TEKLA
A TRIMBLE COMPANY

Tekla Structures

Templates and Reports Guide

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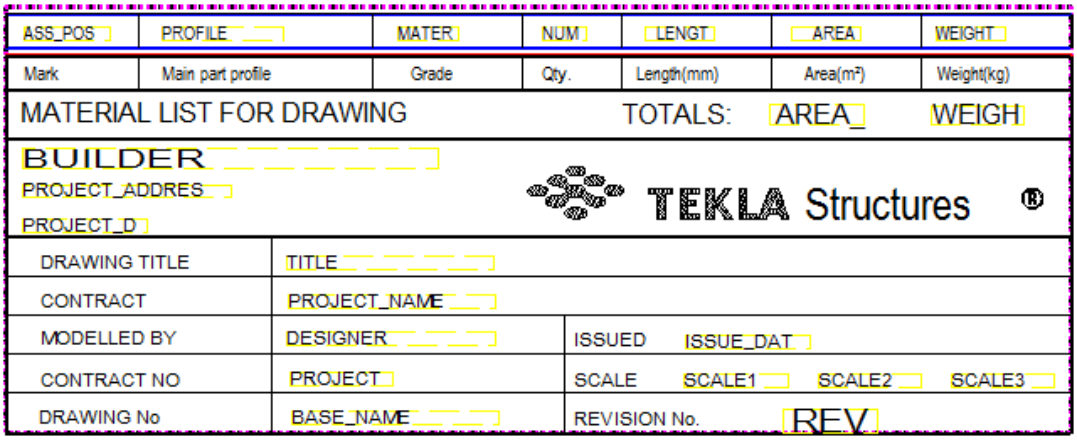
1 Templates

Templates are descriptions of forms and tables that can be included in Tekla Structures. Templates are either graphical or textual. Graphical templates can be included in drawings as tables, text blocks, and drawing headers. Textual templates can be used as reports. The contents of the template fields are filled in by Tekla Structures at run time.

Tekla Structures includes a large number of standard templates you can use. Use Template Editor to modify existing templates, or create new ones to suit your needs. Graphical template definitions have the file name extension `.tpl`. Textual template definitions have the file name extension `.rpt`.

Example



For more information on using templates, see the Template Editor Help.

To access Help, open Template Editor and click **Help** --> **Contents** .

See also

Creating a template on page 3

Reports on page 23

Templates on page 3

1.1 Creating a template

To create a template:

1. Click **Drawings & Reports** > **Template Editor**.
2. In Template Editor, click **File** > **New**.
3. Select the template type and click **OK**. A new empty template is created.
4. Add new rows in the template.
   a. Click **Insert** --> **Component** --> **Row** to add a new row.
   b. Select a content type for the row and click **OK**.
   c. Repeat steps a–b for each new row.
5. Add value fields to get the required data from your Tekla Structures database.
   a. Click **Insert** --> **Value field** .
   b. Click a point to define the location of the field within the row.

      The **Select Attribute** dialog box appears prompting you to select an attribute for the value field.
   c. Select an attribute and click **OK**.
   d. Repeat steps a–c for each value field.
6. Save the template.
   a. Click **File** --> **Save as...**
   b. Browse to the template folder `..\environment\<your_environment>\template`.
   c. In the **File name** field, enter a name for the template.
   d. Click **OK**.

See also Templates on page 3

Creating a template in HTML format on page 4

Creating a template for nested assemblies on page 6

Creating a template for bending schedules or pull-outs on page 10

Adding images in a template on page 12

Creating a template in HTML format

Templates in HTML format give you more possibilities for different layout, fonts, and images. Templates that generate output in HTML format are graphical and have the file name extension `*.html.rpt`.

To create a template in HTML format:

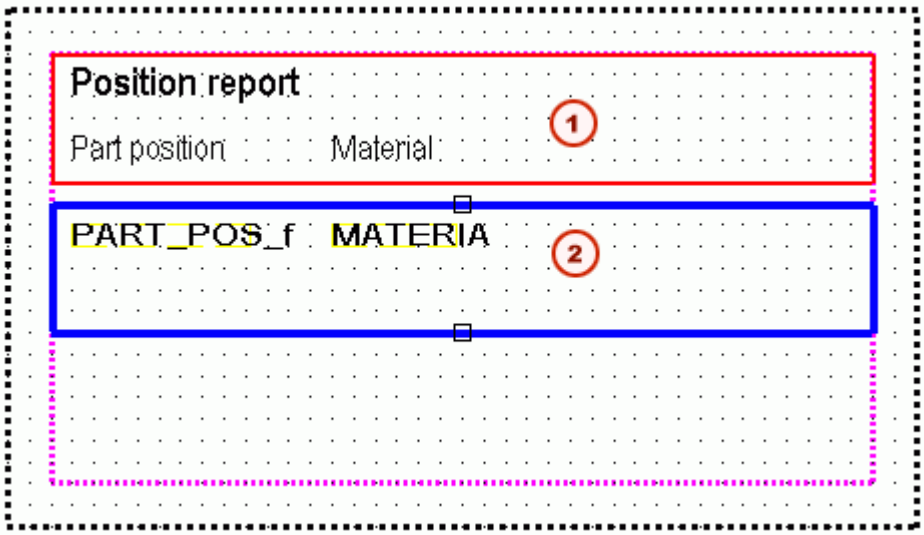
1. Click **Drawings & Reports** > **Template Editor**.
2. In Template Editor, click **File** > **New**.
3. Select **Graphical template** and click **OK**.
4. Add new rows in the template.
   a. Click **Insert** --> **Component** --> **Row** to add a new row.
   b. Select a content type for the row and click **OK**.
   c. Repeat steps a–b for each new row.
5. Add value fields to get the required data from your Tekla Structures database.
   a. Click **Insert** --> **Value field** .
   b. Click a point to define the location of the field within the row.

      The **Select Attribute** dialog box appears prompting you to select an attribute for the value field.
   c. Select an attribute and click **OK**.
   d. Repeat steps a–c for each value field.
6. Add a header for each value field.
   a. Click **Insert** --> **Component** --> **Header...**
   b. Click **Insert** --> **Text...**
   c. Enter a heading for the template, and then click **OK**.
   d. Click a point to define the location of the heading in the header row.
   e. Repeat steps a–d to create headings for all the value fields.
7. Save the template.
   a. Click **File** --> **Save as...**
   b. Browse to the template folder `..\environment\<your_environment>\template`.
   c. In the **File name** field, enter a name for the template.

      Include the extension `*.html.rpt` in the file name. For example, `Part_list.html.rpt`.
   d. Click **OK**.

If you add images in your HTML template, the images should be located in `..\Program Files\Tekla Structures\<version>\nt\TplEd\bitmaps` folder, otherwise they are not shown in the HTML output.

