filled in from the Quantity field. A different invoice quantity can only be entered if services are billed based on time and materials and the New Invoice Qty. in Time Tracking toggle is turned on in Projects Setup. Additionally, when time is posted to budget lines, the line you want to change the quantity on must be billable in full. In other words, the Billable checkbox needs to be selected on the line and the Invoice Qty. % field cannot be filled in with a value other than 100. If the time cannot be invoiced in full, the amount that you can bill will depend on the specified line activity.
Reverse Entry No.	Used to cancel a posted time entry.
Contact No.	Specifies a company contact. This field is used to analyze on a per contact basis the costs linked to sales and marketing projects, which do not require customer numbers. This field is used to analyze on a per contact basis the costs linked to sales and marketing projects that do not require customer numbers.

Additional information about the project and the activity stored on a specific journal line is available in the lower-left section of each journal. The progress and extent of time tracking on the line can be found to the right of that section.

Actions

Functions

Includes the Get Work Package function, which can be used on a journal line to fill in an activity and a reference to a WBS line.

If a project number has been entered on the journal line and the time spent on the project is tracked on budget lines, only activities assigned to the resource or to no resource at all (=general tasks) can be chosen here.

However, if the Project No. field has been left blank, the window for selecting an activity includes all activities from all projects so that staff members can find their tasks without needing to know the number of a specific project.

Selecting an activity then fills in a large part of the fields found on the journal line.

Post

Used to post the journal.

Related

Project

Choosing the Project Card action opens the card of the project that has been entered on the journal line. Choosing Ledger Entries shows the associated ledger entries.

Resources

Choosing Resource Card opens the card of the resource assigned to the journal.

Choosing Time Entries provides a user with a list of all time entries posted for a certain project.

The Budget Line Activities (Open) action, on the other hand, shows all current line activities.

Line

Used to open line-related dimensions and comments.

CTC TIME TRACKING

The time that resources spent on projects can also be recorded on CTC cards. The use of CTC (complete time capture) differs from entering hours on a time journal in the following ways:

- Internal checks prevent time postings from exceeding workday limits.
- The system calculates a resource’s number of work hours from clock-in and clock-out times before allocating these hours to projects.
- Time recording includes default breaks and absence.
- Only one CTC card is available per day and employee. Hours can be allocated on this card more than once, whereas you need to create multiple lines in a project time journal to get the same result.
- Inputs can be tracked at any time based on posted cards.
- Time entries must be released before they can be posted.

CTC Time Tracking—the main page for entering and viewing resource hours—combines unposted and posted cards in a single view. The Status field on the header indicates whether a card has or hasn’t been posted yet. The page also includes calendars with status colors to help pick the days you want to record time on.

Indicate absence

As one visual aid, you can change the color of CTC calendar days to indicate when a certain resource isn’t available.

To initialize background colors indicating absence:

1. Choose the Search icon, enter Calendar Colors, and then choose the related link.
2. On the ribbon, choose New > Initialize to have the system specify RGB color values.

Assign colors to causes of absence

After setting up the colors, you can use them to visualize causes of absence.

1. Choose the Search icon, enter Causes of Absence, and then choose the related link.
2. Select a line. In the Calendar Background Color field, choose a color.

Indicate status of time tracking

You can also visualize the status of time recording on a CTC calendar:

1. Choose the Search icon, enter Projects Setup, and then choose the related link.
2. Go to the CTC Calendar Colors FastTab and fill in the fields as described in the following table.

Field	Description
Neutral	Specify a color for days, such as Saturdays, Sundays, and holidays, on which resources aren’t available.
Posted CTC	Specify a color for days on which hours have been recorded and posted.
Released CTC	Specify a color for days on which hours have been recorded and released but have yet to be posted.
Open CTC	Specify a color for days on which hours have been entered but haven’t been released.
Missing CTC	Specify a color for days on which hours have yet to be recorded.
Outside Month	Specify a color for days that are outside the specified month.

Specify breaks

You can use one of two methods to specify CTC breaks:

1. Enter a default break on the Work-Hour Templates page.
   You can then fill in the Work-Hour Template field on a resource card to copy the break to the card and the resource’s time tracking pages. However, as the name implies, the break is no more than a default value. You can still change it on both the resource card and in time tracking.
2. Break Time Setting
   While the default break is a recording aid, the break time setting define a minimum break depending on the daily working time.

Example

Max. Work Time	Break
4	0
8	1
10	1.25

The work hours and breaks shown in the table have the following meaning:

- At up to 4 hours, a break isn’t required so no time is suggested automatically. You can specify a break manually, however.
- Working for over 4 hours but for less than 8 hours requires a break of at least 1 hour. This value is also entered automatically on every CTC card. Changing the Break field, trying to make a break smaller, results in an error message, but you can increase the length if necessary.
- Over 8 and under 10 hours, resources need to take a break of least 1.25 hours.
- Recording more than 10 hours in a workday isn’t possible.

A default break time setting is defined in the resource setup. A different break time setting can be entered on the resource card for resources that have a special break time regulation *(AZUBI)*.

Note

You can turn on the No Break Minimum toggle in Projects Setup if you want to specify breaks that are smaller than those suggested by the system.

Elements of CTC time tracking

To record time on a CTC card:

1. Choose CTC Time Tracking on the Time Recording (or Project Lead) role center. See also (CTC Card) Actions.
2. Fill in the fields as necessary.

CTC header

Field	**Description**
Resource	Specifies the number of the resource whom time is recorded for.
Description	Shows the name of the resource.
Date	Shows the workday for which time is being recorded.
Start Time	Shows when the resource started work on the specified day.
End Time	Shows when the resource left the office on the specified day.
Break (Hours)	For more information, see Specify Breaks.
Quantity	Shows the time the resource spent on project work. The value in this field is calculated based on the formula End Time minus Start Time minus Break.
Qty. Allocated	Shows the total time allocated to projects on the CTC lines.
To Allocate	Shows time not yet allocated to a project.
Status	Specifies the status of the CTC card. **Open** Card values can be changed at any time. **Released** All hours have been recorded on the card, making it available for posting.
Last Card Posted On	Shows when a card was last posted for the resource.
Cause of Absence Code	Specifies a cause of absence *(field must be unhidden)*.

CTC lines

(Nearly all fields found on project time journal lines are also available on CTC cards.)

Field	Description
Project No.	Specifies the project to which time will be posted.
Project Search	Used to find projects based on common Business Central filter criteria. This feature is meant as an alternative to drilling down on the value in the Project No. field. Projects that match the text you entered are shown as soon as you exit the field, and a project number is filled in on the journal line after you choose a project from the search results. A second dialog page shows the WBS or budget lines that you can post to. Besides numbers and letters, you can use symbols such as * and @ to limit search results. For more information about filter criteria, see Sorting, Searching, and Filtering Lists - Business Central. **Example** The filter @ *introduc* yields the following (case-insensitive) results: Introducing Business Central; Reintroduction of CRM fields Searches cover the Project No., Description, Description 2, and Search Description fields of projects.
Work Package Code	Specifies the work package to which time will be posted.
Description	Describes the activity that was performed by the resource. The description is copied to time and project ledger entries and, for projects billed by time and materials, to proof of performance documents as well.
Customer Comment Internal Comment	These fields can be used to describe the activity further. Both types of remarks are stored on comment sheets. However, whereas comments addressed to customers can be printed on proof of performance documents for projects billed based on time and materials, internal comments cannot, because their Print on Customer Doc. field is not selected.
Start Time End Time	The values in these fields indicate when work on an activity started and ended. Both are logged on time entries. The CTC line quantity is then calculated automatically from them if the CTC Time Tracking Incl. Start/End Times toggle was turned on in Projects Setup. If it was, you can also no longer edit the Quantity field manually.
Start Time (Break) End Time (Break)	These fields specify when a work break starts and ends. The values of both are also logged on time entries. The system then calculates the length of the break automatically if the values entered here are within the start and end times specified on the line and updates the Quantity field to show the actual number of work hours.
Quantity	Specifies the number of hours spent on the activity. You cannot enter a negative quantity in this field.
Line Activity Progress %	Specifies how far the line activity has progressed.
Invoice Qty.	Indicates how much of the project work can be billed to the customer. This is only a deciding factor if work can be billed based on time and materials.
Billable	With the toggle turned on, project effort can be billed to the customer. This effort is stored with the activity.
Billing Type	Copied from the WBS line. This field cannot be changed by the user.
Line Activity No.	

Field	Description
	Shows the activity number of a budget line. When filling in the Project No. field, a user can choose a budget line (=activity) if the time posting level on the related project card is set to Budget. This includes any line to which the user's resource is assigned through the Person Responsible field or the relevant resource group, unless the activity has been completed. To record time for a completed activity, the status of the activity must be set back to In Progress. After a budget line has been selected, the work package and the phase, task, and step code fields on the CTC line are filled in automatically. This means that work hours recorded by resources will be posted to not only budget lines but the associated WBS lines as well. This field can also be used to switch to another activity or—if the time posting level was set to WBS—another work package stored with the project.
Qty. to Complete	This field is only relevant to time tracking at the budget line level. To report the status of a line activity, a user can choose this field or the Line Activity Progress % field. Either will be sufficient for the system to fill in the Estimated Total Quantity and Estimated Total Amount fields on the selected budget line.
Contact No.	Specifies a company contact. This field is used to analyze on a per contact basis the costs linked to sales and marketing projects, which do not require customer numbers. By selecting the relevant option in the Contact No. for Time Tracking field in Projects Setup, you can also make it mandatory to enter a contact number for this kind of project.

FactBoxes

FactBoxes on the right side of the screen provide you with additional information about time tracking.

For example, Time Statistics indicate which services are planned for the day (week, month) according to resource capacity, how much flexitime has been entered for this day (unpaid absences), how many paid absences are registered (vacation, illness, etc.), how much working time has been booked and which services are still outstanding.

Below this section are the current, previous, and following months in calendar form. These calendars are intended to help you navigate time recording and show where resources have recorded hours and entered absence. You can select a calendar day to view or enter time-related data.

The CTC Line Info FactBox lists project and activity data regarding the line you chose on the Lines FastTab.

The Color Legend shows you what colors are being used to indicate absence and the status of time recording.

Actions Create CTC Cards

Creates multiple CTC cards with the same information, an especially useful function for specifying absence.

Release CTC Cards

Releases all completed CTC cards that match the specified filters. During this process, a check is run on all data entered on the cards. If the check fails, you see an error and any card containing incorrect information will not be released *(which means that it cannot be posted)*.

Release

Releases the current CTC card.

Reopen

Changes the current card’s status from Released to Open.

Copy to Today's Card

Copies the current CTC card to the card of today. This copies both the header and the lines and can only be used if the CTC lines of the target card are still blank.

Copy from Existing CTC Card

Works in the opposite way to the Copy to Today’s Card action, as it copies data from the card you choose to the card you’re on.

Post / Post Batch

Posts recorded and released CTC cards.

The single time entries that you can post with the first function are released *(and therefore checked)* automatically. The Post Batch function, on the other hand, can only be used on CTC cards that have already been released.

When posting a batch of cards, you can set filters on resources and periods. The resource filter is filled in with the resource assigned to you, although an administrator can adjust the setting, if needed.

You can also turn on the Release toggle to have the system release all CTC cards within the entered date filter when choosing OK on the request page. You see a message if an error is encountered during this process.

Afterward, the system will post all previously released CTC cards and those released by running the action.

Resource

Opens the card of the resource for which time is being recorded.

Unposted Cards

Opens the CTC Cards page, on which you can manage cards that haven't been posted yet.

Posted Cards

Opens the Posted CTC Cards page.

> **Note**
>
> As mentioned, CTC time tracking shows both unposted and posted cards. Typically, only administrators might need to view them on separate pages.

Cancel Posted CTC Card

Cancels a posted card and deletes project time entries assigned to it.

If the entries have already been copied to a project, the project ledger entries created from them are deleted as well. This requires that the user running the function be authorized to post project ledger entries.

Employees without this kind of permission must ask the project manager to cancel cards. Project ledger entries that have been invoiced cannot be deleted in either case.

Cancel CTC line

Cancels a single CTC line instead of all hours posted on a given day.

Before you can run the action, you need to set up a project time journal batch that will be used exclusively for these kinds of corrections. This batch cannot be assigned to a resource, which means the Resource No. field on the related Project Time Journal Batches line must remain blank.

For more information, see Project Setup | Time Tracking.

Note

As CTC cards are documents, where the values entered on the lines must match the total displayed on the header, reversing a line requires a replacement for the original posting (like a corrective entry does).

Running the function on the selected CTC line opens a new time journal filtered to the prepared reversal posting. The correction must also be entered here.

The project and work package numbers on the CTC line and the reversal entry don’t need to match; the date and the quantity, however, do.

As an example, if the time specified on the line is minus 1.5 hours, the quantity for correction must be plus 1.5 hours. If needed, you can divide up the amount and assign it to multiple entries. The one-and-a-half hours given as an example can therefore be distributed across two entries, with one hour assigned to one entry and 0.5 hours assigned to the other.

The correction must be posted before you exit the journal page. Otherwise, the system will not save the changes you’ve made so far.

The journal used to reverse time entries contains the start time, end time, and break fields from the relevant CTC line. You can also view the comments that were made about the line or enter new ones in the journal, if necessary. If you want to keep the existing notes, use the Copy Comments action on the ribbon.

After you’ve posted the reversal, a new CTC line containing a negative amount is inserted to offset the journal posting you’ve just made. Offset values to keep the line and header quantities in sync are also added.

You can only cancel CTC lines that project ledger entries haven’t been created for. The action also cannot be run if the CTC Posting As field in Projects Setup is set to something other than Time Entry, as line cancellations cannot be used to correct project ledger entries.

Project Time Entries / Project Ledger Entries

Shows the project time or project ledger entries related to the card (provided that these entries have been created for the project).

Absence Registration

Used to specify absence. You can only choose this option when you open a posted card.

Dimensions

Shows the dimensions stored on the header of a card.

Record time

To store work hours, pick a day on the calendar. This creates a new time record, that is, an unposted CTC card, automatically.

You can also use the Create CTC Cards function to create a record.

Record activities

A resource’s work hours are allocated to individual project activities on CTC lines.

To enter the activity last worked on for a project, choose Functions > Get Last Activity on the Lines FastTab. This retrieves the line activity or work package last opened by the relevant employee.

Release a record

Days on which you recorded work hours must be released before posting. Some plausibility checks are performed during that process, for example, to see if the entire CTC card quantity has been allocated on the lines.

By using this action, you can release either a single day or multiple days at once.

Post a record

Released days must be posted. You can post a single day or multiple days.

Only when you post time does the system create time entries. These are then copied to the project as project ledger entries following a review by the project manager.

> **Note**
>
> Single time entries are released automatically. The Post Batch function, on the other hand, can only be run on released CTC cards.

TIME SHEETS

Time sheets are yet another method to specify how much time a resource has spent on a project. You can record usage in time sheets in seven-day increments. Before you can work with time sheets, you need to set up the feature by registering the relevant resources and turning on the Use Time Sheets toggle on their resource cards. You also need to create new, mostly blank sheets.

To create a batch of time sheets:

1. Choose the Search icon, enter Create Time Sheets, and then choose the related link.
2. Alternatively, open a resource card. On the ribbon, choose Process > Create Time Sheets.
3. Fill in the fields as described in the following table.

Field	Description
Starting Date	Specify the first date of the batch.
No. of Weeks	Enter the number of weeks the sheets should cover.

You can then use the fields on the Filter FastTab, for example, to set up sheets for specific resources or external employees.

> **Note**
>
> Time sheets can only be created by a user for whom the Time Sheet Administrator checkbox has been selected in User Setup.

To see the newly created sheets, choose the Search function, enter project365 Time Sheet List, and then choose the related link.

Like a CTC card, a time sheet can only be viewed by the resource linked to the sheet unless the Other Res. in Time Tracking toggle is turned on for a user in User Setup. After the sheets have been created, you can report work hours on a weekly basis:

1. Open the project365 Time Sheet List, select your sheet, and enter the work hours on the lines related to the current calendar week.
2. When all hours have been entered, choose Submit to release them for posting.

The time you recorded is then converted into time entries, which can be done on a regular basis by using a job queue. If the status of an entry is set to Submitted but the line hasn't been posted—that is, it isn't yet part of the Project Time Entries Created—you can still reset the status to make changes to a work package, a line activity, or a quantity.

You can choose Budget Line Activities (Open) on the ribbon to see a list of unposted line activities assigned to the current resource. This doesn't include line activities for resource groups, however.

To copy all the lines from the previous week, use the Copy Lines from Previous Time Sheet action. You can do this week by week.

To add comments to a record, fill in the text fields next to the Quantity field on a line. This ensures that the data record is assigned to the correct time entry when you post the line. The comments can also later be used on a proof of performance document sent to the customer.

Related

If you want to see a list of all project ledger entries related to a time sheet line, select the line and, on the ribbon, choose Related > Ledger Entries.

To open the related resource card or see more information about time entries stored on the line (like on a CTC card), choose Related > Resources > Time Entries.

Lines

To retrieve a work package, choose Line > Get Work Package on the Lines FastTab. You can now select a package from all work packages set up for the resource or the related resource group.

PROJECT TIME ENTRIES

Time entries are created automatically when you record hours spent on a project (in whichever way possible).

> **Note**
>
> You can use the CTC Posting As and Time Sheet Posting As fields in Projects Setup if you want to post project ledger entries instead of time entries or post both at the same time.

Initially, the entries don’t affect project usage but represent the hours committed to a project. Times recorded but not posted can later be analyzed, for example, in cost control.

Usage is generated only when you copy time entries to a project journal and post them there (see also Project Journals).

Important fields

See the following table for a more detailed explanation of the key fields found on the Project Time Entries page.

One option for viewing the page is to open a project and choose Related > History > Project Time Entries on the ribbon.

Field	Description
Posting Date	The date in this field corresponds to the date of performance.
System Date	Shows the exact date and time the entry was posted. Helps to see with what delay (if any) hours are recorded in the system.
Resource No.	Specifies the resource whom time entries were posted for.
Start Time End Time	Only filled in if hours were entered with start and end times.
Project No.	Specifies the project that time was recorded for.
Work Package Code	You always post time entries to lines on an active WBS. To which line the entry is assigned is shown in the Project No., the Work Package Code, and the Phase, Task, and Step Code fields.
Line Activity No.	Specifies a budget line activity if an entry was posted to a project at budget line level.
Reversed	Selected if the time entry has been cancelled.
Reverse Entry No.	Shows the associated reversal entry if the time entry has been cancelled. The reversal entry, on the other hand, will reference this entry.
Qty. (Base)	Time is always recorded in the base unit of measure assigned to the relevant resource. With the most common unit in this context being hours, this field typically shows the hours worked.
Invoice Qty. (Base)	Frequently corresponds to the value in the Quantity (Base) field. Only if you post a line activity that you want to bill based on time and materials and the Invoice Qty. % is not 100 does the value in this field differ from the value in the Quantity (Base) field.
Copied to Project	Indicates if the time entry has been copied to a project journal and posted there. After the entry has been posted, it can no longer be copied to another journal, even if the project that it was posted to contains only part of the quantity assigned to the entry.
Copied to Project (Date)	Shows the exact date and time the entry was posted to a project.
Copied to Project (Ledger Entry No.)	Specifies the project ledger entry that was created when you copied the time entry to a project. This field ensures that the project ledger entry assigned to the time entry is deleted if you cancel the latter.
Qty. Copied to Project	Typically, when a time entry is copied to a journal, the complete quantity entered for it is retrieved automatically. If necessary, however, you can track changes to the journal quantity by comparing the value in this and the value in the Quantity (Base) field.
Total Cost (LCY)	This amount is relevant to measuring the time committed to projects. **Note** When you copy time entries to a project journal, the total cost will be recalculated.
Comments	Indicates if comments exist for the entry. You can store these when recording work hours. You can also have them printed on proof of performance documents.
Contact No.	Shows the contact number entered during time recording.

Field	Description
	This field is used to analyze on a per contact basis the costs linked to sales and marketing projects, which do not require customer numbers.

Actions

The following functions can be run from the Project Time Entries page.

Comments

Opens the comment sheet used for project time entries.

You can enter comments when you record hours in the system. You can also change them if necessary.

These comments will later be copied to the project ledger entry comments and to proof of performance documents.

Cancel Entries

Prepares time entries for cancellation.

When the action is run, a cancellation line (with a negative quantity) is inserted into the relevant resource's time journal while the journal is opened so that the reversal can be posted immediately.

To prepare a single entry for reversal, you can also fill in the Cancellation Entry No. field and use the Cancel Entries function to add a line with a negative quantity.

Time entries can likewise be cancelled by using the relevant function on a CTC card or in time sheets.

> **Note**
>
> When you cancel a time entry that has already been copied to a project, the ledger entry linked to the time entry is deleted as well. You can, however, only delete entries that haven't been invoiced yet. You also require the delete permission.

If (for either reason) you cannot post a cancellation, you need to clear the reference to the project ledger entry in the time journal. This turns the reversal entry into a simple correction posting that doesn't cancel the time entry.

The quantity and value of both entries are the same whichever method is used. The difference is that cancellation links the entry you want to reverse to the cancellation fields in the system.

Cancelled time entries also aren't copied to project journals and, if they've already been turned into project ledger entries, the ledger entries are cancelled as well.

MONITOR TIME ENTRIES

The following ease-of-use reports are available to either resources or time managers for checking time entries in the system.

Project Time Check

If run from the Time Recording role center, this report is already filtered to the user who opened it and you're asked about the month you want to check time entries for.

Afterward, the system opens the report request page, where you can see how entries are filtered in general (=per user and per month).

Choosing Print or Preview & Close then creates a table that lists all posted and unposted hours recorded for project tasks and for absence on each day of the week.

The Total Quantity field on the document shows the sum of all hours recorded on a certain day. The comparison of this value to the expected (daily) capacity results in the difference shown in the Variance field.

At the bottom of the report, you can see a total line and flextime information, if available—for more details, see Set Up Time Summaries (Flextime).

Proof of Performance

When run from the Time Recording role center, this report is also filtered to the user who opened it and you’re again asked about the month you want to create a document for.

Prior to this request, you can choose the project for which you want to issue a proof of performance document.

You can then run the report from the request page to see the hours you spent on a project on different days, together with information on the work package and the activity they were posted to. The total hours are shown at the bottom of the document.

The report can also be filtered to multiple resources. In this case, one list and subtotal are created per resource and the sum of all resource hours recorded for the project in the specified period is displayed at the bottom.

Resource Capacity/CTC List

This special analysis is used to compare resource capacity to CTC values.

The report supports you in checking whether CTC cards have been posted for a certain workday or, at the very least, if they’ve been released already.

It does not provide you with information about how many hours were actually posted and if these were above or below the hours expected on a certain day.

The report only checks if a certain CTC card exists, if quantities are missing on CTC lines, that is, whether some hours haven’t been worked yet, and if the time entries recorded on the card have been released or posted.

When a CTC card is released or when absence is registered for a day on which time was supposed to be recorded for on the card, that day is deleted from the list.

The purpose of this report is to give an overview of which workdays (days with available capacity) time has not been fully entered on or absence has yet to be registered for.

PROJECT JOURNALS

Project time journals, CTC cards, and time sheets are all used to record how many hours have been spent on project work.

To ensure that the correct number of hours is allocated to each project—or, more specifically, that time entries are stored in the project ledger—the time recorded must be posted through a project journal.

Although this journal is used to post all kinds of entries, including those that cover the use of material taken from a warehouse, the following paragraphs will focus on posting project time only.

To retrieve the hours spent but not yet added as project ledger entries:

1. Choose the Search icon, enter Project Journals, and then choose the related link.
2. Select a journal. On the ribbon, choose Home > Get Project Time Entries.
3. Set the filters on the request page as needed.

Typically, as a project lead, you only retrieve time recorded by resources under your management. You can do this by looking at the time entries for a specific project only or by using the Person Responsible filter on the request page.

Another option—which ensures a smooth workflow for those in charge of both invoicing and approval—is to fill in the Responsible for Billing field on the page.

You can also turn on the Check by Time Manager toggle in Projects Setup and specify for each resource a time manager and a fill-in. Either can then use the Time Manager filter in a project journal to see and change the times that have been entered by resources they’re responsible for.

Following approval, the journal is filled in with the required time data, and one journal line is set up for every time entry within the specified filters.

Among the data filled in are the Quantity *(=the amount of work performed)* and the Invoice Qty. Although these values are often identical, the invoice quantity can be changed when a service is billed by time and materials.

If it is, the Manual Invoice Qty. field is automatically selected on the line. This field is also selected if the invoice quantity was changed earlier—either by the person recording time or by their manager in the Invoice Qty. % field found on the budget line that the resource’s hours are posted to—and the new quantity is copied to the project journal.

Journal lines where the quantity and invoice quantity don’t match are marked in another color, and the difference between them is shown in the Invoice Qty. Variance field.

If the Confirm Invoice Qty. Variance toggle is turned on in Projects Setup, you need to release project journal lines with this kind of value difference prior to posting by selecting them and running the Confirm Qty. Variance-Multiple action from the ribbon.

Line values that aren’t supposed to differ from each other must be changed manually on each affected line. On lines that are set to No Billing, the values always differ *(the Invoice Qty. being 0)*, which means these lines are released automatically.

When everything is filled in as needed, you can choose Post on the ribbon to have the system create project ledger entries for all lines and clear the journal.

EXTRA PAY

Holidays and weekends

For holiday and weekend shifts, you can specify premiums that are calculated when resources record their hours worked in time sheets, on CTC cards, or in time journals but which have an impact only after the time entered is copied to a project journal.

More specifically, a second batch of project ledger entries is created to cover extra pay when time entries are released and posted through a project journal so that the premiums are available for billing.

> **Note**
>
> Premiums and on-call or standby pay can only be used for entries that are posted in time tracking and through a project journal as project ledger entries.

Setup Premium types

1. Choose the Search icon, enter Premium Types and Standby/On-Call Pay, and then choose the related link.
2. On the page, create a line for every type of premium that you want to set up, and then fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the premium. The code must be unique.
Description	Enter a description for the code, if necessary.
Invoice Qty. Factor	Specify the factor that the quantity to bill should be multiplied with. A factor of 1.5 translates into 50% extra pay. **Example** On the weekend, a resource posts 4 hours of worktime (Invoice Qty. = 4), the premium being an extra quantity of 2. Therefore, 6 hours will be billed to the customer. **Note** The unit prices for premium entries are the same as for their source entries.
Unit Cost Factor	Specify the factor that the unit cost should be multiplied with. A factor of 1.5 translates into 50% extra pay. **Example** On the weekend, a total of 4 hours is posted at a standard unit cost of USD50 an hour = USD200. The premium entry has a cost of USD25 per hour so that the cost of the work performed amounts to USD200 + (4 * USD25) = USD300.
Premium Type Description	Enter a description that will be copied to all project ledger entries set up for the premium and to proof of performance documents.
Type	Specify if the premium is paid for work on weekends or holidays or for on-call or standby duty.
Style	Choose a style if you want to set apart lines containing the premium from the rest of the project journal lines.

project365 base calender

Following the creation of different kinds of premiums, you also need to specify on a certain resource’s calendar (or the shared calendar stored in Resource Setup, at least) the days on which staff members typically do not work and the premiums that are paid when they do.

1. Choose the Search icon, enter project365 Base Calendar, and then choose the related link.
2. Select a calendar, and then choose Maintain Base Calendar Changes on the ribbon.
3. In the Premium Type Code, select the kind of premium that you want to use when times are posted to the day specified on the line.

Time tracking Project journal

When time entries are copied to a project journal, the entries that premiums must be used for are marked in color (see Setup).

The only difference between these and other time tracking lines is the added premium type. Project leads can remove premiums they don’t agree with and post the entries without them.

Additionally, entries of type Premium can be replaced, or they can be entered on lines where none exist yet. You cannot change or add an entry of type On-Call or Standby, however, as this kind of extra pay comes with different requirements

Premium entries

When hours that premiums have been added to are posted in a project journal, the system creates two project ledger entries, one for the actual hours worked and another for the premium. Both are linked and show the same posting date and project number, as well as the same work package or budget line.

The entry created for the premium is treated as a value correction. This means that the Value Correction checkbox is selected on the entry, whereas the Quantity field isn't filled in. Only the Invoice Qty. is entered, as the value in this field is later used when billing the project.

The value correction (unit cost) and the invoice quantity are determined based on the factor specified on the Premium Types and Standby/On-Call Pay page. The unit price for the premium and the source entry are identical. Additionally, the text you entered in the Premium Type Description field is also retrieved.

On-call and standby times

Standby means that employees must be available to work and cannot use the time they're in that status for other purposes. When they're on-call, they can—unless they're needed.

Standby counts as worktime, on-call (typically) does not. This means that the time an employee is on-call isn't included in the quantity worked. Only if the employee is needed during on-call hours will the time be counted and posted in the same way as regular worktime.

Setup On call and standby

1. Choose the Search icon, enter Premium Types and Standby/On-Call Pay, and then choose the related link.
2. On the page, create a line for every type of premium that you want to set up, and then fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the premium. The code must be unique.
Description	Enter a description for the code, if necessary.
Invoice Qty. Factor	Specify the factor that the quantity to bill should be multiplied with. A factor of 1.5 translates into 50% extra pay. **Example** A resource posts 4 hours of worktime (Quantity = 4). The quantity to bill might then be 6 because of 50% extra pay (factor 1.5). However, a premium of 0 is also possible, depending on whether the time recorded is specified as on-call or standby. In the latter case, the factor remains at 1.0 and the line quantity and invoice quantity will be identical.
Unit Cost Factor	Specify the factor that the unit cost should be multiplied with. A factor of 1.5 translates into 50% extra pay. **Example** A total of 4 hours is posted at a standard unit cost of USD50 an hour = USD200. The premium entry has a cost of USD25 per hour so that the cost of the work performed amounts to USD200 + (4 * USD25) = USD300. However, a premium of 0 is also possible, depending on whether the time recorded is specified as on-call or standby. In the latter case, the factor remains at 1.0 and the line quantity and invoice quantity will be identical. See also Unit Cost.
Premium Type Description	This field remains blank, as no additional ledger entries are created.
Type	You can choose between Standby or On-Call (for the differences between those two options, see above).
Style	Choose a style if you want to set apart lines containing the premium from the rest of the project journal lines.

Work packages

On-call and standby times are posted to special work packages. For each type of extra pay, another work package is needed. Every project that time is posted to must also have this package entered on its WBS.

Work types and sales prices

The work package that you choose determines the work type of the entry. This type, in turn, is then used to calculate the unit cost per hour. You need different work types for differing unit prices, and each work type also requires special prices for both on-call and standby duty.

Unit cost

You can specify unit costs per work type. For on-call duty, which doesn’t count as worktime, you can enter a unit cost of $0.00 so that the time recorded for it doesn’t add costs to your project.

Time tracking

The process of recording hours for on-call or standby duty is the same as for entering regular worktime in the system, the only difference being that a work package must be selected for the former.

Time entries

In contrast to standby time, on-call duty doesn’t count as worktime so that the Qty. field on entries specified as on-call remains blank. Only the Invoice Qty. is filled in. To be able to see the time a resource spent on-call, a field called On-Call Qty. was added to time sheets, cards, and journals. A work package code is also entered in the Premium Type Code field of each on-call entry.

Project journal

When time entries are copied to a project journal, the entries that premiums must be used for are marked in color (see Setup).

You can see the factor specified for an entry in the Invoice Qty. or the Unit Cost field on the relevant project journal line. This is because—in contrast to holiday and weekend premiums—extra pay for being on-call or on standby doesn’t lead to additional project ledger entries in the system.

The sales price for an entry is copied automatically from the price table that is assigned to the specified work type.

For on-call duty, the hours worked are copied from the On-Call Qty. field on the entry.

Project ledger entries

On-call or standby entries don’t differ much from other time entries, except for their filled-in Premium Type Code fields.

BUSINESS REGISTRATION CERTIFICATES

A Freistellungsbescheinigung (often translated as a certificate of exemption) was introduced by the German government to combat tax evasion, especially in the construction sector.

This business registration certificate is issued pursuant to Section 48b of the German Income Tax Act and provides proof that a subcontractor pays its fair share of taxes.

If the certificate hasn’t been made available, companies doing business with the subcontractor will be required by law to withhold 15% of all invoice totals to cover potential tax liabilities.

You can open a vendor card to check the status of registration based on the following (purely informational) fields:

Field	Description
Business Registration Certificate	Shows if a certificate is available.
Registration Certificate Valid Until	Shows how long the certificate remains valid.

You'll be notified if this kind of certificate is needed but hasn’t been provided yet when you enter a vendor on a purchase document.

EXTERNAL RESOURCES

Set up an external resource

External resources can be procured through purchase documents.

All external resources require a vendor for billing services. This vendor might be a staffing agency, for example. For a freelancer, you need to register both a resource and a vendor and link them to each other.

When you later enter the resource on the budget line of a project, the associated vendor is also copied to the line. This way, you can have the system calculate unit costs for the resource-vendor combination and use the vendor to create purchase orders from the budget.

External resources can have unit costs, unit prices, project-specific resource prices, and purchase prices. In contrast to standard unit costs, prices and costs set up this way are always tied to a certain vendor, that is, the relevant vendor is retrieved when you procure the external resource or include the resource in a budget.

If no unit cost is stored with the vendor, a unit cost is copied from the standard Unit Cost table. If no suitable cost is found there either, the required value is copied from the associated resource card.

If you have a specific group of external workers in mind when you start working on a project, we recommend that you set up a resource for each of them and assign a vendor, costs, and prices right away.

For external resources who record time like employees, you need to turn on the Use Purch. Invoice Entries toggle on their resource cards. This will create invoice entries for them during billing so that projects aren’t posted to twice.

Procure a resource

You purchase a resource in the same way as you do items:

1. Open the WBS of a project.
2. On the ribbon, choose New > Create Purchase Document.
3. Fill in the fields as necessary.

This copies the resource to a requisition worksheet or a purchase order.

You can also create a purchase document manually. In this case, you need to enter the relevant project number on individual document lines (if you’ve entered the number on the header, it is copied to new lines automatically) and use the Get Work Package function to copy the number to a WBS line or a budget line, depending on the Purchase Posting Level specified for the project.

Choose Yes on the dialog page that appears if you also want the description of the resource copied from the WBS or budget line. If you choose No, the system will retain the description that you entered on the purchase line.

Typically, you would then post consumption from a purchase order when items have been received by adding their quantities and prices to the project. In the case of external resources, however, the services rendered are often posted with receipt of a bill.

If, on the other hand, you want to post the acceptance of services immediately—that is, post project usage before you get a bill—and the bill shows a different unit cost for the external resource, the project ledger entries created from the resource’s time postings are adjusted automatically based on how much you need to pay.

Distribute purchased work

Typically, the system creates one project ledger entry for each posted purchase line or purchase invoice line related to a project. Sometimes, however, you might want to post project expenses at a more granular level.

With the project distribution feature, you can, for example, distribute WBS line quantities onto multiple budget lines without having to list every little aspect on the associated purchase document. This way, you can keep detailed project posting information handy while streamlining your document.

When you use the distribution feature, you must always distribute the entire quantity; otherwise, you cannot post the document. You’ll see a message if not everything has been allocated yet.

You can distribute a quantity on different WBS lines of the same project at the level of the work breakdown structure or its budget lines.

Track resource costs

Like other resources, an external resource can post hours in a time journal. This isn’t a requirement; a purchase invoice that lists the hours worked would be enough.

However, because a considerable amount of time might pass before the hours are billed, you might run into problems when trying to invoice your own customers. For this reason, we recommend that external resources post their times immediately.

To avoid a situation in which expenses are posted to a project twice, the invoice you get from an external resource will later be applied to the project ledger entries created from the resource’s time journal.

Purchase invoices and invoice entries

When you post invoices for hours recorded by an external resource, you must apply the project ledger entries posted so far to prevent billing a customer twice for the same work (once because of the time entries and once due to the invoice). If the resource doesn't post time, application isn't needed.

To prevent the posting of invoices without invoice entries (which have already been recorded as time entries), you must turn on the Use Purch. Invoice Entries toggle on the relevant resource card. After turning on the toggle, you can post neither receipts nor invoices without these entries, and an error message appears if you try to do so.

Receipts and invoices are then posted in one go. Should you want to separate them, you need to assign invoice entries with the delivery of services. Otherwise, project ledger entries will be posted as always.

Example:

An external resource uses a time journal to record a total of 6 hours. These hours are then posted to a project through its project journal.

To settle the amount that you now owe the external service provider, you proceed by creating a purchase invoice from the project and entering 6 in a Qty. to Receive field on a line. You also check if the Line Amount excl. VAT field there shows the correct value.

Afterward, you choose Line > Purch. Invoice Entries (on the Lines FastTab) to assign invoice entries to the line. This opens a new page on which you select the resource's unapplied project ledger entries and choose Add Entries on the ribbon.

You then choose OK to copy the ledger entries to the purchase line. The invoice entry totals and the Qty. to Receive field values from the line can now be seen in a FactBox on the right-hand side of the Purchase Invoice page.

A difference in these amounts means that there's something wrong with either the direct unit cost on the purchase line or the unit cost on the resource card. If you don't see an error message, you can start posting corrections to quantities or project ledger entries, or both.

Note

For technical reasons, deleting one or more invoice entries will not update the totals on a purchase line. Instead, you need to run the Update Totals function. All totals are also updated when you reopen the invoice page or add project ledger entries.

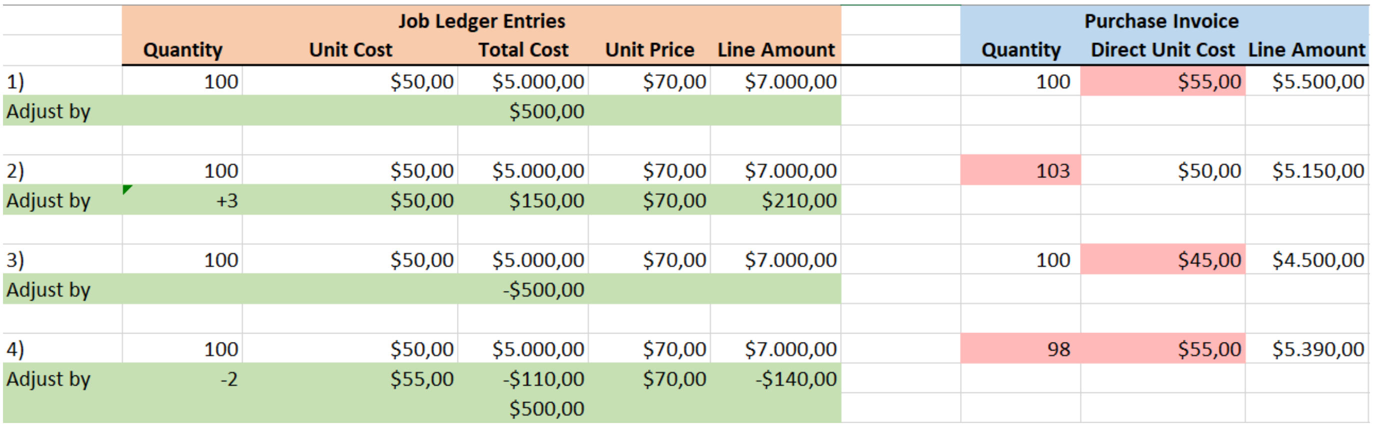
Value or quantity corrections, or both, are only made when you post an invoice. The corrections are documented on a purchase line in the Correction Project Amount (LCY) and Project Qty. Correction fields. After you posted updates to values or quantities and acceptance of the services, project ledger entries can no longer be added to the invoice.

You can post multiple receipts to a single purchase order to gather invoice entries in one place. When you later post a bill for the order, the Qty. to Invoice must match the combined value of the Qty. to Receive and the Qty. Received fields.

You cannot post partial invoices for the services you accepted, as you cannot assign invoice entries from a purchase line to more than one invoice. The same is true for a correction you make to an entry.

Post corrections

Because of the use of invoice entries for bills received from external resources, you typically only need to post a project ledger entry if you want to make a value or quantity adjustment. The following list shows what this kind of adjustment might look like.



	Job Ledger Entries						Purchase Invoice		
	Quantity	Unit Cost	Total Cost	Unit Price	Line Amount		Quantity	Direct Unit Cost	Line Amount
1)	100	$50,00	$5.000,00	$70,00	$7.000,00		100	$55,00	$5.500,00
Adjust by			$500,00						
2)	100	$50,00	$5.000,00	$70,00	$7.000,00		103	$50,00	$5.150,00
Adjust by	+3	$50,00	$150,00	$70,00	$210,00				
3)	100	$50,00	$5.000,00	$70,00	$7.000,00		100	$45,00	$4.500,00
Adjust by			-$500,00						
4)	100	$50,00	$5.000,00	$70,00	$7.000,00		98	$55,00	$5.390,00
Adjust by	-2	$55,00	-$110,00	$70,00	-$140,00				
			$500,00						

Adjust quantities

You post quantity corrections as if you were posting project ledger entries to a purchase invoice without invoice entries. This means that a change in quantity and a change in value always go hand in hand.

Adjust values

Value adjustments are also posted as project ledger entries but without a quantity. This adjusts unit costs in a project without changing the quantity or even the invoice quantity. You can easily spot project ledger entries adjusted in this way by checking if their Value Correction checkbox has been selected.

COST OF MATERIALS

Besides resources, a project might also require materials. Their costs are added to a project when you order items for it. Whereas you use WBS or budget lines to specify and meet item demand, you usually replenish inventory via the supply chain functionality.

However, you can also fill in a project number on a purchase line to purchase items for a project but not add them to inventory. The items are then consumed immediately as you post their purchase.

Project Purchase Incl. Inventory

To decouple inventory management from item consumption, you need to turn on the Project Purchase Incl. Inventory Management toggle in Projects Setup.

With the toggle turned on, items are added to inventory as you post their receipt but aren’t consumed right away. You must use a project shipment to do so manually.

To link inventory items to budget lines, you can use the Create Purchase Document function on a WBS. Alternatively, you can create a purchase order during a planning run and select the Reorder Qty. replenishment method for each item you require.

Both methods will assign items to the project budget through order tracking entries and the Project No., Work Package, Phase Code, Task Code, and Step Code fields.

Manual and automated reordering

The requisition worksheet feature integrated into Microsoft Dynamics 365 Business Central[1] provides you with a multitude of options for estimating item demand. Based on how you set up supply chain and inventory management, a requisition worksheet can then be used to calculate demand for an item and suggest a reorder quantity to you.

Requisition worksheets, however, typically ignore demand that goes directly to projects. To change the behavior of the app and include project materials, you can use either the Requisition checkbox on budget lines or the Create Purchase Document function on a work breakdown structure. The drawback of the function is that it doesn’t check stock or order levels but only informs about them.

As using both options for project management might lead to purchases being made twice, we recommend you stick to one of them for projects. If a decision on this can’t be made right away, you should at least clear the Requisition fields on budget lines from which you want to order manually.

Automated reorder process

Automated ordering uses the Requisition checkbox on WBS lines to budget demand for items ordered through worksheets. To automate ordering:

1. Choose the Search icon, enter Requisition Worksheets, and then choose the related link.
2. On the ribbon, choose Calculate Plan.
3. On the Options tab, fill in the Starting and Ending Date fields. The worksheet will ignore demand outside the planning window.
4. Fill in the Use Forecast field if you want a plan that already includes data about demand.
5. Fill in the Exclude Forecast Before field if you don’t want to include demand created before a specified date.

A worksheet you create in this way will then include all items that you entered on the budget lines set up for a project, but only if the lines are part of on active WBS and if the Requisition checkbox was selected on all of them. All related WBS lines must be set to Open as well.

Be aware that a worksheet also retrieves the settings you made on item cards. If the item you want to reorder wasn’t specified well enough there, demand for it might not be estimated correctly or even not at all.

To create a purchase order from a line on the requisition worksheet, choose Process > Carry Out Action Message. To print the order, turn on the Print Orders toggle.

Manual orders (Action: Create Purchase Document)

As an alternative, you can create certain purchase documents directly from a work breakdown structure. To bypass automated ordering, open a WBS and choose New > Create Purchase Document on the ribbon.

You can then fill in the filter fields on the request page. For the type filter, you can select Resource, Item, or G/L account (unless you’ve already specified a default filter in Projects Setup), and in the Document Type field, you can choose Quote, Order, Requisition, or Purchase Request. Afterward, you need to ensure that the Buy-from Vendor No. field is filled in on the lines. For item lines, the default vendor is entered automatically but can be changed if necessary.

On the Default Shipping Address in Purchase field you can specify the address to which the delivery should be made. The following options are available to you:

Default (Company Address)
No separate delivery address is entered in the purchasing document, so that deliveries are made to the client address from the Company Information.

Location
The delivery address of the corresponding location is specified in the purchasing document. This means that the function separates the purchasing documents according to the different locations.

Ship-To Project Address
The delivery address of the project is entered in the purchasing document.

The system then suggests the budgeted quantity minus the quantity ordered or consumed as the quantity that you need to reorder. For a better overview, you can also see all quote, order, and requisition line quantities associated with the line here, as well as the quantities received or used.

If you want to copy only a certain number of lines, you must select the Copy to Purchase field at the beginning of each line you want to include in the transfer. You can also select the Copy Budget Text to Purch. field on them to copy text entered on budget lines to the new document.

You can then choose OK to create the purchase document.

Purchase requests

A purchase request can be considered a pre-procurement document. You can use this feature—as a project lead—to send a request for items, G/L accounts, or external resources to your organization’s procurement department.

Note

You need a valid license to work with purchase requests. You must also turn on the Purchase Request toggle in KUMAVISION Module Setup.

Note

This article describes the purchase request extension developed for KUMAVISION project365. For general information on how to set up requests and how they work, see the Purchase Request section.

Pseudo items as used on requests in KUMAVISION base (Booster) are currently not supported by project budget functionality.

Projects Setup

Besides general purchase request setup, you can specify a workflow code that will be used exclusively for requests in KUMAVISION project365.

1. Choose the Search icon, enter Projects Setup, and then choose the related link.
2. On the Manufacturing and Warehouse FastTab, fill in the following field:

Field	Description
Purchase Request Workflow Code	You must fill in this field if want to work with purchase request. When you create a request from a project, the value in this field is then filled in automatically. For more information, see Create a Request.

Create a request

To create a purchase request for a project:

1. Open a project.
2. On the ribbon, choose Project > WBS.
3. Select the line for which you want to create a request.
4. On the ribbon, choose Create Purchase Document.
5. Choose Purchase Request in the Document Type field on the header.
6. Select the Copy to Purchase field on the budget lines that you want to transfer to a new request.

You can see in the Qty. on Purch. Request field on each line the quantity that has already been copied to purchase requests. The value in this field doesn’t automatically reduce the quantity suggested for purchase, as requests aren’t tied to standard procurement processes.

After selecting the relevant budget lines, choose OK to link the request to the current project and the request lines to the budget lines.

You can find a list of all requests associated with the project by choosing Related > Documents on the ribbon.

When the request is approved, the purchase lines created from it will be linked to the same budget lines as those included earlier.

Transfer orders

You can move items from one location to another by creating a transfer order. These orders are mostly used if the replenishment method for inventory is set to Transfer.

In KUMAVISION project365, you can move an item on a project budget line from the default location set up in the system to a location that is assigned to the project (or, more specifically, to the line itself).

An item that is moved to a project location will be reserved for the line that it has been assigned to, as specified for the moved item entry in the Project No., Work Package Code, and Line Activity No. fields.

As a result, you can post consumption of the item only on this one budget line. See the following articles for more information on transfer orders:

- Moving Items
- Transfer Inventory Between Locations

Create a transfer

To create a transfer order:

1. Open a project.
2. On the ribbon, choose Project > WBS.
3. Select the line for which you want to create a transfer order.
4. On the ribbon, choose Create Transfer Document.
5. Select the Copy to Transfer field on the budget lines that you want to transfer to a new order.

The following fields on each line are of great import here.

Field	**Description**
Location Code	Shows the location specified on the project budget line. This location represents the target site for the transfer (=project location).
Transfer-from Code	Shows the place from where items should be moved. This code is copied automatically from a stockkeeping unit if the item replenishment method has been set to Transfer. Otherwise, you need to choose a code manually.

What will be transferred is the Order Quantity on a line, which is calculated in the same way as for the Create Purchase Document action. The value in the Order Quantity field is only a suggestion and can be changed if necessary.

The other fields on the page used for the Create Transfer Document function can provide you with information about, for example, the quantities budgeted and consumed, and the following transfer-related values.

Field	**Description**
Outstd. Qty. on Transfer Order (Base)	Indicates the quantity that will remain after you posted the transfer.
Project Inventory (Base)	When a transfer order has been fully posted (shipped and received), shows the quantity moved as project inventory (that is, the quantity reserved for the selected project budget line).
General Project Inventory (Base)	Contrary to the previous field, shows all reserved inventory at the location. If necessary, you can delete a project reference from inventory (see Delete Item Entry Reference).
Inventory	Shows the total stock at the selected location, regardless of whether it has been reserved for projects (=project inventory).

To get a quick overview of what items must be moved, the page only shows transfer-related budget lines. These lines must have:

1. A stockkeeping unit for this item and location with the Transfer replenishment method.
2. An item quantity that isn’t part of a transfer order.

A budget line isn't suggested if the quantity specified on it is already part of a transfer order, has been moved to project inventory—as might be indicated in the Project Inventory (Base) field—or has been consumed (from inventory).

For an unfiltered view on all budget lines, you can turn on the following toggles on the Create Transfer Doc. From WBS page.

Toggle	Description
Show Items If No Order Qty.	Also shows items that have been fully consumed, have been moved, or are about to be moved so that you can request additional transfers, for example.
Show Items If No SKU	Also shows budget lines with items that have not been set up for transfer or have no stockkeeping units.

Take from inventory

You can use the (Inventory) Take action to transfer available (unreserved) item inventory to budget lines. Inventory that has already been assigned to a project can be identified by the project number stored for the relevant item entry.

On budget lines, the function is called Inventory Take and takes out items for a selected line. On planning worksheets, you can only start the function for a line assigned to a project budget.

When you run the action, you'll see the project inventory available at line level and a list of all unreserved, positive, and unassigned item entries that are linked to the location specified on the line. On this list, you can then enter per item entry the quantity that you want to take out of inventory—provided it doesn't exceed the number of items left on the line. You can also clear the Project No. filter if you want to transfer items from other projects.

When you close the page, you're asked to confirm that you want to transfer the selected items. Choose Yes to move the quantities to project inventory and assign them directly to the project (or, more specifically, the budget line) through a project reference on the item entries created by the function.

Afterward, you need to use a project shipment to post consumption. Only then will the item be taken from the location and consumed.

Note

The result of the Transfer Order and Project Take functions is the same. Both create item entries that are directly linked to a budget line so that consumption can be posted only on that line.

The difference is that the Inventory Take function uses entries that are already at the location they're supposed to be (the location specified on the relevant budget line), whereas transfer orders retrieve items from another location.

Stock commitment

As explained earlier, items can be linked to a project in multiple ways, for example, via project purchase, inventory removal, or transfer from one location to another.

Their value entries make up what is known as stock commitment in the app. It indicates inventory that, for all intents and purposes, has been put aside for a specific project and is shown as a flow field quantity at WBS and budget line level, as well as on the project card.

You can track reductions and increases in these kinds of reservations by using the lookup next to a commitment field. This way, you can see how the quantity committed to a project has changed with each inventory-related posting *(such as when you post a purchase receipt and later adjust the purchase price of the items on the associated invoice)*.

When you delete a project reference, you might also have to delete the reservation associated with the project. Otherwise, you see an error message that not enough inventory is available. Afterward, you can delete the reference and transfer the quantity remaining on the project. Because of the transfer, the stock commitment field is also cleared, as the value entry linked to the item is no longer related to a project.

Delete a reference to a project

When an item is moved via transfer order or taken out of inventory, the system creates at the target location (=line-specific project inventory) an item entry based on this transfer or removal and includes a reference to the relevant budget line (by filling in the Project No., Work Package Code, Phase Code, Task Code, Step Code, and Line Activity No. fields). The entry can then be viewed on the budget line in the Project Inventory (Base) field.

> **Note**
>
> The same is true for project purchases without immediate consumption (Project Purchase Incl. Inventory).

Should you determine that reserved project inventory is no longer needed, you can transfer the remaining quantity to item ledger entries without a project reference.

> **Note**
>
> If a project reference is created by a purchase receipt that isn't consumed immediately, an error message appears, and you cannot delete the reference before you invoice the receipt. You then need to post the invoice or move the item to general inventory.

> **Warning**
>
> Besides a relation to a project, an item ledger entry might also be linked to reservation entries on a budget line. In this case, you can delete the reference only after you've manually deleted those entries.

This will clear any project reference and make the inventory accessible again.

Instant Consumption Posting (purchases)

As explained under Project Purchase Incl. Inventory, purchased materials are consumed immediately if you turned on the toggle with the same name in Projects Setup.

If the toggle is turned off, you must use the Post action on a purchase order for this.

When a receipt is posted, consumption is then posted as well. In inventory, a positive adjustment is made at the same time, and the item that you received is posted to the project instantaneously.

For correct posting, the Vendor Receipt No. and Vendor Invoice No. must be filled in, and the order must have been released.

PROJECT DOCUMENTS

The following documents can help make posting consumption to projects faster and easier to track.

Project shipments

Project shipments, or, more specifically, shipping notes, offer your customers more information about the goods and services you deliver to them. They're often made for projects that aren't linked to specific sales orders.

You can create shipping notes in one of two ways. To create a note manually:

1. Go to your role center.
2. Choose Project Documents > Project Shipments at the top of the page.
3. On the ribbon, choose New, and then fill in the lines.

The manual creation of shipping notes is very time consuming and prone to errors. We recommend that you only use this method for editing and instead create new notes by running the Create Project Shipment action from a work breakdown structure.

This action shows you all budget lines of the active WBS. Select the Copy to Project Shipment checkbox on each line that you want to transfer to the new shipment, and then choose OK.

Afterward, you see a message that the shipment has been created and you can open the document immediately.

Like on purchase and sales documents, you can add standard and extended texts at the beginning and the end of a note.

Posting a shipment creates time entries and, if the project includes items, item picks and project usage *(for which the item ledger entry type is set to Negative Adjmt.)*. Additionally, you can change the default shipping values by editing the Shipment FastTab fields on the Project Shipments page.

On the same page, you can also turn on the No Usage Posting toggle so that usage for projects isn’t posted in the background. This is crucial if you want to use notes only as customer receipts—for example, if the items you bought for a project are consumed right away and aren’t moved to inventory.

The toggle is turned on automatically when you create a note from a project so that the system doesn’t pick items and posts consumption yet again.

You can post a note together with a warehouse shipment. For this purpose, the note must be released. To create a warehouse shipment, you need to run the function with the same name on the Project Shipments page or on the shipping document itself.

Warning

Warehouse shipments are only created for project shipment lines that contain a storage location code. The No Usage Posting toggle also needs to be turned off in this case.

Any existing reservations are transferred from the budget lines to the project delivery note line.

Project vendor shipments

The vendor shipment feature provides a supplier with items needed to finish a purchase order. It is used both to pick items from inventory and to send notes to suppliers.

The items picked are then posted as consumption to a project. Each shipment can be assigned to a vendor through a purchase order.

The functions provided with project vendor shipments and project shipments are the same and either can be posted with a warehouse shipment. Their only difference is the page where you fill in the data for each document.

To create a project vendor shipment from a WBS, open a structure and choose Home > Create Project Vendor Shipment on the ribbon.

To create a shipment manually, open the Project Vendor Shipments page and choose New on the ribbon. This creates a blank shipment card, where you can enter a vendor number and address. Alternatively, you can have the vendor assigned automatically by filling in the Purchase Order No. field on the card.

Undo shipment

You can use the Undo Shipment ribbon action to reverse one or more shipped lines on a posted project document. You can only reverse a line quantity in its entirety, however.

When you run the action, a corrective line with a negative quantity is added for each line you want to undo. For partially shipped lines that a source document is still available for, the quantity is reset in full.

Example
You enter an item quantity of 10 on a vendor shipment line. You then post six of the line items as received, with four remaining. When the line is reversed, the outstanding quantity on it is reset to 10. If the unposted line is no longer available, however, the line cannot be reset and the system doesn’t create a replacement document (which must be done manually, if needed).

With the undo function canceling the entire shipping process (that is, unless you’ve turned on the No Usage Posting toggle), the following happens:

1. When you reverse a quantity associated with a resource…

a) …the related time entry is corrected as well.
b) If the time entry has been copied to a project journal and posted as a project ledger entry, this ledger entry is also reversed.

Note

Project ledger entries that are included on invoices or have been billed already can no longer be corrected.

2. When you reverse an item quantity…

a) …the related item ledger entry is corrected as well.
b) With item tracking, this might affect several item ledger entries (that is, all entries created for a certain serial number).
c) …the associated bin entries are also reversed.
d) If the item was entered on a partially shipped warehouse document, the system additionally cancels the relevant line on this document (in the same way as the project document line).

Note

Corrected quantities remain ‘reserved,’ as every consumption entry that you want to reverse includes a project reference (such as a project number or a work package code) and the reversal entry will also contain this reference. If you want to make the item available again to all projects, you need to use the Delete Project Reference ribbon function.

If you reverse item consumption on a warehouse shipment document, the item will remain stored in the warehouse shipment bin at the associated location.

PROJECT LEDGER ENTRIES

Regardless of the method you choose to post project expenses, each posting that you make creates project ledger entries of type Usage. This includes posting times in a project journal, resource costs in purchasing, or lines on project shipments.

Project ledger entries are used to:

- Assign costs to a project.
- Bill by time and materials.
- Provide proof of performance.
- Analyze a project in cost control.
- Measure the progress of work completed.

See the following table for a more detailed explanation of the key fields found on the Project Ledger Entries page.

Important fields

Field	Description
Posting Date	Specifies the posting date of consumption, for example, as shown on a purchase document.
Performance Date	Specifies when work was performed. Typically, this date is identical to the posting date. However, the dates might differ, for example, when you post hours for a previous month.
Performance Resource No.	Only filled in for posting the consumption of resource hours. Typically, the value in this and in the No. field are identical. But the numbers might differ, for example, if you’re using Continia Expense Management for posting travel expenses. The expenses are then posted to dummy resources, whereas this field is used to assign a resource number to the person who took the business trip.
Start Time End Time	Only filled in if usage is the result of hours being entered for a project with start and end times.
Entry Type	Shows either Usage or Sale. Usage entries can come from a variety of sources (such as purchases, project journals, and project shipments) and are used to allocate costs to a project (unless they are part of credit memos or reversals). Entries of type Sale are created by posting invoices or credit memos. They reduce the costs of a project (unless they are part of credit memos or reversals).
Document No.	Specifies the number of the document that is assigned to the entry. Typically, this number originates from a posted document, such as a sales or purchase invoice, but it might also have been retrieved from a posted project journal line. You can configure the display of document numbers on journal lines by using two fields in Projects Setup. For more information, see Project Setup.
Project No.	Specifies the number of the project that the ledger entry was posted to.
Type	Specifies the type of usage or revenue, resource, item, or G/L account stored with the ledger entry.
No.	Shows the number linked to the usage or revenue, resource, item, or G/L account stored with the ledger entry.
Work Package Code	You always post (usage or revenue) to a project on the lines of an active WBS. The ledger entry is linked to a WBS line through the project number and work package, as well as phase, task, and step code fields.
Line Activity No.	Specifies the number of a budget line activity if you posted to the project at budget line level.
Unit of Measure Code	Indicates the unit of measure in which usage or revenue is shown.
Quantity	For time and materials entries, specifies the usage quantity. For revenues, the value in this field is copied from the associated sales invoice line.
Unit Cost	For time and materials entries, specifies the unit cost of the usage entry. For revenues, the unit cost is not relevant so that the field shows a value based on the Type and No. fields on the sales invoice line. **Note** Project values are always measured in local currency, with the unit cost equaling the amount in the Total Cost (LCY) field. It does not matter in this context in which currency project usage was posted or

Field	Description
	if an invoice currency has been specified. KUMAVISION project365 does not support the use of another currency in planning.
Total Cost	For time and materials entries, specifies the cost of project usage as an amount. For revenues, the cost amount is not relevant so that the field shows a value based on the Type and No. fields on the sales invoice line.
Billing Type	Shows the billing type of the associated WBS line. If you change the billing type on that line, the new type will also be copied here.
Billable	Indicates if the project ledger entry can be billed. Only used for time and materials entries. If the field has not been selected for a time and materials entry, the entry will not be included when you bill the project. This is in contrast to a ledger entry where the field has been selected but the invoice quantity is 0 see *(here)*.
Invoice Unit of Measure Code	For time and materials entries, specifies the unit that should be used to bill the entry. In the case of resources, the unit to be used depends on the work type. For revenues, indicates the unit in which the invoice line was posted.
Invoice Qty.	Only used for time and materials entries. Specifies the quantity that should be billed. The value in this field might differ from the value in the standard Qty. field. An entry with no invoice quantity but the Billable field selected will be copied as far as the proof of performance document, for example, to show customers free-of-charge services.
Unit Price	For time and materials entries, specifies the typical sales price for the entry. If no sales order is linked, this price will also be suggested for billing. For revenues, shows the unit price from the sales invoice line. **Note** In contrast to unit costs, unit prices can be displayed in a project-specific invoice currency. The price in local currency is then shown in the Unit Price (LCY) field. You should always bill entries in the invoice currency specified for the project.
Line Amount	For time and materials entries, shows the result of multiplying the invoice quantity with the unit price. For revenues, shows the quantity times the unit price.
Line Discount Amount	For time and materials entries, shows the line discount that will be used in billing. For revenues, shows the line discount specified on the associated invoice line.
Line Discount %	For time and materials entries, shows (in percent) the line discount that will be used in billing. For revenues, the field shows (in percent) the line discount specified on the associated invoice line.
Line Amount (LCY)	Shows the result of multiplying the unit price with the line discount.
Invoice Currency Code	Indicates the currency in which the project should be billed. Sales amounts stored with project ledger entries are shown in both local and invoice currencies.

Field	Description
Invoice Currency Factor	Copied from the project card. Indicates the factor used to convert the unit price in local currency to the price in the invoice currency.
Invoice Entry	Only used for time and materials entries. When a project ledger entry is being prepared for billing (which means the invoice has not been posted yet), the system assigns an invoice entry to the ledger entry and the sales (order or invoice) line. This prevents project ledger entries from being billed twice. Invoice entries have entry numbers identical to project ledger entries and can be printed on preliminary proof of performance documents. For a more detailed explanation, see Billings.
Posted Invoice Entry	Only used for time and materials entries. When you post a sales invoice, the system copies the invoice entries created for it along with other data to the newly posted document. This then closes the assigned time and materials entries so that they can no longer be copied to another invoice. A posted invoice entry is the link between a time and materials entry and a revenue entry. It has the same entry number as the project ledger entry and can be printed on proof of performance documents. For a more detailed explanation, see Billings.
Applies-to Sales	Only used for time and materials entries. Shows for an entry of type Sale how many time and materials entries will be billed with it. The time and materials entries are connected to the sales area through posted invoice entries.
Sales Adjmt. Qty.	Only used for time and materials entries. Shows for an entry of type Sale the total time and materials quantity that will be billed with it. The time and materials entries are connected to the sales area through posted invoice entries.
Purch. Invoice Entry	Indicates for entries of type Usage linked to external resources (with time postings) if the entries were prepared for billing on an unposted purchase invoice. For more information, see Purchase Invoices and Invoice Entries.
Posted Purch. Invoice Entry	Indicates for entries of type Usage linked to external resources (with time postings) if the entries were billed with a purchase invoice. For more information, see Purchase Invoices and Invoice Entries.
Add. Purch. Entry Link	Contains time and materials entries from a purchase invoice created for external resources (with time postings) if the quantities on the invoice differ from those entered in time recording. The new values are then posted to the project. For more information, see Purchase Invoices and Invoice Entries.
Add. Purch. Value Entry Link	Contains time and materials entries from a purchase invoice created for external resources (with time postings) if the values on the invoice differ from those entered in time recording. The new values are then posted to the project. For more information, see Purchase Invoices and Invoice Entries.
Ledger Entry No.	Shows the usage entries, that is, the resource, item, or G/L account entries linked to the project ledger entry.
Entry No.	Shows the (unique) number of the ledger entry.
Time Entry No.	Shows an entry number if the ledger entry was created by retrieving and posting a time entry in the project journal.

Field	Description
WP Modified [multiple fields]	Indicates for an entry whether, when, and by whom the work package entered for the project was changed. Only used for unbilled time and materials entries.
Value Correction	Belated corrective entry from a purchase invoice. This entry is created for an external resource if a purchase receipt was posted with a differing unit cost. The correction concerns only the unit cost, not the quantity or unit price.
Contact No.	Shows the contact number entered during time recording. This field is used to analyze on a per contact basis the costs linked to sales and marketing projects, which do not require customer numbers.

Actions

The following functions can be run from the Project Ledger Entries page.

Edit Entries

What all ledger entries in Microsoft Dynamics 365 Business Central[1] have in common is that once created, they can be changed only to a limited extent. This is also true for project ledger entries.

For this function to work, the project ledger entry that it is used for must be of type Usage and cannot have been billed already (that is, the Invoiced field cannot be selected). Entries that will or have been reversed cannot be changed.

Only the following fields stored with an entry can be edited at all:

- Description and Description 2
- Invoice Qty.
- Billable
- Unit Price
- Line Discount %
- Line Activity No. *(for the same work package or WBS line by deleting the line activity filter on the Budget Line Activities page)*

Most the of these will affect billing. But to correct costs specifically, you must reverse the project ledger entry and repost it with the correct values.

Apply Entries

Assigns time and materials entries to an existing entry of type Sale. This will close the entries so that they cannot be billed again. You can run this action after selecting either entry, which affects whether the system will suggest time and materials or revenue entries for application.

> **Note**
>
> When you bill by time and materials, posted invoice entries are used for application automatically. The business logic of KUMAVISION project365 employs this method for time and materials entries only, although you can do the same manually for other billing types.

Applied Entries

Shows the applied entries linked to the project ledger entry.

You can run this action from time and materials or from revenue entries. Your choice determines if you’re shown a revenue entry closing time and materials entries or time and materials entries applied to a revenue entry.

Change Work Package

Changes the work package assigned to a time and materials entry.

This function provides you with an easy way to correct postings in the system. The change in work packages—and potentially work types—might also lead to repricing and dimension finding.

You can only change a time and materials entry before the entry is billed. You cannot use this function on revenue entries. However, you can use the Change Work Package Multiple option on the ribbon if you want to select multiple time and materials entries at the same time.

When switching to another work package, any existing reference to a budget line is deleted.

Change Budget Line

This function is used to switch to the budget line level. A target budget line can also be selected from another WBS line in the project. The change in budget line—and potentially work types—might also lead to repricing and dimension finding.

This function is only available for resource expenses that are billed "on a time and material basis". The following applies: Expense items that are settled "according to expenditure" can only be reallocated to another budget line as long as they have not yet been settled.

Suggest Account Transfer

The Suggest Account Transfer function goes a step further than the previous action.

When a time and materials entry is selected and the function is run, the entry is copied to a negative posting line on the project journal for cancellation. At the same time, the action retrieves a new target project and a WBS line therein. This results in two lines that must be posted in the project journal.

Correct Dimensions

Starts a correction for one or more selected dimensions.

This action serves essentially the same purpose as the function used to correct general ledger entries. For more information, see Troubleshooting and correcting dimensions - Business Central | Microsoft Learn.

Entry type for G/L account posting

he type of a posted document also determines the type of project entry created for it. Typically, sales documents create entries of type Sale and purchase documents entries of type Consumption. You can, however, change the type, if necessary.

1. Choose the Search icon, enter General Journals, and then choose the related link.
2. Select an account, and then choose Related > Account > Card on the ribbon.
3. On the Projects FastTab, in the Project Entry Type field, choose one of the options described in the following table.

Option	Description
(blank)	G/L posting works as in the standard app (see above).
Usage	The ledger entry associated with the G/L account is posted as consumption (even on sales documents).
Sale	The ledger entry associated with the G/L account is posted as revenue (even on purchase documents).

The original type is then replaced on the relevant document and in the general journal. You can make use of this feature in situations such as the following:

- During purchase: Negative revenue is billed by a supplier.
- During sale: Foreign taxes need to be included on an invoice.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

Project Item Consumption via Sales Shipment

OVERVIEW

In Microsoft Dynamics 365 Business Central[1] Standard, the sales document with project referencing is used to post revenue, but not to post consumption. It is not intended that items are posted from the warehouse, nor that a project is debited with resource expenditure. Project consumption is generated from project entries (worksheets), project delivery bills, purchasing documents and time entries. Further information see Project expenditure

Items are planned in budget lines and posted from the warehouse to the project via a project delivery bill. This creates an item entry of the entry type "WITHDRAWAL" *(consumption of the item from the warehouse stock)* and a project entry of the entry type "CONSUMPTION" *(debit of the project with the corresponding costs)*. Neither item entries nor project entries are created when the sales delivery is posted. Only when the invoice is posted is a project entry of the entry type "SALE" created in order to allocate the revenue to the project.

Entries when using the project delivery bill:

Document	Entry	Entry Type	Description
Project delivery bill			
	Item Entries	OUTGOING	Consumption of the item from stock
	Project Entries	CONSUMPTION	Burdening the project with costs
Sales delivery bill			
	Item Entries		No posting
	Project Entries		No posting
Sales invoice			
	Project Entries	SALE	Proceeds to the project

There are also other entries, such as value entries or debtor entries. However, these are not relevant for the current process.

This can be changed via the Project Item Consumption via Sales Shipment process. In this case, no project delivery bill is required, the item consumption and the project debit are carried out via the sales delivery bill. The project delivery bill is therefore replaced by the sales delivery bill:

Document	Entry	Entry Type	Description
Sales delivery bill			
	Item Entries	DISPOSAL or SALE	Consumption of the item from stock
	Project Entries	CONSUMPTION	Burdening the project with costs
Sales invoice			
	Project Entries	SALE	Proceeds to the project

There are also other entries, such as value entries or debtor entries. However, these are not relevant for the current process.

SETUP

Projects Setup

Activate Project Item Consumption via Sales Shipment

In order to be able to use the function extension, it must first be activated globally in the Projects Setup on the Manufacturing and Warehouse Setup Fasttab by activating the Project Item Consumption via Sales Shipment toggle.

The toggle can only be activated if the Project Purchase Incl. Inventory activated, it would not be appropriate to post items via a sales document if they have already been assigned to the project by the purchasing department and are therefore not available in the warehouse.

Note

The function is activated by activating the Project Item Consumption via Sales Shipment toggle. However, it cannot yet be used, as the control of whether the function should actually be executed is carried out via a configuration on the item card and/or the locations.

Item Posting Type

In the Project Setup, not only is the process activated, but the Item Posting Type for the item entry is also defined via the Item Posting Type. Proj. Cons. by Sales Doc. field.

The item consumption entry usually has the type SALE, similar to commercial deliveries. In the process with project delivery bill, an item entry of type OUTGOING is posted.

Note

The use of the type "SALE" has the disadvantage that it can only be linked to an active Expected Cost Posting.

Sales & Receivables Setup

To ensure that the processes are posted correctly, especially in the case of cancellations, the following toggle must be activated in the Sales & Receivables Setup: Shipment on Invoice, Return Receipt on Credit Memo and Exact Cost Reversing Mandatory must be activated.

Inventory Setup

If the Item Posting Type "SALE" is selected (see Item Posting Type), Expected Cost Posting to G/L must be activated in the Inventory Setup.

The background to this is that if a sales delivery has been posted but not yet invoiced, the item is still included in the stock value. At the same time, a project consumption item is posted, which increases the WIP. As a result, the item is recorded both in the warehouse stock and in the project value. Debit costs must therefore be posted. It is not possible to restrict this posting to certain cases. As soon as debit costs are active, they are always posted.

Master Data Setup

Whether an item is debited from the warehouse when a sales posting is made depends on the item itself or the respective location. There is a Project Item Consumption via Sales Shipment toggle on the item and location card. The warehouse process is only carried out independently of the item or warehouse if this is activated.

Please note that only items with the type "Stock" can be used for this process.

Note

Activation only applies to newly created sales lines.

Tip

The control should be carried out either via the items or the location.

USE IN WORKFLOW

All sales documents are supported with posting of deliveries and return deliveries as well as cancelation functions.

This includes, for example:

- Posting a sales delivery from an order
- Cancel goods issue on a posted sales delivery
- Create correction credit memo from a posted sales invoice
- Cancel from a posted sales invoice
- Correcting from a posted sales invoice
- Create a credit memo via "Copy document"

Budget Line Reference

The Project Item Consumption via Sales Shipment process is only activated for sales lines that contain an item or storage location that has the corresponding setup. The sales line must also be linked to a project budget line.

It is assumed that items that are consumed via a sales line are also planned in the project. The security check in the project delivery bill, which is intended to avoid double consumption, is based on the use of project budget line references.

Sales Line

There are two fields in the sales line that indicate whether and how this process is carried out. The field Project Item Consumption via Sales Shipment shows the posting process in general, while the field "Item posting type project sales" indicates whether the item will have the item type "SALE" or "WITHDRAWAL".

These two fields are required to start the process during operation or to change the Item Posting Type. The posted sales lines must continue to be posted according to the previous procedure. Neither field can be changed manually; they are set automatically for new sales lines in accordance with the above settings.

Tip

After an activation or change during operation, it is advisable to carefully monitor these two fields in each document during the initial phase.

Item "Time & Material"

After posting a sales delivery for an item that is billed Time & Material, there is the following special feature:

So that an invoice can be posted directly from the sales order without a billing proposal, automatic billing entries are created for the order line when the delivery is posted. These entries close the associated project entries.

Note

If the sales delivery note line is canceled, the billing items are automatically deleted

If the billing is to be controlled via the billing proposal, it is necessary to use the option "Delete billing items in orders". This removes them from the order and proposes the project items for the billing document (with reference to the sales order).

Project Shipment

To avoid double consumption postings, no project delivery note line can be created for a project budget line if it is already contained in a sales order or invoice line that is intended for posting the consumption from this sales document.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Billings

OVERVIEW

The articles in this section focus on how you invoice projects and their work packages. All project work can be billed via direct invoices or sales orders.

SALES & RECEIVABLES SETUP

The following fields have been added in Sales & Receivables Setup:

General

Field	Description
Project Bank Account Text	Specify a standard text for the project bank accounts, which is automatically inserted as a follow-up text in the sales documents with a project reference when the document is released. Also see Project Bank Account
Purpose of Use Text	Specify a standard text for the project bank accounts, which is automatically inserted in the posted invoices as an additional text for printing a note to payee. Also see Project Bank Account

KUMAVISION

Field	Description
Suppress Delivery Date	Configuration for printouts of sales documents *(quotes and confirmation notes)* Specifies if you filled in the Delivery Date Suppression List page. To open the page, use the lookup in the field.
Auto Suppress Shipment Date on Quotes	Configuration for printouts of sales documents *(quotes and confirmation notes)* Turn on this toggle if you do not want the Shipment Date field on the Shipping and Billing FastTab of a quote to be filled in automatically. Turning on this toggle might be useful if the date needs to be printed on quotes but must be entered manually on each document. **Note** In KUMAVISION project365, the field is typically not printed so that customization will be required if you want to use this option.

Delivery Date Suppression List

On this page, which you can get to by using the general search function, you can specify whether delivery dates should not be printed for G/L accounts, resources, or items on order confirmation lines, as described in the following table.

Field	Description
Type	Specifies the type that delivery dates should not be printed for *(G/L Account, Item, or Resource)*.
No.	Limits the suppression of printouts to a certain G/L account, item, or resource number or a series of those numbers.

Note

If the delivery date should always be printed, no entry is required for this type on the page.

CREATE SALES QUOTES AND ORDERS

Sales documents are the foundation for customer-centered business transactions.

To transfer project sales to a quote or an order, open a work breakdown structure and choose New > Create Sales Document on the ribbon.

On each WBS line, you can select in the Copy to Sales Doc. field if you want to copy the line itself—as representing the total of detailed budgeting—or transfer individual budget lines and their prices.

You will need to decide this on a case-by-case basis. For example, some customers might not require invoices that describe more than a work package, whereas others might need to be billed for individual components or partial services.

If budget lines are transferred to a sales document, items stored on them are often copied automatically. Resources and resource groups, however, must be converted to billing-neutral resources before transfer.

If a WBS line is copied instead, the system will create a sales line that contains the billing base and number of the relevant work package. All sales documents are generated from customer information stored for a project. You can find this information in the sell-to, bill-to, ship-to, and payment terms fields on a project card.

Transferring WBS lines (or their budget lines) to the sales document depends on various factors. Firstly, the document type (offer, order) determines which wbs lines are considered. Only wbs lines with the status "offer" are included in an offer, while only wbs lines with the status "order" are transferred to an order.

Additionally, wbs lines already converted into an order are not transferred into another order. In contrast, offer lines can be integrated multiple times into offers, for example, to create alternative offers.

The field Copy to Sales Doc. serves as a filter for the transfer function into a sales document. This field not only controls the level at which a wbs line is transferred (either as a wbs line or budget line – see above) but also excludes specific wbs lines from the transfer with the option "No transfer".

In the function Create Sales Document, wbs lines of certain phase, step, and task activities can be considered using the activity filter fields. These three filters act as AND filters. Example: If the phase activity filter is set to "HA1" and the step-activity filter to "UA5", only wbs lines containing both field contents (HA1 AND UA5) will be transferred.

You can add other customers to WBS—and budget—lines based on what option you chose in the Copy to Sales Doc. field on a WBS line. These customers then get their own documents so that you can offer and bill various kinds of services to different companies. Every customer entered this way will be included in invoice suggestions.

When you run the Create Sales Document function, you can also specify a document number manually if needed *(and possible for the number series)*.

Additionally, you can use the function to assign position numbers, calculate totaling lines, or release the new document immediately.

If a WBS line is copied to the document at the budget line level, the sales lines that its budget lines are copied to will be enclosed by a begin-total and an end-total.

You can prevent a block like this from being formed for the transfer of single budget lines by turning on the Streamline Begin-/ End-Subtotals toggle on the request page.

You can also update an existing quote instead of creating another document. In this case, the quotation lines are recreated, and you can archive the existing ones before the update.

Copy attachments to sales documents

Attachments available for a project can be copied to a new sales document by selecting the Copy from Project to Sales checkbox on the Attached Documents page. To open the page, select the hyperlink for attachments on the right-hand side of a project card.

Link a sales document to a WBS

There is another way in Microsoft Dynamics 365 Business Central[1] to create and link sales documents. Many of these documents are generated before a project—and, consequently, a WBS—is set up. You can, however, link to them from a new work breakdown structure as described in the following.

1. Open a sales document.
2. Select a sales line or multiple sales lines.
3. On the ribbon, choose Line > Functions > Get WP For Current Line or Get WP for Selected Lines.

Based on what you chose in the Copy to Sales Doc. field, the function then creates a link at the work package or budget line level —or no link at all.

This means that what you can choose might vary. Sometimes, both WBS and budget lines might show up. However, a WBS line where values are copied at the budget line level cannot be linked to a line at the work package level and vice versa.

When you run an action to get work packages, all fields needed to set up the link to a sales line or to multiple sales lines are filled in automatically. This includes the Work Package Code field.

Some fields are also checked for discrepancies, such as differences in work types or pricing. If a discrepancy is found, you are asked to confirm that you want to copy the data.

A link can only be established if you entered a resource, an item, or a G/L account in the Type field on the sales line.

If you want to create an order from scratch, we recommend that you use the Create Sales Document action instead.

Link opportunities to projects

If you link a sales quote to an opportunity, the project number stored on the quote—or, more specifically, on the quote header—is copied to the opportunity.

To see the opportunities linked to a project, open a project card and choose Related > Job > Opportunities on the ribbon.

If an order is created from a sales quote that is not linked to a project and the associated project is subsequently created, the project number of the new project is adopted both in the order and, if applicable, in the sales opportunity linked to the quotation. Also see Projects from Sales Documents.

Turn quotes into orders

To make an order out of a sales quote:

1. Open the project assigned to the relevant quote.
2. Choose Project > WBS Incl. Budget View.
3. Choose Create Sales Document on the ribbon.

This deletes the quote, although the document is archived if you turned on the Archive Quotes toggle in Sales & Receivables Setup.

A project that is still in the Quote status can be changed to Open when you run the function. The status on WBS lines referencing the quote then changes to Open as well.

If the quote was sent to a contact, not a customer, the contact is converted to a customer based on the customer template code that was used on the quote. The same customer is also entered on the project if it still contains the old contact information.

You can also copy only parts of a quote to an order.

1. Open the relevant quote.
2. Select the Ordered field on the lines you want to copy.
3. Choose Process > Make Order on the ribbon and select Only Lines on Ordered instead of Complete Quote.

The lines you didn’t select will remain in the quote so that they can be copied to another order later.

Alternatively, you can run the Attach to Sales Order (Project) action. This function doesn’t create a new order but adds lines ordered from the quote (or the entire quote) to an order already available for the project and linked to it on the header.

Make order changes

You can alter a sales order that you’ve created for a project if the order hasn’t been set to completed yet and the quote lines you want to add to it have been released.

To make changes to a project-related order:

1. Choose the Search icon, enter Sales Quotes, and then choose the related link.
2. Open the quote that you want to add as a change order to a project.
3. On the ribbon, run the Add to Project Order action.

This adds the lines of the quote to the specified order, deletes the quote, and sets the status of all WBS lines that are linked to the quote to Open.

If no line relations exist, you can create them at the WBS or budget level after the transfer is completed. For more information, see Create Projects from Sales Documents.

Print Line and Print on Invoice

Although you might not want to bill everything on an order at once, the system typically copies the content of the entire document to a posted invoice. However, you can prevent a posted invoice line with a quantity of 0 from showing up on printouts by clearing its Print Line checkbox, which you can select or clear manually even after you posted the invoice.

You can also use the Print on Invoice field on the unposted lines of a document, such as a sales order or invoice, to exclude from printing lines that are not part of the current bill before posting them. The checkbox is selected by default and can only be cleared on lines where the Qty. to Invoice field is set to 0.

What ultimately goes on a printout is specified on each posted document in the Print Line checkbox. The Print on Invoice field, on the other hand, gives you the option to specify, prior to posting, which lines you want printed.

Update sales documents

Sales documents and project budgets might change frequently, for example, when you’re still negotiating with a customer about the price of a project. All you need to do then is to open the work breakdown structure to recalculate prices and create a new offer from a previous quote.

The process might get more complicated when a sales order is involved, as multiple sales lines might have been shipped or invoiced in the meantime—and can no longer be deleted. In that case, the easiest solution would be to make minor changes to the sales document and run a separate function to synchronize data with the project.

Set up synchronization

1. Choose the search icon, enter Projects Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Sales Project Budget Sync. Active	Turn on this toggle if you want budgets and projects to be synchronized automatically.
Sales Project Budget Sync. Error Handling	Choose what happens if the system encounters an error during synchronization. **Cancel** The process is stopped, and no changes are made to the sales line. An error message pops up. Select this option if you want sales to be as much in synch with projects as possible. Errors are then corrected within projects only. **Ask** You see an explanation of the error and are asked if you want to continue with the change on the sales line. Choose No if you want to keep the line as is. Choose Yes if you want to change the sales line but forgo synchronization with the project. The error is logged. **Notify** You are informed about the problem, and the change is made on the sales line but isn’t copied to the project. At the same time, the error is logged.
Sales Project Budget Sync. Notification	With the toggle turned on, you get a message that says the project was successfully synchronized. With the toggle turned off, no feedback is given—except for a log entry that you can open later.

Specify synchronization data

You then need to specify in the Sales Doc. Project Budget Change Matrix what you want to synchronize and how. For each document type, you can specify what you want the program to do when you run synchronization.

- **Never**
  Sales lines aren’t synchronized with the project; no messages are shown on screen either.
- **Question**
  You are asked if you want to make the change. If you choose No, your reply will be logged.
- **Always**
  Sales line changes immediately trigger the update function.

The matrix also shows which kind of changes can be made:

- Delete a sales line
- Enter a new description on a sales line
- Alter a sales price (including line discounts)
- Reduce or increase quantities on a line

Requirements

- The relevant sales line must be related to an active work breakdown structure.
- The project mustn’t be blocked.
- WBS lines mustn’t be blocked (even at the budget line level).
- A plausibility check for type and No. has been performed at the budget line level.
- **In the case of line deletion**
  Nothing must be posted to the line in the project.
- **In the case of price changes**
  The invoice currency must be identical to the currency on the sales document. You can ensure this by using the Create Sales Document function on the WBS.
  The unit stored on the sales line must also be identical to the unit used for the project. You can again ensure this by running the Create Sales Document function.
- **In the case of quantity changes**
  The quantity budgeted for the project must be the same as the quantity you plan to invoice. Otherwise, there would be no way to know whether you want to keep or offset the difference, set up a fixed usage/consumption quantity, or change the invoice quantity.|
- **In the case of quantity changes on budget lines** The unit of measure stored on budget lines must be identical to the unit shown on the sales document. To ensure this, run the Create Sales Document function from the WBS. Quantity changes on WBS lines require the same type of unit for usage/consumption and billing.
- **In the case of quantity reductions on budget lines**
  Reductions can only be equal to or lower than what has already been consumed. The quantity consumed consists of actual consumption, the in-stock quantity on the relevant budget line, and the quantity remaining on the associated purchase order.
- **In the case of quantity changes on WBS lines**
  A quantity change on a WBS line can only be made if no budget lines exist. Else, it would be unclear for what purpose the WBS line was changed.

What can be synchronized Sales Document Types

- Quote
- Order

Changes

- Deleting sales lines
- Replacing descriptions
- Altering prices or line discounts
- Reducing or increasing quantities

Project Levels

- WBS lines of type work package
- Budget lines of any type

What cannot be synchronized

- Insertions of new sales lines, as it would be unclear at which level. Also, to set up a new sales line, you would need to assign a WBS line or a work package.
- Deletions of sales documents, based on the assumption that you want to create new documents from a new project budget, not remove an entire project.
- Changes in structural elements, such as Begin-Total and End-Total lines.

- Insertions of new sales lines, as it would be unclear at which level. Also, to set up a new sales line, you would need to assign a WBS line or a work package.
- Deletions of sales documents, based on the assumption that you want to create new documents from a new project budget, not remove an entire project.
- Changes in structural elements, such as Begin-Total and End-Total lines.

Log

The log shows successful and failed synchronization attempts, plus those canceled by a user. To see the log, open a sales document, a project, or a WBS and choose Related > Project > Sales Doc. Project Budget Change Log on the ribbon.

INVOICE SUGGESTIONS

Invoice suggestions include all the data required to bill customers for expenses you incurred while working on projects for them. However, before you can make the most of these suggestions, you need to set them up properly.

A suggestion is always created from an active work breakdown structure. Each line of the WBS is processed according a billing type. You can select the Suspend Billing checkbox to block lines temporarily from appearing on an invoice.

Set up suggestions

Suggestion templates

To be able to use the invoice suggestion feature, you need at least one template:

1. Choose the Search icon, enter Invoice Suggestion Templates, and then choose the related link.
2. Choose New on the ribbon or fill in a line to create a new template.

We recommend that you set up a separate template for every project manager who performs billing. This ensures that only those working in a certain business unit can bill projects assigned to that unit.

Project data

An invoice suggestion requires an active WBS, and WBS lines of type work package require a billing type. For more information about billing types, see Work Breakdown Structure.

If the Billing Type field is left blank, a project is treated the same as if the field were set to No Billing. A type must be chosen on the WBS; the field found on suggestions is used for informational purposes only.

When you create a suggestion, the system determines for each line of an active WBS if the line has already been billed. For time and materials projects, this means a check on unbilled project ledger entries. For fixed-price projects, the sales budget needs to be invoiced in full. Each expense left to bill is then included in the suggestion, together with a link to the WBS line on which the expense is stored.

In the Rem. Total Price Calc. Base field on WBS lines, you can specify what you want to see in the Unbilled Work field. This field is used for informational purposes only; it has no impact on the suggestion.

Project ledger entries

Project ledger entries are the basis for billing time and materials projects. They indicate project usage and tell you how much of that usage is billed to customers. They also tell you if you’re still in the middle of billing a customer or have posted a final invoice.

