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1 Tekla Structures administrator's release notes

Upgrade guide from Tekla Structures 2016i to Tekla Structures 2017

Administrator's release notes are intended to provide advanced users with instructions on how to apply the additional customizations available in a new Tekla Structures version.

1.1 Administrator's release notes: General settings

General customization settings apply to all user groups. Use these settings together with your own user group settings.

Administrator's release notes: Model templates in version update (page 3)
Administrator's release notes: New configuration - Production Planner (page 7)
Administrator's release notes: Applications & components catalog improvements and maintenance (page 8)
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Administrator's release notes: Model templates in version update

2. Create a new model using an existing model template.
3. Give the model the same name as in the previous Tekla Structures version.

4. Open the 3D view.

5. Diagnose and repair the model.
6. Create a project thumbnail, or add a custom image named thumbnail.png in the model folder. The preferred size of the image is 120 x 74 pixels.
7. Save the model as usual.
   If you do not do this, a message may appear warning about model being created with a previous version.

8. Save the model as a model template.

9. Include the needed catalog files and subfolders from the model folder, and click OK.
10. Remove manually all *.db files (environment database, options databases) from the model folder.

   The *.bak, *.log and xs_user files are automatically removed from the model folder.

   The model template is saved in a location pointed by XS_MODEL_TEMPLATE_DIRECTORY.

   You now have a preview image for your model template. The Applications & components catalog should be in order and easy to use now.

---

**Administrator's release notes: New configuration - Production Planner**

The new Production Planner configuration enables the planning of all kind of production aspects related to detailing, fabrication and construction. The main purpose of Production Planner is processing BIM information in a large scale. The configuration does not provide geometrical modeling or detailing capabilities - Tekla Structures is the information authoring solution, and Production Planner the information consumer.

The Production Planner configuration is based on the existing Project Viewer configuration, but with added as well as removed functionality. Production Planner contains precast exports, such as BVBS, HMS, and EliPlan, which are not available in Project Viewer.
Administrator’s release notes: Applications & components catalog improvements and maintenance

Applications & components catalog improvements

Group sorting

It is now possible to sort predefined groups in non-alphabetical order by adding a Sort index value to groups. This means that you do not need to name groups to "1 - something", "2 - something else" to have them in non-alphabetical order.

Note that:

- Groups are sorted in ascending order.
- You can use negative values as the sort index.
- Empty value is the same as a zero.
- Sorting only applies to predefined groups, not to the default groups that are against the grey background color in the catalog.

Translations to applications

It is now possible to translate macros and external applications. You can also rename them.

To translate:

- Add the albl_macro_<macro nam> translation key and translations to <prefix>_ComponentCatalogDefinitions.ail in the XS_FIRM, XS_PROJECT or XS_SYSTEM folder.
• For external applications, use `albl_exe_<application name>`, without the file extension (.exe).

• Add a translation key for the description and use it in the Description box.

  Description: `albl_CreateSurfaceViewDescription`

• Illegal characters must be replaced with underscore ("_") in the translation key.

<table>
<thead>
<tr>
<th>Translations to CreateSurfaceView macro</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>string_utf8 albl_macro_CreateSurfaceView</code></td>
</tr>
<tr>
<td><code>{</code></td>
</tr>
<tr>
<td><code>entry = (&quot;enu&quot;,&quot;Create Surface View&quot;);</code></td>
</tr>
<tr>
<td><code>entry = (&quot;chs&quot;,&quot;Create Surface View in Chinese&quot;);</code></td>
</tr>
<tr>
<td><code>entry = (&quot;rus&quot;,&quot;Create Surface View in Russian&quot;);</code></td>
</tr>
<tr>
<td><code>};</code></td>
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</table>

<table>
<thead>
<tr>
<th>Translations to Notepad.exe</th>
</tr>
</thead>
<tbody>
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<td><code>string_utf8 albl_exe_Notepad</code></td>
</tr>
<tr>
<td><code>{</code></td>
</tr>
<tr>
<td><code>entry = (&quot;enu&quot;,&quot;Notepad&quot;);</code></td>
</tr>
<tr>
<td><code>entry = (&quot;chs&quot;,&quot;Notepad in Chinese&quot;);</code></td>
</tr>
<tr>
<td><code>entry = (&quot;rus&quot;,&quot;Notepad in Russian&quot;);</code></td>
</tr>
<tr>
<td><code>};</code></td>
</tr>
</tbody>
</table>

Applications & components catalog maintenance

Keep the Applications & components catalog in shape and usable. For more information about the Applications & components catalog, see How to use the Applications & components catalog.