Example



1. Header that contains text fields
2. Row that contains two value fields

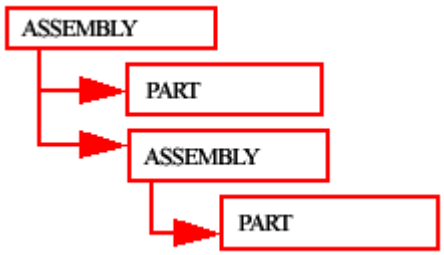
See also

Templates on page 3

Adding images in a template on page 12

Creating a template for nested assemblies

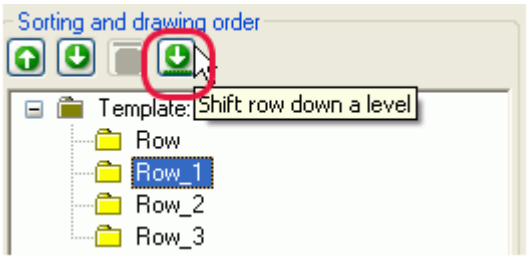
This example shows how to produce a template that displays the hierarchical structure of nested assemblies. You will create a nested assembly structure in a textual template similar to the one in the following picture:



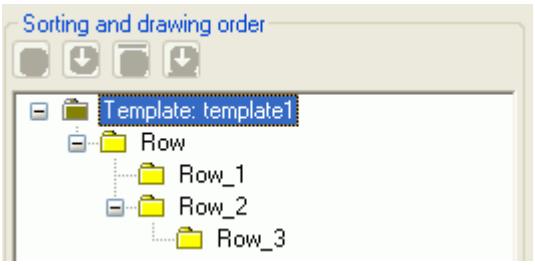
To create a nested assembly structure in a textual template:

1. Click **Drawings & Reports** > **Template Editor**.
2. In Template Editor, click **File** > **New**.
3. Select **Textual template** and click **OK**.
4. Add four new rows in the template.
   a. Click **Insert** --> **Component** --> **Row** to add a new row.
   b. Select a content type for the row, and then click **OK**.

      For the first and third row, select the **ASSEMBLY** content type, and for the second and fourth row, select the **PART** content type.
   c. Repeat steps a–b for each new row.
5. Use the arrow buttons under **Sorting and drawing order** to create a nested assembly structure for the template.
   a. Move the second and third row down one level.
   b. Move the fourth row down two levels.



   The structure should now look like this:



6. Add value fields to get the required data from your Tekla Structures database.

   In this example, the added value fields are assembly or part position, number, and weight.
   a. Click **Insert** --> **Value field** .
   b. Click a point to define the location of the field within the row.

      The **Select Attribute** dialog box appears prompting you to select an attribute for the value field.
   c. Select an attribute and click **OK**.
   d. Repeat steps a–c for each value field.
7. Modify the layout of the template. For example:

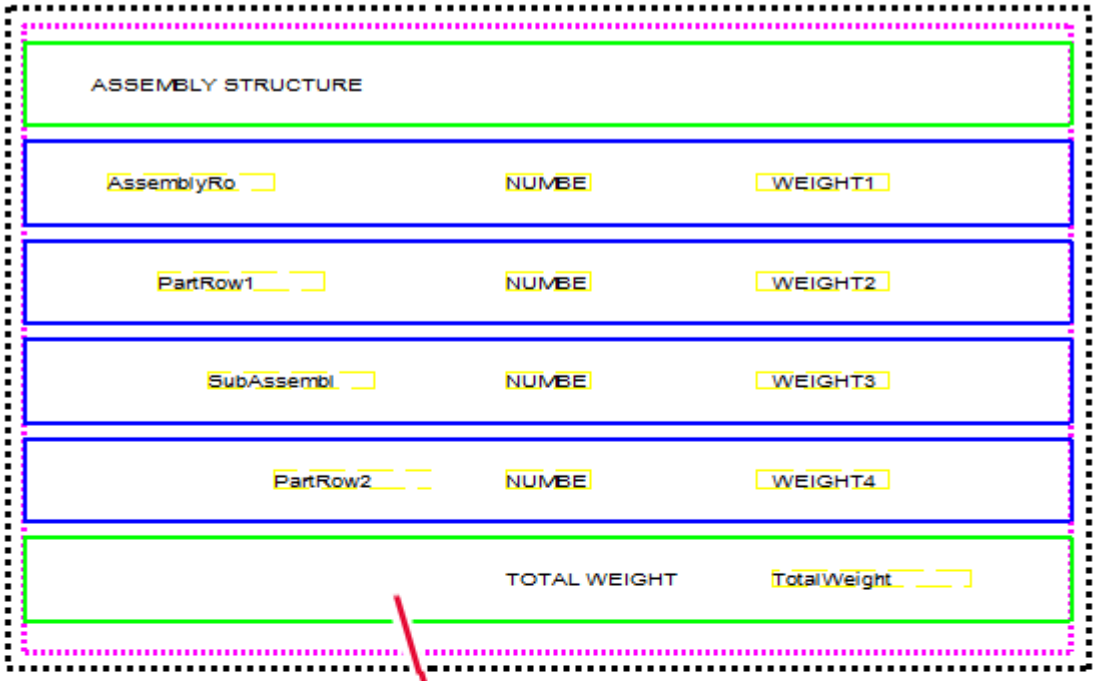
a. Move objects to display the nested assembly structure in the printed report. To do this, select the object you want to move and drag it to the desired position.

b. Align objects. To do this, select all the objects you want to align, right-click and select the appropriate option from the pop-up menu, for example **Align** --> **Right** .

c. Add a header and a footer. To do this, click **Insert** --> **Component** --> **Page header** and **Page footer**. Add the required information to the header and footer.

8. Save the template.

Example Below is an example textual template and a report that has been created using the template:



Assembly structure

TOP/1	1	677.5
SUBTRUSS/5	2	338.7
1001	2	3.6
1002	2	3.4
T/2	2	10.3
T/3	2	12.5
T/4	2	14.8
T/6	2	12.2
T/7	2	14.5
T/8	2	17.0
T/9	2	16.3
T/10	2	9.3
T/11	2	11.9
T/12	2	14.5
T/15	2	73.1
T/16	4	62.7
Total weight		677.5

You can create graphical templates for nested assemblies in the same manner as textual templates. The difference between graphical and textual templates is that in a graphical template you can display project and company information and graphics, such as table outlines, pictures, or symbols.

See also Templates on page 3

Creating a template for bending schedules or pull-outs

You can use Template Editor to create bending schedules or pull-outs on reinforcement bars and bent meshes, and control the type of information that is shown in the bending schedules.

To create a bending schedule:

1. Click **Drawings & Reports** > **Template Editor**.
2. Click **File** --> **New...** .
3. Select **Graphical template** and click **OK**.
4. Click **Insert** --> **Component** --> **Row** to add a new row.
5. Select **REBAR** or **MESH** as the content type for the row.
6. Add value fields to get the required data from your Tekla Structures database.
   a. Click **Insert** --> **Value field** .
   b. Click a point to define the location of the field within the row.

