TEAMCENTER

Basic and Advanced Classification on Active Workspace — Usage

Teamcenter 2412

SIEMENS

About Siemens Digital Industries Software

Siemens Digital Industries Software is a global leader in the growing field of product lifecycle management (PLM), manufacturing operations management (MOM), and electronic design automation (EDA) software, hardware, and services. Siemens works with more than 100,000 customers, leading the digitalization of their planning and manufacturing processes. At Siemens Digital Industries Software, we blur the boundaries between industry domains by integrating the virtual and physical, hardware and software, design and manufacturing worlds. With the rapid pace of innovation, digitalization is no longer tomorrow’s idea. We take what the future promises tomorrow and make it real for our customers today. Where today meets tomorrow. Our culture encourages creativity, welcomes fresh thinking and focuses on growth, so our people, our business, and our customers can achieve their full potential.

Support Center: **support.sw.siemens.com**

Send Feedback on Documentation: **support.sw.siemens.com/doc_feedback_form**

Contents

1. Using classification for reuse and standardization

New product development and product improvement commonly involve the reuse of existing elements. This increases efficiency and savings. Digital libraries contain massive quantities of objects that are unrelated to each other except for how they are used or reused. *Classifying* these objects using descriptive attributes that you can search ensures they can be easily found. Teamcenter contains classification hierarchies, classes, and attributes organized into class definitions so that users can quickly find objects for reuse.

For example, your company decides on a set of standardized processes for manufacturing your new product. When the process designers plan new processes, they can search the classes in the classification hierarchy to find a fitting standardized process to use as a basis for the new one. The designers do not have to start from scratch.

Where do I go from here?

Classification administrator	Learn how to install and configure classification.
Business User	
Classify my business objects	**Classify an object using the Classification tab**
Navigate the classification hierarchy	**Find a classified object by browsing the classification hierarchy**
Search for my classified objects	**Find classification objects using the global search**
Read about classification objects and classified objects	**Learn how the classification system works**
Share classified objects with another site	**Look at the different ways in which you can replicate classification objects and how one method differs from another.**

2. What is the difference between basic and advanced classification?

When using the classification feature, there are two types of data that can exist in your classification hierarchy — Basic and Advanced. These are some of the differences between these two types of data:

	Basic classification	Advanced classification
Availability	Available on the rich client and Active Workspace.	Available on Active Workspace.
Effectiveness	Effective in defining objects uniquely with properties for reuse.	Effective in capturing overall product information for PIM and MDM systems with support for ECLASS standard class hierarchy and definitions.
Standard Features	Some of the basic classification features: • Classification hierarchical representation • Flat list of properties • List of values • Unit of measure • Support for views • Limited to 200 Properties in a class	Some of the advanced classification features: • Class definition versioning • Flexible data modeling with attribute blocks, aspects, cardinality, and polymorphism. • Complex data type attributes • Native data storage • Support for namespaces • Unlimited number of properties • No Array limitations
Data model standards	Supports DIN-4000 standard and confirms to underlying specifications of ISO/TS-13399 standard.	Supports ECLASS standard and conforms to DIN 4002, ISO 13584-32, ISO 13584-42, IEC 61360 standards.
Hierarchy and class definitions	Define custom hierarchy and class definitions.	Define custom hierarchy and class definitions. Additionally supports standard based ECLASS hierarchy spanning more than 48 domains.
Data exchange support	Supports PLMXML, TCXML, and Multi-Site.	Supports JSON, OntoML, BMEcat.

There is very little difference between these two types of data in the user interface. These data types are, however, installed and configured differently. If you have questions, contact your classification administrator.

2. What is the difference between basic and advanced classification?

3. How classification works

A classification system functions as a type of filing cabinet, with each folder representing a class. Objects are sorted into classes based on their properties or attributes. If there is, for example, a class of screws, there may be many different sizes and shapes of screws in this class, but they all share the many attributes such as diameter and length. In Teamcenter, each unique description of a screw is contained in a *classification object*. To illustrate, you may have three different screws in the screw class:

	Screw 1	Screw 2	Screw 3
Diameter (mm)	8	6	5
Length (mm)	50	40	30

The classification system saves each of these descriptions as a classification object with its own unique ID.

	Class = Screws Classification object ID: screw_001	Class = Screws Classification object ID: screw_002	Class = Screws Classification object ID: screw_003
Diameter (mm)	8	6	5
Length (mm)	50	40	30

When you classify an item into this class, the classification object is associated with the item. If a classification object does not yet exist for your item, it is automatically created in the background and associated with the item being classified. After classification, the item is referred to as the *classified item (or object)*.

There are situations where your classification system contains classification objects that do not classify any items. These are referred to as catalog items or **standalone classification objects**. These are useful, for example, when importing catalog items or **automatically creating graphics for a class of objects**.

4. About advanced classification

Overview of advanced classification, ECLASS, and licensing

Advanced classification is based on the *classification standard taxonomy* (CST) framework. This framework supports using standardized classification hierarchies and data so that classification data can easily be shared between customers and suppliers. In particular, the framework supports the ECLASS standard that describes products and services across a wide range of industries through the use of classes and properties with unique identifiers.

For more information about the ECLASS standard, visit their website:

https://eclass.eu/en/eclass-standard/introduction

For information about what versions of ECLASS are supported, see ECLASS version support for the current version of Teamcenter.

Teamcenter Classification for ECLASS introduces CST to support ECLASS structures. CST classes are available in the classification hierarchy, and if desired, alongside traditional classification classes (ICS) to classify your data. Using Teamcenter Classification for ECLASS, you can import and export ECLASS-compliant data.

The use of the ECLASS standard requires registration and licensing.

Advanced Classification can also be used as generic classification system where you can build your own hierarchy and classification definitions by using the new features and data constructs. Most of the new features and data constructs are supported in Advanced Classification even without ECLASS.

If you want standards based classification system then ECLASS Standard is supported in Advanced Classification by importing ECLASS taxonomy and classification definitions.

Classification standard taxonomy features (CST) are available with a regular classification authoring license. Reading, authoring, and browsing of a custom CST hierarchy is possible.

If, however, you download and use hierarchy data from ECLASS, you require a **cls_eclass_user** named user license. With this license, you can perform create, update, and delete operations on an ECLASS hierarchy and data.

For complete information about licenses required, contact your Siemens Digital Industries Software representative.

ECLASS and Teamcenter terminology

The classification standard taxonomy objects and concepts have different nomenclature than the ECLASS objects.

The ECLASS website provides in-depth explanations of ECLASS objects:

https://eclass.eu

The most commonly used objects are as follows.

ECLASS	CST	Traditional classification (ICS)
Value list	Key-LOV definition	Key-LOV
Property	Property definition	Dictionary attribute
Classification class	Node definition	--
Application class	Class definition	Group/class
IRDI	IRDI	ID
Property block	Property block	--
Application data	Classification object	ICO
Aspect	Aspect	--

About the objects that you work with

IRDI

The International Registration Data Identifier (IRDI) originates from the ECLASS standard. This identifier is used by the classification standard taxonomy to uniquely identify all classes, properties, and key-LOVs. Most importantly, using an IRDI supports:

- Unique namespaces
- Revisioning

In CST, the IRDI is displayed using the following format:

*aaaa...a***#***bb-cccccc***#***nnn*

Example:

XMPL#01-CLS001#001

Where:

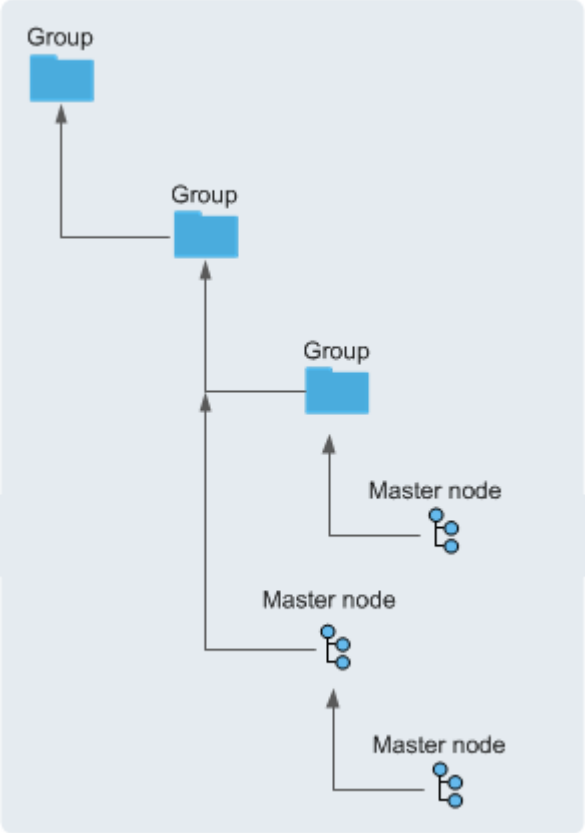
IRDI components	Description
aaaa...a	Unique alphanumeric namespace

IRDI components	Description
	Numeric namespaces are reserved as companies and organizations can register them with ISO. For example, the following namespaces are reserved: **0173** is reserved by the ECLASS organization **0175** is reserved by Siemens Choose a namespace that is unique to your organization. This is particularly important if you plan to share data with other organizations.
#	Separator character
bb	Data type **01**: class **02**: property **09**: list of values (key-LOV)
cccccc	Object identifier This identifier uniquely identifies the object within the object data type. This identifier can have up to six characters.
nnn	Revision number The revision number must have three characters.

Node hierarchy

The classification hierarchy consists of nodes of differing types.

- A *group* node is used for organization and cannot hold data.
- A *master* node references an application class that holds data. Master nodes can have other master nodes as children.



A node hierarchy can be revised.

Class

There are three types of classes in CST:

- Application class

  An *application class* is referenced by nodes and can be used to store data. They hold the properties used to define the class. An application class can reference properties and aspect classes.

- Property block class

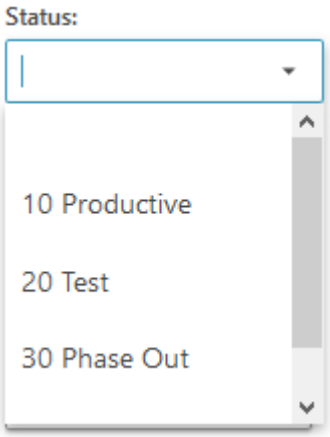
  A *property block class* groups sets of properties together. You can group properties that are frequently used, avoiding the need to repeatedly assign each property to a class. For example, a milling tool generally comprises a holder, an adapter, and an insert. Each of these components is described by many properties. The insert, for example, can be described by properties such as thickness, cutting length, grade, and material. Because these properties apply to every insert, you can group them into one property block class called **Insert** and reuse this property block like a simple property in every class that contains an insert.

- Aspect class

An *aspect class* groups properties that pertain to overarching aspects of many objects and can be reused across multiple object types. They often group such parameters as commercial information, for example, supplier contact information, that have nothing to do with product definition. Aspect classes can only be referenced directly by application classes.

Key list of values

A *key list of values (key-LOV)* holds selection lists.



These lists can be nested.

Key-LOVs are referenced by properties.

Property

A *property* is used to describe attributes of a class. It can have multiple data types:

- String
- Integer
- Double
- Boolean
- Reference

Reference property types point to another object such as a key-LOV definition or a property block class.

Property group

A *property group* is the user interface representation of a property block class. It is a group of properties that you can navigate using the **Property Groups** pane.

Classification object

An internal classification object (ICO) is used to classify Teamcenter data.

View

Used to display all or a subset of the properties in a class in the user interface. There are two types of views used in classification classes:

- Base view
- User, group, or role view

About property blocks, polymorphism, and cardinality

If the classification hierarchy is configured to use classification standard taxonomy (CST) classes, the data stored may include property blocks for which cardinality and polymorphism is enabled.

