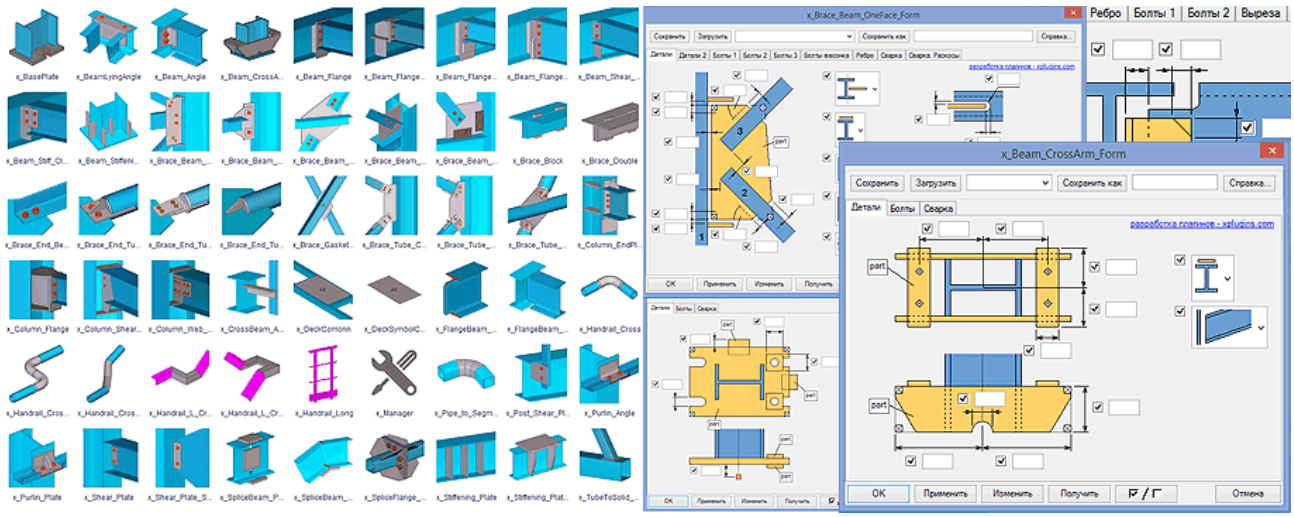
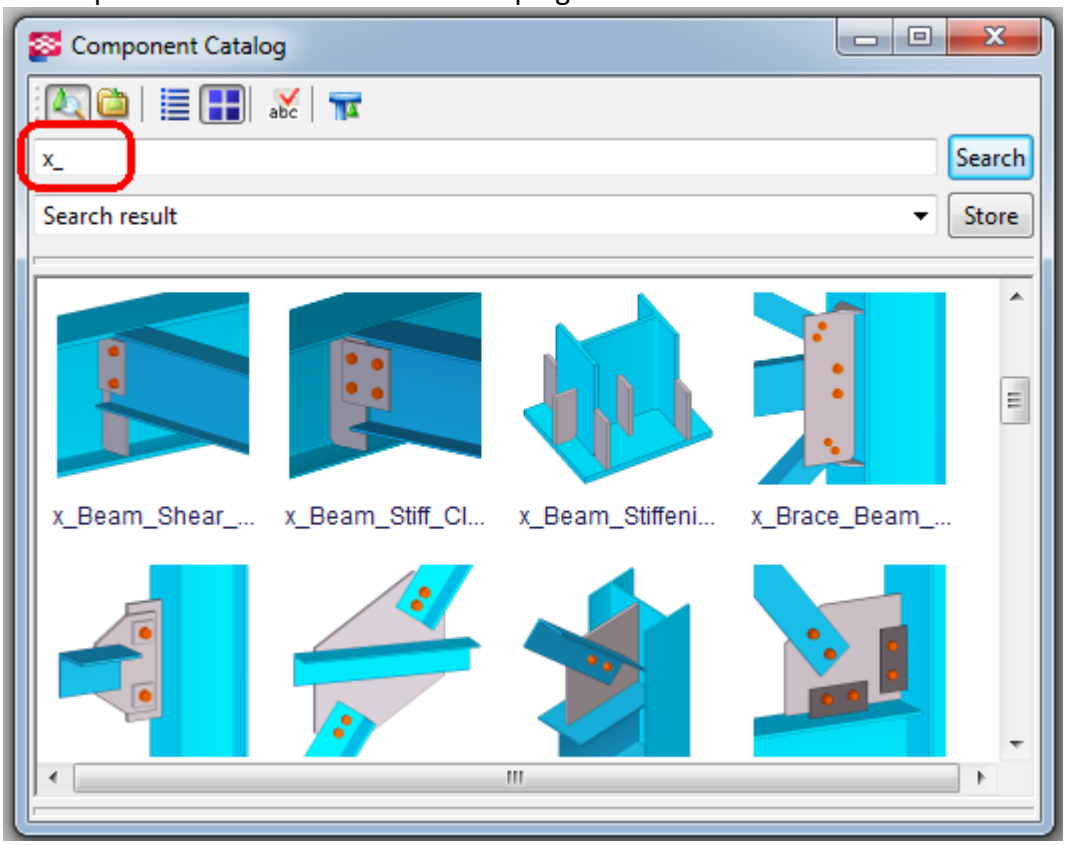
x_plugins short manual



