COSMO PRODUCT DATA MANAGEMENT

Online Help PDF

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COSMO CONSULT
Schöneberger Straße 15
10963 Berlin
Phone: +49 30 3438 15 - 0
Fax: +49 30 3438 15 - 111
Email: appsource@cosmoconsult.com
Website: www.cosmoconsult.com

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COSMO Product Data Management

COSMO Product Data Management is an industry solution of COSMO CONSULT certified by Microsoft Business Solutions.

The module COSMO Product Data Management offers a wide range of product data management features within Microsoft Dynamics 365 Business Central.

The technical documents in the fields of mechanics, electrical engineering and electronics are managed together according to the same rules. The creation of drawing revisions is largely automatic. This also applies to the provision of drawings and documents for production, purchasing and service.

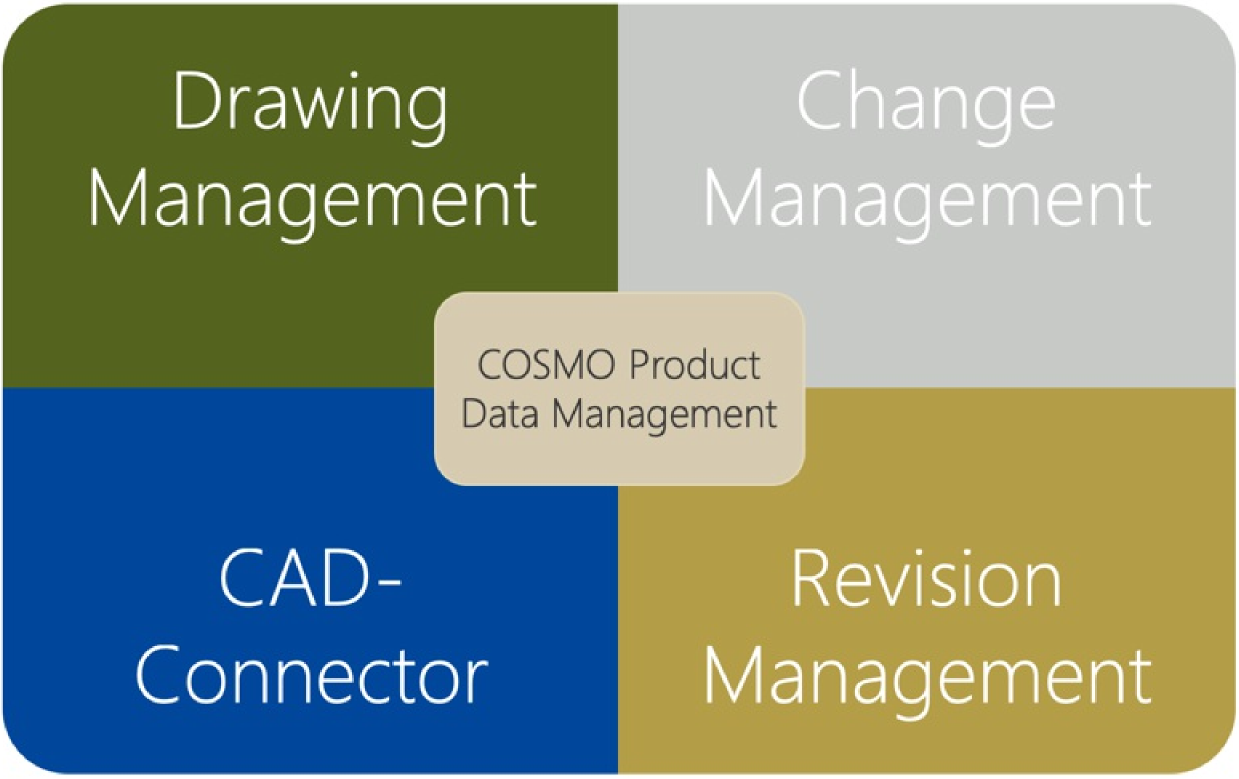
Key Features

- Drawing Management
- Revision Management
- Change Management
- Integration of CAD Systems (CADLink)

COSMO PDM CAD Connector is an extension of COSMO Product Data Management and enables the seamless integration of more than 20 CAD (Computer-Aided Design), PDM (Product Data Management) and PLM (Product Lifecycle Management) systems in Microsoft Dynamics 365 Business Central.

A flexible setup ensures that the data in Microsoft Dynamics 365 Business Central is always up-to-date. In addition to the creation of drawings, items and BOMs, the processes are also harmonized by CAD and Microsoft Dynamics 365 Business Central. The transfer of the status of a drawing directly controls processes in Microsoft Dynamics 365 Business Central. If required, you can add components to the generated BOMs without deleting them when changing drawings.

The following figure shows an overview of COSMO Product Data Management.



This manual describes the standard features of COSMO Product Data Management. Depending on customer-specific configurations, there may be differences to this manual.

COSMO Product Data Management consists of two modules to be licensed:

- COSMO Product Data Management
- COSMO PDM CAD Connector

Depending on which of the modules is licensed, the different functions can be used.

Access COSMO Product Data Management functionality using the Tell Me feature in Microsoft Dynamics 365 Business Central. Choose the 🔍 icon, enter the page name, and then choose the related link.

> **Note**
> **The content in COSMO Docs reflects the most current version of the COSMO Product Data Management app. If your company is using a different version, you may not have some of the described features. If you are using an older version or an On-Premises version of the app, see the specific product content in [COSMO CONSULT Product Documentation].**

Feedback

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Getting Started

This section covers the app installation, licensing, registration, and activation processes required to use COSMO Product Data Management. Additionally, the role center that provides the most efficient user experience is described.

The following table describes a sequence of tasks, with links to the topics that describe them.

To	See
Install COSMO Product Data Management in a SaaS or OnPremises environment.	App Installation
License and register COSMO Product Data Management.	App Licensing and Registration
Make pages and controls visible for the app.	App Activation
Learn about the role center that can be assigned to users to provide the most efficient COSMO Product Data Management user experience.	Role Center

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App Installation

This section covers the installation of the COSMO Product Data Management app. Typically an installation is only performed once by an administrator and is not executed by the user. The installation differs for SaaS and On-Premises (OnPrem) environments.

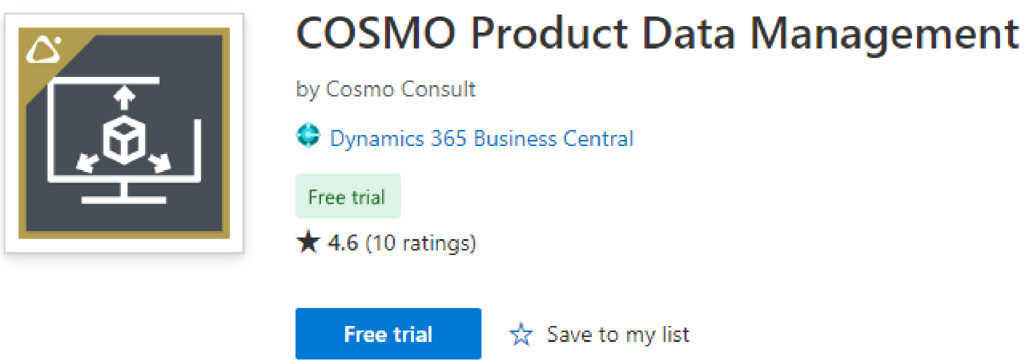
To install in SaaS environment

In SaaS environments, the app can be installed from the AppSource. There are two ways to install the app: externally or internally from Business Central. All dependencies are installed automatically.

Depending on the current Microsoft upgrade policy, you may not have the most current version of the app. To upgrade to the most current version, go to the Dynamics 365 Business Central admin center and perform the app upgrade for your environment.

