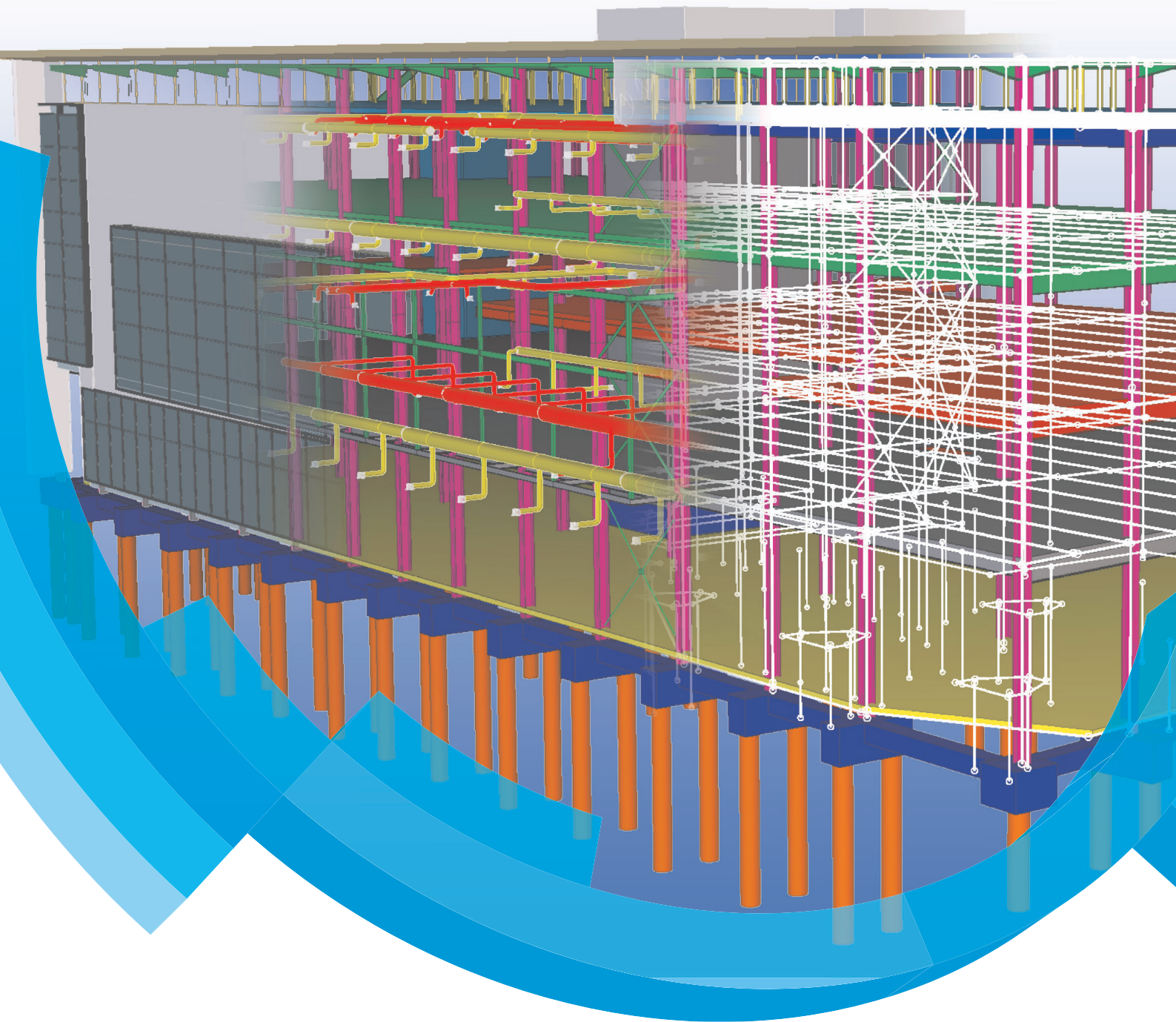
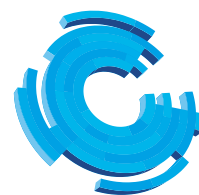




Modeling zinc coating and tapped holes



CONSTRUSOFT

WWW.CONSTRUSOFT.COM

 **TEKLA**
A TRIMBLE COMPANY

AUTHORIZED
RESELLER

All rights reserved. No conclusions can be associated to the representation of the pictures in relation to the operating systems under which Tekla Structures runs.