You can adjust the quantity that you want to bill during various stages of a project. For example, resources can adjust the invoice quantity down from the total number of hours worked as early as creating project time entries.

When these entries are then copied to the project ledger, the project manager can again revise the quantity.

The invoice quantity can also be changed for project ledger entries themselves provided they haven’t been billed or are already part of an invoice suggestion.

A quantity change can even be made on the invoice suggestion. However, if there is more to adjust than the quantity for billing, a function will need to be run.

To specify an invoice unit of measure that differs from the unit for reporting project progress, use the Work Type field on WBS lines. This way, times can be recorded in hours but billed in days.

You can specify conversions from one unit to another in the Units of Measure table so that values are calculated automatically when you post progress. If, for example, project ledger entries show the hours spent on a project, but the effort is typically billed per day, the entered quantity will be converted to the relevant unit for billing.

Sales orders

Invoicing a WBS line usually requires a sales line. Because every WBS line contains a unique combination of work package, and phase, task, and step codes, these fields (as well as the Project No.) are also used to search for the sales line.

When you invoice time and materials projects, the budget remaining on a sales line must be large enough to bill and sales and project values, such as the invoice unit of measure, need to match. For example, if a quantity on a WBS line is given in hours, the quantity on the related sales line cannot be stated in pieces.

Open a suggestion

1. Choose the Search icon, enter Invoice Suggestion, and then choose the related link.
2. Select a name to see the latest suggestions. These are deleted automatically when you choose the Create Suggestion Lines action on the ribbon.
3. Set filters if you want to create several types of suggestions. For example, you can use the Customer No. to filter for projects related to a certain customer or the Person Responsible filter to see only projects managed by a specific project lead.

Fields and functions

Invoice suggestions have the following multi-level structure.

Level 0
The level at which suggestions are grouped by customer.

Level 1
The source type level, where suggestions for customers are grouped according to whether they originated with (sales and purchase) orders or projects. The current focus of this level is on suggestions for projects. Suggestions for order lines represent unbilled shipments and are used for informational purposes only.

Level 2
This level contains the projects for which suggestions are available.

Level 3
The fixed-price level. Based on the billing level, you see a WBS line or budget lines. For time and materials projects, only WBS lines can be found here.

Level 4
This level is for time and materials projects only. It contains the project ledger entries that have been suggested for billing. These can be changed before creating an invoice. For example, you might still want to adjust the invoice quantity.

The most important fields used on suggestions are described in the following table.

Field	Description
Customer No.	Shows the number of the customer whom you want to bill.
Name	Describes the relevant invoice suggestion level.
Phase Code Task Code Step Code	The contents of these fields are copied from the WBS or project ledger entry.
Line Activity No.	Shows the activity number stored on the budget line. The number is copied from the WBS or the project ledger entries. This field is only filled in if you plan, post, and bill at budget line level.
Billing Type	Copied from the WBS line. The options are (blank), Time & Materials, Fixed, No Billing, Milestone, POC, TE Flat Rate (that is, if you installed the Continia Expense Management), and Package Invoice.
Posting Date	Shows the posting date of the project ledger entry.
Performance Date	The date of performance might differ from the posting date, as there are some situations in which services that were rendered the previous month can no longer be posted to that month. **Example** Services were rendered in December, making 12/15 the date of performance but are posted in January (on 01/01) because the posting period for the prior month has ended. As a result, the system will use the date given in this field—and not the posting date—for the Create Suggestion Lines action.
Type	Specifies whether you want to create the invoice for a resource, an item, or a G/L account. The (blank) option is for lines structuring a view.
No.	Shows the number associated with the Type field.
Description	This field is copied from a project, a WBS line, or a project ledger entry based on the level chosen for the suggestion. For resources, it shows a description of activities and for items, the item text.
Quantity	Shows, based on the level chosen for the suggestion, the quantity stored for work packages or project ledger entries. More specifically, the field indicates the quantity budgeted on the WBS line and the quantity reported as finished.
Quantity Invoiced	Shows the (WBS line or project ledger entry) quantity that has been billed so far.
Unit Price	Shows, based on the level chosen for the suggestion, the unit price from the WBS line or project ledger entry. This price is updated from the related sales line. If the price stored with the project ledger entry or project budget is different from the price on the sales order, the price stored on the order takes priority.
Total Price	Shows the result of Quantity * Unit Price.
Amount Invoiced	Shows the (WBS line or project ledger entry) amount that has been billed so far.
Remaining Amt. to Cap	Shows the sales amount that remains on the WBS line and is still available for billing. This field is shown at the WBS line level only.
Invoice Qty.	Shows the billable quantity from the project ledger entry. The value in this field can be changed at any time. If you invoice at the project ledger entry level (typical of time and materials projects), you can change this quantity for individual entries. If you bill at WBS level (typical of fixed-price projects), you can change it on the WBS line copied to the suggestion.
Line Base Amount	Shows the result of Unit Price * Invoice Qty. Describes the non-discounted invoice total.

Field	Description
Qty. 1 if Fixed Price	Only relevant to fixed-price entries on WBS lines with an invoice quantity of 1. Typically, the invoice quantity is used to perform partial invoicing. Often, however, that quantity should not be divided into fractions *(such as 0.12)*, which means you need to use another way to split the invoice—in this case, by dividing up the invoice amount. **Example** The invoice quantity is 1, the invoice amount USD 10,000, and the amount billed USD 4,000. The next invoice suggestion you create then continues to show a quantity of 1, but the invoice amount is reduced to USD 6,000—a value you can again change manually, if needed.
Line Discount %	Shows the line discount in percent, copied from the related sales line. You can enter a discount manually if the suggestion line is not linked to a sales order.
Line Discount Amount	Shows the result of Line Base Amount * Line Discount %. This field cannot be changed.
Total Line Amount	Shows the result of Invoice Qty. * Unit Price. This field is the basis for creating an invoice.
Cross-Ref. Sales Order	Shows the sales order related to the suggestion line.
Cross-Ref. Sales Line	Shows the sales line related to the suggestion line.
Invoice Error Code	Shows a code if an error occurs when the suggestion is processed.
Invoice Error Text	Shows a message that explains the data processing error. The error might prevent the line from being billed.
Note Text	Shows notes that are useful for processing the suggestion. The selected line can still be billed.
Prepare for Billing	If this checkbox is selected, the sales order related to the suggestion is prepared for billing but not posted. The system then creates unposted invoice entries and assigns them to the relevant lines on the document. The Qty. to Ship and Qty. to Invoice fields are also filled in on the order. See also Prepare for Billing.
Invoice on Order	Selected if the highlighted sales lines should be posted as shipped and copied to a new invoice for billing. The system then creates unposted invoice entries for the lines. See also Invoice on Order.
Direct Invoice	Specifies if a direct invoice should be created when no related sales line is found. **Note** You cannot use this option if the selected line is linked to a sales line. See also Create Direct Invoices.

Based on the level chosen for a suggestion, suggestion lines store information about a WBS line or a project ledger entry. For a WBS line, the data includes:

- Budget values (Quantity, Unit Price, and Total Price)
- Entries billed (Quantity Invoiced and Amount Invoiced)
- The remaining budget amount (Remaining Total Price)
- Current billing information (Invoice Qty., Invoice Total)—for fixed-price entries
- The assigned sales line (Sales Order and Sales Line Cross-References)

The Quantity Invoiced is the result of dividing the Amount Invoiced by the Unit Price. This might be a theoretical quantity because the invoiced amount is determined based on the sales project ledger entries related to a WBS line.

The same is true for the Invoice Qty., the result of dividing the remaining budget (remaining total price) by the unit price. The quantity at the WBS line level is filled in only for fixed-price entries. For time and materials projects, work is billed at the project ledger entry level.

For a project ledger entry, the data stored includes:

- Consumption/usage values (Quantity, Unit Price, and Total Price)
- Current billing information (Invoice Qty. and Amount Invoiced)—for time and materials entries

The invoice quantity can be used to determine the quantity you want to bill to the customer for time and materials projects. The following formula applies: Invoice Qty. * Unit Price = Total Price (of an entry).

For a project ledger entry, a FactBox lists the type (that is, internal or external) and the contents of comments made. External comments—that is, those for which the Print on Customer Doc. checkbox is selected—can later be printed on proof of performance documents.

Actions Create Suggestion Lines

Creates new invoice suggestions. You can find the function on the ribbon itself or by choosing Actions.

Note

Running this function deletes the lines on the suggestion you're editing.

The function, however, doesn’t create lines for projects that have been suggested elsewhere. You see a message if a project is already part of another suggestion.

Set meaningful filters when you run the function, for example, to include only a single project, every project that is under the management of a specific project lead, or all projects assigned to a certain customer.

If you’re working with the team role feature, you can also use the Responsible for Billing field to filter for team members in charge of billing. Who is included in this case, however, doesn’t depend on whether the Invoice Suggestion field is selected—as this field allows all members to create suggestions—but whether the correct role is assigned in the project (that is, the team member is marked as Responsible for Billing).

Note

To prevent the accidental retrieval of lines that were set up for projects not relevant to the current suggestion—which would block their use elsewhere—you need to set a filter on at least one of the following fields: Customer No., Project No., Responsibility Center, Person Responsible (=project lead), Responsible for Billing.

A filter set on the Performance Date field affects both the ledger entries that you want to bill and the related payment plan lines.

With the Project Ledger Entry Type and the No. filters on the request page, you can specify what ledger entries to include on a time and materials invoice, for example, those set up for a certain item. Filtering also works if you don’t fill in the No. Filter field so that you can create one invoice for all related resources or item ledger entries.

The WBS Line Status Filter field, which has the options Both, Quote, and Order, can be used to specify the WBS lines that you want copied. Typically, these are in the Order (Open) status.

If you turn on the Delete Invoice Entries from Sales Orders toggle on the page, all invoice entries that haven’t been posted yet to a project that the function is filtered to are removed from the associated sales document before an invoice is created.

Turning on the toggle therefore returns the project ledger entries prepared for billing those entries to the suggestion and might be useful, for example, if you want to restart invoice creation and ensure that all unbilled time and materials entries are included on the new document.

Comments

Shows detailed information about the current invoice suggestion, including whether it has an invoice currency different from the currency used for the project ledger entries, the payment plan, or the sales order.

The Comments page also shows employees who tried to bill projects but couldn’t. For the comments to appear, you must turn on the Check Team at Time Posting toggle in Projects Setup.

Close Entries before Billing

Closes project ledger entries without making them part of an invoice. This is only useful for time and materials entries that aren’t billed or visible to customers.

Edit Project Ledger Entry

Choose this action if you want to change a project ledger entry related to the suggestion.

Switch Order

Replaces an order (or order line) that was assigned automatically with another order (or order line). The project number, work package, and phase, task, and step codes (that is, the WBS line relations) must be identical.

This function is only intended for service (resource) lines invoiced based on time and materials. The function filters for activities posted so that the time spent on a budget activity cannot be billed to a sales line related to another activity. In short, you need a neutral sales line or one with the same line activity number.

Delete Sales Order Ref.

Deletes a relation automatically entered by the suggestion so that you can include a project ledger entry in a direct invoice.

Increase Sales Line

Raises the order quantity for entries that are billed based on time and materials and don’t have enough quantity left on a certain sales line.

By raising the quantity, you can use the line to invoice the entire project effort.

When you run the function, you see a page that shows the current order quantity, the order amount that remains, and the invoice quantity stored on the sales line. You can then overwrite the value in the Order Quantity field.

If an order has already been released, you can choose Open Order to reset the order status. When you exit the dialog, the order is released again.

Report by Sales Order

Shows you the result of billing per sales order, that is, the page provides an overview of what remains of an order after the current billing cycle.

Project Documents

Shows the documents related to a project.

Create Invoices

Creates invoices and readies them for posting or prepares orders for billing. This process generates unposted invoice entries.

When you run the function, all unbilled project ledger entries are entered in a new invoice suggestion. A suggestion should be as specific as possible to avoid time-consuming corrections; this also means that ledger entries should be prepared for billing in time.

Key project ledger fields related to suggestions are described in the following table.

Field	**Description**
Billable	Indicates what billing type was chosen on the related WBS line. • Not selected if the type is No Billing. • Selected if the type is Fixed (Price). • Typically selected if the type is Time & Materials, although the field can be cleared, for example, by the project manager. The content of this field is transferred from the Budget Line Activity Card when you post times for activities. Only project ledger entries for which this checkbox is selected are copied to a suggestion. Billable entries are also copied if the invoice quantity is 0 so that you can close time and materials entries that could be billed but aren't for some reason and display them on an invoice. This might be useful, for example, if the entries originate with a goodwill policy.
Invoice Qty.	As explained, this field doesn't play a role in what is copied to invoice suggestions. But it shows for how much a customer is billed (only applies to time and materials entries).
Invoiced	This field is only relevant to time and materials entries. If it is selected, the entries have already been invoiced.
Invoice Entry Posted Invoice Entry	These fields show unposted and posted (that is, final) invoice entries. Unposted entries are used to block project ledger entries that are copied from suggestions to unposted sales invoices or orders you want to bill. After billing, that is, when you posted the relevant document, the unposted entries are deleted, and posted entries take their place. If either field is filled in, an associated project ledger entry will be excluded from new invoice suggestions. When invoice entries are posted, the project ledger entries related to them are considered settled. That remains true even if—for example, as a gesture of goodwill—you invoiced only part of the total quantity.

Related Show WBS

Opens the work breakdown structure of the project that you want to bill.

Card

Opens the card of a resource, an item, or a G/L account depending on what type of project usage or consumption is shown on the suggestion line.

Show Project Ledger Entry

Shows the project ledger entry from which the selected suggestion line was created.

Project Ledger Comment

Shows a note about the project ledger entry (if one is available).

Edit suggestions

When you open a suggestion, you can change certain information yet again.

Change quantity

You can, for example, change the Invoice Qty. field of a project ledger entry. This field can be revised multiple times throughout the billing process.

You don’t need to do more than go to the field and replace its value. If you set the quantity to 0, the project ledger entry is still suggested for posting. If you then send a detailed invoice to a customer, the line will show up on the invoice as well.

Edit ledger entries

To change other billing-related fields besides the Invoice Qty. (the work package especially):

1. Open an invoice suggestion and select a line.
2. Choose Actions > Edit Project Ledger Entry on the ribbon.
3. You are then asked if you want to edit the project ledger entry related to the line and have the entry included in the suggestion again. Choose Yes.

You can now edit the fields described in the following table.

Field	Description
Description	Shows a description. You can change this description at any time.
Line Activity No.	Shows the number of a line activity. You can change that number here as well.
Invoice Qty.	Shows the invoice quantity. You can adjust the quantity at any time.
Sales Price	Shows the sales price. You might want to change the price, for example, because of new customer agreements. However, if the price shown in this field is different from the one on the sales order, the system will use the price on the related sales line for billing.
Billable	At this stage, a project ledger entry can still be specified as non-billable. This will exclude the entry from invoices and prevent application. If the entry is set to No Billing, it will also have an invoice quantity of 0.

To replace the work package, choose Change Work Package on the ribbon. You are then asked to confirm your choice.

This is because changing the package might alter the unit cost (as the new package might have another work type), the project account (used to control costs), or any of the dimensions. After you assigned a new package, the WP Modified By/On/At fields are filled in automatically.

Choose OK to close the page. Changes in description, invoice quantity, or unit price are then copied to the relevant suggestion line.

To delete a project ledger entry, clear the Billable checkbox on a line. The next time you open the suggestion, the entry will be gone. If you cleared the checkbox by mistake, reopen the entry on the Project Ledger Entries page to correct the error.

In fact, all project ledger fields that you can edit on a suggestion can also be changed on this page. When you swap out a work package here, you see a message that the line referencing the old package on the suggestion will be deleted.

As changes to project ledger entries might also change WBS line relations and package positions on a suggestion, you then need to recreate the invoice suggestion to copy entries with changed work packages to the right lines.

If you open an entry via the Edit Project Ledger Entry function but choose Cancel to exit the page, you see a message that the line related to the entry has been deleted from the suggestion. You then need to recreate the suggestion if you want to include the entry again.

Delete individual lines / Delete level

You can use Ctrl+Del to delete lines from a suggestion at the project ledger entry level. If you then reopen the suggestion, the lines are again suggested for billing because the related entries are still open.

If you want to delete entries at a higher level—for example, to remove an entire project— use the Delete Level function.

Close entries before billing

Excludes from consideration entries that aren't billed and won't ever be with the help of an invoice suggestion.

This means that these entries will no longer show up when you reopen a suggestion.

This action has the same effect as if you manually cleared the Billable checkbox for project ledger entries. If you cleared a checkbox by mistake, open the relevant entry and re-select the checkbox.

Billing procedures

On each suggestion line, you can choose one of three checkboxes to specify how you want a line copied to invoices. For these options to be available, the line must meet certain requirements as described in the following.

Entries that you want to bill with the help of sales lines need to have the Prepare for Billing or Invoice on Order checkbox selected on the related suggestion lines. Based on how you plan to bill the project, you need to select the checkbox at the fixed-price or time and materials level.

Prepare for Billing Fixed price

If you want to bill an entry based on a fixed project price, select Prepare for Billing at the fixed-price level. Whether project ledger entries already exist doesn't matter. Entries can be billed (even partially) at any given time. The only requirement is for a sales line to be linked to the relevant WBS line.

Time and materials

Select the Prepare for Billing checkbox at the project ledger entry level to focus on actual project usage. Selecting or clearing the field on work package lines also selects or clears the same field on related project ledger entries automatically.

However, the checkboxes on work package lines aren't relevant to billing; only those at the project ledger entry level are.

Note

Billing time and materials projects requires that a suitable sales line be found. The billing type on the line must match the type specified for the work package. Typically, a billing resource is used for this purpose.

A resource's invoice unit must also match the unit of measure stored for the relevant time and materials entries. This ensures that no item is billed on a sales line that contains a quote for resource working hours. Additionally, the line quantity cannot be 1, as this is a common value for flat rate payments.

Invoice error codes

Lines that show an error code cannot be selected for billing (if no error was found, the Invoice Error Code field shows 0). The six possible codes are:

1. No valid sales line could be found.
2. The type stored with the project ledger entry doesn't match the type found on the sales line.
3. What is left on the sales line is insufficient. You need to increase the quantity. (You can use the Increase Sales Line action to do this.)
4. Fixed-price positions require the same unit of measure on the sales line and the WBS line.
5. The fixed price has already been invoiced in full. (The only option left is to close the line by issuing a final invoice.)
6. The sales order reference was deleted manually.

Impact on orders

Prepare for Billing requires both a sales order cross-reference and a sales line cross-reference on invoice suggestion lines.

This is because the following changes are made to the referenced sales order when you create an invoice from a suggestion where the Prepare for Billing checkbox is selected:

- An invoice entry is added to an order line for each project ledger entry that you want to bill.
- The total invoice quantity is entered in the Qty. to Ship and Qty. to Invoice fields. On lines that have no invoice entries, the fields are set to 0 to prevent accidental billing.

To view a new invoice entry for a prepared line, open the related order, select the line, and choose Line > Related > Invoice Entries on the ribbon. The number of the entry is shown in the Assigned Project Ledger Entry field.

You can then again update individual entries on the sales order.

Impact on project ledger and invoice entries

No more than a single invoice entry can be applied to a project ledger entry billed based on time and materials. It is for this reason that we recommend you make necessary quantity and value adjustments as early as possible, that is, on invoice suggestions.

As mentioned earlier, time and materials entries are considered settled when invoice entries are assigned to them, even if only partial quantities have been billed.

When you post a shipment and an invoice from a sales order, the invoice entries on the sales lines are copied to the newly posted invoice. Additionally, each now-posted invoice entry is linked to a time and materials entry.

Posting invoices also creates project ledger entries with filled-in Applies-to Sales fields. These fields show the number of posted and applied entries—that is, billed project ledger entries—linked to a project ledger entry originating in sales.

Unlike time and materials entries, project ledger entries generated in sales can relate to multiple posted invoice entries, as a sales project ledger entry often applies to more than one time and materials entry.

To see a list of the posted invoice entries, use the lookup in the Posted Invoice Entry or Applies-to Sales field. The relevant time and materials entry can then be found in the Assigned Project Ledger Entry field. The Sales Project Ledger Entry field shows the number of the series that you set up for creating project ledger entries in sales.

A posted invoice entry can be opened from the billed time and materials entry or the sales project ledger entry (and vice versa).

Delete invoice entries from order

If necessary, you can use the Delete Invoice Entries action on the ribbon of a sales order to remove invoice entries from the order and reopen the related time and materials entries for transfer to a new invoice suggestion.

Note

The Qty. to Ship and Qty. to Bill fields on the order retain their values when you delete invoice entries, and no posted invoice entries are created if you posted something by mistake. Nothing applies to open time and materials entries either, although you can post their application manually if necessary.

Invoice on Order

This option is based on the same program logic as Prepare for Billing. The difference is that the quantity that is invoiced on the relevant sales order is posted as shipped immediately and the shipment is copied to an unposted invoice document.

Unposted invoice entries are then available on the document lines. However, an unposted invoice doesn’t mirror the structure of a sales order. Instead, it contains only the lines you want to bill, which means you see only those that have been shipped automatically. Additionally, structural elements and order fields used for informational purposes aren’t copied to the invoice.

Besides the lack of billing information compared to the first method, this option has the distinct disadvantage that if you need to recreate an invoice due to a billing error, you must first delete the unposted document. Only in this way will the associated project ledger entries be removed as well.

A further issue compounding the problem is that the deletion of invoice entries doesn’t affect the original shipment document, nor does it remove the quantity already posted. This quantity—considered shipped but not invoiced—will instead be copied to a new invoice created from another suggestion.

Changing the invoice quantity can then lead to unwanted results. If you raise the quantity, a second shipment needs to be posted so that more than one is shown on the invoice, which might look confusing on printouts. If you reduce the quantity, only some of what has been posted as shipped might be needed so that the remainder is kept and copied to a new suggestion.

The easiest way to deal with this is to delete the invoice document. This way, all shipments are canceled before you open a new suggestion.

All other requirements for fixed-price and time and materials billing are the same as described earlier.

Impact on documents at invoice creation

When you run the Create Invoices function, you are first informed that sales lines still need to be shipped (unless none are available).

You can now decide to post the lines as shipped or exit the page. Choose Cancel to leave for the invoice suggestion. Choose OK if you want to post the lines and create a sales invoice.

You are then asked if you want to edit the invoice. Choose Yes to open the unposted document.

By using the lookup in the Invoice Entry field, you can see all unposted entries related to the invoice. The underlying order also shows the invoice quantity as shipped.

With the shipped quantity copied to the invoice, each invoice line has been assigned to a posted shipment line. It is for this reason that you cannot raise invoice quantities if you use this option—you simply cannot bill more than you delivered to a customer.

Impact on project ledger and invoice entries

The impact on invoice entries, posted invoice entries, project ledger entries, and applied entries is the same as if you had selected the Prepare for Billing option.

Create direct invoices

If no sales line exists for a project ledger entry, a suggestion line can be billed with the help of a direct invoice. Afterward, posting a shipment will no longer be possible.

Direct billing is often used to pay for travel expenses, that is, for time and materials entries that aren’t related to sales lines. Although typically part of a project agreement, a rate for these kinds of expenses isn’t included in the budget (even the sales budget), as this is often considered unhelpful.

Entries you want to bill in this way must have the Direct Invoice checkbox selected.

When you create an invoice suggestion based on project ledger entries with and without sales lines, the direct invoice lines, that is, those without shipments, are added to an invoice after the order lines. If the current billing process includes only direct invoice lines, however, a new invoice will be created.

If you want to bill various kinds of suggestion lines at the same time, use the Create Invoices action after selecting all lines. If done separately, that is, if you mark Invoice on Order lines and create an invoice before you mark other lines for direct billing and run the function again, lines not related to a sales order aren’t added to the unposted invoice, even if you started the process from the same invoice suggestion.

During processing, project ledger entries are aggregated on a single direct invoice line if their Type, No., and Unit of Measure Code fields match. One invoice entry is created per line to close a project ledger entry.

Impact on project ledger and invoice entries

A direct invoice includes one invoice entry for each line to bill.

When you post the invoice, the system then creates one posted invoice entry per line to establish a link between the time and materials entries on one side and the project ledger entries in sales on the other. It also applies the posted invoice entry to the other two entries.

Negatives invoice amounts

If the total amount on an invoice is negative, the system creates a credit memo instead, as negative invoice amounts cannot be posted to projects in the app.

Budget line billing

You can incorporate budget line activities into sales lines to create more detail-rich sales documents and invoices based on an invoice suggestion.

The invoice suggestion function checks the Billing Integration field on each WBS line to determine the level at which to invoice the relevant project.

If billing level = budget line…

WBS lines that are billed by time and materials are copied to a suggestion grouped by line activity, with unbilled project ledger entries shown underneath. For fixed-price projects, a suggestion doesn’t show WBS lines but the budget lines that need to be invoiced.

Regardless of whether you bill a WBS line or its activities, project sales are always visible on the WBS line when you post an invoice. Revenues from line activities (if you bill at this level) can then be seen on the budget lines.

Ledger entries and application

In project billing, ledger entries of type sales offset ledger entries of type usage. That is, you bill customers for the time spent on a project by creating sales project ledger entries.

An exact match between both types of entries is exceedingly rare. Usage entries are typically combined and billed on a single sales line. This means that the number of entries and the quantities often differ on invoices created from a project.

As explained earlier, you can use invoice entries to post the application of project ledger entries automatically (on a suggestion) or do so manually. The following paragraphs are only meant to sum up again how you achieve this.

Project ledger entries

With the help of invoice entries, project usage—that is, time and materials— entries are closed by project ledger entries created in sales.

Invoice entries

Invoice entries link project ledger entries billed based on time and materials to sales project ledger entries.

Unposted invoice entries

Unposted invoice entries are created when you use the Invoice Suggestion function to prepare a sales order for billing or set up a direct invoice.

To see them, run the Invoice Entries function from either document. You can also add project ledger entries to all unposted entries set up for a document line by using the Add Entries function on the entries page.

Additionally, you can adjust the invoice quantity with this action, with the Qty. to Ship and Qty. to Invoice being changed on the selected line when you exit the request page by choosing OK.

Afterward, the system checks whether the quantity ordered is enough to fulfil demand *(or, more specifically, the quantity remaining on the unposted entries is compared to the quantity still available on the line).*

If the remainder is insufficient, you can have the system increase the quantity in the dialog that appears.

Posted invoice entries

A posted invoice entry represents the main link between usage entries and sales project ledger entries, as it is assigned to both a time and materials entry and a ledger entry posted alongside an invoice in sales.

If you post an invoice from a sales order or from a direct invoice, all unposted invoice entries disappear and posted entries are created and transferred with an Entry No. to project ledger entries billed based on time and materials. No more than one invoice entry can be applied to this type of project ledger entry.

One project ledger entry in sales is then posted per line to bill. However, as multiple time and materials entries are typically aggregated on one line, the posted invoice entries create a 1-to-n relationship between sales project ledger and time and materials entries.

To see the project ledger entries, open a project card and choose Related > Ledger Entries on the ribbon. To see a list of all posted invoice entries, use the lookup in the Posted Invoice Entry field.

Applies to sales

Shows for a sales project ledger entry the number of applied project ledger entries that were billed based on time and materials.

Check against qty. to invoice

If you turned on the Qty. to Invoice vs. Invoice Entry Check toggle in Projects Setup, the total amount stored for the (unposted) invoice entries must match the value shown in the Qty. to Invoice field on the relevant sales line.

The purpose of this check is to prevent proof of performance documents from listing quantities that differ from those billed to the customer.

Manual application

Entries are applied automatically when you use invoice suggestions. However, you can do so manually as well.

Example
A customer is billed a flat rate for travel expenses. At the time of billing, the cost of the hotel that you stayed in hadn’t been posted yet to Business Central. A few days later, the invoice is posted to the project and a project ledger entry is assigned to close the ledger entry in sales.

To post application manually, you need to run the Apply Entries function from either a usage or a sales project ledger entry. Running the function opens a dialog page where you can then choose from all open time and materials or sales project ledger entries.

Select the relevant entry in the Set Applies-to ID field on the page. As more than one instance of project usage can be assigned to a sales project ledger entry, you can assign multiple time and materials entries to an entry here. Apply the entries by pressing F9.

Like automatic application, manual application closes the time and materials entries and creates posted invoice entries. These are linked to the posted invoice via the project ledger entries in sales, which means that manually created invoice entries also show up on posted sales invoices.

Reverse application

Project ledger entries can be unapplied at any time. This reopens the time and materials entries.

To delete a relation between entries, select a posted invoice entry, and then choose Unapply Entries on the ribbon.

Invoice entry relations deleted by users are identified by the following description: “Unapplied manually on... by...”

To be able to track the changes users make, the values in the Assigned Project Ledger Entry and Sales Project Ledger Entry fields are copied to the Old Project Ledger Entry and Old Sales Project Ledger Entry fields. However, after using the Unapply function, data regarding work packages and budget line activities can no longer be restored.

Entry type for G/L account posting

The type of a posted document also determines the type of project entry created for it. Typically, sales documents create entries of type Sale and purchase documents entries of type Consumption. You can, however, change the type, if necessary.

1. Choose the Search icon, enter General Journals, and then choose the related link.
2. Select an account, and then choose Related > Account > Card on the ribbon.
3. On the Projects FastTab, in the Project Entry Type field, choose one of the options described in the following table.

Option	Description
(blank)	G/L posting works as in the standard app (see above).
Usage	The ledger entry associated with the G/L account is posted as consumption (even on sales documents).
Sale	The ledger entry associated with the G/L account is posted as revenue (even on purchase documents).

The original type is then replaced on the relevant document and in the general journal. You can make use of this feature in situations such as the following:

- During purchase: Negative revenue is billed by a supplier.
- During sale: Foreign taxes need to be included on an invoice.

Print duration on invoices

To meet legal requirements, an invoice must indicate a delivery date. For invoicing services, delivery usually extends over a period. This period is determined based on the invoice entries for services billed by time and materials.

For invoice printouts to show periods in the format you want, use the Performance Date Formatting field in Projects Setup.

When you open a project card, you will then see the period in the specified format on the Project Billings FastTab. You can again change the format there.

BILLING CAPS

When you invoice a project by time and materials, you might see work hours exceed the number of billable hours a customer has agreed to. Typically, this means you either cannot bill some of the work or you need to put in a change request.

However, many agreements contain a clause that, up to a point, grants exceptions to scheduled quantities.

For work packages

You can set a cap for time and materials billing as early as creating work packages.

Field	Description
Billing Cap	Select this checkbox to set a limit up to which usage recorded for the work package can be billed even after the sales budget of a project is exhausted. This limit is determined by the total price stored on the relevant WBS line.
Billing Cap %	Specifies the limit for billing time and materials after exhausting a project's sales budget. This field can only be filled in if you selected the Billing Cap checkbox. If you enter nothing, the field is set to 0 and you cannot exceed the price specified on the relevant WBS line.

In project templates

You can then make use of the cap when you create a project template. When you enter a work package on a project template line, the billing cap values are copied to the line alongside other work package fields.

On WBS lines

Likewise, when you set up a new work package line, an available billing cap is copied automatically from the package to the line. The same is true when you create a WBS from a template. You can also set up or change billing caps on WBS lines later.

On invoice suggestions

Billing caps mainly inform those who create customer invoices. FactBoxes show the total billing limit and the amount remaining until that limit is reached.

Example:
An invoice suggestion includes a time and materials work package with a 10% cap. The package has the following data:

The work package has the following data:

USD700.00 sales budget - USD560.00 already billed
= USD140.00 remaining

Based on a USD770.00 billing limit, this means:

USD700.00 sales budget + 10% cap (USD70.00)
USD770.00 incl. billing cap - USD560.00 already billed
= USD210.00 remaining until cap

Mark for cap

When you use a suggestion to invoice a work package, the related project ledger entries are marked for billing regardless of the limit you specified. You can, however, see in the Remaining Amt. to Cap field at what point the limit will be exceeded.

For an invoice quantity to match the cap, you need to choose the Billing Cap action on the ribbon. This adds up the ledger entries from the top until you reach the limit specified. The entry that would have otherwise exceeded the cap is then reduced in quantity. All subsequent entries are set to 0.

Example:
As before, USD210 remain until the cap is reached. The following project ledger entries are now marked for billing:

Quantity	Invoice Qty.	Unit Price (USD)	Total Line Amount (USD)
3	3	30	90
3	3	30	90
5	5	30	150
4	4	30	120

The entries add up to USD450 in total. After running the Billing Cap function, you see the following reductions in quantity to match the cap:

Quantity	Invoice Qty.	Unit Price (USD)	Total Line Amount (USD)
3	3	30	90
3	3	30	90
5	1	30	30
4	0	30	0

The calculation might result in rounding differences, shown in the Rem. Amount to Cap field.

Note

A proof of performance statement continues to show all project ledger entries, including those with a quantity of 0, as all of them are still copied to billing as invoice entries.

Manual override

The person in charge of billing can edit project ledger entries manually to exceed the cap on purpose. However, the quantity available on the related sales order would need to be adjusted in this case see Invoice Error Code and Invoice Error Text.

Manual billing

If you don’t mark WBS lines but individual project ledger entries for billing, a cap will have no effect. Only the Remaining Amt. to Cap field will be updated.

SALES CREDIT MEMOS

When you run the Copy Document action from a blank credit memo to correct an already posted sales invoice, you can turn on a toggle on the request page to also copy the invoice entries from the posted invoice to the new document.

If you created the credit memo because you need to correct and re-send an invoice, we recommend that you keep the invoice entries as they are. If the credit memo represents a discount, however, they should be deleted before posting.

If you use the entries to post a sales credit memo, the applied project ledger entries are unapplied but not deleted (only their relations are).

Unapplied entries can be identified by their Unapplied Description field being filled in (on the posted invoice document). The description reads: “Reopened by Credit Memo [no. of posted memo]).”

The Assigned Project Ledger Entry and Sales Project Ledger Entry fields are then cleared, and their values copied to the Old Project Ledger Entry and Old Sales Project Ledger Entry fields for tracking purposes.

The posted invoice entries are also included on the credit memo. With the Old Project Ledger Entry and Old Sales Project Ledger Entry fields now referring to unapplied entries, their values will be the same as the values on the unapplied invoice (see above).

The Sales Project Ledger Entry field, on the other hand, will contain the project ledger entry that the system created when you posted the credit memo. Only the Assigned Project Ledger Entry field will remain empty, as no posted invoice entries are applied to time and materials entries.

CORRECT A POSTED SALES INVOICE

Besides running the Copy Document action from the credit memo ribbon, you can choose one of the following actions on the posted sales invoice itself to correct billing issues in different ways, with each using the invoice entries set up for the source document.

For more information, see Correct or cancel a posted sales invoice - Business Central | Microsoft Learn.

Correct

Creates a credit memo with the invoice entries from the posted invoice and posts the new document automatically, resulting in a complete reset of the billing process.

Also creates an unposted invoice with the existing entries so that the bill that was just canceled can be recreated. The new invoice can then be edited (that is, you can change sales prices on it, add lines to it, or delete lines from it, for example) and posted.

Cancel

Copies the invoice entries from the posted invoice to a new credit memo and posts the new document automatically. This results in a complete reset, after which billing can (again) be restarted.

Create Corrective Credit Memo

Creates a credit memo with the invoice entries copied from the posted invoice. The result is the same as if you had run the Copy Document action and turned on the Copy Project Invoice Entries toggle on the request page there.

This function also resets everything, which means billing can be restarted after the credit memo is posted.

PAYMENT PLANS

A payment plan provides a schedule for project billings, that is, it records times of cash inflow. Payment plans are used on invoice suggestions and in cost control.

To work with payment plans, you must set up the feature. A plan can cover a whole project or single WBS lines. You choose your preferred option in the Payment Plan Level field on a project card.

You can then run the Payment Plan function on a WBS to set up the plan. Depending on the plan level, the system will use the sales budget stored for the entire project or for individual WBS lines to schedule payments.

For projects

If you set the payment plan level to Project, payment plan lines refer to an entire project and no source work package can be selected. The net amount stored for the plan is calculated automatically from the sales budget set up for the project.

> **Note**
>
> You, however, need a target work package to use a plan on invoice suggestions or in cost control (the purpose of which will be explained later).

For WBS lines

If the payment plan level is set to WBS Line, you must select a source work package. As the plan lines now refer to a specific line on the WBS, a net amount is determined automatically based on the portion of the sales budget stored there.

Not every WBS line needs to be part of the payment plan if you want to use the plan only for invoice suggestions and need to bill periodically for an item or a service.

For example, an expensive piece of equipment might have been budgeted on a WBS line. You then create a plan for this one line together with the customer, whereas the rest of the project will be billed based on effort.

Unlike a payment plan for an entire project, this option requires that you specify a source WBS line in the Source Work Package field or choose the Get Source Work Package action when you create a plan. The net plan amount is then calculated from the WBS line budget with the help of the Pmt. Plan Amount % field.

Dimensions

The dimensions that are added to a payment plan line are typically identical to those on the invoice line that you want to create from it later.

Among the sources dimensions might be copied from is the WBS line to which revenue is posted. This line is then crucial to determining what dimensions the system needs to enter on the invoice document.

You can, however, also change dimensions on a plan line and have the system copy these changes to the invoice line you set up from it.

Fill in a payment plan

Fill in the fields of a plan as described in the following table.

Field	Description
Planning Type	Choose Invoice if the plan refers to separate (partial) invoices or Final Invoice if this is the final billing. When you use a payment plan on an invoice suggestion, the system determines the actual effort to bill, suggests this amount on the relevant date, and applies it to invoices already created.
Date (Scheduled)	Choose the date on which you want to bill. This date is included in all parts of the payment plan.
Pmt. Plan Amount %	Used to calculate a net invoice amount. At the project level, the value is calculated in percent from the budgeted total price of a project. If you entered a value in the Net Amount field, this field is filled in automatically.
Net Amount	Specifies the budgeted net invoice amount. You can fill in this field manually or have the system use the Pmt. Plan Amount % field to calculate the value.
Currency Code	Shows the currency stored for the project.
Billing Base Billing No.	The billing base and number are retrieved based on the WBS line to which you post sales (see also the Work Package field) and determine if a G/L account or a resource is entered on a suggestion line. Often, these fields contain a G/L account and number. If you select a sales account, the system will create a suggestion line based on this account—and not the billing base and number set up for the work package. You can override both values in payment plans. **Note** The standard procedure is to use the billing base and number from the target work package.
Payment Terms Code	This field is copied from the customer but can be changed manually. The terms are used on invoices.
Description	Enter a descriptive text that will later be shown on the relevant invoice line.
Milestone Reached	Relevant to billing by milestone. This field indicates what payment plan lines—that is, lines available for a milestone plan—have reached an agreed milestone. If, based on the plan level, a project or WBS line is set up for milestone billing, an invoice suggestion shows all lines for which the checkbox is selected but which haven't been billed yet.
Copy to Suggestion	Specify if you want a plan line included in an invoice suggestion. Otherwise, the line will only be used for cost control and cashflow forecasts.
Copied to Sales	If this checkbox is selected, the plan line was copied to an unposted invoice. A line can only be copied to an invoice once.
Invoice No.	Shows the number of an invoice if a payment plan line has been posted together with one.
Copied to Sales (Final invoice)	If this checkbox is selected, the plan line is used for a final invoice and has already been copied to a credit memo. On the memo, the actual amount from the line is credited, not the amount stored in the Net Amount field.
Document No. (Final Invoice)	Shows the number of a credit memo if a final invoice line has been posted together with one.
Work Package Code	Shows the work package code of the WBS line to which you want to post sales. For revenue billed at the project level, we recommend that you specify a WBS line that isn't related to a budget and is intended solely for storing sales from partial invoices. You then need to ensure that you selected Fixed or Time & Materials in the Billing Type field on the line if you want a payment plan included in an invoice suggestion. Which type you choose doesn't matter, as the amount stored on the plan line will also be used on the invoice.

Field	Description
	You can select WBS lines via the Work Package Code field or the Get Work Package function. A warning message appears if you don't select a line or if the WBS line you selected isn't suitable for billing.

On invoice suggestions

Plan lines for which you selected the Copy to Suggestion checkbox are given priority on invoice suggestions. If a suggestion contains open payment plan lines, the typical billing process used for projects and WBS lines is interrupted.

The following rules apply when you use payment plans on invoice suggestions:

1. The Copy to Suggestion field must be selected on the plan lines.
2. The scheduled posting date can be used as a filter so that the system suggests only partial invoices with even amounts.
3. Plan lines must relate to a valid WBS line. If there is no valid line, the plan lines will show an error message and cannot be copied to a suggestion.
4. Only a final invoice can close a payment plan.
5. If there are open plan lines, standard project billing is suspended, and the next amount due (filtered by posting date) is suggested instead.
6. Payment plans are always billed by direct invoice and not on an order.
7. Actual billing takes place with the final invoice. Depending on how you set this up, WBS lines will be suggested based on time and materials or fixed-price billing. The invoice is then created from associated sales orders. A credit memo is applied to any partial invoice.
8. This procedure can be used for an entire project or for specific WBS lines, as specified in the Payment Plan Level field on the project card.
9. If a plan relates to specific WBS lines, standard billing will be used for all lines not connected to a plan.
10. If a plan relates to an entire project, a WBS line can be removed from the plan by selecting the Ignore Payment Plan checkbox so that it is suggested for billing immediately.

Regarding rules 9 und 10, suggestions for billing a project might also include (besides payment plan lines that are due) WBS lines that aren't related to a payment plan. Plan lines are always billed by direct invoice (see rule 6).

If standard lines are marked for direct billing on one and the same suggestion, the system will create two different direct invoices, one for payment plan lines and another for the remaining lines.

This facilitates the retracing of calculation steps if final invoices are used. If you don't work with them, you can turn on the No Separate Pmt. Plan Invoices toggle in Projects Setup to ensure that suggestion lines aren't separated.

On credit memos

Full credit

If a credit memo fully settles a posted invoice created from a payment plan, that is, if the entire amount on a plan line has been offset by a memo, the line is treated as if it had never been billed.

You can then delete, change, or recopy the line to billing unchanged.

Partial credit

If a credit memo only partly settles the amount on a posted invoice created from a payment plan, that is, only part of the line amount is offset by the memo, the line is adjusted so that the amount on the line matches the amount on the invoice, minus the value of the credit memo.

In cost control

To create project account entries for cost control, a project budget is used. This budget is distributed onto accounts according to the account setup you specified when you turned on the cost control feature across projects.

The difficulty when budgeting project effort is how to estimate revenue on budget lines. The time spent on a project often doesn’t translate into immediate sales but will show up later, on a fixed-price invoice.

A payment plan can rectify this problem by providing you with reasonable estimates of cash inflow in cost control. To use the feature, you must choose Payment Plan in the Sales Project Acc. Entries From field on a project card.

When you now run the Update Project Account Entries batch job, a payment plan rather than the project budget will be used to determine sales accounts. Finding an account is then a matter of matching it to the (target) work package to which you want to post revenue.

MILESTONE BILLING

Overview

Milestones can be billed in multiple ways. Additionally, you can create milestone invoices per project or WBS line and invoice work at a fixed price or by using a special billing method for each work package (that is, WBS line).

Billing level	Billing type	Payment plan	Notes
On the project card, the Invoice Project by Milestones toggle is turned on. The payment plan level is set to Project.	Fixed price on each payment plan line. A final invoice can be used to bill every WBS line and apply credit memos to billed lines.	YES Only lines on which the Milestone Reached checkbox is selected are suggested for billing.	You can choose Final Invoice in the Planning Type field to schedule a final invoice. When the invoice is due, the invoice suggestion function will include all relevant WBS lines, their billing types, and the billed fixed-price entries as credit memos. You can, at any time, delete WBS lines and invoice them separately (that is, parallel to payment plan invoices). This billing method posts, in accordance with the payment plan, revenues to a milestone line of the work package type on the WBS.
Work packages The Invoice Project by Milestones field is turned off. The payment plan level is set to WBS Line.	Fixed price on each payment plan line. A final invoice can be used to bill every WBS line and apply credit memos to billed lines.	YES Only lines on which the Milestone Reached checkbox is selected are suggested for billing.	You can choose Final Invoice in the Planning Type field to schedule a final invoice. When the invoice is due, the invoice suggestion function will include all relevant WBS lines, their billing types, and the billed fixed-price entries as credit memos.
Work packages No special setup is required.	Instant billing per package.	NO No plan necessary (can be set up to provide payment info, but the Copy to Suggestion checkbox must be cleared).	Instant, one-time billing of WBS lines related to a milestone line when the milestone is reached. A final invoice will not be created. This billing method uses a milestone line of the blank type to post sales to WBS lines directly.
WBS line	Fixed price	YES	This billing method uses a milestone line of the work package type to invoice a group of WBS lines. In other words, instead of being invoiced separately, the WBS lines are added to a payment plan for billing.

For a project

The following paragraphs explain plan-based milestone billing for an entire project.

Project setup

Field	Description
Payment Plan Level	Choose Project.
Invoice Project by Milestones	Leave this toggle turned off.

WBS milestones

Lines for billing an entire project by milestones must be of the work package type, as they are later used to store revenue from plan invoices. For lines to be processed on an invoice suggestion, their billing type must be set to Fixed (Price).

Milestone lines are highlighted in color.

For work packages specified as milestones, certain restrictions apply. The packages can neither have budget lines, nor can quantities and prices be changed. A milestone line isn't used for budgeting but is an element of time scheduling.

Work packages

To assign a milestone line to a work package, select a line, and then choose Line > Milestone Definition in the WBS Lines section. You can choose only work packages that haven't already been set as milestones.

Milestone plan

To set up or update payment plan lines for milestone lines, choose (Advance) Payment Plans > Update Project Milestone Plan in the WBS Lines section.

With work packages already assigned to milestones on the payment plan, plan lines are then created from the total prices and ending dates on the associated milestone lines.

Work breakdown structure

On the WBS, milestone lines are highlighted in color.

Payment plan

Payment plan lines where the Copy to Suggestion checkbox is selected can be used on invoice suggestions. As the payment plan applies to an entire project, individual WBS lines aren't included in the suggestion. With a project set to Milestone Billing, the invoice suggestion also includes only lines for which Milestone Reached is selected.

Milestone Reached

When a milestone is reached, the work status on the WBS milestone line changes to Finished or Accepted (other statuses aren't possible in milestone billing).

The Milestone Reached field on the related payment plan line is also filled in, making that line available for billing on an invoice suggestion.

WBS lines without payment plan

If you don't want to bill work packages based on a payment plan, as some expenses need to be invoiced regardless of whether milestones are reached, select the Ignore Payment Plan checkbox on the relevant WBS line(s).

Invoice suggestions

A suggestion only includes plan lines on which the Milestone Reached checkbox has been selected.

Final invoice

A final invoice isn't strictly necessary. If you want to use one to bill actual expenses on WBS lines, select Final Invoice in the Planning Type field. The WBS lines are then included in a suggestion after every line on non-final invoices has been billed.

On the final invoice, the WBS is suggested for billing as if no plan existed. Each WBS line is also processed based on its billing type.

Additionally, invoices created from the payment plan are added as credit memos to the invoice.

For a WBS line

The following paragraphs explain plan-based milestone billing for a WBS line.

Project setup

Field	Description
Payment Plan Level	Choose WBS Line.
Invoice Project by Milestones	This field is not and cannot be turned on.

Work breakdown structure

No milestones are needed on the WBS, as the project as such isn't billed by milestones.

Work packages that you want to bill according to a milestone payment plan require that Milestone be selected in the Billing Type field.

Payment plan

Payment plans for individual lines are created manually. As you no longer specify plans for entire projects, the focus will be on work package relations, that is, for which source work package you want to create a plan line.

As the same work package is invoiced, source and target packages are identical. You can use the Pmt. Plan Amt. % field to establish a relation to a package. The value in this field is calculated from the total price shown on the related WBS line.

Milestone billing creates partial, fixed-price invoices at multiple stages of a project. The total price from the WBS line thus needs to be included in the payment plan, and the planning type must be set to Invoice.

> **Note**
>
> Don't use the Final Invoice planning type here. This would create a final invoice and credit memos of already posted invoices.

For inclusion in suggestions, the Copy to Suggestion checkbox needs to be selected on the plan lines (done automatically). With the Milestone billing type chosen on the WBS line, a plan line is only included in a suggestion if the Milestone Reached field is selected. This must be done manually and corresponds roughly to the release of an invoice.

Invoice Suggestion

To release a milestone for billing, select the relevant checkbox.

Without payment plan

A milestone plan can also be created from a WBS without the use of a payment plan. When a milestone is reached, the related work package is then billed according to its billing type.

Project setup

No setup is needed on the project card.

WBS milestones

Not unlike the method described earlier, milestones are planned on the WBS. But this time, the Billing Type field needs to be blank, as work packages—not milestones—are billed.

Work packages

To assign a milestone line to a work package, select a line, and then choose Line > Milestone Definition in the WBS Lines section.

You can choose only work packages that haven't already been set as milestones.

Suspend Billing

If you don't want to bill work packages related to a milestone until that milestone is reached, select the Suspend Billing checkbox on each work package line to prevent invoice suggestions from including the package prematurely.

When WBS lines are assigned to a milestone line of the blank type, you are asked if you want to exclude these WBS lines from billing. This way, billing takes place when the milestone is reached.

Milestone Reached

When a milestone is reached, its Work Status field is set to Finished. The system then checks if the Suspend Billing checkbox is selected on related WBS lines, as these can now be released for billing with the help of a dialog.

Invoice suggestions

The rest follows standard billing procedures for WBS lines based on billing types.

For multiple WBS lines

This billing method is different from the rest in that it only uses a milestone line to provide you with a convenient solution for billing more than one WBS line with the same payment plan.

If the billing type specified for the group line wasn’t set to Fixed (Price) but to Milestone, the typical milestone billing process would be run for the payment plan, and the subsequent invoice suggestion would only include plan lines on which the Milestone Reached checkbox has been selected.

Project setup

Field	Description
Payment Plan Level	Choose WBS line.
Invoice Project by Milestones	Leave this toggle turned off.

WBS milestones

A milestone line intended for grouping must be of the work package type, as it is later used to store revenues from plan invoices. For the line to be processed on an invoice suggestion, its billing type must be set to Fixed (Price).

If the billing type had been set to Milestone instead, the payment plan linked to the selected WBS line would be considered a milestone plan and be used accordingly (as explained earlier). Milestone lines are highlighted in color.

For work packages specified as milestones, certain restrictions apply. You can neither create budget lines nor enter quantities or prices for them. A milestone line isn’t used for budgeting but is an element of time scheduling.

Work packages

To assign a milestone line to a work package, select a line and then choose Line > Milestone Definition on the WBS Lines FastTab.

You can only choose packages that haven’t been turned into milestones yet.

You must then select the Suspend Billing field on each WBS line linked to the milestone line so that those lines are excluded from billing (as they should be billed through a payment plan).

Payment plan

To set up payment plan lines for the milestone line, you need to run the Update Payment Plan action.

You can then specify the number of plan lines onto which you want to evenly distribute the total price shown on the associated WBS lines.

The plan must be edited after creation. At the very least, you need to specify the required posting dates. Usually, however, you also need to adjust invoice amounts and edit their descriptions.

Work breakdown structure

On the WBS, milestone lines are highlighted in color.

> **Note**
>
> The Total Price field on a milestone line used for grouping doesn't contain the WBS line total, as this would double the budgeted sales amount.

Payment plan

Plan lines on which the Copy to Suggestion checkbox has been selected can be included on invoice suggestions.

WBS lines without payment plan

As the Suspend Billing checkbox isn't selected on WBS lines that you don't want grouped with the help of a milestone line, you can bill those lines the usual way.

Invoice suggestions

A suggestion only includes plan lines assigned to the milestone line. The associated WBS lines were excluded from invoicing through the Suspend Billing checkbox.

STATEMENT OF SERVICES RENDERED

For time and materials entries, a statement of the services rendered is typically sent alongside an invoice. This statement includes invoice entries from posted or prepared invoices. Proof of performance documents can already be printed when you are about to bill an order so that you can make invoice corrections before posting. This eliminates the need for revising invoices not accepted by a customer.

To print service statements alongside invoices:

1. Open a sales order.
2. On the Project Billings tab, turn on the Print Attachment toggle.

Even if the toggle isn't turned on, you can still print a statement manually. This field and all other fields used for printouts can already be preset on a project card.

The fields are later copied to posted invoices as well. You cannot change them there, but you can overwrite them on the request page associated with a statement.

> **Note**
>
> As with invoices, an attachment can also be printed for credit notes. This documents to the customer which services *(project entries)* have been credited in the credit note.

PERFORMANCE PERIODS ON INVOICES

You can have the period of performance, or a standard note about services rendered, printed on sales invoices in different languages.

Format periods

To specify the formatting of invoice periods on printouts:

1. Choose the Search icon, enter Projects Setup, and then choose the related link.
2. In the Performance Date Formatting field, select an option described in the following table *(includes two printout examples each)*:

Option	Example
YYYY-MM	January 2023 January 2023 to February 2023
YYYY-MM-DD	01-15-2023 – 01-25-2023 01-11-2023 – 02-14-2023
DD.MMM YYYY	15. Jan. 2023 – 25. Jan. 2023 11. Jan. 2023 – 14. Feb. 2023

The performance period is entered on sales headers automatically when you choose to bill a project based on time and materials. This type of billing requires invoice entries, each of which contains a date of performance. All these dates taken together then constitute the performance period.

Print translations

To print notes about services rendered in the language spoken by a customer:

1. Choose the Search icon, enter Document Text Translation, and then choose the relevant link.
2. On each line, select a code in the Language Code field for a language that you want to use on printouts, and fill in the fields described in the following table.

Field	Description
Performance Date Text	Enter a text that you want printed on an invoice if the Performance Period field on the relevant sales header has been filled in. The text should contain placeholder %1 to indicate a performance period on the invoice. **Example** “This invoice convers services rendered in %1.” If the period entered is January 2024, the note will look as follows: “This invoice covers services rendered in January 2024.”
Default Performance Date Text	Enter a text that will be printed when the Performance Period field is left blank. **Example** “Unless specified elsewhere, the date stated on this invoice is also the date of performance or delivery.”

Set periods on sales documents

On sales headers and unposted invoices, you can change the Performance Date field whenever necessary.

Billing by time and materials fills in a period automatically based on the dates of the invoice entries that are created when you prepare a bill. These dates will also be updated when you add or delete entries on invoice suggestions.

Posting an invoice will copy the contents of the Performance Date field to the posted sales invoice.

If the Performance Period field is used to print the period of services rendered on pro forma and (posted) invoices but the period is left blank, the system will print a default note instead. Both are printed below all services listed on a bill.

BILLING REQUESTS

After a sales invoice or credit memo has been prepared, it is typically sent to an organization’s billing department, as the person who prepared the document is most often not authorized to post it in the system.

With the Billing Request feature, project365 provides you with the means to simplify and standardize this process.

Create a billing request

To make a request:

1. Open a sales document.
2. On the ribbon, choose Home > Create Billing Request.
3. Specify a description for the request, if necessary, and choose OK.

A new entry is then added to the Billing Requests (Sales) page. Your decision of whether to specify a description manually doesn’t affect the creation of this entry.

Change a request description

You can also specify or change a request description later.

1. Open a sales document.
2. On the ribbon, choose Home > Update Billing Request Description.
3. Fill in the fields as necessary.

Open a request

To see a sales request:

- Open a sales document.
- On the ribbon, choose Related > Billing Request > Billing Requests.

The page is then filtered to the request created for this document. To see all requests, you can:

- Go to your role center and choose Sales > Sales Billing Requests at the top.
- Use the general search function to look for the Billing Requests (Sales) page.

The requests shown there represent a to-do list for your organization’s billing department, as the documents that you created them for have been released and can now be posted by running the Show Document action from the page.

When the status of a request line is changed to In Progress, the user who is editing the line is entered as the Person Responsible for it. You can see this status on the associated (unposted) document as well.

The request status can additionally be shown as part of the sales order, sales invoice, or sales credit memo list by unhiding the Billing Request Created and Request in Progress fields on the relevant page (via the Personalize function).

If a request is no longer needed, for example, because it shouldn’t be posted after all, it can also be deleted or archived at any time.

You can also check the status of the billing request in the lists for orders, invoices and credit notes. To do this, it is necessary to show the fields "Billing Request Created" and "Billing Request In Progress".

Billing Requests Archive (Sales)

You can use the Archive Request action on the ribbon to move requests that are no longer required to the Billing Requests Archive (Sales) page.

However, sooner or later, even active requests will be archived—without user involvement. This is the case when the related sales invoice or credit memo is being posted, for example.

When requests are archived by the system, the number and the posting date seen on the related document are added automatically to the archived record.

Note

Entries in the archive are read only and cannot be deleted.

PROJECT SALES ENTRIES

Project ledger entries of type Sale are used to record project revenue. They’re created when you post sales documents.

For a project billed based on time and materials, one sales entry closes one or more entries of type Time & Materials. You can see the number of closed T&M entries and the quantity that was billed for them in the Applies-to Sales and the Sales Adjmt. Quantity fields.

Line discount amounts and percentages are also shown; an invoice discount, on the other hand, is distributed evenly among the sales entries so that it can be applied to each Line Amount field in equal proportions.

See the following for examples:

Example 1 – Line discount on a project ledger entry

Quantity	10
Unit Price	50.00
Total Price (LCY)	500.00
Line Discount %	10
Line Discount Amount (LCY)	50.00
Line Amount (LCY)	450.00

Example 2 – Invoice discount

Invoice line 1	10 * 50.00 = 500.00
Invoice line 2	10 * 60.00 = 600.00
Invoice amount	1100.00
Invoice discount	10% = 110.00
Discount per line	Line 1 = 50.00 Line 2 = 60.00

Ledger entry 1

Quantity	10
Unit Price	50.00
Total Price (LCY)	500.00
Line Discount %	0
Line Discount Amount (LCY)	0.00
Line Amount (LCY)	450.00
	(The line amount was reduced by the discount on the invoice.)

Ledger entry 2

Quantity	10
Unit Price	60.00
Total Price (LCY)	600.00
Line Discount %	0
Line Discount Amount (LCY)	0.00
Line Amount (LCY)	540.00

Note

Line and invoice discounts can also be posted and shown together.

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Create Projects from Sales Documents

OVERVIEW

Whereas previous chapters have described, one after another, how to set up a project, calculate the effort that was put into it, and create sales documents from it, the following chapter will explain how to do the reverse, that is, create a project from a sales quote or order.

CREATE LINES FROM PROJECT TEMPLATE

This action can be run to create lines for a blank sales quote or order so that you don’t have to specify a project structure manually when you later want to set up a project from the sales document.

For this reason, the function retrieves not only the work package lines from a project template but also, for example, the Begin-Total and End-Total lines entered on it.

Whether template lines are added at the WBS or budget line level to the blank document depends on the option you selected in the Copy to Sales Doc. field on each line. Additionally, Begin-Total and End-Total blocks are set up around the budget lines assigned to the same template line, to keep them together on the new document as well.

As for the Expand Budget Lines fields on the template lines, you can use them to specify that when you run the function to set up document lines in sales and one of the Copy to Sales Doc. Field on the template is set to WBS Line, the system should also copy the associated budget lines to the new structure.

> **Note**
>
> Although template lines for which the No Transfer option is selected in the Copy to Sales Doc. field aren’t transferred to the sales document when you run this function, you can later add them manually to a WBS (when you’ve created a work breakdown structure from the document) or set up new templates for them (from which you can then transfer them in blocks).

CREATE PROJECT AND WBS

This action, found on the ribbon of sales quotes and orders, opens a page on which you can use two functions and a toggle to create a project from a sales document, as described in the following.

Create New Project

Running the Create New Project action from the page starts the project wizard.

Afterward, you must select a project template unless the sales document was created from one (see Create Lines from Project Template), in which case the Project Template Code field is filled in automatically. This template isn’t used to create a WBS, however, which is what you’ll do later with the help of the Create WBS function.

You can then choose OK to go to the next page, on which all customer-related fields are already filled in (and can no longer be changed) and the Status field is set to Quote or Open (Order), depending on the document ribbon the action was run from. The value in this field cannot be edited. The other fields on the page, including the Starting Date and Person Responsible, are blank and need to be filled in manually.

When you exit the wizard, you’re asked if you want the new project number to be copied to the document lines that you’re using to create the project. Typically, the answer to that question is Yes. Afterward, the system will:

- create the project (so that you can open the project card for it).
- link the sales document header and lines to the new project.
- copy the dimensions of the project to the sales document.

> **Note**
>
> You cannot run this function for a sales document that is already linked to a project.

Create WBS

You can now run the Create WBS/Lines function, found on the same page as the wizard, to create a work breakdown structure by using any resource, item, or G/L account line that isn't already linked to a WBS or budget line *(although you can also complete this part later, if necessary)*.

Note

Document lines that you want recreated as service package lines on the WBS must already have a work type assigned to them, as it is the only way to ensure that the new work breakdown structure contains valid package prices and units of measure.

You can, however, change a price later if necessary. Additionally, the work type that is copied doesn't need to match the type assigned to the WBS *(considering you can also change this type on both WBS and budget lines later)*.

Copy to Project / Target Project No.

Only document lines where the Copy to Project field is selected are included when you run the Create WBS/Lines function.

If, when running the Create New Project action, you said Yes to the question of whether to enter on all sales document lines the number of the project you just created, the Target Project No. is already filled in on the lines. Otherwise, the number is entered after you select the Copy to Project field there.

Begin-total and end-total lines that were copied with the help of a function to the sales document from a project template—to indicate the start and end of certain budget lines—cannot be marked for transfer to the project.

This is because the WBS/Lines function automatically creates a WBS line for each sales document line on which the target WBS level is set to Budget Line, which prevents the creation of additional begin-totals and end-totals.

Target WBS Level

The target level specifies if you want a sales document line to be set up as a WBS or budget line on the new project. Budget lines that contain the same work package (and potentially the same phase, task, and step codes) are grouped on projects.

Target Work Package Code

A work package must be filled in regardless of whether you want a document line copied at the WBS or budget line level.

Note

If the target level was set to WBS, the billing resource entered on the document line must match the resource linked to the target work package, as this resource is also required when you complete the process in reverse, that is, when you create a sales document from a work breakdown structure.

If the document line was created with the help of a project template, the target package is filled in automatically for the function (not on the sales line yet, however), as is the billing resource.

If the line includes an item and was added manually to the sales document, the work package is filled in based on the item category or the item itself, as both might have work package codes entered for them. If the item isn't assigned to a category or no package code was linked to it, the code is retrieved from the relevant item card.

If a service package (=special resource) has been added manually, its target work package is taken from the resource card.

In all cases, however, the system will look for a suitable package, as you can specify in the work package master the types (items, resources or resource groups, and G/L accounts) that you want to set up budget lines for. This means, for example, that you cannot select a package of an item (category) if budget lines aren't allowed for it.

Phase, task, and step codes

While not necessary, you can also fill in the Target Phase, Task, and Step Code fields on the page.

You cannot, however, use the auto PTS code that is specified in Projects Setup for manual entry, as this code is filled in automatically during the creation of a WBS. We nevertheless recommend working with PTS codes—especially if you want to create a work breakdown structure from a sales document.

When a WBS is created in this way, the codes can be adjusted *(for example, by a project manager)* provided no sales, purchase, or other document or posting, such as a time posting, exists for the structure.

Afterward, the updated codes are copied to the relevant sales lines, to retain a reference to the WBS line they're sourced from.

Target Resource Type

If the target WBS level is Budget Line, you can choose another resource or resource group for transfer to the new project if necessary. If you leave the field blank, the system will use the resource specified on the sales document line instead.

> **Note**
>
> If the sales document line contains a billing resource, you need to specify another target resource here.

Target Billing Type

This field is filled in with the type stored on a project template if you've used the Create Lines from Project Template action but can be changed if necessary.

For a sales document line created without a template, you can also fill in the field manually.

Work Status

This field is filled in from the project template but can be changed manually, if necessary.

Project Template Code / Project Template Line No.

These fields show the template that the lines on a sales document originate with if you've run the Create Lines from Project Template function to set up the document.

The information they contain is then used for the Expand Budget Line feature.

Expand Budget Lines

This field tells the system whether to create budget lines from a project template when you run the Create WBS/Lines function.

It is selected automatically depending on how the template has been set up, although you can change the field manually if necessary. Changing the field, however, is only possible for sales document lines on which the Target WBS Level is set to WBS and is only useful for lines with project template codes.

Batch copy WBS lines

When sales lines are created from a project template that a WBS Line Batch is specified for, the batch (which consists of WBS lines transferred from another template) is automatically entered into the new structure.

A line batch is useful when you want to add to the WBS internal cost lines that aren't transferred to sales documents but need to be part of the structure. For more information, see Project Template.

Other document line fields

All other field values, such as sales prices, line discounts, invoice quantities, and descriptions, will be copied to both WBS and budget lines automatically.

Dimensions

When you create sales lines from a project template, the dimensions that are copied to the lines are initially retrieved from a master record *(for example, a customer card)*.

By using the action to set up a project from a template, you can then have the system replace them with the dimensions from the template *(that is, when the number of the project is entered on the document)*.

If you also create WBS lines for the document, the dimensions on these lines will be copied to the sales document as well *(albeit to the lines)*.

Document texts

When you run the action for creating sales lines based on a project template, you’re asked whether you want to copy the text stored on the template to the new header. Any text that exists is kept when the function is run, and text you added to the WBS lines of the template will always be copied.

When running the function for creating a project from a sales document, the template is also used. However, texts are then copied from the sales header instead of the project template.

When you create WBS lines from document lines, any text stored on the lines of the sales document is also copied to the work breakdown structure *(at the line level)*.

Create project prices

When you create WBS or budget lines, you can additionally set up one sales price list per project by turning on the Create Project Prices toggle on the header of the Create Project and WBS from Sales Document page. Every price entered on the relevant sales document lines is then added to this list.

If a list already exists, it is expanded to include those values. Available prices, however, aren’t replaced. You’ll be notified if a price has already been entered for resources of a certain work type.

In addition to manually entered sales prices *(prices entered directly in the sales line)*, graduated prices from pricing are also transferred to the project price list. However, this is done without an assigned quantity. This procedure ensures that the correct sales price is still used for subsequent partial quantity postings.

Example:

The following quantity scale is stored for an item in the project-neutral sales price list:

1–10 PCS	100,00 USD
ab 11 PCS	95,00 USD

If 15 PCS are now entered in a sales line, pricing determines the lower price of 95.00 USD.

If only a partial quantity of 5 PCS is entered later in the project delivery bill, pricing determines the higher price of 100.00 USD without any additional information.

Due to the price line saved in the project price list without a quantity specification, a price of 95.00 USD is still determined despite the booking of partial quantities.

Note

The feature only copies prices that already exist when you turn on the toggle and run the WBS/Lines function.

CHANGE REQUESTS

Change requests can be copied from a quote or an order to an existing project and its WBS lines by entering the number of the project on a blank document header (that is, a header to which only a document number has been assigned so far).

Afterward, all available customer data is transferred automatically. To prevent manual overwrites, this includes the values entered in the Your Reference and External Document No. fields (provided they were filled in). What exactly is being copied depends on how the project has been set up.

The following happens in any case when you run the function:

- Lines from a sales quote are transferred to the WBS as quote lines.
- Lines from a sales order are copied to the WBS as order lines and can therefore only be transferred to projects that are set to Open (Order).
- A Begin-Total and an End-Total line, as well as a reference to the sales document, is added (provided the Batch Copy Change Requests from Sales to WBS toggle is turned on in Projects Setup).
- The change request gets its own WBS lines, even if the target work package that you select is already assigned to the WBS.

Note

If you create a project from a sales document and have only some of the lines copied to a new, blank WBS, the lines that remain after the transfer will be considered part of a change request when you have them copied later.

Service Packages

OVERVIEW

A service package is defined as a group of services billed to a customer for a set price. The time spent on completing the package is stated in hours, and a project is used to plan, post, and bill all related expenses and revenues.

> **Note**
>
> The use of service packages requires the Microsoft Dynamics 365 Business Central[1] price list functionality.

SETUP

Work type

To be able to use a resource as a service package, you need a work type with a unit of measure that matches the resource’s base unit and a billing unit that reflects the nature of the work being done.

This way, you can record and post the time spent on completing and delivering the package in hours but, for example, invoice the work by piece later.

Work package

To be able to add a service package to a WBS or budget line, you also need a work package that must be filled in as described in the following table.

Field	Value
Budget Type Resource	Turn on this toggle.
Billing Base	Select Resource.
Billing No.	Choose a billing resource that contains the units used for the specified work type (for example, Piece and Hour).
Billing Type	Select Time & Materials.
Work Type Code	Enter the work type specified for service packages.
Copy to Sales Doc.	Select Budget Lines.

Projects Setup

Field	Description
Work Type (Service Package)	Specify the work type that will be used by default when a resource is designated as a service package. The base unit specified for the resource must be Hour and the billing unit a measurement that reflects the nature of the package (for example, Piece).
Sales Price List (Service Package)	Select the project sales price list that you want to save unit prices for service packages to.
Auto Update Sales Price List (Serv. Pckg.)	Turn on this toggle if you want the sales price list specified in the previous field to be updated automatically when the price for a service package is changed. **Note** The list entry is created with the date set to today. To set your own date instead, you need to run the Update Sales and Purch. Prices (Serv. Pckg.) action from the ribbon of the relevant resource card.
Purch. Price List (Service Package)	Select the project purchase price list that you want to save unit costs of service packages to.
Auto Update Purch. Price List (Serv. Pckg.)	Turn on this toggle if you want the purchase price list specified in the previous field to be updated automatically when the cost of a service package is changed. **Note** The list entry is created with the date set to today. To set your own date instead, you need to run the Update Sales and Purch. Prices (Serv. Pckg.) action from the ribbon of the relevant resource card.

Note

The use of service packages requires the Microsoft Dynamics 365 Business Central[1] price list functionality.

Note

The Allow Default Settings Update field must be turned on for the specified price lists. This is because the price list lines associated with a service package are created with a starting date and this date might be in contradiction to the data entered on the list header. Selecting the field therefore prevents you from receiving error messages when maintaining price data for service packages.

SPECIFY A PACKAGE

Service packages are set up as resources in the system. The type you assign to a package doesn’t matter; still, we recommend that you specify packages as machines to better distinguish them from human resources.

You can then fill in the service package fields on the relevant resource card as described in the following table.

Field	Description
Service Package	Turn on this toggle if you want to mark the resource as a service package. To help distinguish these packages from human resources, we recommend that you select Machine in the Type field.
Target Work Package Code	This field determines to which work package this service package is transferred when a work breakdown structure is created from a sales document. After selecting the target work package, the work type is transferred from there to the "Service work type" field. If no work type has been entered, the work type of the target work package is transferred. If a work type already exists, it must match that of the selected target work package.
Service Work Type	If the resource is marked as a service package, the work type that is used for packages is copied to this field automatically. However, the work type is transferred from there at the latest when a target work package is assigned.
Invoice Qty.	Enter 1 in this field if resource hours are combined into a service package, that is, the resource is billed by time and materials.
Invoice Unit of Measure	This field is filled in automatically if you mark the resource as a service package and cannot be changed.
Planned Qty.	If the resource is designated as a service package, that is, work is billed by time and materials, specify —in hours—the effort required to complete it.
Planned Unit of Measure	This field is filled in automatically if you mark the resource as a service package and cannot be changed.
Unit Cost / Planned Qty.	This field is also filled in automatically and indicates the estimated unit cost per hour for resources designated as service packages—the result of dividing the cost of the chosen package by the planned quantity.

The other fields are set up in the same way as for standard resources.

Prices

All packages are sold at fixed prices. When you enter the price of a package in the Sales Price field, a new line is (automatically; see note) created for it on the Project Sales Price Lists page, giving the amount in local currency. Prices in foreign currency must be added manually to the list.

The cost per unit is calculated as follows:

Planned Qty. * average unit cost of all resources who contributed to completing the package.

The result is entered in the Unit Cost field. The Unit Cost / Planned Qty. field is also updated, and a new price list line is added to the Project Purchase Price Lists page (by the system; see note).

> **Note**
>
> If you turned on the Auto Update Purch. Price List (Serv. Pckg.) and Auto Update Sales Price List (Serv. Pckg.) toggles in Projects Setup, prices are updated automatically, with the date set to today. If you didn’t, you can set your own date by running the Update Sales and Purch. Prices (Serv. Pckg.) action from the ribbon of the resource card. Only the first, automatically entered price is set without a date. This price is therefore universally valid and there are no problems with pricing in documents and budget lines with an earlier date.

USE ON BUDGET LINES

To be able to assign service packages to a project, you need a WBS line with a suitable work package.

We recommend that for every project, you use one line on the work breakdown structure to collect the service packages you sell, with a Resource-type budget line created from it for each of these packages to enter a resource on.

Following validation of the resource’s number, the system then transfers to the budget line the related description, unit of measure, consumption quantity, and sales quantity, as well as the unit price and unit cost from the associated price lists.

As the quantity values depend on each other or on the values specified for the service resource, you cannot change either on the budget line.

What you can do, however, is to use the Set Service Package Qty. action on the project budget ribbon to adjust the number of packages *(the sales quantity)*, to allow the system to recalculate the scheduled consumption value.

Example
A service package is expected to require 15 hours of work to complete. On the associated resource card, the invoice quantity is set to 1, whereas the planned quantity is set to 15. Both quantities are then copied to the budget line that the package was entered on. If you now run the Set Service Package Qty. to adjust the total to three packages, the number in the Quantity field on the budget line will be set to 3 automatically.

You can then post the time spent on completing the package, with fixed-price billing specified at the budget line level so that each package is sold on its own.

When all values are filled in, you can also perform a target-actual comparison to see in what amount of time you expected to complete the service package and how long it actually took.

USE ON DOCUMENT LINES

You can use the Create Sales Document function to copy service packages to sales documents. But even without running this action, you can add a package to a sales quote, for example, by entering it manually on a document line.

The line must be of type Resource. After you choose a resource in the form of a service package, the system copies to the line not only the description of the package but also its unit price and billing unit.

RECORD TIME SPENT

If you want to add service packages to a project, the project must have been set up in a way that all hours spent on completing a package can be recorded at budget line level.

To simplify the recording process, the time tracking page shows only budget lines assigned to the relevant resource or its resource group and the lines of other service package resources stored in the system.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

Intercompany Work

OVERVIEW

The intercompany management functionality is designed for users who have set up multiple independently operating business entities, each aiming to cover a different region or territory or provide a distinct range of products and services to customers.

Called companies in the system, they typically manage their own data and finances. Sometimes, however, several of them might need to supply products or services to the same customer at the same time. For example, a project might require that staff members working for one company lend their expertise to another. This is where IC management can help coordinate and bill work done on a project.

INTERCOMPANY FUNCTIONS AND ROLES

When a customer places an order for an intercompany project, one organization typically takes on the role of main contractor. This business will be referred to in the following as the billing company.

The services and materials required for the project are then stored on WBS lines that you set up within that company. However, to provide a specific service, the business now hires another to act as a subcontractor, which will be called the service company for the purposes of this article.

The business relationship between both companies isn’t set in stone. For other projects, the roles might be reversed, and the organization that used to supply a service might become the business entity that bills the project. A billing company can hire multiple service companies for a project or complete work on its own.

All service companies are set up as vendors in the partner company that bills the project. The partner, in turn, is entered as the customer in each service company. The actual customer is stored with the project that you set up in the billing company.

To transfer a resource task to a service company, you can then choose WBS lines in the partner business and use a function to copy the entire project, including the selected lines, to the service company for processing the order.

Service companies always send invoices to a billing company and never directly to a client. The project ledger entries that are created from posting these outgoing invoices—marked as inbound in the billing company—are assigned to a WBS and later invoiced to the end customer according to a project-specific price agreement.

Billing and service companies might use different local currencies, which will affect how invoices are settled internally. For example, a billing company might be sending invoices in EUR, whereas the business providing services for the project being billed might have entered DKK as its local currency in Finance Setup.

SETUP

Register a billing company

Before you can copy project data from one business to another, you need to turn on IC management. The settings described here only need to be made once.

Choose an IC partner

Each billing company must have a service company assigned as an IC partner. To assign a partner:

1. Choose the Search icon, enter Intercompany Partners, and then choose the related link.
2. On the ribbon, choose New to set up a partner.
3. Fill in the fields as described in the following table.

General

Field	Description
Currency Code	Specify the currency used by the service company.
Transfer Type	Specify the type of data transfer. **Note** Intercompany project management in KUMAVISION project365 currently only supports data transfers between billing and service companies stored in the same database. This field must therefore be set to Database.
Company Name	Enter the name of the service company. **Note** Intercompany project management in KUMAVISION project365 currently only supports data transfers between billing and service companies stored in the same database.

Purchase Transaction

This FastTab shows the vendor assigned to the billing company’s IC partner.

To set up a vendor, open a vendor card and choose a company partner in the IC Partner Code field on the General FastTab. The Vendor No. field is then filled in automatically.

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Filling in the fields on this FastTab is optional but provides you with a set of alternate numbers and codes when you transfer data to a service provider. WBS and budget lines that you create in a billing company include primary keys, that is, numbers and codes, for the following project information:

- Resources and resource groups
- Work packages
- Phase codes
- Task codes
- Step codes
- Work types

Because data records in service companies don’t need to have primary keys identical to those in a billing company, you can use the options on this FastTab to specify new numbers and codes for them as described in the following table.

Field	Description
Internal Code (Internal No. for resources)	The code (or number) is copied as is from the billing company to the service company.
Shared Code (Shared No. for resources)	The code (or number) is copied from the Shared Code field in the billing company’s data record to the service company.
Activity IC Partner Ref. (Resource IC Partner Ref. for resources)	The code (or number) is copied from the IC Partner Reference field in the billing company’s data record to the service company. A reference can be added to a data record wherever you can set up the numbers and codes listed earlier.

Example
In a billing company, a work package named Project Management with code AP001, shared code PL, and new number RAB001 was entered on a WBS line that you want to copy to one or more service companies.

Internal Code
Billing company code AP001 is copied as is to all service companies.

Shared Code
Shared package code PL is copied to all service companies instead.

Activity IC Partner Ref.
Work package code RAB001 is copied to service company IC1020.

As you can copy projects from one billing company to multiple service companies, the first two options apply to all existing service providers.

The third features company-based code calculations for service companies, which makes it the most flexible but also the most time-consuming setup solution.

For resources or resource groups, there also exists the option of converting a certain resource in the billing company into a resource group in the service company as you copy data from one to the other.

This option is particularly useful if a certain resource is entered on a budget line in a billing company, but the partner company only requires that the line be completed by a member of the related resource group, and the other way around.

To turn on the option, select Resource IC Partner Ref. in the Outbound Project Resource No. Type field on an intercompany card. You also need to assign the resource to the relevant service company. To do this:

1. Open the relevant resource card.
2. On the ribbon, choose Related > Resource > IC Partner References.
3. Fill in the fields as necessary.

Field	Description
Type	Specifies the type of record. In our example, the field is set to Resource automatically.
No.	Specifies the number of the record. In our example, the number of the resource is filled in automatically.
Cross-Reference Type	Specifies the type of company reference. In our example, the type is set to Vendor.
Cross-Reference No.	Specifies the number of the company reference. In our example, the vendor number is retrieved from the service company.
New Type	Select the type that you want to store in the service company, for example, Resource Group.
New No.	Specify a new number based on the preceding field.
Description	Enter a description of the intercompany reference.

Another field on the FastTab is the Outbound Project No. field, which shows the number that you want to use for projects copied to the partner company. The options in this field are described in the following table.

Field	Description
New No.	Assigns to the project the next number from the default series that you set up for new projects in the service company.
Shared Project No.	Retains the number from the billing company so that the number will be the same in both companies.
No. Series	Assigns a new number from a specific series that must exist in both companies. The number series is selected in the Outbound Project No. Series field.

Register a service company

Service companies must also be configured before first use.

Choose an IC partner

Like a billing company, a service company must be assigned to an IC partner. To assign a partner:

1. Choose the Search icon, enter Intercompany Partners, and then choose the related link.
2. On the ribbon, choose New to set up a partner.
3. Fill in the fields as necessary.

General

Field	Description
Currency Code	Specify the currency used by the billing company that you want to assign to the subcontractor. If the billing partner uses another local currency than the service company, the code specified for the currency must be the same in both companies. In our earlier example, where the billing company's local currency is EUR and the service company's is DKK, EUR needs to be specified as a currency in the service company.
Transfer Type	Specify the type of data transfer. **Note** Intercompany project management in KUMAVISION project365 currently only supports data transfers between billing and service companies stored in the same database. This field must therefore be set to Database.
Company Name	Enter the name of the billing company. **Note** Intercompany project management in KUMAVISION project365 currently only supports data transfers between billing and service companies stored in the same database.

Sales Transaction

This FastTab shows the customer assigned to the service company's IC partner.

To set up a customer, open a customer card and fill in the IC Partner Code field on the General FastTab. The Customer No. field is then filled in automatically.

In the Outbound Sales Resource No. Type field, you specify if you want the number of a billing resource to change when a sales invoice is sent by the subcontractor to the billing company, where it is converted into a purchase invoice. Billing resources are used by service companies to charge for work they have done on a project. The options available in the field are described in the following table.

Option	Description
Internal No.	Copies the number of the resource from the service company's outgoing invoice to the billing company's inbound invoice.
Shared No.	Replaces the number of the resource on the billing company's inbound invoice with the value specified in the service company on the card of the resource in the Shared No. field.
Resource IC Partner Ref.	Replaces the number of the billing resource on the billing company's inbound invoice with an IC partner reference, which is stored as additional information on resource cards in service companies.

Note

This field is not to be confused with the Outbound Project Resource No. Type field.

The Outbound Project Resource No. Type field is used to copy projects, including selected WBS and budget lines, from a billing to a service company and is maintained by the billing company see Register a Billing Company.

The opposite is true for the Outbound Sales Resource No. Type field, through which the system converts resource numbers on sales invoices sent to billing companies. This field is updated only in service companies and extends standard functionality to include IC transfers of resource-type invoice lines, which are needed to calculate project usage based on billing resources.

You can also use the Outbound Sales Resource No. Type field for other purposes, for example, when you don’t work on a specific project but want to copy a sales invoice with resource lines between companies.

The Shared Type or New Type field must then be set to Resource, as only resources, not resource groups, can be copied to sales and purchase invoices.

COPY PROJECTS FROM BILLING TO SERVICE COMPANIES

As described earlier, you must set up an IC partner as a customer and another as a vendor if you want to copy a project from a billing to a service company.

Before you can exchange information between them, you also must have specified how basic project information is converted during transfers, including conversion rules for resources and resource groups, work packages, phases, tasks, steps, and work types.

Create a project in a billing company

To use intercompany management, a billing company must be specified as the main contractor. You also need to create a project with WBS lines and budget lines and select a customer for it.

Additional fields on the project card, on the Intercompany FastTab, then show the status of transfers between the billing company and its subcontractors.

The No. of IC Partners is the only relevant field on this FastTab in a billing company. The field shows the number of service companies to which the project has been copied. The other fields are required by service companies and are described later.

Before you can copy a project to a service company, you need to open a WBS and assign a partner through the IC Partner Code field to each line that must be transferred. You can assign a different IC partner per line, if necessary. All lines not assigned to a partner contain work packages that will be provided by the billing company.

Afterward, run the Copy Project to IC Partner action from the project card to have the project’s WBS and budget lines transferred to the service company.

To tell the system not to copy a budget line, for example, because it’s needed for intercompany reconciliation, select the No IC Transfer checkbox on it.

Specify resource prices

Besides WBS and budget lines, you can use prices that were agreed on by a service and a billing company to create invoices for internal billing. Each price you enter on the Project IC Partner Resource Prices page applies only to a specific project.

When you copy a project, the price is then copied to the service company’s Project Resource Prices page. The fields on both pages are identical.

Based on what option you selected in the Type field, you can enter price information for specific resources, resource groups, or all resources.

A price that is stored in the Price (LCY) field is always shown in a billing company’s local currency. This is because the work performed by subcontractors will be billed in the currency specified for the billing company.

Copy a project to a service company

To copy a project from a billing to a service company:

1. Open a project card.
2. Choose Copy Project to IC Partner.
3. On the Options tab, choose the IC partner that you want to transfer the project to.
4. Choose OK to start the transfer. The number of records copied will be shown when the process is complete.

Note

A project can only be copied if it set to Open and the WBS lines you want to transfer have the work status In Progress or Open.

You can transfer records to all partners specified as such on the WBS lines of a project. This will make it easier for you to select a partner if many have been set up in the system. You then need to rerun the action for each company that you want to send the project to.

If the ICP Ships to Customer Address toggle on the project card is turned on *(a toggle you might have already set on the related project template)*, the address that is entered for the project will be taken over as the service company's ship-to address. With the toggle turned off, the project will be shipped to the partner billing the services, that is, to the customer address entered there.

Running the Copy Project to IC Partner action increments the value in the No. of IC Partners field in the billing company (see the Intercompany FastTab on the project card). You can click the field to open a list showing all IC partners that data has been copied to and the reference number they gave the project.

As the same project can be copied to an IC partner more than once to update information, the number of times a project was copied to a single business is shown as well. To see a complete list of all transfers, including the number of WBS and budget lines copied along, select the No. of Transfers field. The log additionally shows the WBS version that was copied and the partner's version that it corresponds to.

You can also use the action repeatedly, for example, to copy additional WBS lines to the same IC partner or to add new price agreements from the Project IC Partner Resource Prices page.

As mentioned, running the function more than once to copy data to the same project and partner increases the value in the No. of Transfers field in the Project IC Partner table by one.

Each time, the function checks if the billing company contains all the data necessary for transferring resources and resource groups, work packages, phases, tasks, steps, and work types to the relevant service company.

For example, if you select Shared No. as the outbound project resource number type on a resource card, the system checks during transfer if this field has been filled in for each resource and group that you want to copy and then copies its value to the subcontractor.

The same applies to conversions based on the Activity IC Partner Reference option. If you use this conversion rule, all data that you want to copy must have a reference entry to an activity in the billing company, and the New No. field stored there cannot be blank. However, the function doesn't check if new values calculated according to the rule are valid in the service company.

Note

Only the active WBS version is transferred. If this version is changed, another transfer to the IC partner will result in the creation of a new active version of the structure. For more information, see Review Data in a Service Company.

Review data in a service company

Prior to an explanation of how to review project data, the following section will detail how much of a project is copied from a billing to a service company.

Scope of data transfer

A number is automatically assigned to a project in a service company based on the option you select in the Outbound Project No. field on the billing company's partner card.

You can see this number in the billing company by opening the source project and choosing Related > Project > Project IC Partners on the ribbon.

The source number, on the other hand, can be viewed in the service company on the Intercompany FastTab of the relevant project card. As the projects are now linked, you can start copying invoices or assigning ledger entries between them.

Other project card fields on the Intercompany FastTab are also filled in during this process. They are described in the following table.

Field	Description
Source IC Partner Code	Specifies the code of the IC partner if a project is copied from a billing company. The field is empty if the project is a standard project with no intercompany reference.
Source IC Partner Project No.	Shows the number of a project stored with a billing company if the project has been copied from there. This field is empty if the project is a standard project.
New WBS Version Exists	If selected, indicates that a new WBS version was copied along with the latest data sent from the billing company. This version must then be checked, reviewed, and activated.
IC Review Status	A project copied from a billing company must be reviewed in the current service company before it can be posted. This field shows the status of the review. **(blank)** The project is a standard project that has not been copied from a billing company. **Open** The project needs to be reviewed. A project receives this status automatically after its initial transfer from a billing company. When you repeat the transfer, the field is filled in again if new data is added. **Completed** The project has been fully reviewed and, if available, the new WBS version that was created for it is set to Active.
IC Res. Price Review Open	Shows if the transfer included project resource prices that still need to be reviewed.
IC WBS Line Review Open	Shows if the transfer included WBS lines that still need to be reviewed.
IC Budget Line Review Open	Shows if the transfer included budget lines that still need to be reviewed.

The customer specified in the service company is the billing company, as the former isn’t the end customer but the subcontractor.

If one of the companies uses a different local currency, we recommend that you already store the invoice currency for the organization that bills services with the company that supplies them. Invoices sent between a service and a billing company always appear in the currency set up for the billing company.

Copying project data to a service company also transfers over data from the project's active WBS header and the WBS lines you select, including from any budget lines.