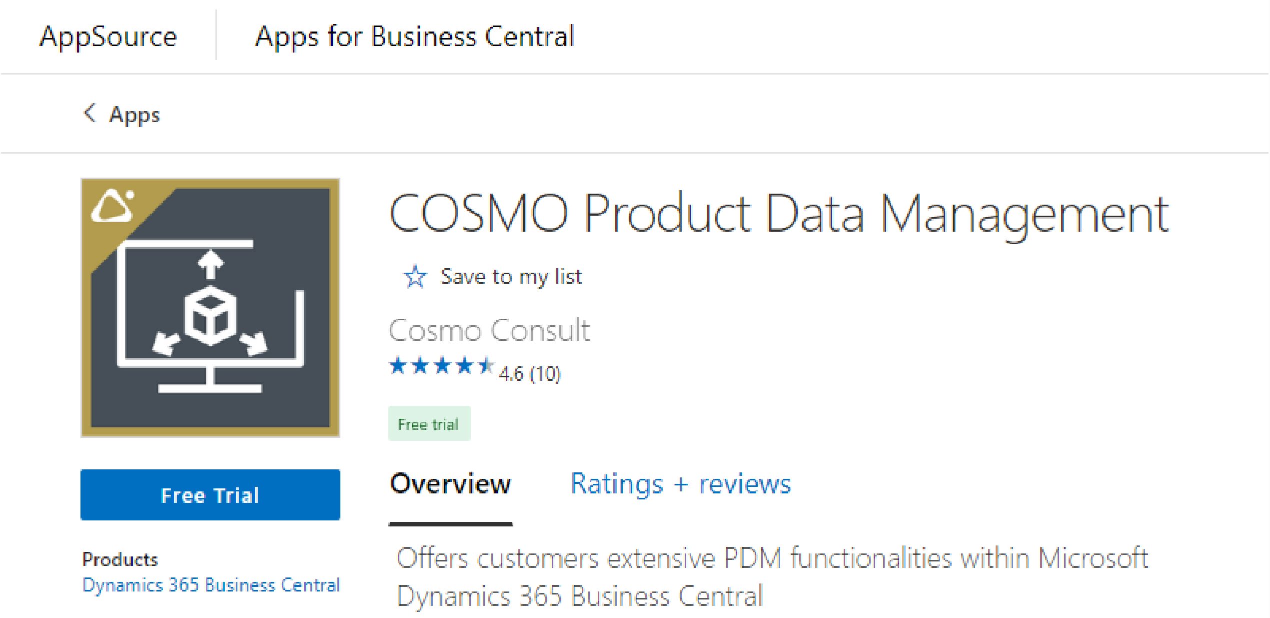
AppSource

Visit the AppSource and then choose Free trial. You will be forwarded to a page where you must log in with your Business Central user credentials and select an environment to install the app to. Follow the wizard instructions to complete the installation.



Extension Marketplace

In Business Central, choose the icon, enter Extension Marketplace, and then choose the related link. In the marketplace, search for COSMO Product Data Management and then choose Free Trial. Follow the wizard instructions to complete the installation.



To install in on-premises environment

To install the COSMO Product Data Management app and its requirements in an on-premises environment, you can find the app files in the COSMO CONSULT Solution Portal. Check the technical specifications of each version to find the minimum dependent version of *Business Central* and the *Base Application*. For customer installations without a Business Central developer license, you must create and install a runtime package of the app (Microsoft Documentation).

Besides the Business Central Base Application, the app depends on additional apps that must be installed in the correct order first.

1. COSMO Licensing app
2. COSMO Product Data Management app

See Also

App Licensing and Registration
App Activation
Role Center

Feedback

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App Licensing and Registration

This section covers the licensing, registration, and license check of the COSMO Product Data Management app. When installing the app, COSMO Licensing is automatically installed. After installing the app, you need to register it either with a license activation code or a trial license.

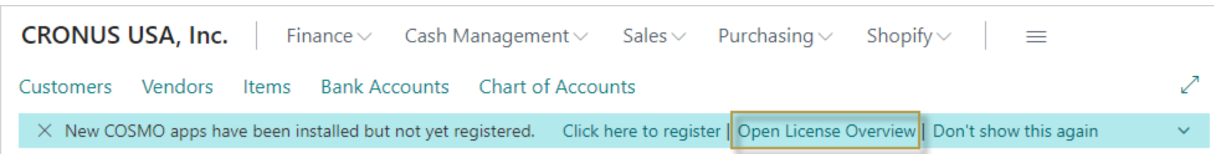
> **Note**
> **App registration by activation code is available if COSMO Licensing version 2.2 or higher is installed. Customers who purchase new COSMO product subscriptions through our Marketplace will receive an activation code.**
> **If you do not have the option to enter an activation code or have not received an activation code, follow the steps in the Register the app with a trial license section.**
> **After you have registered, you can contact appsource@cosmoconsult.com to convert your 30-day trial license to a full license.**

To assign licensing permission set

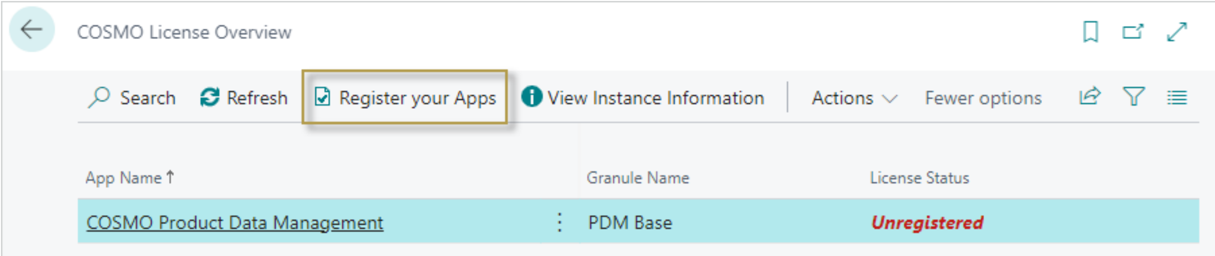
The COSMO Licensing app provides an extension permission set with Role ID = *CCS LIC ALL*. This permission set must be assigned to all users in the database to allow access to the COSMO License Overview page and, more importantly, to the licensed COSMO CONSULT apps. App-specific permission set(s) must be assigned to users in the database to allow access to the licensed functionality.

To open the COSMO License Overview

1. If the registration notification does not show in the notification bar, refresh the environment.



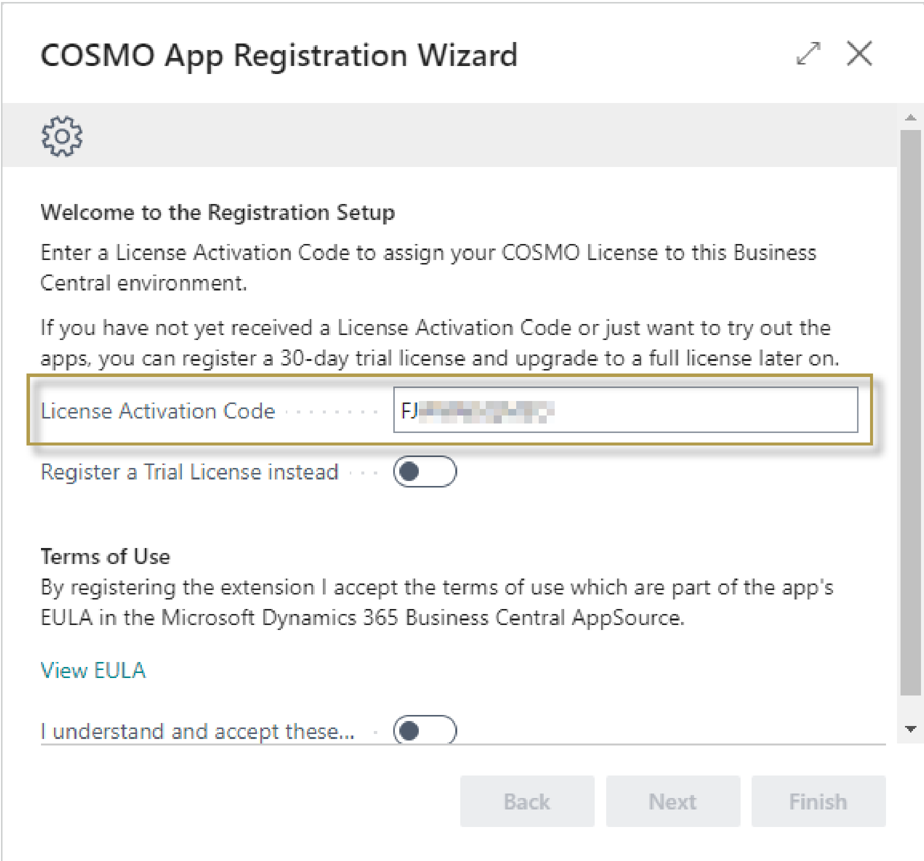
2. On the notification line, choose Open License Overview.
   The app is listed in the COSMO License Overview page with Status = *Unregistered*.



3. Choose the Register your Apps action.
   The COSMO App Registration Wizard opens with the registration options.

To register the app with license activation code

1. If you purchased the Business Central app through our Marketplace, you will have received an activation code by email.
   Enter this activation code in the License Activation Code field on the first page of the COSMO App Registration Wizard.