      The **Select Attribute** dialog box appears prompting you to select an attribute for the value field.
   c. Select an attribute and click **OK**.
   d. Repeat steps a–c for each value field.
7. Insert a graphical field to your **REBAR** or **MESH** content type row.
   a. Click **Insert** --> **Graphical Field...**
   b. Click and drag with the mouse to draw a frame.
8. Double-click the graphical field to open the **Graphical Field Properties** dialog box.
9. Click **Free attributes...** and go to the **User** tab.
10. Add the required bending diagram attributes.
11. Save the template.

Example

Tekla Structures — Project number: 1
Rebar list — Project name: Tekla Corporation — Date: 04.01.2007

Position	Size	Quantity	Grade	Length (mm)	Weight (kg)	Weight/Tot	Pull-out picture
1	12	1	A500HW	2310.0	2.1	2.1	
3	12	1	A500HW	1030.0	0.9	0.9	
4	12	1	A500HW	1150.0	1.0	1.0	
7	12	1	A500HW	2540.0	2.3	2.3	
8	12	1	A500HW	1570.0	1.4	1.4	
9	12	1	A500HW	1700.0	1.5	1.5	

See also Bending schedule attributes on page 11

Bending schedule attributes

The following table lists the attributes and values that can be used for bending schedules in templates.

Attribute	Default value	Available values
FontName	romsim	Available template fonts
FontSize	2.0	Available font sizes
FontColor	1 (black)	1 = black 2 = red 3 = bright green 4 = blue 5 = cyan 6 = yellow 7 = magenta 8 = brown 9 = green 10 = dark blue 11 = forest green 12 = orange 13 = gray
RotationAxis	2	0 = by view 1 = by global Z 2 = by local axis
Exaggeration	1	0 = no 1 = yes
EndMark	1	1 = straight 2 = half arrow 3 = full arrow
Dimensions	1	0 = no 1 = yes
BendingRadius	0	0 = no 1 = yes
BendingAngle	1	0 = no 1 = yes

Attribute	Default value	Available values
ImageWidth	Width of the graphical field multiplied by 4.	Number of pixels
ImageHeight	Height of the graphical field multiplied by 4.	Number of pixels

See also Creating a template for bending schedules or pull-outs on page 10

Adding images in a template

You can add images in graphical templates. For example, you might want to include a company logo in your drawings. Tekla Structures supports the following image formats in graphical templates: `.bmp`, `.jpg`, `.jpeg`, `.tif`, `.tiff` and `.png`.

To add an image in a template:

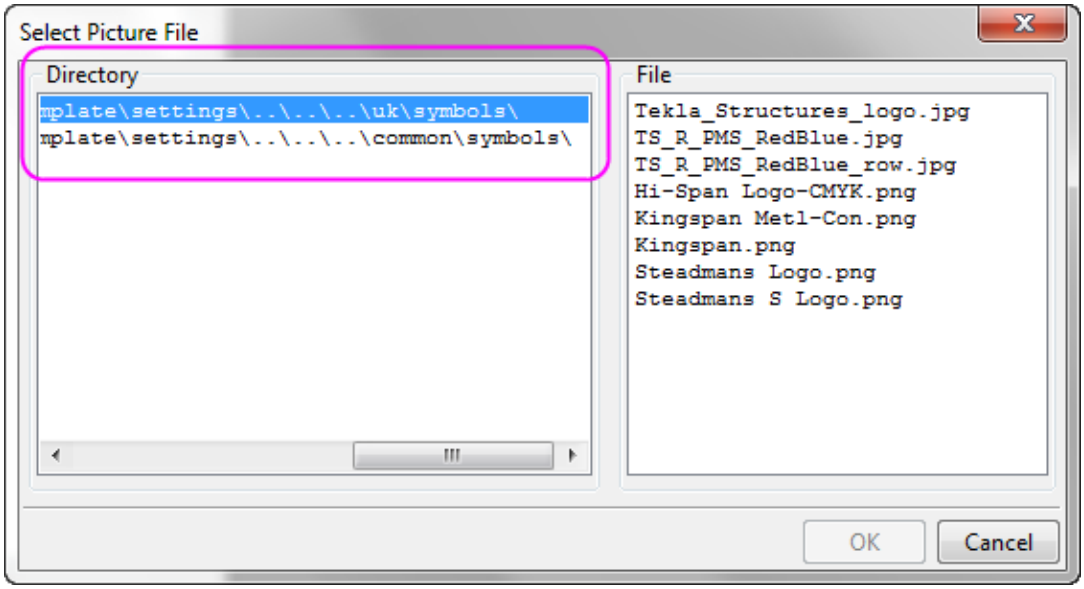
1. Open an existing graphical template in Template Editor.
2. Add a new row in the template.
   a. Click **Insert** --> **Component** --> **Row** to add a new row.
   b. Select a content type for the row and click **OK**.
3. Click **Insert** > **Picture** to open the **Select Picture File** dialog box.

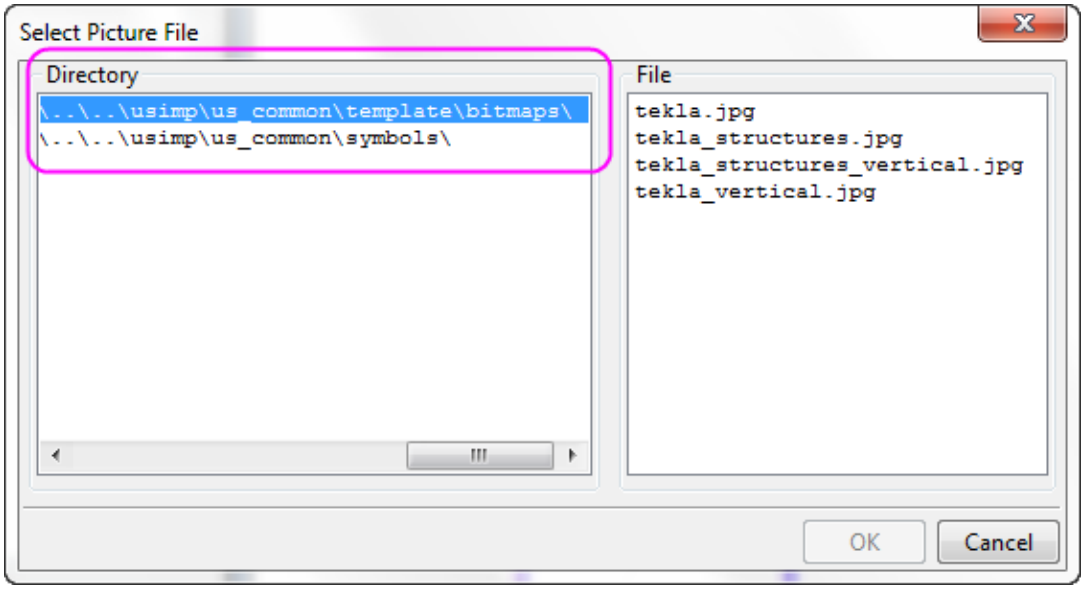
   If a local symbols folder exists, the contents of that folder is shown by default. You can browse the contents of `common\symbols` folder by selecting that folder. If a local symbols folder does not exist, Tekla Structures displays the contents of the `common\symbols` folder.
4. Select an image from the list and click **OK**.
5. Click and drag with the mouse to draw a frame for the image.

