

INSTALLATION MANUAL SHEAR 0.1 (DRAFT0A)

October 6, 2010



ADCONX

AUTO DESIGNED CONNECTIONS

Installation Manual

Installation Manual

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1.0 OVERVIEW

- ADCONX (Auto Designed Connections) is an application for structural steel connection design that interfaces and operates within Tekla Structures.
- ADCONX input data can be retrieved directly and automatically from the Tekla Structures model, eliminating the inaccuracies of manually entering values for connection design.
- ADCONX has the ability to update Tekla Structures model automatically and inform the detailers/modelers of any failed connection including the limit state that governs.
- ADCONX checks detailing/modeling errors such as cases in edge distance, workpoints and material grades that could affect ADCONX design results.

2.0 FEATURES

ADCONX has the following features to offer:

- User-friendly graphical interface for designing steel connections within Tekla Structures.
- Easy to understand descriptive connection details.
- Automated retrieval of connection information directly from Tekla Structures.
- Fully automated calculations for connection design.
- Reports recommendations based on the loads, materials and connections used, with detailed information regarding failures of each component of the connection. This report can easily be printed or exported in MS Word or PDF format.
- Provides an accurate and complete connection design calculation in PDF format that can be reviewed by the connection engineer and/or submitted for approval.
- Reports show connection design calculations, formulas and limit states in a clearly defined and understandable manner.
- Connection design is based on both ASD and LRFD of the AISC Steel Construction Manual (13th Edition).
- Updates the Tekla Structures model based on the design recommendations in real time.
- Provides a color-coding scheme for the components that shows easy pass/fail identification for the detailers/modelers.
- Fully integrated with Tekla Structures.

3.0 SYSTEM REQUIREMENTS

ADCONX works best with the following specifications. Please do take note that Tekla's hardware and software requirement is the base-line since it will be running alongside the said application.

Hardware Requirements

Description	Recommendation
Operating System	Windows XP SP2 or Higher, Windows Vista, Windows 7 – All in 32 bit mode
Memory	2 Gb or Higher
Hard disk	Occupies Approx. 500 Mb disk space
Processor	Intel Core 2 Duo CPU 2.40 GHz AMD Athlon 64 X2 5050E AM2
Graphics Card	256 - 512 Mb
Others	Monitor 14" pref. 19" or Higher Mouse, Network adapter for multi-user support

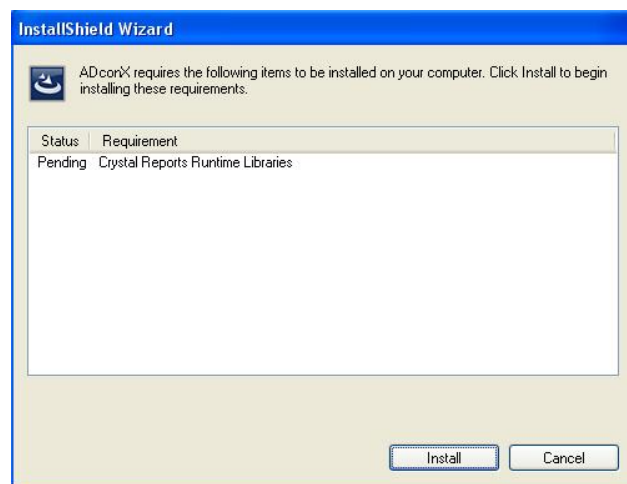
Software Requirements

Description	Recommendation
Operating System	Windows XP SP2 or Higher, Windows Vista, Windows 7 – All in 32 bit mode
Microsoft .Net Framework	Version 2.0 and 3.5
Tekla Structures	Version 16.0 or Higher

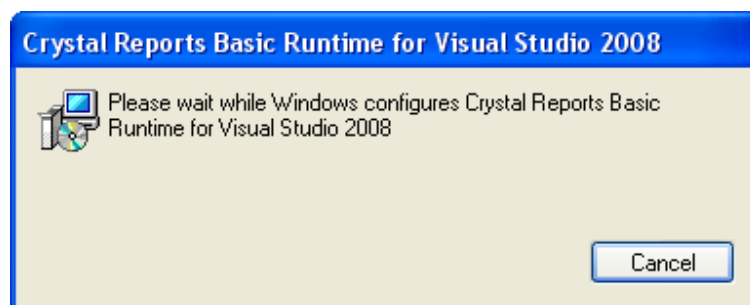
4.0 INSTALLATION PROCEDURE

* Please refer to the Hardware and Software requirements first before installing the software.

1. Under Windows, click on Start-> Run
2. On the Run Dialog box, click on the browse button then search for the Setup.exe file in the installer.
3. Click on Ok to start the installation
4. A window would appear (as shown below) that a requirement needs to be installed to start the installation.



Click on Install to setup Crystal Reports.