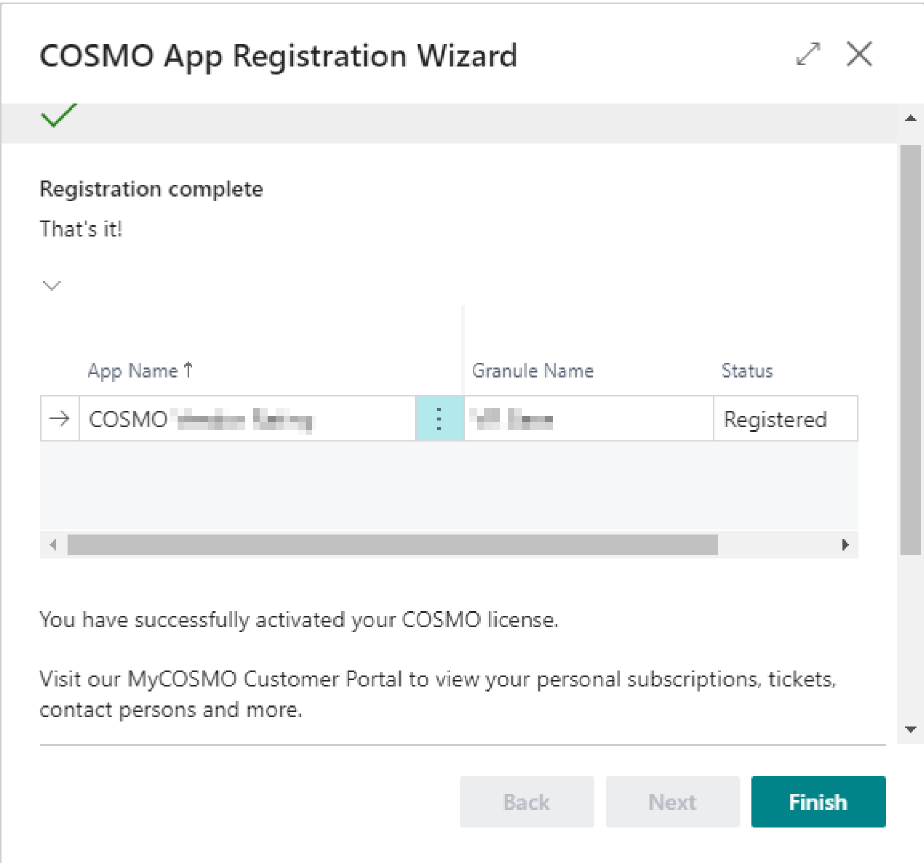


Note

In SaaS environments, an activation code can be used for exactly one production system. The same activation code can additionally be used in multiple SaaS environments (sandbox environments, e.g., test/demo/development environments).

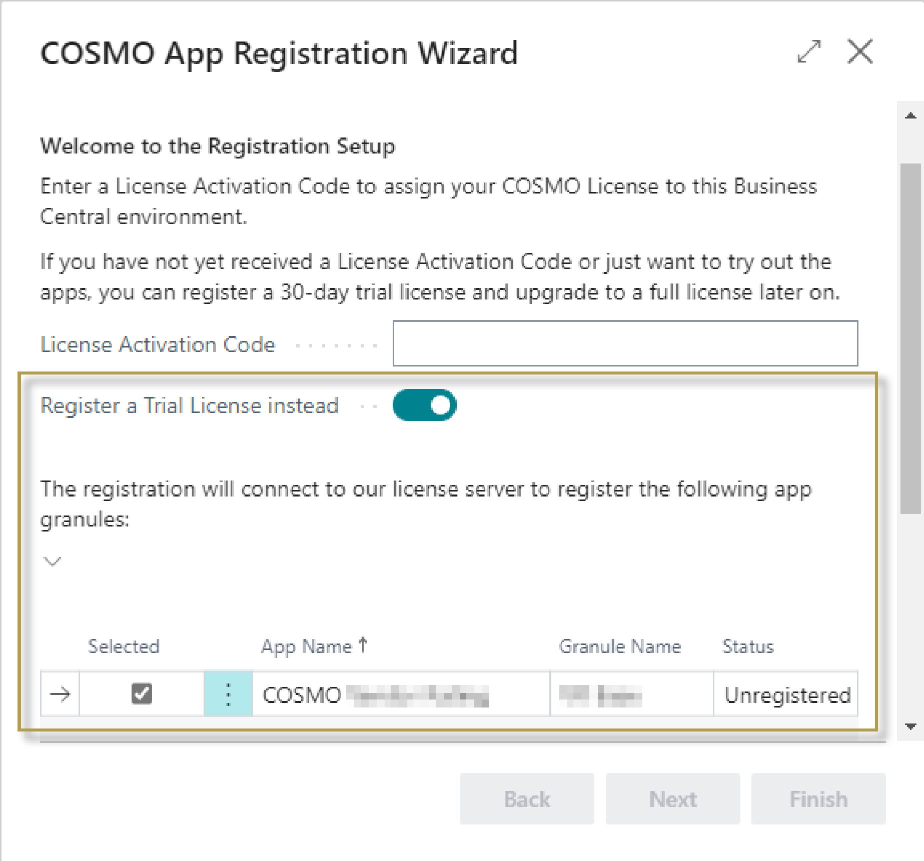
> **For On-premises, there is no technical distinction between *Production* and *Sandbox*, so the activation code is instead connected to the serial number of the Business Central license (.flf / .bclicense) with which it was first activated. Therefore, it is possible to use it On-premises multiple times with the same Business Central license (to allow use in test/demo/development environments). Once it has been redeemed, it cannot be used in BC environments with another BC license.**

2. In order to agree to the Terms of Use, scroll down, turn on the I understand and accept these terms toggle, and then choose the Next button.
3. You have successfully registered your app. Choose the Finish button to close the wizard.
   The license connected to the entered activation code will then be automatically retrieved.



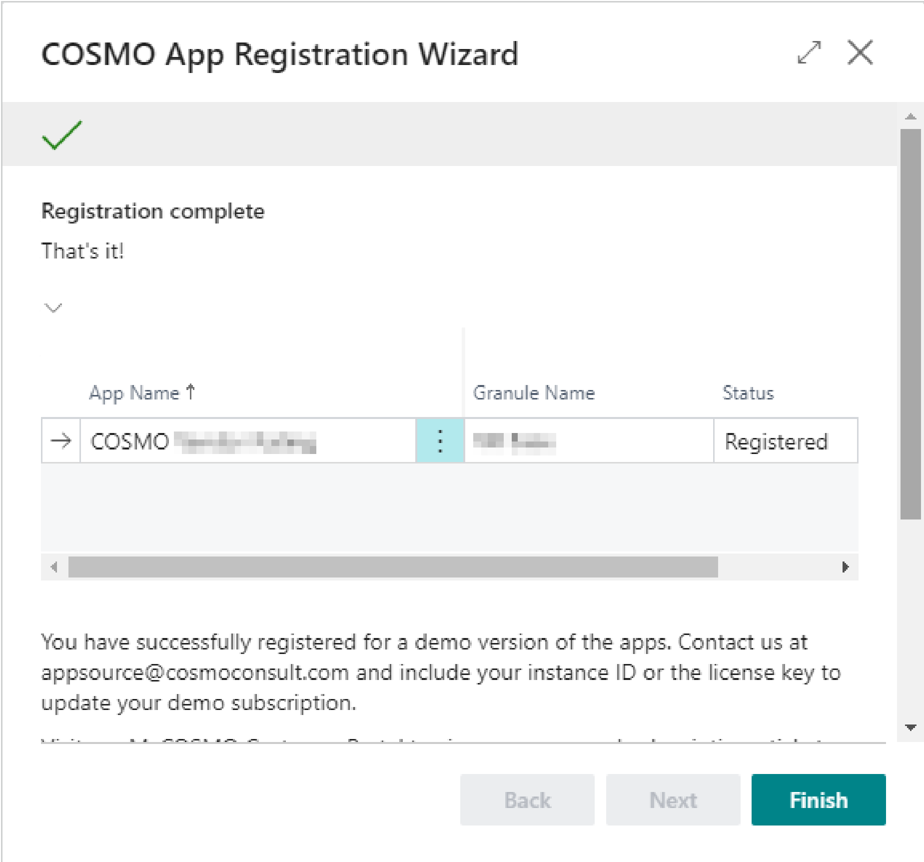
To register the app with a trial license

1. If you turn on the Register a Trial License instead toggle on the first page of the COSMO App Registration Wizard, the app granule to be registered is displayed.



2. In order to agree to the Terms of Use, scroll down, turn on the I understand and accept these terms toggle, and then choose the Next button.
3. Enter your customer name. The name is used to identify the company. For test purposes, enter any Cronus-related name.
4. Choose the Next button to sign into the COSMO Platform to link the registration with your account. The COSMO Platform opens in a new browser tab. After signing in you can close this tab and return to the final page of the COSMO App Registration Wizard.

   To skip this step, choose the Skip Login button.
5. You have successfully registered for a 30-day trial version of the app. Contact appsource@cosmoconsult.com and use the displayed license key to update your trial subscription.
6. The app has Status = *Registered*. Choose the Finish button to close the wizard.



7. The status for the app is updated in the COSMO License Overview page. Leave the COSMO License Overview page to return to the Role Center.

> **Note**
> **You can register the app and perform other administrative licensing tasks from the COSMO License Overview page.**

To check the license

The COSMO License Overview page lists the license status of the COSMO app and is accessed using the Tell Me feature.

1. Choose the icon, enter COSMO License Overview, and then choose the related link. This page can also be opened from the PDM Setup page (Related > App Licensing) and from the last page of the COSMO App Registration Wizard by choosing Open License Overview.
2. In the COSMO License Overview page, the app can be registered if not done on the Role Center notification bar. Other administrative tools are available as well.
3. Hover over an action on the COSMO License Overview page to read a short

description.

See Also

App Installation
App Activation
Role Center
PDM Setup

Feedback

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App Activation

COSMO Product Data Management has its own activation button in the setup page that makes pages and controls visible for the product.

> **Note**
>
> **Turning on the toggle in the setup pages will require logged in users to restart the application.**

1. Choose the icon, enter PDM Setup, and then choose the related link.
2. On the General FastTab, turn on the Activate Appl. Area toggle.
3. Close the page or continue with further setup (see PDM Setup).