- Do not add really large images, as they update very slowly.
- The image may look different in the image editor than in the printout or in the exported DWG file.
- When you export the drawing to DWG, Tekla Structures copies the images in the same folder as the DWG file. If the image for some reason is not in the same folder, only the name of the image is displayed together with an empty frame instead of the image in the DWG.
- If environments have local symbols, the local symbol folder is also included in the search path with the `common\symbols` folder. If the local symbols folder contains files with the same name as `common\symbols` folder, then the local symbol file is used.

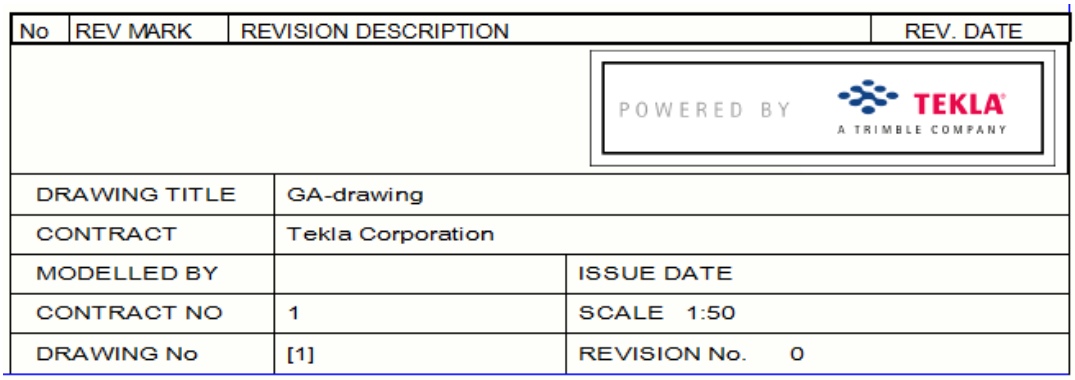
- When you open the drawing that contains images inserted in the template, Tekla Structures first looks for the images in the model folder and then in the `\symbols` folder in the current environment.
- You can define a folder where Tekla Structures always looks for images using the advanced option `DXK_SYMBOLPATH`. You can also define a firm folder for your images.

Example Below are some examples of the **Select Picture File** dialog box showing folder structure in different environments.





In the following example, the Tekla logo has been added in a template.



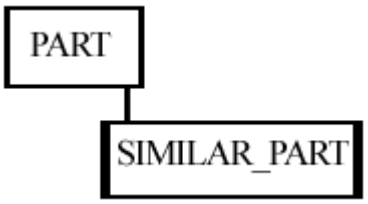
See also Templates on page 3

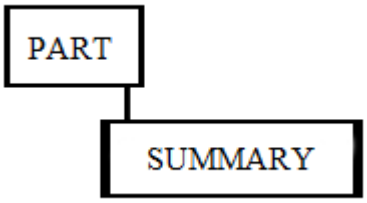
1.2 Content types

When you create a new row in the template, you must select a content type for the row. The content type determines which template attributes you can use in that row.

The available content types are:

Content type	Description
ASSEMBLY	Use to create lists of assemblies and single parts. Includes all assemblies containing the selected parts and bolts.
BOLT	Use to create screw and bolt lists. Includes all bolts connected to selected parts.
CAST_UNIT	Use to create lists of cast units.
CHAMFER	Use to create lists of the length of the chamfers.
COMMENT	Use to create empty rows or rows that only have textual data or lines anywhere on a template.
CONNECTION	Use to create lists of connections.
DRAWING	Use to create drawing lists without revision history information. Use for reports and included drawings.
HISTORY	Use to retrieve history information of the model. You can use this content type with PART, REBAR, CONNECTION and DRAWING rows. The following template attributes can be used with this content type: • TYPE: the type of the historical action, for example update or numbering. • USER: the user who made the change.

Content type	Description
	• TIME: the time the change was made. • COMMENT: the comment which was entered upon clicking **Save**. • REVISION_CODE: the revision code which was entered upon clicking **Save**.
HOLE	Use to create lists of holes.
LOAD	Use to create lists of loads.
LOADGROUP	Use to create lists of load groups.
MESH	Use to create lists of meshes.
NUT	Use to create lists of nuts. Contains all nuts for bolts associated with the selected parts.
PART	Use to create lists of parts.
REBAR	Use to create lists of reinforcing bars.
REFERENCE_MODEL	Use to list the reference models.
REFERENCE_OBJECT	Use to list the reference model objects in a reference model. Only reference model objects that have user-defined attributes are displayed in reports.
REVISION	Use to create lists of revision marks.
SIMILAR_ASSEMBLY SIMILAR_CAST_UNIT SIMILAR_PART	Use to create lists of similar parts. To use this content type, you need to have an empty (hidden in output) ASSEMBLY, PART or CAST_UNIT row in the row hierarchy above the row with SIMILAR_* content type:  You cannot have any rows below SIMILAR_* row content type in the row hierarchy. **Note:** Used in drawings to collect similar object information from the model. All the other attribute information is collected from visible drawing objects.
SINGLE_REBAR	Use to create lists of individual bars in reinforcing bar groups. For example, use it to the get the lengths of the individual bars in tapered reinforcing bar groups.
SINGLE_STRAND	Use to create lists of individual prestressed strands.
STRAND	Use to create lists of prestressed strands.

Content type	Description
STUD	Use to create lists of studs.
SURFACING	Use to create lists of surfacings.
SUMMARY	Use to summarize the contents of the row(s) that are above SUMMARY in the hierarchy.  For example, use PART - SUMMARY hierarchy to summarize the contents of the PART rows.
TASK	Use to create lists of tasks.
WASHER	Use to create lists of washers. Contains all washers for all bolts associated with the selected parts.
WELD	Use to create lists of welds.

See also Template attribute files on page 16

1.3 Template attribute files

Template attributes represent object properties. You can use template attributes in value fields, formulas, and row rules to get the required data from your Tekla Structures database.

When you output the template, Tekla Structures replaces the attribute with the actual value of the corresponding object property. For example, if you include the attribute WEIGHT in a report template, Tekla Structures displays the weight of the model object in the report.