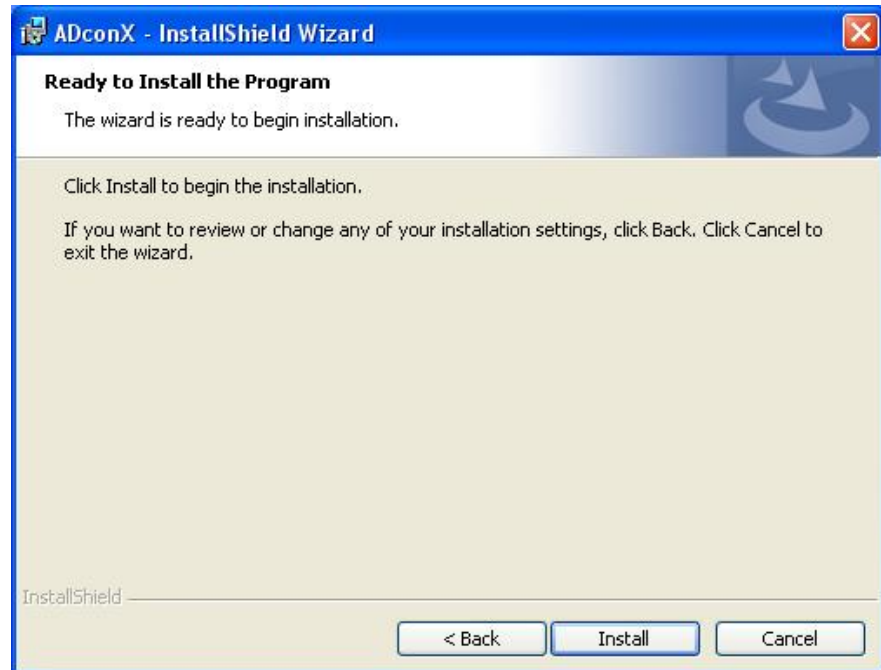
5. Click on Next to start the ADCONX Installation.



6. Read the End-Users-License-Agreement then Click on the Next button after accepting the Software's license agreement.



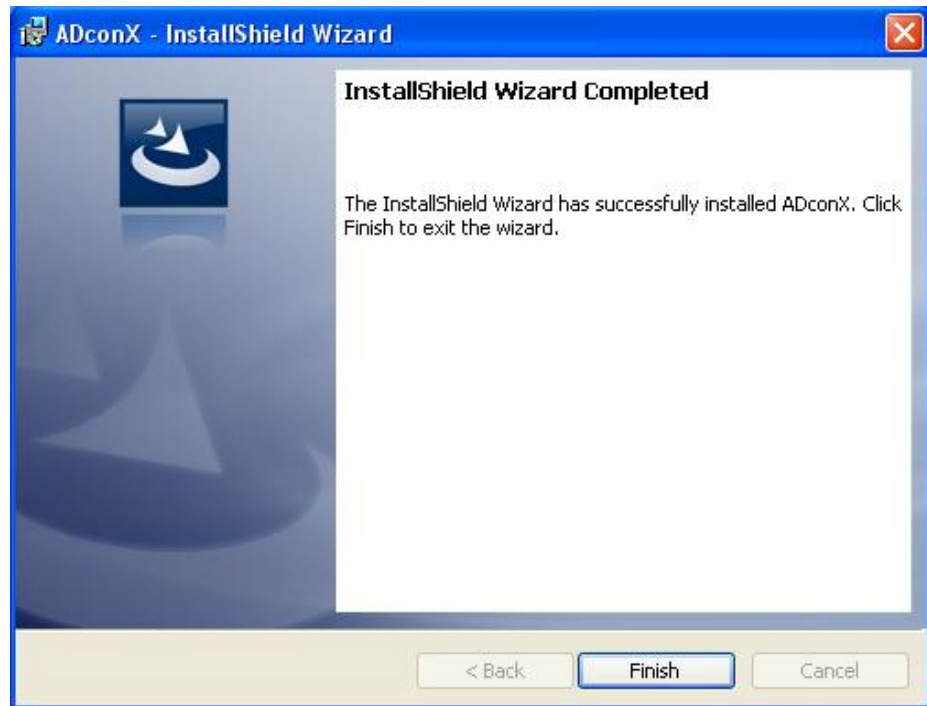
- Click on Install to begin copying the files