See Also

App Installation
App Licensing and Registration
Role Center

Feedback

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Role Center

COSMO Product Data Management has a special Role Center that is used with the *PDM Manager* Profile (Role). This Role Center provides the most efficient COSMO Product Data Management user experience.

This Role Center provides quick access to PDM-related setup (Drawing Statuses, Drawing Types, Engineering Change Reasons, and Engineering Task Templates), as well as links to lists of Engineering Change Notices/Orders/Order Tasks, Drawings, Items, Production BOMs, Planned/Firm Planned/Released/Finished Production Orders, and Service Items.

In addition to various actions such as creating Drawings, Engineering Change Notices/Orders, and accessing more setup information, you also have direct access to the Drawing Search feature.

The Activities part uses cues to provide a visual overview of the number of Engineering Change Notices (ECNs), Engineering Change Orders (ECOs), and Engineering Change Order Tasks based on status (for more information, see Change Management: Role Center).

To apply this role center

1. Choose the icon and then select My Settings from the menu. Alternatively, you can use the Tell Me feature.
2. In the Role field, choose the ellipsis button.
3. In the Available Roles page, select *PDM Manager* and then choose the OK button.
4. Choose the OK button to close the My Settings page and save your changes.

You can also assign roles directly to users in the User Settings page.

See Also

App Installation
App Licensing and Registration
App Activation

Feedback

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PDM Setup

You specify your basic setup of COSMO Product Data Management in the PDM Setup page.

To set up general PDM information

1. Choose the icon, enter PDM Setup, and then choose the related link.
2. On the PDM Setup page, fill in or update the fields as necessary. Hover over a field to read a short description.

Specific field on General FastTab

The Activate Appl. Area field makes pages and controls visible for COSMO Product Data Management. The setting in this field in combination with the settings in the Product Configuration Management tool control the Application Areas in standard Microsoft Dynamics 365 Business Central.
For more information, see Product Configuration Management Tool.

Specific fields on Drawing FastTab

The First Revision Code field specifies the revision code to be used for first drawing versions. If no value is specified, counting will start at 000001. If the value *A* is stored, the following revision level is assigned the value *B*.

The Check Permission for Drawing Status field determines if users need a special setup on the Drawing Status Permissions page to change the status code of a drawing. For more information, see Drawing Status Permissions.

> **Note**
> **This feature requires a client restart.**

The Create Drawings Automatically field specifies whether upon entering a non-existing drawing number on the Drawing Set Entries page, a new drawing should be automatically created. After turning on the toggle, the Default Drawing Type Code and Default Drawing Status Code fields must be filled in. For more information, see Create Drawing from Drawing Set.

The Create Drawings Automatically field specifies whether upon entering a non-existing drawing number on the Drawing Set Entries page, a new drawing should be automatically created. After turning on the toggle, the Default Drawing Type Code and Default Drawing Status Code fields must be filled in. For more information, see Create Drawing from Drawing Set.

App Licensing FastTab

The fields on the App Licensing FastTab include the app license key, the validation period, status of the license, and information regarding your license from the licensing server. The data is generated when the setup is initialized.

Actions

The actions on the PDM Setup page are described in the following table.

Menu	Action	Description
Process	Drawing Status Permissions	Opens the Drawing Status Permissions page. For more information, see Drawing Status Permissions.
Information	About	View the current product version and copyright information.
Related > App Licensing	License Overview	Opens the COSMO License Overview page, which lists the license status of the COSMO app and allows you to register the app and perform other administrative licensing tasks. For more information, see App Licensing and Registration.

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Drawing Management

The drawing management of COSMO Product Data Management allows you to manage one or more drawings. Drawings are assigned to items and BOMs according to a flexible logic and thus creates transparency regarding the use of this data. A drawing record is created in a separate table and inherited from there into the master and transaction data. Using status management, the technician can insert and control drawings and documents specifically in the process.

Note

For older COSMO Product Data Management versions, the drawing management assumes that an item exists for each drawing in Microsoft Dynamics 365 Business Central and that the item and drawing number are identical. The restriction to use drawing numbers based on item numbers was removed in version 13.00.01. Additionally, an action was added to the Drawing Card to link a drawing to multiple items. For more information, see Assign Drawings to Items.

The following table describes a sequence of tasks, with links to the topics that describe them.

To	See
Set up a drawing status.	Drawing Statuses
Set up drawing types.	Drawing Types
Create or view an existing drawing.	Drawings
Assign attributes to drawings.	Drawing Attributes

Feedback

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Drawing Statuses

On the Drawing Status page, the statuses that a drawing can assume are set up. The drawing status is only checked if the Status Check field in the PDM Setup page has the option *Show Error* or *Confirm Individually*.

> **Note**
> **If CAD / PDM or PLM systems are connected using the COSMO PDM CAD Connector module, the drawing status must correspond to that of the connected system.**

To set up drawing statuses

1. Choose the icon, enter Drawing Status, and then choose the related link.
2. On the Drawing Status page, fill in or update the fields as necessary.

Field	Description
Code	Code of a drawing status. The code must be unique and can have up to 20 characters.
Description	Description of the drawing status, at maximum 100 characters.
Valid	Defines the status of a valid drawing. When attempting to open the drawing from a drawing set line or from the Eng. Change Order Drawings page, the last *Valid* drawing revision will always be opened.
Use in Item	Controls whether drawings with this status can be assigned to an item or not.
Use in BOM	Controls whether drawings with this status can be assigned to a production or assembly BOM or not.
Use in Routing	Controls whether drawings with this status can be assigned to a routing or not.
Use in Assembly	Controls whether drawings with this status can be assigned to an assembly document or not.
Use in Not Released Prod. Order	Controls whether drawings with this status can be assigned to a production order that has not been released (status *simulated*, *planned*, or *firm planned*) or not. A production order cannot be created if the underlying BOM contains a component whose drawing status prevents it from being used in a production order that has not been released.

Field	Description
Use in Released Prod. Order	Controls whether drawings with this status can be assigned to a released production order or not. A production order cannot be created if the underlying BOM contains a component whose drawing status prevents it from being used in a production order that has not been released.
Use in Sales Line	Controls whether drawings with this status can be used in a sales document (sales quote or sales order or blanket sales order) or not.
Use in Purch. Line	Controls whether drawings with this status can be used in a purchasing document (purchase quotes or purchase order or blanket purchase order) or not.
Use in Service	Controls whether drawings with this status can be assigned to service documents, service items, and service item components or not.
Allow Posting	Controls whether documents with this status can be posted if they contain a drawing set that is not permitted for this purpose. This setting applies to Purchase Orders, Sales Orders, Production Orders, Assembly documents, and Service Orders.

Drawing Status Permissions

Choose the Drawing Status Permissions action to open the Drawing Status Permissions page. For more information about how to use this function, see Drawing Status Permissions.

Feedback

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Drawing Types

On the Drawing Types page, the types of drawings used in the Drawing Management are defined. Since an item is usually linked to more than one drawing, all drawing types are stored here.

Examples of different drawing types are:

- Mechanical drawings
- Assembly drawings
- Circuit diagrams

In addition, the drawing management can also be used to apply any other documents, such as certificates or control programs with an item.

To add drawing types

1. Choose the icon, enter Drawing Types, and then choose the related link.
2. On the Drawing Types page, create a unique code and description of the drawing type.
3. Go to the next line and add another type.

If you have the integration with Advanced Manufacturing Suite (AMS), the Copy to Prod. BOM Header and Copy to Routing Header fields from COSMO Discrete Manufacturing are available. For more information, see Transfer Drawings to Production BOMs and Routings.

Feedback

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Drawings

Drawings are the construction plans linked with the item. In Microsoft Dynamics 365 Business Central, these consist of several components.

To open the Drawings list, choose the icon, enter Drawings, and then choose the related link.

List of drawings

The drawing list is the overview of all drawings. If an item uses different drawings, all drawings are displayed in connection with the No. field to the Type Code field.

The fields in the Drawings page are described in the following table.

Field	Description
No.	Number of drawing.
Type Code	Unique description of a drawing type.
Revision Code	Displays the current revision of the drawing.
Description	Brief description of the drawing.
Status Code	Displays the current status of the drawing.
Starting Date	Displays the starting date from which the specified status is valid for the respective drawing.
Ending Date	Displays the ending date up to which the specified status is valid for the respective drawing.
Created from No.	Displays the number of the drawing from which the current status has emerged. This field is used to make revision statuses traceable.
Created from Revision Code	Displays the revision status of the drawing from which the current status has emerged. This field is used to make revision statuses traceable. *NOTE: It is possible to create a new revision status D from revision status A, B, and C will then be outdated.*

The drawing picture can be imported and exported normally. However, this is not handled the same as in standard Microsoft Dynamics 365 Business Central. The differences are:

- Saving a picture in standard Microsoft Dynamics 365 Business Central – The respective picture is saved directly in the table of the item between the other fields.
- Saving a picture in COSMO Product Data Management – The respective picture is regarded as a reference and retrieved from its storage structure.

This means that the underlying storage structure in the drawings must not be changed. If this should happen, no more drawings are shown in picture form here.