Template attributes are defined in the following files:

File name	Description
contentattributes.lst	This is a container file listing all the files that contain the actual attribute definitions. The files are added with INCLUDE sentences. The order of the

File name	Description
	files included in `contentattributes.lst` defines the reading order of the files. This file is overwritten in the installation when you install a newer version of Tekla Structures. Ensure that you make a copy of this file before updating. Generally, there is no need to modify `contentattributes.lst`. Do not modify it if you are not an administrator.
`contentattributes_global.lst`	This file contains attributes that are hard-coded into the program. **Do not edit this file.**
`contentattributes_userdefined.lst`	This file contains user-defined attributes, the same as in the `objects.inp` file. This file is overwritten in the installation when you install a newer version of Tekla Structures. To use your own attributes in templates and reports, create a copy of this file and add the necessary attributes to that file.

By default, these files are located in `..\Program Files\Tekla Structures\<version>\nt\TplEd\settings`, but the location may be different in your environment.

The search order for the `contentattributes.lst` file is the following:

1. Model folder
2. Project folder defined by `XS_PROJECT`
3. Firm folder defined by `XS_FIRM`
4. Folder defined by `XS_TPLED_INI`
5. Folder defined by `XS_TPLED_DIRECTORY/settings`

See also User-defined template attributes on page 17

User-defined template attributes

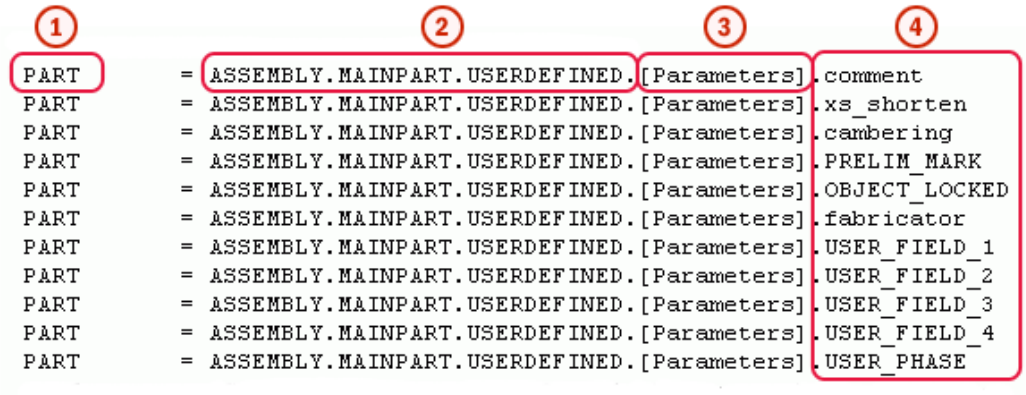
User-defined template attributes are defined in the `contentattributes_userdefined.lst` file. By default, this file includes most of the user-defined attributes that are visible in the part properties dialog boxes. To use your own attributes in templates and reports, you should make a copy of the file, rename it appropriately, and add the necessary attributes to that file.

The `contentattributes_userdefined.lst` file is divided into two sections:

- A list of attribute names and the default settings:

```
..
// Name                          Datatype    Justify  Cacheable  Length
// XXXXX                         FLOAT       RIGHT    TRUE       8
// ------------------------------------------------------------------------
axial1                           FLOAT       RIGHT    TRUE       8
axial2                           FLOAT       RIGHT    TRUE       8
BOLT_COMMENT                     CHARACTER   LEFT     TRUE      64
BOLT_USERFIELD_1                 CHARACTER   LEFT     TRUE      64
BOLT_USERFIELD_2                 CHARACTER   LEFT     TRUE      64
BOLT_USERFIELD_3                 CHARACTER   LEFT     TRUE      64
BOLT_USERFIELD_4                 CHARACTER   LEFT     TRUE      64
BOLT_USERFIELD_5                 CHARACTER   LEFT     TRUE      64
BOLT_USERFIELD_6                 CHARACTER   LEFT     TRUE      64
BOLT_USERFIELD_7                 CHARACTER   LEFT     TRUE      64
BOLT_USERFIELD_8                 CHARACTER   LEFT     TRUE      64
cambering                        CHARACTER   LEFT     TRUE      64
CHECKED_BY                       CHARACTER   LEFT     TRUE      20
CHECKED_DATE                     CHARACTER   LEFT     TRUE      20
comment                          CHARACTER   LEFT     TRUE      30
CONN_CODE_END1                   CHARACTER   LEFT     TRUE      10
CONN_CODE_END2                   CHARACTER   LEFT     TRUE      10
DRAWING_USERFIELD_1              CHARACTER   LEFT     TRUE      64
DRAWING_USERFIELD_2              CHARACTER   LEFT     TRUE      64
DRAWING_USERFIELD_3              CHARACTER   LEFT     TRUE      64
DRAWING_USERFIELD_4              CHARACTER   LEFT     TRUE      64
```

- A list of attributes assigned to content types:



1. The content type of the row in Template Editor
2. The attribute hierarchy in Template Editor
3. Customizable comments, such as the tab name in the user-defined attributes dialog box
4. The name of the user-defined attribute, the same as in the `objects.inp` file

See also Adding user-defined template attributes on page 19

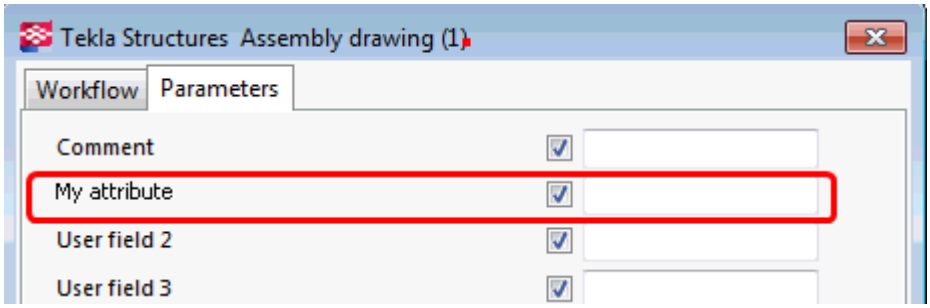
Adding comments to user-defined template attributes on page 20

Adding hierarchy to user-defined template attributes on page 21

Adding user-defined template attributes

This example shows how to add your own user-defined attributes to the attribute tree in Template Editor.

Before you start, add the user-defined attribute to the `objects.inp` file. For example, you might add an attribute named `MY_ATTRIBUTE` to the user-defined properties for drawings.