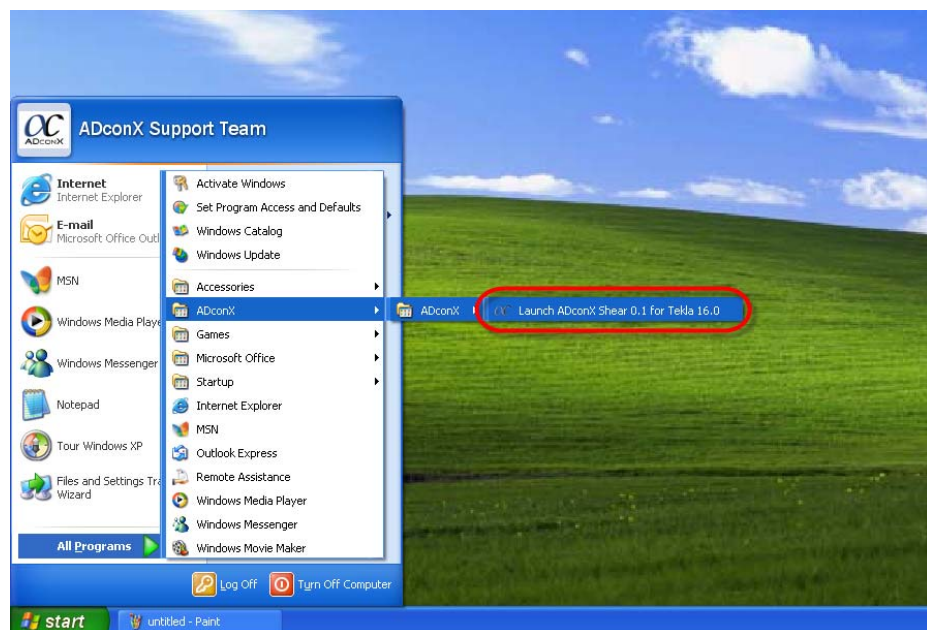
- A status window will then appear to show the progress of the installation.



9. Once the installation is finished, the following window would then appear.



10. A "Launch ADconX" shortcut will then be created on the Start Menu under All Programs-> ADconX ->ADconX and on the Desktop.

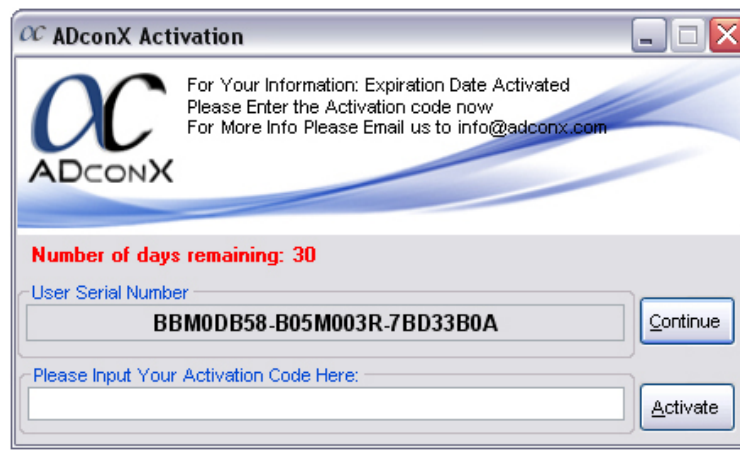


Installation Notes:

- If you're using Microsoft Vista or Microsoft Windows 7, copy the installation files onto the target computer's drive before installing, otherwise an error will appear to prevent the installer from working
- Set the default paper size of your default printer to A4 as some blank pages may be incorrectly inserted in the calcs.

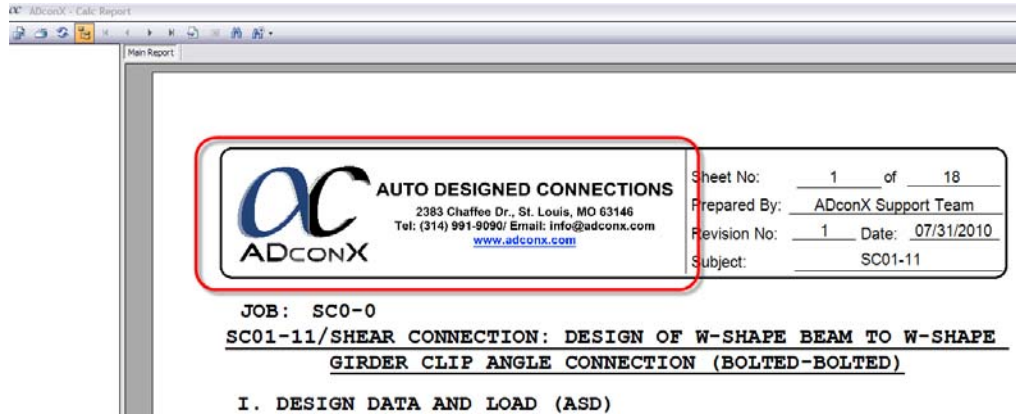
5.0 USING ADCONX SHEAR 0.1 FOR THE FIRST TIME

Product Activation protects you from pirated or counterfeit software. You need to activate your software after installation or the product will not work after 30 days.