Drawing Card

The fields in the Drawing Card are used to specify each individual drawing.

Choose the New action to open a new Drawing Card or the Edit or View action to open an existing one.

General FastTab

In this area the general drawing data is recorded, some of which can also be seen in the list. Therefore, only the fields specific to the Drawing Card are defined in the table below.

Field	Description
Comment	An internal comment can be written for the drawing. This has no relevant effect on the further procedure.
No. of Items Assigned	Specifies the number of items the drawing is assigned to.

History FastTab

All data regarding the last change is displayed on this tab. This makes it possible to trace exactly when a drawing was changed by whom at each revision status. Revisions are created by choosing the Create New Revision action on either the Drawings list or Drawing Card.

The fields on this FastTab are described in the following table.

Field	Description
Created from No.	Displays the number of the drawing from which the current revision status has emerged.
Created from Revision Code	Displays the revision status of the drawing from which the current status has emerged.
Creation Date	Date on which the data record was created.
Created by User ID	User ID from the user list that created the record.
Last Date Modified	Date on which a change was made to the current record.
Modified by User ID	User ID that last changed the record.

Assign Drawings to Items

Drawings that are not linked to any item can be assigned manually. Choose the Assign to

Items action to open the Items list. Choose one or more items to be assigned to the drawing and then choose the OK button.

Link Drawings with Documents (in header and in lines)

Drawings are used in manufacturing to guide the assembly of parts to ensure that the correct drawing is used for a manufacturing part. Therefore, COSMO Product Data Management offers the ability to trace the currently used drawing status with links in the documents.

The Drawing Set and Line Drawing Set FactBoxes show the drawing status of the header item and the status of the drawing in the line, respectively. These COSMO Product Data Management FactBoxes are available in many pages to provide immediate access to the drawing information. The Drawing Set FactBox shows the drawing status of the header item, and the Line Drawing Set FactBox shows the status of the drawing in the line.

> **Note**
> **If a component for an assembly of a production order contains a component whose status code is not valid, an error message is issued when you post or process the production BOM or any other document.**

Create Drawing from Drawing Set

Drawings that don't yet exist for an item can be added to its drawing set, which will then automatically create the drawing based on settings in the PDM Setup page. This is useful in situations, such as when a customer has their own specifications for the item and provides a drawing during the sales process.

For the automatic creation of the drawings, the Create Drawings Automatically toggle must be turned on in the PDM Setup page and the default drawing type and status must be defined in the Default Drawing Type Code and Default Drawing Status Code fields.

To create drawing from drawing set

1. Open the document to add the drawing to, (for example, the Item Card, Sales order, Purchase Order, etc.) and access the Drawing Set action from the header or lines.
2. In the Drawing No. field, enter a drawing number.

The Drawing Type Code field is automatically populated with the value from the Default Drawing Type Code field in the PDM Setup page.

3. In the Drawing Revision Code field, enter a revision code.
4. Press Enter or Tab.
5. If the combination of drawing number, type, and revision does not match an existing drawing, a message opens asking if you want to create it.
   - Choose the Yes button to create the drawing and add it to the drawing set. The Drawing Status Code field is set with the value defined in the Default Drawing Status Code field in the PDM Setup page.
   - Choose the No button to stop the creation process and clear the Drawing Revision Code field. This entry will need to be removed or updated accordingly (i.e., a drawing needs to be created) before leaving the Drawing Set Entries page.

Feedback

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Drawing Attributes

The same item attributes used in standard Business Central can be assigned to drawings in COSMO Product Data Management, which allow you to attach additional characteristics to further define the drawing and for searching purposes.

1. Choose the icon, enter Drawings, and then choose the related link.
2. Select the drawing and open the Drawing Attribute Values page by either:
   - choosing the Attribute Value action on the Drawings list page.
   - opening the Drawing Card and then choosing Drawing > Attribute Values.
3. Fill in the fields as necessary. Hover over a field to read a short description.

When a new drawing revision is created, the attributes are not copied because the values can change with each revision. If item attributes are renamed or deleted, the Drawing Attributes are not changed.

When using the CADLink integration of the *Field Mapping Module incl. Custom Logic Module & Drawing Attribute Mapping*, the attributes are transferred from the technical drawing and stored in the Drawing Card in COSMO Product Data Management.

Feedback

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Revision Management

The Revision Management ensures the consistency of drawing changes throughout Microsoft Dynamics 365 Business Central. A usage check provides information about where a particular drawing is used. Based on this information, you can decide, for example, whether an entire product structure needs to be revised, or only an individual part or an individual assembly. It is therefore not a direct module that has an impact, but rather a form of control mechanism. This takes effect during change management.

The following table describes a sequence of tasks, with links to the topics that describe them.

To	See
Learn how drawings are inherited in documents.	Inherit Drawings in Documents
Learn how drawings are copied from archived documents.	Copy from Archived Documents
Search for where drawings or items are used.	Search for Drawings or Items
Replace or delete drawings using the revision and verification mechanism.	Replace or Delete Drawings

Feedback

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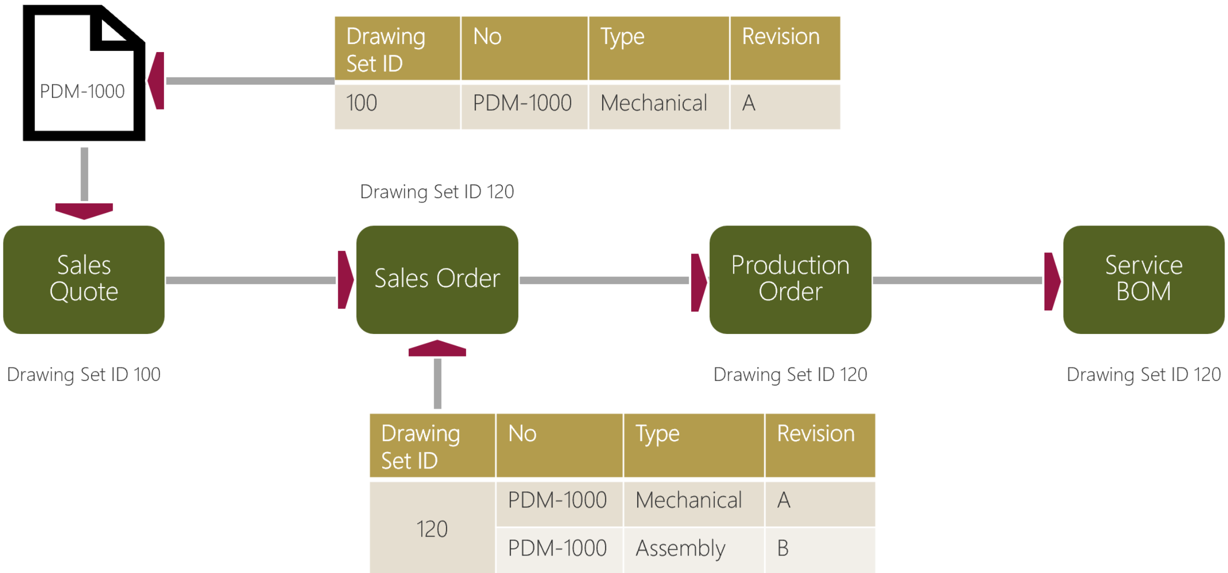
Inherit Drawings in Documents

When creating a document, the drawing set of the previous document or the valid drawings of the item are always inherited. Changing the drawing set in a document will pass it on to the next document. It is only important that the drawing set has a status that allows it to be passed on to the new document.

The following figure illustrates the inheritance process but is not inclusive of all documents.



The mechanical drawing PDM-1000 in revision A is assigned to an item. This is the drawing set with the internal number 100. This drawing set number is passed on to the sales quote when the quotation is created and from there to the sales order. In the sales order, the assembly drawing PDM-1000, revision B is assigned. The new combination of both drawings corresponds to drawing set number 120, which is now inherited in all subsequent documents.

Feedback

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Copy from Archived Documents

When copying documents from archives, the situation is different than with inheriting documents: If a document is restored from the archives, the drawings that are currently valid are copied, not the drawings that were assigned to the document when it was archived.

Feedback

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Search for Drawings or Items

The Drawing Search page allows you to find where drawings or items are used in COSMO Product Data Management. This can be useful for general searching purposes or to access the drawing replacement/deletion functionality.

You can access the Drawing Search page in two ways:

- On the Drawing Card or Drawings page by choosing the Search action to open the page filtered by the drawing with related entries displayed.
- From Tell Me by choosing the icon, entering Drawing Search, and then choosing the related link. This will open the Drawing Search page without any filters.

Drawing Search Page

In the Drawing Search page, both the related entries and number count are displayed (either automatically from the drawing or manually by entering information and then choosing the Find action). You can open a list of each entry by choosing the Show Related Entries actions or by choosing the value in the No. of Entries field.

Whether the search is based on drawings or items is determined by the Search for... field at the top of the page. Depending on the selection, different fields and functions are available.

- Drawing Search
- Item Search

The fields in the top of this page are described in the following table. If the page was opened from a Drawing Card, the fields are pre-populated.