No part of the contents of this manual may be reproduced or transmitted in any form or by any means without the permission of Construsoft B.V.

Construsoft B.V. is not responsible for any consequences as a result of using Tekla Structures.

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/> or send a letter to Creative Commons, 444 Castro Street, Suite 900, Mountain View, California, 94041, USA.

© 2015 Tekla Corporation and its licensors. All rights reserved.

This Software Manual has been developed for use with the referenced Software. Use of the Software, and use of this Software Manual are governed by a License Agreement. Among other provisions, the License Agreement sets certain warranties for the Software and this Manual, disclaims other warranties, limits recoverable damages, defines permitted uses of the Software, and determines whether you are an authorized user of the Software. All information set forth in this manual is provided with the warranty set forth in the License Agreement. Please refer to the License Agreement for important obligations and applicable limitations and restrictions on your rights. Tekla does not guarantee that the text is free of technical inaccuracies or typographical errors. Tekla reserves the right to make changes and additions to this manual due to changes in the software or otherwise.

In addition, this Software Manual is protected by copyright law and by international treaties. Unauthorized reproduction, display, modification, or distribution of this Manual, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the full extent permitted by law.

Tekla, Tekla Structures, Tekla NIS, Tekla DMS, Tekla Municipality GIS, and Tekla Civil are either registered trademarks or trademarks of Tekla Corporation in the European Union, the United States, and/or other countries. Other product and company names mentioned in this Manual are or may be trademarks of their respective owners. By referring to a thirdparty product or brand, Tekla does not intend to suggest an affiliation with or endorsement by such third party and disclaims any such affiliation or endorsement, except where otherwise expressly stated.

Portions of this software:

D-Cubed 2D DCM © 2008 Siemens Industry Software Limited. All rights reserved.

EPM toolkit © 1995-2004 EPM Technology a.s., Oslo, Norway. All rights reserved.

XML parser © 1999 The Apache Software Foundation. All rights reserved.

Project Data Control Library © 2006 - 2007 DIhSoft. All rights reserved.

DWGdirect, DGNdirect and OpenDWG Toolkit/Viewkit libraries © 1998-2005 Open Design Alliance. All rights reserved.

FlexNet Copyright © 2010 Flexera Software, Inc. and/or InstallShield Co. Inc. All Rights Reserved. This product contains proprietary and confidential technology, information and creative works owned by Flexera Software, Inc. and/or InstallShield Co. Inc. and their respective licensors, if any. Any use, copying, publication, distribution, display, modification, or transmission of such technology in whole or in part in any form or by any means without the prior express written permission of Flexera Software, Inc. and/or InstallShield Co. Inc. is strictly prohibited. Except where expressly provided by Flexera Software, Inc. and/or InstallShield Co. Inc. in writing, possession of this technology shall not be construed to confer any license or rights under any Flexera Software, Inc. and/or InstallShield Co. Inc. intellectual property rights, whether by estoppel, implication, or otherwise.

The software is protected by U.S. Patent Nos. 7,302,368, 7,617,076, 7,765,240, 7,809,533, 8,022,953, 8,041,744 and 8,046, 210. Also elements of the software described in this Manual may be the subject of pending patent applications in the European Union and/or other countries including U.S. patent applications 2005285881, 20110102463 and 20120022848.