You can copy projects more than once. If you do so, the system skips WBS or budget lines that have been copied to the subcontractor in the past.

Note

During transfer, the system doesn’t check if individual fields on a WBS line have been changed; the same goes for its budget lines. The IC review status you can see on the budget lines is therefore identical to the status on their WBS lines.

Project transfers additionally include the headings and extended texts that are entered on WBS version and budget lines to help subcontractors fulfil demand. However, this again only occurs the first time you copy lines. Neither headings nor texts will be updated during repeats.

Similarly, comments entered for a project, WBS lines, or budget lines aren’t copied at all, as they’re considered internal information intended only for employees of the billing company. Dimensions (on a project header, on WBS lines, and on budget lines) typically aren’t copied either, as they’re recalculated in service companies depending on how you set them up there.

Project IC resource prices, on the other hand, are transferred to the Project IC Prices page. Furthermore, some base data used for project management is converted according to the rules specified in the billing company. This includes data regarding resources and resource groups, work packages, phases, tasks, steps, and work types.

Still, after a project has been copied to a service company, multiple fields on the project header, the WBS lines, and the budget lines remain blank. Examples are the address fields on the header and the price fields on the lines.

When you transfer a project, the system strictly applies the specified conversion rules to make changes to data in the service company. However, it doesn’t check if a copied field value can be used in that company.

For example, although project usage might be assigned to a resource group, the system doesn’t check whether the group exists in the service company. Because there might be other missing and partly non-validated information, the Locked toggle on the card of a copied project is set to Post automatically after each transfer. You then need to review the project before you can post to it.

Review a project in a service company

Sometimes, the conversion rules that you specified for intercompany transfers might not be enough. For example, the phase, task, and step codes set up for a project might not exist in the service company to which you copied the job.

To check project data in a service company:

1. Open a project card in the company.
2. Choose Actions > IC Review on the ribbon.
3. On the Options tab, select for phase, task, and step codes if you want them created automatically or whether the review process should be canceled with an error message when one of the codes doesn’t exist.
4. If a project transfer has created inconsistencies in other data, for example, in resource group records, the process will be canceled regardless.
5. Choose OK to start the review.

The system then runs a check on all project-related data that was copied to the service company. If the process is canceled because of an error, you can correct the error manually and rerun the function.

Following the review, some of the Intercompany FastTab fields on the project card are updated as described in the following table.

Field	Description
IC Review Status	The status of the review is set to Completed.
IC Res. Price Review Open	The status that indicates if there are still resource prices to review is set to No.
IC WBS Line Review Open	The status indicating if there are still WBS lines to review is set to No.

The Locked toggle on the General FastTab is then turned off as well, which will allow you to post to the project again. If a new WBS version was received from the billing company, it will be the active version after review.

The status of the project, however, is still set to Quote. You can set the status to Open in the usual way, via the Status field, and fill in the Person Responsible field thereafter.

To post consumption to a work package entered on the WBS, you need to set the work status of the package to Released.

Only WBS lines that have been review can be set to open or in progress.

In the service company, you can then edit the copied WBS and budget lines or add lines manually. You can also create budget lines for WBS lines that were transferred from the billing company. This means projects set up in a service company can have both WBS and budget lines with and without references to a billing company.

Example
You set up a package for coordinating work with the business that placed the order you’re currently completing. Because the package isn’t invoiced to your intercompany partner, you set the Billing Type field to No Billing. This way, the WBS line on which you filled in the package in the service company will not be linked to a line in the billing company.

Note

You cannot delete budget or WBS lines that are copied to the service company in this way.

Warning

If another active WBS version is transferred to the billing company later, WBS lines you’ve created manually in the service company must be copied from the previous WBS version to the new active version of the work breakdown structure by running the Copy to IC Project Partner action from the project card ribbon *(selective copying)*.

POST CONSUMPTION IN A SERVICE COMPANY

Before you can post time and material usage for a project in a service company, you need to ensure that the data pertaining to the project is validated (see Review a Project in a Service Company).

The project is then treated like any other: Employees can record their hours on it, and the project manager can approve these hours and post them to the project.

Sales invoices can also be created in the usual way, by using the suggestion feature. The differences to standard processes start when you’re about to post an invoice to the billing company. Not only will it be submitted through an IC transfer, but it will be recreated as a purchase invoice there as well.

Meanwhile, the project ledger entries created from item and resource consumption are aggregated into intercompany commitments. For more information, see Billing Company Commitments.

Post time

To post hours on a WBS line set up in a service company, you must change the work status on the line to In Progress. You can then enter and post hours through your project time journal.

Example
You post two hours spent on coordinating work with an IC partner in the time journal. The remaining hours will go toward the services requested by the partner.

Post project ledger entries

To convert posted hours into project usage, open a project journal and choose Process > Get Time Entries. This posts the journal lines and creates project ledger entries.

BILLING COMPANY COMMITMENTS

Typically, invoices exchanged between a billing and a service company are based on project usage entries posted in the service company. These, in turn, often originate from hours posted by the subcontractor’s employees.

As the intervals between posting project-related work hours, converting them into usage, and billing them might be relatively long, it could prove helpful to be able to estimate the expenses incurred by a service company before an invoice is even created.

These estimates show up in billing companies as intercompany commitments. They represent either hours recorded for a project in a service company but not yet posted as usage or project usage posted but not yet invoiced. Commitments consist only of entries that can be invoiced and that originate from WBS lines included in an IC transfer to the service company.

To (periodically) collect and compile billing-relevant time and usage entries, you can run the Calculates Lines function from the Project IC Commitment page.

Show unbilled entries

Although the Project IC Commitment page looks like a journal, it’s not used to post but to collect project data from a subcontractor and show that data in a billing company.

As a billing company can be linked to multiple service companies and data for each might be available at different times, every company providing services gets its own intercompany commitment page, with the page bearing the name of the business it was created for.

To copy data from a subcontractor to this page:

1. Open a billing company.
2. Choose the Search icon, enter Project IC Commitment, and then choose the related link.
3. Select an IC page in the Name field.
4. Choose Calculate Lines on the ribbon.

The page then shows the intercompany commitment values copied from the service company. If there are no unposted time entries, the commitment will consist entirely of project ledger entries (see the Entry Type field).

The transfer includes only entries from ordered, billable work packages; non-billable packages aren’t copied from the service company.

The fields that can be found on the page are described in the following table.

Field	Description
Project No.	Shows the number of the project as specified in the billing company.
Project Description Sell to Customer No. Sell-to Customer Name	Shows these fields as they appear in the project set up in the billing company.
WBS Line No.	Shows the number of a WBS line set up in the billing company.
Type No. Phase Code Task Code Step Code	Shows these fields as they appear on the WBS line set up in the billing company.
Budget Line No.	Shows the number of a budget line set up in the billing company.
ICP Project No.	Shows the number of the project as specified in the service company.
ICP WBS Line No.	Shows the number of a WBS line set up in the service company.
ICP No. ICP Phase Code ICP Task Code ICP Step Code	Shows these fields as they appear on the WBS line set up in the service company.
ICP Budget Line No.	Shows the number of a budget line set up in the service company.
Entry Type Entry No.	The Entry Type field has two options: Time and Project Ledger (Unbilled Usage). A line on the page thus refers to either a time or a project ledger entry copied from the service company. The Entry No. field shows the number of the entry as specified in the service company.
Posting Date Document No Resource No. Description Start Time End Time	Shows these values as specified for the time or project ledger entry set up in the service company.
Quantity Unit of Measure Code Qty. per Unit of Measure Quantity (Base)	Shows quantity and measurement values as specified for the time or project ledger entry in the service company.
Unit Price (LCY) Line Discount % Total Price (LCY)	The first field shows the expected unit price that will be used for invoices sent from the service company to the billing company. Prices and amounts on IC invoices are always given in the billing company’s local currency. If the line on the page refers to a usage entry in a service company, as determined by the Entry Type field, the values in these fields are copied from that entry (with amounts given in the invoice currency). If the line refers to a time entry stored in the service company, the values in these fields are transferred from a budget line—provided one is available. Otherwise, they’re set to 0.
Performance Date Performance Resource No. Performance Resource	These fields also originate from either a time or a usage entry stored in the service company. They’re used for informational purposes only, to provide a more detailed description of the services rendered.

Field	Description
Name Performance Unit of Meas. Code	When the service company submits an invoice to the billing company, the values in these fields are copied there alongside other project data. The project ledger entries stored on the invoice will later be transferred to the bill sent to the end customer (see the Sell-to Customer No. field).

Running the Calculate Lines function as described earlier deletes all lines, even those copied previously, before retransferring data from the service company.

This function is the only tool available to you for updating lines on an IC commitment page. Posting new time or project ledger entries in the service company will not have the same effect.

In short, you need to run the function in the billing company on a regular basis and do so at the latest before you intend to analyze the IC commitment with the help of fields calculated automatically on the company's WBS lines.

Show on a WBS

Every WBS and budget line contains two fields for determining a billing company's IC commitment. One shows the commitment by quantity, the other by value. Both fields are sourced from the Project IC Commitment page.

As this page shows the WBS and budget lines of all service companies assigned to a specific project, we recommend that you include the commitment fields in analyses only after you have updated the relevant IC commitment pages. Both fields are described in the following table.

Field	Description
Qty. IC Commitment (Base)	Shows the result of totaling the Quantity (Base) fields of all data records in the Project IC Commitment Line table.
Total Price IC Commitment (LCY)	Shows the result of totaling the Total Price (LCY)) fields of all data records in the Project IC Commitment Line table.

SEND INVOICES TO A BILLING COMPANY

A group of intercompany-specific outbound and inbound transactions is used to bill consumption posted in a service company to the company invoicing the work to the end customer.

Create an outbound invoice in a service company

You create invoices in a service company in the usual way, through suggestions. To create an invoice that you want to send to a billing company:

1. Open a service company.
2. Choose the Search icon, enter Invoice Suggestion, and then choose the related link.
3. On the ribbon, choose the Create Suggestion Lines function. This fills in the page with all consumption entries posted for the services provided.
4. Select the Direct Invoice checkbox for entries that you want to bill.
5. On the ribbon, choose the Create Invoice action, and then choose OK to create an invoice from the suggestion.

Example of an outbound invoice

Following on from our earlier example, you run the Create Invoice function from the Invoice Suggestion page to create an invoice with amounts given in EUR, the billing company's local currency. In the service company, EUR is a foreign currency, as the local currency set up there is DKK.

Running the function then creates a resource-type invoice line showing the number of the billing resource that you specified for the Project Management work package.

The line also includes invoice entries. These are later used to close the project ledger entries stored on the line and provide proof of performance.

Post an outbound invoice

Posting an invoice in a service company creates a posted invoice, invoice lines, and invoice entries, as well as G/L, resource, and project ledger entries of type Sale. As the customer entered on the invoice is set up as an IC partner, this process additionally triggers an outbound transaction.

Standard intercompany transactions aggregate data for outbound documents such as invoices and credit memos on the Intercompany Outbox Transactions page. The page is now also used to submit the posted (outbox) invoice from the service to the billing company.

To see the document that you want to transfer, open the page, select the invoice, and then choose Outbox Transactions > Details on the ribbon.

In our example mentioned earlier, the outbox transaction is used to transfer a posted sales invoice, with amounts given in foreign currency EUR, from the service company to its IC partner. Standard functionality only transfers invoice lines through outbox transactions if the lines you want to send are of type Item or G/L Account. Because of the use of billing resources in the project365 industry solution, the functionality has been extended to give you the added option of sending resource-type invoice lines to an IC partner.

Furthermore, fields were added to the standard outbox transaction lines to show you project information stored in billing companies, for example, in the Source IC Partner Project No. and Source IC Partner Work Package Code fields.

Outbox transaction lines also have invoice entries. These are copied from the lines of a posted invoice when you set up an IC transaction.

In the Comments and Comments (Project Ledger Entry) fields, you can view the internal and billing-related comments for the project ledger entries you’re about to invoice. When a transaction is sent to a billing company, only notes relevant to billing are copied to the company, whereas in-house comments are ignored.

The transaction in our example can now be transferred from the service to the billing company for further processing.

Send an outbound transaction

To transfer data on the Intercompany Outbox Transactions page:

1. Select the IC transactions that you want to send.
2. On the ribbon, choose Actions > Send to IC Partner. This sets the Line Action field of all selected transactions to Send to IC Partner.
3. Choose Functions > Carry Out Line Actions, and then choose OK.

Based on our earlier example, this would copy the outbox transaction created in the service company—along with the posted sales invoice—to the billing company.

Afterward, the document would be moved automatically from the Intercompany Outbox Transactions to the Handled Intercompany Outbox Transactions page.

INBOUND TRANSACTIONS AND PURCHASE INVOICES

Outbox transactions sent from a service company are received by a billing company as inbox transactions. The transaction information then needs to be checked before it can be used to create a purchase invoice. This invoice is later posted in the billing company to increase project usage relative to the amount of work performed by the service company.

Receive a transaction in a billing company

As the service and the billing company must always be stored in the same database, sending an outbox transaction will create an inbox transaction in the billing company automatically.

Inbound transaction data

To see what kind of data was received through an inbox transaction:

1. Choose the Search icon, enter Intercompany Inbox Transactions, and then choose the related link.
2. Select a transaction. On the ribbon, choose Process > Details.

On the header, the inbox transaction shows information about the intercompany partner and the vendor assigned to it. This information was converted from the partner’s outbox transaction and is presented here from the vantage point of the billing company to which the transaction was sent.

The lines transferred together with the transaction relate to the project and WBS lines to which you need to post in the billing company.

When you initially sent this project to the service company, the number of the project, as well as the reference values on transferred WBS lines, were copied to the WBS in the service company for informational purposes.

These key fields are now used to identify the project and WBS lines you want to post to. Both the project and the specified WBS lines must exist in the billing company.

Existing invoice entries and, potentially, billing-related comments are also part of the transfer. Project ledger entry comments—viewed as internal information—aren’t.

Additionally, the resource number on an outbox transaction line is copied as is to the corresponding inbox line. As the number might later be converted when you create a purchase invoice, it doesn’t yet need to exist in the billing company.

Accept an inbound transaction and create a purchase invoice

When you’ve finished checking the transmitted data, you can use the information to create a purchase invoice from the Intercompany Inbox Transactions page in a two-step process:

1. Choose the IC transactions that you want to accept. On the ribbon, choose Actions > Send to IC Partner. This sets the Line Action field of all selected transactions to Accept.
2. Choose Process > Carry Out Line Actions, and then choose OK.

The system then creates a new purchase invoice from the selected transactions and moves them from the Intercompany IC Inbox Transactions to the Handled Intercompany Inbox Transactions page.

POST PURCHASE INVOICES IN A BILLING COMPANY

View an invoice in a billing company

The vendor shown on the invoice is the vendor set up for the billing company’s IC partner, that is, the service company.

Going by our example mentioned earlier, the next field on the header, Currency Code, would be blank. This is because the invoice sent by the service company would be in the billing company’s local currency, which is EUR.

The No. field on the invoice lines, on the other hand, would be filled in with the code of a billing resource. This code might change before being transferred to an invoice, based on what conversion option you choose in the Outbound Purch. Res. No. Type field on a service company’s IC partner card.

For example, if you choose the Internal No. option in the field, the resource number is converted according to the simplest of rules—or, more specifically, it remains as is.

> **Note**
>
> To transfer a resource to a purchase line in a billing company, you need to set the resource to External.

Meanwhile, the invoice entries initially transferred to inbox transaction lines are now copied to the Purch. Line Project Dstrn. page, where you can take a closer look at every invoice line created from the current IC transaction. To look at a specific line:

1. Choose the Search icon, enter Purchase Invoices, and then choose the related link.
2. Select a purchase invoice.
3. Go to the Lines FastTab and select a purchase line.
4. On the ribbon, choose Line > Purchase Line Project Dstrn.

Each line on the page might contain comments like those stored with invoice entries on inbox transaction lines. This means that the data shown on a purchase invoice in a billing company closely matches what you see on the original sales invoice sent by its service company partner.

Post an invoice

Prior to an explanation of how you post a purchase invoice in a billing company, some general notes about the Purchase Line Project Dstrn. page mentioned earlier:

The purchase line distribution feature isn’t limited to the use case described in this article, that is, to transmit invoices between service and billing companies. Instead, as the name implies, it can be used to store all kinds of information on a resource-type purchase line if the line is assigned to a project and its work breakdown structure.

In short, the feature also allows you to store information about project-related subtasks on every purchase line on which a resource has been entered. The distribution lines created from this kind of purchase line receive from it not only the resource number and relation to a project and WBS line but also price specifications and line dimensions.

In turn, the quantity entered on all distribution lines combined must match the value specified on the purchase line.

But the feature can do more than provide you with an option to describe subtasks in purchasing. One notable benefit is its utility in posting partial consumption when you post a purchase invoice, as a consumption entry will be posted for each distribution line instead of one entry for the entire purchase line.

Posting a purchase invoice then copies the distribution lines (and the comment lines available for it) alongside other data to the invoice and assigns them to invoice lines.

Posting the invoice also creates G/L, vendor, resource, and consumption entries. The consumption entries are posted in a billing company to the WBS line from which they were originally copied to the business supplying services.

Fields such as Performance Date and Billing Resource Name, both of which are part of every consumption entry, can additionally be used to describe the work performed by the relevant service company in more detail.

INVOICE END CUSTOMERS IN BILLING COMPANIES

The end customer is invoiced in the same way as you would a customer for a non-IC project. The original source of the project ledger entries that you want to bill isn’t relevant in this case.

Control Costs

OVERVIEW

In essence, project cost control is concerned with the difference between a project's budgeted and actual values. It helps ensure that the revenues you earn and the expenses you incur match estimates as much as possible. Comparing these figures over multiple periods is crucial for timely, effective project management.

The cost control functionality in Microsoft Dynamics 365 Business Central[1] uses project ledger and account entries to show you how close your projects are to being cost-effective. Whereas project ledger entries record revenues and expenses related to day-to-day operations, such as item consumption or hours spent on a project, the work breakdown structure and the budget contain the expected sales and costs and form the basis for creating account entries from a chart of project accounts.

The accounts are linked to both the project ledger and the budget. This means that, like in Finance, you can use the account chart to create budget-to-actual comparisons for multiple cost types and generate a variety of business insights.

For even more insights into project performance, you can set up views to analyze the dimensions stored with project ledger and account entries. You can then set filters on budgeted and actual values, or on their variances, to specify what to include in a view.

BASICS

The chart of project accounts is the most important component of cost control. It covers the key values used for tracking cost performance, that is, the types of revenues and expenses you might encounter, and can be as compact or large (detailed) as you want.

Both the project ledger and the project account entries are created based on this chart. They are later consolidated in a financial report.

Chart of project accounts and account setup

Not unlike G/L entries in Finance, entries related to projects are linked to accounts with the help of Project Accounts Setup.

All accounts are identified by their general product posting group, project type, work package, and phase code. Any combination of these can be assigned to a sales and a cost account from the account chart. See the following table for more information.

Field	Description
Gen. Prod. Posting Group	Represents the general product posting group of an item, a resource, or a G/L account for which you specified usage or consumption, budget values or revenues. This group is the only mandatory field on the Project Accounts Setup page.
Project Type	Specifies the type of project.
Work Package Code	Specifies the work package from the WBS line on which you posted or budgeted usage or revenue.
Phase Code	Specifies the phase code from the WBS line on which you posted or budgeted usage or revenue.

You can use this information, for example, to determine

- resource expenses when managing research projects with internal resources.
- the cost of small items for onsite assembly.
- travel times of external employees for major projects.
- follow-on orders (=phase code) for customer projects.

You must set up the chart of project accounts and fill in the Project Accounts Setup page based on what you want to analyze later.

Multi-use accounts

You can add an account more than once to Project Accounts Setup. To see if and how often an account is used:

1. Choose the search icon, enter Chart of Project Accounts, and then choose the related link.
2. Select an account. On the ribbon, choose Related > Account > Where-Used List.

The page that opens also shows where to find the account in templates created through the project measurement functionality.

Switch to setup with phase codes

Previous project365 releases didn’t include phase codes in Project Accounts Setup. You need to switch to a newer version to make use of this feature.

1. Choose the Search icon, enter KUMAVISION Module Setup, and then choose the related link.
2. On the ribbon, choose Actions > Setup > project365 App Setup.
3. Turn on the Use Phase Code in Project Accounts toggle. This opens a dialog. Choose Yes.

Existing entries are now copied to a new setup page and deleted from the old one.

Note

The setup without phase codes has been discontinued. Newer versions no longer support this feature.

Project ledger entries = actual values

Each posting that goes toward a project creates a project ledger entry. These entries are the basis for billing, that is, they show project usage and consumption and store the revenues generated from invoices. They are also used to measure project progress.

When you post to a project, an account is assigned to the created project ledger entry based on what you entered in Project Accounts Setup. This gives you access to the latest data on project usage and sales so that you can track revenues and expenses throughout the lifecycle of a project.

Project account entries = budget figures

Project account entries store the quantities and values from planning. They are created based on the planning level of a WBS line. They originate with budget line entries if you selected the Copy Budget checkbox on available budget lines or with the WBS line itself if planning is set to that level.

You need to run a function to create project account entries:

1. Choose the Search icon, enter Update Project Account Entries, and then choose the related link.
2. Set filters as necessary. If you don’t set filters, account entries are created for all projects.

You can also update entries for a single work breakdown structure. Open a WBS and choose Actions > Functions > Update Project Account Entries on the ribbon.

If you rerun the function, the account entries are deleted and recreated from scratch. This gives you greater flexibility when budgeting a project, as the dimensions, prices, and planning level of a project might be subject to constant change.

See the following table for an explanation of the Project Account Entries page. You can view this page by choosing Related > Project Account Entries on a WBS, for example.

Field	Description
Date	Uses the planning level to show the starting date of the relevant WBS or budget line.
Project Account No.	Shows the number of a cost account from the chart of project accounts.
Sales Project Account No.	Shows the number of a revenue account from the chart of project accounts.
Work Package Code	Shows the relevant work package.
Quantity (Base)	Shows the relevant quantity.
Total Cost (LCY)	Shows the relevant cost.
Total Price (LCY)	Shows the relevant price.
Entry No.	This field is filled in automatically when a project account entry is created.

As explained earlier, the product posting group is crucial to identifying the correct project account for cost control. If an account is retrieved based on budget lines, the system uses the group of the resource or item stored there to find the account.

If you plan at the WBS line level, the posting group related to the work package billing type and number is used. Typically, this is the group of a billing resource. Because of how account entries are stored in the system, you need to run the update function each time you change planning data.

If a project has more than one WBS, project account entries are created for all structures, but only the WBS that is currently active is shown in cost control.

We recommend you use the job queue to update account data on a regular basis.

Account entries for revenues

Typically, cash inflow is recorded later than expenses. In fact, project work is often paid for only in subsequent accounting periods.

However, to monitor projects accurately, the system needs to store expected sales prior to payment. This is what the Sales Project Acc. Entries From field on the project card is for. You can find the field on the Planning tab. It has the following options:

Project Budget

Choose this option if you want project account entries to be created as described earlier. You can still use the Base Date Sales Project Acc. Entries and Formula Sales Project Acc. Entries fields to change the workflow to some extent.

If you choose Planning Date in the Base Date Sales Project Acc. Entries field, the assumption is that you generate revenue when you record project usage, and a date formula doesn’t apply.

If the field is set to Date Formula, the date on which sales are generated is calculated based on the budget date and a specified formula.

Example
The budget line shows 05/15/21. The system then calculates 06/15/21 as the date that needs to be stored with the sales account entry.

(Advance) Payment Plan

Payment and advance payment plans work in the same way. The only difference is their data source. For more information, see the Advance Payment feature.

If you choose one of these options in the Sales Project Acc. Entries From field, you can no longer enter a base date or a date formula.

From this point on, the project budget is no longer required. Instead, revenue is created according to the payment plan. The plan is used to store all information needed for billing a project, such as posting dates and prices.

Allocating a sales account to a payment plan works in the same way as allocating a cost account when you create project account entries from a WBS line. The system will use a work package, a billing type, and a billing number (usually of a billing resource) to determine the correct account.

For cost control to capture the entire cash inflow, the final invoice must also be part of the plan. However, this invoice must include only the amount that remains after all amounts from partial invoices have been subtracted from the total price.

When you create the final invoice based on an invoice suggestion, the total price is shown on the invoice in addition to the partial amounts applied as credit memos.

If you want to use a payment plan in-house and remove it from billing, clear the Copy to Suggestion checkbox on the payment plan lines.

Set up financial reports for projects

You can now use the project ledger and account entries to set up financial reports for analyzing projects based on multiple criteria. The reports have the same purpose and function as those for analyzing G/L accounts and entries in Finance.

Report setup

You can create more than one financial report, for example, to set up different reporting environments for internal and customer projects. To create a new report:

1. Choose the Search icon, enter Project Financial Reports, and then choose the related link.
2. On the ribbon, choose New, and fill in the fields as described in the following table.

Field	Description
Name	Enter a name for the report.
Description	Enter a text that describes the report.
Row Definition	Specify the criteria for analysis on the lines. The layout stored in this field is used when you open a financial report but can be changed at any time.
Column Definition	Specify the criteria for analysis in the columns. The layout stored in this field is used when you open a financial report but can be changed at any time.

Row definition

The report itself is set up in a way that you can add accounts to individual lines. You can also specify formulas or enter lines that total amounts or quantities.

1. Choose the Search icon, enter Project Financial Reports, and then choose the related link.
2. Select a report. On the ribbon, choose Edit Row Definition and fill in the fields as described in the following table.

Field	Description
Row No.	Specify a number to sort lines according to your requirements.
Description	Specify the area that you want to show on the line.
Totaling Type	Choose one of the following options: **Project Accounts** Shows the value of one or more project accounts. **Total Accounts** Includes total lines from the chart of project accounts. **Formula** Uses a formula on the schedule. **Set Base for Percent** Calculates percentages of a total.
Totaling	Fill in this field based on what you selected as a totaling type.
Row Type	Specify the purpose of the line: **Net Change** Shows only transaction data. **Balance at Date** Totals data up to a given date. **Beginning Balance** Shows the starting balance of accounts assigned to the line.
Line Amount Type	Specify whether you want the line to show total prices or costs.
Show Opposite Sign	Select this checkbox if you want to show negative amounts as positive and positive amounts as negative.
Show	Specify whether the line is shown on screen and on printouts. Select If Any Column Not Zero, When Positive Balance, or When Negative Balance if you want to include the line only under the specified circumstances.
Bold Italic Underline Double Underline	Select one of these checkboxes if you want to see text in bold, in italics, underlined, or double underlined.
New Page	Select this checkbox if you want to insert a page break after the line.

Actions

To insert an account into a row, choose Actions > Functions > Insert G/L Accounts. The row can then be used immediately.

Column definition

1. Choose the Search icon, enter Project Financial Reports, and then choose the related link.
2. Select a report. On the ribbon, choose Actions > Functions > Edit Column Definition and fill in the fields as described in the following table.

Field	**Description**
Column No.	Specify a column in this field.
Column Header	Enter a name to describe the column on screen and on printouts.
Column Type	**Net Change** Shows only transaction data. **Balance at Date** Totals data up to a given date. **Beginning Balance** Shows the starting balance of accounts assigned to the line. **Year to Date** Shows all values created in the current year up to a given date. **Rest of Fiscal Year** Shows all values from a given date. **Entire Fiscal Year** Shows all values created during a full fiscal year.
Entry Type	Specify if you want to show project ledger entries, project account entries, or one of two commitments.
Value Base	Specify if the entry represents an amount or a quantity.
Formula	Fill in this field if you selected Formula in the Column Type field.
Show Opposite Sign	Select this checkbox if you want to show debit amounts as negative and credit amounts as positive values.
Comparison Date Formula	Fill in this field if you want to specify a period for budget vs. actual comparisons in relation to the period set in report requests. You can enter a common unit of time here (D, WD, W, M, Q, or Y).
Comparison Period Formula	Fill in this field if you want to compare accounting periods. You don’t enter a unit of time here but a formula. For example, enter -1P if you want the system to retrieve the same range of dates one accounting period earlier.
Show	Specify if the column is always or never shown or only shown when values are positive or negative.
Rounding Factor	Specify if and how to round for clarity.

Financial report card

You can select Edit Project Financial Report on the ribbon to see the card related to the new report. Report values are shown in the rows and columns according to the filters you set.

The header displays the names of the report and the row and column definitions. You can filter data there as well.

All default values on the page can be changed to meet your requirements. You can also use the lookup on a field to see how it relates to the chart of project accounts. On the page that opens, you can then use another lookup if you want to know where an entry originally comes from.

To switch from a report column (or analysis period) to another, choose Column (or Period) on the ribbon, and then choose Previous Column (or Period) or Next Column (or Period).

To copy the financial report to a new Excel worksheet for further editing, choose Export to Excel.

ANALYZE DIMENSIONS

As an alternative, you can use the dimensions posted with project ledger entries to monitor projects. Dimension-based analyses include both global dimensions—posted directly to project ledger entries—and additional dimensions linked to a project. For easy filtering, they’re part of the following aggregated entries:

- Project analysis view entries—created from project ledger entries—to represent actual values.
- Project analysis view budget entries—created from project budget entries—to display budget figures.

Dimension sources

Before you start working with this kind of analysis, it might be helpful to get an overview of the potential sources of a dimension linked to a project, a WBS line, or a budget line, as listed in the following.

> **Note**
>
> For a basic overview of dimension capabilities, see Work with Dimensions.

Sources of project dimensions

- With certain fields in Projects Setup filled in, the dimension (for example, a cost object) might have been automatically added to the project, with the code of the dimension matching the number of the project.
- The dimension might have been entered on the template from which the project was created.
- The dimension might be assigned to a project type. You can set up one dimension per type of project in Projects Setup, with the dimension value matching the type.
- The dimension might have been copied when a customer was assigned to the project. Alternatively, it might have been transferred from a contact or a customer template assigned to the project if the project was set to Quote at the time.
- The dimension might have been added when a project manager was entered for the project provided you’ve turned on the relevant feature in Projects Setup.
- The dimension might have been copied from a main project linked to the project.
- The dimension might be from a responsibility center that was entered for the project.
- The dimension might have been copied from a salesperson if the code of that person was added to the project.

Sources of WBS line dimensions

- The dimension might be among those that are inherited from the project to the WBS lines set up for the project.
- The dimension might be from the work package master if a work package was validated on the WBS line.

Sources of budget line dimensions

- The dimension might be among those that are inherited from the WBS line to the budget line during creation of the latter.
- The dimension might have been copied from a resource (group), an item, or a G/L account when the No. field was validated on the budget line.

Dimension sources during project postings

A dimension that is stored with base data (such as a resource or a vendor) might be passed along to all kinds of documents and journals in the system.

- A project dimension is copied to a document or journal line when the project number has been validated on the line.
- A dimension stored with a work package is copied to a WBS or a budget line when either line is selected for posting. What line must be selected depends on the posting level specified for the project.
- Even WBS or budget line dimensions created manually in planning are copied to project ledger entries if certain fields in Projects Setup are filled in.

On the Dimensions FastTab in Projects Setup, you can see the criteria that will be used for project-related dimension transfers. You can also fill in or change fields on the tab to specify, for example, what dimensions the system should set up for project types or for main projects and how it should copy dimensions from project manager resources.

Project analysis views

Project analysis views offer insights into project data based on analysis view entries and analysis view budget entries.

Analysis view entries can be set up on the project analysis view card. You can use four additional dimensions per card.

To open a list of all cards, choose the Search icon, enter Project Analysis View List, and then choose the related link.

Each line on the page shows if budget values will be created from the card, when the card was last modified, and what dimensions are available.

Choose a card for editing and then fill in the fields as necessary.

General

Field	Description
Code	Specifies a code for the project analysis view. The code must be unique and can reflect the purpose of the view.
Name	Specifies the name of the view.
Project Account Filter	Specifies the accounts that will be analyzed. If the field is left blank, the project analysis will include all accounts.
Project Filter	Specifies the projects shown in the view.
Date Compression	Used to define for which period entries need to be merged, that is, how detailed a view will be. For example, if you want a monthly summary, you can use this field to total the project ledger entries created during a full month and combine them into a single entry. The date of the first posted project ledger entry is then assigned to the entire period. Entries are totaled in a way that no data required for analysis is lost. For example, entries included in the analysis must have identical dimensions.
Starting Date	Used to set a date from which entries are included in the view. All project ledger entries posted on or after this date are then compressed to the level you chose in the Date Compression field. Earlier entries are merged into one entry shown on the date immediately preceding the starting date.
Last Updated On	Shows when the card was last updated.
Last Entry No.	Shows the number of the last project ledger entry that was posted before you updated the view. Entries posted since the last update aren’t included in a view.
Last Budget Entry No.	Shows the number of the last project budget entry that was entered before you updated the view. Entries specified since the last update aren’t included in a view.
Include Budgets	With the toggle turned on, project budget entries are also updated. This creates analysis view budget entries automatically.
Blocked	If this toggle is turned on, the view cannot be used at all.

Dimensions

On the Dimensions tab, choose the four additional dimensions you want to analyze on the card.

Actions

To store selected dimension values, choose Related > Analysis > Filter on the ribbon. This ensures that only certain values are totaled on the card.

You can also choose Update to find all project ledger and account entries that match the filters you set and use them to create project analysis view and budget entries.

If card changes affect existing analysis entries, the entries are deleted. For example, if you edit the Date Compression field or a dimension filter, the project analysis view and budget entries are recreated at the next update. This step is necessary because the criteria for creating entries have changed.

Entries created

Every time you update a view, the system creates data-rich project analysis view and project analysis view budget entries from the project ledger and project budget entries that include the four dimensions you want to analyze.

The analysis view budget entries contain the values shown in the view, the budget name, and the project account, followed by the four dimensions, the posting date, the quantity, and the amount. In short, they represent the link between key data stored with project account entries and the dimensions of a document.

The same is true for analysis view entries. In this case, dimension data is merged with data from project ledger entries.

In the Quantity and Amount fields, you can use a lookup to see where an entry originates.

Analysis views on financial reports

You analyze by dimensions in the same way you analyze by project ledger and account entries.

Open a row definition and use the Assist button next to the Name field at the top to look at the name of the assigned analysis view. If you chose a view, the report will be filled in automatically with analysis view entries.

You can use the lookups on individual lines to identify what analysis view entry was used to fill in a certain line. Choosing the lookup first opens a page that shows the project account chart related to the account used in a certain column.

When you then select a Quantity or a Cost Amount field, you can see the project analysis view entry and the dimensions stored for the analysis view.

Difference to standard functionality

At a cursory glance, the added views might not seem to offer anything new. But you can now set flow filters on the four dimensions described earlier.

You can already store these filters when you set up a row definition. To use them, unhide the four columns that show the relevant dimension values.

The benefit of specifying filters on the report instead of each card individually is that analyses will all have the same design and thus remain comparable over time.

Project analysis by dimensions

Project analysis by dimensions also uses the analysis view and analysis view budget entries described earlier.

1. Choose the Search icon, enter Project Analysis View List, and then choose the related link. This shows you list of all views that have been specified so far.
2. On the ribbon, choose Analysis by Dimensions to open the setup and filter view. The date, project account, project, budget, and responsibility center filters are included by default.
3. Choose the other four dimensions based on the selected analysis view. Each dimension can be assigned to a row or a column. You don’t need to specify a default value for a dimension (as is required for a financial report). To link the dimension to an account, the system will use the project accounts stored with the analysis view card, and you can set filters on them there.

The other fields shown on the card are described in the following table.

Filters

Field	Description
Date Filter	Limits the period for analysis based on a posting date.
Project Filter	Limits the number of projects shown.
Budget Filter	Used to include a certain budget. You limit the display of budget values on the Options tab.
Responsibility Center Filter	Limits analysis to a certain responsibility center.

Options

Field	Description
Show	**Actual Amounts** Shows the actual values posted. **Budgeted Amounts** Shows the values allocated to the budget on the Filters tab. **Variance** Shows the difference between budgeted and actual values as a number. **Variance %** Shows the difference between budgeted and actual values in percent. **Index %** Shows the difference between budgeted and actual values as an index. An index of 100 means that the values are identical. If the percentage is above or below 100, the actual values are greater or smaller than the budgeted values.
Show Amount Field	Two options are available in this field. **Quantity** Shows the values as quantities only. For usage entries, these are the actual posted quantities—changes to invoice quantities not included. **Amount** Shows the amounts stored with the relevant entries.
Rounding Factor	This field reduces large values If you want to see more than one column in a view. **None** Shows values unchanged and with all decimals. **1** Shows integer values without decimals. **1000** Shows values in units of thousands. **1000000** Shows values in millions.
Show Column Names	Specifies if you want to show the names of individual columns. For example, you can use this field to switch between project account numbers and descriptions.
Show Opposite Sign	Specifies if you want to show negative values as positive and positive values as negative.

Actions

To swap line and column views, choose Related > Actions > Reverse Lines and Columns on the ribbon.

To open the analysis by dimensions matrix, choose the Show Matrix action. There, you can choose Export to Excel to copy the analysis data to a new Excel worksheet.

Project analysis views vs. project analysis by dimensions

Both options create analysis view and analysis view budget entries based on a project analysis view card.

Project analysis uses a view that has fixed lines and columns, created from row and column definitions. For a more targeted assessment of projects, you can set filters on up to four additional dimensions.

However, project analysis by dimensions puts even fewer restrictions on how views can be structured. Both the lines and columns can show default dimensions, such as the project account and period, and additional dimensions set up on the analysis view card.

Moreover, you can swap the lines and columns and don’t need to create a layout for either. The drawback is that you can only see what has been budgeted, posted, or the difference between those numbers. But, as an example, you cannot use this view to compare budget to actuals by including all three values.

TRACK ONGOING PROJECTS

You can use multiple functions to assess an ongoing project at the push of a button.

Statistics

The statistics available for projects and main projects can provide you with key insights into project progress and performance. They include budgeted and actual figures and the variance between both. To view the statistics:

1. Open a project card.
2. Choose Related > Project > Statistics on the ribbon.

You can now see a project's budgeted and actual values.

Budgeted

This tab shows you the budgeted values at the level of the WBS and the budget lines, that is, detailed planning.

Achieved

This tab shows you how far the project has progressed.

The fields of both tabs are described in the following table.

Field	Description
Budget (LCY)	Shows the budgeted total cost based on WBS lines in local currency.
Earned Value (LCY)	Shows the result of Budget (LCY) * Project Completion %.
Usage (LCY)	Shows the usage total costs in local currency.
Cost Variance (LCY)	Shows the result of Earned Value (LCY) - Usage (LCY). This tells you by how much a project deviates from budgeted values because of the percentage of completion.
Cost Variance %	Same calculation as for the Cost Variance (LCY) field, the difference being that this field shows the deviation from the budget in percent.
Project Completion %	Shows how much work has been completed compared to the total amount of work required to finish the project. The value in this field is determined by comparing the WBS line values entered by the project manager to the project budget.
Estimated Total Cost (LCY)	Indicates the total cost of the project if work continues as before. This field is determined by comparing the Usage (LCY) and Project Completion % fields.
Posting Progress %	Shows how much of the total budget has been used.
Cost Efficiency	Shows the ratio of earned value to usage. A value below 1 indicates a poor result.

Budget vs. Actual

Compares project usage to budget figures.

Advance Payments

For more on this FastTab, see Advance Payment.

Project cockpit

Both the project list and card contain elements of a project cockpit. In some cases, you need to use the Personalize function to unhide these elements.

Except for the color indicators, the cockpit on the project card shows the same fields as the cockpit on the list.

The list cockpit is split into two areas. The indicators are shown directly on the list in the form of columns. Fact boxes that describe the project can be found to the right.

Indicators

Two list indicators are available to visualize actual usage and profit in percent.

To turn on these indicators, you need to specify in Projects Setup when you want one of them to go from green to yellow and from yellow to red. This setup will then be used for all projects.

The symbols you want to show can be imported as a JPG file to the Documents tab on the Company Information page.

Fact Boxes

The fact boxes provide you with a clear, concise overview of various kinds of project-related information. You can also personalize them to meet your needs. All boxes are available on project cards as well.

Budget/Usage Incl. Commitment

On the first line below the heading, the project budget is given in local currency. Click this value to see the active WBS.

The remaining values are shown in the form of bars so that you can visually compare project budget and usage, that is, actual usage and commitments.

Budget vs. Actual

Displays the same values as the previous box but shows them as numbers. Except for Stock Commitment and Remaining Budget, which are determined automatically, you can open the source tables of all lines by clicking the relevant figure.

Project Documents

Broken down by sales, purchase, and project documents, this list shows the number of documents associated with the project. Click a number to view the related documents.

Payment Plan

Indicates when the payment plan says you need to send the next invoice. This plan isn’t the same as an advance payment plan, which would show in another box (advance payments are handled by a separate app). Besides a projected invoice date, the plan includes the total price expected for the project.

Invoice Overview

Provides a visual update on billing. The bar on the left shows—in local currency—the budgeted total price according to the WBS.

The bar in the middle displays the total price invoiced so far and the open project ledger entries. It is the most important bar regarding projects that are billed based on time and materials. The bar on the right shows what entries remain according to the payment plan. As you can use plans for both fixed-price and time and materials projects, this bar is relevant in both cases.

Compare budget to actuals for work packages

To perform a budget-to-actual comparison at the work package level:

1. Select a project on the Projects page.
2. Open the active WBS of the project.
3. On the ribbon, choose Process > Budget vs. Actual.

On the General FastTab, you can now see the fields of the selected WBS. You cannot change them here. The fields required for comparison can be found on the WBS Line Usage FastTab, near the end of each line. They include fields indicating project progress and those showing the quantities and amounts budgeted and consumed for the project.

Regardless of which WBS version you open, that is, which version is used to fill in the budget figures, the actual values are always the same. This means that you can open any version to compare budget to actuals.

As the Budget vs. Actual page is just another kind of WBS view, only fields that aren't explained in the WBS portion of this documentation are described in the following.

Field	Description
Budgeted Quantity	Shows the budgeted quantity totaled from all work packages assigned to the project.
Usage Qty. (Base)	Shows the total quantity consumed by a specific work package. The field is related to the Project Ledger Entries page and totals the quantities that are stored there.
Time Commitment (Qty.)	Shows the quantities not yet copied from time entries to the project. This means that hours were posted by staff but haven't been transferred to the project by the project manager.
Outstanding Budg. Quantity (Base)	Shows the result of Budgeted Quantity - Usage Qty. (Base) - Time Commitment (Qty.).
Budget Value (LCY)	Shows the budget in unit costs.
Usage Cost (LCY)	Shows the total quantity consumed by a specific work package. The field is related to the Project Ledger Entries page and totals the unit costs that are stored there.
Purchase Commitment (LCY)	Shows the outstanding amount from purchase orders that have been created from a specific WBS line. This field is related to the Purchase Line table and totals the outstanding amounts that are stored there.
Time Commitment (LCY)	Shows the amounts not yet copied from time entries to the project. This means that hours were posted by staff but haven't been transferred to the project by the project manager.
Stock Commitment (LCY)	Shows the item quantity that was procured for the project but is still in stock. This field is only available if you turned on the Project Purchase Incl. Inventory toggle in Projects Setup.
Variance (LCY) Incl. Commitment	Shows the result of subtracting the usage cost and the purchase and time commitments from the budget value.
Project Completion %	Shows the project progress specified for a work package by the project manager.
Posting Progress %	Filled in automatically based on the budget value and the usage cost.
Posting Progress % Incl. Commitment	Filled in automatically based on the budget value, the usage cost, and the time and purchase commitments.
Line Activity Progress %	Weighted entry based on the progress fields of stored budget lines—or, more specifically, activities—which resources enter in time tracking. This field is only filled in if resources use both budget lines and the Line Activity Progress % fields to record time.
Earned Value	Filled in automatically based on the budgeted unit costs and the percentage of project completion. Shows what value a certain WBS line has achieved in unit costs so far.
Cost Variance	Filled in automatically based on the earned value and the usage cost.
Cost Variance %	Filled in automatically based on the earned value and the usage cost. Shows the cost variance in percent.
Estimated Total Cost	Filled in automatically based on actual figures and the percentage of project completion.

A budget-to-actual comparison offers you an overview of an entire project. It not only shows you all work packages related to a project with their budget and actual figures but also allows you to identify where current results differ from expectations.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Alternate Currencies

OVERVIEW

You can use the invoice currency feature to bill projects in a foreign currency.

You can already store this currency when you set up a WBS for a project. Revenues are then shown in the invoice currency and in local currency. Sales documents that you create from the WBS, however, will show amounts in the invoice currency only.

As the name implies, invoice currencies are used not only on quotes and orders but on all sales documents created for a project, including invoices.

> **Note**
>
> A currency of this type cannot be changed during the later stages of a project. If you want to bill a project in different currencies, leave the Invoice Currency Code field blank.

To provide sales estimates, a budget rate is used. Although specified on the project card, this rate might differ from one WBS version to another. However, the rate isn’t copied when you post a sales document. All Total Price (LCY) fields are instead recalculated based on the exchange rate available at the time.

You can change invoice currencies in the planning stage. You can no longer change currencies after project ledger entries have been posted.

Usage entries contain budgeted sales amounts in both local and invoice currencies. Sales entries, on the other hand, contain actual values only in the currency in which you want to bill the project. These are then converted into local currency when you post the entries.

One area where invoice currencies aren’t used is the project budget. All projects are planned in local currency—even if you intend to purchase goods from abroad. LCY is also the only currency used for cost control, that is, for charts of project accounts and dimension analyses, as amounts stated in another currency might make it extremely difficult to compare costs across projects.

ON PROJECT CARDS

As an example, you create a project from a template and select a customer you want to bill in Canadian dollars. You set the status to Open and pick a starting date.

The Invoice Currency Code field on the Project Billings tab is then filled in automatically based on the Bill-to field, if you selected a customer there, or a currency needs to be chosen manually from the Currency table.

Like on sales documents, you can now choose the Assist button next to the Invoice Currency Code field to modify the exchange rate for the project.

Alternatively, you can fill in the Invoice Currency Date field. This field was introduced because projects lack the type of fields, such as a Posting Date field, required to calculate exchange rates. If you enter a date in this field, the rate is determined based on what is stored in the Currency Exchange Rate table.

The rate shown on the project card is only a default value. It will later be copied to the WBS versions, where it can be modified if necessary.

> **Note**
>
> You can no longer change the invoice currency on a project card after project ledger entries have been created. Only the exchange rate can still be altered. A change in currency is copied to all WBS versions of a project, and total prices are recalculated as a result.
>
> By contrast, modified rates aren’t copied to the WBS versions considering you might want to compute versions at different exchange rates.

FOR SALES PRICES

You can specify sales prices in several places throughout the app. Typically, these prices are given in local currency and are converted into a different currency if necessary. If you want to bill a project in a foreign currency for which no general prices are available, we recommend that you set up prices specific to a project.

To set up project-specific prices for resources, items, or G/L accounts:

1. Choose the Search icon, enter Projects, and then choose the related link.
2. Open the relevant project card. On the ribbon, go to Related > Prices and choose Resource, Item, or G/L Account. The invoice currency you specify is then used as the default currency when you set up a new sales price.

FOR A WBS

Each work breakdown structure contains the following fields on the Billing tab:

- Invoice Currency Code
- Invoice Currency Factor
- Invoice Currency Date

These fields match those shown on the project card considering their values are copied from there. Except for the invoice currency, the values can be changed in each WBS version so that you can calculate projects at different exchange rates across multiple versions.

> **Note**
>
> Modifications you make to the Invoice Currency Factor field on the WBS header are copied to all related WBS lines. Total prices are then recalculated.

ON WBS LINES

You reopen the project card set up in our earlier example. On the ribbon, you choose Actions > Create WBS from Project Template.

You then see a message that says the project has an invoice currency and asks if you want to copy the currency from the project card. You choose Yes.

Afterward, you unhide the Invoice Currency Date and Invoice Currency Factor fields on the WBS lines. The contents of these fields are copied from the header. When a unit price is now calculated on a WBS line--that is, you didn’t select the Copy Budget checkbox, as you don’t want to use budget lines for detailed planning—the price will be converted in one of two ways:

- A price stored in local currency will be converted into the invoice currency.
- A price specified in the invoice currency, for example, in the Project Resource Price table, will be converted into local currency and entered in the Unit Price (LCY) field.

In our example, the system calculates a unit price (LCY) of EUR 70. This price is then converted into Canadian dollars by using the currency factor found on the WBS line.

After calculation, you use the Assist button next to the Invoice Currency Factor field on the Project Billings tab and enter a factor of 1.5 for the current WBS version.

You are then asked if you want the new factor to apply to all existing WBS lines and their budget lines (or only to new WBS lines). You are also informed that the change has no effect on existing sales documents. You choose Yes.

The factor is now applied to all WBS lines, and the unit price is recalculated in CAD.

ON BUDGET LINES

You can also enter invoice currencies on budget lines. The use of project-specific unit prices in this context has already been discussed earlier. Based on our previous example, you specify a price of CAD90 for resources of work type CONSULT and set up a budget line for a resource. The pricing functionality then calculates a price of CAD90 and converts this amount into local currency. Although the price was determined based on the currency factor stored on the related WBS line, you can still change the factor on the budget line. The following changes are also made on the budget line:

- The Unit Price (FCY) checkbox is selected. This means that the price calculated for sales is stored in the invoice currency and converted into LCY.
- The Fixed Project Price checkbox is selected, which indicates that a project resource price was used.

ON SALES DOCUMENTS

As an example, you use the number of the project set up earlier to create a new sales order.

Customer data to fill in the sell-to and bill-to fields is then copied automatically. The invoice currency is also copied from the project. In our case, it’s the currency stored for the customer, although that’s not always true. Attempts to enter a different currency on the sales header will prompt an error message.

You then open the WBS. On the ribbon, you choose New > Create Sales Document. The status of the project must be set to Open. After the status has been verified for all WBS lines, the Create Sales Document function is run.

Note

You need to ensure you select the Order document type when you run the function.

The system now checks if all WBS lines and budget lines—including all unit prices—are stored in Canadian dollars on the sales order.

The prices given in invoice currencies aren’t converted again when you create a sales document from a WBS. Instead, they are copied as they are to guarantee that manual prices are transferred over as well. The budget rate stored on the WBS is also copied to the document but can be updated there before you post an invoice.

The Unit Price (LCY) fields found on WBS and budget lines are only used to budget a project. These prices will be recalculated at the available exchange rate when you post a sales invoice and will then be copied to the sales project ledger entries.

FOR PROJECT LEDGER / USAGE ENTRIES AND PURCHASE DOCUMENTS

At first look, invoice currencies have little in common with project usage. However, even project usage entries include unit prices for services that need to be invoiced. This helps determine what to:

- Include when measuring project progress.
- Use for billing time & materials projects not related to a sales order line.

For this reason, the fields described in the following table have been added to the project ledger entries.

Field	Description	Means for Sales Entries	Means for Usage Entries
Unit Price	Shows the unit price in the invoice currency.	All work was billed at this price. The unit price was copied from the Project Resource Price table, the WBS line, or the sales line.	All work will be billed at this price, also known as the budgeted unit price.
Unit Price (LCY)	Shows the unit price in local currency.	All work was billed at this price, now converted into LCY. Conversion occurs based on the exchange rate that was valid at the time of posting the sales entries.	States the budgeted unit price in local currency.
Total Price	Shows the total price in the invoice currency.	Shows the result of Qty. to Invoice * Unit Price.	Shows the result of Qty. to Invoice * Unit Price, which equals the budgeted total price.
Total Price (LCY)	Shows the total price in local currency.	Shows the result of Qty. to Invoice * Unit Price (LCY).	States the budgeted total price in local currency.
Line Discount Amount	Shows the line discount amount in the invoice currency.	Contains the line discount copied from the sales invoice line.	Contains the expected line discount, which equals the budgeted line discount amount.
Line Discount Amount (LCY)	Shows the line discount amount in local currency.	Contains the line discount copied from the sales invoice line in local currency.	States the budgeted line discount amount in local currency.
Line Amount	Shows the discounted line amount in the invoice currency.	Shows the result of Total Price - Line Discount Amount.	Contains the expected line amount, which is equal to the budgeted line amount.
Line Amount (LCY)	Shows the discounted line amount in local currency.	Shows the result of Total Price - Line Discount Amount in local currency.	States the budgeted line amount in LCY.
Invoice Currency Code	Shows the invoice currency entered on the project card.	Stores the currency used for unit and total prices.	Stores the currency used to budget unit and total prices.
Invoice Currency Factor	Shows the currency factor, that is, the exchange rate at the time of posting.	States the exchange rate at which unit and total prices are converted from the invoice currency to LCY	Represents the exchange rate for converting unit and total prices from the invoice currency to LCY.

Coming back to our earlier example, you now want to create a purchase invoice for an external resource. You create a purchase order for a vendor that bills in USD and purchase an external service, that is, a service rendered by an external resource.

As the purchase has been linked to a WBS line, the work type is already known to the system. This makes it easier to determine on the purchase line a budgeted unit price in the invoice currency stored for the project. In our case, the price comes to CAD140.

This price is then converted into local currency at the latest exchange rate—1.4962 in our example. The Unit Price (LCY) field now shows USD93.57. The rate entered on the budget line was 1.5, so the amount used to be USD93.33 only.

Note

You need to ensure that the related WBS line has a valid posting status, that is, the status is set to Open or In Progress when you purchase external services.

Before posting the purchase order, you alter the exchange rate to 1.3 in the Currency Exchange Rate table. You then post the order.

Whether you choose Post or Post and Print, the system creates a project usage entry in both cases. Variations in price between the receipt and the subsequent invoice only affect unit costs but not budgeted sales amounts.

A look at the project ledger entry created shows that usage is billed at the expected unit price of CAD140. At a 1.30 exchange rate, this works out to USD107.69—but that is irrelevant to billing, where the price is kept at CAD140.

IN PAYMENT PLANS

Like sales documents, payment plans are created based on the currency specified for a project.

Following on from our earlier example, you set up a payment plan for the entire project. This will copy the code from the Invoice Currency Code field on the project card to this payment plan, where it can no longer be changed.

Note

When you choose a WBS line on the payment plan lines, you need to ensure that the line can be used for invoice revenue. The Warning column must be blank. Lines that show a warning message aren’t copied to an invoice suggestion.

ON INVOICE SUGGESTIONS

If a payment plan is available, an invoice suggestion will include every payment plan line until all are posted as billed in full. Only when you create a final invoice to bill the entire project can you turn invoices based on a payment plan into credit memos.

For a suggestion, choose the Search icon, enter Invoice Suggestion, and then choose the related link. On the ribbon, choose Create Suggestion Lines.

You can set filters to limit the number of suggestions. For example, you can filter for a specific project.

Lines related to payment plans can only be copied to direct invoices.

1. Open the relevant invoice suggestion.
2. Select the Direct Invoice checkbox on the lines you want to bill.
3. On the ribbon, choose Actions > Create Invoice to create a partial invoice.

The invoice currency used for the relevant project is then included in both the suggestion and the direct invoice. The direct invoice also applies the current exchange rate to all amounts.

WIP Accounting

OVERVIEW

The Measurement functionality provides a way for you to calculate and record work in process in the system so that you can estimate the financial value of ongoing projects in the general ledger.

SETUP

For automatic measurements, you need to set up the following features:

- Measurement methods
- G/L integration codes
- Measurement templates
- Resource pricing

Projects Setup

Field	Description
Balance Filter (Measurement)	Here you can select the G/L integration code that will be shown in measurement summaries after recording WIP or revenue.
Auto Save Posted Measurements	This toggle is only relevant to batch posting *(that is, when you post multiple measurements at the same time)*. If the toggle is turned on, data is saved after each check of a measurement in the batch so that all (successfully) posted values are retained if an error is encountered. With the toggle turned off, none of the measurements from the posting process will be stored *(resulting in a complete rollback)* so that all of them must be reposted should an error occur.

Measurement methods

Before you can work with the functionality, you need to set up at least one method of measurement. Each requires its own page. To set up a method:

1. Choose the Search icon, enter Measurement Methods, and then choose the related link.
2. Choose New on the ribbon.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the method. The code must be unique.
Description	Specify a description for the method.
G/L Integration	Select this field if you want measurements based on this method to be copied to Finance.
Project Posting Group	Select a group in this field if you want to measure project ledger entries.
Measurement Template	Select this field if you want to use a measurement *(that is, calculation)* template. The Template option is then automatically chosen in the Measurement Base field.
Measurement Base	Select a basis for estimating project values. If you select the Measurement Template checkbox, the value in this field is set to Template automatically and cannot be changed. **Project Ledger** Measures project ledger entries. **Completion** The system determines how far the project has progressed and uses that percentage for calculations in a measurement template. **Template** Creates measurements according to custom criteria.
WIP Method	Select a basis for estimating work in process: • (blank) • None • Costs • Prices • HGB Costs
Calculate	Specify if the system should use project ledger entries posted for usage or sales, or both, to record WIP.
Recognition Method	Specify if you want to recognize revenue according to the percentage of completion or the completed contract method.
Computation Log	Select this field if you want the system to log WIP calculations so that you can track measurement amounts. To see the log, choose the Assist button on an unposted or a posted measurement line.

You can also add a method to a project template. This method is then entered automatically on each project that you create from the template.

Projects set up without the help of a template require manual intervention. To assign a method manually:

1. Choose the Search icon, enter Projects, and then choose the related link.
2. On the ribbon, choose Related > Project > Measurement > Measurement Methods.
3. Alternatively, choose a project card from the list and proceed as already described.

If you opt for measuring ledger entries, the default method for measurements will be used and a template will not be created. You then also need to specify the relevant measurement accounts through project posting groups.

Project posting groups

Project posting groups store the accounts to which project costs are posted. To set up a group:

1. Choose the Search icon, enter project365 Posting Groups, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the group. The code must be unique.
Description	Specify a description for the group.
WIP Costs Account	**(Usage)** Choose the account to which unit costs are debited when running the Post Project Work In Process to G/L batch job and credited when you Post Project Revenue Recognition *(to the general ledger)*. When you post WIP, the Project Costs Adjmt. Account found in General Posting Setup is used as the balancing account to this account. For revenue recognition, that function is assumed by the Project Costs Account.
WIP Sales Account	**(Sale)** Choose the account to which unit prices are credited when you Post Project Work In Process to G/L and debited when running the Post Project Revenue Recognition to G/L batch job. When you post WIP, the Project Sales Adjmt. Account found in General Posting Setup is used as the balancing account to this account. For revenue recognition, that function is assumed by the Project Sales Account.
Project Costs Account	**(Usage)** Choose the income account to which unit costs are debited when you run the Post Project Revenue Recognition to G/L batch job.
Project Sales Account	**(Sale)** Choose the P&L account to which unit prices are credited when you Post Project Revenue Recognition *(to the general ledger)*.
G/L Expense Account	Fill in this field if you intend to post to a project-related G/L account. Amounts are then credited to this account when project usage is copied to sales lines.
WIP Profit Account	Choose an account for storing prorated profits, as specified by the IAS percentage of completion (POC) method. This account is only required when you measure project completion.
WIP Profit Applied Account	Choose the contra account to the WIP Profit Account. This account is only required when you measure project completion.

Note

If you estimate the financial value of a project based on a measurement template, the accounts you post values to Finance with aren’t copied from a project posting group. Instead, the system will use those specified through G/L integration codes.

G/L integration codes

These codes are assigned in measurement templates to line amounts that are posted to Finance. They specify the debit and credit accounts you want to use to record WIP and recognize revenue.

You need to set up a unique code for each measurement method and area you want to cover *(by creating one for use with reservations and another to record partially finished work as per HGB or IFRS standards, for example)*.

Afterward, the codes need to be manually assigned to the template lines (see Measurement Templates).

To set up a code:

1. Choose the Search icon, enter G/L integration Codes, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for G/L integration. The code must be unique.
Description	Specify a description for the code.
Integration Type	Select an integration type if you need access to measurement entries posted for a certain project. **Example** Measurements according to HGB require a calculation of the balance sheet values that you posted the previous year. The following options are available in this field: • (blank) • Balance Sheet • Cost of Materials • Labor Costs • Advance Pmt. (Assets) • Advance Pmt. (Liabilities) • POC • POC Project (Assets) • POC Project (Liabilities) • IFRS Prepmt.
Debit Account (WIP)	Specify the account to which you want to add the debit amount stored for a certain measurement entry when work in process is posted.
Credit Account (WIP)	Specify the account to which you want to add the credit amount stored for a certain measurement entry when work in process is posted.
Debit Account (Recog.)	Specify the account to which you want to add the debit amount stored for a certain measurement entry when revenue recognition is posted.
Credit Account (Recog.)	Specify the account to which you want to add the credit amount stored for a certain measurement entry when revenue recognition is posted.
Measure After Final Invoice	Select this field if you want to continue creating measurements for projects that have been settled in full. The integration code is then used to identify the lines to be measured after the entire project has been billed. Suggestions for recognizing revenue, on the other hand, show only entries that this field is not selected for.

Measurement templates

Note

You need a valid license to work with measurement templates.

You need to set up a template for each method of measurement that you want to use. Examples are measurement methods based on IFRS or HGB.

1. Choose the Search icon, enter Measurement Templates, and then choose the related link.
2. Fill in the fields on the lines as described in the following table.

Field	Description
Row No.	Specify a code for the template, such as R10. The code must be unique. The value in this field can later be used to gain access to the Totaling or Argument and Condition fields. **Note** If you want to work with G/L integration, entering a code is mandatory.
Description	Specify a description for the measurement line.
Cost Line	Select this field if you want the system to retrieve only the remaining cost or project ledger entries that contain cost amounts from the source table specified on the line *(see Source Table field)*.
Auto Calculate	Select this field if you want the line calculated automatically based on tables that contain entries relevant to the project.
Source Table	Specify based on which table data the line amount will be calculated. The following options can be chosen: • G/L Entry • Project Ledger Entry • Project Account Entry • Measurement Template • Order Amount • Measurement Entry • Remaining Cost • Completion • Advance Pmt. • Advance Invoices **Note** The Advance Pmt. and Advance Invoices options are only available if you also installed the Advance Payment app. Afterward, you can use the Totaling field to filter data even further.
Use Unit Costs	Select this field if you want to use the unit costs regardless of whether you chose HGB Costs as the overall basis for measurement.
Advance Amt. Type	Specify if you want Advance Pmt. or Advance Invoices entries *(see Source Table field)* to be shown as gross or net amounts. For all other source tables, this field is left blank.
Totaling Type	Specify the source of measurement totals: • Account *(for G/L, project ledger, or project account entries)* • Formula • If • Total Accounts *(for G/L, project ledger, or project account entries)*
Totaling	Fill in this field based on the option you selected in the previous field. **For project ledger or project account entries** Specify a project account number or a total account number. **For measurement entries** Specify a G/L integration code. **For measurement templates** Specify a row number.

Field	Description
	For G/L entries Specify a G/L account number or a total account number. **For totaling type Formula** Specify a row number and a mathematical operator. Leave the field blank if you chose another option than those listed.
Argument 1 Condition Argument 2 Argument 3 Argument 4	For the If totaling type, you need to fill in these fields according to the following rules: If Argument 1 Condition Argument 2, then Argument 3; else, Argument 4. **Note** Arguments can only contain row numbers and mathematical operators or numbers. Options in Condition fields: • (blank) • < • > • = • <= • >= For all other totaling types, the field is left blank.
Date Filter Calculation	If table values are posted to a project automatically, you might need to set one of the following options as a date filter: • Previous Year • Year to Date • Current Period • Balance at Date Otherwise, leave the field blank.
Show	Select this field if you want the line printed on gross profit and loss reports.
G/L Integration Code	Fill in this field if you want to create a project measurement entry. This code is then copied to the account that is specified on the line when posting values to Finance. **Note** You must fill in the Row No. field on the line if you want to add a G/L integration code.
Print Description	Select this field if you want its value printed as a heading on a gross profit and loss report. If the field is left blank, the default description will be used.

Individual measurement values

Additionally, you can specify up to 10 values that will be shown on the Project Measurements and Posted Project Measurements pages in accordance with certain measurement methods.

Each value will be displayed in a separate column on the page *(but as a line, or row, on the individual finance report, hence the name chosen for the feature)*.

1. Choose the Search icon, enter Project Measurement Method Row Setup, and then choose the related link.
2. On each FastTab, fill in the fields as described in the following table.

Field	Description
Measurement Method Code	Specify the measurement method that the value will relate to.
Source Value	Specify the value that will be shown. Options are: • Amount • Measurement Amount • Measurement Base • Posted Until Prev. Period
Description	Enter a description for the column header as it should appear on the Project Measurements page.
Row No.	Select a row number based on the measurement method that you entered.

Resource prices

Besides standard unit costs, you can calculate direct unit costs on resource cards. The calculation is based on the following formula:

- Personnel Cost Rate + Personnel Cost % + Personnel Ovhd. Cost = Direct Unit Cost
- Direct Unit Cost + Indirect Cost % = Unit Cost

Both the unit cost and the direct unit cost can be used to estimate the financial value of a project.

You can also choose the Update Personnel Ovhd. Cost function to recalculate the unit cost and the direct unit cost of several resources at once.

The new overhead is entered on the Options FastTab. You can set filters on the Resource tab if you want to update only certain resource records.

CREATE AND POST TEMPLATE-BASED MEASUREMENTS

One way for you to estimate the financial value of a project is to use a template that contains rules specific to a certain accounting standard.

For more information, see Measurement Templates

> **Note**
>
> You need a valid license to work with measurement templates.

Create a measurement

To create measurements from a template, open the Project Measurements page and choose Actions > Create Measurements on the ribbon.

On the request page, on the Project Measurement Method FastTab, you can then specify the projects you want to estimate financial values for. You also need to select a month (such as 01/01/25 for January 2025) on the Options tab.

Note

Turning on the Post toggle on the Options tab immediately posts the measurements as new entries in the project area (but not in Finance). Don't activate the toggle if you want to check some of the measurements before posting.

Turn on the From Data Transfer toggle if you want to block the values that are calculated (or calculated and posted) from being posted to Finance. This way, you avoid creating duplicate entries when, for example, you only want to enter the status of the measurements into the system but have already added them to the ledger alongside other account values during migration.

Review and post a measurement

To see a measurement that you've created before posting:

1. Choose the Search icon, enter Projects, and then choose the related link.
2. Open a project card and choose Related > Project > Measurement > Project Measurements.
3. Alternatively, choose the Search icon, enter Project Measurements, and then choose the related link.

You can then see all values measured based on each method specified in the system. For measurements calculated with the help of a formula, you can use the Show Computation Log function on the Lines FastTab ribbon to view both the formula and the subtotals. If needed, you can also delete and recreate any measurement that hasn't been posted yet *(Actions > Delete Measurements)*.

After reviewing the measurements, choose Post on the ribbon. This creates the entries required for posting values to Finance.

To post multiple measurements at once, use the Post Measurements action on the Project Measurements ribbon. You can set a filter on the request page to limit what measurements to include.

View a posted measurement

To see a measurement that you've posted:

1. Choose the Search icon, enter Projects, and then choose the related link.
2. Open a project card and choose Related > Project > Measurement > Posted Project Measurements.
3. Alternatively, choose the Search icon, enter Posted Project Measurements, and then choose the related link.

Afterward, you can view the entries created for the measurement by choosing Related > Posted Project Meas. > Measurement Entries on the ribbon.

The G/L Integration field there shows the postings that are created in Finance via the Post Project Work In Process to G/L batch job, with the Measurement Amount field showing the amount to be posted (and the Posted Measurement Amount field being filled in after the batch job is run).

For a value calculated based on a formula, you can run the Show Computation Log action from the Lines FastTab ribbon to see both the formula and the subtotals.

Post WIP

For posting to Finance, you must use the Post Project Work In Process to G/L batch job *(available via the general search function)*.

On the request page, on the Project FastTab, you can then set filters to limit the projects on which you want to run the function.

On the Project Measurement Entry tab, on the other hand, you can filter for a measurement method and a posting period. If you want to post IFRS and HGB measurements separately, you must also specify a suitable filter in the Meas. Method Code field on the tab. The filter in the Posting Date field should be set to the end of the relevant month, for example 1/31/2025.

On the Options tab, you can choose if you want to post measurements per entry or per project. Please be aware that the Project option might result in totals being copied to Finance.

Afterward, fill in a posting date, a document number, and a posting description *(where %1 will be replaced with measurement type WIP and %2 with the posting group, such as IFRS or HGB)*.

The Post toggle on the page specifies whether entries are posted, previewed, and printed. Leaving it turned off will only display and print the report without posting the entries.

You can then select the Preview button to check what you posted to Finance.

> **Note**
>
> With the Post toggle turned on, the standard Preview function isn't really a preview either, as it is used to start posting to Finance.

To see the values posted to G/L Integration accounts in Finance, go to the G/L Integration page and select an entry to open the journal you last posted to. For more information on posting-related accounts and records, see Measurement Templates.

If you filtered for a measurement method on the Project Measurement Entry FastTab, you need to rerun the Post Project Work In Process to G/L batch job for each new method.

Close a project

To post revenue to Finance, the status of the project must be set to Closed. Alternatively, you can turn on the Final Invoice Created toggle on the project card.

> **Note**
>
> You can no longer post to completed projects, but you can post to projects that final invoices were created for. However, you should only post to them if necessary, such as when you need to settle warranty claims or perform rework, as these projects are then excluded from subsequent measurements. In other words, once a project is set to Completed or Final Invoice Created, it will no longer be part of new measurements used for calculating WIP.

Suggest measurements for revenue recognition

Completed projects or those that final invoices have been created for need to have their revenues recognized on the Project Measurement Journals page in advance. You can use the Recognize Revenue function on the page ribbon for this.

On the request page, on the Project FastTab, you can set filters to specify the projects that you want to recognize revenue for.

On the Project Measurement Method tab, you can set a filter on a method if you want to provide separate suggestions for measurements based on IFRS and HGB, for example.

On the Project Measurement Entry tab, you can specify filters to suggest only certain WIP entries for recognition.

On the Options tab, you need to enter a posting date, a document number, and a description *(where %1 will be replaced with the posting date)*.

When you choose OK, the function then suggests for recognition all entries created from WIP measurements.

Posting the journal doesn't lead to postings in Finance, as the process creates only project measurement entries for recognizing revenues. To see the entries for a project, choose Posted Project Measurements or Measurement Methods on the project card.

Post revenue recognition

Afterward, you must copy the measurement entries that you want to recognize to Finance by running the Post Project Revenue Recognition to G/L batch job.

On the request page, on the Project FastTab, you can set filters to specify the projects that you want to recognize revenues for.

On the Project Measurement Method tab, you can set a filter on a method if you want to provide separate suggestions for measurements based on IFRS and HGB, for example.

On the Project Measurement Entry tab, you can specify filters to suggest only certain WIP entries for recognition.

On the Options tab, you can choose if you want to post measurements per entry or per project. Please be aware that the Project option might result in totals being copied to Finance.

Afterward, fill in a posting date, a document number, and a posting description *(where %1 will be replaced with measurement type Recognition and %2 with the posting group, such as IFRS or HGB)*.

The Post toggle on the page specifies whether entries are posted, previewed, and printed. Leaving it turned off will only display and print the report without posting the entries.

You can then select the Preview button to check what you posted to Finance.

> **Note**
>
> With the Post toggle turned on, the standard Preview function isn't really a preview either, as it is used to start posting to Finance.

To see the values posted to G/L Integration accounts in Finance, go to the G/L Integration page and select an entry to open the journal you last posted to. For more information on posting-related accounts and records, see Measurement Templates.

CORRECT POSTED MEASUREMENTS

Posted project measurements can be reversed.

Reverse a posted measurement

To reverse a measurement:

1. Choose the Search icon, enter Project Measurements, and then choose the related link.
2. Choose Actions > Reverse Posted Measurements on the ribbon.
3. Alternatively, choose the Search icon, enter Reverse Posted Measurements, and choose the related link.

We strongly recommend that you set a filter to specify exactly which posted measurements you want to reverse.

Example
To correct HGB measurements from February 2025, you need to set at least the following filters:

Meas. Method Code	HGB
Posting Period	2/1/2025

When you choose OK, the function deletes all selected measurements (their headers and lines) and sets the measured amounts on the previously posted entries to 0.

Additionally, the Corrected Amount field is filled in with the amount that was posted to the relevant entry up to that point.

Reverse posted measurements in Finance

The corrected entries must now be recopied to financial accounting to record the difference between the measured and posted amount in the ledger.

As the amounts were set to 0 in the project area, those previously transferred to Finance are then corrected through reversal postings. To reverse a posting, you need to rerun the Post Work In Process to G/L batch job (see action Post WIP).

Example
To post a correction regarding the HGB value measured in February 2025, you must set at least the following filters on the measurement entries:

Meas. Method Code	HGB
Posting Period	2/1/2025..2/28/2025

Note

The filters should be the same as for reversing posted measurements in the project area; the fact that entries have the same document number or posting description in both instances might be a clue as to why the measurement was removed.

Recreate measurements

Measurements you've reversed can always be recreated, reposted, and then recopied to Finance.

POST PROJECT LEDGER MEASUREMENTS

Postings for project usage and sales aren't automatically transferred to Finance but are only copied when you run the relevant batch job.

When posting measurement entries, a distinction is made between posting WIP and recognizing revenue. A project is linked to financial accounting, for example, to compare inventory consumption, salaries, and other amounts with work in process. At the end of the period, the value of ongoing projects must be reported on a balance sheet for accounting purposes. A batch job is available for both WIP and revenue recognition.

When a project is (partially) completed, work in progress needs to be recognized as revenue. Revenue recognition entries offset the amounts posted to work in process accounts and copy them to the G/L accounts that store project sales and costs.

Measure project ledger entries

Project ledger entries are often the basis for HGB-compliant measurements. Based on unit costs, this measurement method recognizes revenue at the end of a project.

Calculate WIP by project ledger entry

To use this method, you first need to open the relevant project ledger entries on the project measurement journal and create measurement entries. You then need to copy and post these entries to Finance.

When you run the Measurement Suggestion function from the measurement journal to open the Project WIP Worksheet, you can enter individual projects to be considered by the batch job in the No. field on the Project FastTab. If you leave the field blank, WIP will be calculated for all measured projects.

You can then specify the method for measuring WIP on this worksheet in the Meas. Method code field on the Project Measurement Method tab. If the field is left blank, all methods are included in the calculation.

On the Options tab, the Measurement From and Measurement To fields can be used to enter a period during which entries need to have been posted to be considered for WIP measurement. You also need to enter a posting date, a document number, and a posting description on this tab.

Note

Placeholder %1 can be used in both the Document No. and Posting Description. It is later replaced with the posting date.

Choose OK to enter the measurement suggestion in the project measurement journal.

If a journal is filled in through this batch job, you typically don't need to make manual changes to the data. But if the information entered for the batch job is incorrect, you can manually delete lines from the journal and rerun the function.

An example of what a measurement method for posting WIP based on project ledger entries might look like can be seen in the following table.

Field	Description
Code	HGB-L
Description	HGB (Ledger Entries)
G/L Integration	Selected
Measurement Template	Not Selected
Measurement Base	Project Ledger
WIP Method	Costs
Calculate	Usage
Recognition method	Completed Contract

This method is used to measure project ledger entries of the usage type at unit costs. If necessary, the values are copied to financial accounting.

The method ensures that only usage entries are copied to the journal. Ledger entries of type Sale aren’t considered in this context. The measured amount will be retrieved from the Unit Cost field of a project ledger entry. The unit price serves only informational purposes here.

Posting work in progress then creates measurement entries that you can see when you open the relevant project, as each measurement entry is linked to the measured project ledger entry through the Project Ledger Entry No. field. The project ledger entry also stores the WIP amount.

On the project card, you can choose Related > Project > Measurement > Project Measurement to open a matrix that shows you the measurement status of the project. The posted entries are visible in the WIP column during the selected posting period. You can use the lookup in each field to take a closer look at an entry.

Incorrect measurement base
You can perform a second measurement if a wrong measurement base was chosen. However, only project ledger entries not included in the previous measurement are used for this. The measurement method that you used must also be changed accordingly and reassigned to the project. Canceling posted measurements isn’t possible.

Post WIP to Finance

The measurement entries that were created through the measurement journal, which only affected the Project area, can now be copied to Finance by using a batch job. In this context, it is important that the G/L Integration checkbox *(specifying the method and area of measurement)* has been selected for all entries you want to copy.

The values are then transferred to Finance by entering Post Project Work In Process to G/L in the general search field and choosing the relevant link. Individual projects can be selected for inclusion in the batch job on the Project FastTab. You can also set filters on other fields of the project table here.

On the Project Measurement Entry FastTab, you can set filters on individual entries. We recommend that you limit only the period for inclusion here, as the entries are already filtered through the journal.

On the Options tab, you select the method that you want to use for posting. You can create a G/L entry for each measurement entry here or one G/L entry for all of them. You also need to enter a posting date to specify when entries should be transferred to Finance, a document number, and a posting description.

The Post toggle is used to determine if you want to preview WIP calculation (toggle turned off) or whether the posting should already be made.

Afterward, choose Print or Preview at the bottom of the page to start the posting or preview process. This will show you a report listing the work in progress.

After WIP has been posted to Finance, you can open a project card and choose Project > Related > History > Measurement Entries on the ribbon to see the postings. When you post work in progress, the system will update the Posting Date field for the relevant measurement method. The project measurement entries included with the posting are updated in the Posted Measurement Amount field.

In the Finance area, the individual records have been posted as well. As the posting method selected for Post Project Work In Process to G/L was Per Project Meas. Entry, the system posted a great many records.

The posting process is identical when you measure project completion. You only need to first calculate completion values for the period under consideration so that they're included when you run the measurement suggestion from the journal page.

Posting to Finance also works in the same way despite completely different account assignments.

Recognize revenue by project ledger entry

For revenue recognition, it is important when revenue is recognized, that is, whether it is recognized based on the percentage of work completed or at completion of the contract. If you use the Completed Contract method, the status of the project must be set to Completed. You can then run the Recognize Revenue from the measurement journal.

The date of revenue recognition is specified on the Options FastTab. You also need to enter posting date, a document number, and a posting description there. On the Project tab, you can filter for specific projects or, if you leave the Project No. field blank, use the function on all projects.

On the Project Measurement Method tab, you can set a filter on measuring methods or, as before, leave the field blank to include all methods.

The Project Measurement Entries tab, on the other hand, can be used to filter for certain posted project measurement entries. In the Entry Type field, you can select either Usage or Sale. If the field is left blank, all entries are considered for revenue recognition.

As was done when posting WIP, the project measurement journal must now be posted. The recognized project ledger entries can then be found in the project measurement matrix in the Recognition column.

Post revenue recognition to Finance

Following revenue recognition in the Project area, the entries still need to be posted to Finance. For this purpose, you can choose the Post Project Recognition to G/L action.

If necessary, you can limit recognition to specific projects on the Project FastTab. On the Project Measurement Method tab, you can specify for which method you want to recognize revenue.

On the Project Measurement Entry tab, you can select the measurement entries that you want to transfer to Finance for revenue recognition.

On the Options tab, you can specify whether you want a G/L entry created for each measurement entry or if you want to aggregate the measurement entries into one G/L entry in Finance. Additionally, you need to fill in the Posting Date, Document No., and Posting Description fields on the tab.

With the Post toggle turned on, revenues are then posted to Finance. Leaving the toggle turned off will generate only a test report.

As was the case when you posted WIP, the system creates numerous G/L entries in Finance when you recognize revenue.

Post progress measurements

Measuring progress is largely identical to measuring project ledger entries. For this reason, only the differences between them are explained in the following.

Calculate project completion

Project progress is calculated by choosing Related > Project > Measurement > Completion on the project card ribbon. You then use the Estimate Completion function on the page that opens to create completion lines.

Calculate WIP based on completion

For measurements based on project completion, a suitable measurement method must be created for projects. Crucial in this context is the Measurement Base field, where you must select the Completion option.

As was the case for measuring project ledger entries, you first run the Measurement Suggestion function on the Project Measurement Jnl. page. Note the filter set on the Posting Date field, as the focus has now shifted to completion values.

All subsequent steps *(posting the project measurement as a project measurement entry and posting this entry to Finance [if the relevant journal gives you the option of doing so], recognizing the entry and posting recognition to Finance)* are the same as for ledger entry-based measurement.

ANALYZE MEASUREMENTS

The measurement functionality also provides you with options of analyzing the data relevant to determining the current value of a project.

Gross profit and loss report

This report shows you the lines and values for a posted measurement (for example, based on IFRS or HGB and a specific month). A line is only included on the report if the Show checkbox has been selected for it in the measurement template.

On the Project Dim. Value Report Buffer FastTab, you can first specify the dimension by which projects on the report are grouped. In the Dimension Value field, you can then enter a value to show only projects where the value has been assigned as a default dimension (such as range 30). You can also limit what projects you can see by setting a filter in the Project No. field.

On the Options FastTab, you need to enter a date so that you see only measurements valid in that month. In the Meas. Method Code field, you need to enter the code of a measurement method that will be included on printouts.

Additionally, with the Preview toggle turned on, the report will show both posted and created but not yet posted measurements on the report.

German HOAI Fees

Note

Despite being implemented decades ago, the German HOAI regulations on architects’ and engineers’ fees continue to have little to no influence over fee schedules developed outside Germany.

The highly localized nature of HOAI is reflected in the online help articles by limiting the language used to describe the related functionality to German.

Financial Management

OVERVIEW

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s finance department.

G/L ACCOUNT CARD

On a G/L account card, you can specify in the Project Entry Type field whether a certain value should be treated as usage or revenue when it is posted to this account through a project.

Typically, the field can remain blank, as the choice which values are posted to accounts is made by the sales or purchase document you post them from.

You can, however, use the field to change this setting for certain accounts. For example, on a purchase document, you can then post G/L account line values as revenues *(entry type Sale)* and on a sales document, as expenses *(entry type Usage)*.

A posting made to a project-related general journal will always be considered usage—unless this field is used to turn the entry into revenue *(entry type Sale)*.

> **Note**
>
> Check the preview before posting to ensure that the correct project ledger entries are created.

NON-DEDUCTIBLE VAT

For general information about the feature, see Set Up Non-Deductible VAT - Business Central. This article only describes the additional pages, functions, and fields available for it in KUMAVISION project365.

VAT Setup

You can now also use dimensions to calculate percentages of non-deductible VAT.

1. Choose the Search icon, enter VAT Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Option
Non-Deductible VAT Type	**(blank)** Indicates that this field hasn't been filled in yet. To proceed, you must select one of the following options. **Standard** Corresponds to standard functionality, which means the system posts lines by using the non-deductible VAT percentage that has been specified for them on the VAT Posting Setup page. **Dimension** Determines a non-deductible percentage based on dimensions and dimension values *(and, potentially, a time frame, as will be explained later)*.
Non-Deductible VAT Check	**Show Notification** Shows a message if the current combination of VAT business and product posting groups entered on a line allows for a non-deductible percentage based on dimensions, but none can be found. You can still post the line, however. **Show Error** Displays an error message during posting.
Non-Deductible VAT Date	**Posting Date** Posting dates will be used to calculate non-deductible VAT. **Document Date** Document dates will be used to determine the percentage.

> **Hinweis**
>
> The fields in this table are only visible if the Non-Deductible VAT toggle has been turned on.

Non-Deductible VAT Dimensions

Can be opened by choosing Actions > Non-Deductible VAT Dimensions on the ribbon.

If you selected the Dimension option in the Non-Deductible VAT Type field on the VAT Setup page, the non-deductible VAT typically specified in VAT Posting Setup is stored with dimensions and dimension values instead. In that case, you specify on this page the dimensions that you want the system to consider for calculating a percentage, as well as the order of priority in which they should be searched for.

You then need to specify for each dimension value from which date a percentage will be valid for them by choosing Dimension > Dimension Values on the ribbon and filling in the fields as necessary.

Non-deductible VAT is only used for lines on which you stored a business and posting group combination that allows the use of non-deductible input VAT via the Allow Non-Deductible VAT field in VAT Posting Setup *(see the standard help for more details)*.

> **Hinweis**
>
> If you selected Dimension as the non-deductible VAT type, you cannot enter a percentage in the Non-Deductible VAT % field in VAT Posting Setup, as the percentage from the dimension values should be used instead.

PROJECT DEFERRALS

For general information about the feature, see Defer Revenues and Expenses.

The following section only explains the additional pages, functions, and fields available for it in KUMAVISION project365.

Projects Setup

The standard app doesn’t include a function to defer project ledger entries; they’re posted in sales and purchasing as if no deferral took place, that is, one entry is created per posting date. To change that:

1. Choose the Search icon, enter Projects Setup, and then choose the related link.
2. On the General FastTab, turn on the Use Deferral toggle so that you can defer amounts on project ledger entries in the same way as project revenue and usage.

Deferrals in purchasing

Among other things, the use of deferral codes on purchases lines has an impact on the ledger entries created for a project. The following example shows how a deferral affects these entries.

Example
You buy items for a project at a quantity greater than 1 and a unit cost of EUR 60.00 per item. The total costs need to be distributed over three months, with the WBS line invoiced based on time and materials.

Scenario 1
The field Sales Price Deferral in Purchasing is set to Source Entry. This way, only the original expense entry contains an amount and is included on the invoice.

		Quantity	Unit Cost	Total Cost	Invoice Qty.	Unit
Source entry	01/01/2025	70	60	4.200	70	80
Deferral posting	01/01/2025	-1	4.200	- 4.200	0	80
	01/01/2025	1	1.400	1.400	0	80
	01/02/2025	1	1.400	1.400	0	80
	01/03/2025	1	1.400	1.400	0	80

Scenario 2

The field Sales Price Deferral in Purchasing is set to Distributed so that the original expense entry isn’t billed but the entries containing part of the total are.

Whereas source entries can be allocated to items, resources, or G/L accounts, deferrals are always posted to a G/L account with a quantity of (-)1.

		Quantity	Unit Cost	Total Cost	Invoice Qty.	Unit
Source entry	01/01/2025	70	60	4.200	70	80
Deferral posting	01/01/2025	-1	4.200	- 4.200	-1	5.600
	01/01/2025	1	1.400	1.400	1	1.866
	01/02/2025	1	1.400	1.400	1	1.866
	01/03/2025	1	1.400	1.400	1	1.868

FIXED ASSET INTEGRATION

This section describes the integration of project management into fixed asset accounting. For general information about the functionality, see Manage Fixed Assets (contains video) - Business Central | Microsoft Learn.

Setup

A FastTab named Project Integration has been added to the Fixed Asset Setup page, containing a toggle called FA Project Integration. Only if this toggle is turned on are you able to use the features described in the following. If it isn’t, nothing is posted to a project when you post a fixed asset transaction.

Turning on the toggle then unhides the other fields on the tab. You can choose in the Depr. Book (Projects) field the depreciation book for which FA ledger entries will be posted to projects. For each posting type—from acquisition cost to custom1 and custom2—you can also choose the work package that specific FA values should be posted to automatically.

Fixed asset card

To link a fixed asset to a project, open a fixed asset card and fill in the Project No. field. This way, posting a fixed asset transaction also posts the FA value to the specified project.

Post an FA ledger entry

When you post a ledger entry for a fixed asset linked to a project, a project ledger entry is created. This entry is posted to a WBS line containing a work package of the same FA posting type as the package specified in Fixed Asset Setup. If none is found on the current WBS, an error message appears.

However, the system must not create project ledger entries for asset purchases or sales at this point, that is, for fixed asset ledger entries where the posting type is set to Acquisition Cost, Proceeds on Disposal, Salvage Value, or Book Value on Disposal, or where the posting category is Disposal or Bal. Disposal.

The exception are internal projects, identified as such on the Project Type page. Their FA transactions must be set up manually, which creates project ledger entries. But these don’t include amounts used to, for example, measure the financial value of a project. They’re stored in the Fixed Asset Total Cost (LCY) field instead.

To create project ledger entries, project journal lines are set up and posted. What kind of project ledger entry is created during this process depends on the posting type specified for the fixed asset. If that type is Gain/Loss, Proceeds on Disposal, Salvage Value, or Book Value on Disposal, Sale is selected as the ledger entry type; else, the Consumption option is used.

All project ledger entries are of type G/L Account, with the correct account being chosen based on the fixed asset group that you specified for the relevant FA ledger entry type. The value of a project ledger entry corresponds to the FA value that is posted for a project but with the sign reversed. The entry also contains the dimensions of both the project and the fixed asset it’s related to.