Field Group	Field	Description
Options	Incl. Finished Documents	Specifies whether the search should include entries in which drawings cannot be replaced, for example, posted documents or finished production orders.
Drawing	Drawing No.	Indicates the number of the drawing to be searched for or replaced.
	Drawing Type Code	Indicates the type of the drawing to be searched for or replaced.
	Revision Code	Indicates the revision code of the drawing to be searched for or replaced.

Field Group	Field	Description
	Include Empty Revision Code	In case of an empty revision code, determines if only drawing sets with an empty revision code should be found.
Replace with	Drawing No.	Indicates the drawing number that must be reassigned (see Replace or Delete Drawings).
	Revision Code	Indicates the revision code of the new drawing (see Replace or Delete Drawings).

The fields in the lines section are described in the following table.

Field	Description
Table ID	Specifies the table where the drawing set entry has been found. This field is not shown by default.
Related Entries	Specifies the name of the table where the Drawing Search facility has found entries with the selected search criteria.
No. of Entries	Specifies the number of documents that the Drawing Search facility has found in the table with the selected entries.

The actions are described in the following table.

Action	Description
Show Related Entries	Opens a list with the related entries of the selected drawing.
Find	Applies a filter to search on this page, which locates all the related entries based on the set criteria.
Replace	Opens the Drawing Search Results page, which contains a list of the entries found in which the drawing/revision can be replaced or deleted (see Replace or Delete Drawings).

Feedback

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Replace or Delete Drawings

Replacing a drawing can be done manually (by changing the drawing in the related records) but the Drawing Search gives you the ability to find all of the records in which the drawing exists and then run a replace function to perform a mass update in valid records. You can also perform a mass deletion of a drawing from drawing sets.

The Drawing Search page can be accessed from the:

- Drawing Card or Drawings list by choosing the Search action. The page will be populated with the drawing information in the top section and the records to which the drawing is assigned are displayed in the bottom section.
- Tell Me feature (choose the icon, enter Drawing Search, and then choose the related link), which will open an empty search page.

Replace Drawings

The following processes describe how to replace drawings automatically and manually using the Drawing Search page when opened from a drawing. If using the Tell Me feature, then you will need to enter the relevant information in the top section (see Search for Drawings or Items for details about the fields).

> **Important**
> **If drawing status checks are activated, then a drawing can only be replaced with a drawing that has a status that allows the assignment of drawings. For example, you can replace a drawing in an item only if the status of the replacement drawing has the Valid in Items checkbox selected.**

To replace drawings automatically

When the Replace action is chosen in the Drawing Search page, the Drawing Search Results page opens with the selected entries, where you can choose in which entries the drawing should be replaced via the Change checkbox. There are actions to select/clear the Change checkbox on all entry lines as well as an action to toggle the checkbox (select all that are clear and clear all that are selected).

1. Open the drawing to replace and then choose the Search action on the Home menu.
2. In the lines, choose the entry where the drawing needs to be replaced.
3. On the Home menu, choose the Replace action.
   The Drawing Search Results page opens with all entries to which the drawing can

be replaced.

4. Choose which entries to include in the drawing replacement process:
   - To choose all entries, choose the Change All action. The Change checkbox will be selected for all entries.
   - To choose specific entries, select the Change checkbox on the entry lines.
5. If you need to start over, choose the Change None action to clear the checkbox on all entries.
6. Choose the OK button to complete the drawing replacement.

Inactive Versions

If a search result includes inactive versions of the document, a message opens to alert you that drawings are typically not replaced in these types of documents. The Inactive Version checkbox will be selected on the relevant lines. However, you are still able to select the entries and perform the drawing replacement.

For example, a production BOM has multiple versions: A, B, C, D, and E (which is the only active version). The drawing you want to replace was assigned to versions A, B, and C, and then a new drawing was assigned to versions D and E. If you search for the drawing used in versions A, B, and C, then only these entries will be shown for the *Production BOM Version* line (No. of Entries = *3*). If you choose the Replace action for the *Production BOM Version* entries, the message will be shown and the Inactive Version checkbox will be selected for the three entries.

If the drawing to be replaced had been used in all versions (A–E), then five entries would be shown for the *Production BOM Version* line (No. of Entries = *5*), the message would still open when the Replace action was chosen, and the Inactive Version checkbox would be selected on the lines for versions A–D but not on version E because it is the active version.

To use the drawing search to replace drawings manually

1. Open the drawing to replace and then choose the Search action on the Home menu.
2. In the lines, choose the entry where the drawing needs to be replaced and then either choose the Show Related Entries action or the value in the No. of Entries field.
3. Select the entry that needs the drawing replacement and then open the related drawing or drawing set.
4. Replace the drawing as needed.

Delete Drawings from Drawing Sets

If a drawing is no longer used and needs to be deleted from many drawing sets, then you can use the Drawing Search page to perform a mass deletion.

To delete a drawing from drawing sets

1. Open the drawing to delete and then choose the Search action on the Home menu.
2. In the top section, clear the Drawing No. and Revision Code fields in the Replace with group.
3. On the Home menu, choose the Replace action.
   The Drawing Search Results page opens, displaying all entries from which the drawing can be deleted.
4. Choose which entries to include in the drawing deletion process:
   - To choose all entries, choose the Change All action. The Change checkbox will be selected for all entries.
   - To choose specific entries, select the Change checkbox on the entry lines.
5. If you need to start over, choose the Change None action to clear the checkbox on all entries.
6. Choose the OK button to complete the drawing deletion.

Feedback

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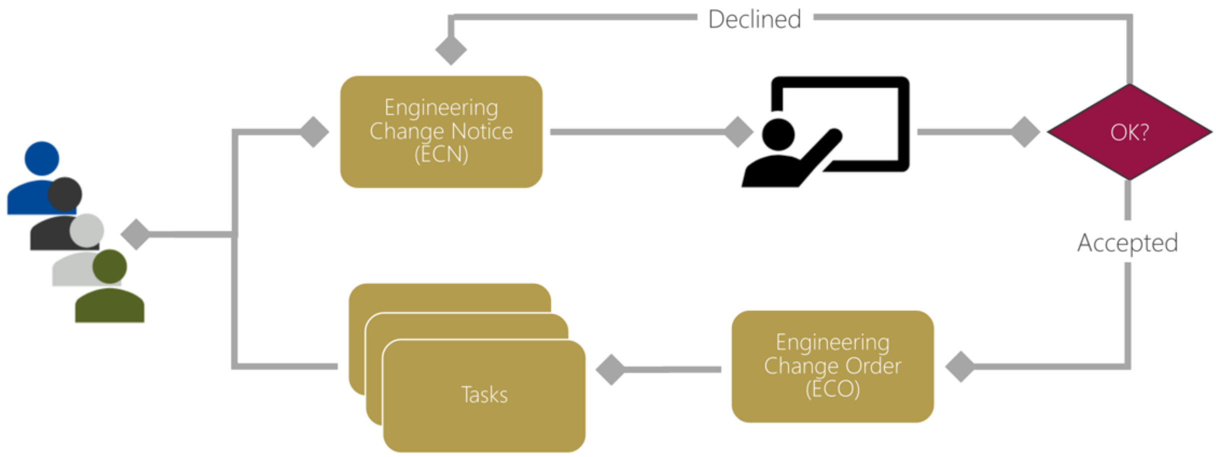
Change Management

Cross-divisional processes are controlled using the Change Management. Change requests are transferred directly to the design. Detailed information about the type of change and the affected components is available. Based on this information, the designer can check the process and decide on a product change. Product changes are controlled by change requests in the business organization. A flexible task plan defines specific tasks for all relevant departments. The designer therefore always has an overview of the current processing status of the changes.

The following diagram shows how change management works.



The following table describes a sequence of tasks, with links to the topics that describe them.

To	See
Set up the Engineering Change Reasons and Task Templates needed for change management.	Change Management Setup
Learn how to use Engineering Change Notices.	Eng. Change Notices
Learn how to use Engineering Change Orders.	Eng. Change Orders
Learn where changes are visible in the Role Center.	Change Management: Role Center

Feedback

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Change Management Setup

To be able to use Change Notices and Change Orders, the Eng. Change Reasons and the Eng. Task Templates must be set up.

Engineering Change Reasons

Change reasons are necessary for use in change notices and change orders. They are used later to simplify the evaluation of changes.

To set up engineering change reasons

1. Choose the icon, enter Eng. Change Reasons, and then choose the related link.
2. On the Eng. Change Reasons page, enter a unique code and description for the engineering change reason.
3. Go to the next line and add another engineering change reason.

Engineering Task Templates

The Engineering task templates serve to quickly define predefined tasks for the individual areas such as design, purchasing, sales, etc. at a later date. They are subdivided into a list and a card for each data record.

To set up engineering task templates

1. Choose the icon, enter Eng. Task Templates, and then choose the related link. The Eng. Task Templates displays all Engineering Task Templates.
2. On the Eng. Task Templates page, choose the New action to create a new template or Manage > Edit to open an existing template.
3. In the General FastTab of the Eng. Task Template page, enter a unique code and description for the Eng. Task Template.
4. In the Lines FastTab, enter the specific tasks to be performed.
5. In the Task No. and Previous Task No. fields, create an optional predecessor check that determines which task(s) needs to be completed before the current task can be started or completed:
    1. In the Task No. field, enter a task number.
    2. In the Previous Task No. field, reference the task number or a pipe-separated list of task numbers.
6. In the Work Center Group Code field, choose the department responsible for processing the task. The Work Center Group Name displays the work center group

name associated with the work center group code.