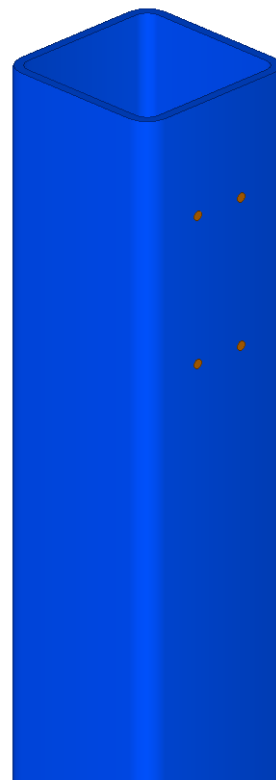
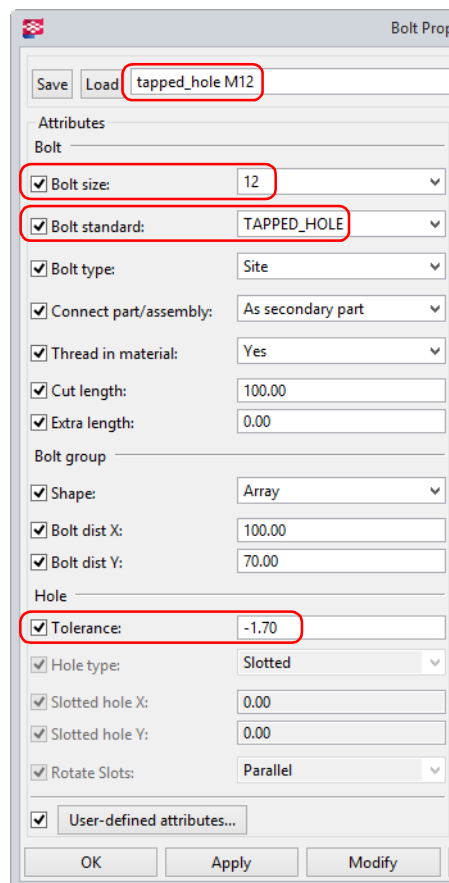
Modeling zinc coating and tapped holes	1
Modeling tapped holes	1
Tapped holes in drawings.....	2
NC files	4
DSTV Converter	4
Modeling zinc coating holes.....	5
Zinc coating holes in system components	5
Zinc coating holes in drawings	6

Modeling zinc coating and tapped holes

Modeling tapped holes

If you want to use tapped holes and bolts in Tekla Structures, you always have to model these as two **separate** bolt groups:

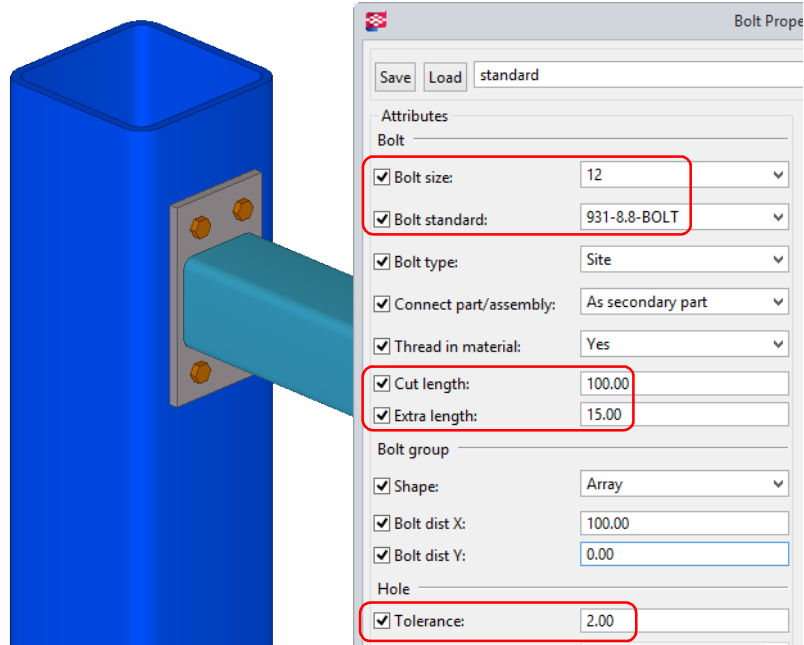
- One bolt group contains the (tapped) holes (in this example Ø10.3 for M12) in the column:



The default setting **tapped_hole M12** uses the bolt standard **TAPPED_HOLE**.

The hole diameter will be the bolt diameter + tolerance, so $12.0 + (-1.7) = 10.3$ mm.