Property block

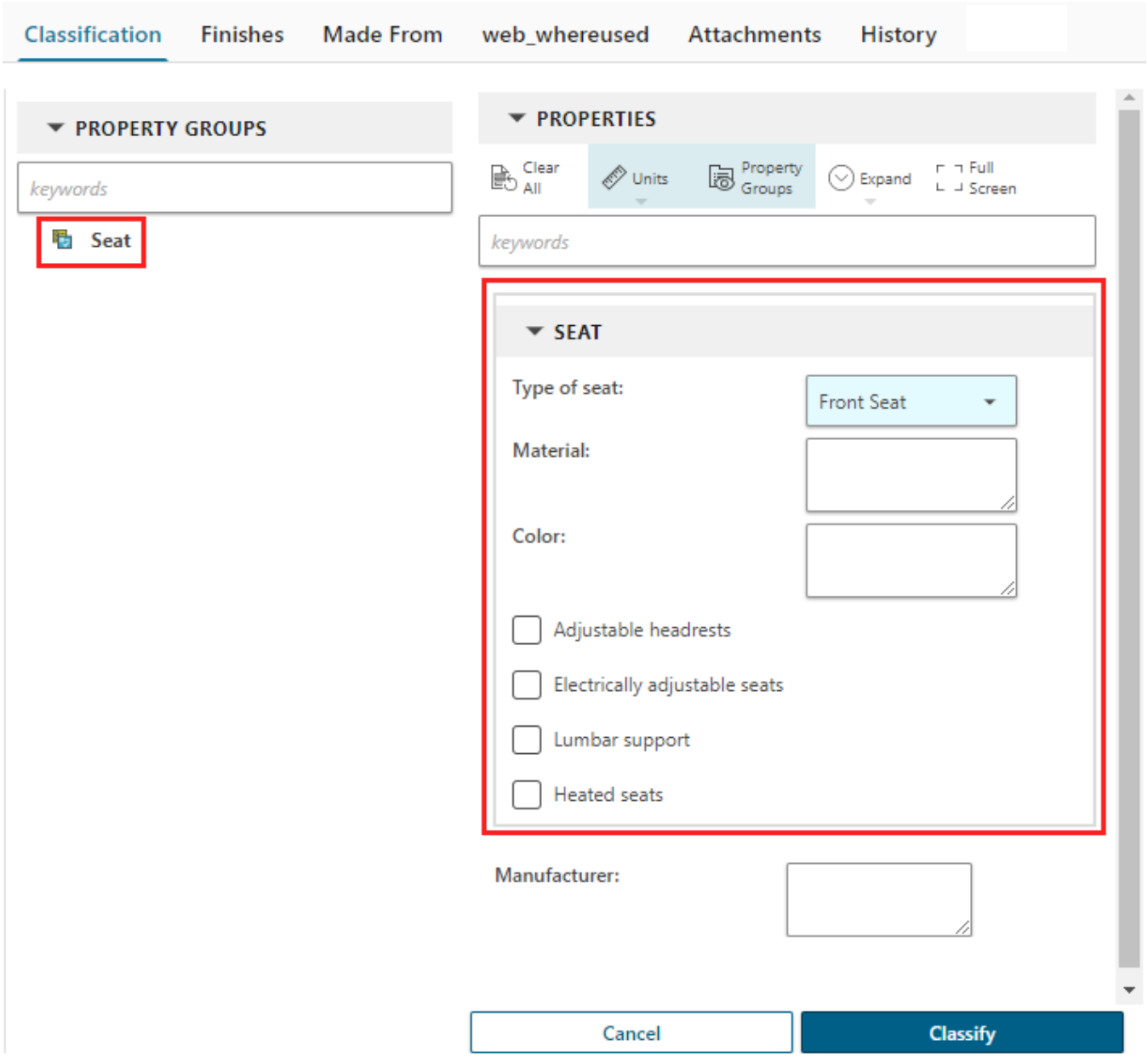
Frequently, there is a group of properties that is always used together. For example, the following sets of properties describe a car seat:

Front seat:

Material
Color
Adjustable headrests
Electrically adjustable seats
Lumbar support
Heated seats

Each time you create a class, you could manually add each of these properties to the class to describe a car seat. However, it is easier to group them and select a single property called **Front seat** that contains all of the required properties. This set of properties is called a property block.

In the user interface, a property block is displayed as follows.



Cardinality

Cardinality on property blocks allows you to specify the number of times that a property block is used in a class. For example, a car can have two or three rows of seats. If a *cardinality controller* is added to the property block, you can specify the number of times that the set of properties is displayed in the user interface.

Polymorphism

In the preceding example, the same set of properties is displayed for each new seat. Displaying a different set of properties depending on the type of each seat is referred to as polymorphism. Here, a property, **Type of seat**, is called the *polymorphism controller*.

Polymorphism controller:	Front seat	Rear seat
Properties:	**Material**	**Material**
	Color	**Color**
	Adjustable headrests	**Adjustable headrests**
	Electrically adjustable seats	**Rear seat entertainment system**
	Lumbar support	
	Heated seats	

The **Type of seat** property determines which properties are displayed.

You can also use polymorphism and cardinality together.

Browsing a class with property blocks

When classes contain many properties and property blocks you can quickly and easily navigate these classes in the following ways:

- Display the **Property Groups** by clicking .

  > Tip:
  >
  > If you have many images or property groups, it may be helpful to hide the display of images by clicking .

- The complete list of property blocks is displayed on the left. Select one block to display only that property block on the right.

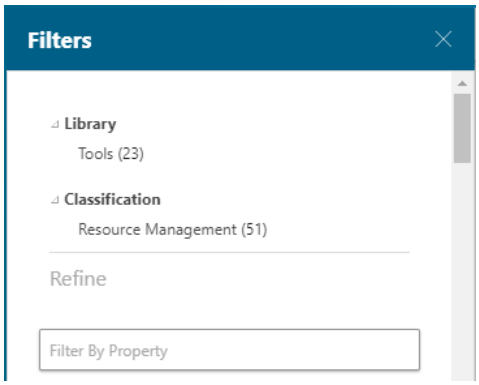
- Deselecting a property block displays all properties on the right.

- Click in a cardinal block on the right and view the attribute values in a tabular format. In edit mode, you can modify values, change the order of the columns, or add more columns by modifying the cardinality controller. If the block also contains polymorphism, the tabular format is not available.

About classification libraries

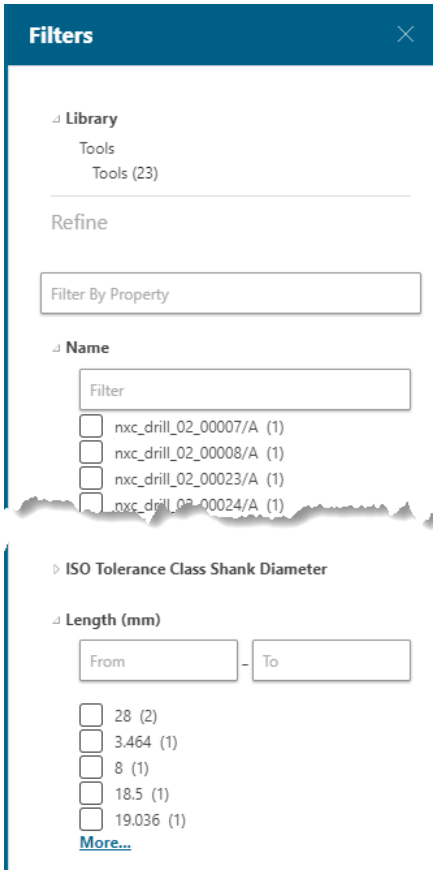
Libraries are used to organize classified objects with similar characteristics or application, in a hierarchy. For instance, if you were looking for a bolt, you would start by searching for the bolt library. Once you find the bolt library, you can perform additional searches, use filters, or browse through the hierarchy to find the object that meets your criteria.

Libraries are installed on top of classification. If both are installed, filters for both are displayed in the **Filters** panel. If libraries are not installed, you see an entry for classification only.



As soon as you begin navigating through one of these filters, the other is no longer visible. This means that you can search using classification or libraries but not both.

When you navigate through the classification or library facets, the classification attributes are displayed in the facet list with the other workspace object properties.



Library object types

	Library object	The object and target of the reuse activity (for example, an item revision that represents a tool or a part) that is referenced from the library element in the hierarchy.
	Library element	Used to manage the mapping of a library object to a specific library hierarchy node in a library. Each library element is indexed in Teamcenter to provide a thorough search result.
	Library node	Each library hierarchy contains a set of nodes (for example, drilling, turning, and milling) that are used to organize library elements contained in the library.

Note:

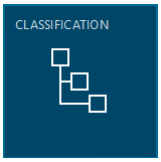
If you classify items, item revisions fulfilling the search criteria are displayed in the search results.

5. Filtering by classification

Find a classified object by browsing the classification hierarchy

The classification hierarchy is displayed as a tree structure of nested classes that allows you to intuitively navigate down the hierarchy in search of a classified object. Selecting any class provides you with filters for all the attributes contained in the selected class. You can use these filters to narrow the search results.

1. On the Home page, click the **CLASSIFICATION** tile.

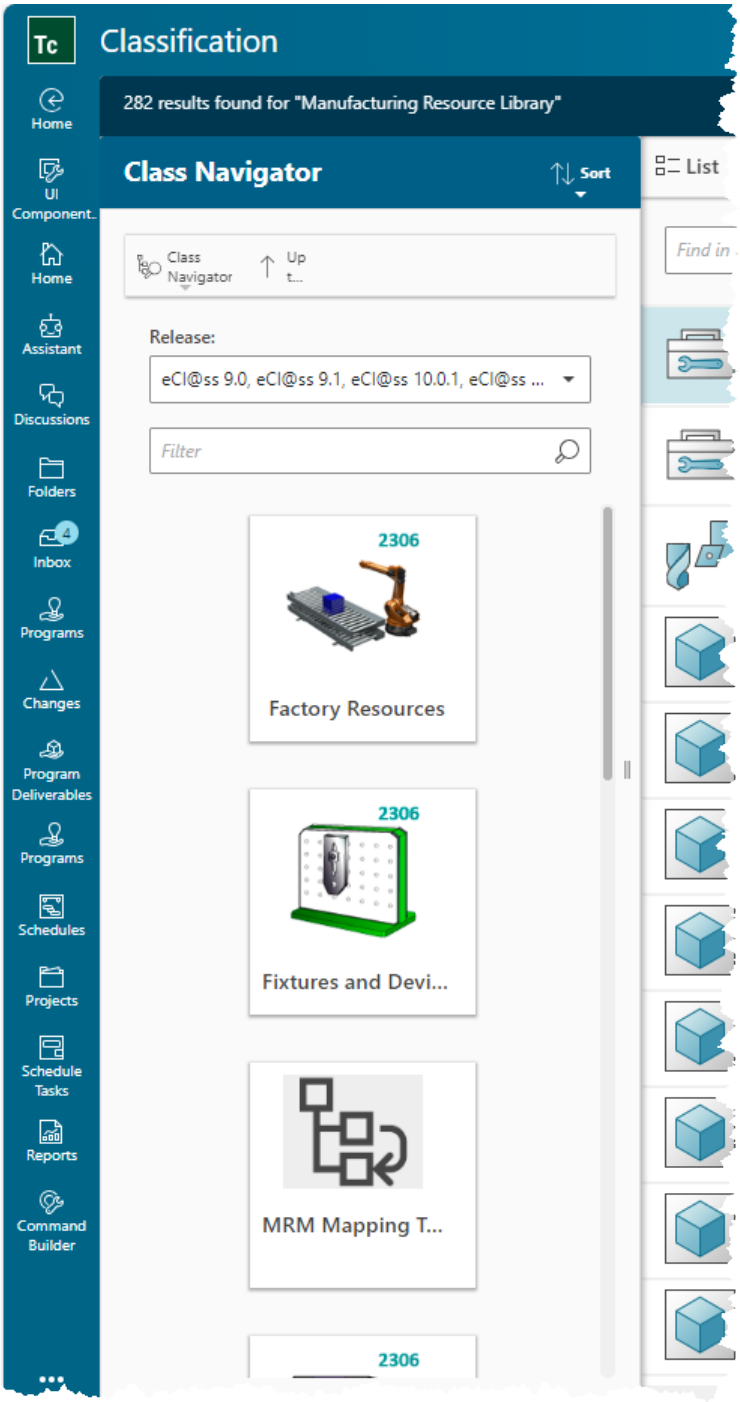


   The classification location is displayed. The classification hierarchy is displayed in the **Class Navigator** panel.

2. Do one of the following:

   - Navigate down the hierarchy and click arrows in the **Class Navigator** pane to open the hierarchy or click the class to perform an automatic search in the class.

   - Click **Class Navigator** and select **Images** to navigate the hierarchy by class image. It is helpful to make the **Class Navigator** pane wider when navigating by image to see as many images as possible simultaneously.



3. Click **Filters** to narrow your search.

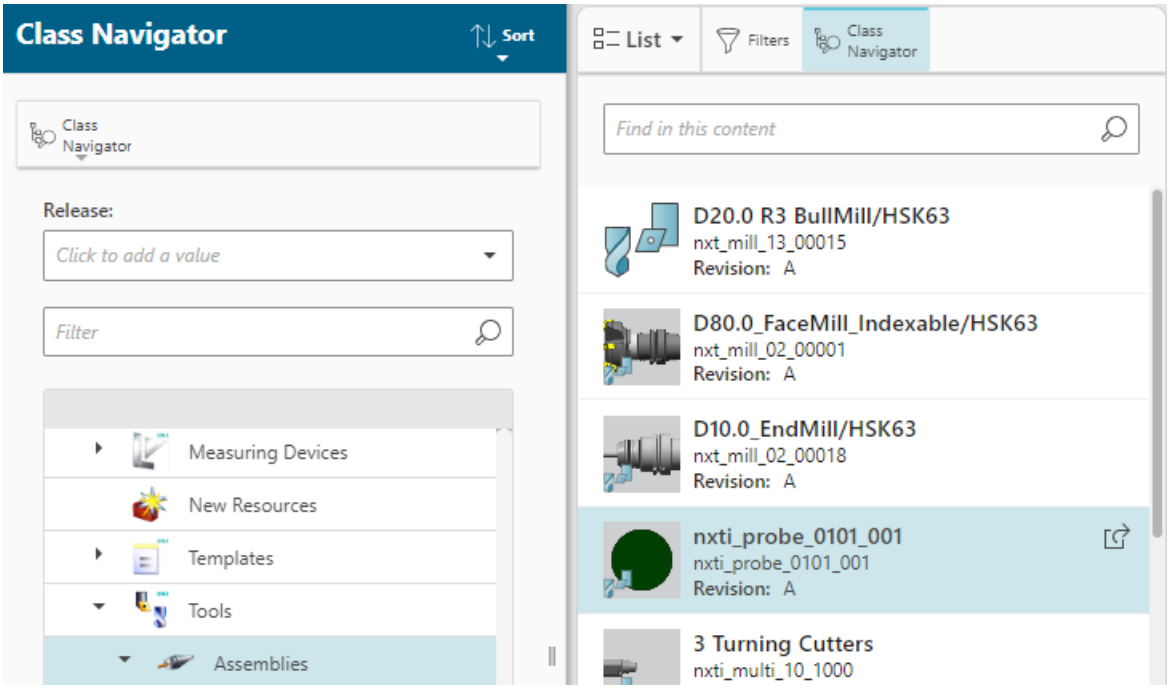
4. Open the desired result by clicking **Open** and click the **Classification** tab.