Financial reports

Financial reports set up for internal projects might include fixed asset-related consumption even if the specified FA type doesn’t allow costs to be stored for them in the usual way.

For this purpose, you can select the Include Fixed Asset Total Costs checkbox in the column definition if you choose Project Ledger Entry as the entry type. With the field selected, the report column will include not only the total costs of the relevant project ledger entries but also those of the fixed asset based on the Fixed Asset Total Cost (LCY) field value stored with the entries.

CASH FLOW INTEGRATION

For a more accurate picture of your organization’s cash inflows and outflows, you can tell the system to consider the payment plans you’ve created for your projects by turning on the Project Payment Plans toggle when you run the Suggest Worksheet Lines action from a cash flow worksheet (*see the Source Types to Include section on the request page there).*

After you choose OK, the action copies the scheduled dates and the amounts from the plan lines to the worksheet and sets the Source Type on each line to Project Payment Plan.

Meanwhile, the number of the related project is copied to the Document No. field, whereas the Source No. field indicates the number of the payment plan line from which an entry originates. Any dimensions used in project planning are also transferred over.

G/L REGISTERS

The G/L Registers page has been extended to include the fields From and To Project Ledger Entry No. and functions that you can run to show their values.

Both fields are only filled in for postings that originate from a general journal assigned to a project. They remain blank when ledger entries are created for the project from a sales, purchase, or other document, as these entries must be posted with the help of the project journal.

Exceptions

- When you post to a general ledger account from a document line, a project ledger entry is posted at the same time as the line values.
- When you post an accrual from a document, this *(and only this)* value is posted through a general journal at the same time as a project ledger entry.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Service

OVERVIEW

For general information about this area, see Service Management. This article only describes the additional pages, functions, and fields available for it in project365.

SERVICE ITEMS

Assign a project for item shipments

You can fill in the Shipment Project No. field on a service item card to indicate the project that was used to ship the service item to a customer.

> **Note**
>
> This field is for informational purposes only and doesn’t have an impact on other service functionality.

Assign a service project to an item

You can also assign a service item to a service project and to a work package on one of its WBS lines.

When entering the item, any posting from a related service contract or service order is then automatically copied to this project and WBS line.

SERVICE CONTRACTS

Assign a service project to a contract

When you add a service item to a contract line, the service project and work package associated with the item are copied to the contract header automatically.

> **Note**
>
> A single contract should only include service items that originate with the same service project. You see a message if you fill in an item used on another project.

Assign a project to a service invoice

When you bill a contract, the associated service project and work package are automatically copied to the invoice header and invoice lines while all revenues from billing are posted to the project.

SERVICE ORDERS

Assign a service project to an order

When you enter a service item on an order line, the service project and work package associated with the item are copied to the service header and lines automatically.

> **Note**
>
> All service items specified for an order must originate with the same service project. You see an error message if you enter an item used on another project.

Assign a project on service lines

When you create a service line, the associated service project and WBS work package are automatically copied from the related service order.

The system then posts, besides service ledger entries, the time and materials consumed (and later, if applicable, the revenues generated) via project ledger entries.

Track times

You can record time spent on service orders both in a project time journal and on CTC lines *(the fields for either might need to be unhidden first, however)*.

To select a service line, use the Assist button that you see next to the Service Document No. field; the Service Line No. field, on the other hand, is filled in by the system. The project number and work package *(=WBS line)* are also filled in automatically with what you specified on the assigned service contract line.

When you post time spent on a project, a project time entry is also posted. The entry provides both project information and a reference to the relevant service contract line.

Prevent project journal posting

Time entries with a reference to a service contract line can be excluded when running the Get Project Time Entries action so that they aren't copied along to the project journal.

To do this, enter the " " filter in the Service Document No. field on the request page for the report. Each entry the field isn't filled in for is then ignored during the copying process.

> **Note**
>
> The filter remains even after you exit the page so that it is already set when you run the function again.

Copy time entries to service lines

You can run the Get Project Time Entries action from the ribbon of a service item worksheet or the service line list to copy time entries that haven't been transferred yet to new service lines, where other fields such as Resource No., Description, and Quantity are already filled in.

Posting the service lines then posts not only service ledger but also project ledger entries and the time entries are marked as Copied to (the) Project.

> **Note**
>
> You can also transfer the time entries to the project journal and then post them to the project itself. In this case, however, the above-mentioned filter must not be set *(so that the entries aren't copied to the service order but to the project)*.

Price Lists

OVERVIEW

This article only describes the price list features implemented in project365. For more information about the extensions added to KUMAVISION base (BOOSTER), see Prices (Sales) and Prices (Purchasing).

For general information about the price list functionality, see Set Up Prices and Discounts - Business Central | Microsoft Learn.

The KUMAVISION project365 Price Sequence option that you can select along with a new pricing experience calculates sales and purchase prices according to project priorities (without the system trying to find the best price).

The following pages are available for this purpose:

- Purchase Price Lists
- Purchase Project Price Lists
- Sales Price Lists
- Sales Project Price Lists

Lists linked to specific projects take priority over the general lists, which serve as a backup in the event a project-specific list doesn’t contain a currently valid price.

SETUP

Feature management

The new features must first be activated.

1. Choose the Tell Me function, enter Feature Management, and then choose the related link.
2. On the line Feature Update: New Sales Pricing Experience, set the Enabled For field to All Users.

> **Note**
>
> If the features aren’t turned on for you, please contact support. Do not try to turn on the functionality on your own.

> **Note**
>
> By activating the new price lists, the previous tables are migrated, that is, replaced.

Sales & Receivables and Purchases & Payables Setup

The features are available in both sales and purchasing. When the new pricing experience is activated, the KUMAVISION project365 Price Sequence option is turned on as well, ensuring that project prices are calculated according to a certain sequence *(and not the standard functionality best price option)*.

Standard resource prices

On each list, you can specify standard prices that will be valid for all resources. This simplifies data management, as the focus of project sales pricing is typically on the activity performed *(=work type)*, not on who performed it *(=resource)*.

To set up a price that should be valid for all resources, open a price list, select Resource in the Product Type field, and leave the Product No. field blank. The new price, however, has a lower priority than if assigned to a specific resource or resource group (see Price Sequences).

Work types

Sales pricing

To be able to determine resource sales prices, a work type is needed for each resource. It not only describes the type of work being performed but also the *(consumption or billing)* unit used. A sales price must always be linked to the correct billing unit.

Example
Project Lead (PL) type of work is recorded in hours but billed by day. This kind of work is also billed at a higher rate than time that is recorded for Travel (TR). The latter is billed in hours.

Work type	Unit of measure	Sales price
PL	Day	EUR 720.00
TR	Hour	EUR 50.00

Note

You cannot specify a price as valid for all resources by leaving the work type on a sales price list blank. To set up standard prices, you need to make actual use of the work types available.

Purchase pricing

A blank work type can only be used as a dummy value on purchase price lists. In this case, price units aren’t specified by work type, so that any price is given in the resource’s base unit of measure.

Explanation

A resource costs a company the same whatever activity is being performed. If purchase prices followed the business logic that is used to determine prices in sales, the same price would need to be stored for all resources and work types specified on a company’s purchase price list.

To simplify data management, the purchase price list thus allows a blank work type to be used as a dummy value.

External resource hours, however, might be purchased at different rates based on the work that needs to be performed. Using work types for these purchases could therefore make sense.

PARAMETERS AND FILTERS

All values used in pricing are described in the following table.

Parameters and filters	Description
Project	Project-specific lists of prices take priority over other price lists. Only if no valid price can be found on those lists will a standard price be used.
Date	Typically means the posting date, except during project planning, when it specifies the starting date. The date is used as a filter criterion, as the basis for calculating a price might differ depending on when the calculation is performed. **Note** If the date field on a line is blank, the price is valid indefinitely. You can, however, also fill in only a starting or an ending date so that a price will be valid for an unspecified period starting on 01/01/2025, for example.
Work type	Relevant only to resource pricing. For more information, see Work Types.
Resource, Item, or G/L Account No.	Depending on posting and planning, resource, item, or G/L account numbers might be shown in these fields.
Resource group	Only relevant to resource pricing, where prices can be assigned to groups instead of individual resources.
Item price group	Only relevant to item pricing.
Customer or vendor	Specifies if calculations result in unit costs or sales prices.
Customer or vendor price group	Prices can also be specified at this level. However, those stored for individual customers or vendors take priority.
Currency code	Specifies the currency used to bill a project or the currency entered on purchase documents.

All these are used as parameters or filters for price calculations. Examples of filters are the date and work type fields (the latter in the case of resource sales prices), where alternatives don’t exist. This means:

- If no price has been assigned to a work type on a sales price list, the system will not retrieve another price.
- If a list price has expired, it can no longer be used.

Among the parameters that will be included in pricing are the project, resource (group), item (price group), G/L account, customer or vendor (price group), and currency code. For more information, see Price Sequences.

PRICE SEQUENCES

Prices are determined based on what value ‘fits best.’ The standard best price principle doesn’t apply any longer. Instead, the system follows a sequence of steps ranked by priority. If a price that matches the specified criteria is found, it is used as the best price.

Price sequences in sales

Resource pricing

Source	Priority	
Project sales price list		
	1: Project-specific prices	
		Resource price
		Resource group price
		Standard resource price (=Resource No. field blank)
	2: Standard project prices	
		Resource price
		Resource group price
		Standard resource price (=Resource No. field blank)
Sales price list		
	1: Customer-specific prices	
		Resource price
		Resource group price
		Standard resource price (=Resource No. field blank)
	2: Group prices (customer)	
		Resource price
		Resource group price
		Standard resource price (=Resource No. field blank)
	3: Standard customer prices	
		Resource price
		Resource group price
		Standard resource price (=Resource No. field blank)
Base data		Price on resource card

Item pricing

Source	Priority	
Project sales price list		
	1: Project-specific prices	
		Item price
		Group price (item)
	2: Standard project prices	
		Item price
		Group price (item)
Sales price list		
	1: Customer-specific prices	
		Item price
		Group price (item)
	2: Group prices (customer)	
		Item price
		Group price (item)
	3: Standard customer prices	
		Item price
		Group price (item)
Base data		Price on item card

G/L account pricing

Source	Priority	
Project sales price list		
	1: Project-specific prices	
		G/L account price
	2: Standard project prices	
		G/L account price
Sales price list		
	1: Customer-specific prices	
		G/L account price
	2: Group prices (customer)	
		G/L account price
	3: Standard customer prices	
		G/L account price
Base data		n/a

Note

If no valid price is found for an item or a resource on a price list, the price stored on the item or resource card is used. This price is in local currency and in the base unit of measure and can be converted if necessary.

Note

If no currency code can be found for a price, you can convert the price from the local currency to the target currency. With sales prices especially, we recommend that you maintain them in the billing currency.

Unit cost calculations

What has been written above also applies to calculating unit costs. But instead of customers, vendors and their price groups are used. Work types of unit cost calculations also aren’t used as a filter but a parameter, that is, the system will look for a valid price for the work type. If none can be found, it will search for a standard price *(for which the work type is blank)*.

PRICE LIST OVERVIEW

If you need to maintain scores of different price lists in the system, you might be looking for a comprehensive overview of your company’s pricing structure instead of having to filter individual lists set up for customers, vendors, items, or resources. To get to this overview:

1. Go to the Project Lead role center.
2. On the ribbon, choose Sales > Sales Prices or Purchases > Purchase Prices to see all price list lines of type Price or Price & Discount.
3. Alternatively, choose Sales > Sales Discounts or Purchases > Purchase Discounts to see all price list lines of type Discount or Price & Discount.

You can then also click a line to open the list that a certain price or discount is stored on.

General Setup

For general information about how to configure Microsoft Dynamics 365 Business Central[1] for first use, see Overview of Tasks to Set Up Business Central.

This article only describes the additional pages, functions, and fields available for configuration in project365.

USER SETUP

In project365, multiple fields have been added to this page to give companies more options to specify what their users can (or cannot) do in the system.

To activate these options:

1. Choose the Search icon, enter User Setup, and then choose the related link.
2. Select a user and choose Edit.
3. Fill in the fields as described in the following table.

Field	Description
Projects Resp. Ctr. Filter	Assign a responsibility center so that users only see projects that match their area of responsibility. **Note** This filter does not apply to time tracking.
Employee No.	Enter the employee number assigned to the user.
Resource No.	Specify the resource associated with the user. If the resource is not an employee, enter a number manually. Filling in this field is crucial, for example, to assigning a resource to a time journal.
Other Res. in Time Tracking	With the toggle turned on, the user can view and complete other resources’ time sheets and CTC cards and check their postings in certain overviews and reports. If you want the user to have access to only some resources’ records, you need to fill in the Resource Management page. **Note** Turn on this toggle for administrators only.
Time Manager	Turn on this toggle to specify the user as a time manager, who, instead of the project lead, should approve the time entries created from resource hours. **Note** The field is only used if the Check by Time Manager toggle is turned on in Projects Setup.
Plan Own Resource	With the toggle turned on, users with the relevant read/write permissions can schedule their own resources. Usually, only resource managers have these kinds of permissions; other employees can do little more than read entries. Turning on the toggle expands (and at the same time, limits) access to a resource by granting write permission to the user who is linked to the resource. **Note** This field is only relevant when planning resources to whom no budget activities are assigned.
Planning Location Code	Specify a resource manager’s default filter when handling resource requests. You can clear this filter on the Resource Request page to see all requests made so far. **Note** This field is only relevant when planning resources to whom no budget activities are assigned.
Resource Manager	Turn on this toggle if the user is a resource manager. Resource managers handle requests posted by coworkers and distribute them among employees with available capacity. A resource manager can see all requests; others only see their own. **Note** This field is only relevant when planning resources to whom no budget activities are assigned.
Team Filter on Resource Requests	Select a code that you want to set as a filter when you open the Resource Planning page from a resource request. The filter can help you sift through the resources and resource planning lines in the system if their numbers are high. The filter can later also be changed manually, if necessary.

Field	Description
	Note This field is only relevant when planning resources to whom no budget activities are assigned.
Planning Department Filter	Select a code that you want to set as a filter when a planner opens the Resource Request page. You can clear this filter on the page if necessary.
Default Sales Doc. Type for Creation from Project	Specify if the function used to create sales documents from a project should create quotes or orders (for more information, see Create Projects from Sales Documents).
Show All Staff Equipmt.	Typically, users can only see the equipment that is assigned to their resource (see above). However, you can turn on this toggle for staff members who have been tasked with managing equipment beyond their own so that they can remove the standard equipment filter and see all devices (and software) issued to resources or employees in the system. This way, they can change equipment data without needing to open the employee master—to which only a handful of people typically have access to anyway.
Allow Customer Change Despite Revenue	If you chose Selected in the Setup Customer Change Despite Revenue field in Projects Setup, you can turn on this toggle to mark the user as someone authorized for the process. **Note** Even if authorized, the user can only change a customer if the Selected option is chosen in Projects Setup.

RESOURCE MANAGEMENT

On the Resource management page, you can grant users access to resources besides their own.

You can, for example, specify whether a certain user can see the times posted by other resources as part of various overviews and reports.

Turning on the Other Res. in Time Tracking toggle also permits the user to edit other resources’ time postings *(for example, on CTC cards)*, with the setting on this page taking priority over the global setting found in User Setup.

PROJECT NO. MANDATORY WHEN POSTING

On this page, you can specify if a project number is required for posting sales or purchase lines. However, the check is only run on document item lines that are in the process of being posted.

In setup, a distinction is made between purchasing and sales but not between different document types. This means that what you specify in purchasing will apply to all purchase documents.

You can make entering a project number a requirement for all document line types or only for items, resources, G/L accounts, or fixed assets. You cannot set a filter on items or resources, however, so when you select the Item option, for example, a project number needs to be entered on every available item line during the posting process.

KUMAVISION MODULE SETUP

In this setup, you can activated or deactivated some functionalities and some features. This serves to make Microsoft Dynamics 365 Business Central[1] more user-friendly by simply deactivating and thus hiding areas that are not required. On the FastTab of KUMAVISION project365, these are the following settings:

Field	Description
Intercompany active	Activate the Intercompany function, which allows projects to be transferred in full or in part to other clients for further processing.
Project Controlling active	Activates the functional area Project Controlling via project financial reports.
project Warehouse Active	Activates the use of warehouses for inventory-managed items in the projects. Even if deactivated, non-stock items can still be processed for the project. However, the location, bins, reservations etc. are hidden in the project area.
Measurement active	Activates the chargeable activation functionality WIP Accounting
Rolling Planning Forecast active	Activates the chargeable activation functionality Rolling Wave Forecast.
Rolling Planning Distribution active	Activates the chargeable activation functionality Rolling Wave Budget Distribution

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

Administration

The following article will describe certain data maintenance actions and the conditions under which they can be run.

DELETE DEFAULT DIMENSIONS FROM WBS OR BUDGET

Dimensions are used on WBS and budget lines in the same way as on the lines of a document. This means they will be retrieved from items, resources, or G/L accounts associated with the selected work package and project.

If the toggle Use WBS Line Dim. as Default or Use Budget Line Dim. as Default is turned on in Projects Setup, or both are, these planning dimensions can also be entered in journals and on document lines.

They’re then treated like dimensions stored in the item or resource master, for example. In other words, they’re temporarily copied to the Default Dimensions page and will be deleted again from there when the required dimensions have been found.

Unfortunately, sometimes, the deletion process might not work as intended so that certain values are still listed as default WBS or budget line dimensions. To rectify this situation and clean up the data, you can run the Delete Default WBS and Budget Line Dimensions batch job, which you can find by using the general search function.

When run, the batch job shows (if available) the number of default dimensions that are currently stored in the system. You can then delete the relevant values from this list immediately.

Deprecated Features

Name	Description	Disabled in Release
Earned Value Management	Feature discontinued (no replacement available).	BC 2025 Wave 1
Forecast	Replaced with Rolling Wave – Forecast.	BC 2025 Wave 1

See also KUMAVISION base (BOOSTER)

1.2.5 project365 Real Estate

KUMAVISION project365 Real Estate

Note

This app has been developed with the German market in mind. Because of the industry's differing rules and regulations across the world, the development of app versions for use outside the country will not only require adjustments to some functions and fields but also rewrites of the online help articles.

As a result, the web help describing the solution is currently available in German only.

1.2.6 project365 Architects

KUMAVISION project365 Architects

OVERVIEW

KUMAVISION project365 Architects provides engineers and architects alike with key functionalities they require for their work. Tapping into a bundle of solutions built on top of KUMAVISION project365, the app features:

- Work breakdown structures so you can monitor and track orders from a single location.
- Customizable quotation and costing, contact management, and assessment of project success.
- Improved time tracking for each project phase and task.
- Billing based on payment plans or expenditures.
- Project schedules as a basis for costing and cost control.
- Cost control down to the task level.
- Budget-versus-actuals comparisons.
- Actuals trackable on individual documents.
- Quote and order archives that you can use to share expertise.
- HOAI and AHO cost and fee management for both internal and subcontracted orders.
- Powerful advance payment accounting.

Available as a standalone solution in Microsoft[1] AppSource, project365 Engineering consists of

- Microsoft Dynamics 365 Business Central[1]
- KUMAVISION project365
- Advance Payment (including Bridge App)
- HOAI Fee Management

Get KUMAVISION project365 Architects from Microsoft AppSource.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

1.2.7 project365 Engineering

KUMAVISION project365 Engineering

OVERVIEW

This app provides engineers with the following array of features specifically designed to integrate with KUMAVISION project365:

- Work breakdown structures so you can monitor and track orders from a single location.
- Customizable quotation and costing, contact management, and assessment of project success.
- Improved time tracking for each project phase and task.
- Billing based on payment plans or expenditures.
- Project schedules as a basis for costing and cost control.
- Cost control down to the task level.
- Budget-versus-actuals comparisons.
- Actuals trackable on individual documents.
- Quote and order archives that you can use to share expertise.
- Powerful advance payment accounting.

Available as a standalone solution in Microsoft[1] AppSource, project365 Engineering consists of

- Microsoft Dynamics 365 Business Central[1]
- KUMAVISION project365
- Advance Payment (including Bridge App)

HOAI-compliant fee management is also available (but requires an additional license).

Get KUMAVISION project365 Engineering from Microsoft AppSource.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

1.2.8 trade365

KUMAVISION trade365

With trade365 developed by KUMAVISION, wholesalers and distributors can fulfil customer expectations of exceptional service and timely delivery—while keeping supply chains lean and costs to a minimum.

Built on top of Microsoft Dynamics 365 Business Central[1], the solution supplies trade companies with a whole host of features to:

- customize quotations, for example, by providing easy-to-edit layouts and space for individually negotiated terms and conditions.
- gain a quick overview of blanket and framework agreements.
- fast-track order entry and calculate customer discounts in a flash.
- scan in documents to prevent errors in warehouse handling and lot tracking (optional).
- get notified immediately of impending credit limits.
- increase customer retention by offering equipment rentals.

Topics

- General Business Functionality
- Sales
- Purchasing
- Manufacturing
- Warehouse Management
- Service
- Subcontracting
- Rent
- Alloy Surcharges
- General Setup

Note

KUMAVISION trade365 basiert auf KUMAVISION base (BOOSTER). Die darin enthaltenen Funktionalitäten werden im Bereich KUMAVISION base (BOOSTER) erläutert.

Get KUMAVISION trade365 from Microsoft AppSource

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

General Business Functionality

The following features expand standard Microsoft Dynamics 365 Business Central[1] functions to provide additional options to those using General Business Functionality.

RESPONSIBILITY CENTERS

Besides filling in the standard fields, you can add logos and translated footers to responsibility centers to replace the default logo and footer specified on the Company Information page with another, or none at all, on sales and purchase documents associated with a certain work area.

You can use this feature, for example, when you’re planning to ship white label or private label products to customers who intend to sell them under their own brands or when you deliver items to companies based in other countries.

1. Choose the Search icon, enter Responsibility Centers, and then choose the related link.
2. Select a responsibility center.
3. On the right-hand side, use the Picture menu options to update the logo (or insert a blank image).
4. Choose Document Text Translation on the ribbon if you also want to add footer text in another language.

ITEMS

You can now see not only the Qty. on Sales Order and the Qty. on Purch. Order but also the Qty. on Sales Quote and Qty. on Purch. Quote on item cards.

You can use a lookup on each field to navigate to the relevant document.

SKU DATA

In the standard app, stockkeeping unit cards show you both the Qty. on Sales Order and Qty. on Purch. Order.

In trade365, the cards also include the Qty. on Sales Quote and Qty. on Purch. Quote. You can use a lookup on either field to open the related document.

ONE-DIMENSIONAL VARIANTS

To identify recurring variants with ease—for example, because many items are available in the same size—you can store variant attributes in the item master.

To fast-track the creation of variants:

1. Open an item card.
2. On the ribbon, choose Actions > Functions > Create Variants (Matrix).
3. Fill in the fields as necessary.

You can, however, also specify all variant data manually.

TWO-DIMENSIONAL VARIANTS

Certain items might require you to assign not one attribute but two attributes to them, such as when a product is available in different sizes and colors but needs to be grouped under the same item number.

In trade365, you can set up variants with two attributes in both the sales and purchasing areas.

Setup

Inventory Setup

When you create a variant with two attributes, the system will combine the descriptions entered for each attribute. To set them apart visually:

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, fill in the Item Variant Descr. Separator field.

Variant attributes

Two-level variants possess values originating with general variant attributes, such as size or color, to which you assigned attribute values, such as red or blue. You can use variant attributes to create any number of items. To set up an attribute:

1. Choose the Search icon, enter Item Variant Attributes, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify the code that will be used for the attribute. The code must be unique.
Description	Specify a description for the attribute.
Variant Description 2	Specify a description that will be used for the item variant in the Description 2 field. **Note** Placeholder %1 specifies what value is copied from this field to the Description 2 field. For example, if you create an item called Blue XL T-Shirt, you need to enter Size %1 in this field for variant attribute Size.

Afterward, choose Attribute Values on the ribbon to set up attribute values for the variant.

To display variant texts in another language, you need to set up translations for variant attributes and values together with the relevant language code in the item master. They're then filled in automatically during variant creation.

You can also block attribute values from being used so that they're no longer visible when you set up another item variant. The block doesn't affect values that are already part of an existing variant.

Attributes are sorted on the Create Variant (Matrix) page *(alphanumerically)* by Code, although the order can be changed if necessary.

Item card

To set up an item variant with two attributes:

1. Open an item card.
2. On the Variants FastTab, fill in the Variant Attribute 1 Code and Variant Attribute 2 Code fields.
3. On the ribbon, choose Actions > Functions > Create Variants (Matrix).
4. Choose an attribute 1 and attribute 2 combination that will be used as a basis for creating new variants.
5. Choose OK.

Afterward, the variant is set up in the same way you would a variant by using standard *(sales or purchase)* functionality.

DEFAULT SALES VARIANTS

You can also set up default values, for example, if you use certain variants to denote different product versions.

Setting up default variants will reduce the amount of information that needs to be entered on sales documents.

1. Open an item card.
2. On the Prices & Sales FastTab, enter an existing variant in the Def. Variant Code (Sales) field.

The variant is then entered automatically on a document after you specify an item number. It can also be removed or replaced manually if necessary.

QUICK ENTRY: VARIANTS

Often, items that come in many variants are also purchased in more than one configuration. To speed up variant creation in a case like this, you can use the trade365 quick entry system.

Setup

To set up quick entry:

1. Open an item card.
2. On the Variants FastTab, turn on one or more of the following toggles to specify the kinds of documents that you want to activate the feature for.

Sales Variant Quick Entry

- Quote
- Order
- Invoice
- Cr. Memo
- Blanket Order
- Return Order
- Framework Agreement

Purchase Variant Quick Entry

- Quote
- Order
- Invoice
- Cr. Memo
- Return Order

Transfer Variant Quick Entry

- Transfer Order

Journal Variant Quick Entry

- Item Journal

> **Note**
>
> When working with variants, we recommend that you select the Variant Mandatory field for each to ensure that items aren’t entered without one.

Workflow

For example, if you select the quick entry option for purchase orders, you can specify a quantity for each variant when entering an item number on an order before choosing OK to add the relevant lines to the document.

If you didn’t select the option for documents that require variants, you need to specify an item number and a variant manually.

However, you cannot choose more than one variant per document line.

Exclude from quick entry

The type and number of variants might change frequently. For example, a color might no longer be available, or you no longer want to sell a specific configuration but will accept return orders containing the variant.

Unless blocked, however, a variant can still be used everywhere in the system. To help ensure that only certain variants are shown during quick entry:

1. Open the Items page.
2. Select an item and choose Related > Item > Variants on the ribbon. Alternatively, open the relevant item card and do the same there.
3. Select a variant and choose Open Variant Card.
4. On the Warehouse FastTab, turn on the Exclude on Variant Matrix toggle.

VARIANT CARDS

Standard functionality provides you with a list view for the display of variants. With trade365, you'll have even more features at your disposal, such as a card view for easy tracking and editing. On these cards, you can add:

- Translations
- Manufacturers' suggested retail prices
- Requirements for complete shipment
- Links to calculated unit costs, which you can edit and view here as well (regardless of where you've maintained variant data so far).
  For more information, see Calculated Unit Cost.

PURCHASING CODES: VARIANTS

Standard functionality gives you the option of storing a purchasing code on an item card if you only procure the items by drop shipment or special order. This code is then copied to all sales transactions and can be changed during any such transaction (if necessary), for example, if you must deliver goods via a certain warehouse.

Often, an item might, in theory, be available but some of its variants are only ordered when needed and will be sent directly to the customer (variant drop shipment).

With trade365, you can specify purchasing codes for certain variants while delivering other variants from a warehouse. To limit a code to a variant:

1. Open an item card.
2. Choose Related > Item > Variants on the ribbon.
3. Select a variant and choose Open Variant Card.
4. On the card, on the General FastTab, specify a purchasing code. If you can't see the field, you might need to unhide it by using the Personalize function.

The code is then copied to sales documents for variants to which it has been linked.

Note

Purchasing codes that have been assigned directly on an item card apply to all variants of that item.

ITEM VARIANTS EXIST

The Item Variants Exist field has been added to item cards and the item list.

If a variant is set up for the first time, the value in this field changes from "No" to "Yes" on the relevant item card or item list line so that you can determine at a moment's notice whether variants exist for an item.

ITEM HISTORY

In trade365, in the item master, you can see a list of all documents that were created for items sold or purchased within the system, sorted by their type:

- Open the item list or a specific item card.
- Choose Related > History > Sales or Purch. History.

ITEM LEDGER ENTRIES

To simplify ledger entry searches and expand the range of analysis options in this context, the following fields were unhidden on or added to the Item Ledger Entries page:

Field	Description
Source Type	Specifies the source of the ledger entry (item, vendor, or customer).
Source No.	Specifies the number of an assembly order, the number of a production order, a customer number, or a vendor number.
Name	Shows the content of the Name field as entered in the vendor or customer master if the ledger entry has been sourced from either.

This way, you can determine from a ledger entry, for example, what has been delivered to which supplier or customer and what has been consumed by an assembly or production order.

GET SOURCE DOCUMENTS AND LINES

You can now see the customer or vendor name on a warehouse or inventory document after running the Get Source Document Lines function.

Additionally, the For Name field has been added to the options menu.

SAVE ATTRIBUTE FILTERS

With standard functionality, you can set attribute filters on the Items page. In trade365, you can also save these filters for future use:

1. Open the Items page.
2. On the ribbon, choose Attributes > Filter by Attributes.
3. Set the desired filters.
4. Turn on the Save Attribute Filter toggle. This will open a new page on which you can enter a code and a description.
5. Select Save Filter (Current User Only) if you want to link a filter to your user profile specifically.

You can then use the stored filter in the Attribute Filter Code field on the Filter Items by Attribute page.

DELETE POSTED DOCUMENTS

By default, deleting posted documents is not possible in trade365. To specify that documents can be deleted after a certain period, you must fill in the Allow Document Deletion Before field. You can find the field on the General FastTab after opening one of the following pages:

- Sales & Receivables Setup
- Purchases & Payables Setup
- Service Management Setup

You also need to turn on the Allow Posted Document Deletion toggle on the trade365 FastTab there. Depending on what setup you used, you can then delete sales, purchase, or service documents posted before the specified date.

ATTACH DOCUMENT ON PRINT OR SEND

If you want a document attached automatically in the form of a PDF when you use the Print or Send function, turn on the Auto Attach Document via Print or Send toggle in Purchases & Payables or Sales & Receivables Setup. With the toggle turned off, documents must be stored manually by running the Attach as PDF action from the ribbon.

COPY LINES FROM SALES OR PURCHASE QUOTES TO ORDERS

When you use the Create Purchase Order or Create Sales Order function on a quote, the system typically copies all lines of the quote to a new order.

In trade365, you can also tell the system to transfer only a certain number of lines by selecting the Copy to Order field on each before running the function.

SHIPPING AGENT SERVICES

A shipping agent might offer various services. For one of these to be specified as the default service:

1. Choose the Search icon, enter Shipping Agent, and then choose the related link.
2. Select an agent.
3. On the ribbon, choose Shipping Agent Services.
4. Select the Default field for the shipping service that will be automatically entered when the agent is selected on a sales, a service, or an outbound warehouse document.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Sales

The following features expand standard Microsoft Dynamics 365 Business Central functionality to provide additional options to those working in your organization's sales department.

CREATE ITEM REFERENCES ON SALES LINES

Sales transactions in the trade industries typically involve two sets of item numbers, yours and those provided by your customers.

You can use the Item Reference No. field when you create an order to specify that the number assigned to an item is sourced from a customer, but only if it has already been stored in the item or customer master. In trade365, however, you can also set up references on item lines during order capture.

Setup

To be able to use this feature:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Auto Add Item References toggle.

Workflow

Sales lines include the following fields:

Type	No.	Item Reference No.	Unit of Measure Code	Variant Code
Item	(number as stored in the system)	(number as specified by customer)	(unit used when selling the item)	(filled in with a code for items that you set up variants for)

If a reference for a certain customer-item number combination already exists, it will be entered in the Item Reference No. field on a line when you've filled in and exited the Item No. field there.

Else, you can create a new reference when filling in the line. You can view and edit references on the Item References page, which is available via the general search.

Sales order types

Note

At this point, only the options added for sales order types in KUMAVISION trade365 will be explained in more detail. An explanation of how to set up sales order types in general can be found here.

Field	Description
Exclude from Periodic Billing	Turn on this toggle if you want orders of this type excluded from Periodic Billing.
No Order Minimum	If selected, the system does not check whether these kinds of orders meet a certain value threshold.

Assign reports by type

Besides assigning order types as identifiers and for the preset of dimensions, they can be used to specify the reports that should be printed, for example, to confirm an order or announce a spare parts delivery:

1. Choose the Search icon, enter Report Selection – Sales, and then choose the related link.
2. In the Usage field, select the type of document that you want to set up reports for.
3. Besides filling in the Report ID field on a new line, you can choose Order Types on the ribbon to specify reports that you want to use for a certain type of order. As can be done with standard functionality, you can store multiple reports here in sequence.

You can also adjust printouts based on what customer you’re using the report for. This way, you can have different kinds of documents printed per customer and order type if necessary.

USER PERMISSION TO EDIT SALES PRICES AND DISCOUNTS

In the user setup, the permissions to edit sales prices and discounts in the sales line can be set for each user.

Here are the available fields:

Field	Description
Can Edit Sales Prices	Permission to edit the sales prices in a sales line.
Can Edit Sales Discounts	Permission to edit the sales discounts in a sales line.
Can Edit Sales Not Billable	Permission to edit the sales not billable in a sales line.

CALCULATE SALES PRICES FROM UNIT COSTS

In Microsoft Dynamics 365 Business Central[1], you use worksheets to enter or edit prices or add them to price lists.

Many of the software solutions developed by KUMAVISION also provide you with sales conditions. For general information about the topic, see Prices. In trade365, they include a Calculated Unit Cost option as a basis for calculating sales prices:

1. Choose the Search icon, enter Price Worksheet, and then choose the related link.
2. On the ribbon, choose the Suggest Lines function.
3. Fill in the fields as described in the following table.

Field	Description
Product Type	Select the product type that you want to have lines suggested for. Options are: • All • Item • Item Discount Group • Resources • Resource Group • Service Cost • G/L Account • Item Price Group The option you choose determines the lines for which the system will recalculate prices. If no unit price or discount has been stored for the selected combination, no lines will be suggested, however.
Product Filter	If necessary, set a filter, for example, on certain item or resource numbers, based on what option you selected in the Product Type field.
Defaults	Here you can use a lookup to choose one of the options that will be described later.
Minimum Quantity	Fill in this field if you only want the system to recalculate prices that apply starting at a certain quantity threshold. For quantities below the limit, no price will be suggested. You can leave this field blank if you want to refresh all prices.
Exchange Rate Date	Used to recalculate prices that are given in a foreign currency or are based on a sales condition for which the Unit Cost or the Calculated Unit Cost option is selected in the Calculation Type field. In this case, the unit cost in foreign currency is converted into local currency at the current exchange rate.
Calculation Type	You can choose between a corrective factor or a sales condition in this field. By using a factor, you can, for example, increase the price by 5%. By applying a sales condition, you can have the price recalculated based on a condition such as the unit cost that is valid today.
Sales Condition No.	Select the condition that will be used for calculating the price. If you selected Adjustment Factor as the calculation type, this field cannot be filled in and will remain blank.
Adjustment Factor	Enter the factor that will be used to recalculate the price. The value must be entered as a factor for multiplication, for example, 1.05 for a 5% increase. If you chose Sales Condition as the calculation type, this field cannot be filled in and will remain blank.
Rounding Method	If necessary, specify a rounding method that will be applied to the result of calculating the price. You can, for example, specify that a price should be rounded to 0.05 from now on.
Starting Date	Enter the date that will be used as the starting date for the new prices in price suggestions. You can change the date again later on the price worksheet (but per line).

For the Defaults field, you can choose one of the following options:

Field	Description
Assign-to Type	Specify for whom or what prices should be created. Options are: • All Customers • Customer • Customer Price Group • Customer Discount Group • Campaign • Contact
Assign-to No.	Based on what option you selected in the Assign to Type field, you can further limit type assignment, for example, to a certain customer, price group, or campaign here. Only if you selected All Customers will you not be able to enter anything in this field. If you want to limit assignment for more than one customer, campaign, contact or group, set filters in this field according to the business logic of the standard app.
Currency Code	Choose a code if you want prices suggested in a certain currency (see also the Exchange Rate Date field above).
Starting Date	Specify the starting date from which the new prices will be valid.
Ending Date	Specify the ending date until which the new prices will be valid.
Defines	Specify if you want to show new prices and discounts or only prices or discounts on price worksheets.

Note

The Copy Lines action that you can run from a price worksheet copies new prices to the default price list stored in setup. Entries added to this list are therefore not used as filters for source prices but as definitions for results. To see the list, use a lookup on the Defaults field *(found on the worksheet header)*.

All other worksheet settings are covered by standard functionality, except for when you use sales conditions. In this case, you can check precisely how new prices have been calculated by selecting the relevant lines and choosing Price Calculation on the ribbon.

SHIP-TO ADDRESSES

The following fields have been added to customers' ship-to address cards:

- VMI Location Code
- Salesperson Code
- Salesperson 2 Code
- VAT Bus. Posting Group
- Gen. Bus. Posting Group
- VAT Registration No.

You can use these fields to customize ship-to addresses on sales documents, as the values entered here will overwrite those stored in the customer master.

By filling in the VAT and Gen. Bus. Posting Group fields, as well as the VAT ID field, you can preset VAT values for goods shipped outside the country but to domestic customers, for example. This removes the need for manual entry on orders on a case-by-case basis, improving both the quality and consistency of your data.

This data is only transferred from the delivery addresses if the option Sell-to/Buy-from No. is set in the Bill-to/Sell-to VAT Calc. field in the General Ledger Setup.

Filling in one of the salesperson code fields, on the other hand, makes it easy to implement area-based commissions.

BILL-TO ADDRESSES

Often, the confirmation of an order is sent to a customer's primary address for approval, whereas the invoice needs to be submitted to someone abroad or to a third party, such as a billing service.

With trade365, you can store more than one bill-to address in the system. Like ship-to addresses, they can be used on a wide variety of sales documents. To store an alternative address:

1. Open a customer card.
2. On the ribbon, choose Related > Customer > Bill-to Addresses.
3. Choose New and enter a unique code that will be assigned to every billing address associated with this customer.
4. Enter the full address, including contact details and communication data. All other information will be copied from the customer master when you create a shipment invoice.
5. Return to the customer card.
6. On the Invoicing FastTab, use a lookup on or manually enter a code in the Default Bill-to Code field. The new bill-to address that you specify here is later entered on sales documents related to the customer.

If you don’t set up a default address, all invoicing data will be copied from the customer master. If more than one billing address has been stored there, you can choose the correct address when you create the relevant sales document.

Choosing Cancel on the selection page will copy the default address from the customer master to the document.

SHIP-TO ADDRESSES ON ORDER ENTRY

To minimize errors during data entry and streamline the entire process, ship-to addresses can be shown automatically when a customer is entered for a sales transaction.

To turn on the automatic display of ship-to addresses:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, turn on the Show Ship-to Addresses on Input toggle.

When you later fill in the Customer No. field on a sales document, the system will check if a ship-to address has been stored for the specified customer.

If it has, you’ll see a list from which you can select the correct address for the transaction. If none of the listed addresses are suitable, choose Cancel to exit the page (and discard any changes).

Note

• You can only choose a ship-to address after filling in the Customer No. field on the relevant sales header. If you create the document through a customer card function, the selection window will not be shown.
• If you specified a code in the Ship-to Code field on the relevant customer card, an alternative address will not be available to you when you fill in a document. Instead, the system will retrieve the default address.

BILL-TO ADDRESSES ON ORDER ENTRY

To minimize errors during data entry and streamline the entire process, bill-to addresses can be shown automatically when a customer is entered for a sales transaction.

To turn on the automatic display of bill-to addresses:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, turn on the Show Bill-to Addresses on Input toggle.

When you later fill in the Bill-to field on a sales document, the system will check if a bill-to address has been stored for the specified customer.

If it has, you’ll see a list from which you can select the correct address for the transaction. If none of the listed addresses are suitable, choose Cancel to exit the page (and discard any changes).

> **Note**
>
> If you specified a code in the Default Bill-to Code field on the relevant customer card, an alternative address will not be available to you when you create sales documents. Instead, the system will retrieve the default address.

If you specified a code in the Ship-to Code field on the relevant customer card, an alternative address will not be available to you when you fill in a document. Instead, the system will retrieve the default address.

SEPARATE COMBINED SHIPMENTS

Big corporate customers especially might use multiple customer cost centers, all with their own ship-to address, for incoming deliveries. Invoices sent to this type of company might therefore need to be itemized by location.

For this purpose, you can use the Combined Shipments Per field (found on the Shipping FastTab of a customer card) to specify that part of an invoice should be issued based on the Customer No. (for example, when you invoice work for associations) or the Ship-to Code field.

When the Combined Shipments Per field is filled in, a new invoice document is created for each specified address.

BILL-TO FACTBOX

Besides the standard sell-to customer history, you can now see all billing data associated with customers entered in the Bill-to field on sales documents. You can get to a specific document by clicking one of the numbers in the new Bill-to Customer No. FactBox, although the list might be limited by a date filter. Both boxes are available for all types of sales documents. However, you might need to use the Personalize function to unhide them. For more information on the topic and on how to set up the FactBox, click here.

CREATE REMINDERS FOR CONTACTS

Often, the contact details used to send reminders differ from those entered for other purposes. Standard functionality, however, typically sends documents to the contact that is stored in the customer master. With trade365, you can now set up contact information that will be retrieved during billing only:

1. Open a customer card.
2. On the Invoicing FastTab, in the Reminder to Contact No. field, select a contact who is stored in the system. This contact will be copied to any reminder that you create from now on.

Leave the field blank if you want reminders to be sent to the customer’s main contact person.

SALES RESTRICTIONS

In trade365, you can limit or block the sale of items to certain customers or customer groups *(product restrictions)*.

> **Note**
>
> Restrictions aren’t filters that can be removed at will. After setup, some items can simply no longer be sold or be sold only to a certain group of customers.

Setup

To set up a restriction:

1. Open a customer card.
2. On the ribbon, choose Related > Customer > Items Restricted for Sale.
3. Fill in the fields as described in the following table.

Field	Description
Type	Choose Item for individual restrictions or Item Category to limit the sale of an entire group of items.
No.	Based on your selection in the Type field, enter the item number or item category that you want sales restricted for.
Variant Code	If necessary, enter the code of the item variant that should be blocked for sale. If you leave the field blank, the restriction set on the line will apply to all variants of the item.
Starting Date	Specify from when the restriction should apply. If you leave this field blank, the item (or items) will be blocked for sale immediately.
Ending Date	Specify until when the restriction should apply. If you leave this field blank, the item (or items) will be blocked until you enter an ending date or delete the line.
Exclude from Offerings	Specify if you want to create a buy list or block items from being sold. A buy list means the customer can only procure the items listed, as is typical when doing business with retail chains. Turning on the toggle does the opposite, that is, create a list of items the customer is no longer allowed to purchase. **Note** For each customer, items must be either on a buy or block list, although you might be able to combine lists as explained in the following.

Restrictions additionally apply to all lower-level members of a hierarchy—even if that means they’re inherited across several levels. At every level, you can add new restrictions or specify a new buy list.

You can also fill in the Hierarchy Type Restrictions Code field, found in Sales & Receivables Setup, to set up a different hierarchy for item restrictions:

Field	Description
Hierarchy Type Restrictions Code	Specifies a code for all item restrictions and customer-specific items set up in the system. The code that you enter here does not affect the value in the Hierarchy Type Code Pricing field.

Pricing isn’t affected when you enter another hierarchy in this field. If pricing and restriction should be checked along the same hierarchy, you must enter the same code in both fields.

The system only checks sales restrictions and customer-specific items for the code entered in the Hierarchy Type Restrictions Code field so that you can, for example, supply an item to a select group of customers without this having an impact on pricing.

As another example, a company might place restrictions on an entire category of items, but its subsidiary might still sell be able to some of the items in this category or restrict sales by other item categories that haven’t been set up yet.

All restrictions only apply to a single customer (and other customers along the same hierarchy). To check if the sale of an item is restricted in some way:

1. Open a customer card.
2. On the ribbon, choose Related > Customer > List Item Restrictions.

You can then see what items and variants the customer can buy across all hierarchy levels.

Workflow

Once specified, restrictions are checked during the release of a document. If the document includes items or variants that cannot be sold to the customer entered for it, the release will be blocked.

> **Note**
>
> Checks might also be run when you reopen older documents. If a check should only be performed from a certain (order) date, you must fill in the Starting Date field when you set up a restriction.

Optionally, a check can be run when filling in a document so that you see a message if an item or a variant that you’re trying to enter cannot be purchased by the specified customer.

For an immediate check during order entry:

1. Open the Search icon, enter Sales & Receivables Setup, and then choose the relevant link.
2. On the KUMAVISION trade365 FastTab, turn on the Check Restrictions on Item No. Input toggle.

Regardless of whether performed on item entry, a check is always run before a document is released to ensure that the restrictions you placed on the item haven’t changed in the meantime.

Customer-specific items

A customer-specific item is a special form of item restriction. It limits the sale of an item to certain customers, for example, because of exclusivity contracts. Like all item restrictions, this kind of restriction also applies to every customer in a hierarchy.

> **Note**
>
> An item or variant can be assigned to one customer only, which means that it is automatically blocked for sale to every other trade partner in the system—unless that customer is part of the same hierarchy, albeit at a lower level.

Country prohibitions

Some items and variants cannot be sold to customers in certain countries, whereas other products might be available in a predefined region only.

By specifying prohibitions for sale, you can block shipments to a country or a region, regardless of customer.

> **Note**
>
> The system checks for sales prohibitions based on the ship-to address entered on a document, regardless of the customer's actual address *(Customer No. field)*.

To set up prohibitions for sale:

1. Choose the Search icon, enter Prohibited Sales Countries/Regions, and then choose the related link.
2. Fill in the fields as described in the following table:

Field	Description
Type	Specify if you want to prohibit the sale of an individual item or a category of items. **Note** If you select the Item Category option, any item created at a later date but assigned to that category will also be covered by the prohibition.
No.	Based on what you selected in the Type field, enter the item number or a category for which you want sales restricted.
Variant Code	If necessary, enter the code of the item variant that should be blocked for sale in the specified country or region. If you leave the field blank, the restriction set on the line will apply to all variants of the item.
Country/Region Code	Select the code of the country/region that you want to block shipments for.
County	Specify a county if you want the country restriction to apply to a certain state or province only. **Note** Standard functionality does not provide a selection window for counties. What you enter in this field must therefore be a precise match to the address data you were given.
Starting Date	Specify the date from which the prohibition should apply. If you leave this field blank, sales will be prohibited effective immediately. Prohibitions are checked when an order is released provided the order date specified on the header is the same as or later than the starting date of the restriction.
Ending Date	Specify the date until which orders should be checked.

As with general item restrictions and customer-specific deliveries, the system checks for country prohibitions when you create or release a document based on what option you chose in Sales & Receivables Setup.

RESERVE ITEMS

With trade365, you'll get more than one function to simplify item reservations. To activate the new features:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, fill in the fields as described in the following table.

Field	Description
Check Lead Time on Reservation	Turn on this toggle if you want the system to consider the lead time settings of items to minimize inventory and cut costs for storage. **Example** Assume today is January 1. You create a new order you want shipped on 01/13. The item you need for this order has a 10-day lead time so that it can be purchased right away and can be received on 01/10. In this case, you do not need to reserve items in inventory. **Note** If the toggle is turned on but no lead time has been specified, the item can never be reserved. Unaffected by the setting are items for which you set the reservation status to Always (regardless of their lead time). You will be notified if the time until the shipping date entered on the sales line exceeds the reorder period.
Auto Reserve on Special Orders	Turn on this toggle if you want item lines to be automatically reserved on purchase orders linked to special orders.
Can Reserve on Quote	With the toggle turned on, you can reserve item quantities as early as the quote stage. These reservations are then copied over when you create an order from a quote.
Can Reserve on Blanket Order	With the toggle turned on, you can reserve items on blanket orders so that when you create sales orders from them, the reservations are copied over as well.

TIME-LIMIT BLANKET ORDERS

To prevent terms and conditions specified on a blanket order from being used after the order has expired, you can now set not only a quantity but also a time limit there:

1. Open a blanket order.
2. On the FastTab, in the Valid Until field, specify up until when the order is valid.

You then see an error message if you try to use the order after the expiration date.

Note

The field has also been added to sales lines (where it contains the value entered on the blanket order header) so that you can specify the validity of blanket agreements at line level. However, the field is only unhidden on request.

SHOW QTY. REMAINING ON BLANKET ORDER

By clicking the highlighted number in the Qty. Rem. on Blanket Order field on a blanket order line, you can see the sales line quantities that you still must ship to the customer.

A new field called Outstanding Qty. Excl. Order now also shows you the actual quantity that remains for call-off from the blanket order. The field is calculated as follows:

Quantity - Qty. Shipped - Qty. Rem. on Order = Outstanding Qty. Excl. Order

CLEARANCE

Clearance items are items that you decided not to reorder or that your supplier has stopped providing. Your procurement department will be notified that the item—or variant—in question is no longer available when they try to enter it on a new sales order. To select an item or variant for clearance:

1. Open an item card.
2. On the Item FastTab, select the Clearance field.
3. Alternatively, select Clearance for each individual variant that will no longer be restocked.

> **Note**
>
> If an item is selected for Clearance, its variants will no longer be restocked either, regardless of whether you've marked some of them as well.

ADD SUGGESTED RETAIL PRICES

A manufacturer's suggested retail price—also known as a list price—is often included in business transactions for purely informational purposes but has no bearing on actual order pricing and is usually stated including VAT.

In trade365, you can store these prices for each item based on a certain time frame. You can also specify which customers they should be shown to.

Setup

As can be done using standard purchase and sales pricing functionality, you can have a list price replaced automatically with a new one. The previous list price is then valid until the day before the new price is:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Auto End MSRPs toggle.

The system now ensures that only one MSRP will be valid at a time unless you manually override the setting by replacing the ending date of a price.

Assign list prices to items

To assign an MSRP to an item:

1. Open an item card.
2. On the ribbon, choose Prices & Discounts > MSRP.
3. Fill in the fields as described in the following table.

Field	Description
Variant Code	Fill in this field if you want to store an MSRP for a variant only. If you leave this field blank, the price will be used for all variants of the item.
Currency Code	Specify a currency for the list price. **Note** The list price will only be used if the currency code stored for the customer is identical to the code specified for the MRSP.
Sales UOM Code	Specify the unit of measure for which you want to state an MRSP. You can enter list prices for different packaging units by filling in a new line per unit that you want to use.
Starting Date	Specify the date from which the price will be valid.
Ending Date	Specify the date until which the MSRP will be valid. If you turned on automatic price replacement in setup, this field is filled in automatically with the last date before the starting date of the new price.
Price Incl. VAT	Enter the suggested retail price including VAT.

Print list prices

You can specify for every customer if you want to print a stored MSRP on the confirmation of an order:

1. Open a customer card.
2. On the General FastTab, turn on the Print MSRP on Order Cnfrm. toggle.

Like sales and purchase prices, the correct MSRPs are determined and printed based on the Order Date field.

SINGLE SHIPMENT PER ORDER

Some customers might want items they requested to be delivered as a single shipment and, if necessary, will reorder an outstanding quantity later. For this purpose, trade365 offers you a new feature called Single Shipment per Order.

Setup

Customer

If a customer wants all its deliveries as single shipments only:

1. Open the relevant customer card.
2. On the Shipping FastTab, turn on the Single Shpt. per Order field.

Ship-to addresses

If you’ve turned on the Single Shpt. Per Order toggle on a customer card, the setting will apply to all shipments to this customer, regardless of the ship-to address. To block follow-on shipments to a specified address only:

1. Open the relevant customer card.
2. On the ribbon, choose Customer > Ship-to Addresses and select an address. Alternatively, use the lookup on the Ship-to Code field.
3. On the Shipping FastTab, turn on the Single Shpt. per Order toggle.

Workflow

Quantity shipped

When you create an order for a customer for whom the Single Shpt. per Order toggle is turned on, the setting is copied automatically to the new document. You can, however, turn off the toggle there to allow for exceptions to the rule.

When you post the order, the system then lowers the value in the Quantity field on the sales lines where the amount to ship or invoice is different from what you entered as the total line quantity before setting the order to Invoiced. The quantity is also reduced when you use the feature during standard warehouse and picking processes.

The original amount can still be viewed on the Lost Revenue page, in the Old Quantity field. Opened via the general search function, this page was created for the purpose of analyzing shipping capabilities.

An order shipped in a single run isn’t deleted after you post the invoice for it. To delete the order, you must run the standard Delete Invoiced Sales Orders function (which you can find on the Sales Orders page).

> **Note**
>
> The Completely Shipped Only and Single Shpt. per Order options exclude each other. For full deliveries, the quantity ordered needs to match the quantity to ship.

> **Note**
>
> You cannot use the Single Shpt. per Order and Drop Shipment options at the same time. If you do, you see a message that both are selected for the line and the single shipment feature is turned off.

Basic or advanced warehouse configurations

If you want to incorporate the feature into a basic or an advanced warehouse configuration *(for which the Require Shipment toggle or the Require Shipment and Require Pick toggles must be turned on for a location)*, you need to create an entry in the job queue so that the quantity that was originally filled in on an order is reduced to the quantity delivered with the single shipment.

1. Choose the Search icon, enter Job Queue Entries, and then choose the related link.
2. On the ribbon, choose New.
3. In the Object Type to Run field, select Codeunit. In the Object ID to Run field, choose `5157136 – KVSTRDReduceSingleShptOrderQty`.
4. On the Recurrence FastTab, specify how often the entry should be run.

For more details, see Use Job Queues to Schedule Tasks - Business Central | Microsoft Learn.

Lost revenue

The Lost Revenue report shows the revenue that was lost because a sales line was marked for single shipment.

It shows the quantity ordered and the quantity shipped, as well as the original and actual sales amount. To see the document related to a line, select the line and choose Posted Document on the ribbon.

FULLY SHIPPED ORDERS

In the standard app, you can specify that items required for an order can only be picked after all of them have become available for delivery. Turning on the relevant toggle on a customer card will affect all orders that you want to ship to this customer.

With trade365, you can now also use the feature on individual lines of a sales order.

> **Note**
>
> The trade365 setting only applies to sales orders that allow partial shipments. This means that you cannot specify different requirements for sales orders that must be shipped in full.

You can specify by default that shipments to certain customers always need to be delivered in full. The same goes for items, regardless of what customer they’re shipped to.

This default requirement is then copied to the sales orders that you create for a certain customer or item but can be changed there if necessary. If you don’t specify a default requirement, you can set a requirement per line.

To mark an item for complete shipments only:

1. Choose the Search icon, enter Items Shipped in Full, and then choose the relevant link.
2. The fields on the header are used to filter existing lines. Fill them in as described in the following table.

Field	Description	Note
Sales Type	Specify whom the entry is valid for: • Customer • Customer Group • All Customers	**Example** You choose Customer and use the lookup in the Sales Code field to select a customer for the sales line. The line setting then applies to this customer but not to other customers.
Sales Code	Depending on what you chose in the Sales Type field, enter the code of a customer or a customer group.	If you selected All Customers in the Sales Type field, the line setting will apply to all customers in the system. As a result, this field remains empty.
Ship-to Code	Specify a ship-to address used by the customer.	To select an address, the Sales Type field must be set to Customer and a customer number must be entered in the Sales Code field. If you enter a ship-to address here, the line setting will only apply to orders where you entered this customer and ship-to address.
Item No.	Enter the number of an item for which the line must be shipped in full.	If all items should always be delivered in full, set up the requirement on the customer card.
Variant Code	If necessary, specify an item variant for which a full shipment is needed.	For items with variants, you do not need to have the setting apply to all variants. If you leave this field blank, however, it will. Fill it in if you want the requirement to apply to a specific variant only.

Workflow

You can require that individual lines be delivered in full without having to turn on the feature that covers entire orders. For this purpose, the Complete Shpt. Required field has been added to sales lines (unhide the field via Personalize if necessary).

If you’ve already set the requirement for a certain customer or customer group and item, the field will be selected automatically on a sales line so that the line will only be considered for warehouse transactions if it can be delivered in full.

You can also turn the line field on or off manually unless the feature has been specifically turned on for a certain customer or order.

Note

The Complete Shpt. Required setting is also checked if you create shipments directly from a sales order.

PREPAYMENTS

Compress prepayments

If you want to compress prepayments on sales orders by default:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the Prepayment FastTab, turn on the Compress Prepayment toggle.

Invoice and credit memo details

The standard prepayment feature is used to bill part of or even the entire order value in advance. The amount that must be prepaid can be arrived at in full (by compressing the payment) or per line.

However, compression will lose you information about the item, unit price, and unit of measure, as the standard app prints the associated G/L account on the invoice document.

In trade365, you can add details to prepayment invoices and credit memos:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, turn on the Details on Prepayment toggle.
3. On the relevant sales order, ensure that the Compress Prepayment field on the Prepayment tab isn’t selected.

Prepayment invoices posted and printed for customers then contain the same details as standard invoices.

VENDOR-MANAGED LOCATIONS

The VMI feature can be used to manage an external warehouse at a customer site.

As items stored at a customer location remain the property of the vendor until sold to end customers, they must still be allocated to the relevant warehouses in Microsoft Dynamics 365 Business Central[1].

Example
A site is initially stocked by transferring products, for example, from your main location (MAIN) to a customer-owned warehouse (VMI).

The items are then consumed or sold there, with consumption reported to you through sales reports or new orders.

When you now create an order or invoice for these item entries and you filled in the VMI Location Code field on the relevant customer card, you’re asked if you want to process a pick from the vendor-managed warehouse.

Choose Yes if you want to have the VMI location filled in on all sales lines. If you choose No, the customer’s default location is entered instead.

You then post and bill the shipment (through a separate or combined invoice), which reduces the inventory level and goods value at the specified site. At the same time, the feature lets you invoice item consumption to the customer and ensures the proper handling of items that require lot or serial numbers.

When you post the shipment, you’re asked if you want to restock the VMI site. If you choose Yes, a new transfer order is created by the system so that stock can be replenished without further manual or logistical intervention (as standard logistics procedures can be followed).

Setup

Locations

To set up a vendor-managed location:

1. Choose the Search icon, enter Locations, and then choose the related link.
2. On the ribbon, choose New.
3. On the General FastTab, fill in the fields described in the following table.

Field	Description
VMI Location (Sales)	Turn on the toggle to mark the location for VMI.
VMI Transfer-from Code	Specify the code of the location from where inventory will be transferred.

> **Note**
>
> If you leave the VMI Transfer-from Code field blank, items might be transferred from a site entered for the customer or from a default location.

Customers

To assign a VMI location to a customer:

1. Open a customer card.
2. On the Shipping FastTab, enter the code of the warehouse in the VMI Location Code field.

Only one location can be assigned per customer unless you assign one to a specific shipping address:

1. Open a customer card.
2. On the ribbon, choose Related > Customer.
3. Enter the VMI warehouse in the VMI Location Code field there.

> **Note**
>
> A VMI location assigned to a shipping address has a higher priority than any address specified on a customer card.

To see the VMI locations assigned to a customer:

1. Open the relevant customer card.
2. On the ribbon, choose Related > History > Item Inventory by VMI Location.

Transfer routes

To set up transfer routes for VMI locations:

1. Choose the Seach icon, enter Transfer Routes, and then choose the related link.
2. For more information, see the Microsoft Dynamics 365 Business Central[1] Help.

Inventory Posting Setup

You also need to set up G/L accounts for the warehouse:

1. Choose the Search icon, enter Inventory Posting Setup, and then choose the related link.
2. For more information, see the Microsoft Dynamics 365 Business Central[1] Help.

Items

To view the items stored in a VMI warehouse:

1. Open an item card.
2. On the ribbon, choose Related > Availability > Item by Location.
3. Turn on the relevant toggle.

You can now see all sites with VMI inventory on the Location List. In addition, you can set up inventory data as you do with standard locations.

Customer-side workflow

When you fill in the Customer No. field on a sales order or invoice, the system checks if a VMI location has been assigned on the relevant customer card. If one is available, you're asked if you want to process a VMI pick.

If you choose Yes, the site is entered as the VMI location on the header of the document and in the Location field (outbound warehouse) on all lines.

> **Note**
>
> You see a message if you change the location in the Ship-to Code field. Also, like in the standard app, you can change a location on a line manually.

When you enter an item, the system then checks its availability based on the inventory level at the specified warehouse. After posting the shipment (from the order or the warehouse), the system also checks if at least one sales line to be delivered contains the VMI location from the header. If so, you're asked if you want to replenish the items consumed. Choose Yes to create a transfer order for the VMI location with the shipped items entered on the transfer lines.

Additionally, when you create a transfer for a VMI location, the system checks if the location is assigned to one customer only. If it isn't, the entire process is cancelled with an error message.

> **Note**
>
> If you want to create transfer orders, you must first set up transfer routes, as you'll need the transfer-from codes that you set up for these routes.

The fields on the transfer order are sourced from the sales order as described in the following table.

Field	Description
Transfer-to Code	Filled in with the VMI location on the transfer header and lines.
Quantity	Filled in with the Qty. to Ship from the sales line (that is, the quantity just delivered) on the transfer lines.
Transfer-from Code	Determined in the following order: 1. SKU data is checked against the location code assigned to the VMI site. If a site is specified in the Transfer-from Code field on the SKU card, it is copied to this field as the outbound location. 2. If no SKU-related location has been stored, this field is filled in with the site entered in the VMI Transfer-from Code field. 3. If no code has been stored there either, the field is filled in with the VMI location assigned to the customer. If none of these checks yield a result, this field is filled in with the default location that is stored in the system. If there is also no default location, no transfer line will be created. You will be notified of which transfer lines could not be set up for the items shipped after you have completed the process. If more than one order is created (because of differing transfer-from codes used for ordered items), you see a message with the first and the last order number and the list of transfer orders is opened.

REASONS FOR ARCHIVING

Sales documents can be archived for different reasons, which are included in the archive automatically.

Reasons for archiving quotes

- Manual
- Deletion
- Printout
- Quote to Order

Reasons for archiving (return) orders

- Manual
- Deletion
- Printout
- Posting

Reasons for archiving blanket orders

- Manual
- Deletion
- Printout

PERIODIC BILLING

In the standard app, you can use the Combine Shipments checkbox to create an invoice covering multiple shipments. But to bill customers in this way, you must manually limit the billing period based on posted shipment dates.

In trade365, on the other hand, you can use the Periodic Billing feature to bill customers through a variety of methods, such as billing them in set intervals, with the last shipment of an order, or even immediately.

Periodic billing cannot be used in combination with the standard prepayment function. In this case, you must post invoices manually.

Setup

You set up most of the periodic billing process on customer cards.

Combine Shipments (Period)

To combine invoice amounts for a certain period:

1. Open a customer card.
2. Fill in the fields as described in the following table.

Invoicing

Field	Description
Billing Type	Choose Combine Shpts. (Period).
Billing Frequency	Choose Periodic.
Billing Cycle Code	Specify a billing interval, such as 2W (=2 weeks).
Next Billing Date	Typically, this field is filled in automatically. Only when you set up the customer for the first time does it need to be filled in manually so that the system can calculate the initial billing interval.

Shipping

Field	Description
Combine Shipments	Turn on this toggle.

Shipments posted before the next billing date but within the period specified for periodic billing are then copied to a new invoice when the function is run (see also Workflow).

The process is cancelled, however, if the next billing date hasn’t been reached.

Bill per Order (Period)

To set up this option, follow the instructions given under Combine Shipments (Period) but choose Per Order (Period) in the Billing Type field.

During the billing run, all shipments made for an order are then included on a single invoice if shipped within the specified billing period.

Bill per Order (on Last Shipment)

Like Bill per Order (Period), this option doesn’t cover multiple orders. However, an invoice is now being sent only after the order has been delivered in full.

Invoicing

Field	Description
Billing Type	Choose Bill per Order (on Last Shpt.).
Billing Frequency	Choose Once.

Shipping

Field	Description
Combine Shipments	Turn on the toggle.

Bill per Shipment

This option corresponds to the use of the Ship and Invoice function, with an invoice created for each shipment that you manually post for the customer.

Invoicing

Field	Description
Billing Type	Choose Per Shpt.
Billing Frequency	Choose Once.

Shipping

Field	Description
Combine Shipments	Turn on the toggle.

Workflow

To run periodic billing:

1. Choose the Search icon, enter Periodic Billing, and then choose the related link.
2. On the ribbon, choose Run Periodic Billing to create all invoices for today.
3. You can then set filters on the entries as described in the following table.

Options

Field	Description
Posting Date	Specify a posting date for the invoices you want to create.
Replace Posting Date	Turn on the toggle if you want to replace the posting date on the invoices with the posting date entered on this FastTab.
Replace Document Date	Turn on the toggle if you want to replace the document date on the invoices with the posting date entered on this FastTab.
Calculate Inv. Discount	Select if you want the customer’s invoice discount calculated on the created documents.
Billing Date	The date shown here will be checked against the dates on all periodically issued combined invoices or invoices created per order. If the date in this field is equal to or later than the next billing date on a customer card, no invoices will be created for this customer.
Update Next Cust. Billing Date	With the toggle turned on, the next billing date is filled in for all customers within the filters according to specified intervals— regardless of whether invoices will be created for them during this billing run.
Post Invoice	Turn on the toggle if you want the created invoices to be posted immediately.
Print Posted Invoice	Turn on the toggle if you want the posted invoices to be printed on the default printer set in Windows.
Shipment Date Filter	Specify the period in which the system should look for posted shipments.

Customer and Sales Order

The filters set on these tabs will be used during a billing run, for example, to invoice only orders placed by a certain customer or those that don’t involve prepayments. After you’ve set the filters you need, choose OK to run periodic billing.

On the Periodic Billing page, you can see the documents created through the function, whereby lines in green indicate posted and lines in yellow unposted invoices. Lines shown in red mark invoices that cannot be posted because of an error that occurred during processing. Errors must be corrected manually, which includes posting the invoice by hand thereafter.

You can open both posted and unposted invoices from the page. To see the postings that were cancelled with an error message, choose Related > Show Logs on the ribbon. You can also choose Actions > Show Errors to view all error messages.

Additionally, you can choose Actions > Delete Entries Older than 30 Days to clear up log space.

To replace or reset the next billing date:

1. Open a customer card.
2. Choose Related > Change Periodic Customer Billing.
3. Choose Fixed Date in the Type field and fill in the New Billing Date field. Alternatively, choose Date of Last Invoice to have the system calculate a date based on the specified billing interval and the latest invoice sent to the customer.

On the Customer FastTab, you can limit the number of customers for whom periodic billing should be used. The function, however, creates invoices that aren't posted directly from sales orders. This means that orders invoiced by using this function aren't deleted automatically when all items and services have been billed for them. They'll only show as fully invoiced on the Periodic Billing page.

To delete them from the system, you need to run the Delete Invoiced Sales Orders function on a regular basis.

SET FREIGHT CHARGES

In trade365, freight charges can be entered on sales documents in multiple ways. To activate the feature:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, fill in the fields as described in the following table.

Field	**Options**	**Description**
Auto Add Freight Charges on Release	- Never - Sales Quote / Order - Sales Order Only	Choose if you want the system to add charges on quotes or orders automatically.
Notify of Missing Freight Charges	- Never - Always	Choose if you want to receive a message if freight charges were supposed to be added but could not be determined.
Auto Close Freight Charges		Turn on this toggle if you want freight charge lines to expire automatically. The lines are then ignored, if necessary, when you fill in the same charges but a new starting date.

The key fields for calculating freight costs are:

- Shipment Method Code
- Shipping Agent Code
- Shipping Agent Service Code
- Country/Region Code
- Post Code
- Weight
- Goods Value (Carriage Paid Limit)
- Shipment/Delivery Date (from document header)

Setup

To set up freight charges:

1. Choose the Search icon, enter Freight Charges, and then choose the related link.
2. Choose New to open a blank freight charge card.
3. On the General FastTab, fill in the fields as described in the following table.

Field	**Options**	**Description**
Code		Specify a code. The code must be unique and meaningful. It is assigned to customers at a later stage.
Description		Specify a description for the charges.
Calculation Base	None Weight Goods Value Goods Weight and Value	Select a base for having charges calculated automatically. Choosing None while the Auto Add Freight Charges on Release toggle in setup is turned on will create cost lines without references to certain quotes or orders (if set up in this way in the customer master). Choosing one of the other options will see charges determined based on the relevant document lines. **Note** To be able to choose the Weight option, you already must have set up all necessary item information in the system.
Starting Date		Specify when you want the charges on the card to become available.
Ending Date		Specify until when the costs should be valid.
Starting / Ending Date per Line	Yes No	Choose if you want to ignore the Starting and Ending Date fields on the header and specify the validity of the charges per line.
Currency Code		Select the currency that will be used for the freight charges. **Note** The code entered on this page must match the code stored with the relevant customer.
Status	New Active In Progress Inactive	Specify the status of the freight charges. All cards are initially marked as New. Only charges set to Active can be added to a sales document automatically. In Processing is used to edit existing freight charges. Inactive means that the charges aren’t used anymore. You can use a filter to hide them from view.

After filling in the fields on the header, you can break down each charge on the lines and, if necessary, specify limits for its application:

Field	Options	Description
Shipment Method Code		Choose the shipping method that you want the freight charge line to be used for. If you leave this field blank, the line will apply to all methods.
Shipping Agent Code		Here you can select a shipping agent.
Shipping Agent Service Code		Here you can choose the code of a shipping service. You can use this field to set up cost groups, such as for standard or express delivery. You must fill in this field if you entered a shipping agent.
Country/Region Code		Specify the country that the cost line should be used for. During the automatic calculation of freight charges, the code refers to the country that is part of the ship-to address. This field must be filled in.
Post Code Filter		Based on the selected country, you can set a filter here to specify one or more post codes that the line should be valid for. You can use standard filters for this purpose. The post codes are then checked against the ship-to address that you specify.
Type	G/L Account Item Resource Charge (Item)	Specify the line type that will be used when the charges are inserted into a document. Choose G/L Account or Resource to have the charges posted to a G/L account or a resource. If you choose Item, you can only use items without inventory management. With the Charge (Item) option, you can have a freight charge line added to a document by the system. However, you need to assign the line within the document manually.
No.		Depending on what option you selected in the Type field, enter the number of an account, an item, a resource, or a surcharge or deduction. The value is then copied to the related document.
Variant Code		You can only fill in this field if you selected type Item and entered an item with variants in the No. field. By filling in this field, the same item can, for example, be shipped by different companies while you can continue to gather data on the shipments for analysis.
Description		Initially shows the description of the data record selected in the Type field. You can change the description manually, however. The system later copies the content of this field to the associated document line.
Description 2		Initially shows the description of the data record selected in the Type field. You can change the description manually, however. The system later copies the content of this field to the associated document line.

Field	Options	Description
Quantity		Specify the quantity that will be inserted on the sales line (typically, this means a quantity of 1). If you want to assign another type of charge, possibly based on the value or weight of the goods and a factor, you can enter 2 here, for example, to specify that the charges should appear twice on a document.
Unit of Measure Code		Filled in automatically with the base unit of measure specified for the chosen account, resource, or item. If necessary, you can specify another unit in this field, although the value you enter must have been set up beforehand (as a resource unit or item unit of measure, for example). The system later copies the unit to the relevant document line during freight charge calculation.
Unit Price		Specify the price per freight charge unit. **Note** If the customer is a B2B trading partner, the unit price should be a net amount. You then also need a separate freight cost list for any B2C transaction (that is, for any customer for which you selected the Prices including VAT toggle on the customer card).
Cost Price (LCY)		Here you can enter, in local currency, a cost value so that you can later determine actual costs on documents.

You might also need to fill in one or more of the following fields, depending on what options you chose on the header:

Field	Options	Description
Max. Weight	…Weight or Goods Weight and Value (see Calculation Base on header)	Specify the weight up to which the cost line should be valid. By specifying more than one limit on multiple lines, you can assign costs by weight class.
Max. Goods Value	…Weight or Goods Weight and Value (see Calculation Base on header)	Specify the goods value up to which the cost line should be valid. Do not create lines with higher values if you want shipments to be delivered free of charge below a certain threshold.
Starting Date	…Starting / Ending Date per Line (see toggle on header)	Specify the date from which you want the line to be valid. **Note** If Auto Close Freight Charges is turned on in setup and you create another line with the same values as before, the ending date on the existing line is set automatically to one day before the new starting date.
Ending Date	…Starting / Ending Date per Line (see toggle on header)	Specify when the cost line is no longer valid.

What you enter on a sales quote or order then determines which cost line will be used for calculation.

Assign costs to a customer or ship-to address

To be able to use freight charges on sales documents, you need to assign them to customers or their ship-to addresses:

1. Open a customer card.
2. On the Shipping FastTab, choose a code in the Freight Charge Code field.

Assignments on customer cards are used for all ship-to addresses unless you enter another code for a specific customer address, for example, because you need to deliver items to a location abroad. To specify charges for an individual address:

1. Open a customer card.
2. Use the lookup on the Ship-to Code field.
3. In the Freight Charge Code field, assign a code for freight charges.

However, the assignment will only take effect if the selected ship-to address is subsequently entered on a document.

Workflow

After being specified, the freight charge code is copied from a customer or, if available, from one of the customer’s ship-to addresses to a sales quote or order. If necessary, you can go to the Shipping FastTab to change the code manually for a certain transaction.

After filling in the document lines, you can run the Add Freight Charges action to have freight costs calculated automatically. If freight charges apply to the document, a freight charge line is inserted. If you’ve turned on the Notify of Missing Freight Charges in setup, you also see a message if costs cannot be calculated.

You don’t need to run this function if you’ve activated Auto Add Freight Charges on Release in setup. In this case, a line is added each time another document is released. If you reopen a document, the line is deleted. You can recalculate and reinsert the line when you release the document again.

LONG-TERM SUPPLIER DECLARATIONS

When you deliver orders throughout the European Union, you can prepare a long-term supplier declaration that certifies the origin of the items you ship. The purpose of this is to receive a kind of preferential tariff treatment when exporting goods.

In trade365, you can create a declaration based on the items you’ve sold to your customers.

Setup

Before you can create a supplier declaration, you need to set up the feature.

Purchases & Payables Setup

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, fill in the European Origin Country field with a text that will be shown on printed declaration documents.

Countries/Regions

1. Choose the Search icon, enter Countries/Regions, and then choose the related link.
2. In the European Union field, select the countries that are part of the EU.

For all countries marked, the text you entered in the European Origin Country field in Purchases & Payables Setup is then printed on supplier declarations.

Preferential countries

As the rules for the preferential treatment of items vary based on country, they need to be specified for each item individually.

1. Open an item card.
2. On the ribbon, choose Related > Item > Preferential Countries.
3. Select the countries where preferential treatment applies.

Afterwards, these countries will be listed on the relevant supplier declarations.

Create a declaration

You use the Long-Term Supplier Declaration report to check what items have been supplied to a certain customer during a specified period and create the necessary document following the check. To create a declaration document:

1. Choose the Search icon, enter Long-Term Supplier Declaration, and then choose the related link.
2. Fill in the FastTabs as described below.

Languages
Specify the language in which the supplier declaration should be printed.

Customer

Field	Description
Customer No.	Enter the number of the customer for whom you want to create the declaration.
Contact No.	Specify the contact person that will be printed on the declaration.

Shipping Period
On this FastTab, you can set a filter on the posting period, to limit the number of sales entries to those of items shipped to a certain customer between the From Date and To Date. These items are then listed on the declaration.

Validity Period
Here you can specify the validity of the declaration by filling in the Valid From and Valid To fields. Both are later printed on the document.

Cumulation
Certain items might be subject to cumulation, for example, because some of their components were made in Morocco, but the finished products originate from within the EU.

When you’ve filled in the request page of the Long-Term Supplier Declaration report, you can use the Preview & Close function to see the declaration you’re about to create (or you can choose Send to or Print).

However, if you also turned on the Cumulation toggle for the report, you’ll first get to the Cumulated Items page, where you can use a lookup on the Item No. fields to choose one or more items that require a note on their cumulation and fill in the necessary originating countries.

If a customer purchased items with cumulation in the period specified on the report, they’re then marked accordingly, and the cumulation notes are printed on the declaration.

If the Cumulation toggle is turned off, the Cumulated Items page is skipped.

PROFILE QUESTIONNAIRES

When you classify contacts, the profile questionnaire fields and functions that are part of Microsoft Dynamics 365 Business Central[1] might not be enough. As an example, if the number of potential answers to a question is high—because you’ve asked for a specific year or the exact number of staff members instead of a range—usability might no longer be a given.

In trade365, CRM profiles have been extended so that you can not only select an answer but also record values along with it. Additionally, the answers that were selected can be stored in a log so that you can track what for an answer was given and when. You can look up the current answer value on the contact lines set up for a questionnaire.

Additionally, two fields have been added for creating questionnaires. One of them is called Answer Type and specifies the kind of user input you want to see. So far, the only possible answers have been Yes or No. In trade365, you can also enter numbers (with or without decimal places) or a body of text.

However, entering a value of, for example, 3.5 is not yet meaningful itself. But with the help of the new Answer UOM Code column, you can specify what the number stands for, such as m³. This unit can then be used to preconfigure an answer line. You can select only units that are already in the system.

Otherwise, the profile questionnaire works as in the standard app. For Yes/No answers, you can simply select the corresponding field.

For numbers or a text, you must choose the relevant option and then fill in the Answer field. If you select the Set field on this kind of line, you see a message that a text or number must be entered instead. You can view the responses in a subsection on contact cards.

When you create a segment for contacts, you can also filter the values you entered in this way. Just choose an address for a profile questionnaire and enter the text you're looking for on a line.

Archive profile answers

If profile answers change for a contact, you can archive the old data:

1. Open a contact card.
2. On the ribbon, choose Contact > Profiles.
3. Choose Related > Archive Answers.

When archiving, the work date and a version number is entered.

To see the most recently archived answers:

1. Open a contact card.
2. On the ribbon, choose Contact > Profiles.
3. Choose Related > Show Answers.

You can then use the Assist button next to the Version No. field to access all versions of the questionnaire.

CREATE SEGMENTS WITH REFERENCES TO SERVICE DATA

Segments are used to create address lists or add and remove contacts in the marketing area. Besides standard criteria, such as contact, profile, and value entries, you can now also include service information in contact segments.

You can then use this information to create a list of customers who possess service items for which the warranty is about to expire so you have an easier time offering them an extension or a new contract.

Workflow

1. Open a new segment.
2. On the ribbon, choose Add Contacts.
3. Turn on the relevant toggle (Include Contacts or Include Serv. Contracts) on the Options FastTab to gain access to service item or contract data.

> **Note**
>
> If you want to create segments based on contacts, you need to turn on the Include Contacts option here.

For the Include Serv. Items option, only contacts of the Company type will be added (that is, customer contacts). The Expand Company option, on the other hand, works only in combination with Consider Contacts.

Turning on the Consider Serv. Contracts toggle will list all contacts used in the Contact No. field on a service contract header. These can be of type Person or Company.

CUSTOMER GROUPS

You can use the Customer Group field to specify a trading partner as an A, B, or C customer:

1. Choose the Search icon, enter Customer Groups, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the Code and Description field.
4. Optionally, you can run the Completely Shipped Items Only function to specify items that can only be delivered to customers in this group as part of a single shipment.

The groups are then stored on customer cards, in the Customer Group field, and you can use them to filter reports.

> **Note**
>
> You can also use customer groups as a filter in the warehouse and inventory area.

CUSTOMER GROUP DIMENSIONS

In Microsoft Dynamics 365 Business Central[1], you can specify customer group dimensions in Sales & Receivables Setup, or, more specifically, the codes that should be used for them. However, the dimensions aren’t shown on the pages that list customer, item, or value entries.

In trade365, a posted dimension value will be displayed directly for an entry to facilitate ad-hoc analyses.

USE RECURRING SALES LINES FOR ALL CUSTOMERS

With standard functionality, you need to assign recurring sales lines to every individual customer. In trade365, by contrast, you can make them accessible to all customers immediately:

1. Choose the Search icon, enter Recurring Sales Lines, and then choose the related link.
2. On the ribbon, choose Manage > Edit to get to the Standard Sales Lines Card for creating recurring sales lines.
3. Select the For All Customers field on the header.

GET SHIPMENT LINES

When you run the Get Shipment Lines function from a sales invoice or use the combined shipments feature, only the ship-to number is copied to the lines as a reference. However, as this is not enough in many cases, you can now have the following field contents copied over as well:

- Shipment Date
- Order No.
- Order Date
- Your Reference
- External Document No.

To turn on this feature:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the relevant toggles in the Get Shipment Lines section.

CREDIT LIMITS

Standard functionality will warn you that a credit limit is being exceeded when you reach the limit on a sales document. To specify when this warning should appear:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, select an option in the Credit Warning Frequency field.
   a. Choose On Release if you want the message to appear only after releasing a document.
   b. Choose Per Line if you want to be notified when you fill in a new line.

RETURN REASON REQUIRED

To prevent sales return orders from being processed without knowing why they were created in the first place:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the trade365 FastTab, turn on the Return Reason Required toggle.

This way, a message is shown when a user tries to release this kind of order but gives no reason for the return.

SCRAPPED ITEMS

Sometimes, credit memos might be issued for items that were disposed of by customers instead of being returned. For the app to be able to handle this kind of scenario, you need to make a few settings in the system.

Setup

Location

Set up a scrap location without configuring the site for warehouse or inventory processes.

Return reasons

1. Choose the Search icon, enter Return Reasons, and then choose the related link.
2. On the ribbon, choose New and specify a code and a description.
3. Select the Scrap Items checkbox on the line. The Inventory Value Zero field is then selected automatically.
4. Specify in the Default Location Code field the site you’ve set up earlier.
5. Exit the page.

Workflow

To process returns where items aren’t sent back to you but are disposed of by the customer:

1. Create a return order for the items you’ve sold. We recommend that you use the Get Posted Document Lines to Reverse function for this.
2. Assign the return reason code used for scrap to the affected order lines. The system then copies the scrap location to each line and sets the Unit Price field on it to zero.

> **Note**
>
> If items are tracked, their tracking codes must be deleted from the document lines before you choose a return reason. Following your choice, the relevant serial or lot numbers must be re-entered manually.

Afterward, you can release and post the sales return order, to have the system create item ledger entries for it.

> **Note**
>
> Turning on the Return Reason Required toggle in Sales & Receivables Setup, on the trade365 FastTab, prevents the release of return orders without giving a reason for why the items were returned.

MINIMUM ORDER VALUES

Wholesale businesses typically charge fees when orders fall below a minimum value. The Minimum Order Value feature provides a way for you to mirror these situations in the system.

Setup

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the trade365 FastTab, turn on the Enable Order Minimum toggle.

3. Select in the Order Minimum For field if the value threshold that you intend to set should apply to all lines of a sales document or only to those that an (inventory) item is entered on.
4. Exit the page.
5. Open the Minimum Sales Order Values window by using the general search function or by running the Minimum Order Values function in Sales & Receivables Setup, on a customer card, or on the customer group list.
6. If necessary, set filters on the header, and then fill in the fields on the lines as described in the following table.

> **Note**
>
> We recommend that you don’t select Check in the Check Pos. Nos. on Sales Lines field in Sales & Receivables Setup if the Enable Order Minimum toggle is turned on. This is because the minimum order value is only calculated during the release of a sales order, which would block you from manually assigning position numbers.

Field	Description
Sales Order Type	If required, specify the type of sales orders that the order minimum should apply to.
Sales Type	Select if the order minimum should apply to a certain customer, to a group of customers, or to all of them.
Sales Code	Depending on the option you select in the Sales Type field, you can fill in a customer or a customer group here. The field is grayed out if the value threshold applies to all customers set up in the system.
Currency Code	If required, specify the exact currency the value threshold should apply to.
Starting Date	Specify from when the minimum will be used.
Ending Date	Specify until when the minimum will be used.
Minimum Value	Enter the minimum value for customer orders of goods or services. Below this value, a fee will be added when releasing quote, order, or invoice lines.
Billing Type	Specify if the minimum order fee added to sales document lines should be determined based on a G/L account, an item, a resource, or an item charge. **Note** Item charges must be added manually to document lines.
Billing No.	Depending on the option you select in the Type field, enter a G/L account, an item, a resource, or an item charge here.
Billing Description	Shows the description of the G/L account, item, resource, or item charge entered in the Bill For – No. field.
Billing Description 2	Shows the additional description of the G/L account, item, resource, or item charge entered in the Bill For – No. field.
Billing Unit of Measure Code	Shows the unit of measure used for the G/L account, item, resource, or item charge entered in the Bill For – No. field.
Fee Type	Choose whether the fee should be added in the form of a percentage calculated based on the total order value or a fixed amount.
Fee Amount	Fill in this field if the Fee Type is set to Amount.
Fee %	Fill in this field if the Fee Type is set to Percentage.

Workflow

When you now set up and release a sales document on which the order value falls below the minimum you've set, a line with the specified fees is added to the document automatically.

Deactivation

You can restrict the use of minimum order values on multiple pages. You can turn on or select the No Order Minimum field on

- the Sales Order Types page *(such as for sample orders)*.
- a customer card *(on the General FastTab)*.
- the customer group list.

If you want to deactivate minimum value checks in general, you need to turn off the Enable Order Minimum toggle in Sales & Receivables Setup again.

SHIP BY (ISO) CALENDAR WEEK

Across Europe especially, wholesalers often use the week number scheme set out in ISO 8601 when quoting delivery dates.

In the standard app, you can enter a formula in a date field to state the day and week when items are shipped (*for example, W5=Wednesday, Week 5)*.

In trade365, you can turn on a feature to additionally show the number of the week that the shipment, requested delivery, or promised delivery date entered on a sales document is in.

With the feature turned on, the week that is specified for the shipment is also printed on all quotes and order confirmation documents related to the entry.

Setup

To be able to work with this feature:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Ship by Calendar Weeks (ISO) toggle.

Afterward, a toggle with the same name will appear on customer cards, on the Shipping FastTab. Turning it on will unhide the week number fields on the lines and the Shipping and Billing FastTab of associated sales documents.

> **Note**
>
> The Calendar Week section is only visible on a sales document that will be sent to a customer whom the Ship by Calendar Weeks (ISO) toggle is turned on for.

The toggle is then automatically activated on the document during creation but can be turned off on the Shipping and Billing FastTab or cleared on individual lines.

Workflow

Week numbers can be entered on documents in the following formats:

- WW/YYYY
- YYYY/WW
- WWYYYY
- WW
- WWYYY
- WW/YYY

When a calendar week is specified, the shipment or delivery date related to it is set to the first day of that week.

> **Note**
>
> You can also enter transportation, warehouse handling, or similar time requirements into the system. They’re then used to calculate the shipment or delivery date and might result in a delivery being pushed back to a time and day outside the promised week.

Shipment dates can also be shown in calendar weeks on blanket sales orders.

SALES BONUS AGREEMENT

Sales bonus agreements in retail are made to reward customers for achieving specified quantity or turnover targets.

With KUMAVISION trade365, it is possible to record and flexibly settle sales bonus agreements. Settlement is based on the posted sales documents in the form of invoices and credit notes.

Setup

Sales & Receivables Setup KUMAVISION trade365

On the KUMAVISION trade365 FastTab in the Bonus area, you specify the item or resource to which the bonus credit is to be posted.

Field	Description
Type Sales Cr. Memo Line	This field is used to specify whether the sales bonus credit is to be applied to an item (without stock management) or to a resource.
No. Sales Cr. Memo Line	The specific item or resource number is entered in this field, depending on the Type Sales Cr. Memo Line field. Only items with the types "No stock" and "Service" are available for the "Item" selection.
Bonus Order Type	Specifies the order type used when creating a sales-side credit memo.

Number Series

To create sales bonus agreements, specify a number of series in the Sales Bonus Agreement Nos.field in the Number Series FastTab.

Item Sales Bonus Groups

If a sales bonus agreement is to apply to a group of items, these items can be grouped together in a sales bonus group. The groups are defined on the Item sales bonus group page by specifying a code and a description.

The groups can then be entered on the relevant item card in the Bonus FastTab in the Sales Bonus Group Code field.

Customer Bonus Groups

Customers can also be divided into Customer Bonus Groups in the same way as items. These groups are specified on the Customer Bonus Groups page.