Set `XS_COMPONENT_CATALOG_ALLOW_SYSTEM_EDIT` to TRUE to be able to edit the Applications & components catalog definition files that are located in the XS_SYSTEM folders.

Check and fix the things listed below.

1. There should not be any ungrouped items
Check **Ungrouped items** and add the items to the appropriate group.

2. There should not be any errors in the log
The **Applications & components** catalog shows a **Display message log** button in the lower-right corner of the catalog if there are errors or warnings in the catalog definition files, for example.

If there are references to missing plug-ins, go to the referred **ComponentCatalog.xml** and remove the references manually:

Test thoroughly that these changes do not create any further errors, or change the structure of your **Applications & components** catalog. Check at least the **Ungrouped** and **Legacy catalog** groups.
As in the example above, there may be errors for:

• CatalogPluginComponentItem?CopyModelDirectoryPlugin
• CatalogPluginComponentItem?SaveAsModelTemplatePlugin

3. Hide all non-related applications and components from roles

1. In the Applications & components catalog, select the Show hidden items check box at the bottom.
2. Right-click a component and select Hide/Unhide.

4. Create custom thumbnails

You can create a custom thumbnail for a component.

---

**Administrator's release notes: Snap settings**

- The snap settings were moved from the Options dialog box Mouse settings to the Snap settings and Drawing snap settings dialog boxes. These dialog boxes can be accessed either from the model or from a drawing through File --> Settings --> Snap settings.

- Ortho angles were added.

- Angle interval controls the snapping angle (Angle interval * n). The settings are pre-defined.

- With Custom angles you can define precise angles for snapping.

Note that you need to be careful if you set a snap angle to other than 45 or 90 degrees because this defined reference snap has more weight than grid lines, for example. Consequently, using small angles such as 10, 15 or 30 degrees may not be convenient with the snap.

**Administrator's release notes: Additional ribbon customization**

Tekla Structures can now read a customized ribbon from the firm folder or environments. For example, a main user in a company can now create...
company-level customizations of ribbons and save them in the firm folder. These ribbons are displayed in the Tekla Structures user interface when users access the firm folder.

**Custom tabs via firm folder**

Although ribbon layout customization allows both administrators and users to add new items to the ribbon, it is not always the best way to add new functionality, because the custom ribbon files replace the entire ribbon. For example, if you want to add an extension to the ribbon, it would override the existing layout entirely. This makes user customization and extension customization mutually exclusive. The situation gets even more complicated if a firm ribbon is introduced. To solve this, it is now possible to import external tabs to the ribbon layout without having to modify the ribbon itself. The new tabs are dynamically added at the end of the tab strip in alphabetical order.

Tabs are imported from both the firm folder and environment folders, but they are not loaded from a user-specific folder. Tabs are not configuration specific, so they are imported regardless of the selected Tekla Structures license. For any folder that custom ribbons would be loaded from, there can be a subfolder named `CustomTabs`. Under the `CustomTabs` folder there may be subfolders named `Modeling` and `Drawing`. These two folders may contain any number of freely named `.xml` files that contain the tab contents. In the following example, the firm folder is used:

```
C:\Temp\FIRM\Ribbons\CustomTabs\Modeling\my-custom-tab1.xml
C:\Temp\FIRM\Ribbons\CustomTabs\Modeling\my-custom-tab2.xml
C:\Temp\FIRM\Ribbons\CustomTabs\Drawing\my-custom-tab3.xml
```

In this example, Tekla Structures would load two tabs for modeling mode and one tab for drawing mode. There is no required naming convention, but the file name is used as a reference when determining overrides. For example, if a file `my-tab.xml` (modeling) exists in both environment and firm folders, the firm folder version would override the environment version. The file names are not case sensitive, which means that `ABC.xml` is considered equal to `aBc.xml`, for example. To avoid file name conflicts, we recommend that company administrators prefix their custom tab file names with the company name, and extension developers prefix their custom tab file names with the name of the extension. For example, `MyExtension_TabName.xml`.