The xplugins is set of 53 connections: beam-column, beam-beam, brace connection, handrail and deck (the most popular connections in steel detailing). All of them have a number of improvements. This allows to model connections without "explosion" and manual editing.

General description.

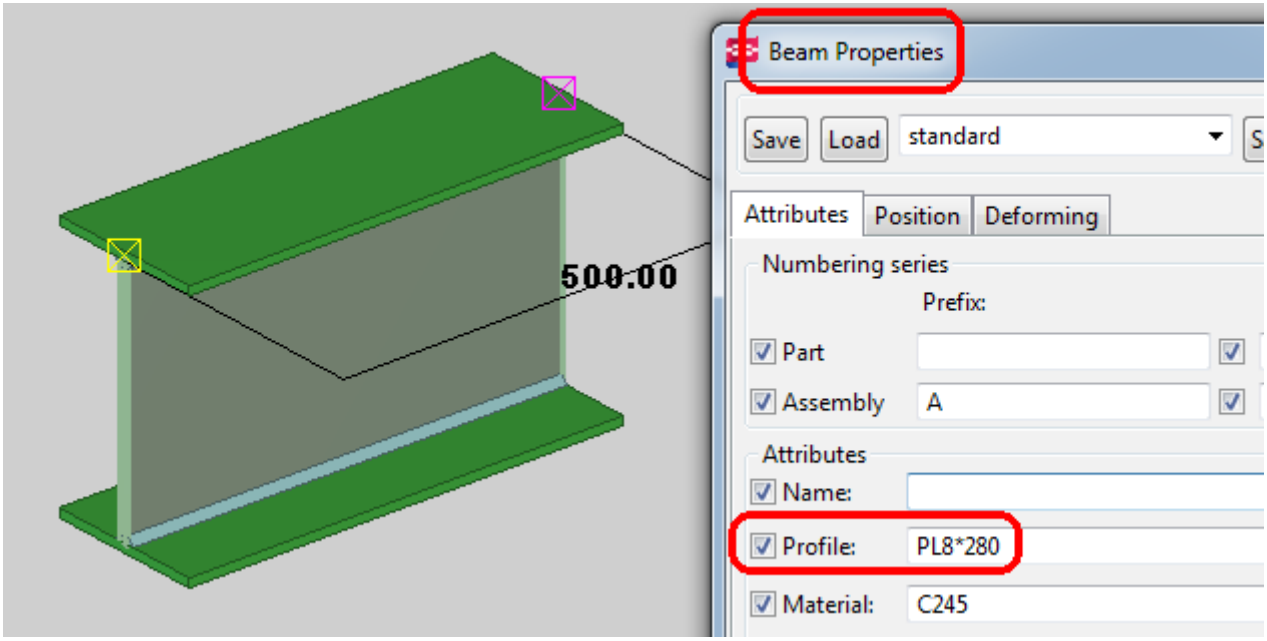
After the installation, x_plugins connections set appears in the "Plugins" tab in the component catalog. Use "x_" filter for quicker search of this kind of the plugins.



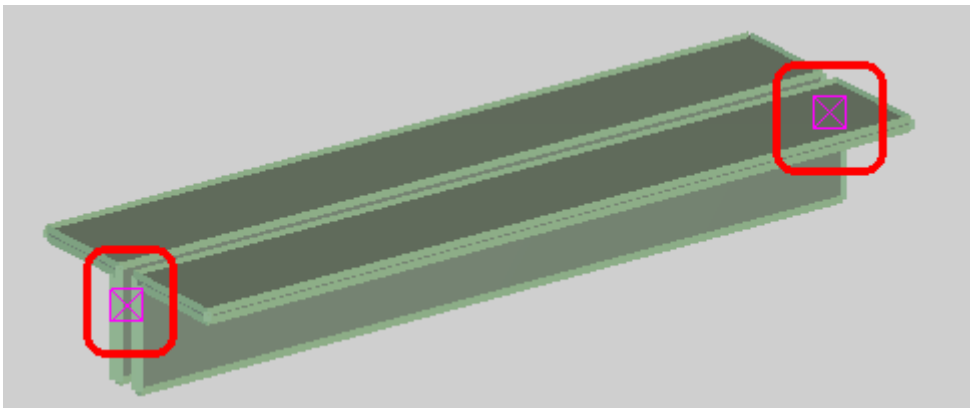
All connections in x_plugins works like system Tekla components. After you choose a component you need to set numbers of the parts (main and secondary) which forms a connection.