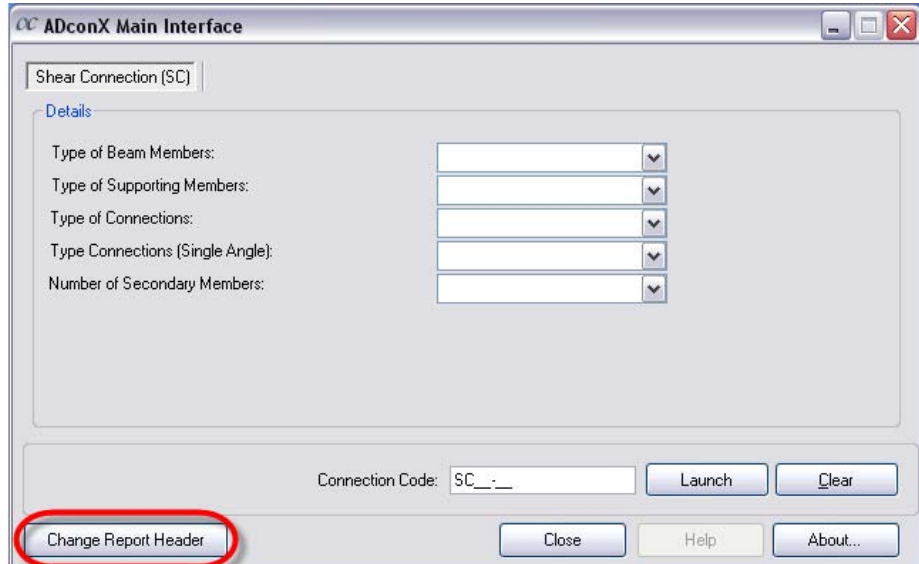


1. To activate your software, click on the ADconX icon found on your desktop or Program Shortcuts, and the Software Activation Screen will pop up.
2. A unique serial number will be generated. You need to activate that serial number by visiting our website www.adconx.com.
3. Click on “Activate Now” then follow the on-screen instructions.

The page headers of the Calcs and Summary Reports can also be customized.



1. To change the graphics of the header go to the Main Interface then Click on the “Change the Report Header” button.

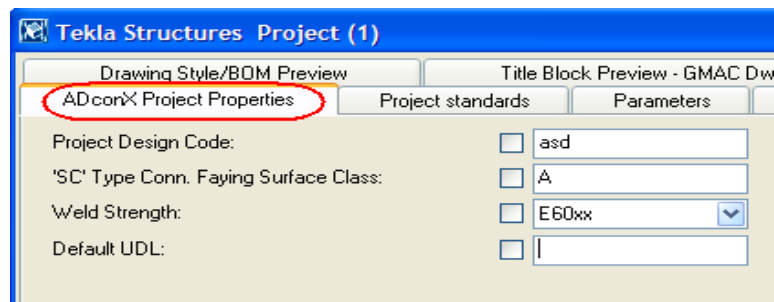


2. A dialog window will appear to ask for the location of you picture. Click on “Open” to set the graphic. Supported files are in JPG and BMP format only. Optimal size should be at 1” x 4” (300 x 1,200 pixels)

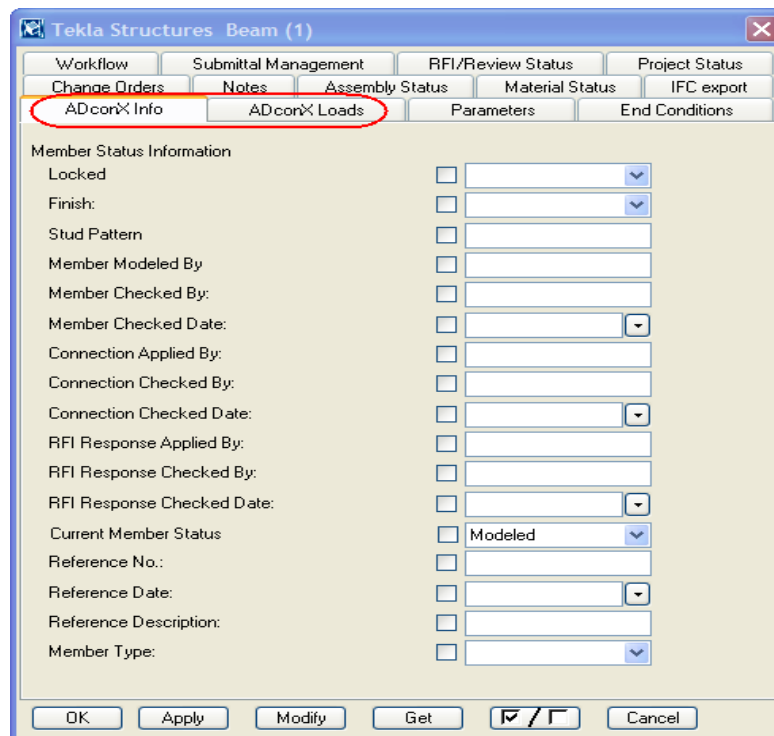
6.0 ADDITIONAL CONFIGURATIONS

1. Copy the objects.inp file that is included with the installer into your model's working folder. This will create an additional ADconX tab on TS User Defined Attributes.