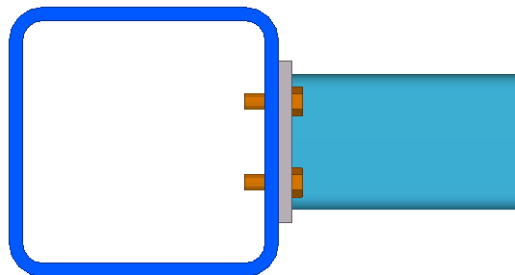
- One bolt group contains the bolts M12 only in the endplate:



All by Construsoft supplied bolt standards, ending with the name "-BOLT", contain nuts with a height of 0,1 mm. This is required for calculating the length of the bolt but these nuts are not represented in reports.

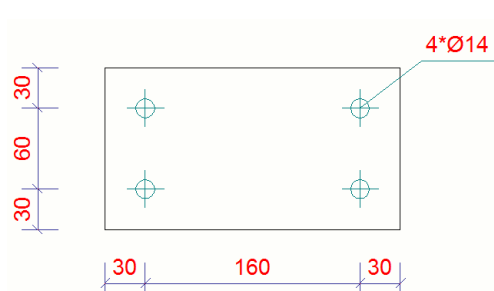
You can enter a value for the **Extra length** to make sure that the length is long enough to pass the thickness of the plate and the column (RHS profile).

The original bolt length is calculated on base of the thickness of the plate.

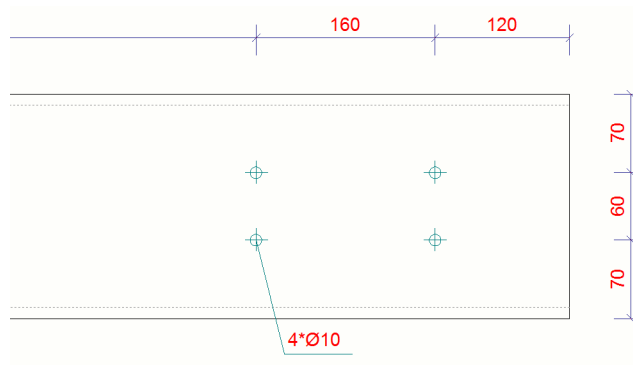


Tapped holes in drawings

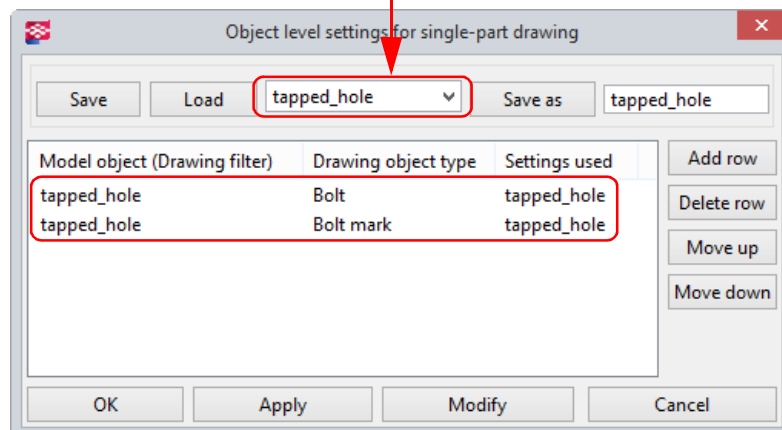
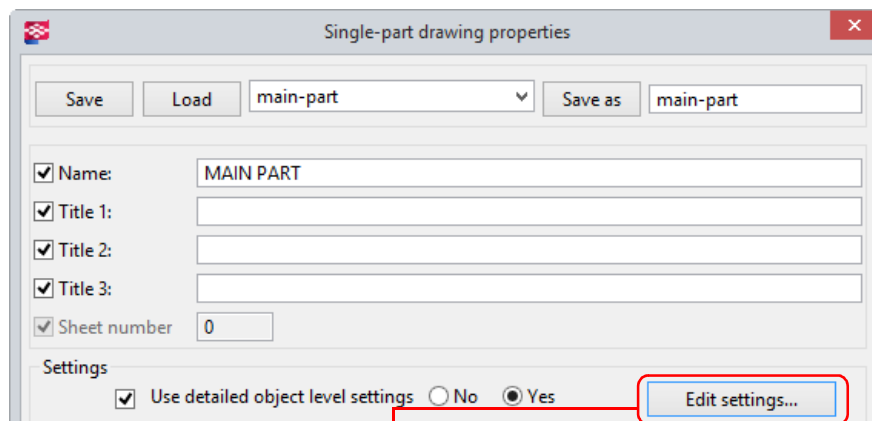
A single-part drawing is created from the endplate and the holes $\varnothing 14$ are displayed in the mark:



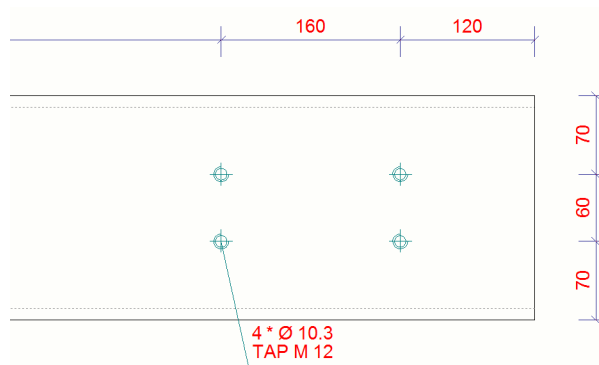
A single-part drawing is also created from the column and the holes are displayed as follows in the mark:



To make sure that the correct mark and symbol is used for the tapped holes $\text{Ø}10.3$, the detailed object level setting **tapped_hole** is used:



This setting is supplied by default for single-part- and assembly drawings. Once the detailed object level setting is used, the drawing looks like this:



NC files

When you create NC files for the RHS profile, the holes Ø10.3 are included in the NC file:

```
BO
u 1620.00s 70.00 10.30
u 1620.00s 130.00 10.30
u 1780.00s 70.00 10.30
u 1780.00s 130.00 10.30
EN
```

DSTV Converter

If you want to convert holes to tapped holes, you can use the DSTV converter.

See also

Click [here](#) for the program DSTVConverter.

The program converts the holes on the basis of a configuration file to a diameter Ø12.0 and a g-code is added to indicate that screw thread (DSTV: g stands for Gewinde) must be added to the hole.

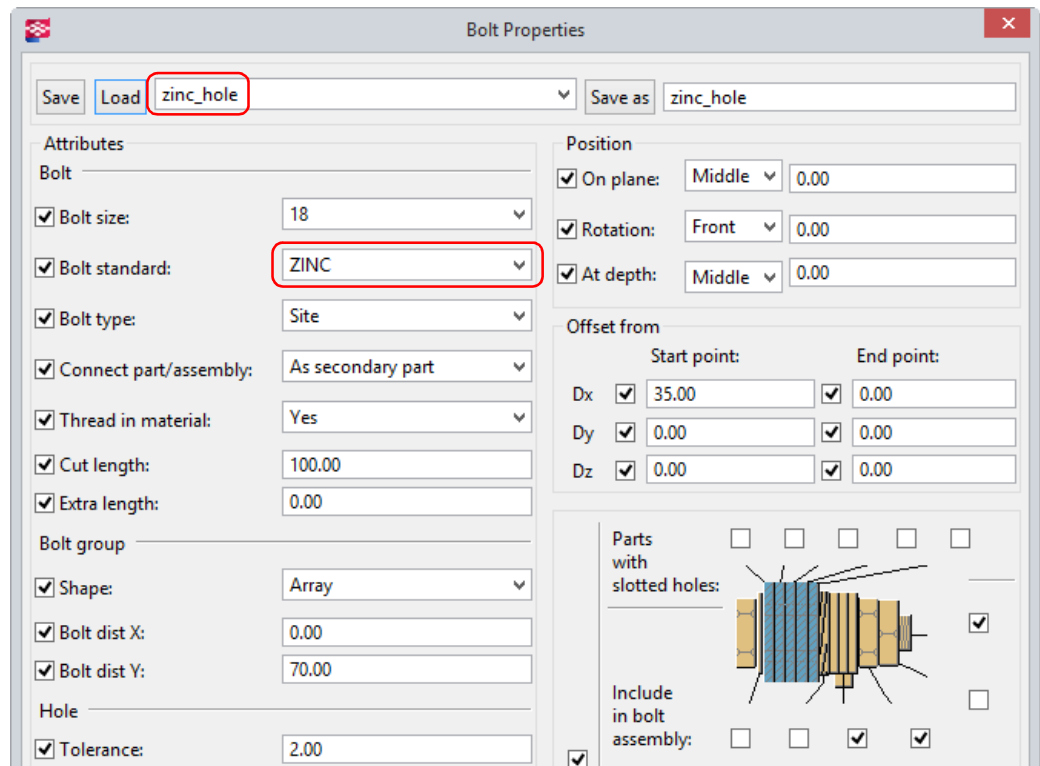
BO				BO			
u	1620.00s	70.00	10.30	u	1620.00s	70.00g	12.00
u	1620.00s	130.00	10.30	u	1620.00s	130.00g	12.00
u	1780.00s	70.00	10.30	u	1780.00s	70.00g	12.00
u	1780.00s	130.00	10.30	u	1780.00s	130.00g	12.00
EN				EN			