The groups can then be entered on the customer card in the Bonus FastTab in the Bonus Group Code field.

In addition, a different bonus customer can be specified for a customer in the Bonus FastTab via the Bonus Customer No. field. The bonus-entitled sales lines of the customer are then included in the bonus settlement for the bonus customer and credited to him.

Exclude from Sales Bonus

The basis for the subsequent evaluation of bonus agreements are the sales invoice and sales credit memo lines. In order to exclude some of these lines from the sales bonus settlement right from the start, there is a Exclude from Sales Bonus toggle on the Bonus FastTab on some master data cards. The toggle can be activated on the following pages:

- Customer
- Item
- Item Variant
- Resource
- G/L Account
- Item Category
- Resource Group
- Order Type

It is also possible to exclude individual prices from the sales bonus in sales price lists.

Note

If different exclusion conditions within an invoice based on different prices are to be avoided, it is recommended to activate the toggle Instant Price Update on All Lines in the Sales & Receivables Setup and to use the Price Calculation Method KUMAVISION base Price Sequences.

Sales Bonus Agreement

The Sales Bonus Agreements define the conditions for the bonus.

General

Field	Description
No.	Assignment of a new sales bonus agreement number from the number series.
Description	Indicates the description of the sales bonus agreements.
State	Indicates the status of the sales bonus agreements indicates. The following statuses can be assigned: • New • In Progress • Active • Archived. Only agreements with the status Active are used to calculate the bonus.
Currency Code	Specifies a currency code for the sales bonus agreement.
Agreement Starting Date Agreement Ending Date	Specifies an agreement period for which the sales invoice and sales credit memo lines are to be used.
Source Type	Specifies a type of source to which this agreement should apply. The following options are available: • Customer • Customer Bonus Group • All Customers
Source No.	The specific customer or customer group bonus number is entered in this field, depending on the Source Type field.

Lines

Field	Description
Type	This field is used to specify the type for which the bonus is to be determined. The following selection options are available: • Item • Item Category • Resource • Resource Group • G/L Account • Item Bonus Group • All Items • All Resources • All G/L Accounts • All Positions
No.	Depending on the type, the number is defined in this field.
Variant Code	For items with different variants, the bonus for a particular variant can be set independently of other variants or the item itself.
Unit of Measure Code	The Unit of Measure Code is pre-assigned with the base unit when an item or resource is entered. The unit of measure code must be entered for the Quantity bonus type.
Bonus Type	The bonus can be calculated based on Revenue or the invoiced Quantity.
Minimum Amount	If the bonus is calculated according to Revenue, a minimum amount from which the bonus is to be granted can be specified in this field.
Minimum Quantity	If the bonus is calculated according to Quantity, a minimum quantity from which the bonus is to be granted can be specified in this field.
Bonus %	For the bonus type Revenue, the percentage for a percentage bonus is defined in this field.
Bonus Amount per Unit	For the Quantity bonus type, the bonus amount granted per unit is defined in this field.
Bonus Amount Flat Rate	For both the Revenue and Quantity bonus types, a flat-rate bonus can be set which applies from the minimum amount or minimum quantity, but is independent of the actual amount of calculation basis.

Bonus calculation

The bonus due in the period is calculated in the Sales Bonus Calculation Worksheet. The Calculate Bonus function in the ribbon uses the sales invoices and sales credits posted in the settlement period to determine the bonus amounts for the sales bonus agreement entered when the function is called up.

In addition, the calculation for a customer can be filtered at this point. The start and end date of the sales bonus settlement can be defined within the validity period of the sales bonus agreement. For example, it is possible to carry out a bonus settlement for a quarter within a year.

Which document lines have been included in the calculation can be traced using the detailed lines that can be shown for each sales bonus worksheet line created.

Field	Description
Bonus Amount	This amount was determined during the calculation and can be credited.
Total Quantity Assessment Base	For a sales bonus agreement of the calculation type Quantity, the total quantity that led to the calculated bonus amount is shown in this field.
Total Sales Assessment Base	For a sales bonus agreement of the calculation type Revenue, the total revenue that led to the bonus amount determined is shown in this field.
Customer No. Customer Name	Specifies the bonus customer who receives the bonus.
Sales Bonus Agreement No. Sales Bonus Agreement Line No.	Specifies the sales bonus agreement and the line that serves as the basis for the calculated line in the sales bonus worksheet.
Agreement Starting Date Agreement Ending Date	Specifies the start and end date of the sales bonus agreement.
Calculation Start Date Calculation End Date	Specifies the start and end date for the period for which the bonus was calculated.
Accepted	The indicator is set if the sales bonus worksheet line is to be taken into account when executing the Register and Create Credit Memo(s) function.

Note

There is no additive calculation of the bonus. The more specific the type within a bonus agreement is, the higher this type is prioritized when determining the bonus amount to be granted (Item before Item Category before All Items).

It is therefore possible that the best possible bonus is not always taken for granted.

Detailed Billing Lines

To track the posted sales invoice or credit memo lines for the bonus calculation, select Detailed Lines in the ribbon of the sales bonus worksheets. All sales document lines that lead to the calculation basis is shown here.

Here you can also see for which customers a rebate customer receives a rebate. The discounts granted on the sales document are also shown here. The discounted amounts (amount minus invoice and line discount amount) form the basis for determining the bonus amount.

Create Sales Bonus Credit Memo

To settle the sales bonus worksheet, all lines that are to be registered and converted into a sales credit note are marked as Accepted. The Register and Create Credit Memo(s) function is then executed in the ribbon.

A sales bonus item is created for each accepted sales bonus line. These can be viewed via the search icon. There is also a menu call for the sales bonus credit and the bonus customer. Here too, there are detailed lines for each sales bonus item, which can be called up using the Show Details function. These correspond to the detailed lines from the sales bonus worksheet.

An unposted sales credit memo is generated, which can be posted as usual. The credit memo lines are created with the details stored in the Sales & Receivables Setup.

Bonusinformation on the Customer

The following information on bonus credit memos and bonus amounts is showed on the Bonus FastTab on the customer card:

Field	Description
No. of Bonus Credit Memos	Show the number of rebate credits created but not yet posted by the customer.
No. of Pstd. Bonus Credit Memos	Show the number of bonus credit memos posted by the customer.
Bonus Amount	Show all bonus amounts that have not yet been registered and that have been determined on the basis of sales bonus worksheets.
Reg. Bonus Amount	Show all registered sales bonus entries in total.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩↩

Purchasing

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s procurement department.

Purchase quote without purchase price

This functionality allows you to specify whether purchase quote should be created with or without purchase price.

In the Purchases & Payables Setup the function can be globally activated via the Quote Without Price toggle in the KUMAVISION trade365 FastTab. When this toggle is activated, no price takes place when creating a purchase quote.

If a general exclusion from price is not desired, the function can be manually activated in the individual purchase quote via the Requests without Prices toggle in the Invoice Details FastTab. The same applies conversely if price is generally not intended but a price should be in specific cases.

> **Note**
>
> This feature extension is also compatible with the Quote requests and price overview function.

BUY-FROM ADDRESSES ON ORDER ENTRY

To minimize errors during data entry and streamline the entire process, buy-from addresses can be shown automatically when a vendor is entered for a purchase transaction.

To turn on the automatic display of buy-from addresses:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Show Buy-from Addresses on Input.

When you later fill in the Vendor No. field on a purchase document, the system will check if a buy-from address was stored for the specified vendor.

If it was, you’ll see a list from which you can select the correct address for the transaction. If none of the listed addresses are suitable, choose Cancel to exit the page (and discard any changes).

> **Note**
>
> You can only choose a buy-from address after filling in the Vendor No. field on the relevant purchase header. If you create the document through a vendor card function, the selection window will not be shown.

CREATE ITEM REFERENCES ON PURCHASE LINES

Purchase transactions in the trade industries typically involve two sets of item numbers, yours and those provided by your supplier.

You can use the Item Reference No. field when you create an order to specify that the number assigned to an item is sourced from a vendor, but only if it has already been stored in the item or vendor master. In trade365, however, you can also set up references on item lines during order entry.

Setup

To be able to use this feature:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Auto Add Item References toggle.

Workflow

Purchase lines include the following fields:

Type	**No.**	**Item Reference No.**	**Unit of Measure Code**	**Variant Code**
Item	(number as stored in the system)	(number as specified by vendor)	(unit used when buying the item)	(filled in with a code for items that you set up variants for)

If a reference for a certain vendor-item number combination already exists, it will be entered in the Item Reference No. field on a line when you've filled in and exited the Item No. field there.

Else, you can create a new reference when filling in the line. You can view and edit references on the Item References page, which is available via the general search.

DROP SHIPMENTS AND SPECIAL ORDERS

In Microsoft Dynamics 365 Business Central[1], purchase orders are intrinsically linked to the drop shipments they're created for. This means that when you've created a purchase order for a shipment, you can no longer change quantities, units, or item numbers on the document.

With offerings changing daily and lead times at a minimum, this might create headaches for trading companies, for example, when items that they ordered aren't available anymore, so suppliers must ship substitutes. In trade365, you can modify or delete purchase orders created for drop shipments in the following ways:

- Replace items (item A1 ordered, but all that the manufacturer can provide you with is item A2) and units of measure.
- Change quantities (5 pieces of item A1 ordered, but the product is only available in packages of 3 or 6).
- Delete links (drop shipment created, but the manufacturer needs to ship the goods to your company instead).
- Post sales invoices before billing purchases.
- Have the system create purchase orders for drop shipments.

Replace or change an item, quantity, or unit

To replace an item on a drop shipment purchase order or change the quantity or unit code on the document:

1. Open the order and make the changes on the relevant line.
2. After you entered another item number, adjusted the quantity, or edited the unit code, you're asked if you want to update the related sales order. Choose Yes.

Throughout this process, the link between the sales and the purchase line will remain intact. When the order is deleted, however, the link to the sales line will be removed so that the sales document can be treated as a standard order, or a new purchase order can be created for the drop shipment.

Delete drop shipment or special order link from purchase

To delete the link between a purchase order and a drop shipment or special order created for a sales line:

1. Open the relevant purchase order.
2. Select a line and choose Line > Order > Drop Shipment or Special Order.
3. On the ribbon, choose Delete Drop Shpt. (or Special Order) Link.

When you run either function, the link to the line currently selected in the order is deleted. Both the sales and the purchase line can then be processed further like any other line in the system.

Create drop shipments automatically

In trade365, purchases for drop shipments can also be created automatically during the release of a sales order.

For this purpose, you only need to select the vendors or purchase orders for which you want drop shipments to be created by the system:

1. Open a vendor card.
2. On the General FastTab, turn on the Auto Create Drop Shpt. toggle.
3. Afterward, fill in the Vendor No. field on an item card, on the Purchase FastTab.

If you now enter the item on a sales order classified as a drop shipment, a purchase order is created during document release.

> **Note**
>
> This function cannot be used for vendors stored in the item vendor catalog.

Allow drop shipment billing prior to sales

If the purchase order created for a drop shipment needs to be billed before the sales order:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Can Bill PO Drop Shpt. Before Sales toggle.

REASONS FOR ARCHIVING

Purchase documents can be archived for different reasons, which are included in the archive automatically.

Reasons for archiving quotes

- Manual
- Deletion
- Printout
- Quote to Order

Reasons for archiving (return) orders

- Manual
- Deletion
- Printout
- Posting

Reasons for archiving blanket orders

- Manual
- Deletion
- Printout

CLEARANCE

Clearance items are items that you decided not to reorder or that your supplier has stopped providing. Your procurement department will be notified that the item—or variant—in question might no longer be available when they try to enter it on a new purchase order. To select an item or variant for clearance:

1. Open an item card.
2. On the Item FastTab, select the Clearance field.
3. Alternatively, select Clearance for each individual variant that will no longer be restocked.

Note

If an item is selected for Clearance, its variants will no longer be restocked either, regardless of whether you've marked some of them as well.

The quote or order can still be processed, as the clearance message is only that: a message. The planned receipt of the item is shown in the availability overview.

MINIMUM QUANTITIES AND INVENTORY MULTIPLES

If you're working with requisition worksheets, you can enter in the item master or as SKU data the quantities in which products can be ordered.

However, the standard app isn't equipped to deal with situations in which you procure items from different vendors whose requirements for minimum order size and quantities vary. And when you enter items on an order manually, you will not be notified if what you specify is below the minimum threshold.

In trade365, you can use a function for either. When working with this feature, the minimum quantity must be a multiple of the order size used for purchases. If you also use inventory multiples, they need to correspond to minimum order sizes.

Minimum quantities

Minimum quantities are used in the item-vendor catalog to specify starting at which order size you can procure an item from a supplier.

In contrast to what you enter in the Minimum Order Quantity field, how you fill in the Minimum Quantity field typically doesn't affect the values on requisition worksheets. Worksheets are checked for minimum quantities, however, if you fill in the Quantity or Vendor No. field on them manually.

The system then issues a warning but will not cancel the process so that, if necessary, you can go ahead and order the lower quantity without receiving any further notifications.

The check for minimum quantities is also performed when you create orders manually and one of the following fields is filled in:

- Quantity
- Variant Code (even if you fill in an item with a variant requirement on the relevant matrix).
- Item Reference No.
- Unit of Measure Code

Additionally, the quantity is checked when you create a purchase order for a blanket agreement.

Inventory multiples

The number of items purchased as one package can be found in the Inventory Multiple fields on item cards but for each vendor individually. The value in this field doesn't have an impact on requisition worksheets, where order sizes are determined based on the standard Minimum Order Quantity field.

Overall, the multiples are used in purchasing in the same way as in warehouse and inventory management.

If you change the vendor on a requisition or a planning worksheet and the new quantity on a line doesn't match the entered inventory multiple, you're asked if you want to round the entered quantity up or down.

When a purchase order is later created for this worksheet line, we recommend that the Planning Flexibility field be set to None so the system doesn't suggest a change to the purchase order following line recalculation.

When you then fill in an order manually or change the quantity on a worksheet line, you're asked if you want to round that quantity up or down to the closest inventory multiple. This way, you ensure that only multiples of what you've got in stock are reordered.

When you enter an item with a specified inventory multiple on a blanket order, you're notified if the quantity doesn't match. The check is performed again as you fill in the Qty. to Ship field for call-off from a blanket order.

If this quantity isn’t a multiple of the inventory size, the system will cancel the entire process and the purchase order cannot be created. But if you fill in the Qty. to Ship manually, you’re again asked if you want to round the value up or down.

VOLUME AND WEIGHT PER VENDOR: REQUISITION AND PLANNING

To facilitate planning, you can have the system show for each vendor the total volume and weight entered on a certain requisition or planning worksheet.

1. Open a requisition or planning worksheet.
2. Select a line to specify the vendor that you want to calculate values for.
3. On the ribbon, choose Volume / Weight (Vendor) to see the volume and net weight of the goods that are to be ordered from a certain vendor on all worksheet lines.

ADHERENCE TO DELIVERY DATES

You can analyze a certain vendor’s delivery schedule adherence based on the Requested, Promised, or Expected Receipt Date. To select the date used as a basis for these statistics:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, select the relevant option in the Schedule Adherence Date field.

To see the statistics:

1. Open a vendor card.
2. On the ribbon, choose Vendor > Delivery Sched. Adherence.
3. Via the Deviation From, Deviation To, and Deviation Period Type fields, you can specify a period during which deliveries should be counted as received in (or on) time. All receipts not within the period specified are shown in the Before or After column on the lines.

REQUISITION WORKSHEETS WITHOUT DATE REFERENCES

In the standard app, items on requisition worksheets are ordered at the most opportune time—typically as late as possible—so that when you, for example, postpone ordering an item, the system might suggest you cancel the original order and create a new one with the correct date. But for wholesale and retail companies, this strict adherence to delivery dates can be more of a hindrance than a help.

For customers who cannot change orders once they’ve been placed with a supplier and for whom it’s enough to have purchase orders suggested and, after posting them, view their quantities without needing to see changes in outbound and inbound delivery data, a new function called Simplified Plan Calculation was added to the ribbon on requisition worksheets in trade365.

Simplified quantity calculation

For simplified plan calculation, the required and the supplied quantities are each totaled, with the source values of both being the same as on standard requisition worksheets, that is, Minimum Inventory and Safety Lead Time.

The period for planning is specified by filling in the Starting Date and Ending Date fields on the request page. If demand outstrips supply during this time, the system will create a requisition worksheet line on which the work date is entered as the order date.

The feature supports the following reordering policies:

- Order
- Lot-for-Lot
- Fixed Reorder Qty.
- Maximum Qty.

As in the standard app, the replenishment settings from stockkeeping units take priority over those on the item card. You can also exclude open (that is, not yet released) sales or purchase orders or transfers from the calculation.

Workflow

1. Open a requisition worksheet.

2. On the ribbon, choose Home > Calculate Simplified Plan.
3. On the request page, fill in the fields as described in the following table.

Options

Field	Description
Starting Date Ending Date	Specify when planning should begin and end. Within this period, the number of items you require is compared to what has been ordered so far, as on a standard requisition worksheet.
Include Blanket Orders	In contrast to standard requisition worksheets, blanket orders are not included automatically on simplified plans. Turn on this toggle to add them.
Released Orders Only	On standard requisition worksheets, a planning run typically includes every sales order created in the system. Often, however, demand calculations should include released orders only, which is what turning on this toggle is for.
Released Purch. Orders Only	On standard requisition worksheets, a planning run typically includes every purchase order created in the system. Often, however, demand calculations should include released orders only, which is what turning on this toggle is for.
Released Transfer Orders Only	On standard requisition worksheets, all transfer orders created in the system will be part of demand or demand coverage calculations. Often, however, the calculations should include released orders only, so this toggle needs to be turned on.

Like during standard planning runs, you can filter for individual items or item groups on the Items FastTab. Additionally, you must fill in the Location Filter field for each run.

Afterward, choose OK to have the requisition worksheet filled in automatically. In contrast to the standard Calculate Plan action, safety stock isn’t added as a separate line to the worksheet. Like in the standard app, however, you can now decide on the lines that you want to order.

RELEASED ORDERS ONLY: REQUISITION WORKSHEETS

To streamline your scheduling process, you can run the Calculate Plan action from a requisition worksheet ribbon to have the system fill in current item demand on the lines according to the planning parameters you’ve set and the number of orders that you’ve received from your customers.

What the standard function doesn’t consider, however, is whether these orders have progressed far enough in the system. To limit demand calculations to sales orders that have already been released, turn on the Released Orders Only toggle when you see the request page of the report.

MINIMUM ORDER VALUE AND FREIGHT LIMITS

Optimizing unit costs is key to a successful wholesale transaction. For this reason, you can now specify how much you must order from a vendor at the very least and up to which amount transportation fees will be paid by the supplier.

1. Open the relevant vendor card.
2. On the Shipping FastTab, fill in the Minimum Order Value or Carriage Paid Limit field. The values entered in both fields must be in the currency used by the vendor.

   What you enter in these fields is then shown as part of purchase order statistics and on requisition and planning worksheets for informational purposes.

Purchase order statistics

To see what you purchased:

1. Open a purchase order.
2. On the ribbon, choose Order > Statistics.

> **Note**
>
> The Minimum Order Value and Carriage Paid Limit fields that you can see on the Vendor FastTab of the page show amounts in the currency used by the vendor, regardless of the currency specified on individual orders.

Requisition and planning worksheets

Minimum order values and carriage paid limits are also shown on requisition and planning worksheets.

Additionally, you can see in the Accepted Order Value (Vendor) field what has already been requisitioned from the vendor.

When you release a purchase order, the system then checks the current order value and fee system against the minimum value and fee limit. You're notified if what you entered on the document falls below either.

However, a check for a minimum order value is only performed if the currency that is specified on the order matches the currency that you stored with the vendor. You see a message if they don't but can decide to release the order anyway.

The line values that are being compared are gross or net, depending on whether you turned the Prices Including VAT toggle on the General FastTab on or off. The toggle setting on the related vendor card must match the setting made here; otherwise, the check isn't run.

The same is true for requisition worksheets. However, because their lines don't have Line Amount fields, the amount to compare the minimums to is calculated based on the Quantity, Unit Cost, and Line Discount % values that you specified on each line. If Prices Including VAT is turned on, the tax that you expect to pay is also added.

> **Note**
>
> Invoice discounts aren't part of the check.

If the values in the Buy-from Vendor and Pay-to Vendor fields differ here, the check will apply to the Buy-from Vendor settings.

Item Vendor Catalog Prices FactBox: requisition worksheets

This requisition worksheet FactBox provides a quick way for you to compare purchase prices for items without having to leave the page. The box displays detailed price information about the line currently selected on the worksheet, including discounts, unit costs, and calculated unit costs, provided an item is specified on the line. The box also remains blank if no price data is stored for the item.

Assign blanket orders manually

When you fill in a purchase order manually, you can also copy over the terms and conditions of the related blanket agreement.

1. Open a purchase order, and then select a line.
2. Fill in the Blanket Order No. or Blanket Order Line No. field.
3. You're asked if the unit cost and the line discount should be copied from the relevant blanket purchase line. Choose Yes if you want the price copied. Choose No to keep the price from the purchase order.

TIME-LIMIT BLANKET ORDERS

To prevent terms and conditions specified on a blanket order from being used after the order has expired, you can now set not only a quantity but also a time limit there:

1. Open a blanket order.
2. On the FastTab, in the Valid Until field, specify up until when the order is valid.

You then see an error message if you try to use the order after the expiration date.

> **Note**
>
> On request, the field can also be added to purchase lines so that you can limit the validity of a blanket order there. Currently, the line option isn’t available for general use and line fields contain the date specified on the blanket order header.

SHOW QTY. REMAINING ON BLANKET ORDER

By clicking the highlighted number in the Qty. Rem. on Blanket Order field on a blanket order line, you can see the purchase line quantities that you still need to receive from a supplier. With the Outstanding Qty. Excl. Order and the Qty. on Purch. Order fields, you can now also see the quantity that remains for call-off from the blanket order.

MANAGE CONTAINERS

In international trading, goods are often transported by sea or air, with partial quantities from multiple orders shipped inside a single container.

A container is also the unit by which vendors are billed for deliveries. This is because payments are often due when items are loaded on a vessel and risk passes from seller to buyer.

In the standard app, you need to assign partial deliveries to a transfer order, for example, when the items are brought onboard, when they’re moved to a bonded warehouse, when a vendor is invoiced, or when customs duties and freight costs must be settled. With the container functionality, you only need to group those deliveries once.

Setup

1. Choose the Search icon, enter Containers, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a unique code for the container. You can enter a maximum of 20 characters in this field.
Description	Specify a description for the container.
External Document No.	Here you can specify, for example, a document ID. This ID is later copied to all documents on which you enter the container.
Vessel Code	Specify the vessel on which the container is transported. For more information, see Track a Vessel.
No. of […]	Shows the number of documents on which the container is used. Click a number to view the associated documents.

The volume and maximum weight of the container can also be noted on the container card. These details are for information purposes only and are not part of the calculation logic.

Track a vessel

This feature can bring even more transparency to your supply chain. To track a container vessel loaded with items that you ordered:

1. Choose the Search icon, enter Vessels, and then choose the related link.
2. On the ribbon, choose New. Alternatively, open a line for editing.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code (abbreviation) that will be assigned to the vessel. The code must be unique.
Name	Enter the name of the ship.
IMO	If available, specify an IMO number. This number, preceded by the letters IMO (for example, IMO 8712345), is assigned by IHS Maritime & Trade, often when the ship is registered.
MMSI	If available, specify a Maritime Mobile Service Identity number. This nine-digit number is used for communication by radio.

> **Note**
>
> For the vessel tracking functionality to work, you need to maintain either the IMO or the MMSI field in the system.

You can then open the Containers page to assign a vessel to a container in the Vessel Code field.

Afterward, choose Ship Tracking on the ribbon to pinpoint the vessel’s current location and see a map of the area it is in.

Containers on orders

Containers can be assigned to a purchase order on the header or lines, which simplifies the creation of warehouse receipts that consist of different (partial) deliveries.

To assign a container:

1. Open a purchase order.
2. On the General FastTab, fill in the Container No. field. If lines already exist, you’re asked if you want to enter the number on all of them.
3. You can then enter another container number on a line, if necessary.

Set expected receipt date

As is not uncommon, shipments might get delayed. If this happens, you can run the Set Expected Rcpt. Date function from the ribbon to change the date that a certain container will arrive on.

This will change the date not only on the Containers page but on every order and transfer line linked to the container.

> **Note**
>
> The expected receipt date is no longer adjusted on order lines when a receipt has been posted. The date is then only changed on the associated transfer order.

Container receipts

Assign a container

You can also assign a container manually to a purchase order during receipt:

1. Create a warehouse receipt.
2. Fill in the container number on the header.
3. On the ribbon, choose Get Source Documents or Get Source Document Lines. The container number is then copied to the lines.

Additionally, when you post the receipt, the number is copied from the receipt lines to the posted document for further processing.

Use a filter

As an alternative to manual assignment, you can enter the container number on the header or lines of an order and set a filter on the header or lines when you use the Get Source Document or Get Source Document Lines function.

Create transfer orders

To create an order for transporting items to a bonded warehouse or the final storage location:

1. Choose the Search icon, enter Containers, and then choose the related link.
2. On the ribbon, choose Create Transfer Order.
3. Specify an outbound, an inbound, and a transit location, and then choose OK.

This also copies to the order the external document number that is assigned to the container, and the posted receipts are moved via the order lines to the outbound warehouse that you specified.

To open the order, use the lookup on the No. of Transfer Order Lines field.

When you post the transfer, the container number is then copied along with other data to the posted document.

If you want to copy container data to a transfer order manually:

1. Choose the Search icon, enter Transfer Orders, and then choose the related link.
2. On the ribbon, choose New, and then fill in the fields as necessary.
3. Afterward, choose Prepare > Get Container to retrieve all purchase receipt entries for the container.

If you don’t have the container number handy, you can also use the purchase order or vendor shipment number for retrieval.

Copy a container to an invoice

To copy receipts from a container to a purchase invoice:

1. Create a purchase invoice.
2. Go to the Lines FastTab. On the ribbon, choose Get Receipt Lines.
3. Filter the posted receipts for a container number, and then choose OK.

Allocate charges to containers

When an invoice is posted for customs duties or freight charges, the costs of which should be allocated to the partial shipments delivered with a container, you can again filter for the number of that container to specify allocation.

VENDOR SHIPMENT NUMBER: WAREHOUSE RECEIPT LINES

To improve delivery management, the Vendor Shipment No. field was added to the lines of receipt documents.

If you post a warehouse receipt, the value in this field is then copied from the corresponding field on the purchase or the warehouse receipt header to the posted receipt lines.

The vendor shipment number is also available when you open warehouse receipt lines from invoices issued by a vendor, to make it easier for you to assign a receipt to an invoice.

INVENTORY RANGE

In most cases, you can use standard planning functions to meet the needs of your wholesale business. But due to an ever-growing item master, restocking warehouses might become quite a difficult task over time.

With trade365, you can specify average daily consumption rates for items you order and compare these rates to item lead times. This way, you can specify a minimum stock level for each product, tying ebbs and flows in sales directly to the reordering process.

To be able to work with this feature, you need a consumption schedule, where you can set date formulas to specify reorder periods and priorities in percent.

Setup

A consumption schedule indicates usage based on item ledger entries of type Sale, Assembly Consumption, or Consumption *(from production)*.

Entries posted for an item are thereby added together over a certain period, which you enter on the schedule lines. You can set a period with the help of date formulas or fixed starting and ending dates.

The value in the Item Consumption % line field might differ in each period you specify. The total across all lines of the schedule, however, must be 100%. To create a new schedule:

1. Choose the Search icon, enter Item Consumption Schedules, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	**Description**
Code	Enter a meaningful abbreviation for the schedule.
Description	Specify a description for the schedule.

Lines

Field	**Description**
Line Type	Select if you want to use a formula or fixed dates for calculating a scheduling period.
Starting Date Formula	Specify a formula for calculating and filling in the starting date on the consumption line. You can only fill in this field if you selected Date Formula as the line type.
Ending Date Formula	Specify a formula for calculating and filling in the ending date on the line. You can only fill in this field if you selected Date Formula as the line type.
Fixed Starting Date	Enter a concrete date, such as 01/01/2025. You can only fill in this field if you selected Fixed Date as the line type.
Fixed Ending Date	Enter a concrete date, such as 01/01/2025. You can only fill in this field if you selected Fixed Date as the line type.
Consumption %	Enter (as a percentage) the consumption rate that you want to assign to the period specified on the line. The total on all lines must equal 100%.
Description	Specify a description for the consumption line.

Assign a schedule

You can set up the schedule on the following cards (with data retrieved in the same order of priority):

- Item Category
- Item
- SKU

Item categories

1. Choose the Search icon, enter Item Categories, and then choose the related link.
2. Select a category.
3. Fill in the Consumption Schedule Code field.

Items

1. Choose the Search icon, enter Items, and then choose the related link.
2. Select an item.
3. On the Planning FastTab, fill in the Consumption Schedule Code field.

SKUs

1. Choose the Search icon, enter Stockkeeping Units, and then choose the related link.
2. Select an SKU.
3. On the Planning FastTab, fill in the Consumption Schedule Code field.

Workflow

To calculate an inventory range:

1. Choose the Search icon, enter Item Planning Suggestion, and then choose the related link.
2. Select a journal name. As with any other journal, you can create as many names as you like to set up different methods for calculation.
3. On the ribbon, choose Calculate Lines to have the system check all items (filtered to a certain user, if applicable) and retrieve their data for editing. The data can later be retransferred to the item master.
4. Fill in the request page as described in the following table to specify, for example, what type of variant and location information should be included in the journal or whether one or more lines should be added per item.
5. You can also fill in the fields on the Items tab to limit the calculation of the range to certain products.

Field	Description
One Line per Location	Turn on this toggle if a new journal line should be set up for each location.
One Line per Item Variant	Turn on this toggle if a new journal line should be set up for each item variant.
Consump. Schedule Code	Specify a weighting schedule. If you leave the field blank, new values are calculated across all schedules.
Use Historical ILEs	Turn on this toggle if field values should be calculated based on previously posted item ledger entries, for example, because new ledger entries do not exist yet. Historical item ledger entries can also be used in addition to existing item ledger entries. If the toogle is deactivated, only the item ledger entries from your client are used. The date up to which historical item ledger entries are to be used is restricted via the Use Historical Item Ledger Entries Until field in the Inventory Setup. After the date entered there, the current item ledger entries are used.
Reference Date	Specify for which date journal values should be calculated.
Clear Safety Stock at 0 Consump.	Turn on this toggle if safety stock quantities should be removed for items or variants with a consumption of zero.
Show Unchanged Lines	This toggle is turned off by default. With the toggle turned on, the system copies to the journal all lines, even those on which the old and new values match.

Step 1

With SKU data available for the item and the location and variant filter used on a line, the system will retrieve the schedule assigned to the SKU.

If no relevant SKU data exists or consumption isn’t specified, the schedule you entered for the item will be used instead.

This means that the exact same code—not multiple codes—must be specified for the location filter on an item card. This applies to item variants as well.

Whether stockkeeping unit data is available can also be seen in the SKU Data Exists field on a journal line.

Step 2

If no schedule is assigned to the SKU or the item, the system will check for an item category. If no schedule is assigned there either, a line will not be added, as no inventory range can be calculated without the schedule.

Note

The Inventory field shows the item’s inventory level after applying the used variant or location filter (or both) when you run the Calculate Lines function. The Inventory field isn’t calculated. If needed, you can unhide fields showing up-to-date values, including the current stock value.

The function then determines the Calculated Consump. Per Day based on the consumption schedule and the periods specified for the journal. The range of current inventory is calculated from the reference date (found under the same name on the Options FastTab of the report request page).

You can check the calculation in detail by drilling down on a field or choosing Line > Invt. Level Calculation (Item) on the ribbon to see a diagram.

Besides determining an inventory range with the help of current stock levels and rated consumption, the item planning suggestion includes new planning parameters based on those values.

You can change a parameter, if necessary. The previous parameters are also shown, albeit in read-only format. A new parameter is determined as follows:

- The new safety stock quantity is the same as the old, except if the value in the Calculated Consump. Per Day field on a line is below or equal to 0 and you’ve selected the Clear Safety Stock at 0 Consump. field on the Options FastTab of the request page. The new stock will then be 0.
- The new reorder point is equal to the new safety stock quantity plus the item consumption specified in the Calculated Consump. per Day field in the period consisting of lead time and safety lead time.
- The new maximum inventory is equal to the new reorder point plus the consumption value from the Calculated Consump. per Day field during the reorder period.

When you fill in the journal, you can decide whether you want to include only lines where the suggested parameter values differ from existing values by turning on the Show Unchanged Lines toggle on the Options FastTab of the request page.

Additionally, you can, after potentially adjusting the new parameters yourself, copy them to the item or SKU master by running the Copy Changes to Item or SKU action on lines selected in the journal.

CLEAR OUT STOCK

You can also use the range feature to clear out stock. The requirements for consumption schedules are the same as for calculating inventory levels.

- Choose the Search icon, enter Item Clearance Suggestion, and then choose the related link.
- This journal shows the unit cost of, sales price for, and profit made with items marked for clearance. The unit cost of each is determined based on the SKU fields associated with the item; the other two are calculated based on field values in the item master.
- Running the Calculate Lines action from the page ribbon then compares the read-only source data available for the items to the values calculated by the function.
- The old and new values will match initially but can be edited, if needed.
- The Options tab on the Calculate Lines request page can again be filled in as described in the following table, while the Item tab can be used to limit clearance calculations to certain products.

Field	Description
One Line per Location	Turn on this toggle if a new journal line should be set up for each location.
One Line per Item Variant	Turn on this toggle if a new journal line should be set up for each item variant.
Consump. Schedule Code	Specify a weighting schedule. If you leave the field blank, new values are calculated across all schedules.
Use Historical ILEs	Turn on this toggle if field values should be calculated based on previously posted item ledger entries, for example, because new ledger entries do not exist yet.
Reference Date	Specify for which date journal values should be calculated.
Clear Safety Stock at 0 Consump.	Turn on this toggle if safety stock quantities should be removed for items or variants with a consumption of zero.
Show Unchanged Lines	This toggle is turned off by default. With the toggle turned on, the system copies to the journal all lines, even those on which the old and new values match.

Afterward, you can run the Create Campaign action from the ribbon to create a sales campaign and transfer the new values (including prices as sales prices) from the selected lines.

BMECAT CATALOG ITEMS

Typically, a wholesaler maintains between around 40,000 and 50,000 items in its item master, although it could supply up to several hundred thousand. This is because the company can procure items from business partners.

For performance and maintenance reasons, a direct transfer of supplier item data to your item master isn’t a viable solution. Instead, the standard catalog management function is used for this purpose.

Standard catalog items then become part of a ‘shadow item master,’ which is made up of all items that could be supplied but have never been moved.

In Microsoft Dynamics 365 Business Central[1], you can use a default interface to import item catalogs. But wholesalers might also need to change the data of an item during this process, for example, because certain purchase prices have changed. This can be done by using an interface such as BMEcat.

Workflow

- With the help of a list, data is read from the input files and mapped so that, for example, items for which data has changed are marked.
- Alternatively, you can use an import suggestion, which provides certain default settings and options.
- Data is then copied from the list to the catalog item master and, based on what template you selected for import, items that are already in the system will be updated immediately.

trade365 Catalog Item Setup

To set up the feature:

1. Choose the Search icon, enter trade365 Catalog Item Setup, and then choose the relevant link.
2. Fill in the fields as described in the following table.

> **Note**
>
> After you turned on the catalog item enhancements in trade365, you need to restart the app.

General

Field	Description
Use trade365 Catalog Items	Turn on the toggle to use the trade365 item catalog.

Numbering

Field	Description
No. Format	Specify how you want item numbers to appear on catalog item cards.
No. Format Separator	Specify the character that will serve as a separator for the code and the number of the item if the format uses both.
No. Series	Here you can store an internally used number series for the items that you want to import.

Templates

Field	Description
Default Item Creation Template	Specify a template that will be used by default for the automated transfer of catalog items to the item master.
Default Item Change Template	Specify a template that will be used by default for the automated transfer of changes to the item master.
Default Catalog Item Creation Template	Description to follow

Catalog interfaces

Catalog item interfaces are used to specify various import formats. To set up an interface:

1. Choose the Search icon, enter trade365 Catalog Item Interface Codes, and then choose the relevant link.
2. Specify a code and a description for the interface.
3. Assign a Microsoft Dynamics 365 Business Central[1] object in the Object Type and Object ID field to ensure that the relevant data is imported.

In trade365, a report for importing data through BMEcat is included by default. Alternatives that can be processed are, for example, Excel, CSV, or XML-based file formats, as well as Datanorm, Eldanorm, or formats used by you internally `Codeunit 5157170`. Using any of them, however, requires that the relevant interface be set up first.

Item catalogs

You can assign different catalogs to each interface. They’re used to identify imported data and are saved with the import or catalog item (data sources).

Via catalogs, you can specify different suppliers who use the same interface, or you can store annual import lists. To assign catalogs to an interface:

1. Choose the Search icon, enter trade365 Catalog Item Interface Codes, and then choose the relevant link.
2. Select an interface.
3. On the ribbon, choose Catalogs.

Map import data

You can assign a mapping code to each catalog to specify the data mapping structure that will be used for importing items. This includes the replacement of values, such as PCE for the unit of measure Piece, which is then converted into the unit used in your system.

1. Choose the Search icon, enter trade365 Catalog Item Mapping, and then choose the relevant link.
2. Specify a code and a description for the mapping.
3. On the ribbon, choose Field Mappings to specify replacement values for individual fields in the structure.

Create a catalog item from a template

You can set up item templates for different import purposes. For example, you might want to use one to create and change base data and another to transfer price changes only. To set up a template for import:

1. Choose the Search icon, enter trade365 Catalog Item Creation Templates, and then choose the relevant link.
2. Fill in the fields as described in the following tables.

General

Field	**Description**
Code	Specify a code for the template. The code must be unique.
Description	Specify a description for the template.
Import Action	Select if you want to add new catalog items to your catalog item master and update existing item data.
Delete Catalog Import on Completion	Turn on this toggle to have entries deleted from an import list after they are copied to the catalog item master.
Can Edit Avail. Items	Turn on this toggle to allow updates of not only catalog but also standard items.
Item Creation Template	Choose a creation template that will be used for copying data to the item master. Click here for more information on how to set up the template.

Transfer

Field	Description
Copy Purch. Prices	Turn on this toggle if you want purchase prices copied to the catalog item (and, if applicable, to a standard item).
Copy Purch. Discounts	Turn on this toggle if you want purchase discounts copied to the catalog item (and, if applicable, to a standard item).
Copy Sales Prices	Turn on this toggle if you want sales prices copied to the catalog item (and, if applicable, to a standard item).
Copy Sales Discounts	Turn on this toggle if you want sales discounts copied to the catalog item (and, if applicable, to a standard item).
Copy Extended Texts	Turn on this toggle if you want extended texts copied to the catalog item (and, if applicable, to a standard item). **Note** You might need to check the extended text toggles that are available in the system and turn them on manually.
Copy Variants	Turn on this toggle if you want variants copied to the catalog item (and, if applicable, to a standard item). **Note** You might need to turn on the variant requirement manually.

On the lines, you can specify what you want to copy for which field. By doing so, you can, for example, add missing item information.

You can also run the Auto Fill Fields action from the ribbon to fill in line fields as described in the following table.

Field	Description
Field No.	Specifies the number of the field as stored with the catalog item.
Field Name	Shows the name of the field.
Show	Specifies if the field should be displayed.
Import	Specifies how data should be copied to the catalog item and, if necessary, to a standard item during import.
Default Value	Shows a default value based on the Use Default Value field.
Use Default Value	Specifies if a default value should be used at all and if so, under which circumstances. **Note** You must fill in the Default Value field if you choose Always or If Import Blank or 0.

Create an item from a catalog item

Like on the previous template for creating items from catalog items, you can specify on the trade365 Catalog Item Item Creation Templates page how you want items to be created from a catalog item import now or later.

Only fields that differ from those included in the earlier template are described in the following table.

Numbering

Field	Description
No. Format	Specify how you want item numbers to appear on standard item cards. **Options are:** • Vendor Item No. • Mfr. + Vendor Item No. • Vendor Item No. + Mfr. • Entry No. • Catalog Item No. • Other No. Series
No. Format Separator	Specify the character that will serve as a separator for the code and the number of the item if the format uses both.
No. Series	Here you can store an internally used number series for the items that you want to import.

Blocking

Field	Description
Blocked on Deletion	In some catalog formats, you will be notified of supply-side item deletion. If this occurs and the toggle is turned on, the item will be blocked for use within the system.
Sales Blocked on Deletion	Turn on this toggle if the item removed by a supplier should not be blocked for use across the entire system but only for sales.
Purchases Blocked on Deletion	Turn on this toggle if the item removed by a supplier should not be blocked for use across the entire system but only for purchases.

Import an item catalog in BMEcat format

To import a catalog:

1. Choose the Search icon, enter trade365 Catalog Import Overview, and then choose the related link.
2. On the ribbon, choose Actions > Functions > Import.
3. Select a catalog, the file name for import, the directory for MIME data (such as for images and documents), and a vendor.
4. Choose OK to start copying items to import to the page.

To transfer items imported in this way to the catalog item master:

1. On the ribbon, choose Actions, and then choose Copy Catalog Item Import.
2. Select a template for import, and then choose OK.

Compare values

To get an overview of all items changed or created through an import:

1. Choose the Search icon, enter trade365 Catalog Import Overview, and then choose the related link.
2. On the ribbon, choose Reports > Print Comparison.
3. Set filters or options as necessary.

The report then checks the imported item entries. To view who imported what and when, choose Actions > Functions > Import Log on the ribbon.

CALCULATE UNIT COSTS

In Microsoft Dynamics 365 Business Central[1], you can use purchase prices and discounts when you write quotes for customers. Unit costs are also calculated on an item-by-item basis, copied along to all subsequent documents, and used to determine inventory levels.

Besides the cost of procurement, they might include charges or deductions. A unit cost relates to posted transactions, which means that you’re viewing price calculations ‘backward.’

Standard functionality offers little support when it comes to deciding where to order and what the actual price (including all charges) is. In trade365, you can use the Calculated Unit Cost feature to set up various calculation templates to which you can assign different vendor-item combinations.

Unit cost calculations can be triggered manually by running a function, or you can have the costs determined automatically. What you’ll always have are up-to-date cost values in local currency to make informed choices.

The calculated unit costs aren’t determined based on postings in the system but on cost values stored in the purchase price and discount master and on calculation template lines. Each calculation is archived so that you can track values at any time.

Additionally, calculated unit costs can be used in sales as a basis for minimum profit checks.

Setup

Inventory Setup

You need to activate the feature before you can use it.

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Use Calculated Unit Costs. Only after turning on the toggle will the related fields show up on item cards and in various other places in the system.
3. In the Replace Unit Cost with Calculated Cost field, you can specify if, and how, you want calculated unit costs to be used when checks on minimum profits are performed in sales, as described in the following table.

Option	Description
Never	The checks will use standard unit costs.
On Non-Avail. Invt.	The calculated unit cost will be used during a check if the inventory that is available is not enough to fulfil demand on a certain sales line. If the quantity is sufficient, a check will be made against standard unit costs.
Always	The minimum profit check feature will use the calculated unit costs in all cases.

If the unit costs don’t need to be updated every day, fill in the Calc. Unit Cost Period (Days) field to specify for how long the old unit cost will be retained.

You can also fill in this field on the Item Category page or an item card. Either takes priority over the validity period specified in setup, and the setting on the item card applies if the field is filled in on all three pages.

Adjust values

Additionally, you can use these types of surcharges or discounts to replace the charges available in the system and have the new values copied to all calculation templates automatically. To set up a type:

1. Choose the Search icon, enter Calculation Value Adjustment Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following tables.

General

Field	Description
Code	Specify a code for the value adjustment type. The code must be unique. You can use a maximum of 20 alphanumeric characters.
Description	Enter a description for the type. The description can be up to 100 characters long.

Calculation

On this FastTab, you can specify what impact the surcharge or discount type should have on a calculation.

Field	Description
Value Adjmt. Type	Specify if the calculation value should increase (surcharge) or decrease (discount) the unit cost.
Calculation Type	If you choose Amount here, the calculation value is added or deducted as an absolute value. Choosing Percent adds or subtracts the adjustment value from the base amount in percent.
Calculation Value	Specify the absolute value or percentage that will be used for calculation.
Currency Code	If a calculation value given as an amount is a value in foreign currency, choose the corresponding currency in this field, for example, USD for a surcharge or deduction in US dollar. The amount is converted into local currency with the help of standard app exchange rates, which are updated daily.

Auto-calculate costs

To have unit costs calculated automatically:

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. Turn on the Use Calculated Unit Costs toggle.
3. You’re asked if you want the system to create a job queue entry. Choose Yes.
4. Open the job queue entries.
5. Make changes if necessary, and then activate the queue entry.

For more information, see Use Job Queues to Schedule Tasks.

Purchase Price Calculation

With this feature, you can calculate a unit cost for a relatively large purchase quantity. Calculated unit costs on item cards always refer to the base unit of measure and purchase quantity that you entered for the relevant calculation template.

The feature can also help check unit costs that haven’t been assigned to a template yet.

1. Choose the Search icon, enter Purchase Price Calculation, and then choose the related link.
2. Fill in the fields as described in the following table.

General

Field	Description
Vendor No.	Specify the vendor who will be part of the calculation. This means that the prices and discounts stored for the vendor will be used in calculating unit costs.
Item No.	Specify the number of an item. The field is then used together with the Vendor No. field and the other fields to determine the unit cost.
Variant Code	If necessary, specify a variant for which you want the unit cost to be calculated. **Note** Based on the settings you made, the purchase prices and discounts assigned to certain variants might differ so that conclusions cannot be drawn for all of them. Leave the field blank if the item has no variants.
Location Code	Specifies the location for which you want to procure items. If no location-dependent purchase prices or discounts exist, you need to select a location here. The business logic is the same as for calculating unit costs in inventory management.
Purch. Quantity	Specify the quantity that will be used for calculating the unit cost. Based on this quantity, the system will calculate block prices and discounts (if these have been set up beforehand).
Purchase UOM Code	Select, based on the quantity, a unit of measure for purchases, for example, 5000 pieces or 5 pallets (should a pallet consist of 1000 pieces). **Note** You must select a unit if a supplier quotes you different purchase prices or discounts for containers.
Template Code	Select a template from which surcharges or discounts will be used when calculating the unit cost.

You can then run the Calculate action on the ribbon to determine the unit cost. The result is summarized on the right-hand side of the page. Besides standard unit cost, you can see on that side the calculated purchase price and discount, as well as the calculated cost value.

You can recalculate values before exiting the page—or compare them on the FastTabs described in the following. However, on exit, all temporary data will be deleted.

Calculation

This FastTab shows all the calculations performed by the system, be they for different vendors or different quantities. You can compare the values directly on the tab.

Calculation Details

This FastTab contains the calculation details of entries from the Calculations FastTab. This means that besides the actual price factors, the tab also shows all surcharges and reductions stored on a certain calculation template.

Show calculated profit

The calculated profit is based on the expected profit, for which the sales price is reduced by the relevant discount on the calculated unit cost, to indicate the profit you would make if the goods needed to be reordered today, which would change the base for calculation.

The calculated profit is shown as a percentage on sales documents, or, more specifically, in the Calculated Profit % field on sales lines, although you might need to use the Personalize function to unhide the field.

Additionally, you can see the standard unit cost, the calculated unit cost, the calculated cost amount, the calculated profit in local currency, and the profit in percent in the Sales Line Profit Details FactBox.

> **Note**
>
> For this piece of information to be shown, the calculated unit cost needs to be turned on across the entire system.

CHECK ITEMS IN VENDOR CATALOG

If, on a purchase document, you enter an item that isn’t part of the item-vendor catalog, you can now be notified of this. To set up the notification:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, in the Notify of Missing Vendor Catalog Items field, select one of the options described in the following table.

Option	Description
None	Items that are not in the supplier catalog can be entered without receiving an error message or notification.
Notify	If an item is entered that is not in the supplier catalog, you will get a notification.
Cancel	Items that are not in the supplier catalog cannot be entered. You will receive an error message if you try to enter an item like this.

RECEIVE BY (ISO) CALENDAR WEEK

Across Europe especially, wholesalers often use the week number scheme set out in ISO 8601 when quoting delivery dates.

In the standard app, you can enter a formula in a date field to state the day and week when items are received *(for example, W5=Wednesday, Week 5)*.

In trade365, you can turn on a feature to additionally show the number of the week the expected, requested, or promised receipt date entered on a purchase document is in.

With the feature turned on, the week that is specified for the actual receipt is also printed on all quotes and orders related to the entry.

Setup

To be able to work with this feature:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Receive by Calendar Weeks (ISO) toggle.

Afterward, a toggle with the same name will appear on vendor cards, on the Receiving FastTab. Turning it on will unhide the week number fields on the lines and the Invoice Details FastTab of associated purchase documents.

> **Note**
>
> The Calendar Week section is only visible on a purchase document that is related to a vendor whom the Receive by Calendar Weeks (ISO) toggle is turned on for.

The toggle is then automatically activated on the document during creation but can be turned off on the Invoice Details FastTab or cleared on individual lines.

Workflow

Week numbers can be entered on documents in the following formats:

- WW/YYYY
- YYYY/WW
- WWYYYY
- WW
- WWYYY
- WW/YYY

When a calendar week is specified, the receipt field related to it is set to the first day of that week.

> **Note**
>
> You can also enter transportation, warehouse handling, or similar time requirements into the system. They're then used to calculate the receipt date and might result in a delivery being pushed back to a time and day outside the promised week.

Receipts can also be shown in calendar weeks on blanket purchase orders.

PURCHASE BONUS AGREEMENT

In retail, purchasing bonus agreements are concluded in order to receive remuneration from suppliers if certain targets are met. These agreements are an important instrument for purchasing, controlling and optimizing supplier relationships.

With KUMAVISION trade365, it is possible to record and flexibly settle purchase bonus agreements. Settlement is based on the posted purchase documents in the form of invoices and credit notes.

Setup

Purchases & Payables Setup KUMAVISION trade365

On the KUMAVISION trade365 FastTab in the Bonus area, you specify the item or resource to which the bonus credit is to be posted.

Field	Description
Type Purch. Cr. Memo Line	This field is used to specify whether the purchase bonus credit is to be applied to an item (without stock management) or to a resource.
No. Purch. Cr. Memo Line	The specific item or resource number is entered in this field, depending on the Type Purch. Cr. Memo Line field. Only items with the types "No stock" and "Service" are available for the "Item" selection.
Bonus Order Type	Specifies the order type to be used when creating a purchase-side credit memo.

Number Series

To create purchase bonus agreements, specify a number of series in the Purch. Bonus Agreement Nos. field in the Number Series FastTab.

Item Purchase Bonus Groups

If a purchase bonus agreement is to apply to a group of items, these items can be grouped together in a purchase bonus group. The groups are defined on the Item Purchase Bonus Group page by specifying a code and a description.

The groups can then be entered on the relevant item card in the Bonus FastTab in the Purchase Bonus Group Code field.

Vendor Bonus Groups

Vendors can also be divided into Vendor Bonus Groups in the same way as items. These groups are specified on the Vendor Bonus Groups page.

The groups can then be entered on the vendor card in the Bonus FastTab in the Bonus Group Code field.

In addition, a different bonus vendor can be specified for a vendor in the Bonus FastTab via the Bonus Vendor No. field. The bonus-entitled purchase lines of the vendor are then included in the bonus settlement for the bonus vendor and credited to him.

Exclude from Purchase Bonus

The basis for the subsequent evaluation of bonus agreements are the purchase invoice and purchase credit memo lines. To exclude some of these lines from the purchase bonus settlement right from the start, there is a Exclude from Purchase Bonus toggle on the Bonus FastTab on some master data cards. The toggle can be activated on the following pages:

- Vendor
- Item
- Item Variant
- Resource
- G/L Account
- Item Category
- Resource Group
- Order Type

It is also possible to exclude individual prices from the purchase bonus on purchase price lists.

Note

If different exclusion conditions within an invoice based on different prices are to be avoided, it is recommended to activate the toggle Instant Price Update on All Lines in the Purchases & Payables Setup and to use the Price Calculation Method KUMAVISION base Price Sequences.

Purchase Bonus Agreement

The Purchase Bonus Agreements define the conditions for the bonus.

General

Field	Description
No.	Assignment of a new purchase bonus agreement number from the number series.
Description	Indicates the description of the purchase bonus agreements.
State	Indicates the status of the purchase bonus agreements indicates. The following statuses can be assigned: • New • In Progress • Active • Archived Only agreements with the status Active are used to calculate the bonus.
Currency Code	Specifies a currency code for the purchase bonus agreement.
Agreement Starting Date Agreement Ending Date	Specifies an agreement period for which the purchase invoice and purchase credit memo lines are to be used.
Source Type	Specifies the type of source to which this agreement should apply. The following options are available: • Vendor • Vendor Bonus Group • All Vendors
Source No.	The specific vendor or vendor group bonus number is entered in this field, depending on the Source Type field.

Lines

Field	Description
Type	This field is used to specify the type for which the bonus is to be determined. The following selection options are available: • Item • Item Category • Resource • Resource Group • G/L Account • Item Bonus Group • All Items • All Resources • All G/L Accounts • All Positions
No.	Depending on the type, the number is defined in this field.
Variant Code	For items with different variants, the bonus for a particular variant can be set independently of other variants or the item itself.
Unit of Measure Code	The Unit of Measure Code is pre-assigned with the base unit when an item or resource is entered. The unit of measure code must be entered for the Quantity bonus type.
Bonus Type	The bonus can be calculated based on Revenue or the invoiced Quantity.
Minimum Amount	If the bonus is calculated according to Revenue, a minimum amount from which the bonus is to be granted can be specified in this field.
Minimum Quantity	If the bonus is calculated according to Quantity, a minimum quantity from which the bonus is to be granted can be specified in this field.
Bonus %	For the bonus type Revenue, the percentage for a percentage bonus is defined in this field.
Bonus Amount per Unit	For the Quantity bonus type, the bonus amount granted per unit is defined in this field
Bonus Amount Flat Rate	For both the Revenue and Quantity bonus types, a flat-rate bonus can be set which applies from the minimum amount or minimum quantity, but is independent of the actual amount of calculation basis.

Bonus calculation

The bonus due in the period is calculated in the Purchase Bonus Calculation Worksheet. The Calculate Bonus function in the ribbon uses the purchase invoices and purchase credits posted in the settlement period to determine the bonus amounts for the purchase bonus agreement entered when the function is called up.

In addition, the calculation for a vendor can be filtered at this point. The start and end date of the purchase bonus settlement can be defined within the validity period of the purchase bonus agreement. For example, it is possible to carry out a bonus settlement for a quarter within a year.

Which document lines have been included in the calculation can be traced using the detailed lines that can be shown for each purchase bonus worksheet line created.

Field	Description
Bonus Amount	This amount was determined during the calculation and can be credited.
Total Quantity Assessment Base	For a purchase bonus agreement of the calculation type Quantity, the total quantity that led to the calculated bonus amount is shown in this field.
Total Sales Assessment Base	For a purchase bonus agreement of the calculation type Revenue, the total revenue that led to the bonus amount determined is shown in this field.
Customer No. Customer Name	Specifies the bonus vendor who grants the purchase bonus agreement.
Sales Bonus Agreement No. Sales Bonus Agreement Line No.	Specifies the purchase bonus agreement and the line that serves as the basis for the calculated line in the purchase bonus worksheet.
Agreement Starting Date Agreement Ending Date	Specifies the start and end date of the purchase bonus agreement.
Calculation Start Date Calculation End Date	Specifies the start and end date for the period for which the bonus was calculated.
Accepted	The indicator is set if the purchase bonus worksheet line is to be taken into account when executing the Register and Create Credit Memo(s) function.

Note

There is no additive calculation of the bonus. The more specific the type within a bonus agreement is, the higher this type is prioritized when determining the bonus amount to be granted (Item before Item Category before All Items).

It is therefore possible that the best possible bonus is not always taken for granted.

Detailed Billing Lines

To track the posted purchase invoice or credit memo lines for the bonus calculation, select Detailed Lines in the ribbon of the purchase bonus worksheets. All purchase document lines that lead to the calculation basis is shown here.

Here you can also see for which vendors a rebate vendors receives a rebate. The discounts granted on the purchase document are also shown here. The discounted amounts (amount minus invoice and line discount amount) form the basis for determining the bonus amount.

Create Purchase Bonus Credit Memo

To settle the purchase bonus worksheet, all lines that are to be registered and converted into a purchase credit note are marked as Accepted. The Register and Create Credit Memo(s) function is then executed in the ribbon.

A purchase bonus item is created for each accepted purchase bonus line. These can be viewed via the search icon. There is also a menu call for the purchase bonus credit and the bonus vendor. Here too, there are detailed lines for each purchase bonus item, which can be called up using the Show Details function. These correspond to the detailed lines from the purchase bonus worksheet.

An unposted purchase credit memo is generated, which can be posted as usual. The credit memo lines are created with the details stored in the Purchases & Payables Setup.

Bonusinformation on the vendor

The following information on bonus credit memos and bonus amounts is showed on the Bonus FastTab on the vendor card:

Field	Description
No. of Bonus Credit Memos	Show the number of rebate credits created but not yet posted by the vendor.
No. of Pstd. Bonus Credit Memos	Show the number of bonus credit memos posted by the vendor.
Bonus Amount	Show all bonus amounts that have not yet been registered and that have been determined on the basis of purchase bonus worksheets.
Reg. Bonus Amount	Show all registered purchase bonus entries in total.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩↩↩↩

Manufacturing

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s production department.

RELEASED ORDERS ONLY: PLANNING WORKSHEETS

To streamline your scheduling process, you can run the Calculate Regenerative Plan action from a planning worksheet ribbon to have the system fill in current item demand on the lines according to the planning parameters you’ve set and the number of orders that you’ve received from your customers.

What the standard function doesn’t consider, however, is whether these orders have progressed far enough in the system. To limit demand calculations to sales orders that have already been released, turn on the Released Orders Only toggle when you see the request page of the report.

SET TIMES FOR STANDARD TASKS

To simplify the completion of manufacturing processes, you can set up a list of standard tasks and add them to operations.

In trade365, you can also specify how long each task is supposed to take:

1. Choose the Search icon, enter Standard Tasks, and then choose the related link.
2. Select the task that you want to specify times for.
3. On the ribbon, choose Std. Task > Routing Sheet Times and fill in the fields as necessary.

The times you specify are then entered by the system on all routing lines the task code is selected on so that you know when the related production order is completed. You can, however, still change a time field manually, if needed.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Warehouse Management

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s logistics department.

ITEM LIFECYCLES

All items follow a certain lifecycle, which starts with premarket development and ends with their discontinuation or replacement by more recent offerings.

In trade365, you can use customizable statuses to detail the stages an item goes through at your company so that, at the right time, it can be archived or blocked in sales or across the entire system, for example.

> **Note**
>
> We recommend that you include lifecycles in your item requirement checks, as you cannot manually set a Blocked toggle (such as Sales Blocked) on an item card if a lifecycle code is also stored on the card.

Setup

Create a lifecycle

Before you can assign a status to an item, however, you need to set up one or more product lifecycles.

1. Choose the Search icon, enter Item Lifecycles, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a meaningful lifecycle code. The code must be unique.
Description	Specify an internal description for the lifecycle. The description can be up to 100 characters long.
Fully Blocked	Select this field if, at the current lifecycle stage, you want the item excluded from all processes, including posting.
Sales Blocked	Select this field to exclude an item from sales transactions (except return orders and credit memos) in the specified stage. You can ignore this setting if the Fully Blocked field is selected.
Purchases Blocked	Select this field to exclude an item from purchase transactions (except return orders and credit memos) in the specified stage. You can ignore this setting if the Fully Blocked field is selected.
Service Blocked	Select this field to exclude an item from service transactions (except service credit memos) in the specified stage. You can ignore this setting if the Fully Blocked field is selected.
Production Blocked	Select this field to exclude an item from manufacturing (production orders) in the specified stage. You can ignore this setting if the Fully Blocked field is selected.
Prod. Consumption Blocked	Select this field to exclude an item from component usage (on production orders) in the specified stage. You can ignore this setting if the Fully Blocked field is selected.
For Clearance	With this field selected, you see a message if the item was marked for clearance by your company or one of your suppliers.
Archived	With this field selected, the item is hidden from view on all pages in the specified stage. You can, however, unhide it again manually, if necessary. To see an item without manual intervention, you need to open the relevant item card and select a lifecycle code for which the field is not selected.

Assign a cycle to an item

To assign a lifecycle code to an item:

1. Open an item card.
2. On the Lifecycle FastTab, fill in the Lifecycle Code field. The code must already be set up.
3. You can then specify starting and ending dates for the sale of the item provided the selected lifecycle code allows entries in the sales area.

Specifying a starting date will have an influence on documents in that the item can only be entered on sales lines with shipment dates on or after the starting date.

You can use this feature, for example, to prevent an order from being shipped before the product entered for it is even introduced to the market. For ending dates, the shipping date on the document must be earlier than the last day on which the item is to be sold. Items are checked when a document is released.

Note

If a lifecycle code is stored on an item card, the fields relevant to the cycle cannot be changed. For changes to the lifecycle, you need to choose another code.

You can also select the Blocked (User) field on a card to prevent the item from being used anywhere in the system even if a lifecycle has been specified for it. The blocks that were originally set up for the item then apply again when the field is cleared, for example, after an internal review has been conducted.

Enter a date for checking

To specify the date against which the system should check the start and end of an item sales period:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, fill in the fields as described in the following table.

Field	Description
Item Lifecycle Reference Date	Enter the date against which the check should be performed. For more information about date fields and their relation to each other, click here.
Item Lifecycle Posting Check	Specify if shipments can be posted only within the period allowed for sales. **None** When you post a shipment, the starting and ending dates are not checked. **Posting Date** You can only post if the posting date is within the specified sales period. **Work Date** You can only post if the work date is within the specified sales period.

Note

When you use warehouse and inventory documents, such as warehouse receipts and picks, you can perform picking regardless of when sales of the item start or end. Still, you can only post the related warehouse shipment if the posting check is successful.

SPECIFY INVENTORY MULTIPLES

In trade365, you can decide if you want to maintain inventory and sales items in a certain size or a multiple of that size only. To set up the feature:

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. In the Inventory Multiple Check field, choose one of the options described in the following table.

Option	Description
None	Ignores inventory multiples.
Sales Outbound	Inventory multiples are checked for sales transactions.
End-to-End	Multiples are checked for sales and purchases.

Both checks can be specified in relation to inventory. Although they have an impact on all locations, you can select a site as a breakbulk location so that neither check will apply. For this feature to work, you must set the Breakbulk Storage toggle on the Bin Check FastTab.

To specify multiples for purchases and sales, you need to open an item card and fill in the Inventory Multiple field. With the field filled in, the item can only be purchased or sold in the specified quantity or a multiple thereof (based on whether the relevant Inventory Setup toggle has been turned on or off).

If an item has variants, differing multiples can be maintained at the variant. If no setting has been made for the variant, the inventory multiple entered on the item card is used. Fixed lot sizes are only checked for sales lines that relate to non-breakbulk locations.

You see a message if you enter on a sales line a quantity below the specified multiple and are then asked whether you want to round that quantity up. The message appears when:

- the Quantity field is filled in on a sales document (except on blanket orders).
- the To Ship field is filled in on a blanket order line.
- the Quantity field is filled in on a transfer order line.

When you fill in the Quantity field on a blanket order line, you see a message but cannot round the quantity up or down. This is also true when you change one of the following fields on a line after filling in the quantity:

- No.
- Variant Code
- Item Reference No.
- Location Code
- Unit of Measure Code

When you create an invoice for items shipped based on a blanket order, the system doesn't check multiples when you post the bill, as the shipment has already been sent. This also applies to credit memos set up for return order lines.

PURCHASING CODES: SKU

Standard functionality gives you the option of storing a purchasing code on an item card if you only procure the items by drop shipment or special order. This code is then copied to all sales transactions and can be changed during any such transaction (if necessary), for example, if you must deliver goods via a certain warehouse.

Often, an item might, in theory, be available but some of its variants are only ordered when needed and will be sent directly to the customer (variant drop shipment).

With trade365, you can specify purchasing codes for stockkeeping units while delivering other units from a warehouse. To limit a code to an SKU:

1. Open an item card.
2. On the ribbon, choose Related > Warehouse > Stockkeeping Units.
3. Open a Stockkeeping Unit Card.
4. On the General FastTab, fill in the Purchasing Code field. If you can't see the field, you might need to use the Personalize function to unhide it.

The code is then copied to all sales documents linked to the SKU.

> **Note**
>
> Purchasing codes that have been assigned directly on an item card apply to all SKUs associated with the item.

SYNCHRONIZE VENDOR ITEM NUMBERS

In the standard app, you can store vendor item numbers in several areas but must maintain them manually, which can lead to issues if they differ from each other.

In trade365, standard functionality has been extended by an update function to reduce the number of manual tasks and ensure that you'll always have up-to-date information.

Setup

You need to activate the feature before first use.

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Auto Add item References toggle.

You can then enter a number directly on a line, in the Item Reference No. field. Existing numbers can also be used for transactions immediately.

If the system finds another item reference for one and the same vendor-item combination, you’ll be notified and can decide whether to replace the number.

Another option is to synchronize item vendor numbers between the item, SKU, item reference, and item vendor records. You can do this by opening Inventory Setup and turning on the Auto Update Item Vendor Catalog toggle.

Workflow

On an item card, you can store the main vendor and its item number (Vendor Item No.) on the Replenishment FastTab. If an item reference doesn’t exist yet, the reference is created automatically. If you later change the number on the card or on the Item References page, the entry is updated everywhere else in the system automatically.

But synchronization extends beyond one card and one page; the reference is also updated in available SKUs and item vendor records (provided the basic parameters remain, that is, the same source vendor item number and vendor are specified). In this case, it doesn’t matter where you make the changes, as all occurrences of the number are then updated by the system.

DELETE PARTIAL WAREHOUSE SHIPMENTS AND RECEIPTS

When you post or ship a partial quantity in the standard app, the documents showing the remaining quantity are kept in the system. In the logistics area, this program behavior is often counterproductive, as you would recreate the documents for new shipments or inventory.

In trade365, you can specify if and how warehouse and inventory documents should be deleted.

1. Choose the Search icon, enter Warehouse Setup, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Option	Description
Delete Whse. Shpt. (Post)	Delete Lines	Following partial shipment, only warehouse lines with remaining quantities are deleted.
	Delete Header and Lines	After partial shipment, the entire warehouse document is deleted.
Delete Unavailable Whse. Shpt. Lines (Pick)	Turned on	Warehouse shipment lines for which picks could not be created (that is, no availability exists) are deleted after picking. This function only applies to locations for which the following toggles are turned on: • Require Shipment • Require Pick
Delete Pick on Registration	Turned on	An availability check is performed when a picking document is created. If inventory accounting and physical inventory figures do not match, the picking process cannot be completed in full. The picks that remain are then deleted on registration. This function only works for locations for which the following toggles are turned on: • Require Shipment • Require Pick

You can also use the general search to open the Adjust Warehouse Receipts or Adjust Warehouse Shipment feature for cleansing purposes. Alternatively, you can create entries for these reports in the standard task queue.

Function	Option
Adjust Warehouse Receipts	Deletes all partial warehouse receipts.
Adjust Warehouse Shipments	Deletes all partial warehouse shipments.

BLOCK LOCATIONS

You can now block locations that are no longer in use so that they cannot be posted to.

1. Choose the Search icon, enter Locations, and then choose the related link.
2. Open a location card.
3. On the General FastTab, turn on the Blocked toggle.

Link locations to items and users

Items that are always stored away in the same warehouse or can only be sold by certain staff members can be limited in availability to a specific location or to a single location and user.

In sales

In the standard app, you can assign a second location to a customer if it is the site that this customer is typically supplied from.

In trade365, you can also link a location to a certain item or an item and a user so that the site will be copied to new sales documents when the item (as well as the user, if available) is entered on a line, regardless of how you filled in the associated customer card.

To set up the feature:

1. Choose the Search icon, enter Sales & Receivables Setup, and then choose the related link.
2. On the trade365 FastTab, turn on the Enable Item-User-Location toggle.
3. Open an item card, and then choose Related > Item > Item-User-Location on the ribbon.
4. Fill in the Location Code field and, if needed, the User ID field. If an item is linked to a location but a user isn't, the new assignment will be valid for all users.
5. Alternatively, open a location card or User Setup, and then run the action from there.

> **Note**
>
> Item-user-location assignments only apply if sales lines are created manually.

Afterward, sales document lines will be filled in with a location in the following order of priority:

1. The location is assigned to both the item and user specified on the line.
2. The location is assigned to the item.
3. The location is assigned to the user.
4. The location is assigned through standard methods (via a customer or center of responsibility card).

In production

You can also work with the item-user-location feature in manufacturing. To assign an item (and potentially a user) to a location:

1. Choose the Search icon, enter Manufacturing Setup, and then choose the related link.
2. On the trade365 FastTab, turn on the Enable Item-User-Location toggle.
3. Open a production order, and then run the Item-User-Location action from the ribbon.
4. Fill in the fields as necessary.

Afterward, the site will be copied to new production order components when the specified item (as well as the user, if filled in) is entered on a component line. If a location is linked to an item but a user isn't, the location will be valid for all users.

For all other settings and the order of priority in which locations are entered, see the previous section.

> **Note**
>
> Item-user-location assignments are only relevant when you create component lines manually. If the Refresh Production Order function is run, the location is determined according to the business logic used in the standard app.

PRINT BY LOCATION

In trade365, you can assign a printer to a location to tell the system to create and print warehouse documents automatically when the location is selected. The following documents are printed in this way:

- Movement
- Picking List
- Put-away List
- Warehouse Receipt
- Posted Warehouse Receipt
- Warehouse Shipment
- Posted Warehouse Shipment

You specify the printer on a location card (on the General FastTab).

SHOW TRACKED ITEMS IN COLOR

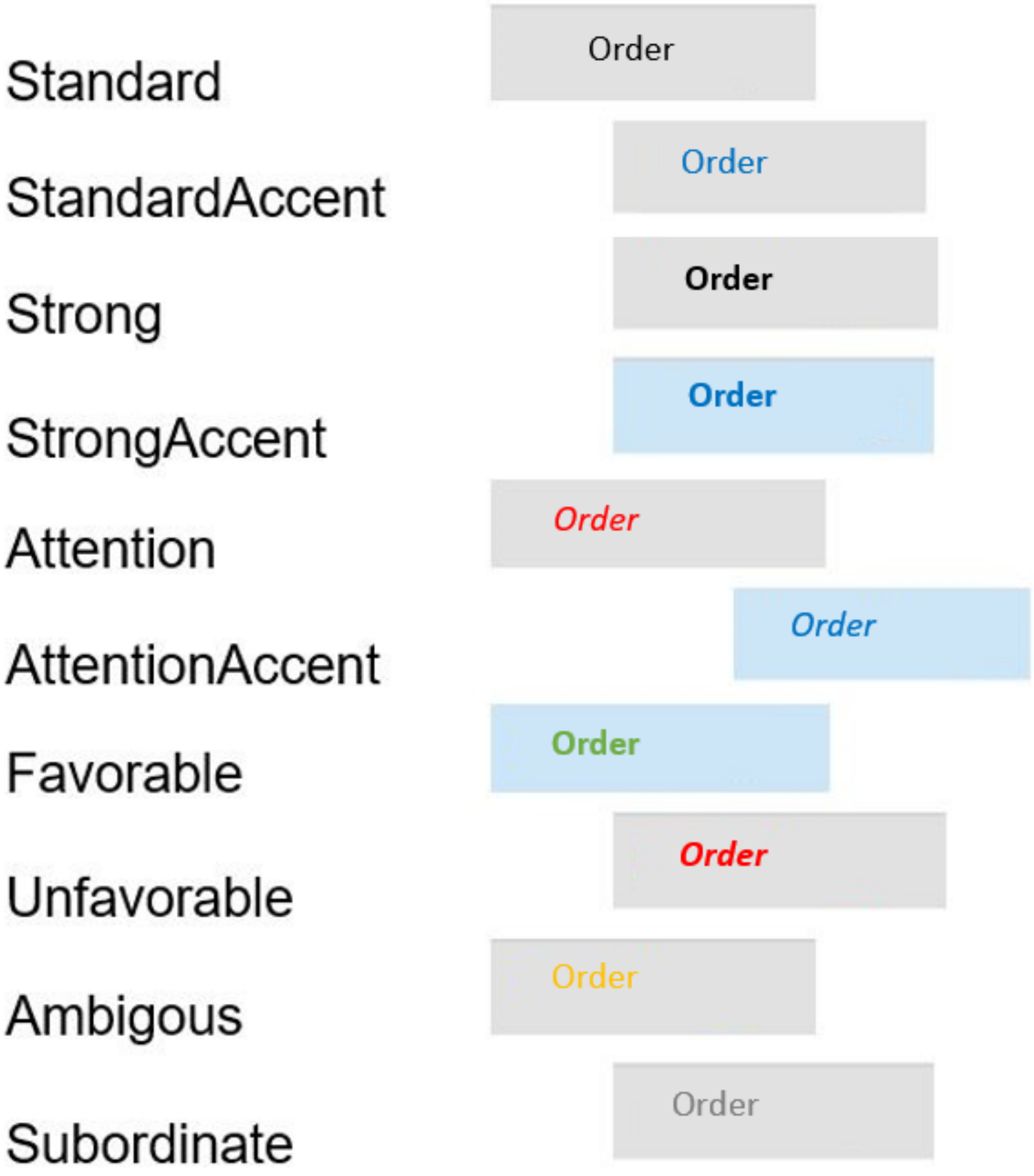
A company's item master might contain multiple items with and without serial number or lot tracking. Identifying those warehouse receipt lines that need an item tracking entry might not be an easy task for warehouse staff, especially if scanners aren’t used.

In trade365, lines with items that require a serial or batch number are shown in color on the following documents:

- Warehouse Receipt
- Put-away
- Inventory Put-away
- Warehouse Shipment
- Pick
- Inventory Pick

Not all fields on each line will be shown in color, only the source document and document line type and number, plus the item number and description fields. To set up the feature:

1. Choose the Search icon, enter Warehouse Setup, and then choose the related link.
2. On the General FastTab, fill in the Serial & Lot No. Item Color field to specify how they should appear, as indicated by the following chart.


Standard
Order
StandardAccent
Order
Strong
Order
StrongAccent
Order
Attention
Order
AttentionAccent
Order
Favorable
Order
Unfavorable
Order
Ambigous
Order
Subordinate
Order

BLOCK PHYSICAL INVENTORY ITEM AND BIN POSTINGS

Under certain circumstances, standard functionality allows posting to items and bins in physical inventory journals or on physical inventory orders.

As this might lead to complications in inventory management, you can block bins in trade365 from being used during physical inventory.

Items, by contrast, are always unavailable for posting when taking stock, even in two-stage picking.

1. Choose the Search icon, enter Warehouse Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, in the Bin Movement if Physical Inventory field, choose one of the options described in the following.
3. **(empty)**
   Posting might be possible (default option).
4. **Notify**
   You’re warned if a certain item is being counted and can cancel the posting process.
5. **Cancel**
   When you try to post an item that is being counted, the process is canceled with an error message.

INDICATOR COUNT: PHYSICAL INVENTORY

The Counted field has been added to physical inventory journals so that staff members have an easier time processing inventory lists during stocktaking.

The checkbox is selected automatically when you fill in a quantity on a journal line.

DEFAULT SORTING METHODS

On a location card, you can choose one or more field values that will be used by default to sort lines on warehouse documents, such as pick documents, if the site is entered on them. You can also decide whether you want the Qty. to Handle filled in on the lines automatically in this case.

1. Choose the Search icon, enter Locations, and then choose the related link.
2. Open a location card.
3. On the Warehouse FastTab, fill in the fields as described in the following table.

Field	Description
Sorting Method – Whse. Receipts	Select by which field value warehouse receipts at this location should be sorted.
Sorting Method – Whse. Shipments	Select by which field value the system should sort warehouse shipments from this location.
Sorting Method – Internal Movements	Select by which field value internal movements involving this location should be sorted.
Sorting Method – Put-aways	Select by which field value the system should sort put-aways at this location.
Autofill Qty. to Handle – Put-aways	Specify if the quantity to handle should be automatically filled in for put-aways at this location.
Sorting Method – Picks	Select by which field value the system should sort picks at this location.
Autofill Qty. to Handle – Picks	Specify if the quantity to handle should be automatically filled in for picks at this location.
Sorting Method – Movements	Select by which field value the system should sort movements involving this location.
Autofill Qty. to Handle – Movements	Specify if the quantity to handle should be filled in automatically for transfers involving this location.

WAREHOUSE AND INVENTORY DOCUMENT EXTENSION

References on transfer orders

With standard functionality, you can only add the Your Reference field to sales documents. In trade365, you can also use the field on transfer orders.

Source document references

The fields External Doc. No. (Source Doc.) and Your Reference (Source Doc.) have been added to the Shipping FastTab on outbound logistics documents, such as warehouse shipments and inventory picks, showing the number that is assigned to the source document and the reference that you entered for it.

> **Note**
>
> If the document contains several lines from different source documents, both fields will be blank.

Number on sales and transfer orders

A Warehouse Documents section has been added to sales and transfer orders under the General FastTab so that you can see instantly how many warehouse lines are tied to the document.

To drill down on a document, click one of the highlighted numbers listed in the following table.

Field	Description
No. of Whse. Shipment Lines	Shows the number of warehouse shipment lines linked to the document.
No. of Posted Whse. Shpt. Lines	Shows the number of posted warehouse shipment lines linked to the document.
No. of Pick Lines	Shows the number of pick lines linked to the document.
No. of Registered Pick Lines	Shows the number of registered pick lines linked to the document.
No. of Whse. Pick Lines	Shows the number of warehouse pick lines linked to the document.
No. of Rgstrd. Whse. Pick Lines	Shows the number of registered warehouse pick lines linked to the document.

WAREHOUSE SETUP

In trade365, a variety of functional enhancements have been added to the warehouse area. To set them up:

1. Choose the Search icon, enter Warehouse Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, fill in the fields as described in the following table.

Field	Description
Serial & Lot No. Item Color	For more information about this field, see Show Tracked Items in Color.
Bin Movement If Physical Inventory	Specify how to proceed when you want to post an item that is being counted. For more information, click here.
Approval Reqd. for Reservation	Specify if users can create or delete reservations. By default, all users can do both. If you turn on this toggle, you should also specify the users for whom reservations must be blocked. To do this, open User Setup and clear the Can Create Reservation and Can Delete Reservation fields on the relevant lines.
Use Internal Item Descr. (Inbound)	Turn on this toggle if you want internal item descriptions used on receipts, put-aways, and warehouse receipts. With the toggle turned off, available descriptions will be copied from the Item References page.
Use Internal Item Descr. (Outbound)	Turn on this toggle if you want internal item descriptions used on shipments, picks, and warehouse shipments. With the toggle turned off, available descriptions will be copied from the Item References page.
Whse. Shipment – Use Def. Employee Location	Specify if the default location assigned to a warehouse employee should be retrieved when creating a shipment. You can assign a location to a staff member by opening the Warehouse Employees page and selecting the Default field for a shipping site.
Delete Whse. Shpt. (Pick)	Standard functionality typically copies all item lines on sales orders to a warehouse shipment when you create the document. Availability is not a factor here. After the available items are picked, those that cannot be supplied remain on the document when the shipment is posted. As a result, the shipping document is not archived automatically. With the toggle turned on, lines that are not available are deleted from the shipment document when you create a pick. For more information, see Delete Partial Warehouse Shipments and Receipts.
Delete Whse. Shpt. (Post)	When a warehouse shipment has been posted and some lines remain, you can delete them if no unregistered pick lines exist either. **(blank)** No effect. **Delete Lines** Lines that meet the above conditions are deleted. **Delete Header and Lines** Lines that meet the above conditions are deleted and if no more lines exist, the entire shipment is as well. For more information, see Delete Partial Warehouse Shipments and Receipts..
Keep Whse. Shpts. for Open Activities	With standard functionality, you can delete a warehouse shipment despite ongoing warehouse activities. Turn on this toggle if you want to receive an error message when you are about to delete a shipment like this.

Field	Description
Assemble to Order - Set Whse. Shpt. Qty. to Qty. to Ship	This toggle only affects locations that warehouse shipments and picks are posted to. If you register a pick for an assembly item for which you selected Assemble-to-Order in the Assembly Policy field, standard functionality will not update the To Ship field on the associated warehouse document. If you turn on this toggle, the To Ship field will be filled in automatically with the picked quantity after registration.
Whse. Receipt – Use Def. Employee Location	Specify if the default location assigned to a warehouse employee should be retrieved when creating a receipt. You can assign a location to a staff member by opening the Warehouse Employees page and selecting the Default field for a receipt site.
No Def. Receipt Bin Code for Bin Content	Description to follow.
Notify If Whse. Pick Completed	In the standard app, an availability check is performed when you pick from a warehouse shipment. Only items with corresponding quantities are then suggested for a pick, if available. If you turned on this toggle, you receive a message if a pick cannot be created for the entire shipment. This function only applies to locations for which the following toggles are turned on: • Require Shipment • Require Pick
Assemble to Order - Reduce Pick to Avail. Qty.	Turn on this toggle if you want component availability to be considered for assemble to order and—if necessary—lower quantities for picks to what can be supplied. **Example** You create a warehouse shipment for a 10-bike order to assemble. A bike is made up of 2 wheels and 2 pedal components. In total, 20 bikes are stocked but only 10 pedals. If the toggle is turned on, the quantity to pick is reduced to 5 bikes.
Delete Pick on Registration	When you create a pick, an availability check is run. If inventory accounting and physical stock values differ, the pick cannot be registered. With the toggle turned on, the pick is then deleted as well. This function only applies to locations for which the following toggles are turned on: • Require Shipment • Require Pick

ASSIGN CUSTOMERS TO FORECASTS

You can now set up forecasts for certain customers or customer groups.

1. Choose the Search icon, enter Demand Forecasts, and then choose the related link.
2. On the ribbon, choose New.
3. Specify a code and description for the forecast, and then choose Edit Demand Forecast.
4. On the General FastTab, in the Sales Type Filter field, specify if you want to assign the forecast to a certain customer or a customer group.
5. In the Sales Code Filter field, you can then enter the customer or group that the forecast should be assigned to.

Advanced demand forecasting

Although a must for wholesale items with long lead times, demand planning in the standard app requires a great deal of effort and remains a manual process throughout.

A new feature therefore combines the potency of forecasts based on historical data with options for integrating demand-related records that originate outside the Microsoft Dynamics 365 Business Central1 environment.

Setup Advanced demand forecast

As a first step, you need to set up a schedule for advanced forecasting.

1. Choose the Search icon, enter Demand Forecast Schedules, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following tables.

General

Field	Description
Code	Specify a code for the schedule.
Description	Specify a description for the schedule.
Status	Specify the status of the schedule. Options are: • New • Active • In Progress • Disabled

Lines

Field	Description
Calculate By	Select a basis for forecasting. Options are Day, Month, Week, Quarter, and Year.
Quarter	Needs to be filled in if you selected Quarter in the Calculate By field.
Week	Needs to be filled in if you selected Week in the Calculate By field. You can enter a value between 1 and 52 here.
Month	Needs to be filled in if you selected Month or Day in the Calculate By field.
Day	Needs to be filled in if you selected Day in the Calculate By field.
Sales Type	Specify if the line should be used for a specific customer or a group of customers or leave the field blank for the line to apply to all customers.
Sales Code	Depending on the selection you made in the Sales Type field, you can specify a customer or customer group here. This field is grayed out if you left the Sales Type field blank, however.
Value Adjmt. Type	Specify whether historical consumption values should be lowered or raised by a certain percentage.
Value Adjmt. %	Specify the percentage by which historical consumption values should be lowered or raised in the period shown on the page.
Qty. Rounding Type	Specify if and by how much consumption values should be rounded. **(blank)** Values are not rounded. **Nearest** Values are rounded to the nearest integer. **Round Up** Values are always rounded up. (But see the Qty. Rounding Precision field.) **Round Down** Values are always rounded down. (But see the Qty. Rounding Precision field.)
Qty. Rounding Precision	Specify how calculated consumption values should be rounded. **Examples** 0.01: Rounds to two decimal places. 0.05: Rounds to a value that can be divided by 0.05. 1.00: Rounds to integer (no decimals and can be divided by 1). 10.00: Rounds to integer (no decimals and can be divided by 10).

Manufacturing Setup

After you’ve set up a calculation schedule for use in forecasting:

1. Choose the Search icon, enter Manufacturing Setup, and then choose the related link.
2. On the trade365 FastTab, fill in the fields described in the following table.

Field	Description
Use Advanced Demand Forecasts	Turn on this toggle so that you can work with the advanced forecast functionality.
Default Calculation Schedule Code	Select the calculation schedule that will be used by default to forecast demand. The schedule must be in the Active status.

Inventory Setup

As a next step, you need to configure the use of historical item ledger entries in demand forecasting.

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. On the trade365 FastTab, fill in the field described in the following table.

Field	Description
Historical Item Ledger Entries Until	Specify up to when historical item ledger entries should be included. Following this date, the functionality will use only current Microsoft Dynamics 365 Business Central1 entries.

Demand forecast templates

You also need a template for forecast worksheets:

1. Choose the Search icon, enter Demand Forecast Templates, and then choose the related link.
2. Fill in the fields described in the following table.

Field	Description
Name	Enter a name for the template.
Description	Specify a description for the template.

Afterward, use the Worksheet Names function on the ribbon and again enter a name and description. You can then run the Edit Worksheet action to open the worksheet page.

Workflow Import historical item ledger entries

Historical item ledger entries from previous or external systems can be copied to the app with the help of a configuration package. For more information, see Set Up Company Configuration Packages.

On the relevant configuration package card, in the Table ID field, you can then select table 5157193 KVSTRDHistItemLedgerEntry (captioned ‘Historical Item Ledger Entry’) and choose Table > Fields on the Tables FastTab to configure the fields of the table as shown in the following.

Field ID	Include Field	Validate Field	Processing Order	Relation Table ID (Caption)
10	Yes	Yes	1	
20	Yes	Yes	2	
30	Yes	Yes	3	
40	No	No	4	
50	Yes	Yes	5	
55	No	No	6	5157127 (KVSTRDCustomerGroup)
60	No	No	7	5722 (Item Category)
70	Yes	Yes	8	27 (Item)
80	Yes	Yes	9	5401 (Item Variant)
90	No	No	10	
100	No	No	11	
110	Yes	Yes	12	14 (Location)
120	Yes	Yes	13	
130	Yes	Yes	14	5404 (Item Unit of Measure)

Afterward, exit the page and run the Export to Excel function. Enter the relevant historical data in a new Excel workbook, close the file, and choose Import from Excel. As is standard when working with configuration package, you must then run the Get Data function to retrieve the data you’ve entered in the workbook.

Demand forecast worksheets

To set up a new forecast worksheet:

1. Choose the Search icon, enter Demand Forecast Worksheets, and then choose the related link.
2. In the Name field, select a name for the worksheet.
3. On the ribbon, choose Calculate Plan to fill in the page with data. For a more detailed plan, you can also fill in the fields on the request page as described in the following table.