**To do**

1. Create the following folder structure in the desired firm or environment folder:
   
   ```
   Ribbons
   ----CustomTabs
   -------Modeling
   -------Drawing
   -----Commands
   ```
2. Create a custom tab using the Tekla Structures ribbon customization tool and click Save. You will find the ribbon customization tool from File menu --> Settings --> Customize --> Ribbon.

3. Open the ribbon file that contains the tab you wish to share from C: \Users\<user>\AppData\Local\Trimble\TeklaStructures\<version>\UI\Ribbons with a text editor, such as Notepad.

4. Remove everything from the file except the first row and the description of the tab that you wish to share.

You can also cut and paste the contents of a tab into a separate file.

5. Click Save as and save the file with a new name, for example mytab.xml, under the \CustomTabs\Modeling or \CustomTabs\Drawing folder. The tabs will then be added either to the modeling or drawing mode ribbons depending on the folder where they are located.

There can be several custom tabs (separate files) in the folder. They are added one after another.

6. If your ribbon uses some custom commands, copy the UserDefined.xml file from ..\Users\<user>\AppData\Local\Trimble\TeklaStructures\<version>\UI\Commands to the \Commands folder created in step 1.

If there are commands that are not available in the configuration, they will be dimmed or left out.

7. Restart Tekla Structures.

The custom tab will be appended to the end of the ribbon regardless of the selected configuration.

The contents of your tab file could be something like this:

```xml
<?xml version="1.0" encoding="utf-16" standalone="yes"?>
<Tab Header="My Tab" IsCollapsed="false" IsUserDefined="true">
  <SimpleButton X="0" Y="0" Width="3" Height="4"
    Command="Common.Interrupt" Text="command:ShortText"
    Icon="command:BigIcon" ShowText="true" ShowIcon="true" />
</Tab>
```

The name of the file does not matter, but it is simpler if you use the same name for the file and the tab. There can be several custom tabs (separate files) in the folder. They are added one after another.

The custom tabs do not appear in the customization tool, so users are not able to edit them. This makes it possible for the company main user to update the contents of the tab, and the users will receive the update whenever they restart Tekla Structures.

**Custom ribbons via firm folder**

Tekla Structures can now read a customized ribbon based on configurations (licenses) in the firm folder or environments. For example, a main user in a...
company can now create company-level customizations of ribbons and save them in the firm folder. These ribbons will be displayed in the Tekla Structures user interface when users access the firm folder.

Details

The customization tool saves the customized ribbons as .xml files, which follow a very specific naming convention:

<Tekla-Structures-configuration_identifier>--<Tekla-Structures-editing-mode>.xml

The two-part name consists of an internal configuration name, a separator of two dash characters (--), an internal editing mode name, and the file name extension .xml. For example, the Full license modeling ribbon would be called albl_up_Full--main_menu.xml.

<table>
<thead>
<tr>
<th>Configuration identifier</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>albl_up_Construction_Modeling</td>
<td>Construction Modeling</td>
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<tr>
<td>albl_up_Developer</td>
<td>Developer</td>
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<tr>
<td>albl_up_Drafter</td>
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<tr>
<td>albl_up_Educational</td>
<td>Educational</td>
</tr>
<tr>
<td>albl_up_Engineering</td>
<td>Engineering</td>
</tr>
<tr>
<td>albl_up_Full</td>
<td>Full</td>
</tr>
<tr>
<td>albl_up_PC_Detailing</td>
<td>Precast Concrete Detailing</td>
</tr>
<tr>
<td>albl_up_Rebar_Detailing</td>
<td>Rebar Detailing</td>
</tr>
<tr>
<td>albl_up_Steel_Detailing</td>
<td>Steel Detailing</td>
</tr>
<tr>
<td>albl_up_Tekla_Structures_Primary</td>
<td>Primary</td>
</tr>
<tr>
<td>albl_up_Viewer</td>
<td>Project Viewer</td>
</tr>
<tr>
<td>albl_up_Production_Planner</td>
<td>Production Planner</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Editing mode</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>main_menu</td>
<td>Modeling ribbon</td>
</tr>
<tr>
<td>edit_draw_menu</td>
<td>Drawing ribbon</td>
</tr>
<tr>
<td>plan_main_menu</td>
<td>Importing ribbon</td>
</tr>
</tbody>
</table>