Find an object by searching for a specific property value

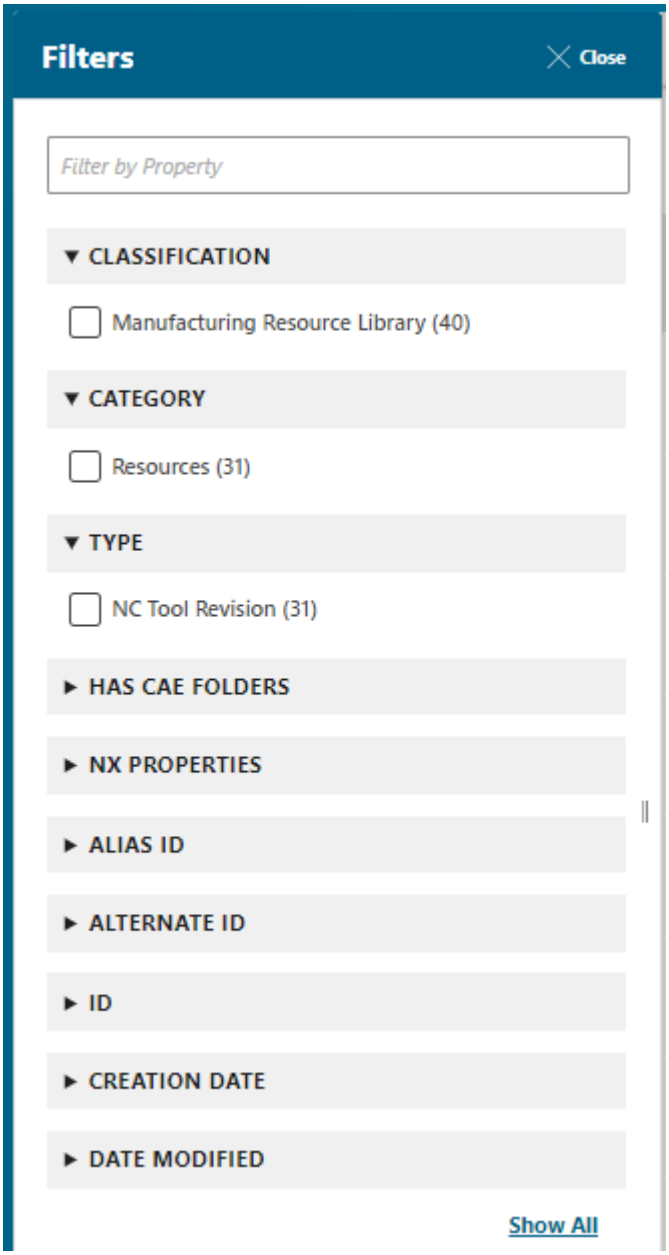
You can find classification objects by searching for the value of a specific property. Filtering is available to aid the search.

1. In the classification location, navigate to the desired class in the classification hierarchy.

2. Click **Filters**.



The properties of the selected class are displayed in the **Filters** pane.



3. Do one of the following:

   - Search for the desired filter by typing the name in the **Filter by Property** box.
   - Select the desired value within any of the filters.

The objects that are in the selected class that contain the specified property values are displayed in the search results.

Tip:

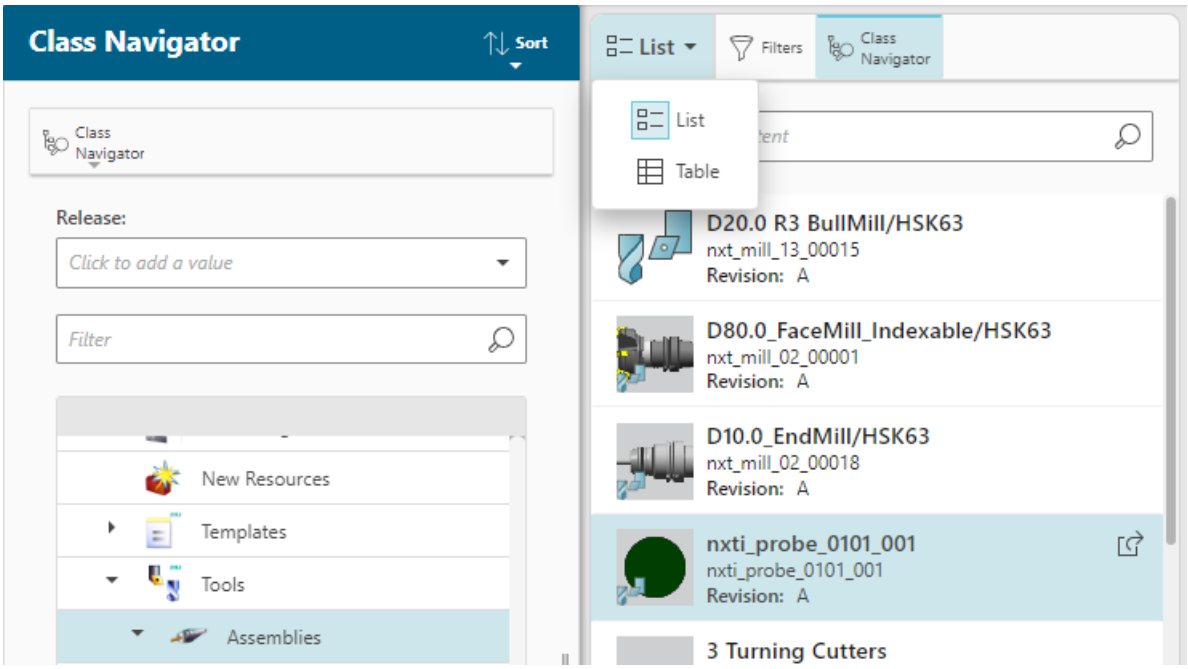
The behavior of the filters depends on your search settings. Find these in the **Advanced Search**.

View multiple objects in a classification class based on their properties

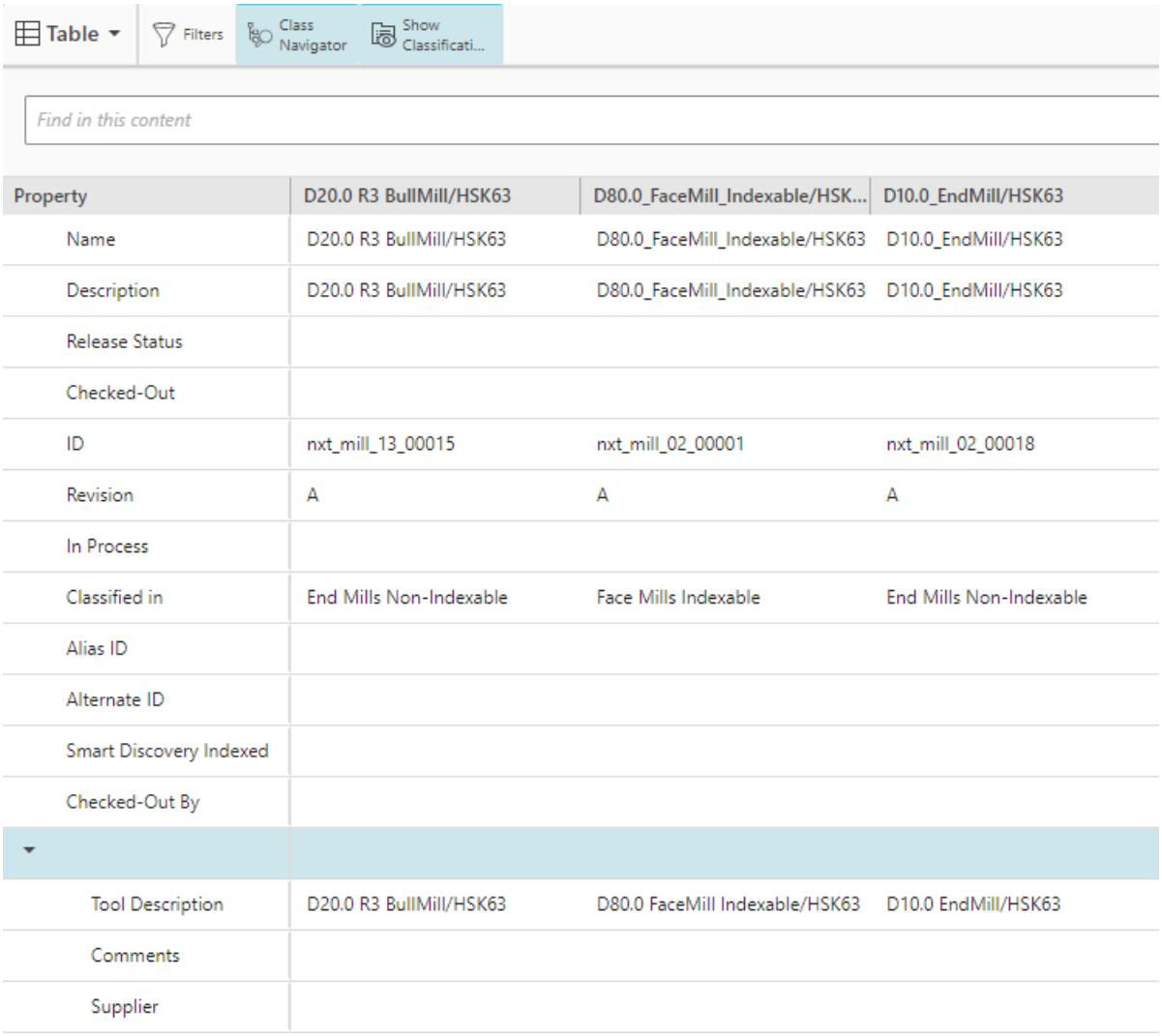
You can view multiple objects in a classification class based on the properties of the objects and the properties of the classification class.

1. In the classification location, navigate to the desired class in the classification hierarchy.

2. Select the table view.



In the table view, the first column displays the properties and the subsequent columns display the property value for each object in the class. By default you see the object properties and the classification properties.

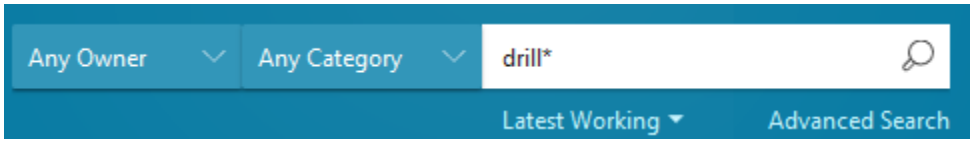


Property	D20.0 R3 BullMill/HSK63	D80.0_FaceMill_Indexable/HSK...	D10.0_EndMill/HSK63
Name	D20.0 R3 BullMill/HSK63	D80.0_FaceMill_Indexable/HSK63	D10.0_EndMill/HSK63
Description	D20.0 R3 BullMill/HSK63	D80.0_FaceMill_Indexable/HSK63	D10.0_EndMill/HSK63
Release Status			
Checked-Out			
ID	nxt_mill_13_00015	nxt_mill_02_00001	nxt_mill_02_00018
Revision	A	A	A
In Process			
Classified in	End Mills Non-Indexable	Face Mills Indexable	End Mills Non-Indexable
Alias ID			
Alternate ID			
Smart Discovery Indexed			
Checked-Out By			
Tool Description	D20.0 R3 BullMill/HSK63	D80.0 FaceMill Indexable/HSK63	D10.0 EndMill/HSK63
Comments			
Supplier			

3. To toggle the display of classification properties, click **Show Classification Properties**.

Find classification objects using the global search

The global search helps you find any object in the database, including classified objects.



Use the following syntax when searching for classified objects in the global search:

To	Use this syntax	Examples
Search on the classification class name	**"Classification class name":***desired-class-name*	**"Classification class name":drill**

To	Use this syntax	Examples
		"Classification class name":"spot drill"
Search on classification class ID	**"Classification class id":***desired-class-ID*	**"Classification class id":TA_MILL_10_20**
Search on a classification property	*property-name*:*property-value-or-keyword*	**Company:siemens** **"Resource Description 1":"angle base plate"** **"Step count":4**
Search for a numeric range of a property	*property-name*:**[***start-range* **TO** *end-range***]**	**"Step count":[0 TO 5]**

Note the following:

- If any part of the search syntax consists of more than one word, it must be enclosed in quotation marks.
- The global search is not case sensitive.
- Classification class IDs are not visible to business users. However, many business users are familiar with their hierarchies and know the class IDs. If so, then they can use the global search to search on a class ID.