As a main/secondary part x_plugin may take a rolling beam, a contour plate, a welded beam, twin profile (angles, channels)

- **Required**: the web of the welded beam must be a plate beam and must be welded to the flanges. If the plugin is set on the welded I-beam it is necessary to put only the web part of the welded I-beam, the upper and lower flange the plugin will find itself due to the fact that they are welded to the web.

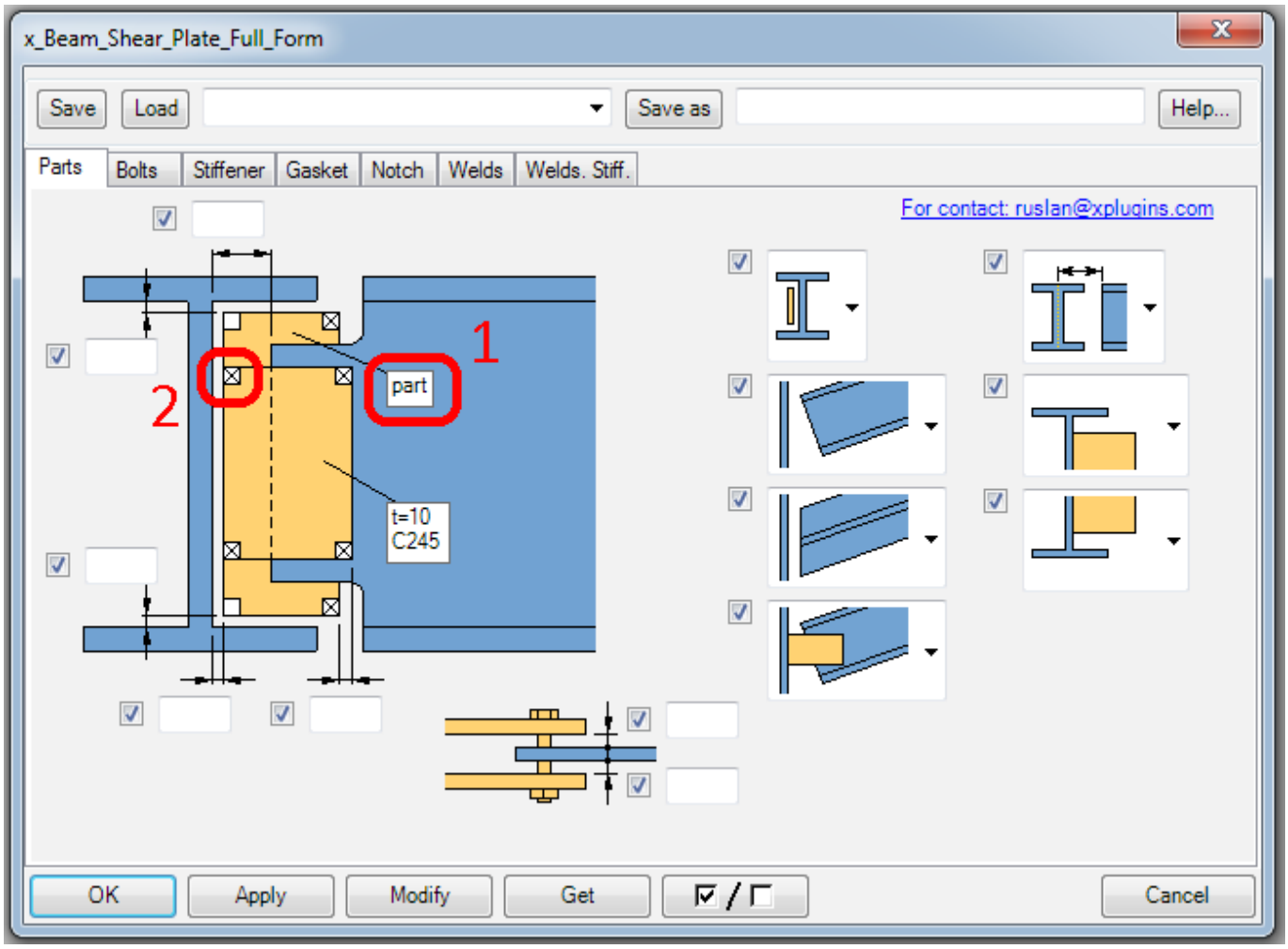


- **Required**: when modeling the twin profile (angles, channels), the handles of both parts must match. If the plugin is put on a twin profile, then you need to pick all the parts included in this profile.