The loading order in Tekla Structures 2017 is the following:

1. Tekla Structures default ribbon (embedded resources)
2. Ribbons in environment folders
3. Ribbons in the firm folder
4. User-customized ribbons under %localappdata%

As before, ribbons that are loaded later will override the previously loaded ribbons with the same configuration + editing mode combination. For
example, a ribbon defined in the firm folder will take precedence over ribbons in the environment folders.

To do

Use the customization tool to create the modeling and drawing ribbons that you want to share. You will find the ribbon customization tool in File menu --> Settings --> Customize --> Ribbon. Your ribbon files are stored in ..\Users\<user>\AppData\Local\Trimble\TeklaStructures\<version>\UI\Ribbons.

Note that it is also possible to use the ribbons that you may already have created using the ribbon customization in Tekla Structures 2016i.

1. In the defined firm folder, create a subfolder Ribbons and save the customized ribbon files there.

2. If your ribbon uses some custom commands, create a subfolder \Commands on the same level as the \Ribbons folder and copy the file UserDefined.xml from ..\Users\<user>\AppData\Local\Trimble\TeklaStructures\<version>\UI\Commands.

3. Restart Tekla Structures.

If you have a customized ribbon in your own ..\Users\<user>\AppData\Local\Trimble\TeklaStructures\<version>\UI\Ribbons folder, Tekla Structures uses that folder, but you can open the customization tool and click Reset to defaults, and then the ribbon in the environment or firm folder will be taken into use. You can also remove or rename your own customized ribbons to get the new default ribbon from the firm folder directly.

Administrator's release notes: Advanced grid labels update

Advanced grid label functionality has changed since Tekla Structures 2016i, so old advanced grid labels will not work correctly in Tekla Structures 2017. This is because frame type (highlighted in red below) controls only the grid number
and text placement now, not the frame shape. That is now selected with symbol selection (highlighted in green below).
What to do:

1. Open all **Advanced grid labels** standard files
   (*.AdvancedGridLabels.AdvancedGridLabels2Form.xml)
2. Change the symbol to match (or improve) the old appearance.
3. Save the standard file and place it to your environment.

**Administrator's release notes: Small items**

**New advanced option: XS_LEADER_LINE_TO_DRAGGED_DIMENSION_TEXT**

- Dimensioning: General
- Available already in 2016i and earlier versions
- The advanced option `XS_LEADER_LINE_TO_DRAGGED_DIMENSION_TEXT` hides or shows a leader line that is drawn from a dimension line to a manually moved dimension text.
- Hiding the leader line results in a cleaner appearance, but makes it more difficult to identify which dimension text connects to which dimension line.
- Automatically created dimensions do not have leader lines.

![Dimension embeds to nearest concrete edge or to bounding box](image)

**Dimension embeds to nearest concrete edge or to bounding box**

- A new option in the **Dimensioning rule properties** dialog box for selecting whether to dimension embeds to the bounding box or to the nearest edge.
- This makes dimensions easier to read and cleaner but depends on preference.

**Bounding box:**
Nearest edge:

Fill for neighbor parts

Now the drawing View Properties dialog box for neighbor parts has a Fill tab for adding visible fills to neighbor parts. This can be used in GA drawings to easily visualize neighbor objects, for example.
Numeric section view labels

Now it is possible to have section views labeled numerically instead of alphabetically. To do this, go to the Drawing properties dialog box and open the Section view pane. Insert a number in the Start number or letter of section view and symbol label box.
Rotation for merged rebar mark

Now it is possible to set a rotation on the General tab in the Merged Reinforcement Mark Properties dialog box, which was previously possible for single and group rebar marks only.
Tekla Structures administrator's release notes

Administrator's release notes: General settings
**Reference model change management**

The `attributes\ReferenceModelComparisonExcludeFilter.txt` file has been removed.