To add user-defined attributes to the attribute tree:

1. Open the `contentattributes_userdefined.lst` file in a text editor.
2. Save the file with an appropriate name, for example `MY_contentattributes_userdefined.lst`, in the same folder.
3. Add `MY_ATTRIBUTE` to the list of attribute names and, define the settings as follows:

```
MORTAR_WIDTH                    FLOAT       RIGHT     TRUE
MY_ATTRIBUTE                    CHARACTER   LEFT      TRUE
OBJECT_LOCKED                   CHARACTER   LEFT      TRUE
```

4. Add `MY_ATTRIBUTE` to the list of attributes assigned to content types.

   Select the content type according to which object the attribute is associated to in the `objects.inp` file. In this example, the content type is `DRAWING`. Add the attribute in the format `USERDEFINED.<ATTRIBUTE_NAME>`.

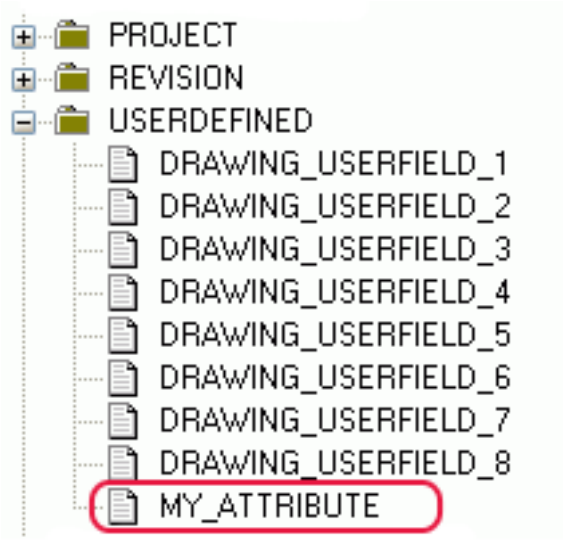
```
// ========================================
//   Drawing attributes
//   ------------------
//   tab_page("DR_Parameters")
// ========================================

DRAWING             =          USERDEFINED.MY_ATTRIBUTE
```

5. Save the changes.
6. Open the `contentattributes.lst` file.
7. Add the following line in the file:

   `[INCLUDE MY_contentattributes_userdefined.lst]`

8. Save the changes.

   The attribute is shown in the attribute tree in Template Editor, under `DRAWING > USERDEFINED`:



See also User-defined template attributes on page 17

Adding comments to user-defined template attributes

You can add your own comments to the Template Editor attribute tree.

To add a comment:

1. Open your copy of the `contentattributes_userdefined.lst` file.

   For example, `MY_contentattributes_userdefined.lst`. Do not modify the original `contentattributes_userdefined.lst` file.

2. Scroll down to the list of attributes assigned to content types.

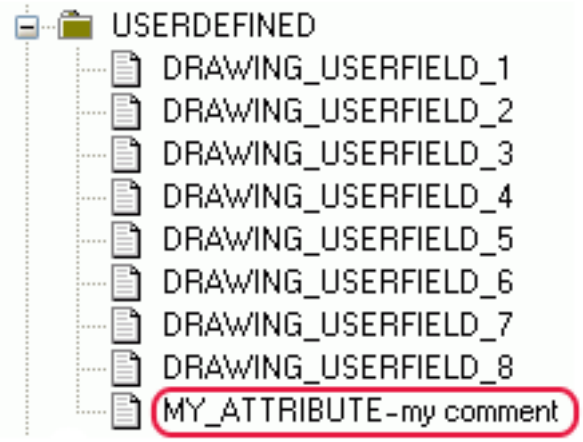
3. Add your comment inside quotation marks, after the attribute name.

   For example:

```
DRAWING     = USER-DEFINED.MY_ATTRIBUTE "my comment"
```

4. Save the changes.

The comment you added is displayed in the attribute tree in Template Editor:



See also User-defined template attributes on page 17

Adding hierarchy to user-defined template attributes

You can add your own hierarchy to the Template Editor attribute tree.

To add hierarchy:

1. Open your copy of the `contentattributes_userdefined.lst` file.

   For example, `MY_contentattributes_userdefined.lst`. Do not modify the original `contentattributes_userdefined.lst` file.

2. Scroll down to the list of attributes assigned to content types.

3. Define the hierarchy in square brackets, between `USERDEFINED.` and the attribute name.

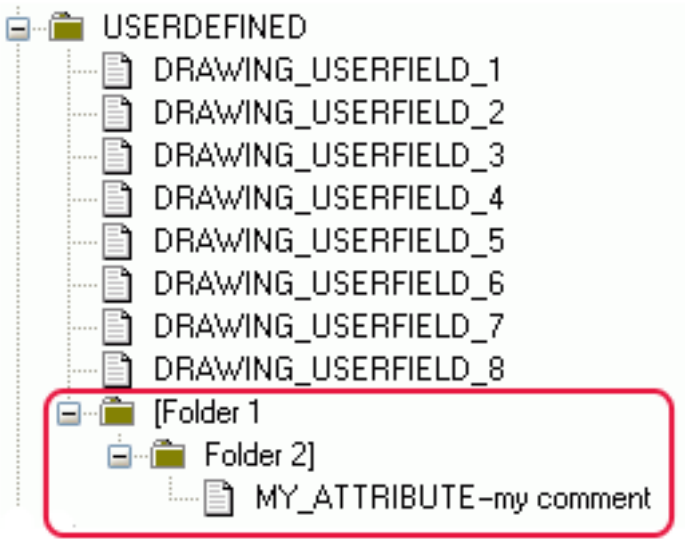
   For example:

   ```
   DRAWING  = USERDEFINED.[Folder 1.Folder 2].MY_ATTRIBUTE "my comment"
   ```

   Notice the full stops after the brackets, and between the hierarchies.

4. Save the changes.

The new hierarchy is shown in the attribute tree:



User-defined attributes are case sensitive. Ensure that you enter the attribute name using the correct case for all characters.

See also User-defined template attributes on page 17

2 Reports

You can create reports of the information included in models. These could be lists of drawings, bolts, and parts, for example. Tekla Structures creates reports directly from the model, so the information is always accurate. Reports can contain information about selected parts or the entire model.

Tekla Structures includes a large number of standard report templates. Use Template Editor to modify the existing report templates, or create new ones to suit your needs. The report templates are located in the folder `..\ProgramData\Tekla Structures\<version>\environments\<environment>\system`. Report templates have the file name extension `.rpt`.