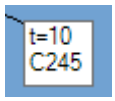


Basic parameters of xplugins

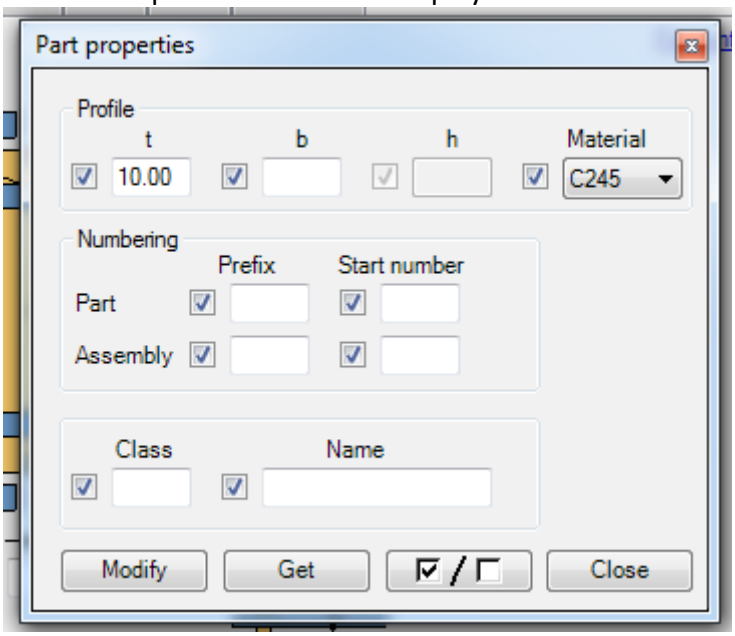
To reduce the occupied space, the parameters of some objects are opened in a new window by clicking on the icon.



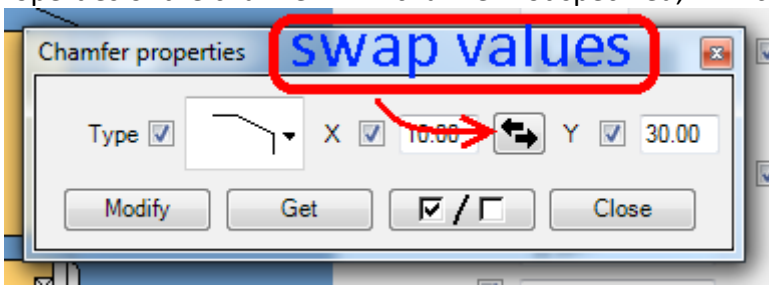
Icon № 1 - opens the properties of the part. 

- the parameters are not specified, 

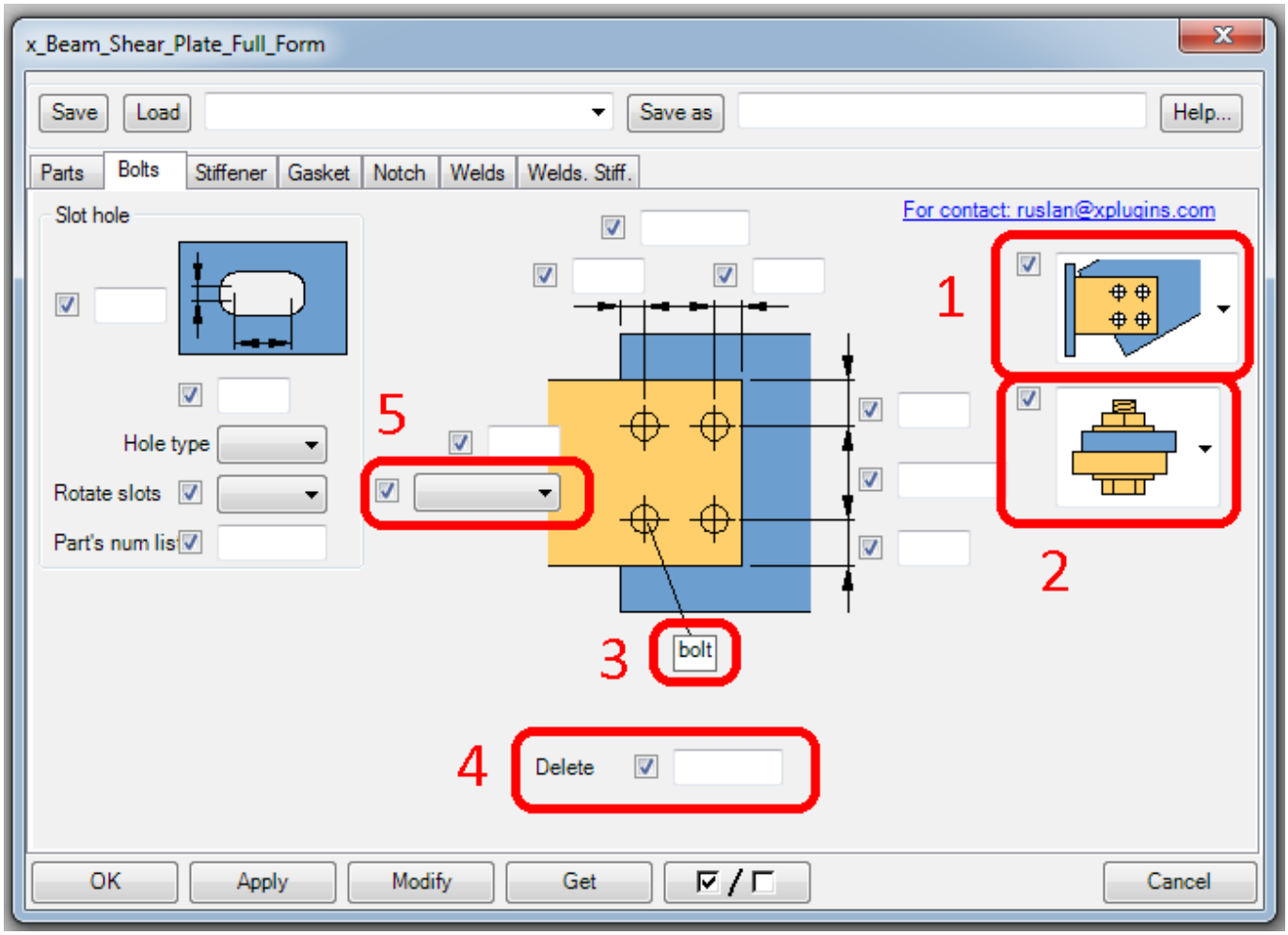
- the parameters are set and the most important values are displayed on the icon.