Localized user interface filters:

- Filter properties from the property details list
- Do not have any effect on the comparison result

Comparison filters:

- Affect the comparison result on the list and the object color
NC: Create pop marks for parts that are site welded

In the Pop-mark settings dialog box, you can now select whether to create pop-marks for parts that are site welded by setting Pop-mark parts welded on site to Yes or No.
1.2 Administrator's release notes: Steel settings

The following customization settings only apply to the steel user group.

Administrator's release notes: Steel components (page 25)

Administrator's release notes: Steel components

The following components have user interface changes:

• Bolted gusset (11)
• Splice plate 2 (62)
• Column with stiffeners W (182)
• Full depth S (185)
• U.S. Base plate (1047)

The following components contain fixes, but no user interface changes:

• Bearing plate (7)
• Haunch (40)
• Column seating (39)
• Cranked beam (41)
• New notch (49)
• Purlin 1 (61)
• Welded beam to beam (123)
• Column with shear plate (131)
• Column splice (132)
• Stub (133)
• Two sided clip angle (143)
• Shear plate simple (146)
• Joist to beam and col. (164)
• Bent plate (190)
• Base plate (1004)
• Stair base detail (1039)
• Base plate (1053)
• Tower member macro (S63)
1.3 Administrator's release notes: Concrete settings

The following customization settings only apply to the concrete user group.

Administrator's release notes: New reinforcement concept - Rebar sets (page 26)
Administrator's release notes: Pour units (page 33)
Administrator's release notes: Automatic hatching of concrete parts depending on cast unit type (page 34)
Administrator's release notes: Curved dimension improvements (page 35)
Administrator's release notes: Detailing manager (page 30)
Administrator's release notes: Double wall edge and opening reinforcement (page 30)
Administrator's release notes: Wall layout tools (page 32)
Administrator's release notes: Other reinforcement improvements (page 37)
Administrator's release notes: Concrete components (page 38)

Administrator's release notes: New reinforcement concept - Rebar sets

Rebar set is a completely new method to create reinforcement. You can more flexibility create reinforcement for various types of concrete geometry, and modify reinforcement easily by using direct modification, existing cutting commands, and by creating various modifier objects. The aim is to support both the new and old rebar concepts. This means that you can mix new and old reinforcements in a structure, and that reports and drawings still work.

1. Check that the reports work with new and old rebars.
   
   • You need to have the **Sum values across all rows** option enabled in Template Editor when calculating the number of bars. With old rebars, the **NUMBER of bars** attribute returned the number of rebars in one group. With the new rebar concept, you will get only individual bars,
with every bar having 1 as the number. This means that you need to sum the values. This has worked in the same way with old single bars so the majority of reports should work.

2. Check or create property pane standard files.
   - Note that every area that is not reading in the Common environment **MUST** localize their own property pane standard files, or copy or share the ones in the Common environment.
3. Add concrete cover UDAs to your environment **IF** your environment is **NOT** reading the `.inp` file folder from the Common environment.
   - Check that you have the following UDA tab for all concrete objects:
If you do not have the **Concrete cover** UDA tab for all concrete objects, your environment is not using the objects.inp file in the Common environment. In this case, add the following tab to all concrete objects in your environment:

```
tab_page("ConcreteCover")
{
    attribute("__CovThickTop", "j_Top", dimension, "%d", no, none, "0.0", "0.0")
    {
        value("", 0)
    }
    attribute("__CovThickBottom", "j_Bottom", dimension, "%d", no, none, "0.0", "0.0")
    {
        value("", 0)
    }
    attribute("__CovThickSides", "j_Sides", dimension, "%d", no, none, "0.0", "0.0")
    {
    }
}
```
For more information about rebar sets, see Create a rebar set in Tekla User Assistance.