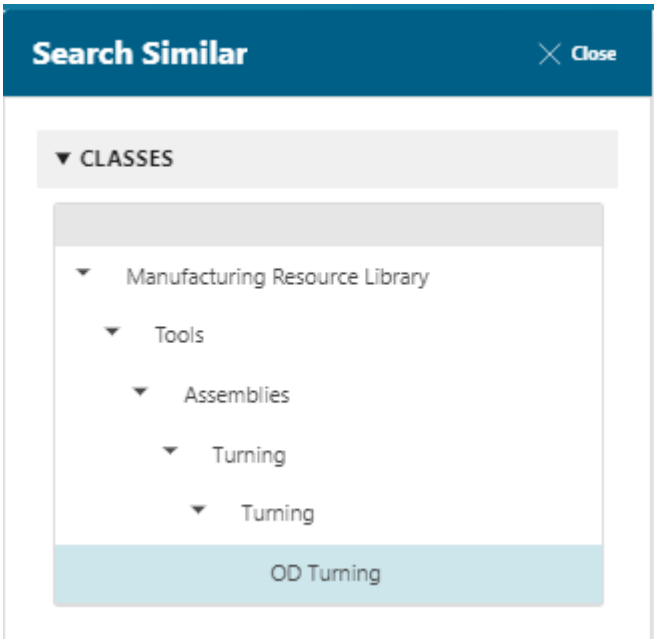
Search for an object based on the properties of another object (search similar)

Sometimes, you want to find an object with similar properties to one you know or to one you currently have open. This is possible with the **Search Similar** command.

1. Open an object in the **Classification** tab.
2. Select **Search Similar** in the **CLASSIFICATIONS** pane.

You may have to allow the pop-up blocker permission to open the web page.

The **Search Similar** pane opens displaying the classification hierarchy of the object.



3. To search in the same class as the currently opened object, click **Search**. Alternatively, you can widen your search by clicking any of the parent classes displayed in the hierarchy and then clicking **Search**.

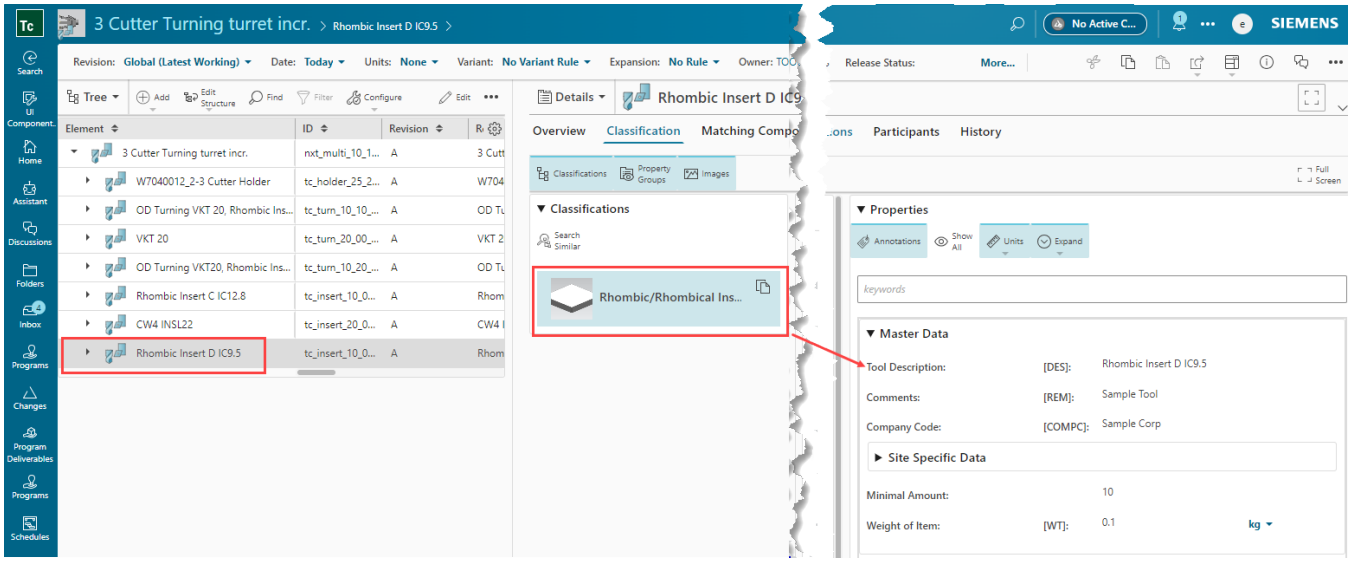
   A new browser window is displayed containing the **Filters** pane with the facets of the chosen class.

4. Modify these filters to find the appropriate object.

Understanding the classification of assemblies

When you classify an assembly, you are actually classifying the underlying classifiable object (for example, the item revision). The underlying classifiable object of each line of an assembly is classified independently.

This means that each object in an assembly can belong to a different classification class (or none at all). When you view an assembly, the **Classification** tab displays the classification properties of the classifiable object that the selected element in the left panel points to. If no element is selected, the classification details for the assembly's classifiable object are displayed.



Search for classes using classification criteria

In the classification location, you can navigate through the class hierarchy manually.

If you already know the name or ID of the class in which you want to search, you can search using the following syntax:

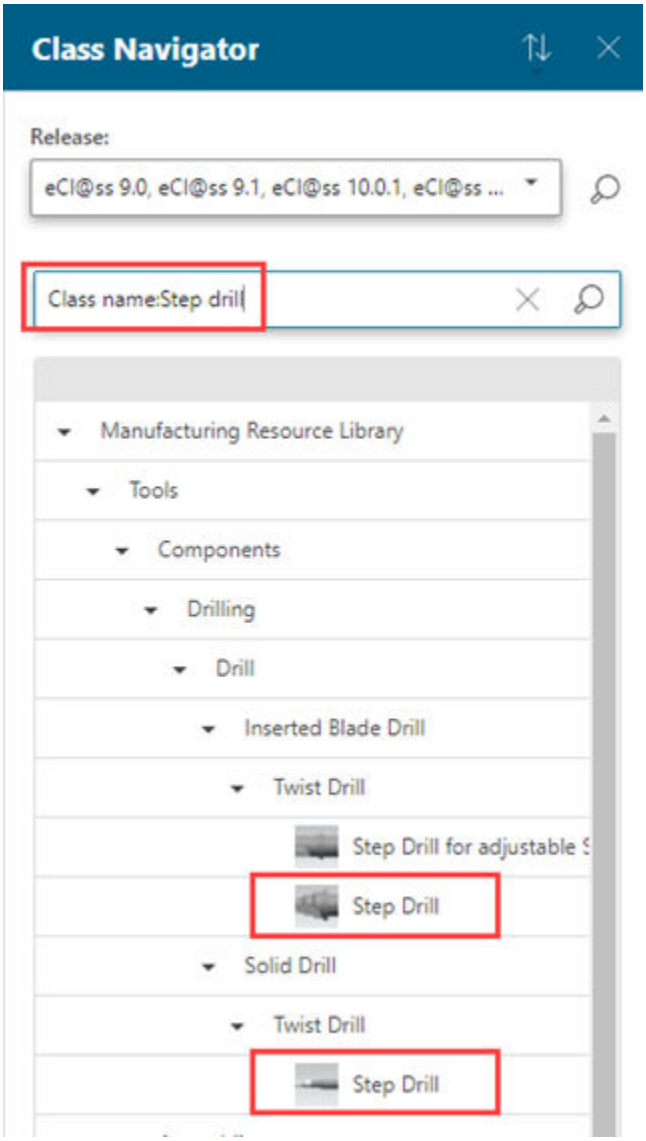
Class name:

Class id:

Example:

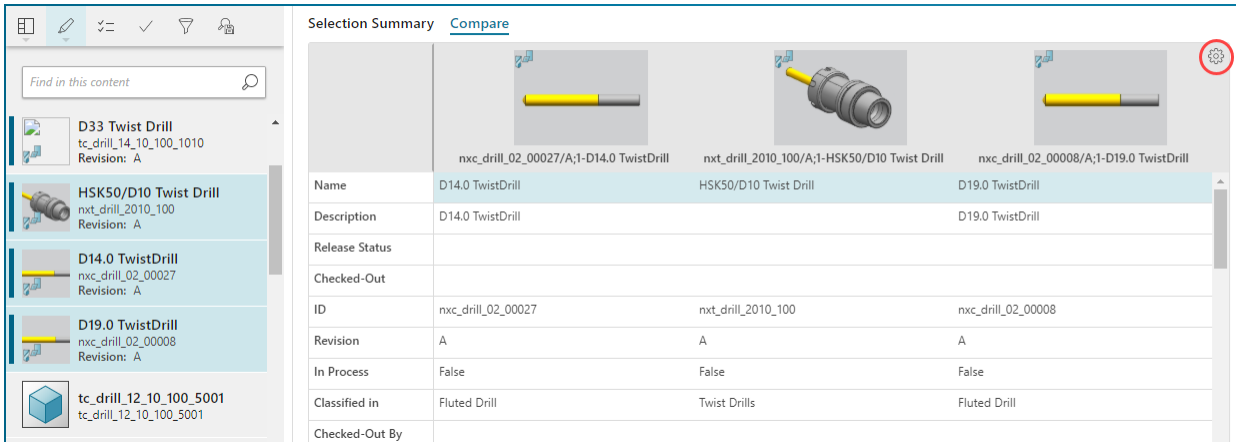
Class name:Step drill

Do not enter a space between the colon character and the parameter you search for.



Include classification properties when you compare search results

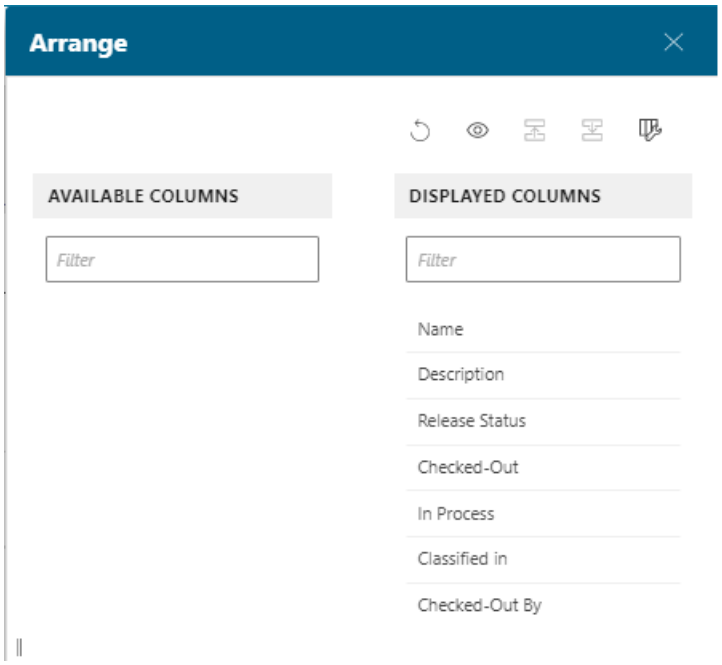
When you select multiple search results, you can compare their properties in a table. Classification properties are included in this table.



Note:

The comparison of classification properties is available only in the **Results** panel of the search. Only classifiable objects are displayed in the comparison table.

Open the **Arrange** panel by clicking ⚙.



Note:

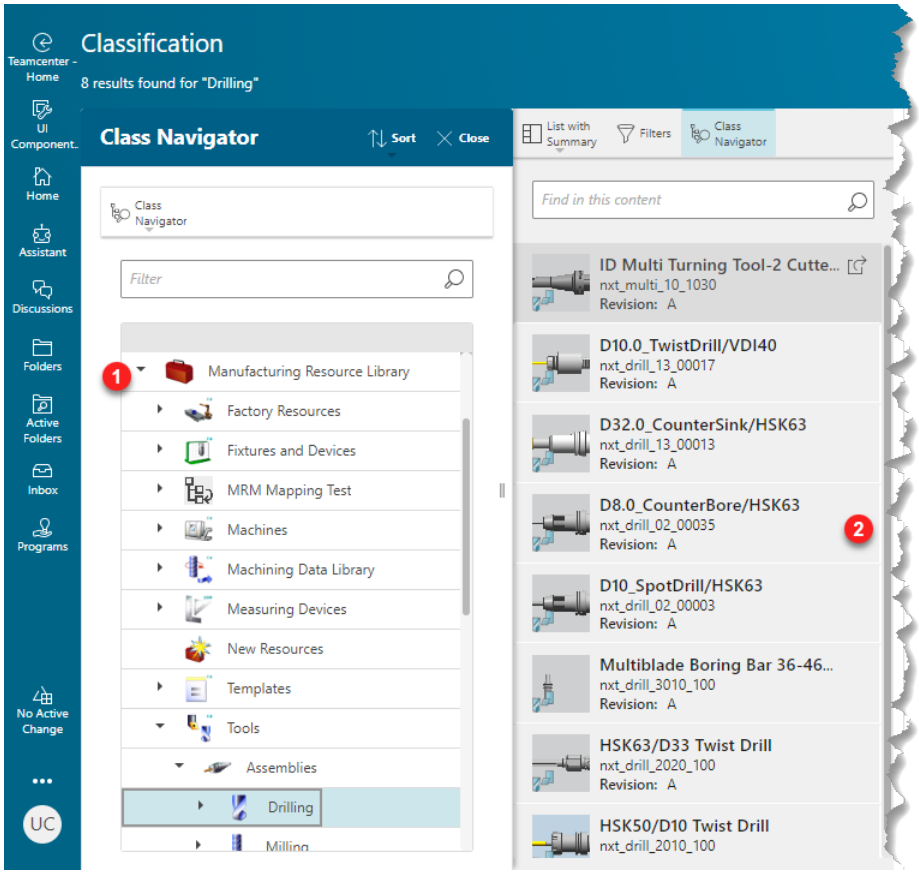
When an object is classified in multiple classes, the most recent (by time) classification properties are displayed in the **Compare** table. Older classification properties are not shown but can be seen in the **Selection summary** view.