Field	Description
Calculate By	Specify how demand should be calculated and shown in the worksheet. **(empty)** With no option selected, demand is calculated per day. **Day** Demand entered on the worksheet is calculated for each day within the specified period. **Week** Demand entered on the worksheet is calculated for each week within the specified period. **Month** Demand entered on the worksheet is calculated for each month within the specified period. **Quarter** Demand entered on the worksheet is calculated for each quarter within the specified period. **Year** Demand entered on the worksheet is calculated for each year within the specified period. **Note** If a different calculation method is entered on the schedule that the demand plan is based on, the calculated quantity is split up on the worksheet in the Quantity field (period = quarter 1) into equal halves. **Example** You specify on a forecast schedule that first-quarter demand needs to be calculated with a 10% buffer in mind. The item ledger entries that have already been posted in the stated period are: 30 touring bikes sold on Jan. 12 20 touring bikes sold on Feb. 20 10 touring bikes sold on Feb. 27 This means that 60 bikes have been sold so far; with a 10% buffer, this comes to 66 bikes for the entire quarter. On the worksheet, in the Calculate By field, you then choose the Month option. As a result, three lines with the following values are added to the worksheet: January quantity (in period) = 20; forecast = 22 February quantity (in period) = 20; forecast = 22 March quantity (in period) = 20; forecast = 22
Forecast Type	Specify if you want to plan demand for sales items or components on the worksheet.
Item Filter	Here you can filter for the items that must be filled in on the worksheet.
Forecast by Variants	Turn on this toggle if you want to create a forecast line for each variant. With the toggle turned off, the variant quantities are aggregated, and their total is shown as an extension of the main item.
Variant Filter	Here you can filter for the variants that must be filled in on the worksheet.
Forecast by Locations	Turn on this toggle if you want to use only certain locations for planning. With the toggle turned off, forecast quantities are calculated for all locations available in the system.
Location Filter	Here you can filter for the locations that must be filled in on the worksheet.
Review Period Start	Specify from when past demand will be shown.
Review Period End	Specify until when past demand will be shown.

Field	Description
Use Historical ILEs	Turn on this toggle if you want to use historical item ledger entries in addition to existing entries. With the toggle turned off, only the ledger entries in your company are used.
Consider Lost Revenue	Turn on this toggle if you want the forecast to consider potential revenue losses.
Sales Type	Specify if you want to forecast demand for a certain customer or customer group only. Leave the field empty if you want to consider all records within the period.
Sales Code Filter	Depending on what option you selected in the Sales Type field, choose a customer or customer group in this field.
Use Calculation Schedule	Turn on this toggle if you want to use the calculation schedule that is stored in Manufacturing Setup. With the toggle turned off, quantities are forecast as selected in the Calculate By field (see above). As a result, the Quantity (Period) will be the same as the Forecast Quantity.

After running the Calculate Plan function to fill in the worksheet, you can check the data you’ve entered, especially the Forecast Quantity values.

If necessary, you can then adjust the quantities manually. To approve forecast quantities, select the Accepted field on the relevant lines or use the Accept All Worksheet Lines action on the ribbon. Otherwise, run the Reject All Worksheet Lines function if you don’t want to take over any of the lines.

To restart planning, you can use the Clear Worksheet function.

As a next step, you can add the accepted forecast quantities to an existing demand forecast or create a new forecast.

Create a demand forecast

To set up a new forecast with accepted lines, choose Create Forecast on the worksheet ribbon.

Specify a name, a description and specify whether all, none, or the accepted or rejected lines should be deleted from the forecast worksheet after running the action. The accepted lines are then copied to the new forecast.

Add to an existing forecast

To add worksheet lines to an existing demand plan, choose Add to Existing Forecast function from the worksheet ribbon.

Select the name of a demand forecast in the In Process status and specify if all, none, or the accepted or rejected lines should be deleted from the worksheet after choosing OK. Each accepted line is then copied to the new forecast.

Demand forecast status

The Demand Forecasts and the Demand Forecast Overview pages have been extended to include the Status field, with the options being In Process, Active, and Expired.

If you’re working with the advanced forecast feature, only one forecast can be active at a time. This plan in the Active status is then automatically copied to the Current Demand Forecast field on the Planning FastTab in Manufacturing Setup to make it available for use on requisition and planning worksheets.

SPECIFY REPLACEMENT ITEMS

Products are often redeveloped, with new versions of them put on the market at regular intervals. In the standard app, much manual intervention is required to manage this process.

For this reason, trade365 provides you with a Replacement Item feature. The feature alerts staff members to replacement items automatically so that they can choose whether to ship the original item stock or that of the new item.

Setup

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.

2. On the KUMAVISION trade365 FastTab, turn on the Use Item Replacements toggle.
3. Open an item card. On the General FastTab, click the Assist button in the Item Replacement No. field to get to the Item Replacement page. The fields on the General FastTab there are filled in with source item data.
4. Assign replacement items on the document lines as described in the following table.

Field	Description
Item No.	Enter the number of the replacement item.
Variant Code	Fill in this field if only a certain variant should be considered a replacement.
Description	Enter a description for the replacement item.
Description 2	Here you can enter an additional description for the item, if necessary.
Replacement Qty.	Specify the quantity by which the source item quantity is replaced.
Unit of Measure Code	Specify a unit of measure for the replacement item.
Starting Date	Specify when the item should replace another. Starting on that day, you might see a message during document entry.

> **Note**
>
> We recommend that you block the source item in purchasing.

Sales

If an item is entered on a sales document and a valid replacement has been stored for the item, you’re notified of this after you specify a quantity.

You’re also shown the quantity entered and the total available for the source item. To proceed, you then need to select one of the options described in the following table.

Option	Description
Use Item Qty. Available	If the quantity available is smaller than the value entered, the system reduces the quantity that you entered for the source item to what is available.
Use Qty. Available and Replacements	If the quantity available is smaller than the value entered, the system reduces the quantity specified for the original item to what is available and adds another line where the replacement item is filled in together with the amount still outstanding.
Use Entered Replacement Qty.	The original item line is deleted. The system then creates another line where it enters the replacement item and the original quantity.

Inventory range

Although the suggestions used in inventory range planning are based on past consumption, you can also use the feature for replacement items.

The range is then calculated based on the consumption levels logged for the source item, which will significantly reduce the complexity of planning.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Service

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s service department.

PURCHASING CODES: SERVICE ORDERS

Standard functionality gives you the option of storing a purchasing code on an item card if you only procure the item by drop shipment, for example.

In trade365, you can also ship spare parts in this way, such as when you need to deliver replacement items directly from a supplier to a customer (see Special Orders and Drop Shipments in Service):

1. Choose the Search icon, enter Service Management Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Copy Item Purchasing Code toggle.

Any purchasing code stored on an item card is then copied to service lines as well.

> **Note**
>
> Purchasing codes aren’t entered on service quotes, however, but only on the orders that are created from them.

AUTO-CREATE SERVICE ITEMS ON PURCHASE

In the standard app, you can specify in a service item group that when selling a certain item, you can have a service item created for it automatically.

In trade365, you can already create a service item when you buy a product for a sales order, for example, to prepare for remodeling.

1. Choose the Search icon, enter Service Item Groups, and then choose the related link.
2. On the ribbon, choose Create Service Item (Purch.) for the item group for which items should be created as service items during purchasing.

When you post a warehouse receipt, service items are then set up for all items assigned to the group. Information about the vendor whom you purchased the items from is also copied to the service items and stored for later use in sales.

SHIP-TO ADDRESS FIELDS

To replace ship-to-address information on service documents, the following fields have been added to customers’ ship-to address cards:

- VAT Bus. Posting Group
- Gen. Bus. Posting Group
- VAT Registration No.

If nothing is specified in these fields on the ship-to address, the corresponding fields of the customer will be used for the service documents.

By specifying a VAT Business Posting Group, General Business Posting Group, and VAT Registration No. for an address, you can preset VAT values for goods that were ordered by a domestic customer but need to be shipped outside the country, for example. This eliminates the need for manual entry on orders on a case-by-case basis, improving both the quality and consistency of your data.

DOCUMENT TEXTS

In principle, you can store standard app texts on invoices created for service contracts. This method isn’t sufficient, however, if you use the KUMAVISION text feature on a regular basis *(for more information, see Extended Text)*.

To print extended customer texts on service documents:

1. Open a customer card.
2. On the ribbon, choose Related > Customer > Extended Texts.
3. Choose a text, and then select the relevant print fields on the Lines FastTab.

> **Note**
>
> Extended item texts cannot currently be retrieved on service quotes and orders.

SERVICE ITEM: POSTED INVOICES

Service items, and their serial numbers, are now available on posted service invoices. Drilling down on either of these fields then shows the service order for which the invoice was created.

SERVICE ITEM FACTBOX

A Service Item Documents FactBox has been added to service item cards, as well as the service item list, to help you find all documents on which a certain item is used.

You can click a highlighted number in the box to get to the relevant item lines, filtered by service orders or quotes, or the posted service shipment lines.

NON-BILLABLE ENTRIES ON SERVICE LINES

The No Billing feature introduced in KUMAVISION base can also be used in the service area. For more information, see Non-Billable Lines.

If you enter a line without an amount on a service document, you must choose an option besides No in the Not Billable field there. Otherwise, you see an error message when you try to post the document later and the posting process will be canceled altogether.

CREATE SERVICE ORDERS FROM SALES RETURNS

If a customer returns an item and, on closer inspection, you determine that the item can be repaired, you can now create a service order from the sales return order.

1. Open a return order.
2. On the Line FastTab, select one or more lines of the Item type, and then choose Create Service Order.
3. You’re asked if the document should be opened. Choose Yes to prepare the service order for further editing.

> **Note**
>
> The shipment of service items isn’t posted together with the related service orders. You can use standard functionality to post the receipt of a return item—but without inventory valuation—and ship it back to the customer through a sales order.

CREATE ORDER WITH SERVICE ITEM OF ANOTHER CUSTOMER

In the standard app, you can specify on a service order only service items that you’ve already set up for the entered customer. Creating an order that another customer might pay for is therefore not an easy task.

In trade365, on the other hand, you can create and process service orders for customers without having to change the owner of a service item in base data. You can also replace owner information when you create a service order if, for example, the item has changed hands in the meantime. To be able to use this feature:

1. Choose the Search icon, enter Service Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, turn on the Disable Cust. Check on Serv. Item Entry toggle.

You can then use any service item on an order. If the customer doesn’t match the owner of the item, you’re asked if you want to replace the information that is stored on the service item card.

Choose No if you want to process the order and nothing more. Choose Yes to change the customer for the service item to the customer shown on the order. Afterward, you can process the service order as in the standard app.

CREATE PURCHASE RETURNS FROM SERVICE ORDERS

If, during repair, you determine that the service item should be sent back to the supplier, you can now create a purchase return order from the service order.

1. Open the relevant service order.
2. On the Lines FastTab, select one or more lines, and then choose Line > Actions > Create Purch. Return Order-Multiple on the ribbon. You must run the function once for each vendor.
3. Select the vendor so that the purchase return order can be opened on request.

> **Note**
>
> To send an item back to a supplier based on a purchase return order, the item must be in inventory, that is, it must have already been posted via a sales return order.

The action can also be run on installation component lines that you selected on a service item worksheet (provided, again, the items to be returned are in inventory).

CREATE SERVICE ITEMS IN SALES AND PURCHASING

In trade365, you can also create a service item directly from a purchase or sales document.

1. Open a purchase or sales document.
2. Create a line with a quantity of 1.
3. On the Lines FastTab, on the ribbon, choose Line > Create Service Item.

The service item is then created automatically and the information from the purchase or sales document is copied to the service item card.

To open a service item, select the relevant document line and choose Line > Show Service Item on the ribbon, or choose Delete Service Item if you want to delete it. If no item is assigned to a line, both functions are grayed out.

MAINTENANCE PLANS

Maintenance plans are used as a convenience option for specifying recurring maintenance tasks and inspections in the service area.

Setup

Types of maintenance

Maintenance types describe the activities that you can specify for a service item on a maintenance plan. To set up a type:

1. Choose the Search icon, enter Maintenance Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	**Description**
Code	Specify an abbreviation for the type.
Description	Specify a description for the type.
Maintenance Cycle	Specifies at which interval service orders should be created for this kind of maintenance work. For example, entering 6M means that an inspection is needed every six months.
Maintenance Duration	Specify how much time maintenance usually takes.
Maintenance Starting Time	Specifies when maintenance orders should be started.
Maintenance Ending Time	Specify when maintenance orders should be completed.

Plans for maintenance

You can create as many maintenance plans for a service item as you like. To set up a plan:

1. Choose the Search icon, enter Service Items, and then choose the related link.
2. Open an item card.
3. On the ribbon, choose Maintenance Plans, and then fill in the fields as described in the following table.

Field	**Description**
Maintenance Type Code	Specify the type of maintenance work (or create a new type here).
Description	Shows the description of the maintenance type.
Maintenance Cycle	Shows the cycle in which this type of work is carried out. You can enter another value in this field if the item must be maintained at a different interval.
Maintenance Duration	Shows the typical duration of this type of work. You can enter another value in this field if maintaining the item requires more or less time than usual.
Maintenance Starting Time	Shows when this type of maintenance work typically starts. You can enter another value in this field if maintaining the service item requires a different starting time.
Maintenance Ending Time	Shows when this type of maintenance work typically ends. You can enter another value in this field if maintaining the service item requires a different ending time.
Starting Date	Specifies from when maintenance plans should be created.
Ending Date	Specifies until when maintenance plans should be created.

Required Components

Provided the components required for maintenance have already been set up in the system:

1. Open a maintenance plan.
2. On the ribbon, choose Components.
3. Fill in the fields as described in the following table.

Field	Description
Type	Specify the type of component. Options are: • Item • Resource • Cost • G/L Account
No.	Based on the option selected in the Type field, enter the number of an item, a resource, or a G/L account or a cost code here.
Variant Code	If needed, select a specific item variant that should be maintained.
Description	Shows the description of the item, resource, G/L account, or cost code.
Description 2	Shows the additional description of the item, resource, G/L account, or cost code.
Quantity	Specify the item quantity needed for maintenance.
Unit of Measure Code	Specify the unit that will be used for the maintenance item.

All components you need must be entered here. They’re then copied from this page to the relevant order lines when service orders are created by the system.

Maintenance orders

To set up orders for carrying out maintenance work:

1. Choose the Search icon, enter Create Maintenance Orders, and then choose the related link.
2. On the General FastTab, use the Starting Date and Ending Date fields to specify the period that maintenance orders should be created for.
3. If you only want to create service orders for certain items, use the filters on the Filter: Service Item FastTab.
4. Choose OK to run the report.

Afterward, service orders and maintenance entries are set up automatically, and the orders are processed based on standard business logic. For more information, see Service Management - Business Central | Microsoft Learn.

Maintenance Entries

For an overview of all maintenance entries created in the system, open the Maintenance Entries page (available via the general search function).

As an alternative, you can open a service item card and then choose Show Document to see the service orders associated with this item.

LOCATIONS ON SERVICE DOCUMENTS

At wholesale companies, the warehouse area where service items are stored is often run by another team than the rest of the site.

To specify an area where service cases are processed:

1. Choose the Search icon, enter Service Management Setup, and then choose the related link.
2. On the trade365 FastTab, in the Default Location Code field, select the code that will be used by default when creating a document in service.

   If you leave the field blank, a location will be determined according to standard app logic.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Subcontracting

Outsourcing or subcontracting certain operations, in particular finishing and assembly, is a common practice in many industries, for example, to prevent capacity shortages or to let in-house staff focus on core business functions.

To complete a job, a subcontractor is often supplied with materials, or semi-finished products even. In trade365, you can use transfer orders to ship both to the vendor and print shipment notes based on the transfers you posted.

When you later post the subcontracted work as received, each item consumed during the completion of requested operations is then taken from the vendor’s warehouse instead of your own.

SETUP

Before you can subcontract work on components and products, you must set up the manufacturing area. For more information, see the Microsoft Dynamics 365 Business Central[1] Helpsite. Only the differences to standard functionality will be explained in the subsections of this chapter.

Production BOMs and BOM versions

Lines

You must fill in the Routing Link Code field for the relevant production BOM (or version), to specify parts as raw materials supplied to a vendor. You also need to fill in the Type of Part Provided field (see the following table).

Option	Description	Note
(blank)	Standard functionality will be used (no materials will be supplied to the vendor).	
In Advance	Parts will be provided to the vendor when a production order or operation is subcontracted.	Requires a routing link code.
General	The vendor will receive an item quantity regardless of whether work has been subcontracted. When it is, only the production order document will be sent, as the required parts have already been delivered. To able to use this option, the subcontractor’s site must be entered as the outbound location on the related work center card (see the Posting FastTab there).	Requires a routing link code.
By Vendor	The material or item is shown on the BOM in a FactBox, for informational purposes. As all materials and items are purchased by the vendor, their costs are included in the total subcontractor price. This option is also used if the materials or items needed to finish subcontracted work are provided by one of your customers, as no inventory or warehouse postings must be made in this case.	Does not copy information to manufacturing.

Note

You can use a routing link code to tie a component supplied with an item BOM to a manufacturing operation. The code specifies the operation the item is needed, that is, consumed for. Like in the standard app, you must first enter the operation before you can link the part to the BOM. Otherwise, you see an error message when you try to certify the bill of materials.

Tip

We recommend that you use a separate routing link code for each subcontractor.

Certify BOMs

To streamline data maintenance, you can select multiple bills of materials on the production BOM list page and run the Certify Prod. BOMs-Multiple action from the ribbon.

The action then certifies all selected BOMs on which the status is set to New. Those that cannot be certified will be skipped and their original status retained.

Routing and routing versions

Lines

Field	Description
Standard Task Code	Fill in this field if a subcontractor takes over multiple operations, each with its own price tag. The code is then used to separate tasks on the purchase order created for the vendor. You do not need to fill in this field if only one operation is subcontracted per item.
Routing Link Code	Specify a code for the routing link.

Certify routings

To streamline data maintenance, you can select more than one routing on the routing list page and choose Certify Routings-Multiple on the ribbon.

The action then certifies all routings on which the status is set to New. Those that cannot be certified will be skipped and their original status retained.

Work center card

General

In the Department Code field, fill in the Subcontracting department.

Posting

Field	Description
Unit Cost Calculation	If work is performed in the unit of measure Piece, set this field to Unit.
Specific Unit Cost	As for taxation, you might need two groups, one for subcontractors who charge the full tax and another for those whose work is subject to a reduced rate.
Subcontractor No.	Fill in the vendor to whom you subcontract work.
Subcontractor Location Code	Specify the location that will be used to transfer the item supplies.
Product Bus. Posting Group	Specify the G/L accounts that you want to post to in sales and purchasing. For an easier overview of the postings made in the system, we recommend that you set up a group that will be used solely for subcontracted work.

Planning

Set the Unit of Measure Code to Day unless the contract between you and the vendor says otherwise. Typically, you also create a new company calendar for subcontracted work.

Ribbon functions

To store subcontractor prices, choose Related > Work Ctr. on the ribbon.

Calculate subcontractor prices

In the standard app, the price for subcontracting, that is, the cost later used on a purchase order, can only be entered on this card. You therefore cannot enter different prices per vendor, quantity, operation (standard task code), or period.

In trade365, subcontracted work has its own price table, for which data can be specified in various parts of the system. These entries then replace the values stored for the work center. You can set prices by period, piece, or specific unit cost.

Subcontractor prices

Prices (and, potentially, block prices) for subcontracted work can be stored in combination with:

- Work centers (required)
- Items (required)
- Vendors (required)
- Standard task codes (subcontracted operations)
- Starting and ending dates
- Minimum quantities (block prices)
- Price units (conversion factors based on weight)

You can filter for them on the following pages:

- Item Card or Items
- Work Center Card or Work Centers
- Vendor Card or Vendors

To have ending dates assigned to subcontractor prices automatically when a new price is created, you need to turn on the Auto Close Subcontractor Prices toggle in Manufacturing Setup. The ending date that is filled in will be one day before the new price becomes valid.

Transfer routes

With the help of a transfer route, you can link a warehouse owned by a vendor (subcontractor) to your own. To set up a route:

1. Choose the Search icon, enter Transfer Routes, and then choose the related link.
2. On the Transfer Routes Matrix, go to the line containing the warehouse that you want to remove items from, and then click the site (highlighted in blue) that the items should be moved to.
3. On the Trans. Route Spec. page, enter your warehouse in the In-Transit Code field. You must fill in this field. The other fields can remain blank if no shipping agent has been specified.

> **Note**
>
> You should also set up a transfer order type called Subcontract Transfer. For more information, see Order Types.

You can then exit the Trans. Route Spec. and Transfer Routes pages.

WORKFLOW

Example
You schedule production and release the production order. For tracked items, you also link the relevant tracking lines to the components and the order itself.

Subcontracting worksheet

Calculate subcontracted work

Afterward, you open the Subcontracting Worksheets page.

To see the released order, set a filter on, for example, the work center, vendor, or production order number. The worksheet then lists all pending subcontract work. The vendor is retrieved from the work center, whereas prices are shown based on how you've set them up in the system.

Change a vendor

On the worksheet, you can change the vendor on each individual line (=order). The subcontractor prices you specified for the new vendor are then retrieved automatically.

Carry out action message

To copy a subcontracting worksheet line to a purchase order, you can use the Carry Out Action Message and Accept Action Message functions. Both can be found on the ribbon.

You can create the necessary transfer order by selecting the Create Transfer Order field on a line. Lines for which the field isn’t selected remain.

Released production order

Track subcontracted work

You track subcontracting on production order lines as follows:

1. Open a production order.
2. Select a line. On the ribbon, choose Line > Track Subcontracting.

You can then see and open the documents linked to the line.

Purchase order

When you create a purchase order for subcontracted work, the components for production are provided by transfer. This also means that the description of an item on a purchase line doesn’t include the name of the product but of the subcontracted service.

Moreover, you can unhide the following production-related fields on purchase lines:

- Subcontrd. Items
- Subcontrd. Qty. at Subcontractor
- Production Order No.
- Production Order Line No.
- Work Center No.
- Operation No.

Item tracking information assigned to production will be printed as well.

The relevant order type is also set automatically if purchases originate with a subcontracting worksheet, although the type can be changed, if necessary. It is used to prefill certain order data, including the terms of payment.

> **Note**
>
> You need to set up a purchase order type called Subcontrd. Purchase Order for this purpose. For more information, see Order Types.

The associated operation is then reported when an order quantity is received.

Subcontractor reference

When you print a purchase order, the components provided on transfer lines to a vendor for completing operations are referenced on the document. You also see the total price for the subcontracted work as specified earlier (see Calculate Subcontractor Prices).

If a block price is assigned to the relevant work center, this price will be used (and updated) automatically.

Post shipment

After you post the purchase order, a warehouse receipt containing the items manufactured is posted. At the same time, the inventory level at the vendor’s location is reduced by the component quantity provided (and then consumed) during manufacturing.

You can see on a released production order when each associated purchase has been received. After all of them have, the progress bar on the production order is set to 100%.

> **Note**
>
> With the Check Rcvd. Not Invd. Subcontrd. Orders toggle in Manufacturing Setup turned on, a production order cannot be finished before all subcontractor invoices related to the order have been posted in full. We recommend that you turn on this toggle so that a unit cost statement always includes the subcontractor prices you specified and isn't readjusted.

Transfers

On the General FastTab of a transfer order, in the Transfer Order Type field, you can see if an order is being used to move items for subcontracting.

If you don't receive separate receipts from a subcontractor, you can turn on the Auto Post Shpt. as Receipt toggle on the same FastTab; else, the goods supplied to the vendor would remain in the specified in-transit location, and you would need to post the inventory put-away for the vendor separately.

If an actual item, that is, a semi-finished product, is sent along, the amount shipped isn't shown in the Quantity but the Subcontractd. Qty. field. This is because the item hasn't been put into inventory yet.

Materials provided to the vendor, on the other hand, are shown in the Quantity field, as they must be taken from the subcontractor's warehouse (with Type of Parts Provided set to For Order).

You can then ship the relevant components to the subcontractor via transfer.

> **Note**
>
> Turn on the Auto Post Shpt. as Receipt toggle if you don't expect a subcontractor to send a separate receipt. This is because when a transfer order is posted, quantities are first posted to a transit warehouse along the specified route. If you don't turn on the toggle, you need to then post the receipt. For components that must be provided, you can create warehouse and inventory documents, such as a warehouse receipt or shipment, from the transfer order.

SUBCONTRACTING AND AUTO POSTING

To be able to use automatically generated consumption postings, you need to set up the feature. You can also post consumption manually, if necessary.

Setup

Set the posting method on the production BOM, and—consequently—the component, to Backward.

Requirements

If item tracking is turned on, store the tracking data with the components.

Workflow

When the items are shipped, consumption is now posted automatically.

Post consumption manually

In the production journal, you can see all consumption lines and post them manually, if necessary. The output line linked to a subcontracted operation, however, isn't shown here, as it must be posted through the purchase order.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Rental management

Fully integrated into the service and fixed asset areas of Microsoft Dynamics 365 Business Central[1], the Rental Management functionality provides you with the tools you need to rent out equipment, including a visual representation of rental schedules, lists of accessories and surcharges (such as for insurance), and new pricing options.

> **Note**
>
> You need a separate license before you can use this functionality.

SETUP AND BASE DATA

Role center

In trade365, equipment rentals are managed on a separate Role Center page. You can also run the graphical planner from there.

1. On the ribbon, choose the Settings icon, and then choose My Settings.
2. In the Role field, choose Rental Manager.

If you can’t find the role, you might need to add it first. For more information, see Manage User Profiles.

Setup

To configure the functionality:

1. Choose the Search icon, enter Rental Setup, and then choose the related link. Alternatively, open the Rental Manager role center, and then choose Setup > Rental Setup on the ribbon.
2. Fill in the fields as described in the following table.

General

Feld	Beschreibung
Base Calendar Code (Rentals)	Select a calendar besides the base calendar if you want to rent (and invoice) equipment at times that differ from your regular schedule, for example, on Saturdays.
Date Filter (Upcoming)	Enter a formula to specify how you want dates filtered when you click a tile such as Upcoming Pickups or Overdue Rental Orders on the role center. For more information on how to set up a formula, see Work with Calendar Dates and Times. **Tip** Click a tile to see if the specified formula meets the needs of your business. You can then extend or shorten the period for which dates are shown, if necessary.
Insurance %	Specify a percentage for insurance. The value entered in this field will apply when you want insurance fees calculated but have not assigned any to the rental item or the category that it belongs to. For more information on how to set up fees, see Additional Rental Lines Setup, Item Categories, and Resources.
Unit of Measure (Hour)	Specify the unit that will be used to rent out equipment per hour.
Unit of Measure (Day)	Specify the unit that will be used to rent out equipment per day.
Use Rental Item Dimensions	Turn on this toggle if you want resource or item dimensions copied to rental documents.
Check Inspection Lists on Post	Turn on this toggle to ensure that the system checks during posting whether the relevant inspection checklists are filled in.
Customer Location Code	Specify where customers get their rental equipment from.

Rental Planner

On this FastTab, you can specify the colors that you want rental items and documents to be shown in when you work with the visual planner. You can choose any RGB color you like.

Item categories

Item categories can be used to group and classify rental equipment and to prepare rental quotes. The pricing function also uses these categories.

1. Choose the Search icon, enter Item Categories, and then choose the related link.
2. Select a category, and then fill in the fields described in the following table.

Field	Description
Rental Resource No.	Select the resource that rental income based on this category should be posted to. You can use different resources to post income to a variety of accounts.
Use for Rentals	Select this field to specify that the category is used for rental management (including for the visual planner).
Rental Inspection Code	Select the checklist that will be used for equipment handovers and returns, as well as maintenance.
Rental Insurance %	Fill in this field if you want to specify a different insurance rate for this category than the rate entered in setup.

Set up additional rental lines

Additional rental lines can help you with filling in a rental document. You enter on them items and resources that should be added automatically to any rental quote or order that you create.

The lines ensure that documents include, for example, an insurance policy, the sales items needed for machine rentals, and the names of service technicians.

Additional lines are created based on the category that a rental item belongs to. You can specify standard items, G/L accounts, or resources here. Unlike a rental component, an additional rental line is entered in the form of a new line on a document, typically together with a calculation value.

> **Tipp**
>
> We recommend that you use components assigned to a rental item when you need to rent (and record) additional parts that, for example, must be delivered during handover. This way, they are shown on documents but are not entered on separate lines (and can then be used on instruction sheets or for tool setup).

Pricing

To set prices for renting equipment, open the Rental Prices page by using the Tell Me function, or choose Actions > Rental Prices on the role center.

Rental fees are created based on item categories and rental price groups. A group contains, for example, corporate prices only. Like in sales, this feature can be used to:

- assign block prices and minimum quantities to item categories.
- show amounts with or without VAT.
- assign a sales type to a customer price group, a campaign, or a single customer.
- specify price validity via starting and ending dates.
- view historical price data.

Resources

Billing

You must create at least one resource for settling rental invoices.

1. Open the relevant resource card.
2. On the General FastTab, turn on the Billing Resource toggle.
3. Select Hours in the Base Unit of Measure field.
4. Add another measure for days so that the system can convert between units of time.

You can create more than one billing resource if you need to post an item category to different accounts depending on the situation.

> **Note**
>
> No prices are directly stored with a resource.

What resource is used to bill what type of item can be specified on the Item Categories page. To link a G/L account to rental equipment:

1. Open the Item Categories page.
2. Fill in the Rental Resource No. field.

Insurance

To calculate added insurance costs (for example, to cover downtime or theft of machinery), you also need an insurance resource.

1. Open the relevant resource card.
2. On the General FastTab, turn on the Rental Insurance Resource toggle.

If insurance fees are billed as a lump sum, set the Base Unit of Measure field to Piece. If they’re calculated based on the number of days that the item is to be insured, fill in the field with the unit set up for billing by day.

Rental items

To create a rental item:

1. Choose the Search icon, enter Rental Items, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following.

> **Note**
>
> You must choose New; the other, similar-sounding action on the ribbon—New Item—is run to create standard, not rental items.

General

Because rental equipment and machinery must always be bought upfront, the relevant item is often already available in the system so that it can be used as a template for the rental item. The rental item then inherits the categories, the description, and the search terms from the standard item.

Note

Rental items originate from standard service items. This means that they're listed on the Service Items page as well. Like in the standard app, you also cannot delete them after they've been posted.

Field	Description
Rental Item	Selected automatically to specify the item as a rental item.
Responsibility Center	Select a location to specify who has access to the rental item. The location must be set up and the relevant users must already be assigned to it.
Rental Calendar Code	Specify a calendar for the rental item. This calendar might be different from the base calendar, for example, because you want to rent and bill equipment also on weekends. You only need to fill in this field if the period for which the item is rented out differs from your usual schedule. As an example, a construction dehumidifier might need to run 7 days a week, whereas other machinery is used only during work hours.
Capitalized Fixed Asset No.	These fields are selected automatically when the item is capitalized. For more information, see Fixed Asset Capitalization.
Rental Insurance Cost Amt.	Turn on this toggle if item insurance costs a certain amount per day covered and isn't based on a percentage of the total.
Rental Insurance Cost Amt. (per Day)	If necessary, specify an amount that will be used to calculate item insurance per day. **Example** Although the item has been rented out from this Monday to Tuesday next week, the days it will need insurance on might be fewer (9 calendar days in total, of which the machine will be in operation on 7, that is, excluding weekends). Your rental calendar determines how many days coverage will apply. The system copies this number to rental orders automatically.

Customer

On this FastTab, you can see the customer for whom service orders, or follow-up services, might be created when a rental item is returned.

Vendor

Here you can add information about the vendor.

Details

On this FastTab, you can add fields for informational purposes.

Ribbon functions

The functions on the ribbon can provide you with more detailed information about the rental item, such as what standard items it is related to, which checklists have been set up for it, when it is available, and what it looks like.

Show operating hours

Shows the current number of hours an item has been in operation. The value is updated when you post a return to a rental order. Additionally, you can see here whether hour-counting has been reset.

Rental item bom

Shows where you can enter components for this item.

> **Note**
>
> In contrast to additional rental lines, components specify parts that will be supplied with the rental item in any case. Examples are safety vests and similar gear.

Rental item capacity

Like resources, rental items require capacity for planning purposes. Capacity must be set up for each item individually.

Capacity settings also have an impact on general item availability. When you start up new equipment, you can, for example, fill in the Starting Date field to specify that the machine should already be listed as available for rent. In the same way, you can use the Ending Date to specify when certain items will no longer be in use.

Set capacity

1. On the role center, click Plan > Item Rental Capacity, or open the page by using the Tell Me function.
2. On the Matrix Options FastTab, in the View By field, specify the period for which rental items should be shown.
3. Select the rental item that you want to set capacity for, and then choose Create Capacity on the ribbon.
4. Specify a starting date and an ending date. If you’ve set up work-hour templates, you can select one here.
5. Specify for each weekday how long the item should be available.
6. Choose Set Capacity to fill in the Item Rental Capacity matrix.

By clicking the Avail. Rental Items tile on your role center, you can then see if a certain item can be rented out.

Handover reports and checklists

In trade365, you can create reports to document the handover and return of rental items. See also Rental Orders. To set up the feature:

1. On the role center, choose Setup > Rental Checklists.
2. On the ribbon, choose New.
3. Specify a code and a description for the report, and then choose Report Q&A on the ribbon.
4. In the Type field, select Question, and then enter the checklist question.
5. On the next line, select Answer, and then fill in the Description field.

More than one line following a question can be set up as an answer line, and you can specify on each if multiple answers are allowed.

Example
You create one line of the Question type where you enter Tank Capacity in the Description field. You then create three lines of type Answer, with descriptions ranging from Full to Half-Full to Empty. You then specify that only one answer is allowed for the question.

Follow-up service

The Rental Follow-Up page, which you can get to by using the general search function, can help with scheduling equipment availability and ensure that the items you rent to customers stay in perfect condition.

You can decide here for each category of rental item whether to include fees for fuel service or damage repair on final invoices and how long you will need to clean and maintain the equipment following its return.

A service order, to which you can post the required spare parts and times, is then created automatically.

> **Note**
>
> You can also open the page by choosing Setup > Rental Follow-Up on the action bar of the Rental Manager role center.

WORKFLOW

Rental quotes

Rental quotes can only be created for actual customers; writing a quote for a contact isn’t possible. Quotes are typically created at item category level, that is, assigning a quote to a certain device isn’t necessary at this point.

However, you must select a specific rental item if a quote should be included in capacity planning. Extended texts and alternative addresses are entered in the sales area.

> **Note**
>
> You need to ensure that the Long-Term Rental toggle is turned off on the document, as the toggle only applies to orders. You can use the Personalize function to hide it.

Create a quote

1. Choose the Search icon, enter Rental Quotes, and then choose the related link.
2. On the ribbon, choose New.
3. On the General FastTab, specify a customer, and then fill in the other fields as necessary. If you’re using price groups for rental management, you need to select a group here.
4. On the Lines FastTab, select the category of items you’re writing a quote for. The billing resource assigned to the category is then copied to the line automatically.
5. Specify a rental period by filling in the Rental Starting and Ending Date fields. When you bill by day, the start and end times are set to 00:00 and 23:59, respectively. However, you can change them, if necessary.
6. A page with rental lines opens if you’ve created any for the item category. Select Apply on the lines that you want to retrieve and exit the page by choosing OK.
7. You can then add more rental item, sales item, or resource lines, if necessary. When you’ve entered them all, you can release the quote and print or send it like any other document in the system.

> **Tipp**
>
> Use the Personalize function to sort the columns on rental quotes so that the date and time fields are shown to the right of the item category.

> **Note**
>
> This help section is still being expanded. More content will follow soon.

RENTAL ORDER

Create a rental order

You can create a rental order in multiple ways:

- Open an existing rental quote, and then choose Make Order on the ribbon to create a rental order from the information entered on the quote. You can then change or enter new content on the order.
- On the home page, choose Rental Orders, and then choose New to create a blank rental agreement.
- Open the Rental Orders page by using the Tell Me function, and then choose New on the ribbon.

Most sales order fields and functions can also be found on rental orders, with a few exceptions.

For example, to rent a specific item, you need to fill in the Rental Item No. field on a line. If you use a lookup on the field, you’ll see the items with the required availability and capacity for rental during the period specified on the order.

After you’ve entered all items, you can release the order.

Long-term rentals

With the long-term rental feature, you can invoice rental orders periodically based on a certain date or a billing interval. To set up a long-term contract:

1. Open a rental order.
2. On the General FastTab, turn on the Long-Term Rental toggle.
3. You can now edit the relevant fields on the header to specify a formula or fixed starting and ending dates.

Post a rental shipment

When an item is handed over to a customer, you must post a rental shipment.

1. Open a rental order.
2. Select the relevant item line.
3. On the ribbon, choose Rental > Post Rental Shpt.
4. If components are assigned to the rental item, you can now document any damage, as well as the handover process.
5. Under Comments, you can enter remarks or, if necessary, describe the condition that the rental item is in, as a basis for comparison when the item is returned.
6. After handover, the Rental Shpt. Posted field is selected automatically on the line.

The checklists accessible from the Rental Order page are used as a receipt for the customer when rented equipment is handed out or returned. To print them, choose Actions > Print on the ribbon.

The other items you hand over to the customer with a rental order are supplied with the help of warehouse shipments or picks.

The traffic light system on rental orders, on the other hand, only relates to item purchases created from the order.

Rental interruptions

Rental interruptions make it impossible to use rented equipment, for example, because extraordinary circumstances disallowed its use, or because the item became defective during the rental period and had to be repaired on site.

To be able to document these situations on an order and therefore on the final invoice, trade365 provides you with the rental interruption feature.

With this feature, you can set the criteria that must be met for an interruption period to be free of charge to the customer. The feature only applies to rental fees, not insurance costs.

The interruption also doesn’t change the overall rental period. This means the ending date specified on the order remains. For example, a customer rents an excavator from March to November, but winter strikes again in April.

Workflow

1. Open a rental order.
2. On the Lines FastTab, on the ribbon, choose Rental > Interruption.
3. Specify the period in which the rental item cannot be used (enter the exact times, if possible).
4. Specify the interruption quantity.
5. In the Comment field, include the reason for the interruption.
6. Choose OK.
7. You’re asked if the rental lines should be adjusted. Choose Yes to reduce the quantity on the lines by the Interruption Qty.

Extend or cut short a rental

For extending or cutting short a rental period, change the ending date on a rental order, and then confirm the rental lines to adjust the insurance cover.

CAPITALIZE ASSETS

Capitalization is used to depreciate an asset over its useful life. In trade365, assets can include rental items, for which equipment must first be bought in Microsoft Dynamics 365 Business Central[1].

If it hasn't been, you need to set up and capitalize the equipment in the fixed asset area before assigning it to a rental item.

> **Note**
>
> Consult with your financial department before making any changes to this area.

Setup for automatic capitalization

1. Choose the Search icon, enter Fixed Asset Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, fill in the fields in the Rental Item Capitalization section as described in the following table.

Field	Description
Item Journal Template	Specify the journal template that will be used to remove the item from current assets. We recommend that you create a separate template for this purpose. Only templates of the Item type can be used.
Item Journal Batch	Select the journal name from the template that you selected in the previous field. We recommend that you create a separate journal for capitalizing rental assets. **Note** The journal must be set up in the system. As an alternative, you can create a new journal here by choosing New on the ribbon.
Capitalization Nos.	Specify a number series that will be used for item removal.
FA Journal Nos.	Specify a number series that will be used to post rental assets through a fixed asset journal.
FA General Journal Nos.	Specify a number series that will be used to post rental assets through a general fixed asset journal.

Fixed asset posting groups

Additionally, specify an offset account for rental item acquisitions on the FA Posting Groups page.

The account is required if you use a G/L-integrated depreciation book to post, filling in a general fixed asset journal.

Item categories

You need to use the following category fields for a rental item to create a fixed asset and depreciation books:

- Depreciation Book Code
- FA Posting Group
- No. of Depreciation Years
- FA Class Code
- FA Subclass Code
- Depreciation Method
- 2nd Depr. Book (if you use two; otherwise, leave the field blank).

Source Code Setup

1. Choose the Search icon, enter Source Code Setup, and then choose the related link.
2. On the KUMAVISION trade365 FastTab, fill in the Rental Item Capitalization field.

Workflow

To capitalize rental equipment, you must run the Capitalize Rental Item action from the relevant rental item card.

Remove item from current assets

As a first step, the system checks if the item is part of current assets.

1. For this purpose, it searches for Purchase-type item entries that relate to the entered serial number.
2. If no corresponding entries are found, the process is cancelled.
3. If an entry exists, the item journal that you set up is filled in and the item is removed from the current journal.

Create and post an asset

After the item has been removed, the system creates a fixed asset card and the relevant depreciation books. Depending on how they've been set up, one of the following journals is then filled in and posted to:

- With G/L integration: Fixed Assets Journal.
- Without G/L integration: Assets Journal

If you've set up two books, only the standard book is used automatically. For additional depreciation books, the system will create a (general) fixed asset journal line, and you'll be notified of this so that you can post the line (in the standard app, the journal is filled in, but nothing is posted directly either).

Copy data to an item card

Following successful capitalization, fixed asset information is copied to the rental item card. The Capitalized field is then selected on the card while the Fixed Asset No. field is filled in as well.

You can see the number of the asset and its current book value in the Service Item FactBox to the right.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩↩

Alloy/Metal Surcharges

With this feature, you can add alloy and other metal surcharges to sales and purchase documents in Microsoft Dynamics 365 Business Central[1]. You can also use an API to see the prices that alloys and other metals needed by your company are traded at on certain exchanges.

> **Hinweis**
>
> Tracking exchange prices can carry additional costs beyond app licensing.

SETUP

Alloy Surcharge Setup

To be able to use the feature:

1. Choose the Search icon, enter Alloy Surcharge Setup, and then choose the related link.
2. Fill in the fields as described in the following tables.

General

Field	Description
Enable in Sales	Turn on this toggle if you want to use alloy surcharges in sales.
Enable in Purchasing	Turn on this toggle if you want to use alloy surcharges in purchasing.
Web Service Integration	Specify the API that will be used to retrieve metal prices. **None** An interface should not be used. **Metals-API** Prices are retrieved via the Metals-API. If this option is selected, the Metals-API FastTab, as well as the Open Metals-API Web Service and Map Metals-API Surcharges actions, are unhidden on the setup page. **Metals.Dev** Prices are retrieved via the Metals.Dev API. If this option is selected, the Metals.Dev FastTab, as well as the Open Metals.Dev Web Service and Map Metals.Dev Surcharges actions, are unhidden on the setup page. **Note** The costs incurred through the use of any such interface are not part of trade365 licensing fees.

Metals-API

Note

This FastTab is only shown if you selected Metals-API in the Web Service Integration field.

Field	Description
Metals-API URL	Specify the URL for retrieving prices from an exchange. By default, this field is filled in with the following internet address: *https://metals-api.com/api/latest?access_key=*
Metals-API Key	Enter the key you have received for commercial use of the API.
Metals-API Base Currency	Specify the base currency that will be used for retrieving prices.
Job Queue Entry	Turn on this toggle if you want to create a job queue entry for the daily retrieval of alloy prices via web service integration. You can adjust this entry later if prices should be updated, for example, in 10-minute or 60-seconds intervals *(depending on what options are available to you as per your API payment plan)*.

Metals.Dev

Note

This FastTab is only shown if you selected Metals.Dev in the Web Service Integration field.

Field	Description
Metals.Dev URL	Specify the URL for retrieving prices from an exchange. By default, this field is filled in with the following internet address: *https://api.metals.dev/v1/latest?api_key=*
Metals.Dev Key	Enter the key you have received for commercial use of the API.
Metals.Dev Base Currency	Specify the base currency that will be used for retrieving prices.
Job Queue Entry	Turn on this toggle if you want to create a job queue entry for the daily retrieval of alloy prices via web service integration. You can adjust this entry later if prices should be updated, for example, in 10-minute or 60-seconds intervals *(depending on what options are available to you as per your API payment plan)*.

Alloy surcharges

To assign surcharges to individual alloys:

1. Choose the Search icon, enter Alloy Surcharges, and then choose the related link. Alternatively, run the Surcharges function when you’re on the Alloy Surcharge Setup page.
2. On the ribbon, choose New and then fill in the fields as described in the following table.

Field	Description
Code	Specify a unique code for the surcharge.
Description	Specify an additional description for the surcharge.
Item Charge No.	Choose a surcharge from the Item Charges page (or create one).
Unit of Measure	Select the unit of measure that the surcharge will be based on. Options are: • Gram (g) • Kilogram (kg) • Metric Ton (t) • Pound (lb) • Ounce (oz) • Troy Ounce (oz t)
Base Price	Specify a base price for the surcharge.
Procurement Costs %	Specify the percentage that you want to add to the current (precious metal) price.

Exchange prices

Besides entering a base price for an alloy, you can choose Exchange Prices on the ribbon to maintain prices for a limited period. If the web service integration is turned on, daily prices are stored on the page.

Field	Description
Trading Date	Specifies when the price was retrieved.
Trading Time	Specifies at what time the price was retrieved.
Exchange Price	Specifies the price at the date and time shown.
Unit of Measure	Specifies the unit of measure that the price is shown in. A unit that is maintained on the related Alloy Surcharge Card is automatically retrieved for this price line.
Metals-API Metal Type Metals.Dev Metal Type	Shows in connection with the price the type of alloy surcharge mappings. **Note** You can only see this field if you selected Metals-API in the Web Service Integration field in Alloy Surcharge Setup.
Metals-API Exchange Price Metals.Dev Exchange Price	Shows the price quoted for the specified metal. **Note** You can only see this field if you selected Metals-API in the Web Service Integration field in Alloy Surcharge Setup.
Metals-API Base Currency Metals.Dev Base Currency	Shows in connection with the price the base currency from alloy surcharge mappings. **Note** You can only see this field if you selected Metals-API in the Web Service Integration field in Alloy Surcharge Setup.

Auto-retrieve metal prices – exchange interface

If you want to use an interface to track the exchange prices for certain metals each day, select Metals-API or Metals.Dev in the Web Service Integration field in setup, and then enter your password credentials for the commercial use of the API on the relevant FastTab. You also need to turn on the Job Queue Entry toggle on the tab.

Map API prices to surcharges

For metal prices to be shown, you must tie the surcharges set up in Microsoft Dynamics 365 Business Central1 to the metals traded on an exchange.

1. Open Alloy Surcharge Setup.
2. On the ribbon, choose Map Metals-API or Metals.Dev Alloy Surcharges.
3. Fill in the fields as described in the following table.

Field	Description
Alloy Surcharge Code	Select one of the surcharge codes available in the system.
Metal Type	Select the type of metal and the exchange it is traded on (as per your API).
Metal Type UOM	Shows the unit of measure that this type of metal is traded in.

The price retrieved for the metal is then assigned to the relevant surcharge on the Exchange Prices page.

Assign surcharges to items

You also need to assign the surcharges to the corresponding items set up in the app.

1. Open an item card.
2. If the Alloy Surcharges Exist toggle is turned off on the Item FastTab, choose Related > Item > Other > Alloy Surcharges.
3. Fill in the fields as described in the following table.

Field	Description
Variant Code	Specify the variant that the surcharge will be used for. If the item has no variants, this field remains empty.
Alloy Surcharge Code	Assign the relevant surcharge to the selected item.
Alloy Weight	Enter the weight of the alloy item per base unit of measure. **Example** An alloy surcharge for copper is assigned to item Cable. Whereas the item is specified in meters, the alloy is measured in grams. With one meter of cable containing 500 grams of copper, the weight that needs to be entered in this field is 500.
Unit of Measure	Specifies the unit of measure used for the selected alloy surcharge.
Use in Purchasing	Specify for the selected line if the alloy surcharge should be used in the purchasing area. **Note** This toggle takes priority over the toggle in Alloy Surcharge Setup.
Use in Sales	Specify for the selected line if the alloy surcharge should be used in the sales area. **Note** This toggle takes priority over the toggle in Alloy Surcharge Setup.

Surcharges on customer cards

To set up different alloy surcharge calculations for customers.

1. Open a customer card.
2. In the Alloy Surcharge Per field, select one of the options described in the following table.

Option	Description
Day	Use the price for the current day to calculate alloy surcharges. **Note** The system retrieves the most recent price if none can be determined for the given day. If multiple prices exist for the same day, they are averaged.
Last Week	Uses last week's average price as the basis for alloy surcharges.
Last Month	Use last month's average price as the basis for alloy surcharges.
Last 3 Months	Use the last three month's average price as the basis for alloy surcharges.

> **Note**
>
> The default option for all customers is Day.

WORKFLOW

Surcharges on purchases and sales

Following setup, you can use the surcharges in sales or purchasing, or both.

1. Create a sales or purchase document.
2. On a document line, choose an item that you've set up a surcharge for. When you add a quantity for the item, the surcharge is entered on the line below as specified in setup.
3. If you replace the item or delete the item line, the related surcharge line is also deleted.

The following fields in the sales lines that showed you how the alloy surcharge was calculated. The fields are only showed if the Enable in Sales toggle in the Alloy Surcharge Setup is activated.

Field	Description
Alloy Surcharge Calculated At	Specifies the date and time when the alloy surcharge was calculated.
Alloy Surcharge Calculation Factor	Specifies the number of valid alloy surcharge prices found during calculation to calculate the average alloy surcharge price.
Alloy Surcharge Valuation Price	Specifies the valuation price used to calculate the alloy surcharge.

During posting, alloy surcharges are treated by the system like any other item charges.

For more information, see Assign item charges to sales and purchases - Business Central | Microsoft Learn.

Surcharges on receipts

Surcharge lines are automatically added to partial receipts if the Auto Post Non-Invt. via Whse. field in Purchases & Payables Setup is set to None. The other field options aren't supported in this context.

When you receive only some of the items you've purchased, the quantity on the related surcharge line is reduced by the specified number of items after the receipt has been posted.

If the remaining quantity isn’t delivered later, you must delete the link to the alloy surcharge manually before you can archive the purchase order.

Surcharges on shipments

Surcharge lines are also added automatically to partial shipments if the Auto Post Non-Invt. via Whse. field in Sales & Receivables Setup is set to None. The other field options aren’t supported in this context.

When you turn on the Single Shpt. per Order toggle on a sales order and post a partial shipment from an item line, the quantity on the related surcharge line is reduced by as much as the quantity shipped.

> **Note**
>
> No alloy surcharge will be included on the Lost Revenue report.

Surcharges on return orders

When you use the Retrieve Posted Document Lines to Reverse action to copy an item line to a sales return order or credit memo, any related and previously shipped line that an alloy surcharge was entered on must also be transferred.

The surcharge isn’t recalculated, and no new price is determined for it during this process.

If the number of items returned needs to be reduced, you must manually lower the quantity specified for the surcharge. In line with standard functionality, this quantity relates to the original shipment. You can, however, link it to the return order, if needed.

The above also applies to purchase returns and credit memos.

Surcharges on Drop Shipments and Special Orders

Drop Shipments and Special Orders can also be used with alloy surcharges. In addition to the standard settings for these two types, it is necessary that the alloy surcharges to be applied are marked for use in sales and purchasing.

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General Setup

DEACTIVATE SALESPEOPLE AND PURCHASERS

By specifying salespeople or purchasers on documents within the system, you can, for example, decide which contact details should appear on printouts. But if an employee leaves your company, their salesperson or purchaser code can no longer be deleted from the relevant master table.

As a result, the number of salespeople or purchasers that are available in the system but cannot be selected on documents might grow to untenable levels. To prevent this:

1. Choose the Search icon, enter Salespeople/Purchasers, and then choose the related link.
2. Open the relevant Salesperson/Purchaser Card.
3. On the General FastTab, turn on the Inactive toggle.

The salesperson or purchaser is then not listed anymore when you use a lookup on documents, as overviews are filtered for active staff members. If necessary, however, you can remove the filter on a view.

Deprecated Features

Name	Description	Disabled in Release
Rentals based on service items	KUMAVISION trade365 rental management made available to users without a premium license. Connection to service remains for now, as redesigned functionality must be manually activated on KUMAVISION Feature Management page prior to BC 2026 Wave 2, at which time feature is turned on automatically.	BC 2024 Wave 2

See also KUMAVISION base (BOOSTER)

1.2.9 medtec365

KUMAVISION medtec365

Fully integrated into Microsoft Dynamics 365 Business Central[1], medtec365 empowers medical device companies to manage day-to-day operations with ease by providing industry-specific production, sales, and service functions.

TOPICS

- General Business Functionality
- Financial Management
- Sales
- Purchasing
- Manufacturing
- Warehouse Management
- Service
- Batch Production
- Subcontracting
- Multi-Order Subcontracts
- Equipment Tracking
- Compliance
- Complaints, Warranty Claims, and FMEA
- Workflow and Notification Manager (WNM)
- MDR Document Management
- General Setup

Note

KUMAVISION medtec365 basiert auf KUMAVISION base (BOOSTER). Die darin enthaltenen Funktionalitäten werden im Bereich KUMAVISION base (BOOSTER) erläutert.

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[1] Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

General Business Functionality

The following features expand standard Microsoft Dynamics 365 Business Central[1] functions to provide additional options to those using General Business Functionality.

FOLLOW-UPS

With the Follow-Up feature, you can conveniently set up reminders for tasks in various places in the app and send each reminder to a user or a whole team.

Setup

Teams

To be able to send a reminder to multiple staff members (users) at once, you must assign them to a team.

1. Choose the Search icon, enter Sales Teams, and then choose the related link.
2. On the ribbon, choose New, and then fill in the fields on the line.
3. Again, on the ribbon, choose Home > Users to add members to the team.

> **Note**
>
> If a user is assigned to multiple sales teams, automatic assignment only works when one of them is selected as the user's main team.

Task templates

To specify task templates for follow-ups:

1. Choose the Search icon, enter Follow-up Tasks, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the task.
Description	Specify a description for the task.

Task groups

Multiple follow-up tasks can also be combined into groups.

1. Choose the Search icon, enter Follow-up Task Groups, and then choose the related link.
2. Fill in the fields on the header as described in the following table.

Field	Description
Code	Specify a code for the task group.
Description	Specify a description for the group.

You can then add tasks to a group on the Lines FastTab. You can also specify here whether a certain team is responsible for handling them.

Workflow

Create a follow-up

You can create follow-ups on a variety of pages. To set up a reminder:

1. Open the relevant page.
2. On the ribbon, choose Create Follow-up.
3. This opens the Follow-up Card on which your user ID (and, potentially, a team code) is filled in automatically. You can then enter a short description for the task in the Summary field.
4. On the Follow-up Tasks FastTab, choose the relevant task codes or fill in the lines manually. Alternatively, specify a group of tasks on the header, and then choose OK.

The Description field always shows the next task that you created a reminder for.

Reassign tasks

If a task should be assigned to a(nother) team, turn on the Team Task toggle on the General FastTab. The current user is then automatically deleted, and you can assign the task to a team. If the task should be completed later, you can adjust the follow-up date on the tab as well.

Create follow-on tasks

A follow-on for a follow-up can be created for all or individual tasks.

1. Open a Follow-up Card.
2. On the header, choose Create Follow-on. Alternatively, select a single task on a line and choose the same option there.
3. If only a line is selected, the task is retrieved directly and, if specified, the new team is assigned to it immediately.

The original reminder is then set to Completed, and the number of the follow-on will be shown instead.

Complete follow-ups on role center

To open and edit reminders that you set up for your own tasks:

1. Go to the role center, and then choose the Own Follow-ups tile.
2. Select a follow-up.
3. On the ribbon, choose Edit. Again, on the ribbon, choose Under Review.

WARNINGS

In medtec365, you can store warning messages that will be shown in the marketing cockpit when you open certain contact or customer cards.

Such a message might be needed because of the presence of an infectious disease at a customer’s premises, for example. Based on how the warning has been set up, you’ll see it on the header of the card, in running text, or in a separate box.

To set up a warning:

1. Choose the Search icon, enter Marketing Cockpit List, and then choose the related link.
2. Open the relevant cockpit.
3. On the ribbon, choose Related > Contact > Warnings.
4. Assign a warning message from the list and select if you want the specified message shown in the Warning field or in running text.

> **Note**
>
> Warning messages can only be assigned with the appropriate permissions in place, that is, the Edit Internal Information toggle on the relevant User Setup Card needs to be turned on for this. You can find the toggle on the Cockpit View FastTab.

QUICK DATA CAPTURE WITH WIZARD

The Quick Contact Capture Card is a separate record that you can create base data from, including contact, customer, and vendor information.

The card is created before the actual contact is, which has the advantage that you can interrupt the process and resume it later. For this reason, quick capture is also used to set up customers and vendors, for whom contacts will be added as well.

Overall, the feature lets you set up data for each faster than any standard function. Additionally, you can use a configuration template to reduce the actual entry to the essentials.

Example
When you set up a customer from a contact based on a template, you can even add to the record fields that aren’t typically found on contact cards (such as Transaction Code).

Setup

medtec365 Setup

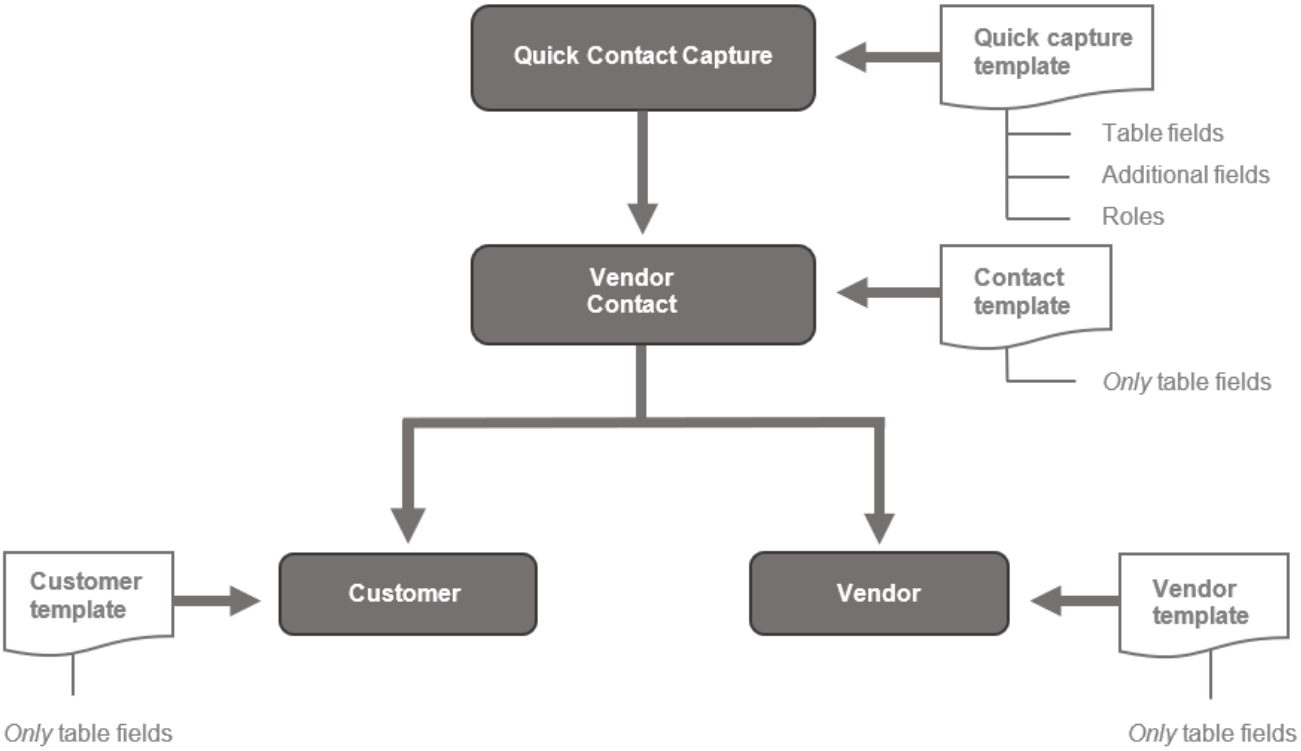
To be able to work with the feature:

1. Choose the Seach icon, enter medtec365 Setup, and then choose the related link.
2. On the Contact Cockpit FastTab, fill in the field as described in the following table.

Field	Description
Contact Quick Capture Nos.	Specify a number series for quick contact capture.

Configuration templates

Configuration templates are used to generate meaningful base data from captured contact information. You can specify on a template any field that is relevant to your business and should be filled in during capture, such as Gen. Bus. Posting Group, so that you no longer need to enter data for it manually.


Quick Contact Capture
Quick capture template
Table fields
Additional fields
Roles
Vendor Contact
Contact template
Only table fields
Customer template
Customer
Vendor
Vendor template
Only table fields
Only table fields

All templates are processed in the sequence that you can see in the following chart.

Template for quick contact capture

On this template, you can specify the standard and additional fields that will be filled in during contact capture. The additional fields will also be added to the new master records for contacts, and—potentially—customers and vendors later.

Additionally, you can specify here what other contact information you want to store and the template that this information should be based on. For example, turning on the Create Customer toggle will also create a customer from the entered data while filling in the Customer Templ. Code field specifies the template that will be used for setting up this new customer.

For contacts

Only fields specified on this template are filled in during quick capture, whereas the additional fields that might be assigned to the relevant contact template are ignored. The additional fields specified for quick contact capture, however, will be transferred to the new contact.

For customers
Only fields specified on this template are filled in during quick capture, whereas the additional fields that might be linked to the relevant customer template are ignored. The additional fields specified for quick contact capture, however, will be transferred to the new customer.

For vendors
Only fields specified on this template are filled in during quick capture, whereas the additional fields that might be assigned to the relevant vendor template are ignored. The additional fields specified for quick contact capture, however, will be transferred to the new vendor.

Note

Additional fields are only inherited if they’ve been set up at the required places in the app. This means that if you want one of these fields to be transferred from a certain template to quick contact capture, and to the contact and customer from there, the field must be set up for the template, contact capture, the contact, and the customer.

Setup

1. Choose the Search icon, enter Configuration Templates, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

General

Field	Description
Code	Specify a code for the template.
Description	Specify a description for the template.
Table ID	Specify the table that needs to be filled in from the template, for example, Contact Quick Entry (table ID 71076624).
Table Name	Shows the name of the table entered in the Table ID field.
Activated	Turn on the toggle to allow the template to be used.

Lines

When a table has been selected, you can specify on the lines the field values that you want automatically copied from the template to the table.

Other

On this FastTab, you can attach additional fields to the template. These are then also used in quick capture.

> **Note**
>
> Additional fields are only inherited if they’ve been set up at the required places in the app. This means that if you want one of these fields to be transferred from a certain template to quick contact capture, and to the contact and customer from there, the field must be set up for the template, contact capture, the contact, and the customer.

Capture data

Quick capture can be run each time you want to set up a contact, a customer, or a vendor.

1. Open the marketing cockpit list.
2. On the ribbon, choose Quick Contact Capture.
3. Select the template that will be used to prefill and add fields to the relevant card, and then choose OK.
4. This opens the Quick Contact Capture Card, where a number will be assigned automatically. You can now fill in the other fields, such as Name and Address.
5. On the ribbon, choose End Update.

Afterward, a mandatory field check is run and base data such as contact, customer, or vendor information is set up depending on what you specified on the Create Data FastTab.

When exiting the page, the new record is selected on the Quick Contact Capture List and can be opened directly from there.

> **Note**
>
> The field check is run for each record that you create.

Release data

If the mandatory field check is turned on for quick contact capture, base data such as contact, customer, or vendor information can only be created if released—which depends on the status that is indicated in the Capture Update field, as described in the following table.

Option	Description
No Field Check	The mandatory field check is not turned on for quick capture. This means that data maintenance does not need to be completed. You can also enter more information, if necessary.
In Progress	The mandatory field check is turned on. However, data maintenance has not yet been completed. As a result, more base data cannot be created.
Completed	The field check has been run and maintenance has been completed. More base data for contacts, customers, and vendors can now be added.

You can run the End Quick Capture action to complete data maintenance and release the captured entry. If the required data wasn’t filled in, a wizard page appears so that you can make the necessary adjustments.

After maintenance of the captured entry is complete, the Quick Contact Capture Card becomes non-editable.

To be able to edit data again, choose Edit Quick Capture on the ribbon to set the card status to In Progress.

List of captured entries

To see a list of all records that have been created through quick capture, choose the Search icon, enter Quick Contact Capture List, and then choose the related link. Here, you can also capture new contact data or edit existing entries.

Manual Capture

Additionally, you can create a record manually via quick capture mode.

1. Choose the Search icon, enter Quick Contact Capture List, and then choose the related link.
2. On the ribbon, choose New.
3. This opens the Quick Contact Capture Card. The card is empty, as no data from a template is copied to the entry.
4. Click any field to create a record. This assigns a number from the number series stored in medtec365 Setup. All other fields can be filled in manually.

In this context, we recommend you consider the base data that you want to create from the captured entries and the templates that you want to use for them. Or you can choose Apply Template on the ribbon and specify a configuration template for filling in the information.

ITEM TRACKING

On installation, medtec365 provides you with a variety of tracking methods that are commonly employed across the industry and can be used for all items set up in the system.

Color indicators

Line quantities might be shown in a different color if they relate to tracked items.

This applies to quantities on open purchase and sales documents, on warehouse shipments and receipts, and on item, transfer, and inventory journals, as well as to quantities entered in manufacturing and assembly.

You can also use the lookup next to a quantity field to see the tracking code that is assigned to the associated item. The meaning of each line color is explained in the following table.

Color	Description
Red	Lot or serial numbers are available but have yet to be assigned.
Blue	Lot or serial numbers are available but only some of them have been assigned.
Green	Lot or serial numbers are available and have all been assigned.

Warranty dates for external lots

You can now specify manufacturing dates based on item tracking codes.

On the Item Tracking Code Card, on the Misc. FastTab, you can also fill in a variety of new fields relating to maintenance and repair services. As an example, you can enter customer-side and vendor-side warranty periods in the Customer Warranty Until and Vendor Warranty Until fields on the tab.

Serial No. Information Card

This card has been extended to include the fields described in the following table.

General

Field	Description
Description 2	Filled in automatically with the Description 2 from the item or variant.
Registration No.	Specifies the number assigned by a health insurance company to the medical equipment.
Field Check Status	Indicates if a mandatory field check has been run.
Blocked By	Shows if data is blocked by the field check or a user.

Vendor

This FastTab is required to provide maintenance and repair services.

You need to enter a vendor on the tab if a device has been acquired via a purchase order outside the scope of existing contracts or from a competitor.

Customer

This FastTab is required to provide maintenance and repair services.

The fields on the tab specify who provided the instructions on how to use the device.

Other

Field	**Description**
Previous Owner Previous Owner Search Descr.	Specifies the contact or the search term for the contact who used to own the device.
Last Invt. Movement On	Specifies when the item was last posted to inventory. This field is updated with every movement of the item.
Last Invt. Mvmt. Location Last Invt. Mvmt. Bin	Specifies where the device is stored. These fields are updated with every movement of the item.
Last Variant Invt. Mvmt.	Specifies the device variant. This field is updated with every inventory movement.
Status	Specifies the status of the device. This field needs to be filled in manually.
Warranty Period (Customer)	Specifies a warranty period based on a date formula. This field is filled in when the device is posted as shipped.
Customer Warranty Until	Filled in automatically based on the warehouse shipment date and the customer warranty period.
Device Class	Can be used to classify the serial number card. You can enter any code you want.
Startup Date	Filled in automatically when the device is shipped for the first time.
Vendor Warranty Until	Filled in automatically based on the warehouse receipt date and the vendor warranty period.
Warranty Period (Vendor)	Specifies a warranty period based on a date formula. This field is filled in when the device is posted as received.
Repair Warranty Until	Filled in when repairs are carried out.
Estimate Needed	Specifies if the customer wants a cost estimate. The field is automatically filled in with information supplied by the customer after sale.
Estimate Limit	Specifies the value starting from which the customer wants a cost estimate for repairs. This field is also filled in following a sale.
Scrapped	If selected, the device is considered scrapped. You can only select this field after the device has been removed from the item journal. With the checkbox selected, the Blocked toggle is turned on automatically as well, and the Scrapped By and Scrapped On fields will be filled in to log by whom and when the checkbox was selected or cleared.
Maintenance Interval (MPG Appendix 1)	Filled in with the information from the item card.
Additional Information	This subpage lists the fields added to the serial number card and the related item card.

Ownership & Rent

This FastTab specifies who owns the device.

Field	Description
Last Transaction Code	Indicates whether the device has been loaned to someone. This field is refreshed with each movement of the item. If the field is blank, the device was sold without leaving a trace in the system.
Legal Owner	Specifies the owner of the device. If the field is blank, the device is owned by your company.
Legal Possessor	Indicates the customer who is currently in possession of the device.

Provided the whereabouts of the device can be traced, the transaction code and the Location and Bin fields are filled in with the values that were specified with the most recent warehouse posting.

If a device is sold only to one customer, the fields will be blank, but the Legal Owner and Legal Possessor fields will be filled in, with the transaction code inserted in the correct way automatically.

Ribbon functions: Home

Field	Description
Edit Serial No. Info End Update	Turns on the editing mode for the card or triggers the mandatory field check.
Inventory Overview	Shows the inventory related to the item tracking code.
Equipment Entries	If Equipment Tracking is used in the manufacturing area, shows the components linked to the device. Also lists all expenses and spare parts incurred as part of servicing.
Attributes	Shows the parameters specified for the device.
Item Ledger Entries	Shows the movements of the device.
Find entries	Shows all items, and purchase and sales documents referring to a serial number.

Ribbon functions: Customer Service

Field	Description
New Case	Creates a new case for the device.
Open Cases	Shows all open cases for the device.
Completed Cases	Shows all completed cases for the device.

Ribbon functions: Actions

Field	Description
Edit Serial No. Info End Update	Turns on the editing mode for the card or triggers the mandatory field check.
Attribute Search	Used to search for device parameters based on the serial number.
Find entries	Shows all items, and purchase and sales documents referring to the serial number.
Assign Bar Code	Specifies a barcode to which documents have been assigned in the document management system (DMS for short).

Ribbon functions: Related

Field	Description
Item Tracking Entries	Documents the movements of the device.
Comment	Used to enter comments about the serial number.
Item Tracing	Shows the serial number or component history (where included). This field is only required for manufacturing.
Attributes	Shows the parameters specified for the device.
Equipment Entries	If Equipment Tracking is used in the manufacturing area, shows the components linked to the device. Also lists all expenses and spare parts incurred as part of servicing.
Item Ledger Entries	Shows the movements of the device.

BLOCK ITEMS WITHOUT VARIANTS

Typically, when the Variant Mandatory if Exists toggle is turned on in Inventory Setup, you’re blocked from posting transactions for which an item variant isn’t specified.

This setting, however, doesn’t apply to items that don’t have variants. You can also change the requirement for individual items by choosing No in the Variant Mandatory if Exists field on an item card.

Conversely, if the setup toggle is turned off but the Variant Mandatory if Exists field is set to Yes on an item card, transactions for this item cannot be posted when variants exist but none is specified during a transaction.

To also block transactions from being posted if the item requires a variant but none has been set up for it yet in the item master, you can create a field check that uses the Variant Exists field from the item card.

> **Note**
>
> The Variant Exists field is hidden on the card.

Workflow

Inventory Setup

Ensure that the Variant Mandatory if Exists toggle is turned off on this page.

Item card

Set the Variant Mandatory if Exists field to Yes for items that require a variant.

Field check

Create a field check for table Item (27) that will result in an error message *(as well as the cancellation of the posting process)* if certain fields are filled in on an item card as described in the following.

Operator	Field Source	Field No.	Field Caption	Condition Type	Condition Value
IF	Table	122	Variant Mandatory if Exists	=	Yes
AND	Table	71076593	Variant Exists	=	0

Compliance (optional)

We recommend that you also set up a compliance check to block the deletion of variants whenever the Variant Mandatory if Exists field is set to Yes for an item that has already been released.

For this purpose, you must add the following line to the compliance tables:

Code	Table No.	Table Caption	Sorting	Description	No. of Field Filters	Statu
VARREQ	27	Item	0	Variant Mandatory	1	Releas

Additionally, you need to fill in these fields on the Compliance Fields page:

Field No.	Field Caption	Field Value
122	Variant Mandatory if Exists	2
71076593	Variant Exists	1

Note

You need a valid license to work with the Compliance functionality. For more details, see Compliance.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Financial Management

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s financial department.

REMINDERS: ACCOUNTS RECEIVABLE

This section describes extensions to standard reminder functions.

Consider payments received

When running the Suggest Reminder Lines function, you can set a filter on the Incl. Payments Until field on the Reminder FastTab to specify up to which date the system should consider payments that have been received and posted *(as per a bank statement)*.

Besides the reminder term and level placeholders, that were already available, you can use variable %13 to display on printouts the date entered for the filter.

Line-level reminders

Setup

To be able to work with this feature, you need to add report 5048915 – Sales Reminder to the Report Selections Reminder/ Finance Charge page.

Print line levels

Following setup, the system will print on reminders that include more than one level the highest on the header, whereas the level specified on each line will be shown next to the relevant document entry.

INVENTORY AND ASSET TRANSACTIONS

Transaction codes

These codes are used to describe various types of item ownership and specify both the posting process used and the type of valuation needed for your inventories (as shown in the Valuation Type field on a posted item ledger entry). The following ownership structures can be specified:

- Fixed assets that are managed in inventory.
- Leased property that a customer rents to others.
- Third-party property that is shipped, stored, or serviced.
- Current assets that you manage.
- Current assets that will become rental items or represent used equipment.

In medtec365, a transaction code is required for every movement of an item.

> **Note**
>
> The use of costing method Average in connection with valuation type Not Valued in the item master is not supported in medtec365.

Posting groups: purchases

If you want posting groups retrieved from base data to be changed by default when you set up a certain type of purchase order:

1. Open the Search icon, enter Purchase Order Types, and then choose the related link.
2. Select a type and then choose Related > Purchase Order Type > Posting Groups.
3. Fill in the fields as necessary.

Posting groups: sales

Although possible for purchase orders, you cannot tell the system to change posting groups for certain kinds of sales orders automatically. However, you can still change a group yourself on an order line.

Posting groups: service

When you enter spare parts for service items, you might need posting groups that differ from those stored as base data.

For this purpose, you can set up alternative combinations on the Service Order Types page and have them copied to the service lines they're required on.

Posting groups: item journals

You can use item journals to post inventory adjustments that are the result of, for example, scrapping products or removing them for personal use. You can then specify posting parameters when you create the journal batch: a reason code for use in analyses and a general product posting group to set up an inventory adjustment account, such as 'Scrap' *(provided the corresponding group combination is entered in setup).*

CAPITALIZE ASSETS

Note

You need a separate license before you can use this feature.

Transaction codes

The following transaction code settings might influence the capitalization of assets in the system:

Field	Description
FA Posting Type	When set to Capitalization, current assets can only be capitalized if this code is entered during a transaction. The same option is also used for data transfers, which means it is set for codes CA-CAP and DT-FA by default.
Default Pos. Adjmt. Code	The default code will be CA (current assets) if no other code is entered.
Positive Adjmt. on Capitalization Only	Only selected for codes that are linked to fixed assets via capitalization, FA being an example. This field can help you reconcile fixed asset transactions with the general ledger and items in inventory and complete subsequent transactions, such as disposal and scrapping.

Current-to-fixed asset reclassification

Receiving equipment

When equipment is bought, you typically cannot say for certain where it will end up (for example, in sales or as a rental). Therefore, the item is typically purchased by using a code that covers valued transactions (such as CA=current assets).

For more information, see Transaction Codes.

Field	Value
Transaction Code	CA
Description	Current Assets
Valuation Type	Valued

Reason for capitalization

Fixed assets that need to be reclassified are mainly intended for long-term rental.

The reclassification process involves using a delivery hierarchy on a sales order to change the transaction code assigned to the asset from CA to CA-CAP. For more information, see Transaction Codes.

Field	Value
Transaction Code	CA
Description	Current Assets
FA Posting Type	Capitalization

Note

Only equipment that a purchase invoice has been posted for should be capitalized. You can ensure this by filtering the relevant item journal to exclude lines with blank Purch. Invoice No. fields.

Fixed asset item journal

Before you can capitalize an item with a serial number, you need to set up a serial number information card for it and specify an equipment class on the related item card (on the Misc. FastTab).

To capitalize equipment, that is, reclassify items from current to fixed assets, you use the suggestions that are provided by fixed asset item journals. If you want to create more than one journal, you must filter, for example, the journal to a specific transaction code when creating a name.

The Show FA Items to Capitalize function that you can run from the ribbon of the page only considers item ledger entries where the asset posting type was set to Capitalization in transaction code setup.

The results of the report are filtered to transaction code CA-CAP. There might be other codes to consider, such as Buyback, however.

The starting date specified for depreciation is always the first of the month in which the equipment should be capitalized, although the date can be changed manually, if needed.

Details about the notes shown in the Warning field on a line can be found in the FactBox on the right-hand side of the page, though you can capitalize an item despite the warning. However, if the field contains errors, capitalization will not be possible.

To ensure that error messages are displayed correctly, codeunit 71076692 KVSMTCFAItemJnlCheckLine must be added to the App Log Batch Types page for code POST-ITEMFA.

After the lines have been checked, they need to be posted. Posting them will create the fixed asset master and FA depreciation book and post the cost of acquiring the items. You can open the serial number information list from the asset master via a FactBox hyperlink.

When equipment is capitalized, the item ledger entries assigned to it will be moved as well. Afterward, each item will be derecognized as a current asset and recorded as a fixed asset.

Following reclassification, the transaction codes will also change, from CA-CAP to FA (fixed assets).

Field	Value
Transaction Code	FA
Description	Fixed Assets
Valuation Type	Not Valued
Positive Adjmt. on Capitalization Only	Yes

Note

For a user to be able to capitalize an item that a receipt has been posted for, you need to turn on the Pos. Adjmt. - All Transact. Codes toggle on the relevant card in User Setup.

Fixed asset card

If the base item number or serial number on an asset card is edited manually, a note appears regarding capitalization.

Equipment classes

These classes list the requirements for capitalizing items with serial numbers, as described in the following table. You must assign a class to each item that you want to capitalize.

Field	Description
Target Transact. Code (Capitalization)	FA
Depreciation Book Code	Example: HGB, Tax, or IFRS
FA Posting Group	(Needed to determine the correct accounts.)
Depreciation Method	Example: Linear
No. of Depreciation Years	(Retrieved from the FA subclass.)
Use Depr. Book on Copy Action	Only relevant if two depreciation books are used.
Auto Post 2nd Depr. Book on Disposal	Only relevant if two depreciation books are used.
2nd FA Posting Group	Only relevant if two depreciation books are used.
2nd Depreciation Method	Only relevant if two depreciation books are used.
No. of Years (2nd Depr. Book)	Only relevant if two depreciation books are used.
2nd Depreciation Book	Only relevant if two depreciation books are used.

Assign a class

As not every piece of equipment within a class might have the same value but that value will be crucial to determining how to capitalize a low-value item, you can set up a hierarchy on the Equipment Class Mapping page, which can be found by using the general search function.

The page can also be used to adjust the capitalization threshold for these items.

If the fields on the page are already filled in, at least partially, those entries are taken into account and, if needed, the class is changed by the system to make sure the serial number item is capitalized with the correct settings in place.

Both the equipment class and the next class on the list are then shown on the page for a last check prior to starting the capitalization process, as seen in the following table.

Field	Description
Equipment Class	Shows the class that this piece of equipment belongs to. The value in this field is retrieved from the item master.
Starting Date	Shows from when the class will be assigned to the equipment.
Ending Date	Shows until when the class will be assigned to the equipment.
Operator – From Amount	>=
From Amount	Indicates starting at which amount the class should be used (Example: 800.01).
Operator – To Amount	<=
To Amount	Indicates up to which amount the class should be used (Example: 99999).
Next Equipmt. Class Code	F>800
Note	Example: 4Y depreciation

Cancel asset capitalization

In medtec365, you can also reverse the capitalization of a fixed asset.

1. Open a fixed asset card.
2. Go to the FactBox on the right-hand side, and then choose FA Item Tracking > Cancel Line on the ribbon.

If you turn on the Delete Fixed Asset toggle when running the action, the fixed asset card and the (item, value, and G/L) entries related to it will be deleted. If the toggle is left turned off, the card will be kept whereas the (item, value, and G/L) entries related to the asset will be canceled.

Note

If you decide to capitalize the fixed asset again later, its card will be linked by using the serial number that was previously assigned to the asset.

Post capital assets via sales orders

Sometimes, you might want to sell a capitalized item with a serial number to a customer.

The equipment must then be removed from inventory while the asset that was set up for it must be derecognized by creating and invoicing a sales order.

If the Automatic Cost Posting toggle is turned on in Inventory Setup, disposal of the asset is done by the system. If the toggle is turned off, you need to run the following batch jobs:

- Adjust Cost-Item Entries
- Post Inventory Cost to G/L
- Post Inventory Cost to FA

Afterward, the sale will be listed in the FA Item Tracking FactBox.

Post capital assets via item journals

Equipment that transaction code FA is assigned to can also be disposed of by posting a negative adjustment in an item journal.

This adjustment might be needed, for example, following physical inventory or when items are scrapped or deemed unrecoverable in the middle of a year.

The asset that is set up for the equipment is then derecognized automatically provided the Automatic Cost Posting toggle is turned on in Inventory Setup. If the toggle is turned off, you need to run the following batch jobs:

- Adjust Cost-Item Entries
- Post Inventory Cost to G/L
- Post Inventory Cost to FA

Afterward, the removal will be listed in the FA Item Tracking FactBox.

Derecognize for scrapping

Items that should be scrapped can be stored at a separate location and then removed from the balance sheet by using the Derecognize FA Scrap feature.

To set up the feature:

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. On the KUMAVISION medtec365 FastTab, fill in the fields described in the following table.

Field	Description
Scrap Location Filter	Specify the location that will be used to derecognize fixed assets for scrapping.
Remove via Item Jnl. Templ.	Specify the journal template that you want to use for the feature.
Remove via Item Jnl. Batch	Specify the name of the journal with which you want to run the batch job.

You can then use the general search function to open the request page for the batch job and filter the Transaction Code field to code FA (see the Item Ledger Entry FastTab).

Afterward, you can fill in the other fields as needed and run the batch job. This copies all capitalized items with a serial number from the scrap location to the item journal that you've specified on the page, unless the Post toggle is turned off. In this case, the equipment you want scrapped is copied to the journal that you've specified in Inventory Setup.

We recommend that you don't turn on the toggle immediately so that you can check the entries for errors before posting them.

When an item that is assigned to a fixed asset is taken from a scrap location, the related asset is also derecognized provided the Automatic Cost Posting toggle is turned on in Inventory Setup. If the toggle is turned off, you need to run the following batch jobs:

- Adjust Cost-Item Entries
- Post Inventory Cost to G/L
- Post Inventory Cost to FA

Afterward, the item transaction will be listed in the FA Item Tracking FactBox.

> **Note**
>
> If you don't turn on the Post toggle on the Post Inventory Cost to FA request page, the associated transaction will be printed but not posted.

As part of the process, you need to ensure that all assets are derecognized in the correct periods. For this purpose, you must run the Post Inventory Cost to FA batch job at regular intervals—that is, at the close of each month, at least—to update item ledger entries of type Negative Adjmt.

Post Inventory Cost to FA

This feature is needed to derecognize an inventory item as a fixed asset if the Automatic Cost Posting toggle is turned off in Inventory Setup.

For more information, see Post Capital Assets via Sales Orders or Post Capital Assets via Item Journals.

Capitalize during data transfer

When transferring data for capitalized equipment, we recommend that you:

- Copy items per serial number by using transaction code DT-FA (not valued) during physical inventory.

Field	Value
Transaction Code	DT-FA
Description	Data transfer for capitalization
Valuation Type	Not Valued
FA Posting Type	Capitalization

- Set up assets with references to base item and serial numbers.
- Capitalize assets with code DT-FA after setting them up, which includes specifying their acquisition costs and depreciation.

Return capital assets to inventory

You cannot use the Get Posted Document Lines to Reverse function when previously capitalized equipment is returned to your company after having been sold to a customer. Additionally, you cannot re-assign the item to the fixed asset that you had set up for it prior to the sale.

> **Note**
>
> Care must be taken when turning on the Pos. Adjmt. - All Transact. Codes toggle on a user setup card. No fixed asset is created based on this setting, and the specified equipment can no longer be sold, which means that the only way to dispose of it is by posting a negative adjustment in an item journal

Analyze items in transit

The Items in Transit analysis shows you all shipped but unbilled items—information that might be particularly helpful at the close of a month or year. In-transit analyses are mainly based on the value entries assigned to a certain item, enriched with data from multiple fields found on the item card and on item and general ledger entries.

To run the analysis:

1. Choose the Search icon, enter Items in Transit, and then choose the related link.
2. On the Options FastTab, set filters as needed.

To update the analysis, run the Fill Value Entries action. The entry data is then copied to Excel, where you can use one or more filters to customize each workbook *(that is, the appearance of the pivot tables it contains)*.

GENERAL LEDGER

In Use: chart of accounts

By setting a filter on the In Use field on a chart of accounts, you can quickly determine if certain accounts are used elsewhere in the system, such as on posting setup pages.

> **Note**
>
> You need to unhide the field on the page.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Sales

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s sales department.

BACKLOG

With this feature, you can specify for each customer how you want backlog printed on a shipment note.

1. Open a customer card.
2. On the Misc. FastTab, in the Print Backlog field, select one of the options described in the following table.

Option	Description
No (Current Shpt.)	Only item, resource, and G/L account lines with a quantity <> 0 are shown on the note.
Yes (Current Shpt.)	Only item, resource, and G/L account lines with a quantity <> 0 are shown on the note. Besides the line quantity and unit of measure, the following information is also printed: order quantity, quantity shipped, and backlog.
No (All Lines)	All lines are shown.
Yes (All Lines)	All lines are shown. Besides the line quantity and unit of measure, the following information is also printed: order quantity, quantity shipped, and backlog.

SHIPMENT MULTIPLES

If necessary, you can specify that items or item variants entered on sales document lines can only be shipped in multiples of a certain lot size.

Setup

Sales order types

On the Sales Order Types page, you can decide for each order type whether you want to use the feature by turning the Ignore Shpt. Multiples toggle on or off.

Items

On an item card, on the Misc. FastTab, you can specify in the Shipment Multiple field the multiple that will be used for the given unit of measure.

> **Note**
>
> For items sold in more than one unit, the multiple is adjusted based on the unit of measure that you enter on the relevant document. As an example, if the typical unit an item is sold in is 15 pieces, selling the item in a package of ten results in a 1.5 multiple.

Variants

On a variant card, in the Shipment Multiple field, you can specify a multiple that will be used for this variant instead of the default value entered for the item.

Workflow

The following checks are run if you enter on a sales order an item that you specified a multiple for:

1. **Is the quantity smaller or greater than the multiple?**
   If you entered a quantity that doesn't match the multiple specified on the item or variant card, you're asked if you want to round the quantity up or down.
2. **Is the item being sold in another unit of measure?**
   When you change the unit of measure, a new shipment multiple is automatically suggested to you.
3. **Is a multiple specified for the selected variant?**
   If a multiple is specified for the item variant that you want to sell, this multiple is used instead of the value on the item card.

ALTERNATE ADDRESS ON QUOTES

You can now change the address that will be printed on sales quotes.

- Open a quote.
- On the General FastTab, in the Address on Quote field, choose whether the sell-to, ship-to, or bill-to address should appear on printouts of the quote. If you select Ship-to or Bill-to, the shipment address entered on the quote will not be shown at the bottom of the printed document.

The field is also copied along when a quote is archived.

SELECT TO ORDER

You can use the Copy to Order field on quote lines to convert only part of a quote to an order.

By default, the field is selected for all lines but can be cleared manually. Running the Make Order function from the ribbon then creates an order based on the lines where the Copy to Order field is selected. The prices and discounts from the quote are also copied.

NO CREDIT MEMO INVOICE

In medtec365, a sales credit memo can be created without having to assign it to an invoice. To allow a user access to this feature:

1. Choose the Search icon, enter User Setup, and then choose the related link.
2. Select the relevant user.
3. Select the Allow Standalone Cr. Memos field on the line.

CREDIT MEMO VALUES

On a credit memo card, you can now turn on the Value Posting toggle on the General FastTab to specify that no items are moved in a warehouse with this credit memo. If the toggle isn't turned on, the system will create a sales return order and therefore an item entry in the background when you post the document.

EXTENDED SALES HISTORY

The sales history available in the standard app has been extended to show archived sales quotes, sales orders, blanket orders, and return orders as well.

COLOR INDICATORS

The indicators that can be shown in the Sales Header Status FactBox provide you with a quick overview of the inventory, warehouse and posted shipments, and invoices available for an order.

Each indicator gives you an aggregated view of the individual line values. That is, if the indicator is set to Green on one line but to Red on another, it will show as Yellow in the box. To see the status of a specific line, you can choose Sales Line Statuses on the sales order ribbon.

To use this feature, you need to ensure that an image is assigned to represent each indicator color:

1. Choose the Search icon, enter Company Information, and then choose the related link.
2. On the Documents FastTab, select the plus sign next to Red, Yellow, or Green, and then choose the image that you want to see when this color applies.