Example

```
-------------------------------------------------------------------------------
TEKLA STRUCTURES PARTS LIST FOR CONTRACT NO:   1        Page: 1
 CONTRACT:  Tekla Corporation                          Date: 16.09.2009
-------------------------------------------------------------------------------
PartPos    Profile      No.   Material     Length   Area(m2)   Weight(kg)
-------------------------------------------------------------------------------
Concrete  250*12000     2     K30-2         12000     227.6         0.0
Concrete  250*12000     6     K30-2         12000     250.2         0.0
Concrete  250*14997     18    K30-2         12000     278.4         0.0
Concrete  250*14997     54    K30-2         12000     301.0         0.0
Concrete  1500*1500     8     K30-2           500       7.5         0.0
Concrete  500*1000      4     K30-2         12000      37.0         0.0
Concrete  380*380       80    K40-1          4000       6.4         0.0
Concrete  4000*300      80    K30-2         12000     105.6         0.0
Concrete  CHS323.9X7.1  80    S275J0         4000       4.1       222.0
Concrete  800*400       80    Concret        8620      21.3      6620.2
P/1       IPE500        80    S235JR        12000      20.9      1092.7
P/2       IPE500        80    S235JR        13909      24.3      1266.6
-------------------------------------------------------------------------------
                      Total for  572  members:     38030.7    736117.6
-------------------------------------------------------------------------------
```

See also Creating a report on page 23

Templates on page 3

2.1 Creating a report

When you create a report, you can include the information related to an entire model or only the selected objects. Tekla Structures automatically selects the related assemblies and other objects.

To create a report:

1. Open the model.
2. If needed, number the model.
3. Click **Drawings & Reports** --> **Create Report...** .
4. Select a report template from the list.
5. If needed, enter the report titles you want to use under **Titles in reports**.
6. If needed, enter a new name for the report file in the **Name** box.
7. If needed, set the report options on the **Options** tab.
8. Unless you want to create a report of the entire model, select the objects you want to include in the report.
9. Do one of the following:
   - To run a report on the entire model, click **Create from all**.
   - To run a report on the selected model objects, click **Create from selected**.

You can create reports without numbering the model objects. This is useful when you need to produce draft reports from large multi-user models. Tekla Structures still warns you if numbering is not up to date.

See also

Reports on page 23

Report settings on page 28

Creating a report of selected drawings on page 24

Creating a report of nested assemblies on page 25

Creating a report of selected drawings

Before you start, create drawings of the parts you want to include in the report.

To create a report of selected drawings:

1. Open the model.
2. Click **Drawings & Reports** --> **Drawing List...**
3. In the **Drawing List** dialog box, select the drawings you want to include in the report.

To select multiple drawings, hold down **Ctrl** and then click the drawings you want to select.

4. Click **Drawings & Reports** --> **Create Report...** .
5. Select a drawing report template from the list.

   For example, **drawing_list** or **drawing_issue_rev**.
6. If needed, enter the report titles you want to use under **Titles** in reports.
7. If needed, enter a new name for the report file in the **Name** box.
8. If needed, set the report options on the **Options** tab.
9. Click **Create from selected**.

   Tekla Structures automatically selects all the parts in the selected drawings and includes them in the report.

See also Report settings on page 28

Creating a report of nested assemblies

You can produce a list of assemblies, or a report of the parts included in the assemblies. If the report template has a nested assembly structure, Tekla Structures displays the assembly hierarchy in the report when you view or print it.

To create a report of nested assemblies:

1. Open the model.
2. Select the assemblies you want to include in the report.
3. Click **Drawings & Reports** --> **Create Report...** .
4. Select an assembly report template from the list.
   - **Assembly_list**: creates a list of the assemblies
   - **Assembly_part_list**: creates a report of the parts included in the assemblies
5. If needed, enter the report titles you want to use under **Titles in reports**.
6. If needed, enter a new name for the report file in the **Name** box.
7. If needed, set the report options on the **Options** tab.
8. Click **Create from selected**.

See also Report settings on page 28

2.2 Viewing a report

To view a report you have already created:

1. Click **Drawings & Reports** --> **Create Report...** .
2. Click **Browse...** to locate the report file you want to view.
3. Click **Show** to view the report.

See also Defining how reports are displayed on page 26

Defining how reports are displayed

You can define how reports are displayed. For example, you can have Tekla Structures open all HTML reports in a web browser. By default, all reports are displayed in a new dialog box within the Tekla Structures window.

To define how reports are displayed:

1. Define which program is used to open a specific type of report file.

   To do this in Windows 7 or Windows Vista, click **Control Panel** --> **Default Programs** --> **Associate a file type or protocol with a program** .

2. In Tekla Structures, click **Drawings & Reports** --> **Create Report...** and go to the **Options** tab.
3. In the **Show report** list, select **With associated viewer**.
4. Click **Save** in the **Report** dialog box.

See also Viewing a report on page 26

Adding tabs to reports

You can associate Tekla Structures to open reports of a certain type in Microsoft Excel. When you open such reports in Microsoft Excel, the report template rows might not be divided correctly into cells. To correct this, you can add tabs between the cells.

To add tabs to a report:

1. Open an existing report template.
2. Add `\t` between the text and value fields. For example:

```
Tekla Structures MATERIAL LIST

Project number:       \t Project_number
Project name:         \t Project_info_1
Project address:      \t Project_info_2
                      \t Project_info_3
                      \t Project_info_4
Date:                 \t Report_creation_date

Profile     \t Material   \t NUM   \t Length [mm]   \t Length sum
Profile     \t Mater      \t NUM   \t Length        \t Length_su
```

3. Save the report.

   The output in Microsoft Excel:

	A	B	C	D	E	F	G	H
1	Tekla Structures MATERIAL LIST							
2								
3	Project number:							
4	Project name:							
5	Project address:							
6								
7								
8	Date:	07.12.2009						
9								
10	Profile	Material	NUM	Length [mm]	Length sum	Weight[kg]	Weight sum	Area [m2]
11	175*600	K40-1	2	6050	12100	0.0	0.0	9.59
12	175*9000	K40-1	2	9000	18000	0.0	0.0	168.30
13	1800*1800	K40-1	7	650	4550	0.0	0.0	11.16
14	2700*2700	K40-1	17	850	14450	0.0	0.0	23.76
15	D6400	S355JR	2	18000	36000	4543782.8	9087565.7	426.19
16	D7000	K40-1	2	800	1600	0.0	0.0	94.53
17	HEA300	S355JR	72	13400	964800	1183.4	85203.9	23.01

   The output in a text editor:

Material_list.Excel - Notepad

File Edit Format View Help

```
Tekla Structures MATERIAL LIST

Project number:
Project name:
Project address:


Date:                    07.12.2009

Profile          Material        NUM     Length [mm]     Length sum      Weight[kg]
175*600          K40-1           2       6050            12100           0.0
175*9000         K40-1           2       9000            18000           0.0
1800*1800        K40-1           7       650             4550            0.0
2700*2700        K40-1           17      850             14450           0.0
D6400            S355JR          2       18000           36000           4543782.8
D7000            K40-1           2       800             1600            0.0
HEA300           S355JR          72      13400           964800          1183.4
IPE600           S355JR          1       4150            4150            508.2
IPE600           S355JR          8       5657            45255           692.7
IPE600           S355JR          4       6000            24000           734.8
IPE600           S355JR          2       9000            18000           1102.1
IPE600           S355JR          26      13150           341900          1610.3
P18(175X12       K40-1           219     6159            1348801         0.0
RHS150*150       S355JR          3       8415            25245           190.9
RHS150*150       S355JR          3       8846            26538           200.7
```

Alternatively, you can use a comma or semicolon as a delimiter between the text fields. However, the default delimeter may vary between users, and the output might not be readable in all text editors.