6. Exploring the classification user interface

The Active Workspace client in Teamcenter provides a rich web-based graphical interface for working with classified objects. The main components are the **Class Navigator**, the **Classification** tab, and the **Classify** panel.

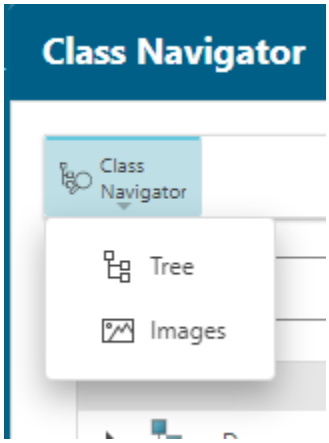
The classification location

The classification location is the starting point when searching for classified objects. The Class Navigator helps you find the class you need.

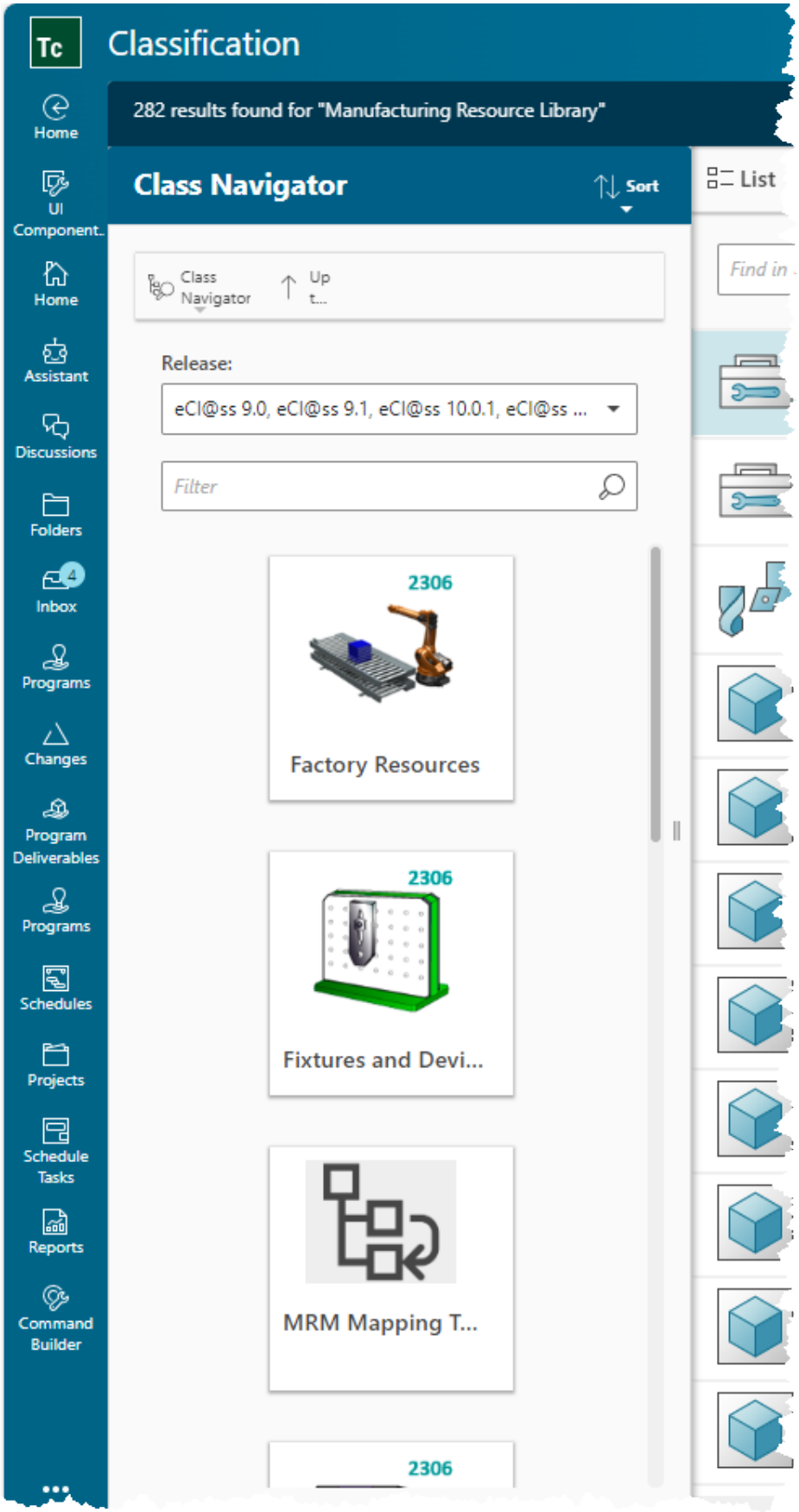


1	**Class Navigator**	Navigate the classification hierarchy to find the desired class and then optionally, use filters to narrow your search.
2	Search results	Select from a list of search results.

Alternatively, you can switch from tree viewing to navigating by image.

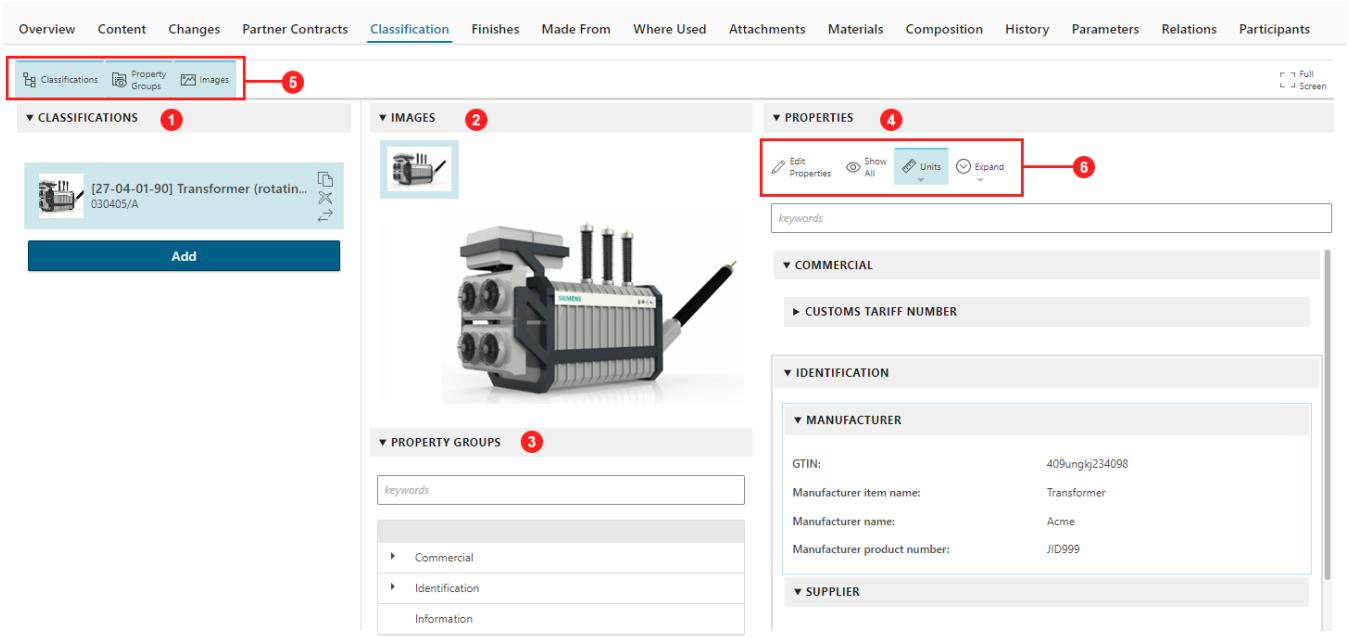


Each node in the hierarchy is then represented by an image.



The Classification tab

The **Classification** tab provides a large area to view, edit, or delete classification data.



Using the full page display improves the process of working with classification data by also allowing you to search and browse the classification hierarchy during a classify operation. For more space when working with the classification properties, click **Full Screen**.

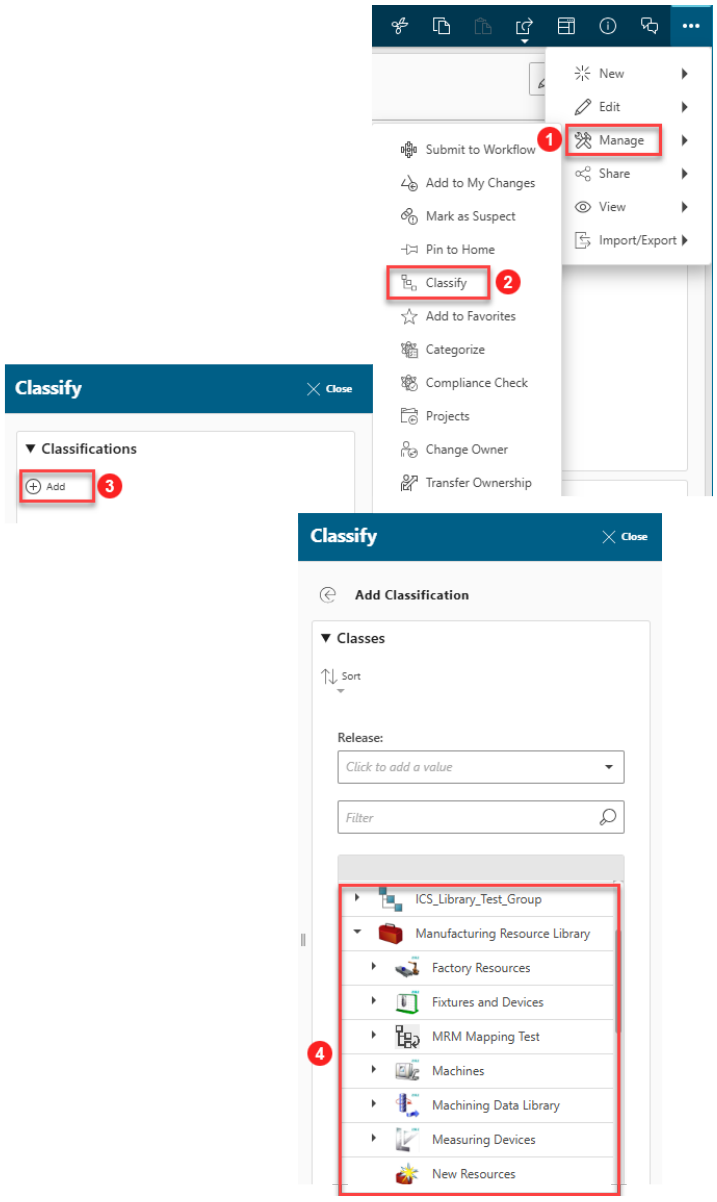
1	**CLASSIFICATIONS**	Lists the classifications for a selected object.
2	**IMAGES**	Displays any images associated with the classified object.
3	**PROPERTY GROUPS**	Displays all property groups 5 used to classify the object. Navigate the property groups by expanding or selecting each of them.
4	**PROPERTIES**	Displays the classification properties of the selected object.
5	Tab-specific buttons	Hide areas of the user interface to provide more viewing space for other areas.
6	Property-specific buttons	Edit property values. Show or hide the display of empty properties. This helps keep the focus on the properties containing a value.

Specify whether you enter metric or non-metric values. The values are always stored in the base unit of the class regardless of which unit system you use to enter them.

Expand or collapse all the property groups.

The Classify panel

The **Classify** panel provides the option to classify without opening the **Classification** tab.



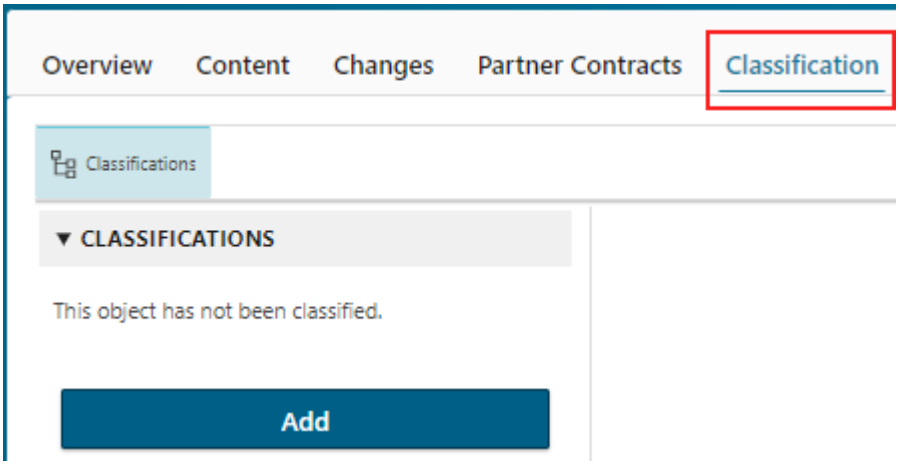
7. Classifying objects

Classify an object using the Classification tab

When you classify an object (for example, an item revision, document, or model), you add searchable attributes to the object and relate similar object types. Classifiable object types are set by your Teamcenter administrator.