**Administrator's release notes: Detailing manager**

**Detailing manager** is a supporting component for all material and object types, and it can be used for applying one or more detailing components to detail any structure by using rules and selection filters. With **Detailing manager** and predefined settings, you can automate repetitive detailing tasks to maximize productivity and reduce errors. The **Detailing manager** plug-in stays intact, and the you can always modify the logic at a later point. In addition, the component re-applies the defined rules when an object is changed.

**Detailing manager** can be used with any object type, regardless of the material. Currently, **Detailing manager** does not support seam or connection components.

**Create rules**

We recommend that you create a few sample cases for different roles in your environment. You can use object-type selection filters and add basic components, for example. You can also create new selection filters and new system component settings to apply the same component with different settings depending on the object attributes.

Creating a rule set with **Detailing manager** is simple and straightforward:

- You can create as many component settings with as many rules as you like.
- You can create rules on separate tabs: select the component, the component attribute settings, and a selection filter for the rule.
- You can create components as **Detailing manager** plug-ins, which keeps the components grouped and re-applies the rules if the object is changed. You can also create the components as individual components to manage the components separately.

For more information about **Detailing manager**, see Detailing manager in Tekla User Assistance.
Administrator's release notes: Double wall edge and opening reinforcement

The Double wall edge and opening reinforcement concrete reinforcement tool is designed to support the double wall detailing workflow by placing vertical, horizontal and diagonal reinforcement around the edges, openings and narrow sections of the panels.

Double walls are precast elements with two panel layers, with a layer of cast-in-place concrete poured after the erection. Double wall edge and opening reinforcement is similar to the Wall panel reinforcement component with the added functionality of connecting U bars between the panel layers. Note that you cannot place reinforcement meshes with Double wall edge and opening reinforcement.
For more information, see Wall panel reinforcement / Double wall edge and opening reinforcement in Tekla User Assistance.

**Administrator's release notes: Wall layout tools**

**Wall layout** tools are a set of components that you can use for creating and modifying all common types of concrete walls, such as precast panels from single layers to double walls and sandwich walls. You can also use the tools for different wall structures that are cast on the site. The wall structures may contain several layers, such as structural, insulation, and void layers, and surface treatment.

You can flexibly change the wall geometry, layer offsets, openings and seam lines by using direct modification. You can create openings and connections with or without details.

**Wall layout** tools are available in the Applications & components catalog:

- **Wall layout** is the main component.
• **Wall layout connector** connects the **Wall layout** components to each other.

• **Wall layout elementation** application creates automatic elementation to **Wall layout** components according to length, height, number, weight or crane lifting capacity.

**Localizing wall layout tools**

Localize a few example settings of typical precast and cast-in-place (CIP) walls in your region as well as the corresponding connections.

Localize the following tools:

• **Wall layout**, modeling settings for the layers

• **Wall layout seam**, typical connections for straight precast panel edges

• **Wall layout connector**, typical connections for wall corners, precast or CIP

• **Wall layout elementation**, typical elementation frame conditions to your region

For more information about **Wall layout** tools, see Wall layout tools in Tekla User Assistance.

**Administrator's release notes: Pour units**

Pour units are management units for cast-in-place concrete that will eventually replace cast units. If you are not familiar with pour units, watch the following webinar: *Improve your way of working - check out the lates Tekla Software developments for concrete*.

You can now select, for example, rebars, embeds, and items in drawings and filters based on the pour unit where they belong. This means that you can create a report or a drawing that lists all the rebars that belong to **Pour 6**, for example.

After the introduction of pour units in Tekla Structures 2016i, the pour unit functionality has been improved in 2016i Service Pack 1 and newer versions. The most important improvement is that pour unit information can be used for filtering the sub-objects of the unit. In practice, this means that you can localize view filters, object representations, selection filters, general arrangement (GA) drawing filters, for example, to select objects such as rebars, embeds, or formwork based on the pour unit where they belong.

**Localization**

The Concrete Contractor role localization should be built around the pour units to make the most of the pour functionality. For now, it may still be useful to maintain cast unit-based reports. The focus is, however, shifting towards the pour units in cast-in-place concrete.