Tekla Structures NC file

NC file after conversion

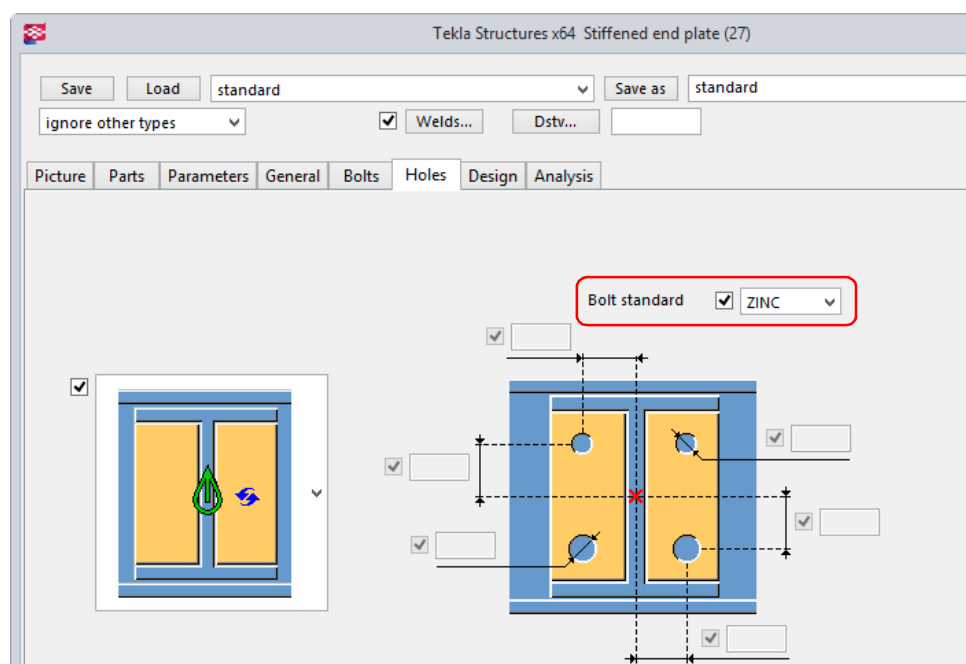
Modeling zinc coating holes

If you want to create zinc coating holes in Tekla Structures, you can use the setting ***zinc_hole***. This setting uses the bolt standard **ZINC**:



Zinc coating holes in system components

A large number of system components, such as **Stiffened end plate (27)**, **Haunch (40)**, **Partial stiff end plate (65)**, **Two sided end plate (142)**, **End plate (144)**, **Manlock column (1032)**, **Manlock beam (1033)** and **Zinc coating hole (S61)** include an option to define this bolt standard.



Zinc coating holes in drawings

Based on bolt standard **ZINC**, you can again define how zinc coating holes are displayed in assembly drawings with the help of detailed object level settings.

This concerns the representation of zinc coating holes, either the holes are dimensioned or not, the content of the marks for the zinc coating holes, etc.