7. In the Task Description field, enter a detailed description of the tasks to be performed.
8. In the Due Date Formula field, enter a time specification that defines the calculation of the due date of a task. 1D means *Creation date* + 1 day = Due date of task.

Feedback

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Eng. Change Notices

During the manufacturing process there are circumstances that lead to certain parts within a BOM not meeting the desired requirements. This can be, for example, a generator that does not provide enough power or a bicycle chain that cannot be used for a model because it is not working.

In such a case, a change must be made during manufacturing. These changes may also need to be made in the source document, e.g., a sales quote/order, where the item (with certain drawing revisions) was used. It is also possible that changes are discovered prior to production and need to be sent to the designers.

Create an Eng. Change Notice

To create the Eng. Change Notice for the production order or sales quote/order, open the document in which the assembly is affected and then choose Functions > Create Eng. Change Notice on the Lines FastTab.

Existing Eng. Change Notices can be opened from the Line or Related Information menus on the Lines FastTab.

Eng. Change Notice Card

The General and Comments FastTabs are described below. The Source Drawing Set and Source Document FastTabs only show which current drawing is affected and from which production order this change notice was created.

General FastTab

The General FastTab shows the most important information about a change notice at a glance.

The fields on this FastTab are described in the following table.

Field	Description
Change Reason Code	Specifies the reason for the change notice.
Change Reason Description	Basic description that defaults from the Change Reason Code.

Field	Description
Item No.	Specifies the number of the item affected from the production order.
Item Description	Description of the item affected in the production order.
BOM Comment Exists	Shows whether a comment exists in the area Eng. Change Notice BOM lines or not. This is independent of the number of comments. As soon as a comment exists, *Yes* is displayed. The BOM of the originating document is always copied to the change notice.
Drawing No.	Specifies the number of the affected drawing, which will be inherited to the subsequent engineering change order (ECO). *NOTE: The drawing number does not have to be that of the item. You can select any drawing here.*
Drawing Type Code	Specifies the type of affected drawing, which will be inherited to the subsequent engineering change order (ECO).
Status	Status of Eng. Change Notice. The options are *Open*, *Pending Approval*, *On Hold*, *Approved*, *Rejected*.
Creation Date	Date of creation of data record.
Created By	User ID from user list, which has created the data record.

Comments FastTab

In the Comments FastTab, add information to a change notice.

The fields on this FastTab are described in the following table.

Field	Description
Comment	Text field to describe the problem or reason why an item needs to be changed, at maximum 80 characters.
Date	Date on which the comment was entered.
User ID	User ID from the user list that is to make the change and must approve it. *NOTE: It is possible to delete or change lines only with your own User ID. The lines of other users cannot be edited.*

Source Document FastTab

The Source Document FastTab contains information about the document that was used to create the Eng. Change Notice, including the type (production order line/sales line), production order status, sales document type (quote/order), number and line number.

Actions

Various actions are available for editing change notices.

Send

As soon as all information has been entered on the card and anchored in the BOM lines of the Eng. Change Notice, the responsible person must choose the Send action in the Eng. Change Notice. The status changes to *Pending Approval*.

In the Role Center, the change notice now is displayed in the Pending Approval Activities of the Eng. Change Notices.

During the processing, change notices can have the following statuses:

- On Hold – If a change notice has been sent, the responsible engineer can set the status to Wait. This means that they accept the change notice but will not process it until a later date.
- Approved – If a change notice has been sent, the responsible engineer can set the status to Approved. This means that they accept the change notice.
- Rejected – If a change notice has been sent, the responsible engineer can set the status to Rejected. This means that they reject the change notice and no further processing takes place.

Open Item

The Open Item action opens the item card of the relevant item.

Open Source Document

The Open Source Document action opens the source document of the change notice.

BOM

After the relevant information has been entered in the change notice, the BOM Lines of the Eng. Change Notice can be opened by choosing the BOM action.

The fields on the Eng. Change Notice BOM Lines page are described in the following table.

Field	Description
Type	The type of data record to be addressed, for example, Item.
No.	The number of the record that is affected, depending on the type, for example, item number.
Description	Description of the data record.

Field	Description
Quantity	The quantity affected by the change.
Comment	Field for the change reason, specification of the type of material or assembly affected.

Source Drawing Set FactBox

The Source Drawing Set FactBox shows the drawings attached to the item.

Feedback

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Eng. Change Orders

The Eng. Change Order is used to combine several changes. If an Eng. Change Notice is created, it can have several effects. Several departments can be affected. This means that production triggers an Eng. Change Notice and transmits it to the product data manager, who in turn creates a change order and then anchors all further necessary steps.

General FastTab

The fields on the General FastTab are described in the following table.

Field	Description
Change Reason Code	Specifies the reason for the change order.
Change Reason Description	Basic description that defaults from the Change Reason Code, for example a drawing change.
Item No.	Number of the item in a BOM that is affected by the change.
Item Description	Description of the relevant item in the BOM.
Drawing Release Blocked	Indicates whether the changed drawings can be released before all tasks of the change order have been completed.
Drawing No. / Drawing Type Code	Used together to specify the drawing for the Drawing Search and Drawing Where-Used actions.
Eng. Change Notice No.	Indicates the number of the related Eng. Change Notice, which can be opened via the drop-down arrow. To open the source document that was used to create the Eng. Change Notice and subsequent Eng. Change Order, choose the Open ECN Source Document action.
No. of Documents to Change	Number of documents that need to be changed. The documents to be changed are defined by choosing the Documents action on the Process menu.

Field	Description
All Tasks Completed	Indicates whether the change orders to be completed have been processed. The options are: - *Yes*: The status in all change order lines on the Tasks FastTab is *Finished*. - *No*: Not all change order lines have the status *Finished*.
Status	Status of Eng. Change Orders. The options are *Open*, *Released*, and *Finished*.
Creation Date	Date on which the Eng. Change Order was created.
Created By	User who has created the change order.
Change Description	User-defined field, where a summary of the necessary changes can be entered.

Tasks FastTab

As described initially, the tasks that are carried out at the end of the change are stored in the Tasks FastTab.

The fields on this FastTab are described in the following table.

Field	Description
Task No.	Optional task number for this line, to be referenced by the Previous Task No. field.
Previous Task No.	Optional task number or a pipe-separated list of task numbers that need to be completed before the current task can be started or completed. Used with the Task No. field.
Work Center Group Code	Code of work center group from production.
Work Center Group Name	Name of the work center group.
Task Description	Description of the tasks to be performed.
Due Date	Date on which the task should be completed.
Status	Current status of the task line processing. The options are *Not Started*, *In Progress*, and *Completed*.

Actions

The actions on the Eng. Change Order page are described in the following table.

Menu	Action	Description
Home	Drawings	Opens a list of the drawings related to the item in the engineering change order.
	Documents	Opens a list of the unfinished/outstanding quantities in production order or purchase lines for the item in the engineering change order to which the resulting new drawing revision should be manually assigned. To indicate which documents should be changed, select the To Change checkbox. These documents will be reflected in the No. of Documents to Change field in the General FastTab.
	Apply Task Template	Applies a task template to the engineering change order.
	Open ECN Source Document	Opens the source document (e.g., item, production order line) that was used to create the engineering change notice and subsequent engineering change order.
Item	Open Item	Opens the Item Card for the item in the engineering change order.
	Production BOM	Opens the production BOM attached to the item in the engineering change order.
Drawing	Drawing Search	Finds drawings attached to records and can be used to replace them. The Drawing Search page will be pre-populated with the last valid drawing revision. For more information, see Drawing Search.
	Drawing Where-Used	Displays where the drawing defined in the Drawing No. and Drawing Type Code fields is used in production BOMs.

Item Drawing Set FactBox

The Item Drawing Set FactBox displays the drawing set for the item in the engineering change order.

Feedback

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Change Management: Role Center

As soon as a change order with associated tasks has been created, it is visible in the *PDM Manager* Role Center. There, the entire content is divided into three Cue Groups in the Activities part:

- Eng. Change Notices (ECNs) – These Cues display the number of change notices sent from Production or Item Management to the Product Data Manager.

  > **Note**
  > **Open orders should be checked and processed by the PDM manager so that there is no delay.**

- Eng. Change Orders (ECOs) – These Cues display the number of change orders and the status of each of these change orders at the current time.

  > **Note**
  > **Ready to Finish means that this change order must still be finished by the PDM manager.**

- Eng. Change Order Tasks – These Cues indicate the extent to which processing was carried out by the PDM manager. Due and overdue changes should be reviewed and processed.

See Also

PDM Manager Role Center

Feedback

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CAD Connector

The module COSMO PDM CAD Connector is an extension of COSMO Product Data Management and allows the seamless integration of all commonly used CAD, PDM, and PLM systems in Microsoft Dynamics 365 Business Central.