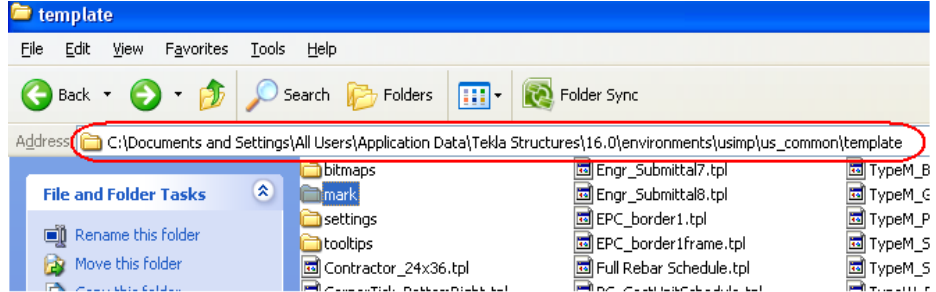
Project Properties:



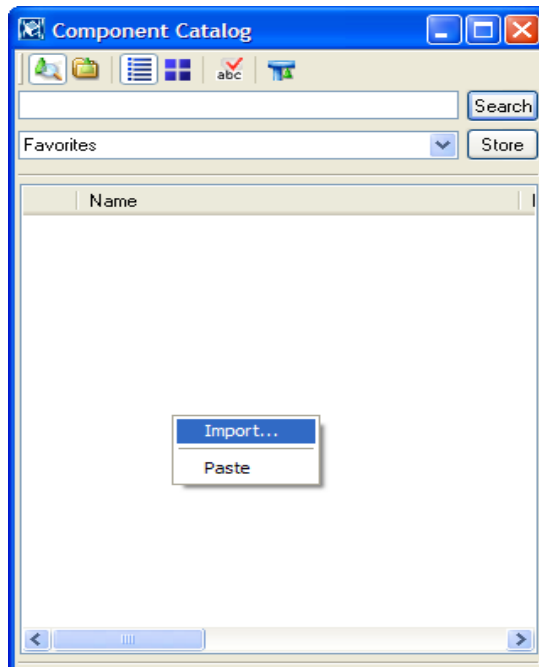
Part Properties:



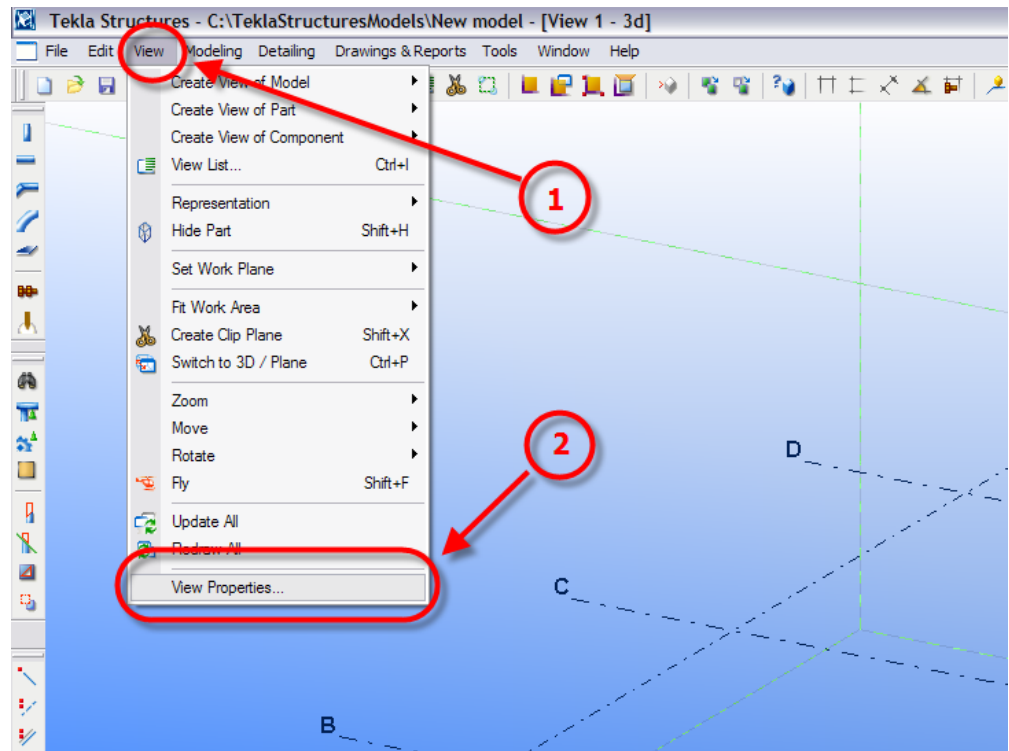
- Copy also the template file “ADconX_Conn_Code.tpl” to your template-Mark folder.