Flag insufficient demand on multiple orders

If the item quantity in inventory isn’t enough to meet demand from more than one sales order, the Pickable Status field will nevertheless be set to Green on all documents where the item is entered. To avoid any issues during shipping, you can add the Invt. Availability Status indicator to the Sales Order page and other types of sales overviews.

Setup

1. Choose the Search icon, enter medtec365 Setup, and then choose the related link
2. Fill in the fields on the Sales FastTab as described in the following table.

Field	Description
Show Inventory Availability (Extended)	Adds the Invt. Availability Status indicator to the relevant pages.
Inventory Availability Formula	Can be used to specify a formula, such as 3M *(for 3 months)*. This formula is then used to determine which color is shown in the Sales Status Header FactBox and on the Sales Line Statuses page after accounting for demand from other sales orders placed in the specified period *(provided that the outstanding quantity on at least one of them is still greater than zero)*. If you leave the field blank, the availability of inventory is calculated based on the item’s shipment date.

Workflow Example - Quantity on sales orders > Quantity in inventory

You create two sales orders that pick from a location storing 1000 pieces of the item you need to ship.

The Pickable Status field is then set to Green on both. Without turning on the extended indicator view, no status light will make you aware that the quantity in inventory is insufficient to meet demand from two orders.

After turning on and setting up the extended view, the Invt. Availability Status indicator will become visible on multiple sales pages and change color based on the quantity and delivery date entered on a line.

When the same item is entered on the second order but with a delivery date outside the period defined in setup and the quantity at the specified location isn’t enough for both, the Invt. Availability Status will be set to Green on the order (line) that needs to be delivered first and to Yellow on the other. If the orders need to be shipped in the same period, the indicator on both will turn Yellow.

Any sales line will also be set to Yellow if the quantity at the location entered on it can only be fulfilled in part, regardless of the period entered in setup.

This also holds true for lines set to Red, for example, when the items you need aren’t stored at the site you’ve entered.

Calculate statuses manually

With the Show Inventory Availability (Extended) toggle turned on, you can run the Calculate Invt. Availability action from the sales order ribbon to ensure all availability indicators are up to date, as not every change that you make to an order will trigger an automatic recalculation of these statuses.

Pages

When turned on, the status of inventory will be shown on the following pages:

- Sales Order *(Sales Header Status FactBox)*
- Sales Status List *(via the general search function)*
- Sales Line Statuses *(on the Sales Order or Sales Status List ribbon)*

MANUAL RESERVATION

Setup

If you want to work with reservations, you must enter in the Inventory Setup on the KUMAVISION medtec365 FastTab in the View Manual Reservation field whether reservations should only be made for available quantities or whether stock that has already been reserved should also be included.

This setting controls which stocks or receipts from documents can be reserved. The two options are available for this purpose:

Qty. Available
Only stocks/receipt quantities that are available and therefore actually available for a reservation are showed in the document allocation overview. There are no other reservations for these quantities. This option is the default option.

Qty. Remaining All stocks / receipt quantities with a remaining quantity are showed, even if this remaining quantity has already been reserved by other documents. The quantity determined in this way provides an overview of the actual stock / receipt and, if necessary, a rescheduling / rebooking can be carried out, e.g. to serve a rush order from the stock.

Reservation via Sales Order

To reserve the required quantity, create a sales order as usual and enter the desired item(s) in the line. If you want to make reservations, select the line and choose "Reserve..." in the line menu to open the Document Assignment Overview.

Document Assignment Overview

The Document Assignment Overview can be divided into the following four areas:

Header Data

The header data of the document allocation overview provides information about the document for which the reservation is to be made, as well as the item and the required quantity. The header data can also be divided into three areas:

1. Document Information

This area shows the document or document line for which the document assignment overview has been open. Furthermore, a short note can be entered here in the Note on reservation field, which is then showed in the stock allocation overview and in the reservation item overview.

2. Information about Item This area shows the Item and variant for which a reservation is to be made.

3. Information about Quantities

In addition to the delivery date/consumption date on which the requirement is to be available, the quantity information of the requirement line is also showed in this area. This quantity information consists of the fields:

- Remaining quantity (base) - corresponds to the remaining quantity of the document line in the base unit of the item
- Allocated quantity (base) - corresponds to the quantity already reserved / allocated for this document line
- Quantity for allocation (base) - shows which quantity has not yet been allocated to the document line and is available for allocation.

Line Data

The line data in the Document Assignment Overview provides information about the items available for the reservation and is subject to a specific structure. On the first level, the available quantity is showed for each requirement coverage type (warehouse stock and purchase orders) and posting code.

If the item to be reserved is a trackable item, the first level of the stock can be unfolded to obtain details on item tracking.

Similarly, the first level of purchase orders can be unfolded to obtain further information on the receipt documents.

Note

Items already reserved by other orders are always displayed directly below the first level so that reserved items are quickly visible.

Each line, regardless of the structure level, contains the following quantity information:

Field	Description
Remaining Qty. (Base)	Shows of the quantity that is available as actual stock or is expected to be received as an order (specified in the base unit of the item).
Total Qty. Assigned (Base)	Shows of the quantity that has already been reserved by other sales orders (specified in the base unit of the item).
Qty. Assigned on Doc. (Base)	Shows of the quantity that has already been allocated for the current sales order (specified in the base unit of the item).
Qty. Available (Base)	Shows of the quantity available for allocations (specified in the base unit of the item).
Pick Qty. Available (Base)	Shows of the quantity that is available for allocation and also matches the picking parameters of the item (displayed in the base unit of the item). For example, batch picking or picking by expiration date is taken into account, which may result in the available quantity that can be picked being smaller than the available quantity.

Footer Data

The Document Assignment Overview ribbon contains the following functions:

Function	Description
Calculate	This function update the Document Assignment Overview.
Auto Reserve	With this function, the system allocates the quantity to be reserved from the warehouse stock without a manual selection. If it is not possible to cover the demand, the system falls back on the purchase orders.
Reserve from Current Line	You can make a manual selection here. To do this, you must first select a corresponding line in the line data.
Cancel Reservation from Current Line	You can use this function to cancel a reservation that has already been made.
Show Document Show Line	The functions relate to all the purchase orders displayed in the lines. The purchase orders/lines can be displayed above this.
Show Reservations	This function can be used to display existing reservations.

Note

If a reservation is made for an item with item tracking in the stock allocation overview, this information is not transferred to the item tracking of the sales order.

However, the reservation is displayed in the stock overview.

ITEM RESTRICTIONS

You can restrict what items can be delivered to a certain customer, invoice recipient, or country by specifying restriction codes. These codes are used to assign (include) or block (exclude) items for shipping. The system then checks for these restrictions when you enter an item on a sales line.

Create restrictions

To restrict the sale of an item:

1. Choose the Search icon, enter Item Restrictions Overview, and then choose the related link.
2. On the ribbon, choose New.
3. Enter a code in the Restriction Code field, and then fill in the Description field. The code must be unique.
4. On the Condition Lines FastTab, enter the relevant source fields and set field filters as necessary.
5. On the ribbon, choose Create Restrictions to have the restrictions entered on the Restricted Items FastTab.

Assign restrictions

To limit what can be sold to a certain customer:

1. Open the relevant customer card.
2. On the Shipping FastTab, fill in the Restriction Code field.

Restrictions that have already been assigned can be opened by choosing Related > Sales > Restricted Items on the ribbon.

As for shipments to a certain country or region, you can restrict their delivery on the Countries/Regions page, by filling in the Restriction Code field on a line there.

Use restricted items

If items are shipped to a country they shouldn’t or if you enter a restricted item on a sales order even though the restrictions apply to the customer you created the order for, you see a message stating that the item is blocked.

EXTENDED QUESTIONNAIRES

The CRM profiles have been extended so that you can not only select an answer but enter values as a response to a question. The system will also create a history of all selected answers.

LOT RECALL AT COMPONENT LEVEL

You can now use item tracking to recall a product while also creating segments and bulk letters for specific recall campaigns.

CLEARANCE

Clearance items are items that you decided not to reorder or that your supplier has stopped providing. Your procurement department will be notified that the item—or variant—in question is no longer available when they try to enter it on a new sales order. To select an item or variant for clearance:

1. Open an item card.
2. On the Item FastTab, select the Clearance field.
3. Alternatively, select Clearance for each individual variant that will no longer be restocked.

> **Note**
>
> If an item is selected for Clearance, its variants will no longer be restocked either, regardless of whether you’ve marked some of them as well.

TIME LIMITS ON BLANKET ORDERS

To prevent terms and conditions specified on a blanket order from being used after the order has expired, you can now set not only a quantity but also a time limit there:

1. Open a blanket order.
2. On the FastTab, in the Blanket Order Until field, specify up until when the order is valid.

You then see an error message if you try to use the order after the expiration date.

ADDITIONAL FIELDS

For additional customer fields, you can specify if you want to make them available in the sales area and have them copied to the headers of posted documents; additional item and resource fields will be included on the lines.

On the Additional Field Setup page, you can also specify whether these fields can be changed manually. The system then logs the time they were modified and the ID of the user who edited them.

MOVEMENT TYPES

Standard sales documents can be used to post the receipt and shipment of items in the system, whereas transfer orders move goods from one place to another.

Sometimes, however, items might need to be presented to a customer and returned. Using standard functions to mirror this process can be very time-consuming, as two types of documents need to be created. For this reason, a Movement Type field has been added to all sales lines so that you can post both transfers and standard sales transactions.

Setup

Sales order types

You can set up movement types on the Sales Order Types page so that when you create item lines assigned to a certain order type, the Movement Type field will be filled in automatically on the lines of the relevant sales document.

Locations

To specify a receiving location and bin for transfers based on a movement type:

1. Open a location card.
2. On the medtec365 FastTab, fill in the fields as described in the following table.

Field	Description
Receiving Location Code	Specify a code that will be automatically assigned to the field with the same name on sales lines if Transfer has been selected as the movement type.
Auto Assign Customer Bin	Turn on this toggle for the receiving location if a bin is required and you want one created automatically based on the customer number.

Customers

You can also fill in a location (and a bin) separately for each customer.

1. Open a customer card.
2. On the Shipping FastTab, fill in the fields as described in the following table.

Field	Description
Receiving Location Code	Specify a code that will be automatically assigned to the field with the same name on sales lines if Transfer has been selected as the movement type.
Receiving Bin Code	Specify a code that will be automatically assigned to the field with the same name on sales lines if Transfer has been selected as the movement type.

Workflow

You can post transfers on item lines of both sales and return orders.

1. Open a sales or sales return order.
2. Select Transfer in the Movement Type field on an item line (that is, unless the field has already been filled in from a sales order type).
3. In the Receiving Location Code field, specify the destination that you want to transfer the items to. If this site requires bin assignment, fill in the Receiving Bin Code field as well.

Some of the Receiving Location and Receiving Bin Code fields might already be filled in if default values have been specified for them on the relevant location or customer cards.

For transfer lines, the Unit Price field is set to zero automatically, as ownership of the items doesn’t change. A minimum profit check isn’t performed either. After the items have been shipped, they’re marked as invoiced; no Qty. Shipped Not Invd. remains.

This means that an order might be completed just by shipping the items. However, it isn’t deleted from the system. You can then delete the order manually or you can run a batch job to have it removed by the system.

Posted documents

You can view the movement type, as well as the receiving location and bin, on posted shipping documents. The system creates application entries of type Transfer for the shipment and a corresponding bin entry for each location that requires bins.

Cancellations

Cancelling a transfer automatically reverses the entries associated with the transfer.

Returns

On a sales return order, lines should be created by running the Get Posted Document Lines to Reverse action, as it shows, for example, what posted shipment lines can be selected. The window also displays the Cancellation Qty. and Movement Type fields.

Compared to the original order, the location and receiving location are now reversed. This means that a return receipt you created based on a transfer from bin 001 at the main warehouse to customer 20000 then shows a transfer from customer 20000 to main warehouse bin 001.

Warehouse

Overall, posting from the sales document should lead to the same result as posting from a warehouse document (shipment or receipt).

There are no differences to standard functionality when it comes using the Transfer movement type on sales orders. As for sales returns, the difference is that the roles of inbound and outbound location will be reversed.

DISCOUNT REASONS

You can now also specify the reason for granting a line discount on a document.

1. Choose the Search icon, enter Discount Reasons, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the reason. The code must be unique.
Description	Specify the reason. The description will not be included in the item text.
Type	Specify the kind of discount that should be granted for this reason on a document line. **Fixed** The amount entered in the Line Discount % field is fixed and cannot be changed manually on document lines. **Maximum** The amount entered in the Line Discount % field is the maximum amount that can be granted. The discount can therefore still be changed on lines that you enter the reason on unless it exceeds the value specified here.
Line Discount %	Specifies the line discount in percent. This field is related to the Type field.

To assign a reason:

1. Open a sales document.
2. Select the relevant sales line, and then fill in the Discount Reason field.

Discount reasons can also be used for transactions in kind.

For this purpose, you need to create a discount reason = 100% and assign it to the relevant document line. After selecting the reason, the associated line discount is then filled in automatically.

A discount only applies to a single line and is subtracted from the line amount there.

PRICING BY ORDER TYPE

Item prices might be the same across multiple order types or they might differ per type. The prices asked for in sales might also not be the same as those offered to service customers.

To specify a price for a certain type of sales order in medtec365:

1. Choose the Search icon, enter Sales Order Types, and then choose the related link.
2. On the ribbon, choose New (or go to a line on the page).
3. In the Sales Order Pricing Type field, select the price you want to use and fill in the other fields as necessary.

When you create a certain kind of sales order, the system then retrieves the price for it based on the order subtype selected in this field instead of the price list that would typically be chosen.

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[1] Microsoft, Microsoft Dynamics und Microsoft Dynamics 365 sind Marken der Microsoft-Unternehmensgruppe. ↩

Purchasing

PURCHASING

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s procurement department.

- Minimum expiration dates
- Time limits on blanket orders
- Extended purchase history
- Delivery schedule adherence
- Optimized Purchases
- Manage certificates and declarations
- Additional purchase fields
- Minimum order value and freight limits
- Variantenstamm
- Kommissionsartikel
- Rabattgründe
- Komfort Funktionen Bestellarbeitsblatt

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

MINIMUM EXPIRATION DATES

To prevent the purchase and sale of perishable goods that are close to expiring, you can specify a minimum shelf life for each item that you ship or receive. The shelf-life fields then need to be filled in as described in the following table.

Based on your needs, you can specify minimum expiration dates for shipments and receipts on location, item, item category, item reference, or stockkeeping unit cards, or do so on the Warehouse Setup page.

Field	Description
Min. Expiration Date (Outbnd.)	Specify the formula that will be used to determine if an item can be shipped on a certain day. To be able to ship the item, the expiration date entered for it must be greater than the planned shipping date plus the time span calculated by the formula in this field.
Min. Expiration Date (Inbnd.)	Specify the formula that will be used to determine if an item can be received on a certain day. To be able to receive the item, the expiration date entered for it must be greater than the planned receipt date plus the time span calculated by the formula in this field.

Workflow

When you post an item, the system searches for its expiration date in the following order:

1. Item references
2. Item master (item card)
3. Item category (as specified on the item card)
4. Stockkeeping units
5. Warehouse Setup

You then see an error message if an item is about to expire (or has expired already).

Note

Inbound or outbound expiration dates that you fill in for an item category are copied automatically to any item that you create based on this category.

By user

If a certain user still needs to be able to post items with low shelf lives, you can turn on the Ignore Min. Expiration Dates toggle on the relevant line in User Setup.

With the toggle active, the user is informed during posting that the entered items are below the minimum and is asked whether to post them regardless. Choosing No will cancel the posting process.

By location

You can also add expired inventory to certain warehouses (such as scrap locations) by turning on the Ignore Min. Expiration Dates toggle on the relevant location cards.

TIME LIMITS ON BLANKET ORDERS

To prevent terms and conditions specified on a blanket order from being used after the order has expired, you can now set not only a quantity but also a time limit there:

1. Open a blanket order.
2. On the FastTab, in the Blanket Order Until field, specify up until when the order is valid.

You then see an error message if you try to use the order after the expiration date. If the field isn’t filled in, the blanket order will be valid indefinitely.

EXTENDED PURCHASE HISTORY

The purchase history available in the standard app has been extended to show archived purchase quotes, purchase orders, blanket orders, and return orders as well.

DELIVERY SCHEDULE ADHERENCE

The Schedule Adherence FactBox shows you vendors’ compliance with requested or confirmed delivery dates, that is, how many of their deliveries arrived too late—or too early—and by how much.

Setup

You can analyze a vendor’s schedule adherence based on the Requested, Promised, or Expected Receipt Date on purchase orders. To select the date that will be used as the basis for analysis:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, select the required option in the Schedule Adherence Date field.

The system then checks if the field with the same name is filled in when you create a purchase order. You see an error message if it isn’t.

Evaluate schedule adherence

To analyze a vendor’s adherence to delivery schedules:

1. Choose the Search icon, enter Vendors, and then choose the related link.
2. Select a vendor, and then choose Find entries > Schedule Adherence. You can also open a vendor card, and then choose History > Schedule Adherence.
3. On the General FastTab, set filters as necessary, the purpose of each being as described in the following table.

Field	Description
Vendor No.	Filled in automatically with the vendor whose card you ran the action from.
Item No.	Can be used to filter for a specific item.
View by	Specifies the interval in which values on the Lines FastTab should be shown. Options are: • Day • Week • Month • Quarter • Year • Accounting Period
View as	Specifies what should be shown per line and interval. **Net Change** Shows the total for each interval. **Balance to Date** Shows the average per interval.
Analyzed From	Specifies by how many days or weeks (see Period Type) a delivery can arrive too early but still be included in the analysis.
Analyzed To	Specifies by how many days or weeks (see Period Type) a delivery can arrive too late but still be included in the analysis.
Period Type	Specifies the period that will be shown on the Lines FastTab.

OPTIMIZED PURCHASES

With this feature, you can raise the quantity on a requisition or planning worksheet to meet, for example, a minimum order value, cubage, or weight.

On the Optimized Purchase page, vendors will be listed with their inventories, as well as their receipts and shipments, over the past few months so that you can adjust any quantity required and then copy it to the relevant worksheet.

Setup

Item Vendor Catalog

Before you can use the feature, you need to ensure that the items that you want to change quantities for have been linked to the specified vendor on the Item/Vendor Catalog page.

medtec365 Setup

The period that enhancements should be made for can be specified in medtec365 Setup, in the Inventory Level Period field on the Inventory FastTab. You see an error message if you try to adjust worksheet quantities without the field being filled in.

Item units

To be able to see the cubage and weight of an optimized purchase, you must also fill in the Cubage and Weight fields for the relevant item units of measure.

Optimize worksheets

View optimizations

To see how quantities have been adjusted:

1. Open a requisition or planning worksheet.
2. On the ribbon, choose Home > Optimized Purchase.

Only quantities that originate with unblocked items and the same supplier (according to the item/vendor catalog) will be shown on this page.

Statistics

The following statistics fields are also shown on the page:

- Qty. on Order
- Inventory at Location
- Total Inventory
- Lead Time
- Inventory Level (Weeks)
- Avg. Pos. Adjmt. per Week
- Avg. Neg. Adjmt. per Week

Add items

To help you select the right items and quantities so that you can achieve the cubage required for a certain container or the amount needed to get an invoice discount, the line amount, cubage, and weight of all items shown on the Optimized Purchase page are totaled in the footer.

When you adjust a quantity or add a new item, these fields are then updated and the system runs the pricing function (that is, if weight and cubage values have been filled in for the relevant unit of measure and prices have been set up as well).

MANAGE CERTIFICATES AND DECLARATIONS

File a certificate or declaration

You can now store and monitor the validity of certificates and declarations from a vendor card. To set up the feature:

1. Choose the Search icon, enter Certificates and Declarations, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the certificate.
Description	Enter a description for the certificate.

You can then see the certificates and declarations stored for the vendor in the Long-Term Supplier Decl. and Short-Term Supplier Decl. fields, found on the Foreign Trade FastTab of the vendor card.

Using the lookup on either field will take you to the Vendor QM Data page, where you can choose New on the ribbon and fill in the fields as described in the following table to add a declaration or a certificate.

Field	Description
Code	Select a certificate stored in the system.
Starting Date	Specify when the certificate becomes valid.
Ending Date	Specify when the validity of the certificate ends.
Notification Date	Specify when you need to ask the vendor about the certificate.
File Path	Specify where the certificate is stored.

Search for valid certificates

As certificates are only in use for a limited period, their validity must be checked at regular intervals.

For this purpose, you can run the Vendor QM Notification report, where you can set filters on the Notification Date field, for example.

ADDITIONAL PURCHASE FIELDS

For additional vendor fields, you can specify if you want to make them available in purchasing and have them copied to the headers of posted documents; additional item and resource fields will be included on the lines.

On the Additional Field Setup page, you can also specify whether these fields can be changed manually. The system then logs the time they were modified and the ID of the user who edited them.

Note

The values in additional fields that you didn’t change manually will be retrieved again from the master records when you run an action such as Copy Document or Post.

Copy items (ease-of-use function)

The standard Copy Item function has been extended to include copying the following records:

- Stockkeeping units
- Packing types
- Item substitutions
- Related items
- Item label information
- Alternate prices
- Additional item fields
- Additional variant fields
- Additional unit of measure fields
- Attributes

Note

For more information, see Copy Item Function (KUMAVISION base).

MINIMUM ORDER VALUE AND FREIGHT LIMITS

Optimizing unit costs is key to a successful wholesale transaction. For this reason, you can now specify how much you must order from a vendor at the very least and up to which amount transportation fees will be paid by the supplier.

1. Open a vendor card.
2. On the Receiving FastTab, fill in the Minimum Order Value and Carriage Paid Limit fields. The amounts in both fields must be in the currency specified for the vendor.

What you enter in these fields is then shown as part of purchase order statistics and on requisition and planning worksheets for informational purposes.

In statistics

To see what you purchased:

1. Open a purchase order.
2. On the ribbon, choose Order > Statistics.

> **Note**
>
> The Minimum Order Value and Carriage Paid Limit fields that you can see on the Vendor FastTab of the page show amounts in the currency used by the vendor, regardless of the currency specified on individual orders.

On worksheets

Minimum order values and carriage paid limits are also shown on requisition and planning worksheets.

Additionally, you can see in the Accepted Order Value (Vendor) field what has been requisitioned from the vendor.

When you release a purchase order, the system then checks the current order value and fee system against the minimum value and fee limit. You’re notified if what you entered on the document falls below either.

However, a check for a minimum order value is only performed if the currency that is specified on the order matches the currency that you stored with the vendor. You see a message if they don’t but can decide to release the order anyway.

The line values that are being compared are gross or net, depending on whether you turned the Prices Including VAT toggle on the General FastTab on or off. The toggle setting on the related vendor card must match the setting made here; otherwise, the check isn’t run.

The same is true for requisition worksheets. However, because their lines don’t have Line Amount fields, the amount to compare the minimums to is calculated based on the Quantity, Unit Cost, and Line Discount % values that you specified on each line. If Prices Including VAT is turned on, the tax that you expect to pay is also added.

> **Note**
>
> Invoice discounts aren’t part of the check.

If the values in the Buy-from Vendor and Pay-to Vendor fields differ here, the check will apply to the Buy-from Vendor settings.

VARIANT MASTER

The variant master provides you with the option of specifying a list of potential item variants, to prevent the creation of a random *(that is, unstructured)* series of variant codes.

Setup

medtec365 Setup

To ensure variants can only be created for items entered in the variant master:

1. Choose the Search icon, enter KUMAVISION medtec365 Setup, and then choose the related link.
2. On the Inventory FastTab, turn on the Variant Master Reqd. toggle.

Item categories

If you don’t want the variant master requirement to apply to every category of items, don’t turn on the toggle in setup.

Instead, choose the general search function to open the Item Categories page and then select the Variant Master Reqd. field for each category that you want variant creation to be restricted for.

Variant master

On the Variant Master page, you can also create lists of potential attributes, for example, to prevent people from using different spellings for the same variant.

Note

A clear-cut structure that is easy to follow will help users choose the correct variants, considering that variant codes might be used for pricing as well.

Item card

You can restrict variant creation even further by filling in the Variant Cat. Code Filter field on an item card *(on the Misc. FastTab)*. The field specifies the code range available for selection from the variant master.

Workflow

For items that require you to select a new variant from the variant master, you can choose the lookup in the Code field on the Item Variants page to pick one of the available options.

The exact number of variants that you can choose from depends on whether you also put a Variant Cat. Code Filter on the items.

CONSIGNMENT ITEMS

The standard reordering policy Order is typically based on consignment transactions. For this reason, the configuration templates have been extended to include a field for specifying how consignment items will be stored.

Setup

Item

To specify the storage method for a consignment item:

1. Open an item card.
2. On the Warehouse FastTab, fill in the field described in the following table.

Field	Description
Consignment Type	Specifies whether and how an item will be used for consignment. Depending on whether you choose Local or Central, stockkeeping units are then created automatically for the item at a main site or multiple locations.

medtec365 Setup

Field	Description
Main Consignment Location Code	If you’re using an item template, identifies the location for the centralized procurement of consignment items.
Other Consignment Location Fltr.	If you’re using an item template and selected Local or Central as the consignment type for an item, you can set a filter in this field to specify the locations stockkeeping units should be created for. If you leave the field blank, stockkeeping units will be created for every location set up in the system.

Bins

You must also set up a bin for consignment items at each location they’re assigned to. This bin is specified for the warehouse in the same way as a standard bin, except for the field described in the following table.

Field	Description
Consignment Type (Bin)	Specify what bin will be used for consignment items. You can choose between (blank), Default, and Other.

Workflow

Create a consignment item

If you’re using a template to create a consignment item or applying the template to an existing product, stockkeeping units are created in one of the ways described in the following sections. What all of these have in common is that on each SKU card created through this process, the Reordering Policy field will be set to Order.

Local procurement

Stockkeeping units with the Purchase replenishment system will be created for all sites included in the Other Consignment Locations Fltr. (see medtec365 Setup).

Centralized procurement

Stockkeeping units with the Transfer replenishment system will be created for all sites included in the Other Consignment Locations Fltr. (see medtec365 Setup).

Only for the warehouse selected in the Main Consignment Location Code field (also found in medtec365 Setup) will the system create an SKU card with replenishment system Purchase.

Procure an item

When you enter a consignment item on a sales order, a purchase order or a transfer that includes a purchase order are then suggested automatically on the associated worksheet depending on the location and stockkeeping units involved.

The purchase order is linked to the sales order by reserving items on the sales lines. As a consignment item typically has no inventory available, you’re notified about the consignment when you enter this kind of item.

If non-reserved inventory exists, however, you see a message that you might need to reserve the item manually.

Confirm an order

You can run the Create Purch. Order Cnfrmn. function from the Lines FastTab ribbon on a purchase order to enter a number and a date for a confirmation document. The number is then copied to the Current Cnfrmn. No. fields on the selected lines.

For a better overview, the field was also added to sales lines. Clicking the field there opens a page that shows the confirmation note. On this page, you can:

- Run the Show action to see the purchase order.
- View the type and number of the order.
- Identify the sales order by the Sales Order No. and Sales Line No. fields that have been added to the confirmation lines.

As for bullet point 2 and 3, the fields are automatically filled in when a confirmation line is created provided the relevant item was reserved on the sales document (or indirectly via a transfer).

Another field that was added to order confirmation lines is the Source field. It is filled in with the Manual option when you create a confirmation note manually.

A source entry with the Whse. Receipt option selected is also created on receipt of a delivery. The entry links a purchase line to the sales line that the purchase order was set up for (provided an item reservation exists) and will remain even after the item is no longer reserved.

Change a quantity

Typically, you cannot change the quantities on purchase and sales orders that you reserved items from.

However, for consignment items, you can adjust the quantities at any time (that is, prior to receipt) both on purchase and sales orders, with the changes copied to all relevant reservation entries and document lines.

What you still cannot do is change a quantity mid-transaction (=during transfer) or after you’ve shipped or received part of the delivery.

Specify a default bin

As the default bin for consignment items, the CONS bin is automatically suggested on receipt of a delivery if it hasn’t already been specified by a user or through a two-step logistics process using warehouse bins.

Change an item or a variant on receipt

On the Warehouse Receipt page, you can run the Change Consignment action on the Lines FastTab to change an item number or a variant, or both.

Clear backlog

On the Warehouse Receipt page, you can also use the Clear Backlog action to create warehouse shipments after a receipt has been posted.

Before the function can be run, you must turn on the Can Clear Backlog toggle for the relevant user in User Setup. A default purchase order type for clearing backlog needs to have been set up as well.

Print a label (incl. reservation data)

To print a label for an item on receipt and create a corresponding ledger entry:

1. Open an item card.
2. On the ribbon, choose Related > Item > Label Information.
3. Fill in the fields as necessary.

A label is then printed when you post a warehouse receipt that includes the specified item. If the item was reserved from a sales order, the system also prints the number and name of the customer and the number of the sales order on the label.

Create a purchase return

You see a corresponding message when you enter a consignment item on the Sales Return Orders page manually. You can then create a purchase return order from that page by using the Create Return Document function on the ribbon.

Afterward, the reservations made for consignment items from purchase lines will be copied to the relevant sales lines.

DISCOUNT REASONS

You can now also specify the reason for granting a line discount on a document.

1. Choose the Search icon, enter Discount Reasons, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the reason. The code must be unique.
Description	Specify the reason for the discount. This description will not be included in the item text.
Type	Specify the kind of discount that should be granted for this reason on a document line. **Fixed** The amount entered in the Line Discount % field is fixed and cannot be changed manually on document lines. **Maximum** The amount entered in the Line Discount % field is the maximum amount that can be granted. The discount can therefore still be changed on lines that you enter the reason on unless it exceeds the value specified here.
Line Discount %	Specifies the line discount in percent. This field is related to the Type field.

To assign a reason:

1. Open a purchase document.
2. Select the relevant purchase line, and then fill in the Discount Reason field.

Discount reasons can also be used for transactions in kind.

For this purpose, you need to create a discount reason = 100% and assign it to the relevant document line. After selecting the reason, the associated line discount is then filled in automatically.

A discount only applies to a single line and is subtracted from the line amount there.

REQUISITION WORKSHEETS (EASE-OF-USE FUNCTION)

You can now open item and SKU cards from requisition worksheets.

1. Choose the Search icon, enter Requisition Worksheets, and then choose the related link.
2. Choose a worksheet from the list.
3. Select a line, and then choose Related > Line > Item Card or SKU Card on the ribbon.

You can also choose Related > Line > Item/Inventory Turnover on the ribbon to see the movements of an item, as well as the priority texts, block prices, minimum order values, and carriage paid limits specified for it.

Manufacturing

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s production department.

REPORTS AND DOCUMENTS

To assist you in your manufacturing tasks, medtec365 provides route sheets and barcodes matching the numbers that you assigned to production orders, components, and operations in the system. To set up the feature for first use:

1. Choose the Search icon, enter Report Selections Production Order, and then choose the related link.
2. In the Usage field, choose Project Card.
3. On a line, in the Report ID field, select report 5007239 (Route Sheet).

Afterward, you can add route sheets to your production processes. When you run the report to create a sheet, you can also choose on the Options FastTab whether you want to have additional information printed on the document, as described in the following table.

Option	Description
Incl. Bar Code	Turn on this toggle to have a bar code printed on the sheet.
Incl. Materials	Turn on this toggle to have the materials required for each production step printed on the document.
No. of Copies	Specify the number of sheets you need.

EASE-OF-USE IMPROVEMENTS

To increase traceability and transparency, you can now turn production order numbers into lot numbers so that you can continue to track items even when the status of a production order changes.

1. Choose the Search icon, enter KUMAVISION medtec365 Setup, and then choose the related link.
2. On the Manufacturing FastTab, turn on the Prod. Order No. as Lot No. toggle.

See the following table for an explanation of the other fields on the tab.

Field	Description
Default Scheduling Period	Here you can specify a date formula that will be used to refresh the ending dates on requisition and planning worksheets. The result of the calculation is added onto the value in the Starting Date field when you fill in a worksheet. **Example** You enter 12M. This means that the next time you fill in a requisition or planning worksheet, the Starting Date field will be filled in with the work date, whereas the Ending Date field will show the same day and month, only a year later *(unless that day is not a workday)*.
Default Run Time	Turn on this toggle if you want the system, and not staff members, to fill in run times.
Default Setup Time	Turn on this toggle if you want the system, and not staff members, to fill in setup times on production and output journals.
All Flushing Methods for Tracked Items	Turn on this toggle if you want production order components that require item tracking and a flushing method other than Manual to be posted automatically to production and consumption journals.

DEFAULT ITEM LOCATION AND BIN

If you’ve set up a location and a bin on an item card (on the Replenishment FastTab), they’re filled in automatically when the item is entered…

- …on a production order (in the Source No. field) during manual order creation, with both the location and bin filled in on the header.
- …as a component on a BOM.
- …manually on the components of a production order.

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1. Microsoft, Microsoft Dynamics und Microsoft Dynamics 365 sind Marken der Microsoft-Unternehmensgruppe. ↩

Warehouse Management

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s logistics department.

TYPES OF ITEMS

In the Type field on the Item Card page, you can select what the item is used *(Inventory, Non-Inventory, Service)* for in your business. Also see Types of items

KUMAVISION medtec365 only supports the Inventory type. For this reason, this option is preset for each items. The corresponding field is hidden by default and cannot be edited.

ADVANCED LOGISTICS PARAMETERS

Overview

In medtec365, you can use multiple advanced logistics parameters to decide on, for example, the methods used for picking items, whether lot tracking is required for outbound goods, and what the minimum expiration date should be for products that you ship or receive.

As the choice of settings might vary depending on storage conditions or agreements with customers or vendors, the parameters are available in several places in the app. The following sections will show you where you can find them in the system and how you can customize them to your needs.

Setup Parameter Descriptions

Parameter	Description
Pick Method	Specifies the method that will be used for picking items from your warehouse. Options are: **(blank)** A method has not been set up yet. **FIFO** The items with the earliest receipt or manufacturing dates are picked first. **LIFO** The items that were received or manufactured last are picked first. **FEFO** The items with the earliest expiration dates are picked first. **Note** If FEFO is selected but expiration dates are not maintained, the method is replaced with the FIFO option automatically. **Custom** Warehouse employees decide on their own what items (in which lots or with which serial numbers) to pick for shipments. **Note** When you use this pick method, the system does not check if the items can be shipped at all.
Single-Lot Pick	With the toggle turned on, all items will be picked from the same lot. **Note** This parameter is only relevant to lot-tracked items.
Min. Expiration Date (Outbnd.)	Specifies a formula that will be used to calculate the minimum shelf life for items that you want to ship. **Note** If expiration dates are not maintained, this parameter is ignored.
Min. Expiration Date (Inbnd.)	Specifies a formula that will be used to calculate the minimum shelf life for items that you expect to receive. **Note** If expiration dates are not maintained, this parameter is ignored.

Note

The parameters are only considered by the system if you’ve also turned on the Advanced Logistics toggle on the relevant master record (such as a location card).

Parameter Locations

You can use the parameters in various places in the app for different purposes, from mirroring individual agreements with a certain customer or vendor to making general warehouse settings.

The following list shows you all configuration options in order of their retrieval.

1. **Item references**
   Here you can specify parameters for items and variants based on special agreements with certain customers or vendors, for example.
2. **Stockkeeping units**
   On stockkeeping unit cards, you can set up parameters for locations that are linked to certain items, variants, or transaction codes.
3. **Items**
   On an item card, you can make warehouse settings regardless of where the item is shipped to or from and who should receive or supply it.
4. **Item categories**
   On the Item Category page, you can make settings for categories without having to link to a specific item, location, customer, or vendor.
5. **Locations**
   Parameters you set on a location card relate to this location regardless of the items shipped from or received at the site and the vendors or customers they're intended for.
6. **Warehouse Setup**
   The Warehouse Setup page represents the lowest level in the parameter hierarchy, with the parameters being available for all locations and items tied to the warehouse functionality.

   Validation

The system looks for parameters in master records in a certain order (see Parameter Locations). This is to ensure that the sales and purchase agreements you negotiated individually with a customer or vendor take priority over general settings, such as the configuration found in Warehouse Setup.

First, the system checks whether the logistics parameters are activated at all (that is, the Advanced Logistics toggle is turned on for the record) and if the parameter—for example, Min. Expiration Date (Outbnd.)—is filled in. If the relevant field is blank, the system will look for the required value in the remaining app locations as described in the previous section.

Additionally, the system searches for all parameters independently of each other. As an example, it might retrieve lot pick settings from the item references but minimum expiration dates from an item card.

You can also store the parameters on master records that have no direct relation to an item or a tracking code. This includes item categories, locations, and Warehouse Setup, where you can choose pick method FEFO, turn on Single-Lot Pick, or fill in the Min. Expiration Date (Inbnd.) and Min. Expiration Date (Outbnd.) fields.

The settings then apply to items with lot or expiration date tracking. If you're working with items that these options aren't set up for, FEFO automatically changes into FIFO while the other parameters are ignored.

FULFILL BACKLOG ON RECEIPT

With this feature, you can fulfil sales backlog, that is, overdue deliveries or transfer shipments, automatically when a receipt is posted to your warehouse.

You can also track item movements on the Sales Backlog page and intervene if, for example, the number of items that you receive isn't enough to satisfy demand. The page provides an easy-to-use overview of all open sales and transfer lines that you can complete by filling in items from the delivery.

Building on standard cross-document functionality, the feature offers you a way to automate order fulfillment while streamlining your logistics, as no storage space is required for items that you can ship immediately.

Depending on how backlog fulfillment has been set up, items are reserved on sales orders, warehouse shipments are created, or the shipments are already posted and printed.

> **Note**
>
> This feature can only be used if the relevant site is set up as a warehouse location.

Setup

User Setup

To specify if and how a user can automate order fulfillment:

1. Choose the Search icon, enter User Setup, and then choose the related link.
2. Select a line.
3. In the Can Clear Backlog field, choose one of the options described in the following table.

Option	Description
No	The user cannot open the Fulfill Backlog page. Warehouse receipts are therefore posted without the feature being turned on.
Reserve Only	The user cannot see the Fulfill Backlog page. The backlog is cleared by using the quantities already reserved.
Custom	The user can see the Fulfill Backlog page. The backlog is cleared by using the quantities already reserved and the quantities allocated by the user.

Purchase order types

Whether the sales backlog can be fulfilled when you post a receipt also depends on the type of order you’re working on.

1. Choose the Search icon, enter Purchase Order Types, and then choose the related link.
2. In the Fulfill Backlog field, select one of the options described in the following table.

Option	Description
Reserve	The allocated quantities are reserved for the demand lines.
Create Outbnd. Docs.	The quantities that should be distributed across the demand lines are first reserved. Afterward, a warehouse shipment is set up for each sales order that demand should be met for, with the reserved quantities filled in on the shipments. If picking is required, the system then creates a pick document that it transfers the reservations and the bins to, if needed (unless directed pick and put-away is used). **Note** Warehouse shipments are only created when the Shipping Advice field is set to Partial Shipment, or when all remaining quantities can be delivered in a single shipment. The system also checks whether the credit limit will be exceeded because of the reservations.
Post Outbnd. Shpts.	The first steps in the process are the same as with the other two options. Afterward, the pick is registered, if necessary, and the shipments posted. If you turned on the Require Put-away toggle on the location card, the put-away that is created is also registered automatically.
No	No backlog is cleared.

Based on the option that you select and the type of order you’re handling, you might see a dialog box where you can choose the type of fulfillment that will be used when you post a receipt.

The field on the page is filled in by default with the option specified for the order on the Purchase Order Type page but can be changed manually for each posting (that is, if the relevant toggles are turned on for your user ID on the User Setup page).

Workflow

When a warehouse receipt is posted, the system first checks whether the items that are specified on the warehouse receipt lines are needed to meet demand from sales, transfer, or service lines, production order components, or purchase returns. To limit the period that demand needs to be met for:

1. Choose the Search icon, enter Purchases & Payables Setup, and then choose the related link.
2. On the KUMAVISION FastTab, in the Fulfill Backlog (Days) field, specify the formula that will be used to find based on today’s date demand lines within the calculated period.

If one or more demand lines are then found during receipt, you see a dialog box that you can specify in how current backlog should be fulfilled. If what you’ve received is too little to cover what’s needed according to the demand lines in the system, you’re informed that you need to allocate items to them manually. If no demand exists, you don’t see this box.

> **Note**
>
> Backlog isn’t cleared if you select No on the request page of the Fulfill Backlog report. If you select any of the other options, you see a page that lists all sales, purchase, transfer, service, production order, and purchase return order lines that demand must still be met for.

Based on the shipment date entered on a demand line, the system then suggests the part of the receipt that hasn’t been reserved yet in the Qty. to Allocate or Qty. to Allocate (Base) field. The line with the earliest shipment or due date has the highest priority here. You can change the value and distribute the quantity across individual demand lines, however, before confirming your choice. Afterward, the quantities that you entered in the Qty. to Allocate (Base) field will be reserved.

REPLACE CONSIGNMENT ITEMS

The Replace Consignment action has been added to the Lines FastTab ribbon on the Warehouse Receipt page.

Running the action opens the Choose Item & Variant page, where you can change the item number or, if applicable, the variant code on a line.

GET BIN CONTENT: RECLASSIFICATION JOURNAL

You can run the Get Bin Content function from an item reclassification journal to move the content of one or more bins to another bin stored at the same location.

The function uses the transaction codes set up in medtec365 to specify who owns the items that you move with the help of the journal. When you transfer them, their tracking information is copied as well.

> **Note**
>
> This action is only available on the transfer journal ribbon.

To move items within your warehouse:

1. Choose the Search icon, enter Item Reclassification Journals, and then choose the related link.
2. Select the relevant line, and then choose Get Bin Content.
3. On the request page, set filters as necessary to calculate and fill in the journal.

The Quantity Type field plays a major role in the transfers. You can select one of the following options in this field:

Option	Description
Overall Quantity	All pick lines that have not yet been registered and all allocation entries related to the bin content are deleted.
Moveable Qty.	All allocation entries related to the bin content are deleted. Quantities in picking or blocked quantities are ignored.
Available Invt.	Only available quantities are used during transfers. Allocated, blocked, or picked quantities are ignored.

The impact of each option is also described to you in a text box below the field. User Setup controls if you can choose between all three (Can Get Bin Content is selected for your ID) or whether you can only have available quantities calculated (the field in User Setup is deactivated).

> **Note**
>
> The New Location Code and New Bin Code fields aren’t filled in automatically on the transfer lines. Instead, you must manually specify the location and the bin that you want inventory to be moved to. Item tracking codes can only be shown after you’ve entered a new location.

When you’ve specified a target location and bin for the lines that you created, choose Post or Post and Print on the ribbon to transfer the items.

POST SHIPMENTS AS RECEIPTS: TRANSFER ORDERS

You can use the Auto Post Shpt. as Receipt toggle—found on the General FastTab of a transfer order—when you have no staff member who could confirm item receipts at a certain location, for example.

To set up the feature:

1. Choose the Search icon, enter Inventory Setup, and then choose the related link.
2. On the Numbering FastTab, in the Direct Transfer Setup field, select the option you want to use (Microsoft Direct Transfer or KUMAVISION base Direct Transfer).
3. In the Direct Transfer Posting field, select Direct Transfer for standard functionality. For the KUMAVISION base extension, select Receipt and Shipment.

However, for the function to work, you must also turn on the feature for the relevant location:

1. Open a location card.
2. On the General FastTab, turn on the Auto Post Transfers toggle.

The toggle is then set automatically on transfer orders that the location is assigned to.

INVENTORY OVERVIEW

In this overview, you can filter inventory, including its tracking information, by custom criteria.

To open the overview, use the general search function or run the Inventory Overview action from the Items page or an item card. The following fields must be filled in on the header:

- Location Code
- Item No.
- Transaction Code

When you choose Inventory > Calculate on the Lines FastTab ribbon, the inventory is then calculated and shown according to the filters that you’ve set.

To specify the FactBoxes that should be shown for a line, go to the ribbon, and then choose Show FactBox > Line Details to see information such as item availability for the current line, Total (Factors) to see total availability—limited by the filters entered on the page header—or Totals to analyze data by location, item, variant (if available), and transaction code.

Because items that are stored in a bin such as QM aren’t available for picking, they will be marked accordingly and can be viewed by drilling down on a location field.

Additionally, the Total Qty. (Base) field shows you how many items are in inventory, regardless of availability. The Qty. on Inventory (Base), on the other hand, indicates how many have been put away.

These quantities might not match, for example, when some items have been picked. Subtracting the Qty. Picked (Base) from the Qty. on Inventory (Base) will get you the Available Qty. (Base) shown in the FactBox.

DAMPENER PERIODS

In the standard app, you can add a dampener period to a purchase order to mark the time span in which supply orders aren’t rescheduled if they arrive earlier than needed (for example, to meet demand on a sales order).

Although you initially need to fill in the dampener period field in Manufacturing Setup, you can later enter another period on a specific item or stockkeeping unit card.

In medtec365, the field Dampener Period (Delay) has been added to both these cards and Manufacturing Setup so that you can now specify buffer times in both directions during lot-for-lot reordering.

> **Note**
>
> If you want to use this feature, you also need to set up a lot accumulation period (which is typically greater than the dampener period).

ASSIGN PERMISSIONS BY LOCATION

Overview

One of the things you must do when you add a new company to the app is to specify who can use or post to locations on documents created in the system. The following setup is therefore required for every user to whom you haven’t assigned one or more locations on the Warehouse Employees page.

Setup

Location permissions

To assign a non-warehouse employee to a location (and bin):

1. Choose the Search icon, enter Location Permissions, and then choose the related link.
2. On the ribbon, choose New, and then fill in the fields as described in the following table.

Field	Description
Role ID	Specify the role that permissions should be granted to.
User ID	Specify the ID of the user whom permissions should be granted to.
Location	Specify the location that permissions should be granted for.
Purchase Sale Pos. Adjmt. Neg. Adjmt. Transfer Output Consumption	As for each of these checkboxes, you can decide whether to select it—and allow the user or role to run the function—or clear it to block use of the feature. **Note** You can also choose Yes or No in the All Functions field to select or deselect every checkbox at the same time.
Own Bin Only	Restricts the user to the bin that is linked to their customer number (which is determined based on their salesperson code and contact; for more information, see Own Bin Only).
Customer No. Bin	Limits the user’s permissions to the bin that a customer number is entered for in this field. **Note** The bin must be assigned to this number at the specified location.
Applies to All Bins	With the toggle turned on, the settings on this page apply to all bins at the location. The value in this field is only considered by the system if the Own Bin Only and Customer No. Bin fields are blank.
Bin Permissions Exist	Specifies if bin permissions are maintained for the selected line.

Note

You can assign permissions either by role or user. Assigning a location to both isn’t possible. If you specify permissions for a role, the Role Permissions checkbox needs to be selected on the relevant location card.

Own bin only setup

To limit a user’s access to their own bin, the following must be true:

Warehouse employee

The user isn’t specified as a warehouse employee for the location.

User Setup

On this page, the All Locations Allowed checkbox, which you can find on the General FastTab, isn’t selected. The Salespers./Purch. Code field, however, is filled in.

Note

If the user hasn’t been added as a salesperson or a purchaser yet, you must set them up as one.

Employee (Salesperson/Purchaser)

On this card, the contact specified for the user is entered in the Contact No. field.

Note

If a contact doesn’t exist, you need to set one up before continuing.

Contact

The contact specified for the user is assigned to a customer.

Location

The location contains a bin that is linked to this customer.

Restrict to existing bins

To allow a user or role to post only to an existing bin that isn’t assigned to them or a customer, choose Find Entries > Bins on the ribbon and specify the required permissions.

Note

If Own Bin Only or Applies to All Bins is selected, or the Customer No. Bin field is filled in, you can safely ignore the bin permission settings described in the following section, as you don’t need to maintain data for individual bins in this case.

Workflow

Location lookups

In most cases, the Location Code and New Location Code fields show only locations that the current user is allowed access to. This concerns the following records:

- Sales documents (headers and lines)
- Purchase documents (headers and lines)
- Transfer records (headers)
- Item journals
- Requisition and planning worksheets
- Inspection orders
- Production orders

Permissions check (in three stages)

a) Post
Each time you post to inventory—whether from a document, a journal, or somewhere else—the system checks what permissions are required for posting and cancels the process if you aren’t allowed to post to the specified location.

b) Release
A check might already be run one step before (a)—if the record that you release is a purchase, sales, or production document—but only on document lines that you want to post.

Theoretically, posting the lines might then lead to more inventory postings, although these cannot be checked in advance. Consequently, the system only runs a check if at least one line leads to inventory being moved, that is, some quantity still needs to be shipped.

c) Lookup
Further upstream, the view provided by location lookups on documents and journals is limited to locations that you have permissions for given the settings made for the document or journal line (for example, during a transfer).

The feature was designed as a usability improvement, which means that all locations remain available when you type in the name of a site manually. Additionally, the view isn’t restricted when you create base data or want to set a filter on an analysis or the Possession / Ownership field.

The following records are excluded from permission checks:

- Invoices and credit memos that don’t lead to a change in inventory levels.
- Report 71076607, which is used to create fixed assets.

Roles and users

Users can have permissions superior to those of the roles assigned to them. They can also have fewer permissions if some rights aren’t granted to them. All a user's roles are checked, one after another, for the extent of their permissions. If none of those, nor the user’s individual permissions, allow access to a certain location, the user cannot post to the location at all.

Transaction codes and movement hierarchies

Transaction codes specify the type of possession or ownership over an item and are automatically entered when you post a warehouse shipment.

By using the associated movement hierarchy, the system then selects, depending on setup and availability and according to a predefined sequence, the fixed, current, and third-party items that need to be shipped.

You can change this configuration on the Transaction Codes page, which is available via the general search, by replacing the transaction codes and movement hierarchies filled in there by default. This way, you can ensure that, for example, used goods (=current assets) are always shipped first.

If no inventory is assigned to a transaction code, the system will search for available inventory based on the next transaction code set up in the system.

PRINT ITEM LABELS

You can have the system print labels for items that you post a receipt for. To set up the feature:

1. Choose the Search icon, enter Items, and then choose the related link.
2. Select an item or open the associated item card.
3. On the ribbon, choose Related > Item > Label Information, and then fill in the fields as necessary.

You can specify in the Print on Receipt field whether the label should be printed when the item is received. In the Packaging Size field, you can specify the size of the outer packaging as a factor. As an example, entering 5 in this field would tell the system to print three labels if a receipt contained 15 of the same items.

The barcode information that will be printed on the label consists of the item number and information for tracking the item (such as a lot or a serial number). You can also enter a short text that should be shown on the label.

VERIFY INVENTORY

You can create a verification request in the system to ask customers to confirm how many items that aren’t their own are held by them at their warehouses. The basis for verification is the quantity that is posted with warehouse shipments of type Transfer.

1. Choose the Search icon, enter Physical Inventory Journals, and then choose the related link.
2. Select a journal.
3. On the ribbon, choose Customer-Held Inventory to fill in the journal.

You can then compare the numbers entered in the journal to those provided by your customer.

INVENTORY: EASE-OF-USE FUNCTIONS

Besides offering year-end counts, medtec365 provides you with multiple functions for handling ongoing inventory control with ease.

For example, with the new count fields available in physical inventory journals, you can quickly identify the parts of a location or bin where you still need to take a physical inventory of your items. Additionally, you can now exclude an area from a count, if necessary.

Setup

To be able to take stock, you must first complete all related transactions that involve some kind of inventory movement. This means that you need to:

- Take the items you want to ship from their bins and post their costs to the associated general ledger accounts.
- Make sure that transferred items aren’t still at the in-transit location.
- Adjust inventory as necessary and then post the adjustments.

Physical Inventory Location Setup

On this page, you can specify how you want a warehouse area to be divided among the physical inventory journals you’ve set up. You can open the page by running the Phys. Invt. Location Setup action from the ribbon of a journal.

This way, you can speed up inventory calculations, especially if the number of items in inventory is comparatively large.

To assign certain rows and aisles of a location to a journal, you only need to fill in the Location, From Bin Code, and To Bin Code fields on the page.

Block inventory posting

In medtec365 Setup, you can specify on the Inventory FastTab if you want to:

- block all locations when a physical inventory journal is filled in.
- block only the locations entered in the journal.
- don’t block posting at all.

The setting that you choose will apply to all items entered on physical inventory journals. With the first two options, posting inventory transactions (movements) will be blocked in sales and purchasing and on item journals.

Year-end counts

Calculate inventory

To do a year-end count:

1. Choose the Search icon, enter Physical Inventory Journals, and then choose the related link.
2. Use the Assist button to the right of the Batch Name field to select a journal.
3. On the ribbon, choose Prepare > Calculate Inventory, and then fill in the fields as necessary.

As for the field values that you can specify on the request page, the posting date and document number you fill in are later copied to the journal lines so that you can track exactly when and what items were counted during physical inventory.

You can also filter for certain locations and bins on the page to specify the areas that the journal should cover.

> **Note**
>
> If the Calculate per Serial No./Lot/Expiry toggle is activated on the request page, the system creates (among other things) a line for each lot that items are in inventory for. Turning on the toggle is therefore essential to proper stocktaking.

After you run the function, the Qty. (Calculated) field on a journal line shows the total quantity that is available in inventory for the item entered on the line. If the Calculate per Serial No./Lot/Expiry toggle was turned on before you ran the Calculate Inventory function, you also see a new line for each serial number assigned to the line item, for example. Meanwhile, the Qty. (Phys. Inventory) field shows the number of items that were expected to be in inventory, as well as their tracking information.

Record count

Afterward, you can choose Print on the ribbon to print the list you need for a physical count. On the request page, you can then specify if you want the quantity determined for each item on the list to be printed with the relevant tracking information and if the print or count date should be added as well.

Enter inventory

When you’ve done the count, you can manually copy the quantities written in the Qty. (Phys. Inventory) column on the list to the fields with the same name in the physical inventory journal.

> **Note**
>
> You don’t need to fill in the field for every item but only for items where the quantity that you have on hand differs from the quantity calculated earlier.

For items that use serial numbers, tracking must be removed before you can enter a quantity in the field and then reassigned after you make the entry. For an item with a serial number, you must add a new line and tracking information manually.

Recount

When you need to do a recount, you can set filters on the lines to restrict the journal view to certain values, such as Difference <15 or Quantity <> 0.

Ongoing inventory counts

Calculate inventory

For ongoing inventory control, only a limited number of bins are typically counted.

1. Choose the Search icon, enter Physical Inventory Journals, and then choose the related link.
2. Use the Assist button to the right of the Batch Name field to select a journal.
3. On the ribbon, choose Prepare > Calculate Inventory.
4. On the Filter: Item FastTab, specify a range of bins for calculation.
5. In the Inventory Type field, select the type of stock that you want to count. You can choose among the following options:
   a. **Year-End**
   Calculates the entire inventory (as of the balance sheet date).
   b. **Excl. Ongoing Inventory**
   Calculates inventory quantities for all item lines where the Counted On and Count Document No. fields aren’t filled in.
   c.**Only Ongoing Inventory**
   Calculates inventory for each line a count date and document number are filled in on.
6. Turn on the Ongoing Phys. Invt. toggle. This activates the Block Bins and Incl. Non-Inventory Items toggles as well so that no one can post to the bins you’ve specified and that empty bins are included on the list.
7. Fill in the other fields as necessary.

Record count

For ongoing inventory counts, you again need a list for recording item quantities. For more information, see Year-End Counts > Record Count.

Enter inventory

Ongoing counts are subsequently entered into the system in the same way as year-end counts. For more information, see Year-End Count > Enter Inventory.

However, before you post a journal line, you need to choose Actions > Functions > Include in Regular Counts on the ribbon. This opens a dialog box in which you can specify the number of the relevant count document and the count date.

This data is then copied to all calculated lines, as well as to the physical inventory entries and the bin content created for the journal.

If you later add an item to a bin where the content has been counted before and the data pertaining to that bin is entered in the box, only new items (=quantities) will be copied to the journal lines (provided you select Excl. Ongoing Inventory when using the Calculate Inventory function).

Recount

The recount process used for ongoing inventory control is the same as for year-end counts. For more information, see "Year-End Count > Recount“.

Special features: physical inventory journal

Specify possession and ownership

For third-party property, you can specify in the Possession / Ownership field whether the legal possessor or owner must be recorded during counts.

Capitalize fixed assets

Fixed assets should be posted by using CA-CAP or another transaction code.

If you’re using a separate code, your financial department and the customer need to agree whether it should be set to Valued or Not Valued. For CA-CAP, you need to run the capitalization function when you acquire the item.

When you dispose of an asset, the fixed asset number is recorded in the background so that you can check the asset schedule later.

> **Note**
>
> The FA transaction code should never be used to post positive adjustments to, for example, physical inventory or item journals.

INVENTORY VALUATION

Many companies also need to manage items that aren’t their own. This includes:

- Items delivered by a customer for repair, with some also forwarded to suppliers before being returned to the customer.
- Products managed and rented to customers but provided by a third party.
- Goods sold on consignment.
- Rental equipment that counts as a fixed asset (although it will again be considered an item for the purposes of repair and refurbishment).

What all these examples have in common is that they shouldn’t increase the value of your regular inventory or show up as such inventory on your general ledger.

Additionally, the handling of these items must not have an influence on the average unit costs determined for them under normal circumstances.

In short, whatever way is used to ship or receive goods and move them through your warehouse, they must always, or in the case of consignment, at least, temporarily, be excluded from inventory valuation.

With a new feature, you can use standard logistics processes to move items without changing the value of your inventory—but still be able to arrive at the expected costs for consigned stock when ownership over it is transferred in purchasing. This concerns the following posting processes:

- You remove goods from a consignment delivery.
- Products that you’ve sold are returned to you for rental or repair purposes.
- You rent out items (which are recorded as fixed assets on your balance sheet).
- You sell rental equipment that was capitalized as a fixed asset.
- You buy back stock that was returned to you for storage or rental purposes.
- You cancel one of these transactions.

Depending on the process, you can use transaction codes to set a valuation method manually. You can specify a code for each method that you want to use. The correct method is then determined based on the type of transaction that occurs (as entered in the Valuation Method field on posted item ledger entries).

While this procedure works for posting quantities, you see an error message if the method shown on the invoice and the type specified on the associated item ledger entry don’t match.

You can unhide and fill in the Transaction Code field on all types of purchase documents, except blanket orders, quotes, and item journals. You can also set up default transaction codes for certain documents and lines on the Purchase Order Type page. For more information, see Purchasing.

Note

The valuation method is determined for each process separately and is then copied to the item ledger entry created by the relevant posting.

A valuation method is also filled in on application entries if you apply an item that the field was specified for (that is, was set to Valued, Variable, or Not Valued).

Note

Output reported is always posted with a value.

Variable valuation

The delivery of consigned goods is typically posted as a purchase receipt in the app, with the Valuation Method field set to Variable when you post them. The value of the items is then specified in the system not as a Cost Amount (Expected) but as a Cost Amount (Not Valued) and the item quantity is copied to the ILE Qty. Not Valued field. Additionally, the valuation method on the item ledger entry created during posting is specified as Variable.

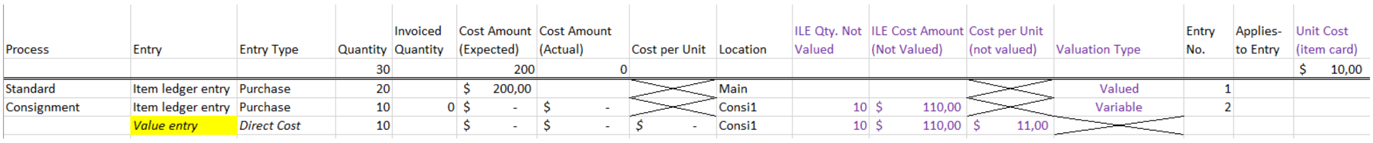
When you later post an outbound transaction, like a sale, a disposal, or consumption, the system checks if Variable is selected in the Valuation Method field on the applied ledger entry. Should the option have been selected, the system creates inbound item ledger entries and—sorted by application date—value entries for expected costs, as if standard functionality had been used. Afterward, the balancing quantity is entered as the ILE Qty. Not Valued.

The Cost Amount (Not Valued) in this scenario is calculated based on the following formula: ILE quantity not valued times cost per unit, with the expected cost amount representing the opposite value.

If you want to cancel an entry, another value entry will be used to post the reversal.

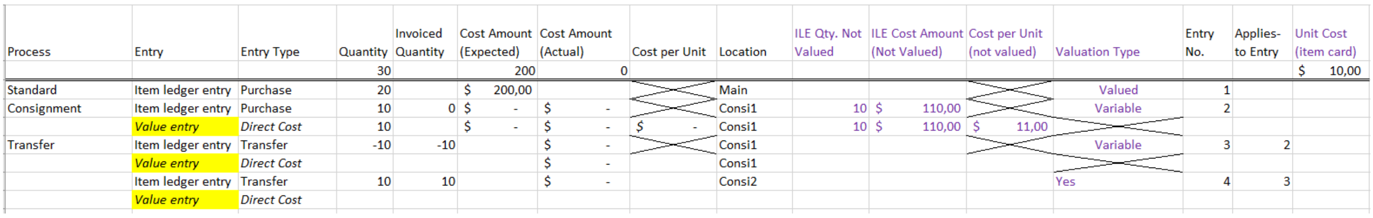
Example
You have a purchase order of 20 items with expected costs of USD200, which works out to a unit cost of USD10 on the associated item card.

You then receive consigned stock that the Variable valuation method is selected for. The delivery consists of a total of 10 items that are valued at USD110. Standard unit costs aren’t affected by the receipt, however.



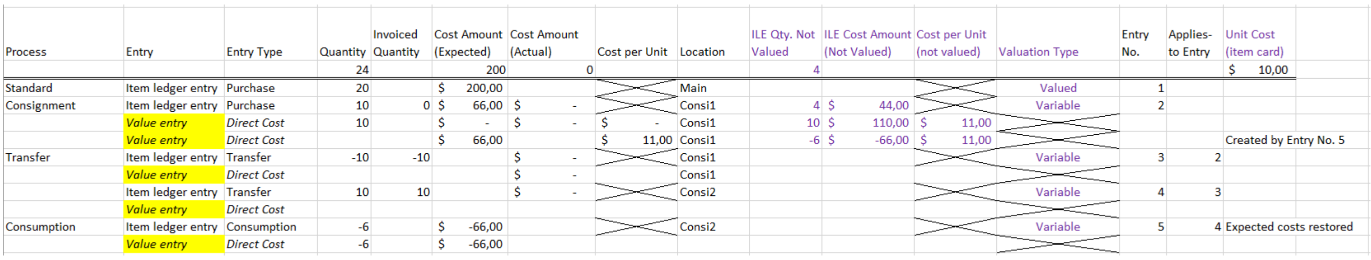
Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			30		200	0									$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Consignment	Item ledger entry	Purchase	10	0	$ -	$ -		Consi1	10	$ 110,00		Variable	2		
	Value entry	*Direct Cost*	10		$ -	$ -	*$ -*	Consi1	10	$ 110,00	$ 11,00				

Afterward, you transfer the items to another location. Posting the movement creates a value entry but has no impact on unit costs either.



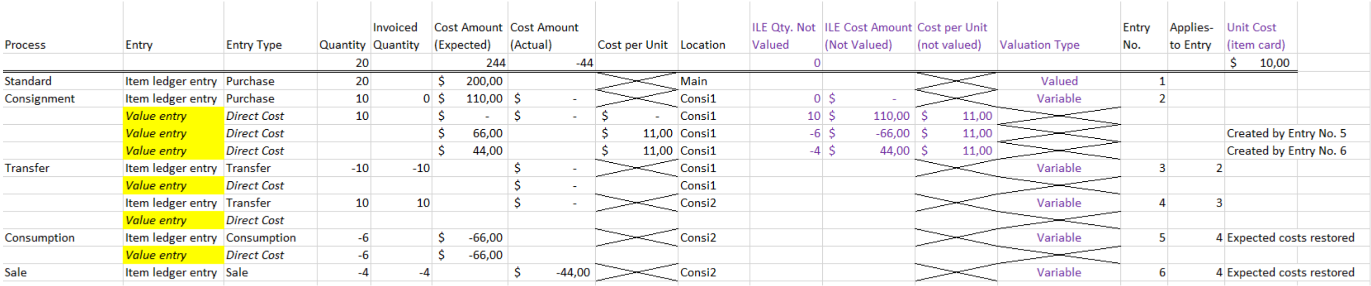
Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			30		200	0									$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Consignment	Item ledger entry	Purchase	10	0	$ -	$ -		Consi1	10	$ 110,00		Variable	2		
	Value entry	*Direct Cost*	10		$ -	$ -	$ -	Consi1	10	$ 110,00	$ 11,00				
Transfer	Item ledger entry	Transfer	-10	-10		$ -		Consi1				Variable	3	2	
	Value entry	*Direct Cost*				$ -		Consi1							
	Item ledger entry	Transfer	10	10		$ -		Consi2				Yes	4	3	
	Value entry	*Direct Cost*													

As a next step, six items are consumed. This means that another value entry must be created to change their valuation and calculate expected costs.



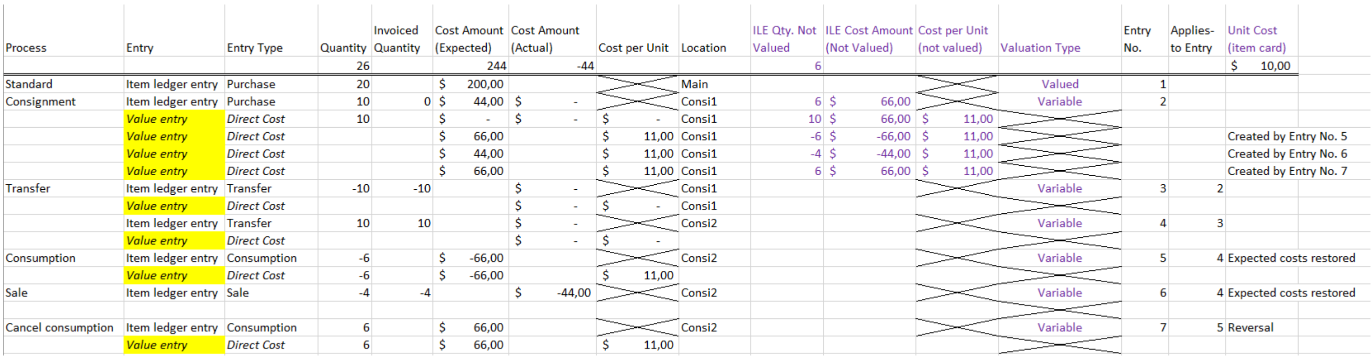
Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			24		200	0			4						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Consignment	Item ledger entry	Purchase	10	0	$ 66,00	$ -		Consi1	4	$ 44,00		Variable	2		
	Value entry	*Direct Cost*	10		$ -	$ -	$ -	Consi1	10	$ 110,00	$ 11,00				
	Value entry	*Direct Cost*			$ 66,00		$ 11,00	Consi1	-6	$ -66,00	$ 11,00				Created by Entry No. 5
Transfer	Item ledger entry	Transfer	-10	-10		$ -		Consi1				Variable	3	2	
	Value entry	*Direct Cost*				$ -		Consi1							
	Item ledger entry	Transfer	10	10		$ -		Consi2				Variable	4	3	
	Value entry	*Direct Cost*													
Consumption	Item ledger entry	Consumption	-6		$ -66,00			Consi2				Variable	5	4	Expected costs restored
	Value entry	*Direct Cost*	-6		$ -66,00										

You sell the remaining four items. As a result, the system creates yet another value entry based on the original document and again calculates the expected costs.



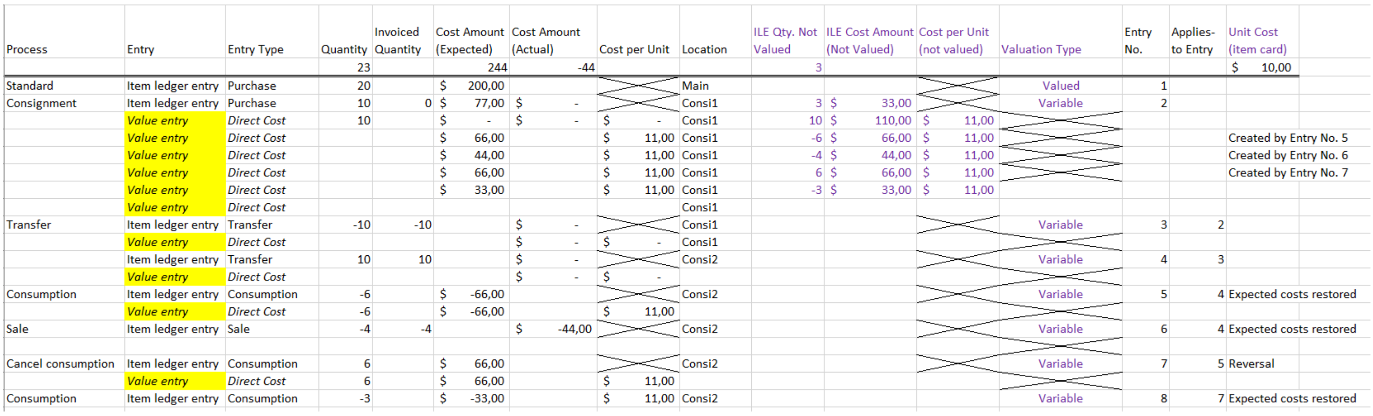
Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			20		244	-44			0						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Consignment	Item ledger entry	Purchase	10	0	$ 110,00	$ -		Consi1	0	$ -		Variable	2		
	Value entry	*Direct Cost*	10		$ -	$ -	$ -	Consi1	10	$ 110,00	$ 11,00				
	Value entry	*Direct Cost*			$ 66,00		$ 11,00	Consi1	-6	$ -66,00	$ 11,00				Created by Entry No. 5
	Value entry	*Direct Cost*			$ 44,00		$ 11,00	Consi1	-4	$ 44,00	$ 11,00				Created by Entry No. 6
Transfer	Item ledger entry	Transfer	-10	-10		$ -		Consi1				Variable	3	2	
	Value entry	*Direct Cost*				$ -		Consi1							
	Item ledger entry	Transfer	10	10		$ -		Consi2				Variable	4	3	
	Value entry	*Direct Cost*													
Consumption	Item ledger entry	Consumption	-6		$ -66,00			Consi2				Variable	5	4	Expected costs restored
	Value entry	*Direct Cost*	-6		$ -66,00										
Sale	Item ledger entry	Sale	-4	-4		$ -44,00		Consi2				Variable	6	4	Expected costs restored

If for whatever reason you need to cancel the consumption posting made for the first six items, the system identifies them as items variable valuation was used for so that they’re returned to the non-valued status on the source document.



Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			26		244	-44			6						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Consignment	Item ledger entry	Purchase	10	0	$ 44,00	$ -		Consi1	6	$ 66,00		Variable	2		
	Value entry	*Direct Cost*	10		$ -	$ -	$ -	Consi1	10	$ 66,00	$ 11,00				
	Value entry	*Direct Cost*			$ 66,00		$ 11,00	Consi1	-6	$ -66,00	$ 11,00				Created by Entry No. 5
	Value entry	*Direct Cost*			$ 44,00		$ 11,00	Consi1	-4	$ -44,00	$ 11,00				Created by Entry No. 6
	Value entry	*Direct Cost*			$ 66,00		$ 11,00	Consi1	6	$ 66,00	$ 11,00				Created by Entry No. 7
Transfer	Item ledger entry	Transfer	-10	-10		$ -		Consi1				Variable	3	2	
	Value entry	*Direct Cost*				$ -	$ -	Consi1							
	Item ledger entry	Transfer	10	10		$ -		Consi2				Variable	4	3	
	Value entry	*Direct Cost*				$ -	$ -								
Consumption	Item ledger entry	Consumption	-6		$ -66,00			Consi2				Variable	5	4	Expected costs restored
	Value entry	*Direct Cost*	-6		$ -66,00		$ 11,00								
Sale	Item ledger entry	Sale	-4	-4		$ -44,00		Consi2				Variable	6	4	Expected costs restored
Cancel consumption	Item ledger entry	Consumption	6		$ 66,00			Consi2				Variable	7	5	Reversal
	Value entry	*Direct Cost*	6		$ 66,00		$ 11,00								

Reposting consumption for three of the items later will add values to them again, as shown in the following image.



Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			23		244	-44			3						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Consignment	Item ledger entry	Purchase	10	0	$ 77,00	$ -		Consi1	3	$ 33,00		Variable	2		
	Value entry	*Direct Cost*	10		$ -	$ -	$ -	Consi1	10	$ 110,00	$ 11,00				
	Value entry	*Direct Cost*			$ 66,00		$ 11,00	Consi1	-6	$ 66,00	$ 11,00				Created by Entry No. 5
	Value entry	*Direct Cost*			$ 44,00		$ 11,00	Consi1	-4	$ 44,00	$ 11,00				Created by Entry No. 6
	Value entry	*Direct Cost*			$ 66,00		$ 11,00	Consi1	6	$ 66,00	$ 11,00				Created by Entry No. 7
	Value entry	*Direct Cost*			$ 33,00		$ 11,00	Consi1	-3	$ 33,00	$ 11,00				
	Value entry	*Direct Cost*						Consi1							
Transfer	Item ledger entry	Transfer	-10	-10		$ -		Consi1				Variable	3	2	
	Value entry	*Direct Cost*				$ -	$ -	Consi1							
	Item ledger entry	Transfer	10	10		$ -		Consi2				Variable	4	3	
	Value entry	*Direct Cost*				$ -	$ -								
Consumption	Item ledger entry	Consumption	-6		$ -66,00			Consi2				Variable	5	4	Expected costs restored
	Value entry	*Direct Cost*	-6		$ -66,00		$ 11,00								
Sale	Item ledger entry	Sale	-4	-4		$ -44,00		Consi2				Variable	6	4	Expected costs restored
Cancel consumption	Item ledger entry	Consumption	6		$ 66,00			Consi2				Variable	7	5	Reversal
	Value entry	*Direct Cost*	6		$ 66,00		$ 11,00								
Consumption	Item ledger entry	Consumption	-3		$ -33,00		$ 11,00	Consi2				Variable	8	7	Expected costs restored

Non-valued inventory

In the case of repairs, items are posted to the warehouse from a sales return order. As they’re owned by someone else, however, no inventory value is assigned to them, as indicated by their valuation method.

Consequently, the Unit Cost (Expected) and (Actual) fields on the item ledger entry that is created during the posting process remain blank and only the Unit Cost (Not Valued) field is filled in.

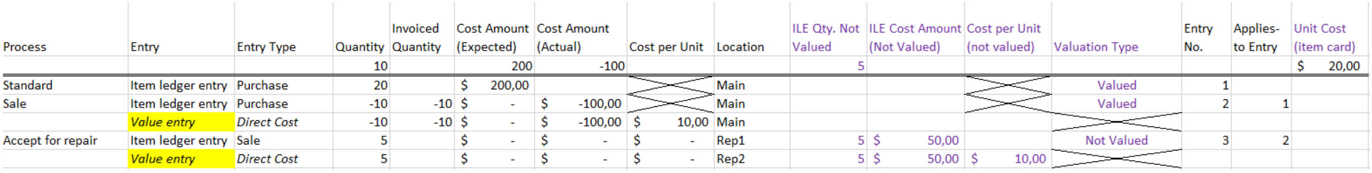
If the entry is applied (for example, through a purchase return order used for repairs made by a supplier or via a sales order when you ship the repaired items back to the customer), the valuation method is copied over to the applied entry and the number of items is entered in the ILE Qty. Not Valued field, to prevent them from influencing standard unit cost calculations.

When the supplier returns the repaired items to you, the Valuation Method must then be set to Not Valued so that the items are treated like on sales return orders.

You need to make the same settings for cancellations, with the valuation method set to Not Valued so that the ILE Qty. Not Valued field is filled in.

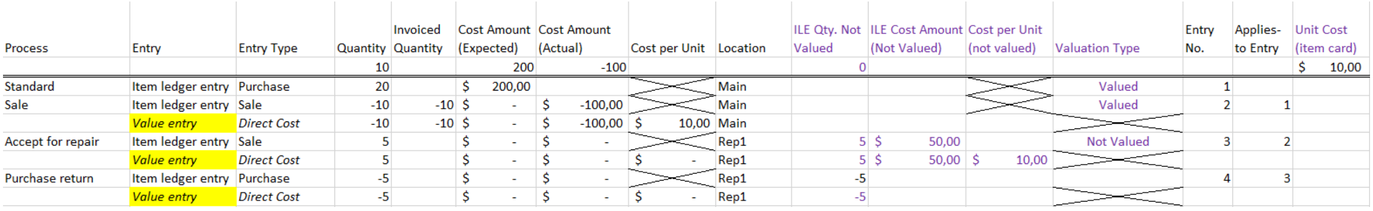
Example
You have a purchase order of 20 items with expected costs of USD200. Ten of those are sold at USD100, which comes out to a unit cost of USD10 on the associated item card.

You now accept five of them for repair, with the valuation method on the item ledger entry set to Not Valued during the posting process. Even if you later adjust the costs by using exact cost reversal, the Cost Amount (Expected) and Cost Amount (Actual) are then not filled in on the entry, only the Cost Amount (Not Valued) field is, and the unit cost entered on the related item card isn’t affected by the postings either.



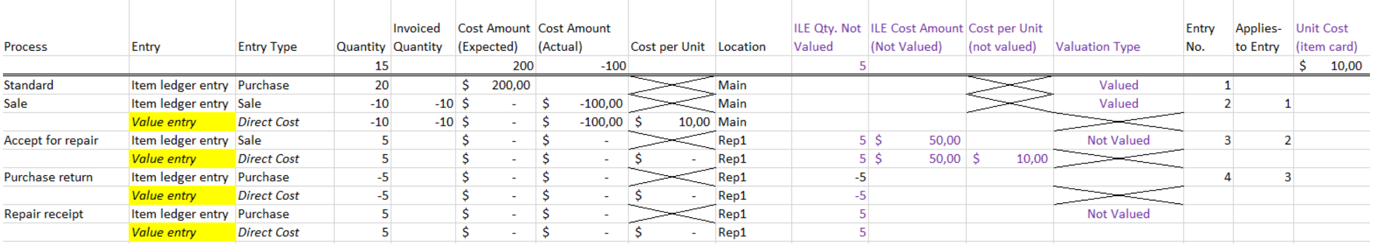
Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			10		200	-100			5						$ 20,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Sale	Item ledger entry	Purchase	-10	-10	$ -	$ -100,00		Main				Valued	2	1	
	Value entry	*Direct Cost*	-10	-10	$ -	$ -100,00	$ 10,00	Main							
Accept for repair	Item ledger entry	Sale	5		$ -	$ -	$ -	Rep1	5	$ 50,00		Not Valued	3	2	
	Value entry	*Direct Cost*	5		$ -	$ -	$ -	Rep2	5	$ 50,00	$ 10,00				

For repairs, items must be sent to the relevant supplier by creating a purchase return order; the valuation method Not Valued is copied along when the entries are applied. The method also specifies that no changes must be made to the goods on the sales document that they were originally entered on (as would be the case with consigned stock).



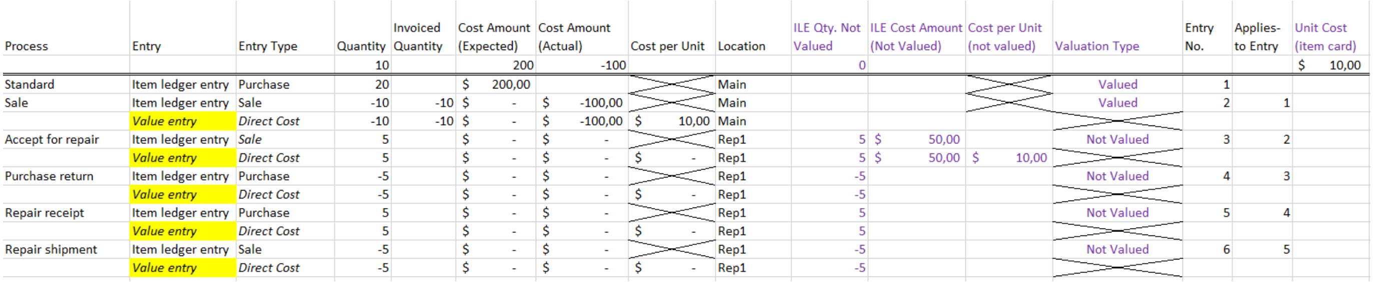
Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			10		200	-100			0						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Sale	Item ledger entry	Sale	-10	-10	$ -	$ -100,00		Main				Valued	2	1	
	Value entry	*Direct Cost*	-10	-10	$ -	$ -100,00	$ 10,00	Main							
Accept for repair	Item ledger entry	Sale	5		$ -	$ -		Rep1	5	$ 50,00		Not Valued	3	2	
	Value entry	*Direct Cost*	5		$ -	$ -	$ -	Rep1	5	$ 50,00	$ 10,00				
Purchase return	Item ledger entry	Purchase	-5		$ -	$ -		Rep1	-5				4	3	
	Value entry	*Direct Cost*	-5		$ -	$ -	$ -	Rep1	-5						

After the repaired items are returned by the vendor, you put them away by creating a purchase order and mark the receipt posting as Not Valued.



Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			15		200	-100			5						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Sale	Item ledger entry	Sale	-10	-10	$ -	$ -100,00		Main				Valued	2	1	
	Value entry	*Direct Cost*	-10	-10	$ -	$ -100,00	$ 10,00	Main							
Accept for repair	Item ledger entry	Sale	5		$ -	$ -		Rep1	5	$ 50,00		Not Valued	3	2	
	Value entry	*Direct Cost*	5		$ -	$ -	$ -	Rep1	5	$ 50,00	$ 10,00				
Purchase return	Item ledger entry	Purchase	-5		$ -	$ -		Rep1	-5				4	3	
	Value entry	*Direct Cost*	-5		$ -	$ -	$ -	Rep1	-5						
Repair receipt	Item ledger entry	Purchase	5		$ -	$ -		Rep1	5			Not Valued			
	Value entry	*Direct Cost*	5		$ -	$ -	$ -	Rep1	5						

As a last step, you ship the items back to the customer; the result of this transaction is shown in the following image:



Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			10		200	-100			0						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Sale	Item ledger entry	Sale	-10	-10	$ -	$ -100,00		Main				Valued	2	1	
	Value entry	*Direct Cost*	-10	-10	$ -	$ -100,00	$ 10,00	Main							
Accept for repair	Item ledger entry	*Sale*	5		$ -	$ -		Rep1	5	$ 50,00		Not Valued	3	2	
	Value entry	*Direct Cost*	5		$ -	$ -	$ -	Rep1	5	$ 50,00	$ 10,00				
Purchase return	Item ledger entry	Purchase	-5		$ -	$ -		Rep1	-5			Not Valued	4	3	
	Value entry	*Direct Cost*	-5		$ -	$ -	$ -	Rep1	-5						
Repair receipt	Item ledger entry	Purchase	5		$ -	$ -		Rep1	5			Not Valued	5	4	
	Value entry	*Direct Cost*	5		$ -	$ -	$ -	Rep1	5						
Repair shipment	Item ledger entry	Sale	-5		$ -	$ -		Rep1	-5			Not Valued	6	5	
	Value entry	*Direct Cost*	-5		$ -	$ -	$ -	Rep1	-5						

Manage third-party property

The posting processes used for repairs also apply to items that are owned by a third party but are stored in your warehouse for other purposes.

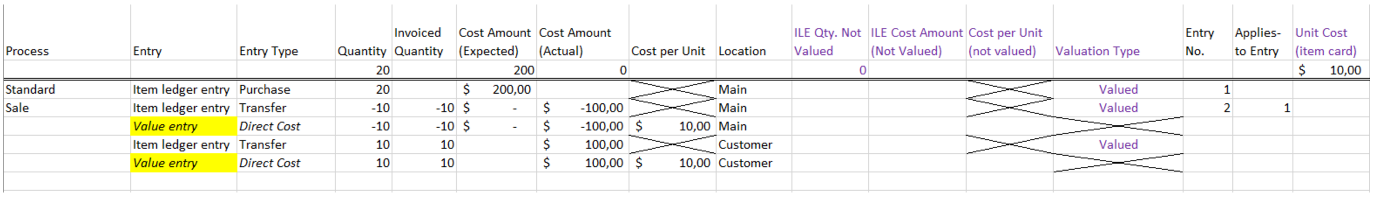
Transfer ownership to third parties

In some industry solutions, ownership over items might change not by selling them directly to a customer but by creating a transfer order, for example, if the items are paid for much later.

They’re then still treated as being owned by a third party, although no function has been implemented to cover this exact scenario.

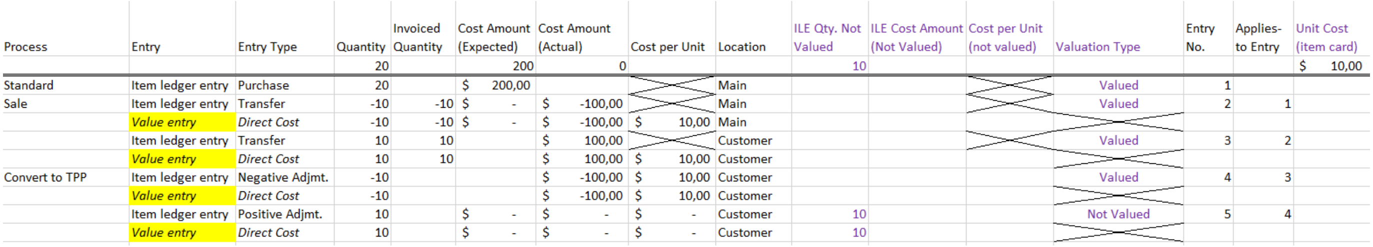
Convert to third-party property

You have a purchase order of 20 items with expected costs of USD200. Ten of those are shipped at a value of USD100 via a transfer order, which comes out to a unit cost of USD10 on the associated item card.



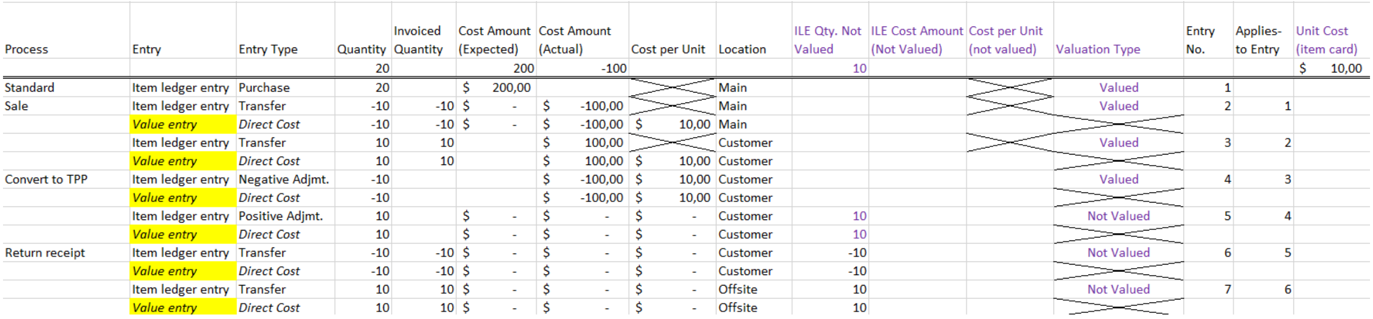
Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			20		200	0			0						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Sale	Item ledger entry	Transfer	-10	-10	$ -	$ -100,00		Main				Valued	2	1	
	Value entry	*Direct Cost*	-10	-10	$ -	$ -100,00	$ 10,00	Main							
	Item ledger entry	Transfer	10	10		$ 100,00		Customer				Valued			
	Value entry	*Direct Cost*	10	10		$ 100,00	$ 10,00	Customer							

A third party agrees to buy the items to assume ownership over them. But because they’re still held by you in any case, as they were only transferred to another one of your locations, you need to post a negative and then a positive cost adjustment in the system.



Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			20		200	0			10						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Sale	Item ledger entry	Transfer	-10	-10	$ -	$ -100,00		Main				Valued	2	1	
	Value entry	*Direct Cost*	-10	-10	$ -	$ -100,00	$ 10,00	Main							
	Item ledger entry	Transfer	10	10		$ 100,00		Customer				Valued	3	2	
	Value entry	*Direct Cost*	10	10		$ 100,00	$ 10,00	Customer							
Convert to TPP	Item ledger entry	Negative Adjmt.	-10			$ -100,00	$ 10,00	Customer				Valued	4	3	
	Value entry	*Direct Cost*	-10			$ -100,00	$ 10,00	Customer							
	Item ledger entry	Positive Adjmt.	10		$ -	$ -	$ -	Customer	10			Not Valued	5	4	
	Value entry	*Direct Cost*	10		$ -	$ -	$ -	Customer	10						

Afterward, you post the item quantity again as non-valued third-party property:



Process	Entry	Entry Type	Quantity	Invoiced Quantity	Cost Amount (Expected)	Cost Amount (Actual)	Cost per Unit	Location	ILE Qty. Not Valued	ILE Cost Amount (Not Valued)	Cost per Unit (not valued)	Valuation Type	Entry No.	Applies-to Entry	Unit Cost (item card)
			20		200	-100			10						$ 10,00
Standard	Item ledger entry	Purchase	20		$ 200,00			Main				Valued	1		
Sale	Item ledger entry	Transfer	-10	-10	$ -	$ -100,00		Main				Valued	2	1	
	Value entry	*Direct Cost*	-10	-10	$ -	$ -100,00	$ 10,00	Main							
	Item ledger entry	Transfer	10	10		$ 100,00		Customer				Valued	3	2	
	Value entry	*Direct Cost*	10	10		$ 100,00	$ 10,00	Customer							
Convert to TPP	Item ledger entry	Negative Adjmt.	-10			$ -100,00	$ 10,00	Customer				Valued	4	3	
	Value entry	*Direct Cost*	-10			$ -100,00	$ 10,00	Customer							
	Item ledger entry	Positive Adjmt.	10		$ -	$ -	$ -	Customer	10			Not Valued	5	4	
	Value entry	*Direct Cost*	10		$ -	$ -	$ -	Customer	10						
Return receipt	Item ledger entry	Transfer	-10	-10	$ -	$ -	$ -	Customer	-10			Not Valued	6	5	
	Value entry	*Direct Cost*	-10	-10	$ -	$ -	$ -	Customer	-10						
	Item ledger entry	Transfer	10	10	$ -	$ -	$ -	Offsite	10			Not Valued	7	6	
	Value entry	*Direct Cost*	10	10	$ -	$ -	$ -	Offsite	10						

Buy third-party property

Buying back items you sold is typical for handling return orders. However, because of their current status as third-party property, you first need to post a negative cost adjustment for them as well.

Revalue inventory

If variable valuation is used, revaluation should only be possible for items that you decided to include in the value of your inventory.

As the standard app allows the revaluation of expected costs only to a limited extent, it is excluded in variable valuation to reduce complexity. This means that item ledger entries can only change in cost if the valuation method is set to Valued.

LOCATIONS AND BINS

Receiving location and customer bins

The name of the default receiving location is OFF (offsite).

Each bin at the location is named for a customer so that you can quickly identify who is in possession of the items stored in it. A bin is created automatically when you set the movement type on a sales order to Transfer.

To set up the feature:

1. Open a location card.
2. On the medtec365 FastTab, in the Receiving Location Code field, select the site that you want to use for transfers from this location.
3. On the same tab, turn on the Auto Assign Customer Bin toggle.

This setup can be useful for a site that patients are supplied from, for example.

Post outbound transfers as inbound

With the Auto Post Transfers toggle on a location card turned on, a receipt is posted automatically for a transfer order when the order is posted as shipped at the source location. This can be useful, for example, when you have no staff member who could confirm receipt at the destination.

Warehouse type: bins

You can specify the following warehouse types on the Bin page:

- On Hand
- Receipt
- Shipment
- Production
- QM

You must assign a type to each bin when it is created. Picking is only performed for bins of type On Hand.

SHIPPING AND PICKING: EASE-OF-USE FUNCTIONS

A page combining warehouse shipment and picking functions has been added to the app, showing you only the take lines for picks and keeping them aligned with the put-away lines.

Print pick list

After you’ve pulled source document lines to a warehouse shipment document, you can choose Print/Send > Print Pick List on the document ribbon to print out a list of all the items that must be picked from the warehouse.

Delete shipment

Sometimes, a warehouse shipment might need to be deleted because the customer who ordered the items no longer requires them (or, for example, an employee forgot to remove the pick code before posting the warehouse shipment).

Pick lines are automatically registered when you post a warehouse shipment, even if an error occurred during posting (for example, because of the code used for picking).

When lines are registered, the items specified on them are posted from their source bin to the default OUT warehouse bin and you can no longer see the lines on the Warehouse Shipment page.

Now, before you can delete a shipment, you need to reopen it by choosing Release > Reopen on the ribbon.

You then see a message that shows you the items that were picked and are asked if you want to move them back to their source bins. Choose Yes. You’re informed that transfer journal lines have been created (provided the Own Jnl. Template Name field is filled in for your user ID in User Setup) and are asked if you want to see the journal.

Choose Yes again to open the journal. Afterward, you’re told that the picked items will remain in the OUT bin, that is, the shipping area, unless transferred and are asked whether you want to delete the warehouse shipment.

Choosing Yes a third time deletes the shipment and the only thing left to do is to put the items back to where you want them.

TRACK SLOW-MOVING INVENTORY

To see which of your items aren’t selling, use the general search function to open the Slow Movers page. The following actions are available on the ribbon:

Function	Description
Refresh	Recalculates all lines.
Resolve	Opens the Take Action page for the selected line.
All Problem Items At-Risk Entries Problem Entries Follow Up Entries	Filters the page view based on the specified value.

Refresh: ribbon function

This action is run to look for all open item ledger entries, that is, all entries for which a quantity remains in inventory.

One line is then created per open entry. Entries that already exist are updated; those that have been closed are deleted. Overall, the following line fields are filled in by the function:

Field	Description
Entry No.	Specifies the number of the item ledger entry.
Item No. Variant Code Location Code Transaction Code	These fields identify the item on the line and are used to calculate its quantity on hand and consumption.
Description Description 2	These fields show the description and additional description stored on the related item card.
Posting Date	Is filled in from the item ledger entry.
Sched. Consumption Code	Specifies how consumption of the item is calculated.
Qty. on Hand	Indicates how many items remain in storage.
Remaining Quantity	Is filled in from the item ledger entry.
Serial No. Lot No. Warranty Date Expiration Date Manufacturing Date External Lot No.	The values in these fields are copied from the item ledger entry as well.
Sold Until	Is filled in with a value that the system extrapolates from the item quantity on hand and sales of the item per day.
Minimum Expiration Date	Is filled in according to setup.
Problem Item	Selected if the date shown in the Sold Until field is later than the minimum expiration date.
Problem Entries	Selected if there is at least one problem with the item.
Sales per Day	Shows the result of applying the consumption schedule.
Amount	Shows the remaining quantity multiplied by the unit cost.
Comment Comment (Whse.)	Used to enter remarks about the item.
Customer Count	indicates how many customers have bought the item. You can see them by using the lookup in the field.
Modified By Modified On/At	Shows by whom and when the record was last changed.
Follow-up By Follow-up On	These fields are set on the Take Action page.
Shelf Life on Sale (Months)	Specifies, in months, the difference between the Sold Until and Minimum Expiration Date values.
Best-By (Sale)	Is filled in according to setup.
Entries at Risk	Selected if the date shown in the Best By (Sale) field is later than the minimum expiration date.
Statistics Main Group Statistics Group Statistics Subgroup	These fields are filled in from the related item card.
CG Statistics Main Group	These fields are filled in from the related customer card.

Field	Description
CG Statistics Group	
CG Statistics Subgroup	

Colors
Lines where no problem has been encountered are displayed in green, at-risk entries in black, problematic entries in blue, and problem items in red.

Resolve: ribbon function

Running the Resolve action opens the Take Action page for the current line.

At the top of the page, you can see detailed information about the item. You can then enter the solutions you've tried. You can also specify here if you want to follow up on this issue or all issues with the item and when you want to do so.

The Follow-Up Date field is copied to the line when you select an action on the page. After a date is set, you no longer see the record when you filter for problem items, for example.

Selecting the Exp-DATE-2M option on the page sets the date for following up on the issues with the item to two months before the item is shown to expire. With the Set-Multiple action, you can apply the setting to all ledger entries that are created for the item. Set-Single means that the formula applies only to the selected entry.

In the Action Reason field, you can describe the reasons for taking action, and in the Solution field, how to solve the issues you have. Choose Return here, for example, if the item should be returned to the vendor.

The remarks that you enter in the Comment and Comment (Whse) fields are shown on the Slow Movers page later. One such warehouse remark might be: “Please move to restricted location.”

Note

The Follow-up Date field is only used to deal with issues arising from slow-moving inventory and isn't part of the medtec365 follow-up feature described elsewhere in these articles.

PICK FROM MULTIPLE ORDERS

You can now set filters to combine picks for multiple shipments, which will help you save time and optimize your pick paths.

Before you can work with this feature, however, you must set up multiple warehouse shipments and register picks for them in the system.

You then use the general search function to open a new pick worksheet and choose Get Multi-Order Lines on the ribbon. On the request page, you can set the maximum number of lines that a shipment can have for it to be included in multi-order picking. This ensures, for example, that a large outbound delivery isn't split up before leaving your warehouse. Additionally, you can specify if you want to pick items not only from warehouse shipments but also from production or assembly orders.

As a next step, choose OK so that the system can copy all lines that a pick document hasn't been printed for to the worksheet. Following retrieval, you need to select the Include in MOP checkbox on the lines that you want included in the multi-order pick process.

Note

If you exclude a certain sales line from the multi-order pick, the other lines of the sales order will be excluded from it as well.

Afterward, choose Create Multi-Order Pick on the ribbon. You can make a variety of settings on the request page of this function to customize the new pick documents to suit your needs, as described in the following table.

Option	Function
Per Whse. Document	Creates pick documents for worksheet lines with the same warehouse source document.
Per Cust./Vend./Loc.	Creates pick documents for each customer, vendor, and location.
Per Item	Creates pick documents for each item on the pick worksheet.
Per From Zone	Creates pick documents for each zone. **Note** This function is only used for directed pick and put-away.
Per Bin	Creates pick documents for each bin.
Per Due Date	Creates pick documents for source documents that have the same due date.
Max. No. of Pick Lines	Creates pick documents that have no more than the specified number of lines on each document.
Max. No. of Pick Source Docs.	Creates pick documents that each cover no more than the specified number of source documents.
Assigned User ID	Creates pick documents only for worksheet lines that are assigned to the selected warehouse employee.
Sorting Method for Pick Lines	Specifies how the created pick documents should be sorted.
Print Pick Document	Prints the pick documents created by the multi-order pick.

Note

Pick lines where the Include in MOP field has been cleared must be processed manually on the pick worksheet.

After the picks have been created and the pick documents printed, you can continue with picking, packing, and posting the shipment in the usual way.

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1. Microsoft, Microsoft Dynamics, and Microsoft Dynamics 365 are trademarks of the Microsoft group of companies. ↩

Service

The following features expand standard Microsoft Dynamics 365 Business Central[1] functionality to provide additional options to those working in your organization’s service department.

SETUP

Role center

A role center called medtec365 Service has been added to the standard service area, providing you with an overview of ongoing tasks and an easy way to select and open pages relevant to your work.

You can find the role under the My Settings page.

Work with tiles

The medtec365 Service role center contains multiple cue tiles, each filtered to one or more of the repair *(or maintenance)* statuses that can be set on service documents. You can therefore already finish most tasks in the service area by using these tiles alone.

The statuses can be changed in Service Management Setup.

Service Orders – Open

Cue	Description
New Service	Shows all orders that were created manually or based on receipts at the warehouse but have yet to be processed. This includes every order where the repair status is set to New Order, Sales Return Posted, or Receipt Checked.
To Inspect	Shows all orders that must still be assessed *(repair status To Inspect)*.
Inspected	Shows all orders that have already been assessed *(the repair status is set to Inspected)*.
Servicing at Vendor	Shows all orders that have been classed as external repairs or maintenance following inspection *(the repair status is set to Repairs at Vendor)*.
Customer-Held Items	Shows all item ledger entries.

Service Activities – Technicians

Cue	Description
To Inspect	Shows all orders that still need to be assessed *(repair status To Inspect)*.
Service Released	Shows all orders on which items must still be repaired *(the repair status is set to Scheduled, Service Released, or Service Started)*.
Back from Vendor	Shows all orders that items are returned for by the vendor *(repair status Received from Vendor)*.

Service Orders – Estimates

Cue	Description
To Estimate	Shows all orders that cost estimates are required for but have not been created yet (repair status To Estimate).
Estimated	Shows all orders that cost estimates have been created or sent for (the repair status is set to Estimated or Estimate Sent).
Estimate Rejected	Shows all orders where customers did not accept estimates (the repair status is set to Estimate Rejected).
Estimate Accepted / Not Reqd.	Shows all orders that cost estimates have been accepted for or where you do not need to create estimates in the first place (the repair status is set to Estimate Accepted or Estimate Not Reqd.).

Service Orders – In Process

Cue	Description
Service at Vendor	Shows every order where the Current Place field is set to At Vendor (that is, for which a purchase return order has been posted).
Service Released	Shows all orders on which items must still be repaired (the repair status is set to Scheduled, Service Released, or Service Started).
Service OK	Shows all orders that repairs have been successfully carried out for (the repair status is set to Service OK).
Service Not OK	Shows all orders that repairs could not be carried out for (the repair status is set to Service Not OK).
Delivered	Shows all orders where something has been or needs to be sent to the customer (the repair status is set to Sent to Customer or Confirmed by Cust.).

Service Orders – Custom

The four tiles in this section can be customized in Service Management Setup to suit your needs.

Service Management Setup

General

Field	Description
Order Type – Repairs	Specify the order type that will be automatically entered on a service order when you run the New Case function on a customer, marketing cockpit, or serial number information card and classify the order as a repair case.
Order Type – Maintenance	Specify the order type that will be automatically entered on a service order when you run the New Case function on a customer, marketing cockpit, or serial number information card and classify the order as a maintenance case.
Order Type – Receipt	Specify the order type that will automatically be entered on a service order when you post a service receipt.
Archive Orders	Specify whether service orders should be archived.
Archive Service Quotes	Specify when you want service quotes archived. Options are Never, Question, and Always.

Defaults

Field	Description
Location Code (Service) Bin Code (Service)	Specify the location and bin that will automatically be filled in on the header of a service order that you create. Both fields are also filled in by the system on receipt headers when they are created.
Loan Location Code Loan Bin Code	Specify the location and bin that will be automatically filled in when you enter a loaner on a service order.
Substitution Location Code Substitution Bin Code	Specify the location and bin that will be automatically entered on a service order when you ship a substitution item from the order.
Service Consump. Location Code Service Consump. Bin Code	Specify the location and bin that will be automatically filled in when you enter items of activity type Service Consumption on the service lines.
Customer Location Code	Specify the location that will be automatically filled in as you transfer items to a customer, with the name of the bin matching the customer number.
Vendor Location Code	Specify the location that will be automatically filled in as you transfer items to a vendor, with the name of the bin matching the vendor number.
Discount Reason	Specify the reason for a discount granted during repairs, such as a discount on spare parts.
Logistics Discount Reason	Specify the reason for a discount granted for logistics-related activities. Examples are returns in sales and purchasing.
Transaction Code TPP	Select a transaction code for items posted in connection with repairs. To prevent the posting of costs, we recommend that you treat most items that are specified in the service area as third-party property.
Transaction Code CA	Select a transaction code for items added to service lines. In service management, sales and consumption are usually posted as current assets. As a result, the system considers both to belong to this asset category if the field is left blank.
Current Place	Specify what option should be selected by default in the field with the same name on new service orders. Options are: • (blank) • Onsite • Inhouse • At Vendor The setting that you make here is automatically copied to all service item lines that you create (although you can change the option there manually, if necessary).
Place of Servicing	Specify what option should be selected by default in the field with the same name on new service orders. Options are: • (blank) • Onsite • Inhouse • At Vendor The setting that you make here is automatically copied to all service headers and item lines that you create (although you can change the option there manually, if necessary).

Field	Description
	The value in this field is also changed by the system when you post certain documents, such as purchase return shipments.
Destination Document Type	Specify the document type that will be used when you enter an item or a resource manually on service quote or order lines. If this field is left blank, the type is retrieved from the standard service code that is assigned to the selected BOM. For more information, see Destination Doc. Type on Service Quotes and Orders.
Claim Case Type	The value in this field is copied to any warranty claim that is created from a service order.
Complaint Case Type	The value in this field is copied to any complaint that is created from a service order.

Activities

On this FastTab, you can specify the actions that will be added to the Lines FastTab ribbon above service item lines and service lines.

Field	Description
Activity Grp. – Repair BOM	Store the activities used for spare parts supply.
Activity Grp. – Service	Store the activities used for repairs.
Activity Grp. – Estimate	Store the activities used for estimating costs.
Activity Grp. – Sales Return	Store the activities used to process return receipts.
Activity Grp. – Sales Shpt.	Store the activities used to process sales shipments.
Activity Grp. – Purch. Return	Store the activities used to process return shipments.
Activity Grp. – Scrapping	Store the activities used for handling scrap.
Activity Grp. – Claims and Complaints	Store the activities used to manage warranty claims and complaints.

Scrapping

Field	Description
Scrap Location Code Scrap Bin Code	Specify the location and bin that will be used for two-stage disposal. This involves transferring the item to a special scrap location and then manually posting the removal of the item from this location.
Scrap Serial No. Status	If needed, specify the status that will be entered on the relevant Serial No. Information Card when you post an item as scrapped.
Scrap Source Code	If needed, specify the source code that will be entered on the relevant Serial No. Information Card when you post an item as scrapped.

Cue Filter

Here you can remove or add the repair status filters set on each cue tile on the role center.

Free to Use

On this FastTab, you can customize four tiles that you can then filter for their repair status.

Archiving

The Delete Service Orders Date Formula field allows you to enter a formula to calculate the permitted deletion date for the automatic archiving of service orders based on the End date in the service order. If a date formula is stored in this field, the deletion date is calculated based on the end date in the service order plus the date formula.

Service order types

You can use service order types to categorize orders by the type of service provided and store different settings for each. To set up a type:

1. Choose the Search icon, enter Service Order Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the order type. The code must be unique.
Description	Specify a description for the type.
Sales Order Type Pricing	Specify the related sales order type if you agreed on a different pricing structure for a certain type of service.
Default	Specify the default order type that will be used when you create a service order manually. **Note** Only one service order type can be selected as the default type.
Service Order Type	Here you can assign a classification to the order type. Options are: • (blank) • Repairs • Maintenance This classification is automatically entered in the Case Category fields on service case documents that you create.

You can also choose Actions > Service Activity Templ. Setup on the ribbon to specify for each order type one or more service item group codes that should be linked to an activity template code.

The template codes are then stored on the relevant item lines, whereas the activities from the template are added to the Service Activity Groups FactBox.

When you choose New Case on the ribbon of a customer, marketing cockpit, or serial number information card, the system copies the service order type entered in Service Management Setup to the new document provided the case was set up for repairs or maintenance purposes (see Service Management Setup – General).

However, if no default value is specified, the Service Order Type field remains empty on the service order.

When you create an order for inbound services, the order type is also retrieved from Service Management Setup (again, provided the type is specified there). When you create an order from a complaint registered in sales, the system fills in the type that was selected as the default type.

When a service order is created in the maintenance cockpit, the order type is copied from the associated service contract.

Order types and payment terms

You can assign payment terms to a service order type, to replace those stored in the customer master. To assign terms to a type:

1. Choose the Search icon, enter Service Order Types, and then choose the related link.
2. On the ribbon, choose New. Alternatively, choose Edit List to edit a type that already exists.
3. Fill in the Payment Terms Code field.

When you create a service order, it is initially filled in with service order type Default. The system then checks if payment terms are available for the order type. If so, the terms are used. If none exist, the terms are copied from the relevant customer card.

When you edit a service order type, the system runs the same check again to update the payment terms, if necessary. The same applies when you change a customer on an order. If no payment terms are assigned to the new type, the terms will be copied from the customer, as mentioned earlier.

Service activity groups

These groups specify the activities that will be required to manage customer service cases. Examples are giving cost estimates, providing devices on loan, and disposing of equipment that was originally sent in for repair.

Each group might contain multiple alternative options for how to perform an activity, with the decision on which option to choose depending on factors such as the location where services will be rendered. When a group is chosen, the system automatically limits what you can do to whatever fits the case you're working on.

You can also set up a default sequence of steps for performing an activity by using a standard service code, which you can assign to an activity group. The correct steps are then chosen from that group by the system, or you can pick them manually.

Additionally, you can set up groups that can be run directly from the ribbon of service (item) lines. For more information, see Service Management Setup – Activities.

Afterward, multiple groups can be combined on a service activity template to form a sort of work schedule.

Field	Description
Code	Specify the code of the activity. The code must be unique.
Description	Specify a meaningful description for the activity.
Service Activity Type	Assign an activity to the code. Options are: • Repairs • Maintenance • Substitution • Loan • Service • Scrap • Estimate • Logistics
Item No. Required	Specify if an item number is required for the activity. Options are: • No • Optional • Always
Text Required	Specify if a text is required for the activity, for example, for labeling. Options are: • No • Optional • Always

Service activity templates

These templates specify the individual steps for repairs and maintenance.

Each template is linked to a service order type and a service item group so that it is automatically filled in on the relevant item lines when you create a service order. All steps are also listed in the Service Activity Groups FactBox. To set up a template:

1. Choose the Search icon, enter Service Activity Templates, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in a code and a description for the template.
4. Choose View on the ribbon to open the Service Activity Template Card.
5. Choose New Line to fill in an activity group code, and then repeat the process as necessary.

Service Activity Template Setup

On this page, you can specify per service order type one or more service item group codes that should be linked to a service activity template. When you later enter an item on a service order, the system checks the service order type and the item group code for a link to an activity template.

If a link exists, the activity template code is automatically entered in the field with the same name on the relevant service item line. Additionally, the steps that make up the activity will be listed in the Service Activity Groups FactBox.

Standard service codes

These codes usually represent a sequence of steps for performing an activity, such as BOM or cost estimate creation, equipment rental, or item return and scrapping.

Each code that you set up can then be assigned to an activity group, with the correct activity determined from the group automatically or chosen by a user.

Additionally, the group values that you’ve specified in setup are automatically filled in on service orders or service lines that you start activities from.

Standard Service Code Card General

Field	Description
Service Order Type	If available, specifies the type of service order. The code is only visible on orders that are of the same service order type.
Service Activity Grp.	Specifies the group that the service code belongs to.
Onsite Inhouse At Vendor	These fields are relevant to handling service orders. Only activities with the same location specified on the standard service code record can be started on the service order. **Example** For standard service code REPLACEMENT, you choose Inhouse and At Vendor. This means that the REPLACEMENT activity cannot be run on a service order where Onsite has been specified.

Lines

Field	Description
Selected	Only used if the related activity group is set to Service BOM. Item or resource lines that the field is selected for on the BOM are then filled in automatically on service quotes and orders.
Print Line	Specifies whether a line containing this code should be printed. The setting is later copied to the Print Line field on each service line that you create with this service code.
Relation	Options are: • (blank) • Service Item • Substitution • Loaner A blank field means that no relation has been specified, as in the case of BOMs. The setting is later copied to the Relation field on each service line that you create with this service code.
Type	This setting is later copied to the Type field on each service line that you create with this service code.
No.	Specifies the number linked to the service code. With the Relation field filled in for a service, loaned, or substitution item, the item number specified on the service item line will be used and this field should remain empty. The setting is later copied to the No. field on each service line that you create with this service code.
Discount Reason	Specifies a discount reason, if available. This reason is copied to the associated service order automatically when the specified activity is performed.
Not Billable	Shows No if an item value should be calculated. Otherwise, the No Cost option is selected in this field. The setting is later copied to the field with the same name on each service line that you create with this service code.
Destination Doc. Type	When you run a service line linked to this service code, the system will create the document specified here and fill it in with what you entered on the line. Options are: • Service Consumption • Service Sales • Service Quote • Sales Quote • Sales Order • Sales Invoice • Sales Cr. Memo • Sales Return Order • Sales Transfer • Sales Return Transfer • Purch. Quote • Purch. Order • Purch. Invoice • Purch. Cr. Memo • Purch. Return Order • Transfer Order • Item Jnl. Pos. Adjmt. • Item Jnl. Neg. Adjmt. • Item Journal Transfer

Field	Description
	The setting is later copied to the field with the same name on each service line that you create with the service code.
Direction	Specifies the direction of the flow of goods. When you post service equipment, the direction should be specified so that the current location of the equipment can be updated on the relevant service item lines. Options are: • (blank) • Cust. -> Serv. • Serv. -> Cust. • Vend. -> Serv. • Serv. -> Vend. • Cust. -> Vend. • Vend. -> Cust. The setting is later copied to the field with the same name on each service line that you create with this service code.
Location Code Bin Code	These fields only need to be changed manually in rare circumstances, as the values from setup are filled in by default. Lines where the Service Item relation is selected typically contain the location that was entered on the associated service item line. For substitutions and loaned items—and for lines with consumption and transfers from and to a customer or a vendor—the location and bin specified in Service Management Setup are entered here. The settings are later copied to the location and bin code fields on each service line that you create with this service code.
Transaction Code	This field only needs to be changed manually in rare circumstances, as the value from setup is filled in by default. Lines where the Service Item relation is selected typically contain the transaction code that was entered on the associated service item line. For consumption, the code that is assigned to third-party property in Service Management Setup is used. The setting is later copied to the field with the same name on each service line that you create with this service code.
Auto Create Document	After an activity is inserted, the first service line where this field is set is run, that is, a document is created and, if needed, a tracking number. The setting is later copied to the field with the same name on each service line that you create with this service code.
Auto Show Document	Specifies whether the system should show new documents created for the service line. The setting is later copied to the field with the same name on each service line that you create with this service code.
Repair Status Code	If available, specifies that the status of repairs is updated when you post a document added to the lines.
Order Type	This field is used on purchase and sales documents created from the related service order, for example, on sales return receipts, but has no function on service documents.

Field	Description
	The type is later copied to the field with the same name on a service line created with this service code. Depending on whether the target document type involves a purchase, sale, warehouse, or service transaction, the specifications entered for this type of order apply.
Work Type Code	Specifies the type of work performed by a certain resource. By assigning a type, you can set up a variety of prices for each resource.

Copy Standard Service Code

In addition to the manual creation of a standard service code card, a copy function is available to duplicate an existing standard service code card. This function is particularly useful when creating new boms.

To use the copy function, first create a new standard service code card and assign a meaningful abbreviation in Code field. Then execute the Copy Standard Service Code function via ribbon. On Copy Standard Service Code options page, you have the option of specifying the Service Code No. to be copied to the new card. Activate Include Header if the data from the General Fasttab should also be copied. Otherwise, this data must be added manually after the copying process.

Confirm your entry with Ok.

The function can be executed again to transfer additional lines of a Standard Service Code to the card.

Standard service item groups

With the help of standard service item group codes, you can set up BOMs for repair and maintenance purposes. Items and resources that are relevant to either are therefore entered on standard service code cards. If necessary, you can also specify a quantity on every card.

To see the standard service item group codes, choose the relevant function on the ribbon.

You can assign one service type (such as repairs or maintenance) to each standard service item group and then store the group in the field with the same name on the relevant item card.

> **Note**
>
> The Service Order Type field has no function and is shown for informational purposes only.

Field	Description
Code	Specifies the code of the standard service group.
Description	After you enter a code, the description is filled in automatically.
Service Type	Specifies the service type assigned to each item group. Options are: • (blank) • Repairs • Maintenance
Copy to Serv. Line	This field currently has no function.
Service Order Type	Specifies the type of service order. The service order type has no effect on processes in the system and is used for purely informative reasons.

Standard Service Item Group Setup

On the Standard Serv. Item Gr. Setup page, you can link standard service item groups to standard service codes. If no link is specified, an activity applies to all groups.

Tip

We recommend that you link each service BOM to a service item group; otherwise, all existing BOMS are shown on service orders and quotes.

Repair Status Setup

Each service item line contains a code that identifies the progress of repairs or maintenance carried out with that line. The tiles on the medtec365 Service role center are also filtered to these statuses.

Depending on setup, certain statuses change automatically when you post a service transaction, but you can also set or change the status yourself at any time.

Additional status actions can be run from the service line and service item line ribbons, with some having a direct impact on system operations.

You specify the codes and descriptions for all required statuses on the Repair Status Setup page. After entering both, you must also fill in the Activity Status field to make sure that the correct repair or maintenance status is set on each service line and service item line. Options are:

- (blank)
- New Order
- Receipt to Check
- Receipt OK
- Items OK
- To Inspect
- Inspected
- New Purch. Order
- New Estimate
- Estimate Sent
- Estimate Not Reqd.
- Estimate Accepted
- Estimate Rejected
- Service Released
- Service Started
- Service OK
- Service Not OK
- Shipment OK
- Scrapped
- Finished
- Servicing at Vendor

Activate the checkbox Set Starting Date or Set Finishing Date if the repair status should set the start or end date in the service order. Also see Delete Invoiced Service Orders.

For more information, see Set Up Statuses for Service Orders and Repairs - Business Central | Microsoft Learn.

Service inspection groups

On service item lines and service lines, you can use a two-stage process for ordering items so that you can store any number of technical inspections on the top level, the Service Inspection Group. To set up a group for technical inspections:

1. Choose the Search icon, enter Service Inspection Groups, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in a code and description for the group.
4. On the ribbon, choose Inspections, and then enter all potential settings that you want to make available for later.

Service Inspections Setup

All potential defects that might result from the service inspections in a group are specified on this page. You can store multiple types of inspections per group.

Note

An inspection group cannot currently be assigned to an item card.

Service Contract Setup

On this page, you store the service agreements that you enter into with customers.

The values that you specify here are automatically filled in on service orders in the fields with the same name.

Field	Description
Contract Type	Specify the type of contract that you entered into. Options are: **Estimate** Fills in the Estimate Limit field. **Solution Code** With this option selected, you can fill in the Solution Code field. You can enter any code you want. The code is used, for example, to specify that an item can be scrapped if it can no longer be repaired. Both fields are visible on service item lines.
Customer No.	If necessary, specify the customer number that will be used for this type of contract. If the field remains blank, the type will be used for all customers.
Ship-to Code	If the Customer No. field is filled in, this field can be filled in as well.
Service Item Gr. Code	Specify the code of the service item group code that will be used for this type of contract. If the field is left blank, the type will be used for all service item groups.
Service Order Type	Specify the order type that will be used for this kind of contract. If the field remains blank, the contract type will be used for all types of service orders.
Estimate	This field can be filled in if Estimate is selected as the contract type.
Solution Code	This field can be filled in if Solution Code is selected as the contract type.

Solution codes

These codes can be used to specify individual agreements made after consulting with a customer. You store the codes on the Service Contract Setup page. They're then shown on service item lines automatically.

You can also store activity template codes on the Solutions page, as an alternative option for having the template codes filled in on item lines later.

Property groups

These groups are used to classify device attributes and settings *(termed ‘item properties’)* and patient profiles, which consist of medical information such as height and weight *(named ‘customer properties’)*.

Historical data, including when a certain entry was made and by whom, is also saved. You can see the values that are assigned to each category in the Group Properties FactBox on a serial number information card or on the serial number information list *(by selecting a card on the page)*.

To set up a group:

1. Choose the Search icon, enter Property Groups, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in a code and description for the group.
4. In the Group Type field, specify if the group describes item properties or customer properties, or both.

You can also store an image for each group by using the upload button that is found below the group lines. Individual attributes are specified on the Group – Additional Fields FastTab.

As an example, you create a category called Wheelchairs and select All in the Group Type field. You then set up four fields on the Group – Additional Fields FastTab, captioned Seat Width, Seat Height, Brake System, and Accessories.

Customer properties

These properties are used to record patient data for calibrating and adjusting medical tools and equipment.

To specify a property:

1. Choose the Search icon, enter Marketing Cockpit List, and then choose the related link.
2. Select a cockpit card, and then choose Actions > Property Groups.
3. Alternatively, open the relevant customer card and choose Related > Sales > Property Groups.
4. Enter a group code on a line in the upper half of the page. Your user ID and the date of change are then saved as well.
5. Fill in the fields on the Group Properties FastTab to assign properties to the new group.

Item properties

Property groups can also be added to item cards to record the attributes and settings of certain devices.

1. Open an item card.
2. On the ribbon, choose Actions > Property Groups.
3. Enter a group code on a line in the upper half of the page. Your user ID and the date of change are then saved as well.
4. If the same group is stored on another line later, the History checkmark is automatically selected on the prior line so that you can keep track of the various item properties.
5. As you did for customer properties, you can now fill in the fields on the Group Properties FastTab to specify the values needed for each device of this type.

On the item card, you can also decide whether the item requires specification at all by going to the Item Tracking FastTab and turning the Device Properties Reqd. toggle on or off. With the toggle turned on, properties must be entered *(or existing ones confirmed)* each time a warehouse receipt is posted.

Warehouse receipts: item properties

When a device is delivered, its tracking data must be added to the warehouse receipt line that is set up for the delivery. You can enter the serial number of the device via the Quantity line field or the Item Tracking Lines action on the Lines FastTab.

Afterward, you can choose Home > Property Groups on the ribbon to specify properties for the device so that they're copied to the relevant serial number information card when you post the receipt.

With the Device Properties Reqd. turned on, an error message appears should you try to post receipt of an item that certain properties have yet to be entered for, and the process will be cancelled.

Serial number information: item properties

To see the properties of a device that is posted as received, you can open the serial number card assigned to the item and choose Home > Property Groups on the ribbon. Information about individual properties is also available as part of a FactBox on the right-hand side of the page.

The properties shown on the card are a combination of those specified on the item card and the attributes entered during receipt.

Warehouse shipments: properties

Customer properties are shown in a FactBox on all warehouse shipments and sales orders set up in the system and are printed on every pick document that you create from them.

Additionally, you can see the properties of any device that a serial number is specified for on a pick line by selecting the item on the Pick Lines FastTab of the warehouse shipment and choosing Line > Item Properties on the ribbon.

To provide details regarding the calibration and adjustment of medical tools and equipment, you can additionally choose Functions > Copy Cust. Prop. to Device, to have the customer's properties added to the data available for the device prior to shipment.

Find Properties

You can use this action to look for matching serial numbers or devices in the system. It can be run from a warehouse shipment—by choosing Functions > Find Properties on the Pick Lines FastTab—or from a serial number information card.

The relevant property group and customer are shown at the top of the screen, the individual attributes assigned to the customer in the Customer Properties FactBox. You can then fill in the Location Filter or Transaction Code Filter field to further narrow down the results you'll be getting.

On the Search Parameters FastTab, you see the individual properties and can both enter values for them and refine or expand your search by using a set of operators *(+-, -, +, or =)*. Keep in mind, however, that you'll only see equipment which is already available in inventory.

To start a search, choose New > Search on the ribbon. Any serial number that matches the specified criteria, including the location and bin, is then listed on the Search Results FastTab, whereas the properties of the device can be seen in the Item Properties FactBox.

Afterward, you can select a serial number on the page and choose OK to have it copied to the document that you ran the search from.

SERVICE RECEIPTS

On the Service Receipts page, you can register items that are delivered to you for repair or maintenance (or other types of services). You can enter any item on the page, regardless of whether it's tracked or has already been set up in the system.

The method for registering receipts differs depending on whether items are sent to your company with or without advance notice.

Unexpected receipt

To register unannounced item returns:

1. Choose the Search icon, enter Service Receipts, and then choose the related link.
2. On the ribbon, choose New.
3. Exit the No. field to have the system assign a number to the document from the series that you’ve set up for this purpose.
4. The location and bin on the header are filled in from the Location Code (Service) and Bin Code (Service) fields shown on the Defaults FastTab in Service Management Setup but can be changed, if needed.
5. As for the External Document No. field, you can specify whether this number is required by turning on the relevant toggle in Purchases & Payables Setup. Filling in the Your Reference field is optional.
6. Item, serial, lot, and customer numbers can be entered manually, or you can use the Assist button to select a number.

When you enter an item, a serial, or a lot number, a dialog box appears, with the fields related to the record already filled in if the number is set up in the system.

When you enter a serial number, the system also checks if the customer shown on the associated serial number information card is the same as the customer entered on the receipt. If the number isn’t linked to the specified customer and item, you’re asked whether you want to do so now. Choose Yes if you want the system to replace the customer on the card when you post the receipt.

If the entered serial or lot number doesn’t exist, you can specify in the dialog box the item that was sent to you—including, if available, its variant code, expiration date, and manufacturing date—and the customer who sent it.

On the other hand, if the item exists and the assigned tracking code requires that you specify a variant code, an expiration date, or a manufacturing date for it, you can change the relevant field in the box. Otherwise, the field is grayed out.

Like on the service order, the quantity on each service receipt line is set to 1 and cannot be changed. You must therefore set up one line for each item that receipt should be recorded for *(even if all items originate from the same lot)*.

Choosing OK copies the information given in the box to the Service Receipt Lines FastTab.

Afterward, you can change the location and bin on a line, if needed. You can also add accessories to each. See Manage Accessories for more on this topic.

Additionally, you can use the Inspection Codes ribbon action to specify codes for inspections per line. The codes can be used to, for example, record damage that occurred when transporting the items and are copied to the related service order after the lines are posted. For more information, see Inspection Groups.

When you post the receipt, the system then posts a sales return order, creates a service order, sets up serial or lot number information cards for items for which this number isn’t in the system yet, and assigns the return order to a case file so that you can check the progress of the case at any time.

You see a message if the information you’ve entered is incomplete, for example, because the customer or an item is blocked.

You might see another message if the service receipt cannot be posted because an item with this serial number has already been registered as received. You can, however, post the item again following its return shipment, regardless of whether the related service order is completed.

If a counter template is assigned to an item, the Counter page then opens automatically.

Expected receipt

If a customer tells you upfront that they will send in one or more items for repair, you can also create a service order and—from there—a sales return order prior to receipt.

You can change the location and bin on this return order, if necessary. The order must then be released. Afterward, you can register the expected receipt by using one of the following methods.

Option 1: Post to the return order
The most straightforward option is to post the service receipt by running the Post > Receive and Invoice function from the sales return order.

Option 2: Create a service receipt from the return order
Alternatively, you can use the Create Whse. Receipt action on the return order to have the data shown on the document copied to a new service receipt, to which the system then adds the relevant case, service order, and return order numbers.

Locations and bins that are copied to the receipt in this way cannot be changed manually. The header values are copied from Service Management Setup, those on the lines from the return order. The values that are relevant when posting the receipt will be on the lines.

If an item needs to be tracked, the line where it is entered is marked in red. You can add tracking data to the line by using the Assist button in the Quantity field. After the tracking information has been entered, the line will be green.

When everything is filled in, the receipt can be posted.

Option 3: Get source document lines
As a third option, you can create a service order from the return order, release the service order, and register receipt of the item when it is delivered for repair.

On the receipt, you then enter the customer who delivered the item to you and run the Get Source Doc. Lines function from the ribbon.

With this action, you can see all released but not yet posted return orders that are assigned to the entered customer. You select the relevant orders and choose OK, which will copy their values to the receipt lines.

If an item needs to be tracked, the line where it is entered is marked in red. You can add tracking data to the line by using the Assist button in the Quantity field. After the tracking information has been entered, the line will be green.

When everything is filled in, the receipt can be posted.

Repair company-owned devices

Another purpose of creating service orders is to record repairs or other types of servicing performed on machines and equipment.

Note

This section only explains the medtec365 adjustments to the general repair feature in KUMAVISION, with the underlying functionality being described here.

To set up a service order for repairs done in-house, you can choose New on the service order list. Alternatively, you can run the New Case function from a serial number information card or a customer card.

As for the customer whom you want to enter on the service header, you need to ensure that the Internal toggle is activated for them on their customer card *(see the Invoicing FastTab there)*. With the toggle turned on, the transaction codes on the relevant service item lines are set by the system to the code that you’re using for current assets while the Place of Servicing is changed to Inhouse.

Meanwhile, on the service lines, the destination document type changes to Serv. Consumption and the NO COST discount reason is filled in from the Warehouse – Discount Reason field in Service Management Setup, together with a 100% line discount.

Note

You can only post the order as a whole. Posting individual service lines isn’t possible.

Repair external devices

Loaned, consigned, and demonstration devices are typically shipped via sales orders, with a sales return order used to receive back each item.

But machines and equipment can also be returned through service orders if they need to be inspected, with the customer being charged for any repairs that might be required.

To bill for a service like this, you need to manually create a service order, specify the customer from whom you expect to receive an item in need of inspection or repair, and enter the number of the item, as well as its tracking data, on a service item line.

You can also set up a service order type for the sole purpose of handling service returns.

> **Note**
>
> The third-party code in the Transaction Code field must be manually changed to a code that is used for current assets.

As a next step, you run the Create Sales Return action from the service item line ribbon or the Service Activity Groups FactBox.

> **Note**
>
> For the correct information to be displayed on the sales return order, a standard service code is required.

When running the function, you might need to select a standard service code (if more than one is available). Afterward, the return order is filled in automatically and you can post the order. You can also create a service receipt from the return first and post the return document from there.

The service order and its lines are then used to record repairs to the machine or equipment and, if needed, create an invoice to send to the customer. Following repairs, you can also use the service lines to have the item moved to a different warehouse and bin.

> **Note**
>
> Loaned, consigned, and demonstration devices can only be returned via an expected delivery. You cannot post them as unexpected receipts.

External Document No.

When you store an external document number on receipt of service items, the number is copied automatically to the service item lines during posting and to the service quote and posted service shipment.

If available, you can already fill in this field when you create an order manually. The number is then copied to all subsequent documents, for example, when a service order is converted to a sales return and then to a service receipt.

If you create an order manually and fill in the field later, that is, on subsequent documents such as the sales return order or the service receipt, the number is still copied automatically to the service item lines after posting.

> **Note**
>
> The External Document No. field isn’t shown on service invoice and credit memos.

Create a sales return from a service order

On the service order, you can use the Create Return Orders function to have a sales return order created based on service item lines.

Sales Line Details: FactBox

On a sales return order, the No. of Service Item Lines field in the Sales Line Details FactBox shows how many open service orders exist for the customer and item that you entered on the selected line.

You can see the field at any time. You can also open the related service order via a lookup on the field, if necessary.

Note

The No. of Service Item Lines field is filtered by customer and item numbers, not by tracking information.

TRACK ITEMS ON SERVICE LINES

The Lot No. field has been added to service items. If a service item is automatically created during a sale because you've selected the Create Service Item checkbox on the associated service item group record, the lot number is entered as well.

You can open the lot number information list from a service item card by using the Assist button next to the Lot No. field.

Note

At present, you can assign only serial or lot numbers that are already set up in the system.

No distinction is made between serial and lot numbers on a service item line, where item tracking information is stored in the Item Tracking No. field.

The system automatically recognizes if a serial or lot number is stored for the item.

You can open the serial number or lot number information card from a service item line by using the relevant line function on the FastTab ribbon.

DESTINATION DOC. NO. ON SERVICE QUOTES AND ORDERS

On standard service code records, you can create the BOMs that you want to open on service quotes and orders and specify per line if the destination document type should be Service Sales or Service Consumption. You can also select the Print Line checkbox on a line, if necessary.

When you insert the BOM into a service quote or order, the standard service code configuration is then copied to the document but can be changed there manually.

Note

When you enter an item or a resource on a service quote or order line manually, the system retrieves the target document type from Service Management Setup.

SERVICE ORDER

General

A new field called Place of Servicing has been added to service order documents, to the General FastTab. It is filled in from Service Management Setup when you create an order but can be changed manually, if needed. The field is also later copied to the service item lines.

Note

The fields on the service item lines aren't updated when you change the place on a service header.

Lines

All fields that have been added to service item lines are described in the following table.

Field	Description
Activity Template Code	This field might already be filled in based on the service order type and item group code specified for the order that you created. However, you can change the field manually, if necessary. When you fill in a code, the activities specified on the template will be added to the Service Activity Groups FactBox.
No. of Previous Services	Shows how many times the item on the line has been repaired or has undergone maintenance. **Note** As for items tracked by lot number or not at all, you see all products with the same item number *(and, if available, the same lot number)*. **Note** The field lists only services carried out inhouse (that is, a sales return and a shipment have been posted). To see onsite repairs, you need to open the Equipment Entries page.
Service Status	Automatically set to In Process when you create a service order but can be changed manually. The status also changes following the start of certain activities. It is used both for informational purposes and for controlling a variety of workflows. Options are: • In Process • Rendered • Not Possible • Scrapped
Place of Servicing	Is filled in from the field with the same name on the service header. The field indicates where repairs should be carried out. Options are: • (blank) • Onsite • Inhouse • At Vendor
Current Place	Is filled in with the value from Service Management Setup when you add an item but can be changed manually, if necessary. The field indicates where the item on the line is currently located. Options are: • (blank) • Onsite • Inhouse • At Vendor The field is updated by the system if, for example, the item is shipped to a vendor for repairs.
Repair Status Code Repair Status Changed On/At	This field is also used in the standard app but has been extended in functionality to include a log that is automatically filled in each time the status of the line changes. Shows the date and time when the repair status was last changed. You can click the field to see a history of all the changes.
Item Tracking No. Substitution Item Tracking No. Loaner Item Tracking No.	These fields are filled in with a serial or lot number, depending on the tracking information specified for the item on the line. The first field contains the serial or lot number of the current item, the second the number for a substitution item. The third is filled in with a loaner number.

Field	Description
	The fields are used in both directions. This means if one of these tracking numbers is known in advance, you can fill in the relevant field so that subsequent processes can incorporate it. If item tracking information is added later in warehouse handling, it is automatically retrieved when posting a document with a case number so that the information can be used thereafter. If the item has a serial number, the system checks if a warranty date for repairs is specified on the related serial number information card and retrieves it if the value in the Warranty Date (Repairs) field is not later than the order date.
Estimate Limit	Is filled in from Service Contract Setup but can be changed manually.
Solution Code	Is filled in from Service Contract Setup but can be changed manually.
Vendor No. Vendor Item No.	These fields are required when you ship an item to a vendor. When you enter the item, both fields are automatically filled in on the line with the numbers from the related item card but can be changed manually, if necessary.
External Document No.	If available, is filled in by the system when you post a service receipt. When you create a service order manually, you can already fill in this field in an earlier stage of processing.

Ribbon functions

Accessories

Run by choosing Lines > Line, shows the accessories entered during receipt of the service item on the selected line.

Serial No./Lot No. Info Card

Used to drill down to the relevant serial or lot number information card.

Status

Choosing one of the following ribbon actions sets the lines you’ve selected to the specified status:

- Checked
- Inspected
- New Estimate
- Estimate Sent
- Estimate Accepted
- Estimate Rejected
- Service Released
- Service Started
- Service OK
- Service Not OK
- Other Repair Status (opens a list of all available repair statuses)

If you set the repair status to Service OK, the Service Status field changes as well, to Finished; with the status set to Service Not OK, the Service Status field changes to Not Possible.

If the status is set to New Estimate, the system checks the amount shown on the service quote against the limit for cost estimates. If the amount is lower than the limit, the status is automatically set to Estimate Not Reqd. and the quote line that is linked to the service line is set to Finished.

Activities

The actions available on this menu were designed to give you quick access to the most important functions in the service area. Choosing a function runs one of the activity groups specified in Service Management Setup.

The impact of the Create Service action depends on where repairs are carried out. If a vendor repairs the items, you must first set up a purchase return order. Options are:

- Create Sales Return
- Create Purch. Return
- Create Estimate
- Create Service
- Create Shipment
- Create Review

You can also select more than one service item line before you run the function to have the activity performed for multiple lines at once.

Inspection Codes

Found by choosing Line > Service, you can use this action to see the inspections stored for the selected line.

Service Lines

Opens the card for the selected line.

Lines

The fields that have been added to service lines are described in the following table.

Field	Description
Print Line	Specifies if the line is shown on printouts.
Unit Cost (LCY)	Is filled in on every line where the Destination Document Type field is set to Service Sales or Serv. Consumption. Shows an amount of zero on all other lines. For repair or maintenance services that are rendered by vendors, you need to fill in the Unit Cost (LCY) field on a service quote line instead. The cost entered there is then automatically copied to the Direct Unit Cost field on any purchase order that you create for the service.
Service Activity Step	Used to sort and uniquely identify the activity on the line. In the case of an external repair, the vendor costs are entered in the “Cost price (MW)” field in the service line of the quotation. When the purchase order is created, the cost price is automatically transferred to the “Purchase price” field.
Relation	Specifies the data that is updated on the line during posting. • (blank) • Service Item • Substitution Item • Loaner
Destination Doc. Type	Specifies the document that is created and filled in with the data from the line when it is run. Options are: • Service Consumption • Service Sales • Service Quote • Sales Quote • Sales Order • Sales Invoice • Sales Cr. Memo • Sales Return Order • Sales Transfer • Sales Return Transfer • Purch. Quote • Purch. Order • Purch. Invoice • Purch. Cr. Memo • Purch. Return Order • Transfer Order • Item Jnl. Pos. Adjmt. • Item Jnl. Neg. Adjmt. • Item Journal Transfer
Direction	Specifies the direction for updating the current location on the line when you post to the service item. You can have the field filled in by default based on a standard service code.
Destination Doc. No.	Shows the number of the target document if one is created. The number is automatically removed when the document is deleted. This field should not be edited unless absolutely necessary.
Destination Doc. No.	Shows the number of the target document if one is posted. This field should not be edited unless absolutely necessary.
Item Tracking No.	Is filled in from the service item line and is used to create destination documents.

Field	Description
Service Vendor No.	Is filled in with the vendor number stored on the related item card and is used to create purchase documents.
Finished	Is selected automatically when you post the line.
Order Type	Specifies the default value for document creation. Depending on the destination document type, the order type settings for a purchase, sales, warehouse, or service document apply.
Auto Create Document	After an activity is inserted, the first service line where this field is set is run, that is, a document is created and, if needed, a tracking number.
Auto Show Document	Selected if a new document is created for the service line.
Service Activity Type	Classifies the activity on the line. Options are: • Repairs • Maintenance • Substitution • Loan • Other Service • Scrap • Estimate • Logistics

Ribbon functions Delete

Deletes the service line.

If you’re about to manually delete a line that has been completed or that includes a Destination Document No. or To Posted Document No., you’re asked to confirm the deletion request. The Destination Document No. field is cleared automatically if the specified document is removed from the system.

Status

Sets the repair status on the selected lines to the specified value. You can choose from the following statuses:

- Checked
- Estimate Accepted
- Estimate Rejected
- Service Released
- Service Started
- Service OK
- Service Not OK

If you set the repair status to Service OK, the Service Status field changes as well, to Finished; with the status set to Service Not OK, the Service Status field changes to Not Possible.

Activities

The actions available on this menu were designed to give you quick access to the most important functions in the service area. Choosing a function runs one of the activity groups specified in Service Management Setup.

Function	**Description**
Create Service	Depends on where repairs are carried out. If a vendor repairs the item, a purchase return order should be set up first.
Start Line	Creates the target document specified on the current line if it does not exist yet. If the target document is of type Service Sales or Service Consumption, the document already exists and, if necessary, the item tracking data is copied from the service item line to the service line. In all cases, the (created) document number is entered in this field.
End Line	Completes the line, regardless of whether the document has been posted. This function should only be run under special circumstances.

Transfer items on service lines

If you want to transfer an item during repairs, you can do so directly from the service line by setting up an activity or filling in the line fields manually. Should you decide to use the second option, you need to fill in certain fields on the line as described in the following table.

Field	**Description**
Service Activity Type	Logistics
Relation	Service Item (specifying the relation fills in the item that is to be repaired on the rest of the lines)
Destination Doc. Type	Transfer Journal
Location Code Bin Code	Location and bin that the item should be transferred to. By default, the system fills in both from the related item card.

Service

Found by choosing Line > Service, you can use this action to see the inspections stored for the selected line.

Posting

Choose Post Consumption to post all lines that aren’t related to a service, loan, or substitution item, regardless of whether the destination document type is Service Sales or Consumption.

Choose Post Sale to post all lines that need to be invoiced and where the document type is Service Sales.

Factboxes

The FactBoxes are identical to those on standard service orders.

Service order: FactBoxes

Service Item Line Status

This FactBox provides you with a quick overview of the selected line, including:

- Case No. and Case Line
- Place of Servicing
- Current Place
- Repair Status
- Estimate Limit

Service Activity Groups

This FactBox is linked to the selected service item line. Activity groups are entered by the system based on the relevant service activity template code but can also be added manually to each line.

You can add, delete, or start activities from the box:

1. Go to the box and then select the relevant activity.
2. Click Service Activity Groups.
3. In the dialog box that appears, select one of the actions described in the following table.

Function	Description
New	Shows a list of all activity groups from which you can select a group. New groups are never run automatically.
Delete	Deletes the selected group.
Run	Depending on your current configuration, adds the activity to the list of service activities and runs it immediately thereafter.

Activities that have been carried out will be highlighted in green.

Service Activities

This FactBox shows the activities that have been created, posted, or specified for the selected service item line. Their status is indicated by one of the following colors:

Color	Description
Green	The relevant document has been posted.
Red	The document has been created but not yet posted.
Black	The document has been added to the FactBox but has not been created yet.

You can add, delete, or start activities from the box: 1. Go to the box and then select the relevant activity. 2. Click Service Activity Groups. 3. In the dialog box that appears, select the action that you want to run.

Activities that have been carried out will be highlighted in green.

Case Documents

Every document started and posted from a service order is automatically stored with a case document. To see a document, click the number in the No. of Records field.

> **Note**
>
> Case documents don’t refer to individual service lines but to the entire service order.

Change a ship-to code

You can edit the Ship-to Code field, found on the Shipping FastTab, when you create a service order manually. After you edit the field, all service item lines and service lines filled in on the order are deleted. For this reason, we recommend that you enter a new code before you fill in everything else.

The field can no longer be changed when you’ve posted a sales return for the service order.

Complete an order

A service order that is set to Finished isn’t automatically deleted from the system but must be removed manually.

Before you delete the order, make sure that the Finished checkbox is selected on all service lines. If it isn't, the service order is only archived.

After the field is selected on all lines and the order is deleted (while being archived), you can choose Closed Cases (instead of Open Cases) on the associated customer or serial number information card to see the case document set up for the order.

SERVICE QUOTE

You can create a service quote from the Service Activity Groups FactBox.

However, as data displayed in the Service Activity Groups and the Service Activities FactBoxes relates to a single line, the quote will be set up only for the item that was selected last.

If you want to create a quote for multiple items, select all of them and run the Activity – New Estimate function from the Lines FastTab ribbon. This opens the Service Item Lines page, where you can see all quotes that items have been entered on, except for quotes in the Finished status.

To copy the new items to an existing quote, select them and choose OK. To set up a new quote for them, choose Cancel.

> **Note**
>
> You can, at any time, manually delete a service quote that was created by accident.

When you set the status of a quote to Estimate Accepted, the Finished checkbox on the relevant service lines is selected automatically.

When the quote is set to Estimate Rejected, on the other hand, the checkbox is left blank so that you can edit the quote, if necessary. Alternatively, you can select the checkbox manually and create another quote.

If a quote isn't required, you should also select the checkbox, as you can only delete service orders where Finished is selected on all lines.

General

When you create a quote from a service order, the values in the Service Order Type and Case No. fields are automatically retrieved from the service header.

Lines

When you create the quote document, the values from the service lines are also copied to the quote.

Field	Description
External Document No.	Is copied to the service item lines that are created when you post a receipt (if the number is specified on the Service Receipts page).

Status

Choosing one of the following ribbon actions sets the lines you've selected to the specified status:

- New Estimate
- Estimate Sent
- Estimate Accepted/Not Reqd.
- Estimate Rejected
- Service Released
- Other Repair Status

The Other Repair Status action opens a list of all available repair statuses so that you can change the status for one or more selected lines.

Service Lines

The following fields have been added to service quote lines:

Field	Description
Serv. Activity Step	Used to sort and uniquely identify the activities set up for the related service item line.
Destination Document Type	Is automatically filled in from the BOM. The first line is the repair or maintenance line, on which the type is set to Service Quote. All other lines can be of type Service Sales or Serv. Consumption. You can edit this field, if necessary.
Destination Document No.	Is filled in automatically when an item or resource is retrieved from the BOM. If you enter or select an item or a resource yourself, you also must fill in a destination document number, for example, by using the Copy to Estimate function. The value in this field represents the service order number.
Item Tracking No.	Is filled in automatically with the tracking information specified for the item you want repaired or maintained (as stored on the service order).

Note

If an item needs to be replaced with an identical product, you can set the Relation field to Substitution so that the rest of the line fields *(Item No., Transaction Code, Location Code, Bin Code, Unit Price)* are filled in by the system.

Ribbon functions Status

Sets the repair status on the selected lines to the specified value. You can choose from the following statuses:

- New Inspection
- New Estimate
- Estimate Sent
- Estimate Accepted
- Estimate Rejected
- Other Repair Status

The Other Repair Status action opens a list of all available repair statuses so that you can change the status for one or more selected lines.

If the status is set to New Estimate, the system checks the amount shown on the service quote against the limit for cost estimates. If the amount is lower than the limit, the status is automatically set to Estimate Not Reqd. and the quote line that is linked to the service line is set to Finished.

Other functions available on the ribbon are:

Function	Description
Copy to Estimate	When you add items or resources to service quote lines via a BOM, the Destination Document No. on a line is filled in automatically. You can then use the No Estimate Lines function to delete the number, except for when it is assigned to the item to be repaired. With this function, you can enter the number on all lines.
No Estimate Lines	Deletes the destination document number on all quote lines, except for the line that is assigned to the item you want repaired. After you have deleted the number, you can no longer copy the lines to the related service order.

Activities

The actions available on this menu were designed to give you quick access to the most important functions in the service area. Choosing an option here runs one of the activity groups specified in Service Management Setup.

The impact of the Create Service action depends on where repairs are carried out. If a vendor repairs the items, you must first set up a purchase return order. Options are:

- Create Sales Return
- Create Purch. Return
- Create Estimate
- Create Service
- Create Shipment
- Create Review

You can also select more than one service item line before you run the function to have the activity performed for multiple lines at once.

Service BOM

Here you can specify the items and resources required for the service BOM by using the Selected checkbox. Or add new items/resources via the No. field in accordance with the Microsoft Dynamics 365 Business Central[1] standard. You also need to enter a quantity and can choose a variant if one is set up for the relevant item.

You can have a quantity filled in automatically as well. With the quantity already filled in, the Selected checkbox is also set by the system.

Additionally, you can choose Select All or Deselect All to specify what lines to run an action on.

Inspection Codes

Found by choosing Line > Service, you can use this action to see the inspections stored for the selected line.

VALIDITY PERIOD ON SERVICEQUOTES

In the service offer overviews, service offers that have expired are showed in red in the No. and Quote Valid To Date fields.

However, the quote can still be converted into an order.

In the Service Management Setup, you can enter a formula in the Quote Validity Calculation field that determines how the Quote Valid To Date is to be calculated based on the document date.

The validity is always determined by adding the current document date and the stored quotation check calculation when the quotation is created and the document date is changed.

If the status "CT sent" is set from a service offer, the determination is made using the working date (*working date + Quote Validity Calculation)*.

Alternatively, you can specify the Quote Validity Calculation manually in the sales offer.

KEY SERVICE ACTIVITIES

Transportation

Transportation activities typically relate to the movement of items that you intend to process in the service area.

To transport devices from, around, and to your locations, you need to select Item and Service Item in the Type and Relation fields on a standard service code line.

Afterward, the system copies the transaction code entered on the associated service item line to the service code line, where you can change it manually.

As posting transportation activities doesn’t lead to changes in item value, you should set the Not Billable field on the service code line to No Cost. If you fill in the Direction field, posting the movement of the item also updates the item’s current location (and its repair status code, if needed).

Typical document types

- Sales return receipts, on which you post the receipt of customer-owned items.
- Service orders for shipments to customers. Alternatively, you can create sales orders for this purpose.

For subcontracted repairs

- Purchase return shipments, on which you post item shipments to vendors.
- Purchase orders for returning items from vendors to your premises. However, these orders can also be classified as service activities and incorporated into the relevant activity groups.

Loans

Loans are also transportation related. However, in this case, it’s not the service items that are being moved but additional items (typically equipment that is owned by your organization). The Relation field on the relevant standard service line must therefore be set to Loan.

As a loan often involves more than one item movement, you can use a template to cover inbound and outbound transportation. Alternatively, you can set up two, with each covering one direction.

The location that you enter on a standard service code line has priority over all other locations, which provides you with a way of entering an additional location for rental equipment here. What’s more, you can add a placeholder such as a resource line, for billing the use of a loaner based on time and materials.

Cost estimates

Cost estimates are based on your evaluation of service cases and are supplemented by price data stored in the system. They can be created in the form of service quotes from service orders.

On the lines of a quote, you can then not only enter inspection codes but also specify planned consumption and sales, as well as retrieve values from a service BOM.

For creating a quote, the relation on the relevant standard service line must be set to Service Item and the destination document type to Service Quote. As every estimate contains prices, the Not Billable field also needs to be set to No.

Repairs and maintenance

Of all service activities, these are the activities that depend on the largest variety of outside factors. As a result, more than one template will certainly have to be set up.

For example, services can be provided onsite or inhouse, or the equipment might be sent to a vendor, and the type of service order that you create can play a role as well.

The result of this might be that a different service BOM will be required for each job, based on the inspections you carried out and the estimates customers accepted, or a purchase order must be created to have equipment repaired by a supplier.

Scrapping

To scrap an item, the Relation field on the relevant standard service line must be set to Service Item.

For single-stage disposal, you also need to select the Item Journal Removal option in the Destination Doc. Type field on the line.

For a two-stage scrapping process, the type must be set to Item Journal Transfer so that the item can be transferred to the scrap location that you’ve specified in Service Management Setup before its removal from that location must be posted manually.

Item substitution

Typically, substitution means the receipt of new items, recognized as current assets.

You can use a template to decide whether a substitution item should be procured in the usual way—from inventory—or, if the item isn’t in stock, be purchased directly via a supplier or through the replenishment methods available in the system.

In either case, the Relation field on the relevant standard service line must be set to Substitution.

Other services

Additionally, you can use resources to integrate other services such as sterilization, labeling, or quality control management into service workflows.

SERVICE CASES

When you create a service order, the system also creates a service case document and classifies it according to the service order type entered on the order, indicating whether the services consist of repairs or maintenance.

A case classification can be stored for each type of service order that you set up in the system. If the field is left blank on the Service Order Type page, each new order that you create with this type is set automatically to Repairs. When you change the service order type, for example, from repairs to maintenance, the classification also changes.

The number of the case document is copied by the system to both the header and lines on a new service order. To see a certain case document, choose Open Cases on a customer, marketing cockpit, or serial number information card.

Each service line linked to a case is automatically filled in with all information that you need to render services, including the related item and lot number, description, variant code, and quantity.

If you create another document from a service order, such as a service quote, sales order, or purchase return order, the relevant case number is automatically copied to it. This way, you can see if a purchase or sales document is linked to a certain order and which documents are assigned to each other.

A case provides you with a quick overview of service order information and can be used, if needed, to create follow-ups, open a customer card, or see the documents that you’ve created or posted based on the service order.

For the system to create a case automatically, you must set up a number series for service cases in Service Management Setup.

> **Note**
>
> The case document serves to collect information and therefore cannot be processed further.

LINK SERIAL OR LOT NUMBERS TO SERVICE ITEMS

When you post a sales shipment, a service item is created for each inventory item that belongs to a service item group with the Create Service Item checkbox selected.

If one of the items from inventory is tracked, its serial or lot number is copied along as well, and you can drill down on the relevant service item card field to see the information that is stored for the number.

This process also works the other way around, with a drill-down on the Service Item No. field on a serial number information card or the Serial No. Information List. You cannot do the same from the cards or list containing lot number information, however, as each lot number can be assigned to more than one service item.

If you enter a service item on a service order, the system copies its serial or lot number, along with the number of the related inventory item, to the order, and you can again use a drill-down to see the related information.

Conversely, if you specify on the document a combination of inventory item and serial or lot number that a service item already exists for, this item is automatically added to the order. If none is found, you can also create one from there.

Note

You can assign only one serial or lot number to each service item.

PRICING FOR SERVICE CONTRACTS

Service contract pricing (labor and parts) has been extended to include the selected service order type and contract number. This way, you can specify customer-specific prices for the following service activities:

- Maintenance and repairs that a service contract was set up for (via the Contract No. field).
- Service orders that are created without reference to a contract.

Setup

To be able to use the feature, you need to open the following pages (unless you've already specified the relevant records):

Sales Order Type

1. On the ribbon, choose New.
2. Fill in a code and a description. All other fields have no impact on pricing.

Service Order Type

1. On the ribbon, choose New to set up the service order type that you want to use contract pricing for.
2. Fill in the Sales Order Type Pricing field to assign a sales order type (such as the kind you've just created on the Sales Order Type page) to this type of service order.

Price List

If you want to work with customer price or discount groups, you need to set them up here.

Fill in a group in the Assign to Type field on the price list header, and then specify, in percent, the required order type and discount on the lines.

Service Contract Card

On the contract, fill in the Service Order Type field (and, possibly, the Customer Price Group or Customer Discount Group field).

Price update

The Price Update % field, found on the Price Update FastTab on a service contract, can be used to store different price update percentages for contracts set up in the service area.

To configure the feature:

1. Choose the Search icon, enter Update Service Contract Prices, and then choose the related link.
2. On the request page, in the Update Contracts field, choose one of the options described in the following table.

Option	Description
No – % on Report	Updates the line percentages on all service contracts where the Price Update % field has been blank so far. This option requires that you fill in the Price Update % field on the request page.
Yes – Ignore % on Report	Updates the line percentages on all service contracts where the Price Update % field is filled in. The new value is retrieved from the contract specified on the request page. Allows leaving the Price Update % on the request page blank, as the field has no impact on the process.
All – Include % from Report	Updates the line percentages on all service contracts, regardless of whether the Update % field on a contract is filled in. Requires that you fill in the Price Update % field on the request page, as the report copies the percentage from the page, ignoring the values on the contracts.

Note

Prices are always updated for the entire contract, regardless of the starting dates entered on individual lines. If you want to recalculate the price for a single line, you need to do so manually.

Workflow

When you create a new service order, the system then enters on each service line the specified customer price or discount group and, in the Sales Order Type Pricing field, the sales order type linked to this type of service order.

Note

If the system calculates a 100% discount based on the specified customer discount group, the Not Billable field is automatically set to No Cost.

MAINTENANCE SCHEDULE AND COCKPIT

To improve the scheduling of service operations, the maintenance cockpit has been implemented as a link between service contracts and service orders. The cockpit can be used to show and schedule all maintenance work that is due and create the required service orders.

Setup

Inspection types

Before you can use this feature, you need to set up different inspection types. Each type represents a way of doing work in the service area, such as maintenance. You can create any number of inspection types.

1. Choose the Search icon, enter Inspection Types, and then choose the related link.
2. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code (abbreviation) for the inspection type. The code must be unique.
Description	Specify a description for this type of inspection.
Calculation Type	The default value of the field is "Interval", as this represents the previous calculation type. The second option is the value Counter. The value "Counter" is stored if a counter type code and a counter interval are also stored.
Scheduled Interval	Specify the time span that will be filled in as the interval on service contract lines.
Interval Type	Specify how the next servicing date should be calculated. Options are: • Scheduled Serv. Date • Actual Servicing Date
Counter Type Code	If the Calculation type field contains the value "Counter", the counter type from the page of the same name can be stored here.
Counter Unit of Measure Code	This calculated field automatically displays the unit from the meter type.
Counter Interval	A default value for the meter interval can be stored here, which is later transferred to the service contract line. When a meter has reached this meter interval, maintenance is due.
Service Order Type	This field is set as a filter on the service contract field with the same name to determine the correct customer contracts. If the type selected here is not identical to the service order type on a contract, you cannot enter this type of inspection on the document. If you leave this field blank, the inspection type is entered irrespective of the service order type specified on the contract.

Schedule templates

These templates specify the intervals at which maintenance should be performed.

You can use the inspection types that you’ve set up to specify exactly what kind of servicing needs to be done. To fill in a template:

1. Choose the Search icon, enter Maintenance Schedule Template List, and then choose the related link.
2. On the ribbon, choose New.
3. Enter an inspection type. The Scheduled Interval and Interval Type fields are then filled in by the system.

Item Card

To link a template to an item, open the relevant item card and fill in the Maintenance Schedule Template field there.

Vehicles, Drivers, and Technicians

You can create any number of technicians on this page and link them to a resource, device, location, or responsibility center.

Field	Description
Type	Specifies the type of record. Options are: • Vehicle • Driver • Technician **Note** At present, only records of type Technician can be entered on service orders or in the maintenance cockpit. The Vehicle and Driver types have no impact on the system.
Code	Specifies a unique code (that is, abbreviation) for the vehicle, driver, or technician.
Description	Specifies the name of the vehicle, driver, or technician.
Employee No.	If available, shows the number of the employee who is linked to the record.
Resource No.	If available, shows the number of the resource linked to the record.
Shelf No.	Might contain a description but has no impact on any process in the system.
Fixed Asset No.	If available, shows the fixed asset that is linked to the record.
Responsibility Center	Specifies the location or branch office responsible for the record.
Location Code	If available, shows the code of the location assigned to the record.
User ID	If available, shows the ID of the user who is linked to the record.
Blocked	With the field selected, the record is blocked and cannot be used.
Blocking Reason	Specifies the reason for blocking the record.

The location or the user ID filled in for a technician is copied to all service orders that you enter the technician on.

You can also specify a technician on a service item card, with the selection window already filtered to this type. When you create entries in the maintenance cockpit, the Technician field on each entry that is linked to the service item is then filled in by the system, although you can still edit the field, if necessary.

Schedules on service contracts

When you post a sales shipment, the system checks whether the item specified on the document is linked to a service item group that a service item is automatically created for in this case. If so, a valid service contract is determined and a line with EUR 0.01 is added per inspection type.

As a result, the same service item might appear on a contract more than once.

Note

The Service Order Type field must be filled in on the relevant contract; otherwise, you cannot create it from the maintenance cockpit.

Note

The line values need to be adjusted manually after creation.

> **Note**
>
> Service contracts in the Canceled status aren’t included in the check.

On each contract line, you can then see the starting date of the line, the inspections that are carried out, and the interval at which maintenance is performed, as well as when the equipment was last serviced, when it was scheduled to be serviced again, and when the next servicing date is.

The values in the Starting Date fields are retrieved from the posted shipment but can be changed manually, if necessary.

> **Note**
>
> At present, you cannot fill in contract lines with an interval that is later than the billing period.

At any time, you can add a line to the contract manually. You can also delete it if the New Line checkbox on the line has been selected and the status of the contract has been set to Open. You can no longer do so if the Lock Contract checkbox is selected.

To end the line, you must fill in the Contract Expiration Date field.

> **Note**
>
> At present, the Annual Amount field on the Invoice Details FastTab must be set manually to the value specified in the Calcd. Annual Amount field.

> **Note**
>
> The Change Status field is automatically set to Open and must be manually set to Blocked if you want to block a line.

Maintenance cockpit

This cockpit helps you plan upcoming service cases. To open it, choose the Search icon, enter Maintenance Cockpit, and then choose the related link.

Afterward, you can use the Create Cockpit Entries function on the ribbon to retrieve all service lines that are due until a certain date. To narrow down their number even further, you can set a variety of filters on service contract header fields.

> **Note**
>
> Items that don’t contain an inspection type on contracts aren’t retrieved by this function.

Each line on the cockpit then shows the most important information from a contract, including the items involved, the customer who has them, the types of inspection used, and the last and next servicing date. Any technician specified on a service item card is also automatically entered on the relevant lines.

To finish a line, fill in the Schedule On and Scheduled Technician fields and select the Planned checkbox on it.

> **Note**
>
> The Schedule On and Scheduled Technician fields aren’t mandatory. The Planned checkbox, however, must be set if you want to create a service order for a cockpit line.

You can also select multiple lines and run the Enter Values for Filtered Recs. Action on the ribbon to copy to them the Planned, Schedule On, and Scheduled Technician field values that you enter on the request page.

Running the Delete Records in Filter action, on the other hand, deletes all selected lines from the cockpit.

You can then run the Create Service Docs. action to create service orders from the lines. On the request page, you can turn on the Split by Technician toggle or select one of the options in the Combine Lines field to copy, by service item or customer, multiple contract lines to a new service order.

Based on your setup, the orders will look as described in the following table.

Combine Lines	**Split by Technician**	**Result**
No	Turned off	One service order is created per line. If available, the technician is then copied to the service item lines.
No	Turned on	One service order is created per line and technician. If available, the technician is shown on the service header and the service item lines.
By Service Item	Turned off	One service order is created per service item number. If available, the technician is then copied to the service item lines.
By Service Item	Turned on	One service order is created per service item number and technician. If available, the technician is shown on the service header and the service item lines.
By Customer	Turned off	One service order is created per customer (independent of the items specified). If available, the technician is then copied to the service item lines.
By Customer	Turned on	One service order is created per customer (independent of the items specified). If available, the technician is shown on the service header and the service item lines.

When the orders are created, the document numbers linked to them are entered on the maintenance cockpit entries so that you can later open an order by drilling down on the relevant Document No. field.

Additionally, the contract numbers are entered on the new service headers and lines. The service order type is also copied from each contract, as is the location and user ID you’ve filled in when you set up the Technicians page; the same goes for the type of inspection.

The date entered in the Schedule On field in the cockpit is copied to the Starting Date field on the relevant service order, or, more specifically, to the service item line that it was specified for. If different starting dates are filled in on an order, the Starting Date field on the Details FastTab remains blank.

The work date, on the other hand, is copied to the Posting Date and Document Date fields on the Invoicing FastTab. You can change them manually, as you can all other fields, except for the Response Date field.

When you delete a service order, the data entered on the maintenance cockpit line is deleted as well; when you post an order, the line is also deleted.

When a service shipment is posted, the Last Planned Service Date and Next Planned Service Date fields on the service contract are recalculated, whereas the Last Service Date field on the General FastTab is updated on the service item.

METER-BASED MAINTENANCE: SERVICE CONTRACTS

With this feature, you can manage measuring components that are linked to medical devices for maintenance, billing, or accounting purposes.

A component might be a meter or a counter that indicates the time, volume, quantity, or distance reached thus far and is posted with one of the following statuses:

- Activation
- Reading
- Removal

Setup

KUMAVISION medtec365 Setup

On the Measuring Components FastTab, you can specify whether you want a window for recording maintenance-related readings to pop up when you post, for example, a sales order or a warehouse receipt. The options, which are the same for each FastTab field, are described in the following table.

Option	Description
Never	A pop-up window to record readings never opens automatically.
When Required	The window is only shown if at least one reading is required to complete the posting process.
Always	The window is always shown when posting a document of this type.

Meter types

To specify the kind of measuring components you need, for example, meters to record equipment utilization, run hours, or consumption:

1. Choose the Search icon, enter Meter Types, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for this type of component. The code must be unique.
Description	Specify a description for the type.
Unit of Measure Code	Specify the unit that will be used for a component of this type.
Reading Reqd. on Receipt	Turn on this toggle if a meter reading must be taken when posting a warehouse receipt.
Reading Reqd. on Shipment	Turn on this toggle if a meter reading must be taken when posting a warehouse shipment.
Internal Comp. No. Reqd.	Turn on this toggle if you want users to always have to fill in the numbers that are used in-house to refer to this type of component.
External Comp. No. Reqd.	Turn on this toggle if you want users to always have to fill in the numbers that are used by other companies to refer to this type of component.

Each type will later be copied to the measuring component templates that it is entered on.

Measuring component templates

You use these templates to specify the measuring components that you want to link to a device. To set up a template:

1. Choose the Search icon, enter Measuring Component Templates, and then choose the related link.
2. On the ribbon, choose New.
3. Fill in the fields as described in the following table.

Field	Description
Code	Specify a code for the template. The code must be unique.
Description	Specify a description for the template.

Afterward, choose Edit on the ribbon and fill in the Meter Type Code and Description fields on the Lines FastTab to add the required components.

Mapping

Following setup, you can enter the template code on an item card, on the Misc. FastTab, to link the specified components to a device.

Maintenance templates

These templates contain the types of inspections an item must undergo

Note

The following fields have been added to the inspection types so that maintenance requests can be triggered based on a variety of data: Calculation Base, Scheduled Interval, Meter Type Code, Meter UOM Code, and Meter Interval.

Mapping

Following setup, you can enter the template code on an item card, on the Misc. FastTab.

Workflow

Meter-Based Maintenance

When a serial number information card is created, the system checks whether the code of a measuring component template is filled in for the specified item.

If it is, a base component is created in the system for each meter type that is entered on the template and the template code is copied to the field with the same name on the information card (see the Misc. FastTab).

To view these components, you can run the Meter-Based Maintenance action from an item, a customer, or a serial number information card (or from the list pertaining to any of these cards).

If you change a template linked to a serial number, the system will remove all existing components without meter entries and set up new ones as specified on the replacement template.

Note

The Meter-Based Maintenance page is only used to fill in basic information, whereas the actual, physical meters must be maintained on the Measuring Components page.

Field	Description
Item No.	Specifies the item number of the device that is linked to the measuring component. The value in this field is retrieved from the associated serial number information card.
Variant Code	Specifies, if available, the variant of the device that is linked to the measuring component. The value in this field is retrieved from the associated serial number information card.
Serial No.	Specifies the serial number of the device. The value in this field is retrieved from the associated information card.
Meter Type Code	Specifies the type of measuring component.
Description	Shows the description of the component type.
Meter Total	Shows the cumulative meter reading. The value in this field represents the total value recorded by the component over its lifetime.
Meter Reading	Shows the difference between the current reading value and the value that existed before activating the component.
Meter Reading (Open)	Shows the values that have been measured but not posted.
Meter UOM Code	Specifies the unit of measure that will be used for readings.
Customer No. Customer Name	These fields specify the number and name of the customer who has the device in operation.
Starting Date	Indicates when measuring should start.
Ending Date	Indicates when measuring should end.
Component No.	Shows the number of the active physical component.
Internal Comp. No.	Shows the number by which the component is referred to in-house.
External Comp. No.	Shows the number by which the component is referred to in external correspondence.

Measuring Components

This page is used to manage the physical components that will be linked to a device to take readings.

Components can be created by activating them in a meter journal or posting meter readings (on purchase, sales, or service documents or in item journals).

Field	Description
Component No.	Shows the number of the physical component, which is assigned automatically.
Item No.	Specifies the item number of the device that is linked to the component. The value in this field is retrieved from the associated serial number information card.
Variant Code	Specifies, if available, the variant of the device that is linked to the component. The value in this field is retrieved from the associated serial number information card.
Serial No.	Specifies the serial number of the device. The value in this field is retrieved from the associated information card.
Meter Type Code	Specifies what the component will measure.
Description	Shows the description of the meter type.
Meter Total	Shows the cumulative meter reading. The value in this field represents the total value recorded by the component over its lifetime.
Meter Reading	Shows the difference between the current reading value and the value that existed before activating the component.
Meter Reading (Open)	Shows the values that have been measured but not posted.
Meter UOM Code	Specifies the unit of measure that will be used for readings.
Starting Date	Indicates when the physical component was activated.
Ending Date	Indicates when the physical component will be removed.
Active	Specifies that the component is currently active.
Internal Comp. No.	Shows the number that is used for the component in-house. Filling in this field might be mandatory if the relevant toggle is turned on in medtec365 setup.
External Comp. No.	Shows the number that is used for the component in external correspondence. Filling in this field might be mandatory if the relevant toggle is turned on in medtec365 setup.

Note

A meter entry is also created during component activation.

Meter Entries

This page lists all transactions involving a certain measuring component.

Field	Description
Entry No.	Shows a number from the series that you have set up for this purpose. The number must be unique.
Component No.	Shows the number of the physical measuring component.
Item No.	Shows the item number of the device that is linked to the component. The value in this field is retrieved from the associated serial number information card.
Variant Code	Shows, if available, the variant of the device that is linked to the component. The value in this field is retrieved from the associated serial number information card.
Serial No.	Shows the serial number of the device. The value in this field is retrieved from the associated information card.
Meter Type Code	Shows what the component measures.
Posting Type	Specifies the type of item transaction posted for the entry. Options are Activation, Reading, and Removal.
Posting Date	Indicates when the entry was posted.
Reading Date	Shows when the reading specified for the entry was taken.
Document No.	Shows the document number that is stored with the entry or in a meter journal.
Meter Total	Shows the consumptive meter reading. The value in this field represents the total value recorded by the component over its lifetime.
Unit of Measure Code	Specifies the unit of measure that was used for the reading.
Description	Shows the description that was specified when the entry was created.
Operator Code	Shows the person who filled in the measurement data to create the entry.
Reason Code	Shows the reason that was specified when the entry was created.
Internal Comp. No.	Shows the number by which the component is referred to in-house and which was specified when the entry was created.
External Comp. No.	Shows the number by which the component is referred to in external correspondence and which was specified when the entry was created.
Canceled	Indicates if the entry has been canceled.
Open	Indicates whether the entry still must be posted.

Readings Record readings during transactions

If the document to which you’re posting contains serial numbers that meter types are specified for, a pop-up window appears, allowing you to select the types you need (provided the relevant option is activated in setup).

You can then fill in or change the values on the page. After exiting the window, the system also checks whether all mandatory fields are filled in and will block the posting process if some are still blank.

You can also add readings to tracking lines. In this case, fields that identify the device and need to be filled in will be shown in red.

Note

No check will be run on the unit of measure used.

See the following table for an explanation of the pop-up window fields.

Field	Description
Posting Date	Indicates when the entry is posted.
Posting Type	Shows the posting type, which is always set to Reading in this context.
Reading Date	Specifies when the meter was read. This field must be filled in.
Component No.	Shows the number of the active physical component.
Internal Comp. No. External Comp. No.	These fields show the numbers used in-house and in external correspondence to refer to the component. Depending on medtec365 setup, both might or might not need to be filled in to activate the meter. In any case, any number that you see here will be saved so that it can be suggested automatically next time the meter is read.
Item No.	Specifies the item number of the device that is linked to the component. The value in this field is retrieved from the associated serial number information card.
Variant Code	Specifies, if available, the variant of the device that is linked to the component. The value in this field is retrieved from the associated serial number information card.
Serial No.	Specifies the serial number of the device. The value in this field is retrieved from the associated information card.
Meter Type Code	Specifies the type of component used. A device can be linked to more than one component and might therefore have multiple types associated with it.
Meter Reading	Specifies the reading taken. This field must be filled in.
Value Entered	Indicates if a reading has been entered.
Unit of Measure Code	Specifies the unit of measure that is used for the reading.
Description	Shows the description that will be copied to the meter entry created from the reading.
Operator Code	Specifies who fills in the measurement data. As this person might be different from the current user, you can also select a salesperson code here.
Reason Code	Shows the reason code that will be copied to the meter entry created from the reading.

Ribbon functions

Function	Description
Serial No. Information Card	Opens the associated serial number information card.
Copy to Other Lines	Copies the reading date, meter reading, description, and name of the person who entered the data to every input line that is linked to the same document line.

Post readings manually

Typically, you can also post entries in a meter journal manually.

Before posting, you can choose a journal template in the Batch Name field on the header. Alternatively, you can have the system create both a template and a name when you open the relevant journal.

The journal fields correspond to those on the Meter Entries page—except that in the journal, you can edit the Posting Date, Document No., and Posting Type fields. As for the type, the options are:

Activation
A meter is activated by entering its number into the system, with the physical component set up automatically. You cannot activate components that are linked to a device. The active meter must first be removed from the associated equipment in the system.

Reading
If a reading isn't entered for an existing component, the system will create a new component and post its activation.

No reading can be recorded for removed components.

Removal
You can only remove active components. Each component can also only be deactivated once.

Cancel entries

To discard a reading, choose Cancel on the Meter Entries ribbon and choose OK to confirm your choice.

Alternatively, you can cancel entries in the relevant meter journal, where you need to unhide the Canceled column and select the field on the lines.

> **Note**
>
> Typically, you can only cancel meter entries that haven't been posted yet. Entries that have been billed or that have been included in service contracts cannot be reversed—not least because this wouldn't have any impact on readings already recorded.

Service contract integration

On service contracts, you can set the calculation base to Metering manually, or you can edit the related inspection type. The Meter Interval field indicates when maintenance is due.

You can also see the Meter Total (Open) field here, with its value copied from the Meter-Based Measurement page. This field, which is the basis for service contract integration, shows the total of all meter entries that have yet to be posted but from which the values that existed prior to activation have been subtracted.

Service contract line

Field	Description
Calculation Base	This field is set to Interval automatically, which represents the standard base for calculations; the second option is Metering. The value in this field might be filled in from the inspection type.
Meter Type Code	If the calculation base is set to Metering, the meter type from the page of the same name can be stored here. The value in this field might be filled in from the inspection type.
Meter UOM Code	Specifies the unit stored on the Meter Type page.
Meter Interval	Specifies when maintenance is due. The value in this field might be filled in from the inspection type.

Afterward, you can open the maintenance cockpit and run the Update Service Contract Meters function from the ribbon. This makes the system check each service contract line with a meter type for whether the value in its Meter Total (Open) field equals the scheduled interval. If it does, the Next Planned Service Date field will be set to the current date.

EQUIPMENT ENTRIES

When you choose Post > Ship or Post > Ship and Consume on the ribbon of a service order, the system creates a posted service shipment and checks if the items that are specified on it are tracked via serial numbers. If they are, the consumption calculated for them will be copied to the service ledger entries and the equipment entries linked to the relevant serial number information card.

Note

In version 22.3, only consumption posted by running the Post > Ship and Consume function is copied to the equipment entries. From the next version, both options can be used.

You can cancel equipment entries manually by running the Change Cancellation Qty. action on the Equipment Entries page. This opens a page where you can see the full quantity of the line in the New Cancellation Qty. field and can change it manually.

To have the Cancellation Qty. set automatically, you must fill in the Equipment Entry No. field on an entry so that the quantity is filled in by the system when you post the relevant line.

Note

The process only marks an entry as canceled; nothing is posted in connection with the entry.

INVOICE A SERVICE CONTRACT

When you invoice a contract, the system copies to the unposted invoice all contract lines where the ending date of the billing interval is later than the line’s starting date.

Example
The next invoice is due in September. Two lines show a starting date of 10/01/2023. These lines will not be included on the current but the next invoice (sent in October).

ADD ACCESSORIES

When a customer sends accessories along, you can record them even if they’re not known to the system. You can open the list of accessories from the following pages:

- Service Receipt
- Service Order
- Service Lines
- Service Quote Lines
- Service Shipment
- Sales Return Order
- Sales Order
- Warehouse Shipment
- Purchase Return Order
- Purchase Order
- Warehouse Receipt

On service receipts

On a service receipt, you open the Accessories page from the Lines FastTab and can then choose an existing item, resource, or G/L account *(or enter a text line if the equipment you’ve received isn’t in the system yet)*.

Any description can be replaced. If available, you can also specify a serial or lot number or an expiration date here.

After you post the receipt, each accessory is assigned to a service item line and can be viewed, changed, or expanded upon there.

On service orders

Accessories that are entered on a service receipt are copied automatically to the service order that you create from it. You can then choose Accessories on the service item lines ribbon to change or recreate the equipment, if needed.

Should a service item line be deleted, any accessory linked to it is deleted as well. The accessories are also copied along to all documents that you create from this order and can be edited there again manually.

Similarly, updates to the equipment are immediately applied to existing orders, except to posted service receipts.

After you issue a service shipment, you can use the Accessories action on the item line ribbon to see every auxiliary item added to the document (but can no longer change any data).

LINK TO EQUIPMENT

With the Equipment Entries function, you can create a link to equipment specified on a sales or purchase document when you post to an item, a resource, or a G/L entry.

During posting, the information pertaining to the equipment is then copied from the related serial number information card to the Equipment Entries page, which you can get to from the document.

When you post the document, the system checks if the new item ledger entries meet the following criteria:

- The posting can be traced to a sales or purchase order.
- The entries contain serial numbers.
- Sale or Purchase is selected as the ledger entry type.

If one of these criteria isn’t met, the process is canceled.

> **Note**
>
> If the Positive checkbox is selected for an item ledger entry of type Sale or Purchase, the process is canceled as well. In this case, it is a reversal that must be posted by running a different function (Undo Shipment).