This topic describes the basic setup of COSMO PDM CAD Connector as well as using CADLink, which is the middleware between the CAD system and Microsoft Dynamics 365 Business Central.

The following table describes a sequence of tasks, with links to the topics that describe them.

To	See
Set up the basic settings for COSMO PDM CAD Connector.	CAD Connector Setup
Learn about the general fields and settings in a CADLink window.	CADLink

Feedback

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CAD Setup

The CAD Connector has two setup pages: CAD Connector Setup and CAD Category Mappings.

CAD Connector Setup

The CAD Connector Setup ensures that the data in the ERP system is always up-to-date. In addition to creating drawings, items and parts lists, the tool also harmonizes the processes of CAD and ERP systems.

To set up general CAD Connector information

1. Choose the icon, enter CAD Connector Setup, and then choose the related link.
2. On the CAD Connector Setup page, fill in or update the fields as necessary. Hover over a field to read a short description.

Actions

The actions on the CAD Connector Setup page are described in the following table.

Menu	Action	Description
Information	About	View the current product version information and copyright information.
Web Service	Publish Web Services	Publishes data as a web service. The Published field on the Web Services page is set to *Yes*. *NOTE: It is essential to run this function so that the CAD Connector can communicate with this client.*
	Remove Web Services	Removes the data records that were previously created with the Publish Web Services action. *NOTE: Run this action before uninstalling the app, or if you no longer want to communicate with the CAD Connector.*
Related	Web Services	Opens the Web Services page, which allows you to see all available web services.

CAD Category Mappings

The CAD Category Mappings determine which item template is to be used for new items based on the CAD category sent.

Note

On the CAD Connector Setup page, turn on the Activate Appl. Area toggle to gain access to the CAD Category Mappings page.

To set up CAD Category Mappings

1. Choose the icon, enter CAD Category Mappings, and then choose the related link.
2. Choose the New action.
3. In the CAD Item Category Code field, enter a unique code for the CAD item category.
4. In the Item Config. Template Code field, enter the template to be used for new items.
5. Go to the next line and add another CAD Category Mapping.

Feedback

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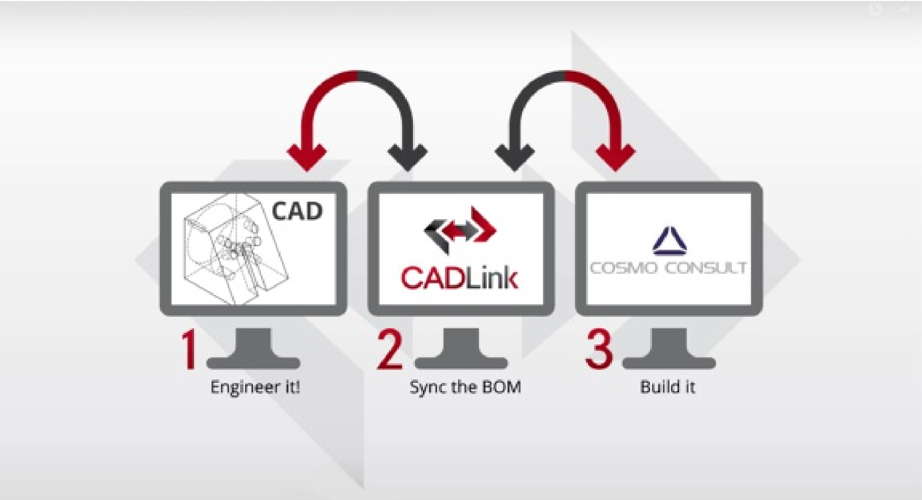
CADLink

Every company working with CAD systems faces the problem of transferring data developed in CAD to Microsoft Dynamics 365 Business Central. With COSMO PDM CAD Connector the customer can create, update, or remove design data from the CAD in Microsoft Dynamics 365 Business Central.

> **Note**
> **This topic provides an initial overview of the most important functions of CADLink. For more information, please contact the supplier QBuild.**

The following figure illustrates how the connection between CAD and COSMO Product Data Management works.



CADLink is to be understood as middleware between the CAD system and Microsoft Dynamics 365 Business Central. Web services are used to read information from both systems and compare it in CADLink.

To open CADLink and access files

CADLink is opened from a CAD, PDM, or PLM system and is installed there in the respective client.

> **Note**
> **Different CAD systems may have a different appearance. However, the functionality of CADLink remains the same.**

The following table describes the actions in the menu in the CADLink window.

Action	Description
Open File	Opens an Explorer for searching a CAD file.
Close File	Closes the open file and returns CADLink to its initial state.
Run CADLink	Calculates the materials of the drawing and opens the CADLink BOM management. If a CAD system is connected, it is possible to use this function directly from the CAD system.

After the file has been opened in the CAD system, choose the Run CADLink action to open the CADLink system.

When opening CADLink, the Web services are initialized, and all materials are derived from the CAD model, determined, and summarized in a BOM.

The following table describes a sequence of tasks, with links to the topics that describe them.

To	See
Learn about the Bills of Materials tab on the CADLink window.	Bills of Materials
Learn about the BOM Changes tab on the CADLink window.	BOM Changes
Learn about the CAD Properties tab on the CADLink window.	CAD Properties
Learn about the CADLink Messages tab on the CADLink window.	CADLink Messages
Learn about the information in the CADLink Settings window.	CADLink Settings

Feedback

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Bills of Materials

In the CADLink Bills of Materials tab of the CADLink window, the BOMs from CAD and Microsoft Dynamics 365 Business Central are compared.

The following table describes the fields for BOMs in the CADLink Bills of Materials tab.

Field	Description
Save	If selected, the item is copied to Microsoft Dynamics 365 Business Central, updated or removed from the BOM.
Part Number	Item number of the assembly or material.
Revision	Revision code with which a drawing is to be created.
Description	Description of the item.
Unit Qty	Quantity that is required as the base quantity in the BOM.
Base Uom	Base unit of measure based on quantity.
Category Code	Category assigned to the item.
ERP-Item	Item in Microsoft Dynamics 365 Business Central that was added manually but is not to be imported into Microsoft Dynamics 365 Business Central. *NOTE: In the Microsoft Dynamics 365 Business Central production parts lists, BOM components are marked as ERP items.*
Drawing Link	Path that refers to the storage location of the drawing.
File	Storage path of the CAD file.

There is also the ERP Item check box in the Microsoft Dynamics 365 Business Central BOM lines. If this check box is selected, the component is not considered when comparing with CADLink. In this way, parts lists can be added manually in Microsoft Dynamics 365 Business Central without the components being deleted again by CADLink.

Feedback

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BOM Changes

In the CADLink window, the changes made to the BOM are summarized in the Bom Changes tab.

The following table describes the fields for BOM changes in the BOM Changes tab.

Field	Description
Part Number	Item / Drawing number of the material.
Description	Item description for item / drawing number.
CadLink Qty	Quantity in CADLink.
Cad Qty	Quantity copied from CAD.
Erp Qty	Quantity in Microsoft Dynamics 365 Business Central from the BOM line.
Notes	Information about what exactly will happen when importing into Microsoft Dynamics 365 Business Central, for example, that an item will be removed or added.

Feedback

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CAD Properties

In the CADLink window, the CAD Properties tab shows the properties of the individual assembly materials, which come from CAD, in more detail. These can then be linked directly to the item properties in Microsoft Dynamics 365 Business Central and used to fill certain fields, such as the production code.

Feedback

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CADLink Messages

In the CADLink window, the CADLink Messages tab shows error messages that prevent an import from CAD. At the same time, saving in Microsoft Dynamics 365 Business Central is not possible.

Feedback

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CADLink Settings

In the CADLink Settings window, opened from the CADLink window, there are various options for defining the import behavior and the BOM display.

General Settings

General settings, such as drawing type or standard values for unit or revision code, are entered in this tab.

The fields on the General Settings tab are described in the following table.

Field	Description
Show Preview Image	Defines whether the drawing or image describing the item is displayed directly in CADLink.
Drawing Type	Default drawing type, which is transferred to Microsoft Dynamics 365 Business Central if one is not transferred from the CAD.
Default Base Uom	Default unit, if no unit is transferred from CAD.
Default New Revision	Default revision code, which is stored if one was not transferred from the CAD.
Create New BOM Version	If selected, no changes are made in Microsoft Dynamics 365 Business Central when the BOM is changed or items are deleted, but a new BOM version is created directly.
Use Default Category Code	Defines whether the default category code should be used, if it does not exist.

Field Mappings

In the Field Mappings tab, the mapping of fields between CADLink and Microsoft Dynamics 365 Business Central determines exactly which values are transferred from a field in CADLink to the correct field in Microsoft Dynamics 365 Business Central.

Color Codes

In the Color Codes tab, the colors and their meaning are defined for use in the BOM.

By default, the colors have the following meaning:

- Yellow – There are changes to the part, which are adopted during import.
- Green – The part does not yet exist in Microsoft Dynamics 365 Business Central and is created again.
- Grey – The corresponding part no longer exists in the BOM and is removed from the document BOM in Microsoft Dynamics 365 Business Central.

Feedback

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