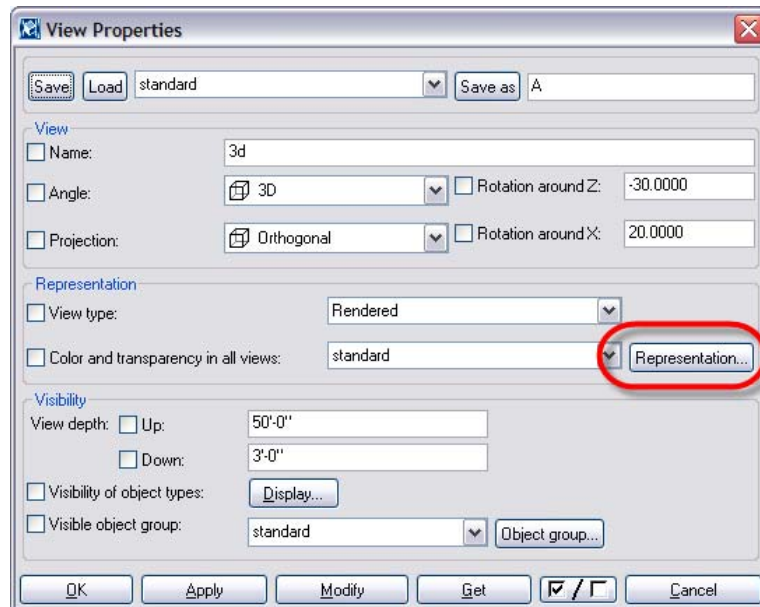
- Once a model is opened, import the file “Joint141_WebStiffeners.uel” that is also included with the installer.



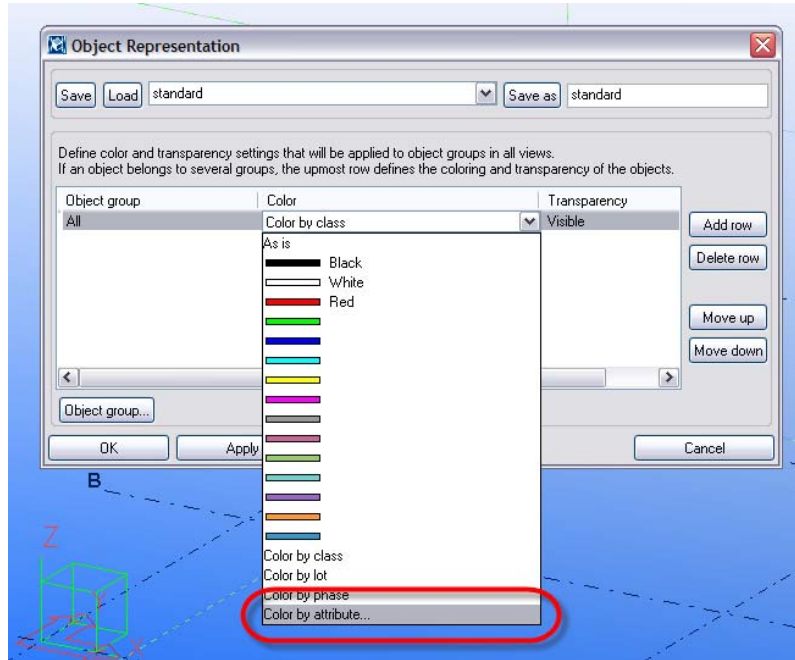
- In order to know visually in 3d View the connection’s status, ADconX has a color representation that needs to be set as it automatically changes the color of the parts in the component when checking or designing. (This is defined in the objects.inp file that is included with the installer.) To show this color representation, click View->View Properties



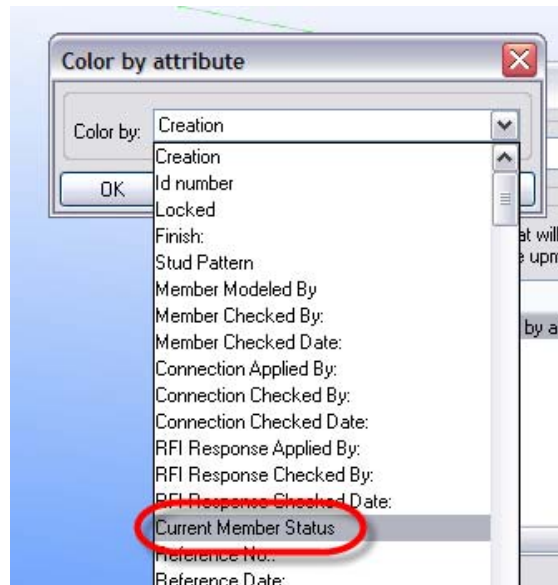
5. Click “Representation”