See also Viewing a report on page 26

2.3 Printing a report

To print a report:

1. Do one of the following:
   - Click **Drawings & Reports** --> **Create Report...** and then click **Print...**
   - Click **File** --> **Print** --> **Print Reports...**
2. Use the **Browse...** button to display the **Select file...** dialog box, where you can indicate the folder and file name of the report.

   By default, Tekla Structures uses the **Report files (*.xsr)** filter to show Tekla Structures reports only.
3. If needed, modify the print settings.
   - To change the report font, click **Select...**
   - To set printer-specific options such as paper size and orientation, click **Printer setup...**
4. Click **Print**.

See also Reports on page 23

2.4 Report settings

Use the **Report** dialog box to view and modify the report settings.

Option	Description
Titles in reports	Optional report titles. You can enter up to three report titles. All the titles are not used in every standard report. **Title1**, for example, is used to show phase information in the **Assembly_list** report.
Browse...	Use to change the folder where the report will be stored. By default, reports are stored in the current model folder.

Option	Description
Show report	Defines how Tekla Structures displays reports. **On dialog** displays the report in a new window. **With associated viewer** displays the report in the associated program. For example, you can have Tekla Structures open all HTML reports in a web browser.
Show created report	Defines whether or not the report is automatically shown on the screen after it has been created.

See also Reports on page 23

3 Tips for templates and reports

This section provides useful hints and tips that help you use templates and reports more efficiently.

Click the links below to find out more:

- Selecting objects included in reports on page 30
- Useful shortcuts in viewing logs and reports on page 31
- Using text type attribute in calculations on page 31
- Changing value field content if using imperial units on page 32
- Defining customized date format on page 32
- Assembly or cast unit drawing sheet number on page 33

3.1 Selecting objects included in reports

You can select objects, which are included in reports, by using their GUIDs (globally unique identifiers).

To select objects included in reports:

1. Create a template that is used for creating the report.
   a. Click **Drawings & Reports** --> **Template Editor...**
   b. In Template Editor, click **File** --> **New** .
   c. Select **Textual template** and click **OK**.
   d. Add a row for the GUID.
      - Click **Insert** --> **Component** --> **Row** .

        Select a content type for the row and clicking **OK**.
      - Click **Insert** --> **Text** and enter the text `guid:`, `Guid:` or `GUID:`. Click **OK**.

        This enables the selecting of objects in the model.

- Click **Insert** --> **Value Field** . Click a point to define the location of the field within the row. The **Select Attribute** dialog box appears prompting you to select an attribute for the value field.

  Select the attribute **GUID** and click **OK**.

e. Add the required amount of other rows in the template.

f. Click **File** --> **Save As...** .

   Enter a name for the template and browse the folder `..\environment\<your_environment>\template` . Use the file name extension `.rpt`.

2. Create a report based on the report template you saved.

   a. Click **Drawings & Reports** --> **Create Report...**

   b. Select the report template you created from the list.

   c. Click **Create from all**.

      Tekla Structures displays the report.

3. Click a row that contains an GUID number in the report.

   Tekla Structures selects the corresponding object in the active model view.

See also Creating a template on page 3

Creating a report on page 23

3.2 Useful shortcuts in viewing logs and reports

Use the following shortcuts when viewing items in log files and reports:

To	Do this
Zoom to the selected objects	1. Hold down **Z**. 2. Click a row that contains an ID number. Tekla Structures zooms to the corresponding objects in the active model view.
Fit the work area to include only the selected objects	1. Hold down **F**. 2. Click a row that contains an ID number. Tekla Structures zooms to the corresponding objects in the active model view.

See also Viewing a report on page 26

3.3 Using text type attribute in calculations

Change text to numeric format

```
double(GetValue("ASSEMBLY_TOP_LEVEL"))
```

Change into correct format for calculation (double=decimals)

```
format(double(GetValue("ASSEMBLY_TOP_LEVEL")),"Length", "mm",
1)
```

Add all above into calculation formula

```
format(double(GetValue("ASSEMBLY_TOP_LEVEL")),"Length", "mm",
1)+15000
```

Another example of the same for part elevation

```
(double(GetValue("TOP_LEVEL"))-
(double(GetValue("BOTTOM_LEVEL"))))*1000
```

3.4 Changing value field content if using imperial units

Advanced option to check if imperial units are in use

```
GetValue("ADVANCED_OPTION.XS_IMPERIAL")==1
```

Translated string call for multi lingual text

```
GetValue("TranslatedText("albl_Diameter_")")
```

Formating of units

```
format(GetValue("DIAMETER"),"Length","inch-frac", 1/16)
```

```
format(GetValue("DIAMETER"),"Length","mm", 1)
```

Combine all above in rule

```
if GetValue("ADVANCED_OPTION.XS_IMPERIAL")==1 then
```

```
GetValue("TranslatedText("albl_Diameter_")")+
format(GetValue("DIAMETER"),"Length","inch-frac", 1/16) + "
Inches"
```

```
else
```

```
GetValue("TranslatedText("albl_Diameter_")")+
format(GetValue("DIAMETER"),"Length","mm", 1)+" mm"
```

```
endif
```

3.5 Defining customized date format

Use mid function to find year, month and day.

```
mid("","","") string, offset, n
```

year

```
mid(format(GetValue("DATE"),"Date","dd.mm.yyyy", ),"6","4")
```

month

```
mid(format(GetValue("DATE"),"Date","dd.mm.yyyy", ),"3","2")
```

days

```
mid(format(GetValue("DATE"),"Date","dd.mm.yyyy", ),"0","2")
```

Combine all above in rule

```
mid(format(GetValue("DATE"),"Date","dd.mm.yyyy", ),"6","4")
+"-"+
mid(format(GetValue("DATE"),"Date","dd.mm.yyyy", ),"3","2")
+"-"+
mid(format(GetValue("DATE"),"Date","dd.mm.yyyy", ),"0","2")
```

3.6 Assembly or cast unit drawing sheet number

Use match function to find "-" character

```
match(GetValue("NAME_BASE"),"*-*")
```

Use of mid function to return only characters after "-"

```
mid(GetValue("NAME_BASE"),(1+
(find(GetValue("NAME_BASE"),"-"))),2)
```

Combine all above in rule

```
if (match(GetValue("NAME_BASE"),"*-*"))
then mid(GetValue("NAME_BASE"),(1+
(find(GetValue("NAME_BASE"),"-"))),2)
else ""
endif
```

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