Consider localizing the following items using the new filtering functionality:
• View filters
• Object representation
• Selection filters
• GA drawing filters

You can use the following use cases, for example:
• Select or view pour number x and related rebars
• Select or view pour number x and related embeds
• Select or view pour number x and related anchor bolts
• Select or view pour number x and related formwork

Limitations
• Rebar groups are not automatically split at the point where the pour changes. However, the group can be manually regrouped, because by default the whole group goes to one pour unit. Rebar sets will fix this problem.

For more information about pour units, see Pour units in Tekla User Assistance.

Administrator's release notes: Automatic hatching of concrete parts depending on cast unit type

Automatic hatching can now be set to distinguish between precast and cast-in-place concrete. This will show otherwise identical concrete parts differently based on the concrete type.

This is customized in the automatic hatching scheme (.htc) files, which are mapped to be used by the XS_DRAWING_<drawing type>_HATCH_SCHEMA settings.

Place the Precast/CIP text as the second value, between material type and material name. The value is optional. You do not need to leave empty spaces, as the old files work as before.

Examples:
CONCRETE, Precast, C40/50, CONC, 0.2, 0
CONCRETE, CIP, C40/50, CONCRE, 0.2, 0
This functionality can be useful in GA drawings for presenting different types of concrete structures, or in cast unit drawings for identifying different concrete layers in composite elements such as double walls or half slabs.

**NOTE** When localizing automatic hatching to your environment, note that heavy hatches may decrease the drawing editor performance.

Automatic hatching supports the new gray scale colors. New color numbers are 130 - 133 from darker to lighter.
Administrator's release notes: Curved dimension improvements

New options are available for curved dimension tag settings: Middle tag to be placed at the middle of the curve as curved text. The tag along the curve option can be selected to set the tags at the end of dimension line to follow along the curve instead of having the tags at a fixed angle.

These will only affect the curved dimensions.
For more information about rebar reinforcement, see Add dimensions to reinforcement in Tekla User Assistance.

**Administrator's release notes: Other reinforcement improvements**

**Rebar USAGE as template attribute (Main bar/Tie or stirrup)**

- Reinforcement (single and group) reports can now include the **USAGE** value, which is a numeric field that shows the reinforcement usage as determined by the reinforcement grade, size, bending radius and hook values.
- The attributes are the following:
  
  USAGE: Returns either the string **Main bar** or the string **Tie or stirrup**.
  
  USAGE_VALUE: Returns integer **1** (for **Main bar**) or **2** (for **Tie or stirrup**).
To download an example of a usage report template, click usage report.

Administrator's release notes: Concrete components

Corbel connection (14), Seating with dowel (75), Two sided seating with dowel (76), Seating with dowel to flange (77), Two sided seating with dowel to flange (78)

You can now create the connection dowel by using a custom part, or polybeam objects instead of the default rebar.

Unitechnik export (79) - support for strand pull force

You can now use the main part or rebar UDA to include strand pull force information in the Unitechnik export. You can define this in the Export Unitechnik dialog box on the Reinf. data specification tab.
Rectangular column reinforcement (83)

You can now create spiral stirrup reinforcement using a list option on the **Stirrups** tab of the component dialog box.
Concrete foundation (1030)
You can now exclude the stirrups for the column bottom on the Stirrups tab of the component dialog box.

Round column reinforcement (82)
You can now manage the main bars individually on the Advanced (main bars) tab.
**Hollowcore reinforcement strands (60)**

You can now manage different strand patterns through a catalog .dat file with codes for hollow core profiles, instead of manually controlling strand patterns in the dialog box.

A sample HollowCoreReinforcementsStrands.dat is included in the Common environment, but this should only be used as an example. Sample catalog files can be distributed through Tekla Warehouse, but consider before adding them to your environment, unless you have done extensive research on hollow core industry standards.

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**Reinforcement mesh array in area (89) works with one part input**

There is a new tool, *Reinforcement mesh array (91)*, that has the same functionality as *Reinforcement mesh array in area (89)*, except that the input is only part.

You can use *Reinforcement mesh array (91)* to systematically create several mesh objects according to the defined setting with overlaps.
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