6. Load the ADconX user defined attributes under the “Color” column



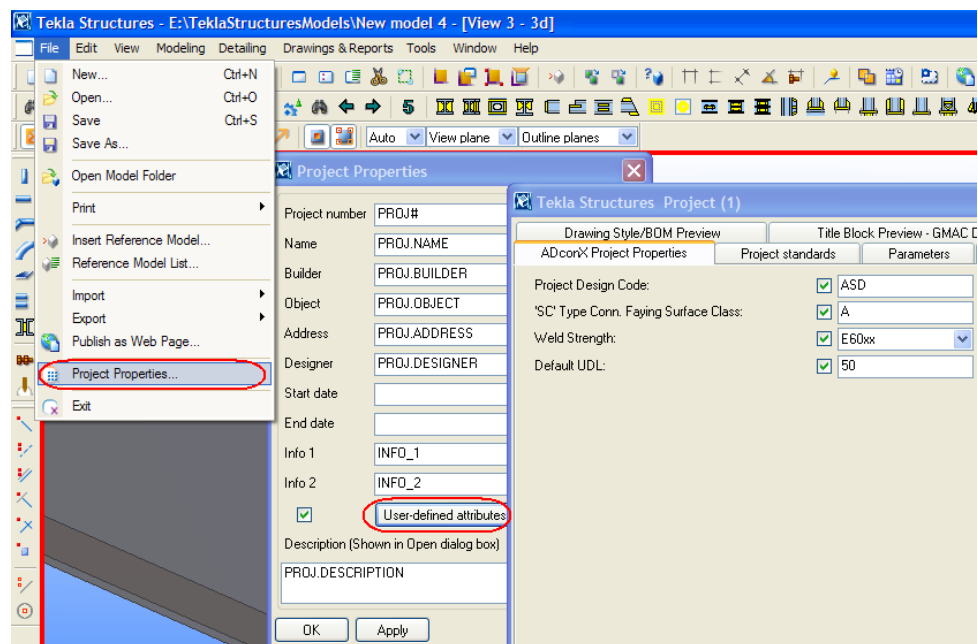
7. Select the “Current Member Status” and then click “Ok” then “Modify”.



Colors to be used in the components are gray for connections that are not yet designed/checked, red for connections that fails and green for connections that are adequate.

➤ Starting a Project.

1. At the start of the project, define the general setting of the model. Click File->Project ->User Defined Attributes. Click on the ADconX Project Properties tab and fill up the following fields.
 - a. Project Design Code (options: ASD or LRFD)
 - b. “SC” Type Connection Faying Surface Class (options: A or B)
 - c. Welding Electrode (options are as indicated on the pull down list)
 - d. Default UDL (percent of UDL as used on AISC specifications)



Note: If you are not sure what to input in the fields, consult the design engineer in-charge of the project. To access the User Defined Attributes, refer to the Tekla manual. If still cannot access the User Defined Attributes, ask your local Tekla support administrator to fix your Tekla start up files.

2. ADconX software extracts data from Tekla system components. These components are innate in Tekla installation, but in some unfortunate cases, the intention of the connection designer may not be attainable. In light of this, ADconX created a customized component to be used for connection codes SC01-11 and SC01-12 as an additional component for the connection. To use this component, you must import the .uel file included with the installer as the connection design requires.

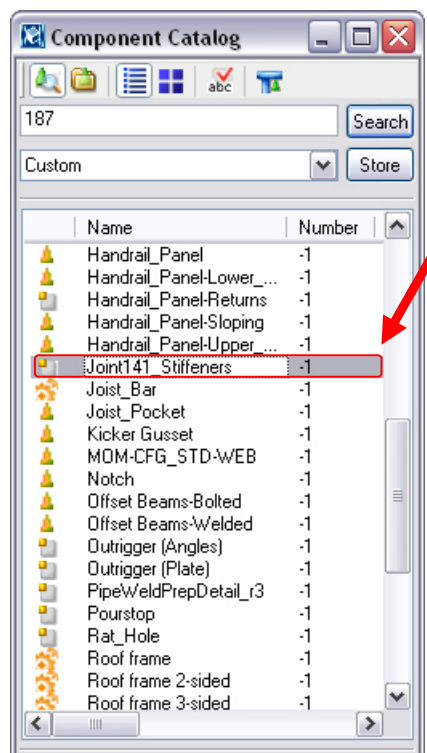
3. If your computer freezes and you have to restart the Tekla program, you must restart the ADconX program as well.
4. ADconX appreciates any comments or suggestions you may have to help us improve our software.