Icon № 2 - opens the properties of the chamfer. - chamfer not specified, - chamfer set.



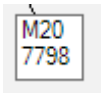
Bolts



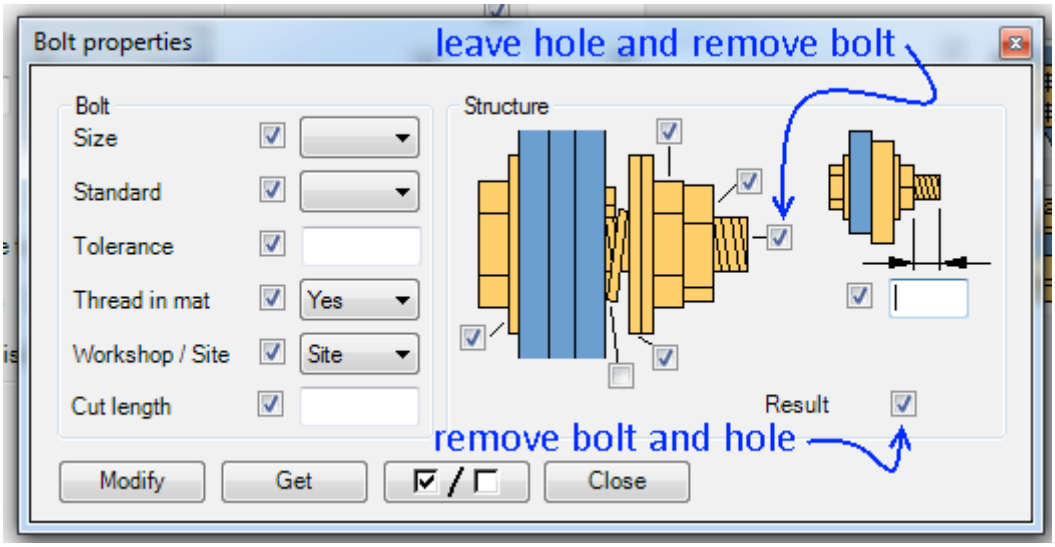
№1 - Selection of the orientation of the bolt field, when the main and secondary parts are connected non perpendicularly.

№2 - Turn the bolt 180°

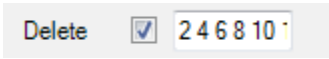
№3 - the icon of parameters of bolts. 

- the bolt parameters are not specified. 