1. Select an object to classify.

2. Click the **Classification** tab.



   If a standalone classification object (ICO) exists in the database that has the same ID as the object you are classifying, you will be asked if the object should be connected to that ICO, and therefore, classified in the ICO's class.

3. In the **CLASSIFICATIONS** pane, click **Add**.

4. Do one of the following:

   - In the **Filter** search box, type the name of the class and press Return.
   - Select subclasses from the list of available classes.
   - **Search for a class based on classification parameters**.

5. Enter the classification property values, complete the required and optional information, and click **Classify**.

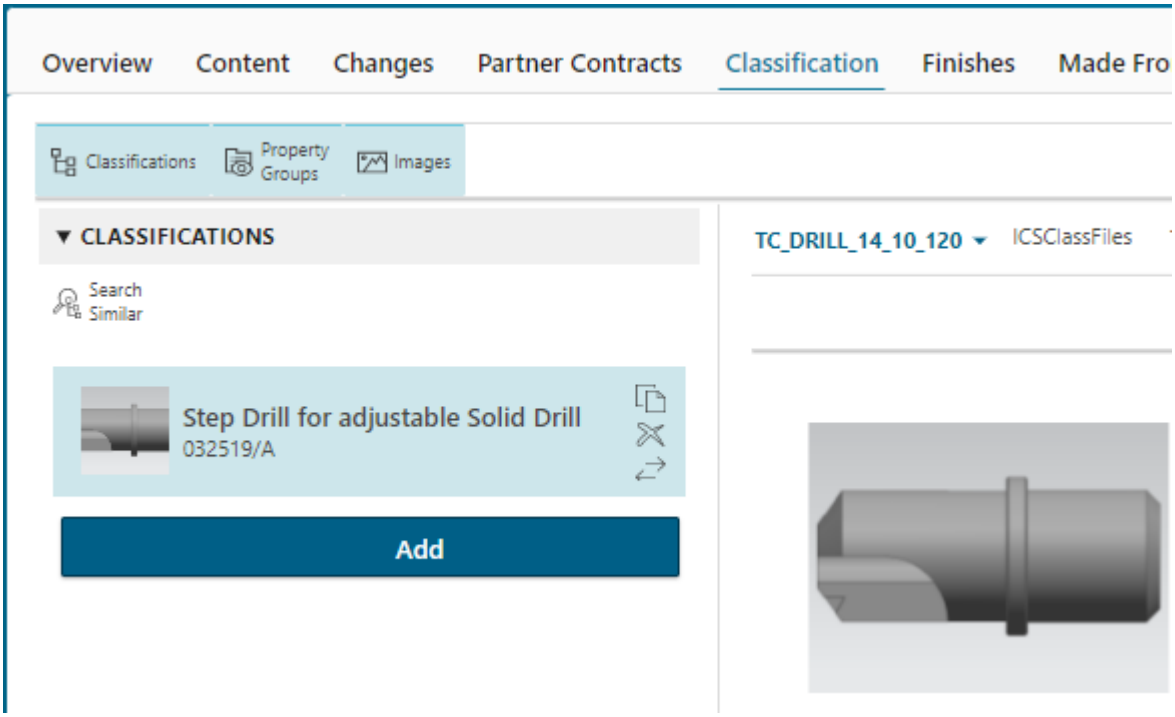
   You can enter multiple values for properties for which your administrator set up an array by entering the values vertically until the set number of entries is reached.

123
456
789
12
234
Only 5 entries are allowed.

> Note:
>
> When you enter a date, it is saved in the format set by the classification administrator. This may not be the format in which you enter the date.

The classification information is saved and displayed in the **PROPERTIES** section of the work area.

The classification is displayed in the **CLASSIFICATIONS** pane.



6. (Optional) Edit or delete the classification information if necessary.

7. (Optional) **Classify the object in a second class.**

Classify an object in a suggested class

> Note:
>
> This functionality is available only when the AI assisted classification is deployed.

When you classify an object, Teamcenter provides you with suggestions of classes that may be suitable for classification. The suggestions are based on an artificial intelligence engine that is trained on data in your database. The AI engine suggests classes based on properties that are specified in preferences.

1. Open the object to be classified in the **Classification** tab.
2. Click one of the suggested classes.

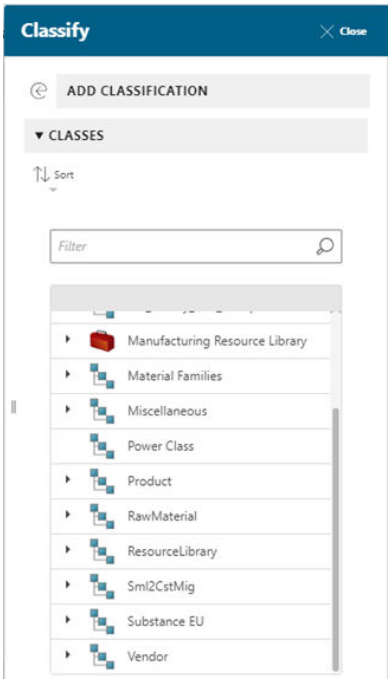
   You see the class with properties pre-populated by the most likely values.
3. Enter property values and click **Classify**.

Classify an object using the Classify panel

When you classify an object (for example, an item revision, document, or model), you add searchable attributes to the object and relate similar object types. Classifiable object types are set by your Teamcenter administrator. The Classify panel allows you to classify objects without opening the Classification tab.

> Note:
>
> The **Paste** command is not available in the **Classify** panel. To perform this action, open the **Classification** tab.

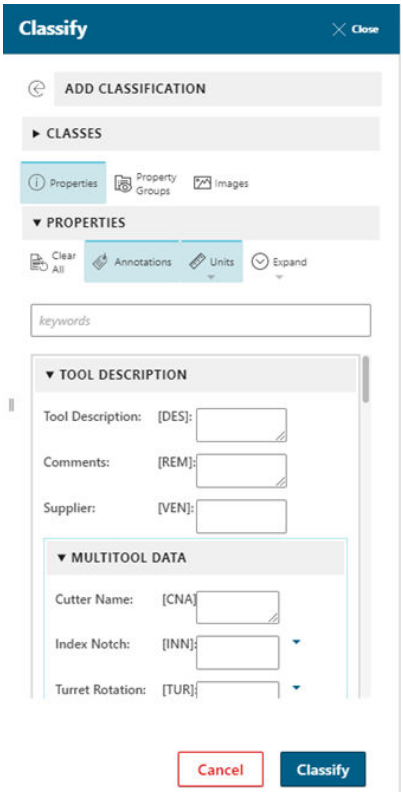
1. Open the object to be classified.
2. Click **More Commands** ••• > **Manage** > **Classify**.
3. Click **Add**.



4. Do one of the following:

   - Type the name of the class to search for.
   - Navigate the hierarchy to find the desired class.
   - **Search for a class based on classification parameters**.

   When you reach a storage class, the properties are displayed at the bottom of the panel.

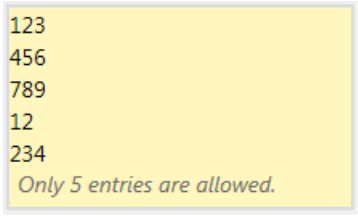


5. Select the unit system in which you want to classify the object. If the class you selected is a fixed unit class, the **Metric** and **Non-Metric** options are for information purposes only. If the class you selected is not a fixed unit class and you switch between units:

   - Corresponding attribute values for integers and real numbers are converted to the other unit system, and the units displayed are also changed accordingly.
   - Key-LOVs are converted to the key and value pairs for the destination metric or nonmetric value system.
   - Other attribute types (such as strings) remain unchanged.

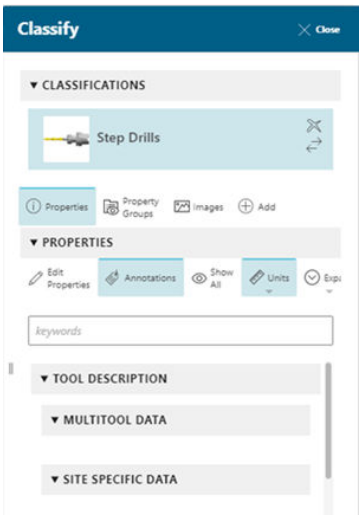
6. Enter the classification property values, complete the required and optional information, and select **Classify**.

   - You can enter multiple values for properties for which your administrator sets up an array. You can do this by entering the values vertically until the set number of entries is reached.



- When you enter a date, it is saved in the format set by the classification administrator. This may not be the format in which you enter the date.

The classification information is saved and displayed in the **Overview** tab. If you reopen the **Classify** pane, the properties of the classified objects are displayed.



7. (Optional) To browse only the properties in a specific property group, click **Property Groups** and select a group, and then click **Properties**.

   Only the properties in that property group are displayed.

   > Tip:
   >
   > Click the class tile to view all properties again.

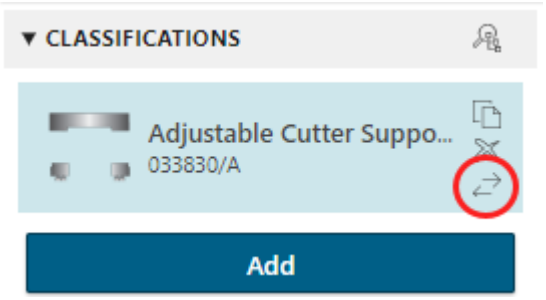
8. (Optional) Edit or delete the classification information if necessary.

9. (Optional) Classify the object in a second class.

Reclassify an object

1. Open the classified object in the **Classification** tab or the **Classify** panel.

2. Click **Reclassify**.



3. Select a new classification class.

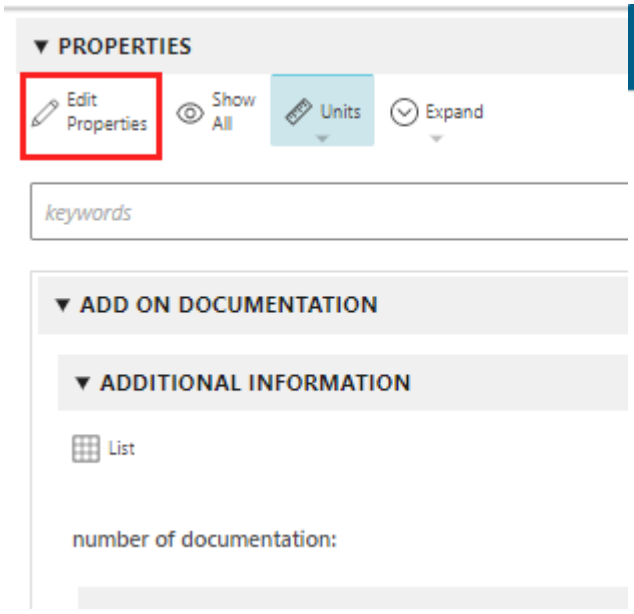
4. Click **Classify**.

Edit object properties

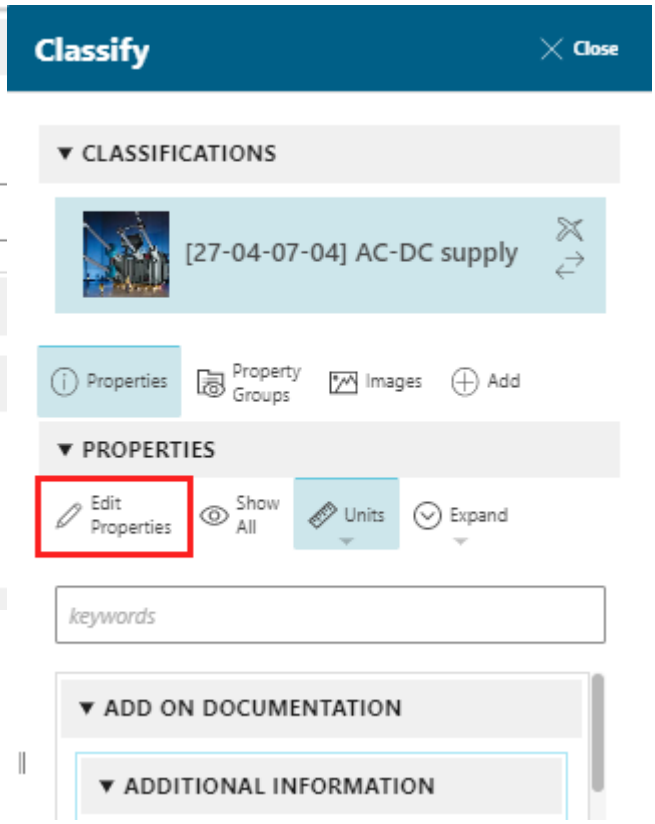
1. Open the object in the **Classification** tab or the **Classify** panel.