7.0 USING THE CUSTOM COMPONENT

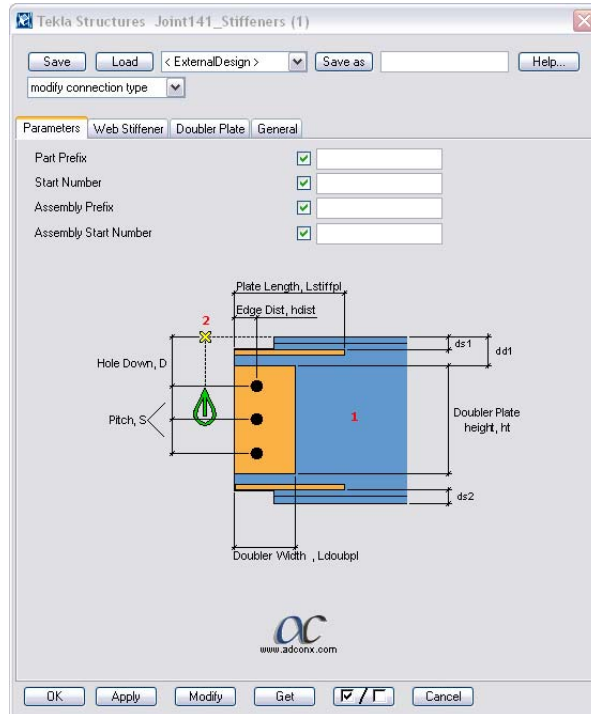
Custom Component Detail - Joint 141 Stiffeners creates either a Web Horizontal plate or a Web Doubler Plates at beam end.

How to create web stiffener:

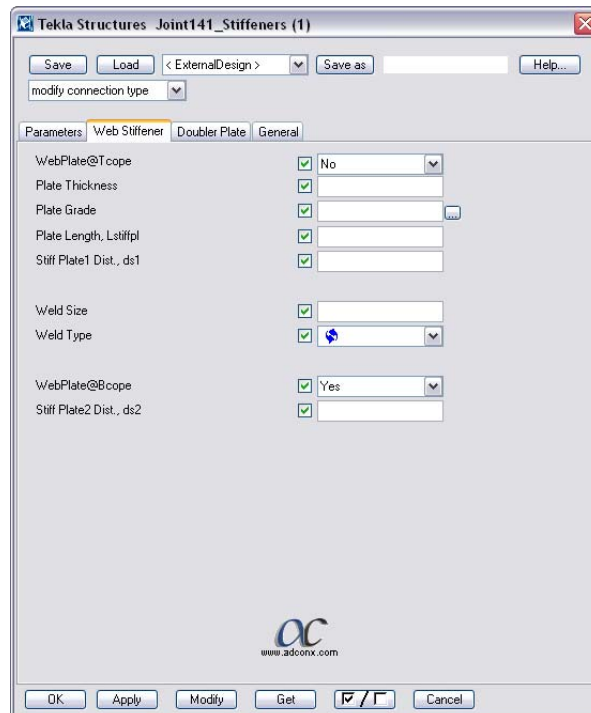
1. In Component Catalog, click “Joint141_Stiffeners”.

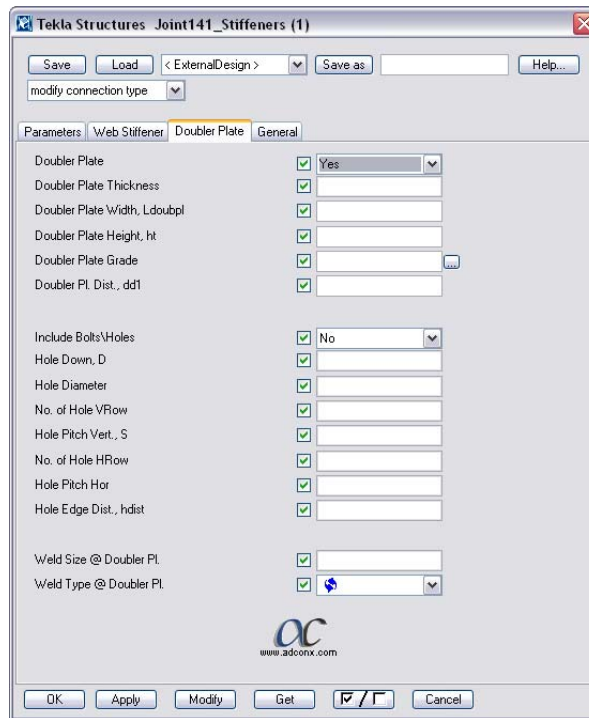


- Select the beam (1) and pick a point (2) that is near at the end of the beam.



- Fill all the necessary parameters that are needed. Do not use default values or values that have brackets.





Always use single web stiffening on beams otherwise ADconX calculation will not start.