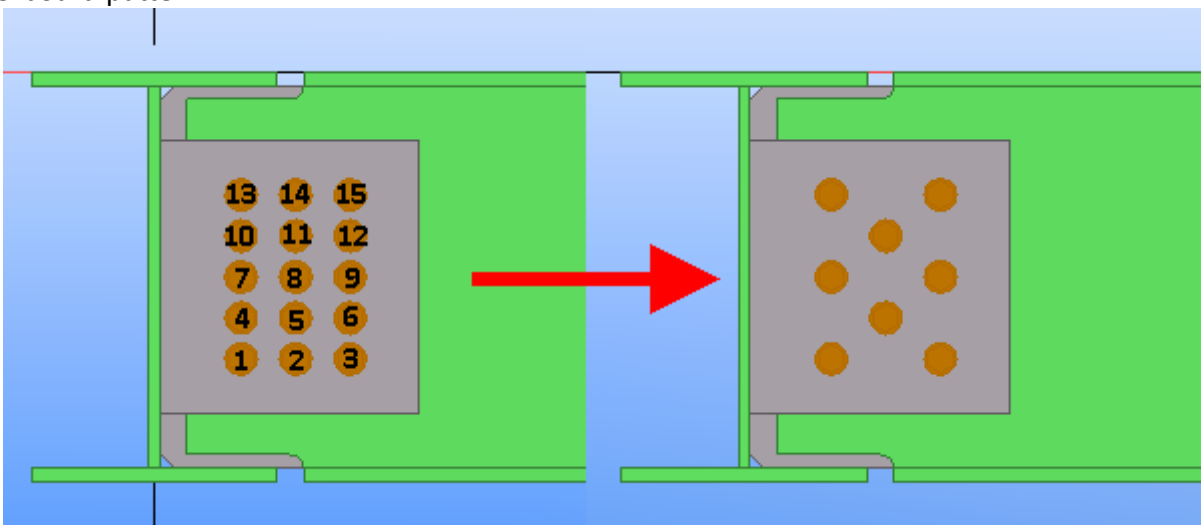
- the parameters are set.



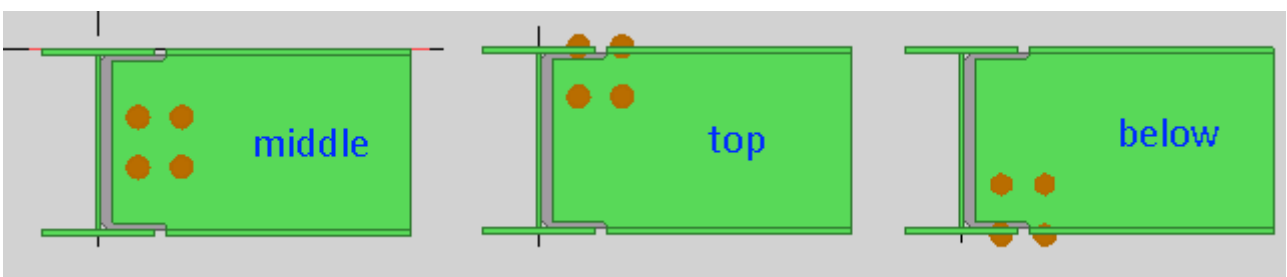
№4 - remove the bolt by its number. This field indicates the numbers of bolts (through the space) that need to be excluded from the bolted field.

For example, you need to arrange the bolts in staggered order, to do this, create a full array of bolts and then remove the bolts numbered "2 4 6 8 10 12 14" 