2. Click **Edit properties**:

In the Classification tab



In the Classification panel



3. Modify the property values.

4. Click **Save**.

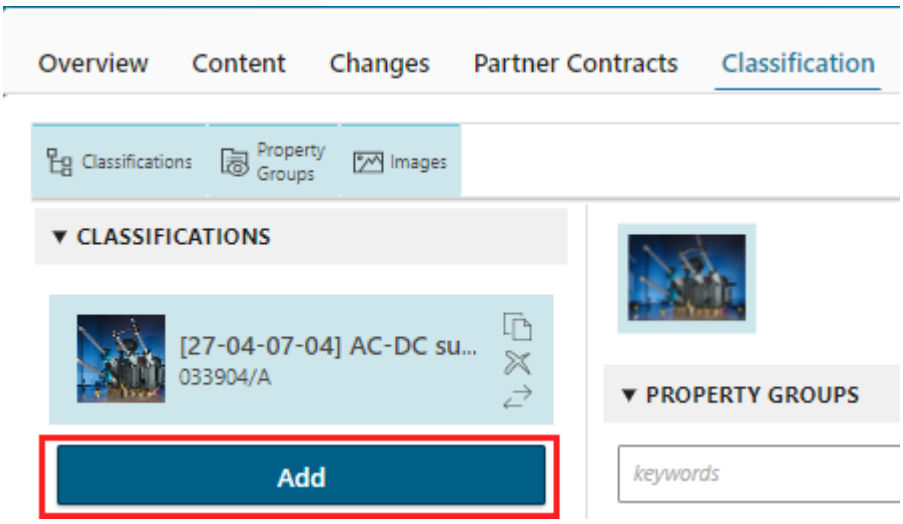
Viewing and authoring classification data in your preferred language

Teamcenter supports adding translations for your classification attribute values. Additionally, you can mark these with a status such as **Approved** or **Pending**. These translations are saved with the classification object.

The **Edit localization** feature is available for traditional basic classification classes only. You cannot use this feature with classification standard taxonomy classes.

Classify an object in multiple classes using the Classification tab

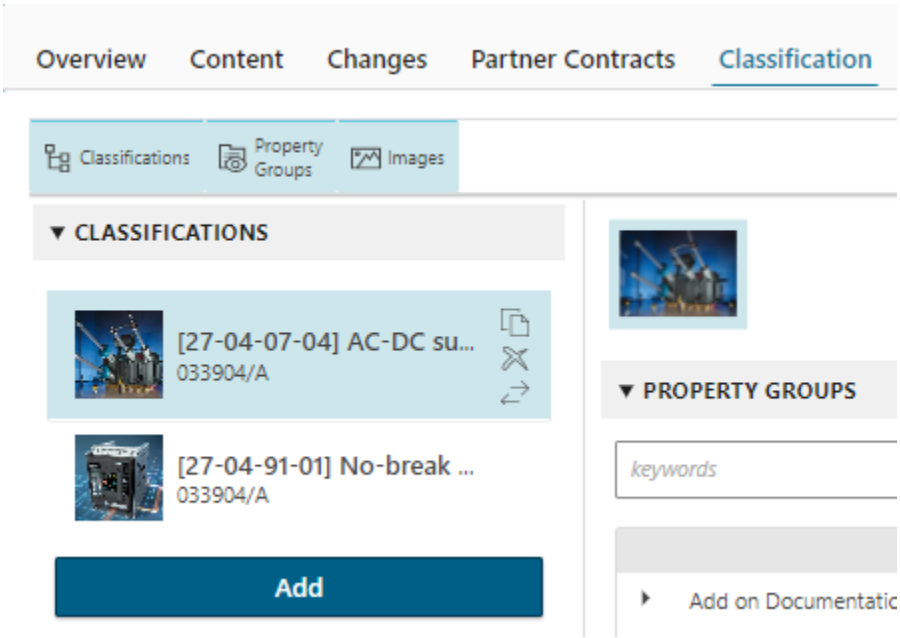
1. Open the classified object that you want to classify in an additional class and click **Add**.



2. Select the new class, add property values, and click **Classify**.

   When you select the new class, the values of any attributes that are common to both classes are automatically entered into the same attribute in the new class. If these values are not appropriate for the new class, modify or remove them by clicking **Clear All**. To remove them individually, click in the cell and remove each undesired value.

The object is now classified in multiple classes.

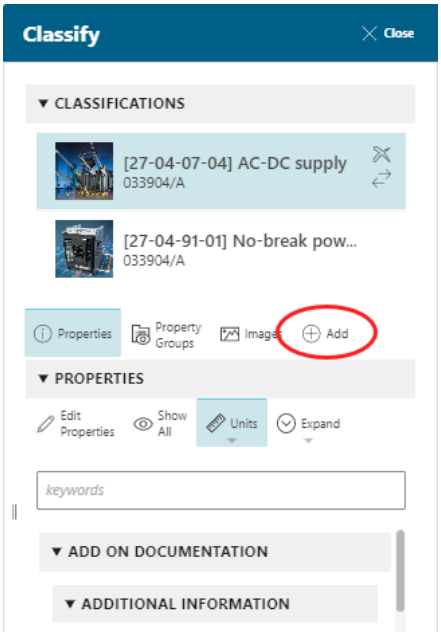


The **PROPERTIES** section displays information about each selected classification.

Classify an object in multiple classes using the Classify panel

1. Open the classified object that you want to classify in an additional class and choose **More Commands** > **Manage** > **Classify**.

2. Click ⊕ in the **Classify** panel.



3. Select the new class and add property values.

   When you select the new class, the values of any attributes that are common to both classes are automatically entered into the same attribute in the new class. If these values are not appropriate for the new class, modify or remove them by clicking **Clear All**. To remove them individually, click in the cell and remove each undesired value.

4. Click **Classify**.

The object is now classified in multiple classes.

Classifying multiple objects simultaneously

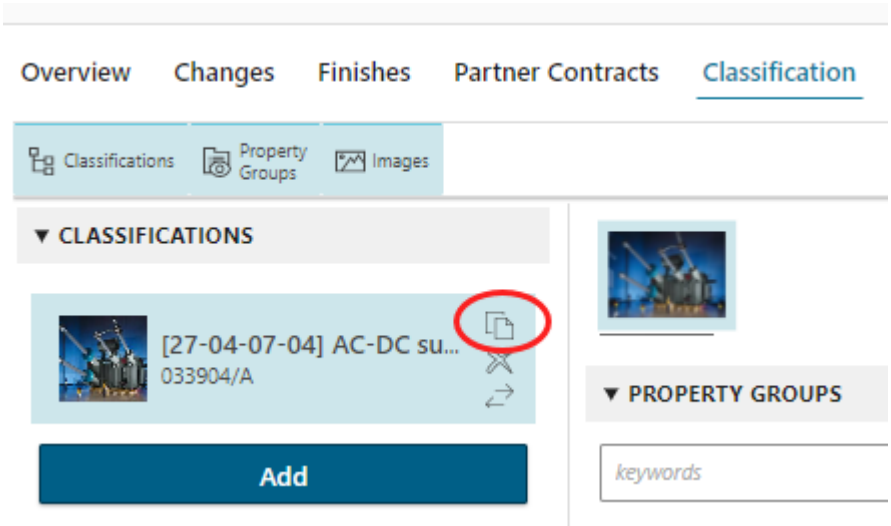
> Note:
>
> This functionality is available only when the AI assisted classification is deployed.

A classification administrator can run a utility that classifies multiple objects simultaneously based on definable properties. This classification process is carried out using artificial intelligence. The process sends the objects to a workflow. Specified users receive a notification, and they can then decide whether to accept the suggested classification or, if it is not appropriate, to delete it.

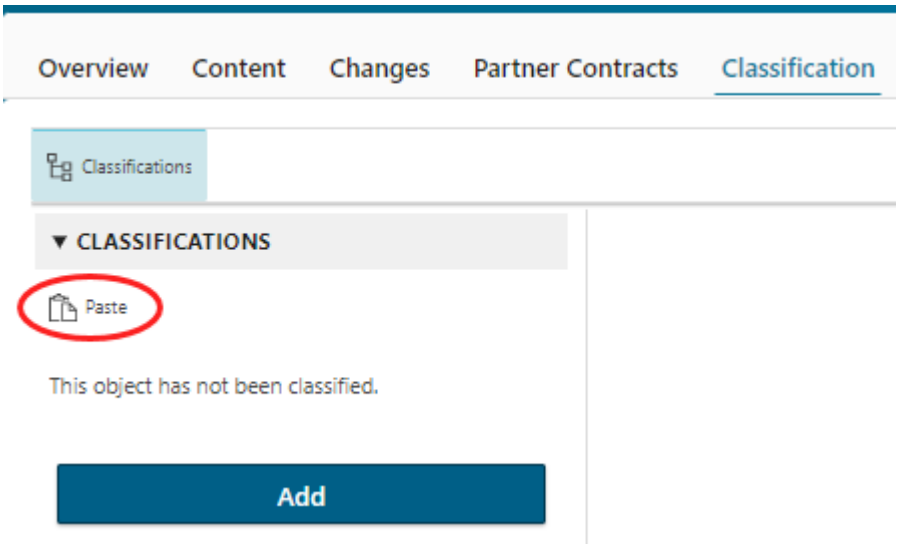
Classify an object based on the properties of an existing classified object

If an object that you want to classify has very similar properties to an object that is already classified, you can copy the classification properties of the existing object and use them as the basis for classifying the new object.

1. Select the classified object with similar properties and click **Copy**.



2. Open the new object to be classified and click **Paste**.

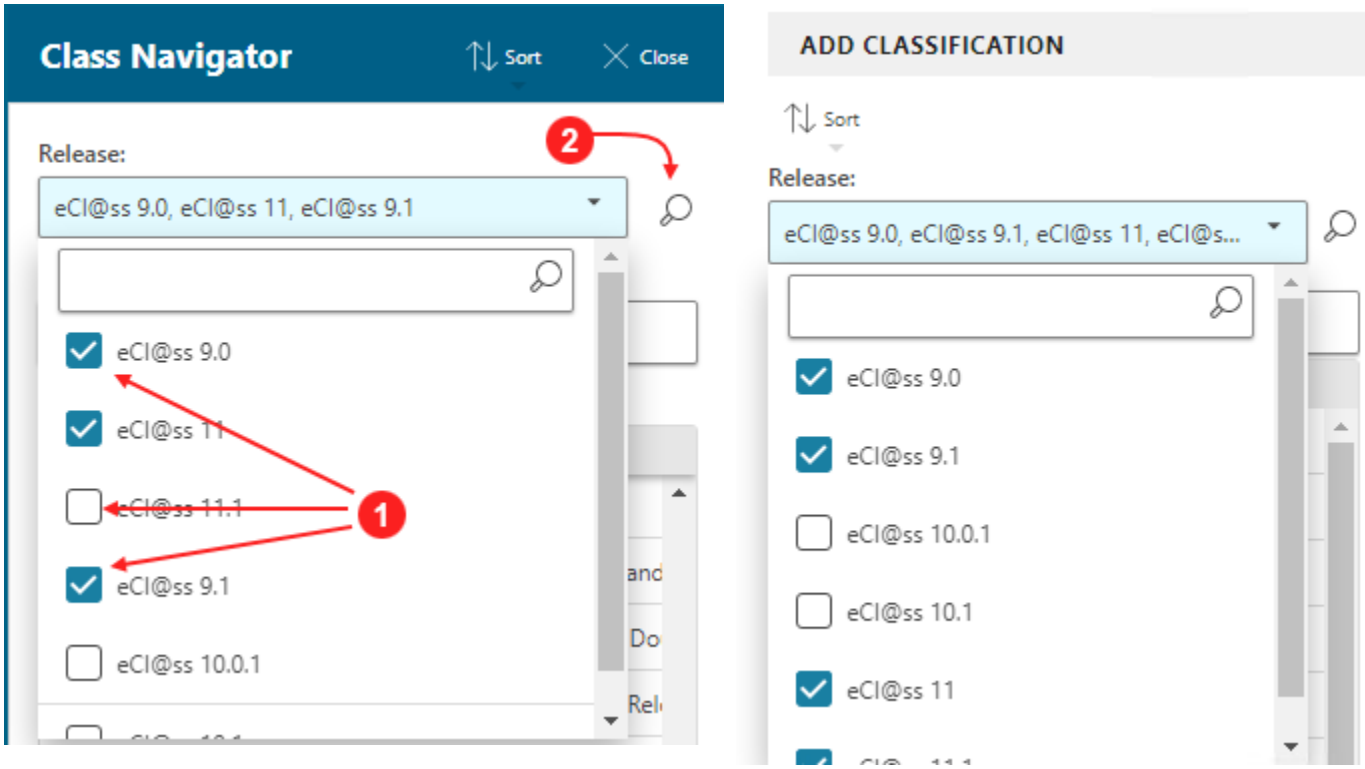


The classification properties of the source object are opened in edit mode. You can now modify them and save them as the classification properties of the target object.