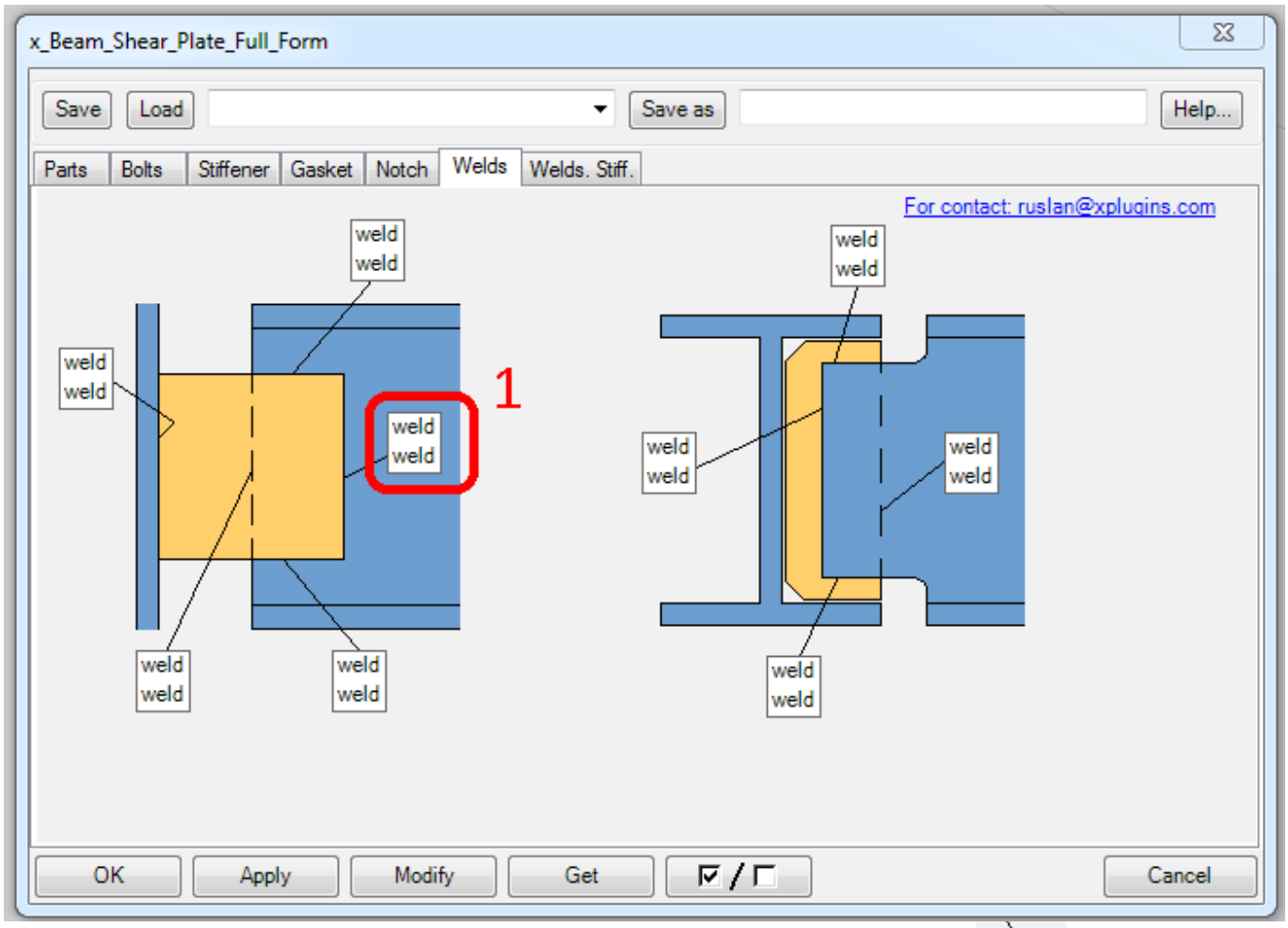
from it and get a checkerboard pattern.

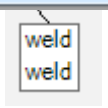


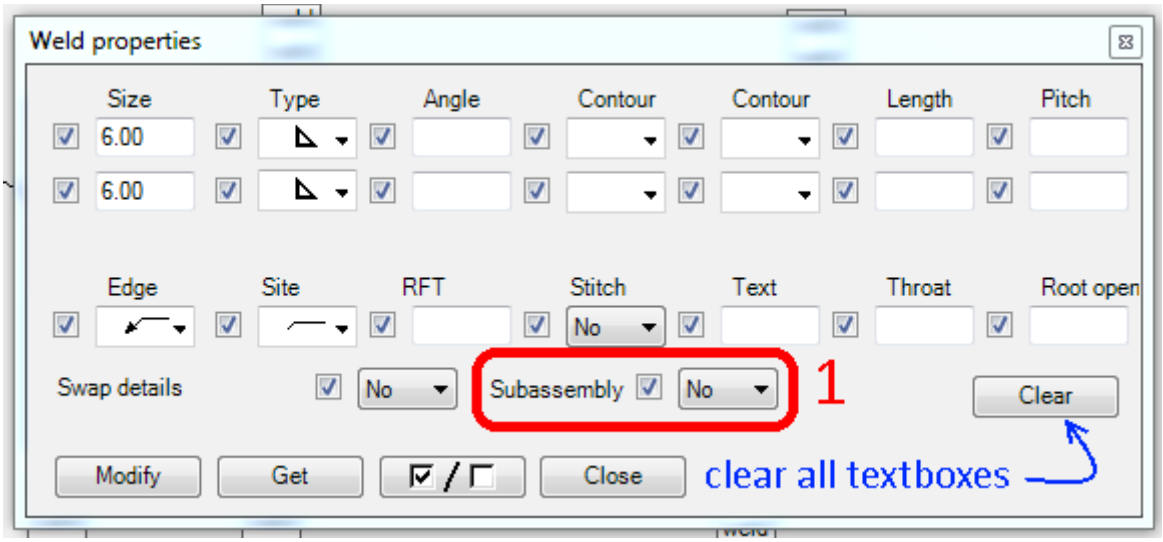
№5 - position of the bolt field relative to the secondary part
"Mid": the center of the bolt field lies on the center line of the beam.
"Top": the top row of bolts lies on the top flange of the beam.
"Below": the bottom row of bolts lies on the bottom flange of the beam.