Classify in multiple versions of a hierarchy

This functionality is only available in Advanced classification and ECLASS.

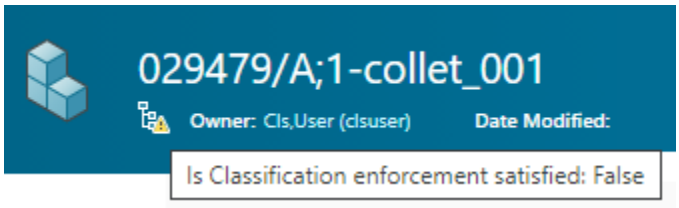
If your company uses multiple versions of a classification hierarchy, you can set a filter to more easily find the appropriate class. This filter is available in both the **Classification** tab and the **Classification** location.



By default, all releases are selected. After choosing the releases that you require, click 🔍 to update the hierarchy.

About mandatory classification

If your administrator has configured classification enforcement, then you may see the following symbol after you create new objects.



This means that your business process requires that you classify this type of object. You must either classify the object or assign the classification process to a colleague. To do this, submit the object to a workflow that uses the **Review Classifications** template and assign it to the responsible subject matter expert. The object to be classified is displayed as a target of this workflow and can be opened from within the workflow. After classification, the subject matter expert completes the workflow affirming that the object is correctly classified and the warning sign is removed from the classified object.

Delete classification information

1. Open the classified object for which you want to delete the classification information.

2. Click **Delete** .

The classification information is deleted from the object. The object itself remains in the database but is no longer classified.

8. Working with classification objects

Create standalone classification objects

Standalone classification objects, also referred to as catalog items, are used for storing unique classification descriptions but do not necessarily classify an object.

> Tip:
>
> See **How classification works** for some background knowledge.

1. In the Class Navigator, select the desired class.
2. Click **Create Classification Object** ⊕ in the primary work area. This button is available in the **List with Summary** and **Table with Summary** views only.

   The class attributes are displayed.
3. Enter an ID and the attribute values.

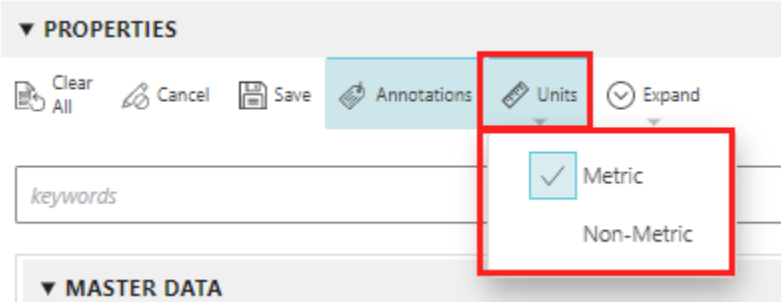
   The ID must be unique in the database.
4. Click **Create**.

The standalone classification object is displayed in the **Recent** pane until it is indexed, after which it is displayed in the primary work area.

> Note:
>
> The **Create Classification Object** button is available only when the presentation layer is installed.

Working with unit systems

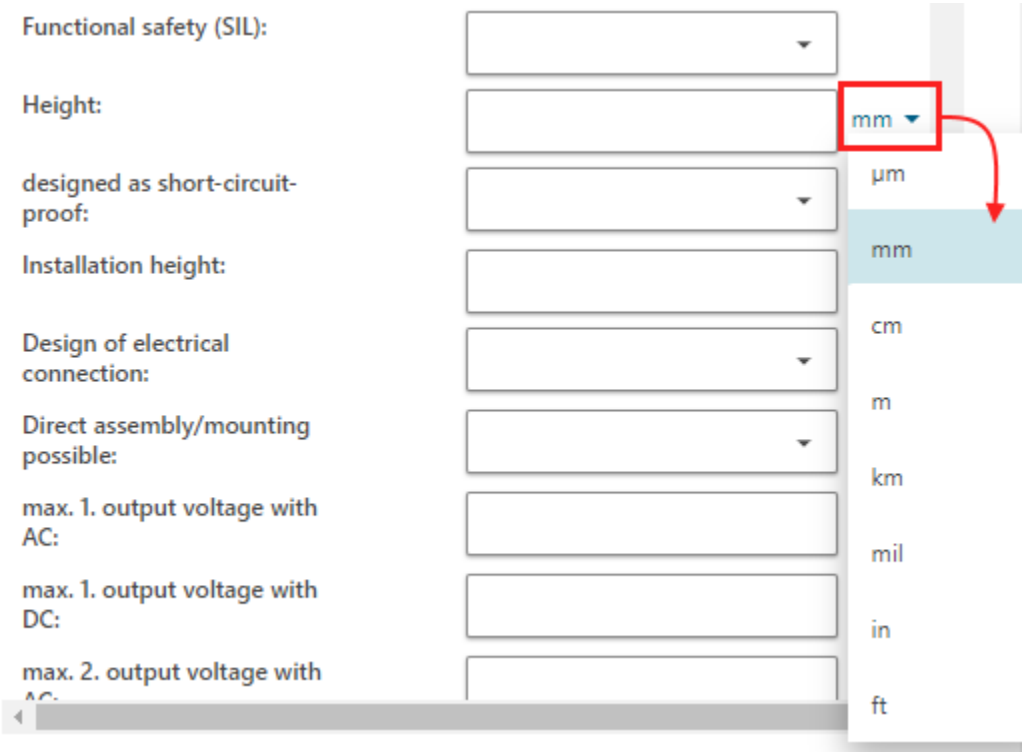
When classifying an object, you select the unit system in which you want to classify it.



If the class you selected is a fixed unit class, the **Metric** and **Non-Metric** options are for information purposes only. If the class you selected is not a fixed unit class and you switch between units:

- Corresponding property values for integers and real numbers are converted to the selected unit system and the units displayed are also changed accordingly.
- Key-LOVs are converted to the key and value pairs for the selected unit system.
- Other property types (such as strings) remain unchanged.

You can convert the display to a different unit, or enter a value in a different unit, but the value is always stored in the base unit specified in the property definition.



If you convert a value from a larger unit to a smaller unit, for example, 5000 kg to 5,000,000,000 mg, but the format of the property does not support that value (for example, the attribute can only contain 4 digits), the value is not converted.

If the units are configured for optimization, then entering 1000 m, for example, is converted to 1km in the display. The value is displayed with the least number of leading or trailing zeros for readability.

Sharing classified objects

Use one of the following methods to share a classified object:

- **Multi-Site**

  Use Multi-Site to replicate classification object to another site. Additionally, you can transfer the ownership of the nodes.

  You cannot transfer the ownership of classification standard taxonomy objects.

- **Briefcase file**

  Replicate classified object at another site and, optionally, transfer ownership.

  All object types for which you want to transfer ownership using a briefcase file must be added to the **Briefcase_ownership_transfer_supported_types** preference.

  You cannot transfer the ownership of classification standard taxonomy objects.

- **PLM XML**

  Replicate a classification object to another site. Unlike the other two sharing methods, sharing using PLM XML creates a copy of a classification object at the target site (creates a different UID of the object at the target site). This prevents you from sharing using the other two methods.

  This method is not supported for classification standard taxonomy objects. If you export an object classified to a CST class with PLM XML, the resulting file is blank.

Share classified object using Multi-Site

1. Search for the classified object that you want to share and choose **More Commands** > **Share**>**Share with Sites** in the primary toolbar.

2. Select the target site.

3. In addition to the regular transfer options, select the following classification-specific options:

Option	Description
Option Set	Select **MultiSiteExpOptSet**.
Transfer Site Ownership	Transfers the ownership of the classified object to another site.

4. Click **More Commands** > **Share**.

The classified objects are shared to the target site. This is an asynchronous process. You can monitor the status in the **Alerts** area.

Replicating the classification object using a briefcase file

1. Search for the classified object that you want to share.
2. (Optional) Mark the object for ownership transferal by selecting **More Commands**••• > **Manage**>**Transfer Ownership** in the primary toolbar.
3. Choose **Share**>**Export to Briefcase**.
4. Select the target site.
5. In **Transfer Option Set**, select **TIEUnconfiguredLLBCZExportDefault**.
6. Click **Export**.
7. Download and give the exported BCZ file to the target site.
8. At the target site, import the file with the **Import from Briefcase** command.

The nodes and, if selected, their classification objects, are shared to the target site. This is an asynchronous process. You can monitor the status in the **Alerts** area.

Replicating classified objects using PLM XML

Sharing a classified object using PLM XML is a two-step process: first you export the object, and then you can share the resulting zip file with the second site that imports it using PLM XML.

1. Search for the classified object that you want to export and choose **More Commands**••• > **Share**>**PLM XML Export** in the primary toolbar.
2. Select the appropriate transfer mode.

   The transfer mode you select depends on your data. For classification objects, you must select transfer modes that begin with **CLS**, for example, **CLSExportInstance**.

   Do not use the **ICS** transfer modes as these are not applicable to classification in Teamcenter.
3. Click **Export**.
4. Download and give the exported ZIP file to the target site.
5. Import the file with the **Import PLM XML** command.

   If you import a standalone classification object, you must select the **ConfiguredDataImportDefault** transfer mode.

Understanding how you can create graphics for a class based on templates

There are two ways in which Teamcenter can automatically create part files and JT graphics for a classification object:

- Based on part family templates

  Part family templates are used in NX to define a set or *family* of parts that share similar form, fit, and function but differ based on parameter values (for example, length, width, or diameter) that typically control the physical characteristics of the part (or tool). The part families are created with the help of a Microsoft Excel file that holds a list of all *part family members*.

- Based on template parts

  Any NX part can be used as a template part.

Both part family templates and template parts contain expressions that describe a part parametrically. For example, **L1** represents the length of a drill. If you change the value of **L1**, you can quickly create many drills (*part family members* or *member parts*) of different lengths. Although the behavior in Teamcenter when using part family templates and template parts is very similar, the internal mechanics of how graphics are created for the members varies.

> Note:
>
> Revisioning is supported with the template part method only.

You begin by creating a new classification object by entering attribute values. When you start the process to create graphics, Teamcenter starts the graphics builder executable that communicates with NX in the background and generates a new part family member or member part using the new attribute values. The graphics builder executable also creates a 3D model and, optionally, a JT file. These are stored in the database, and the JT file is displayed in the viewer

To create graphics based on a part family template, you must have write privileges to the template. This is not the case for creating graphics based on template parts.

Create graphics for a class based on templates

1. Classify an object in a class that has a part family template or template part associated by entering the appropriate attribute values.

2. In the primary toolbar, click **More Commands** ••• > **Manage** > **Update Graphics**.

   The **Update Graphics** panel is displayed.

3. Select the type of template to use as the basis for creating the graphics.

4. (Optional) Choose to create a part file or JT file.

5. Click **Update**.

   The part files and JT files are added as attachments to the classified object. You can view the graphics in the 3D viewer. Open the **Part Family** tab to view the part family and template members.

The first time you create graphics, the NX executable is started on the server. This can take a few minutes. Creating subsequent graphics is faster.

9. Browsing a class with property blocks

When classes contain many properties and property blocks you can quickly and easily navigate these classes in the following ways:

- Display the **Property Groups** by clicking .

  > Tip:
  >
  > If you have many images or property groups, it may be helpful to hide the display of images by clicking .

- The complete list of property blocks is displayed on the left. Select one block to display only that property block on the right.

- Deselecting a property block displays all properties on the right.

- Click in a cardinal block on the right and view the attribute values in a tabular format. In edit mode, you can modify values, change the order of the columns, or add more columns by modifying the cardinality controller. If the block also contains polymorphism, the tabular format is not available.

10. View audit logs for classification events

You can view audit logs for classification events.

Procedure

1. Open a component, and click **Audit Logs**.

   The audit logs for classification events appear in the **Classification Logs** section.

11. Import classified data for advanced classification

You can import classified data in BMEcat XML or JSON format in the user interface. The XML files and supporting documents (for example, images) must be available in a local directory that you compress to a ZIP file. The import searches the compressed for the correct input file.

1. Compress the directory structure of the data in a ZIP file.

   If you download BMEcat files from the Siemens Industry Mall, these are already in the appropriate zipped format.

2. In your **Home** folder, choose **More Commands** ••• > **Import/Export** > **Import Classification Data**.

3. In the **Choose File** box, select the ZIP file containing the data.

   Teamcenter searches inside the compressed file for all eligible import files and presents them to you in a list.

4. In the **Select file to import** box, select the XML file containing the data.

   If you import BMEcat data, there may be several versions of the XML file in different languages. These are not localized values. If you import, for example, the English version, and then subsequently import the German version, the German version overwrites the English values. Each of these language files represent master locales.

When the import is complete, you are notified in the **Alert** area where you can view the details of the import. As soon as the data is indexed, it is available for searching.

This feature requires that both the Subscription Manager and Dispatcher Client are running. If the Subscription Manager is not running, no notification is displayed in the **Alert** area, but the operation still occurs in the background.

If the imported data includes classification objects only, at import they are automatically attached to existing objects in the database if they have the same ID. This automatically classifies the existing objects or updates an existing classification on previously classified objects. If there is no existing object with the same ID in the database, a new object is created.