Weld

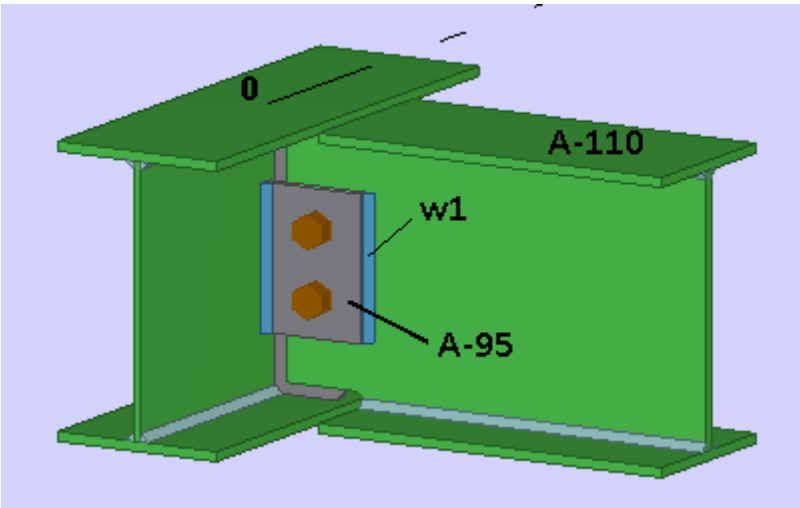


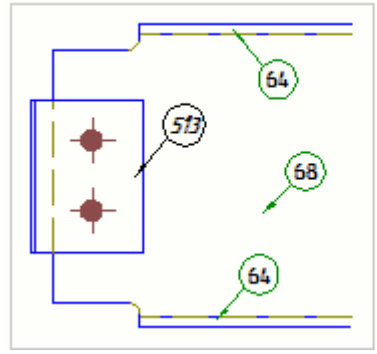
№1 - clicking on the welding icon opens a window with welding parameters.  - the parameters are not specified.  - the parameters are set.



№1 - the switch "Subassembly" allows you to include the welded part as a subassembly.

For example: the A-95 site plate is welded by welding w1 to the beam A-110, if in the settings for the weld seam w1 to include "subassembly-yes", then both A-110 and A-95 appear in the assembly drawing.

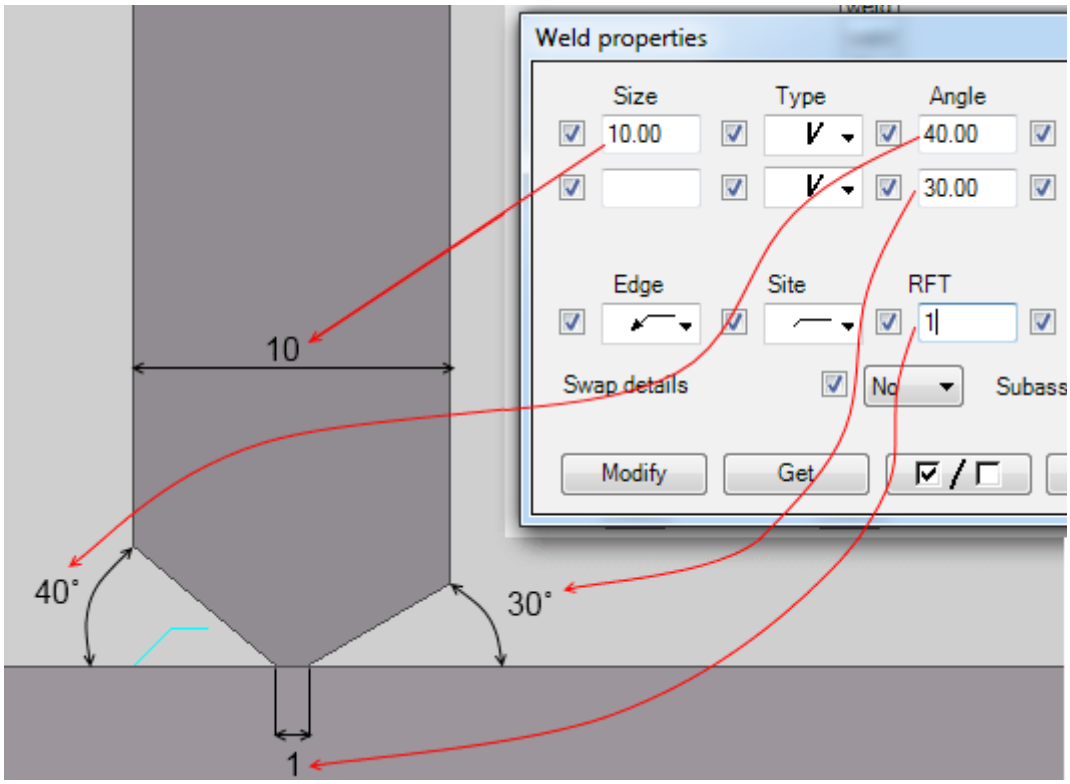




Bill of material

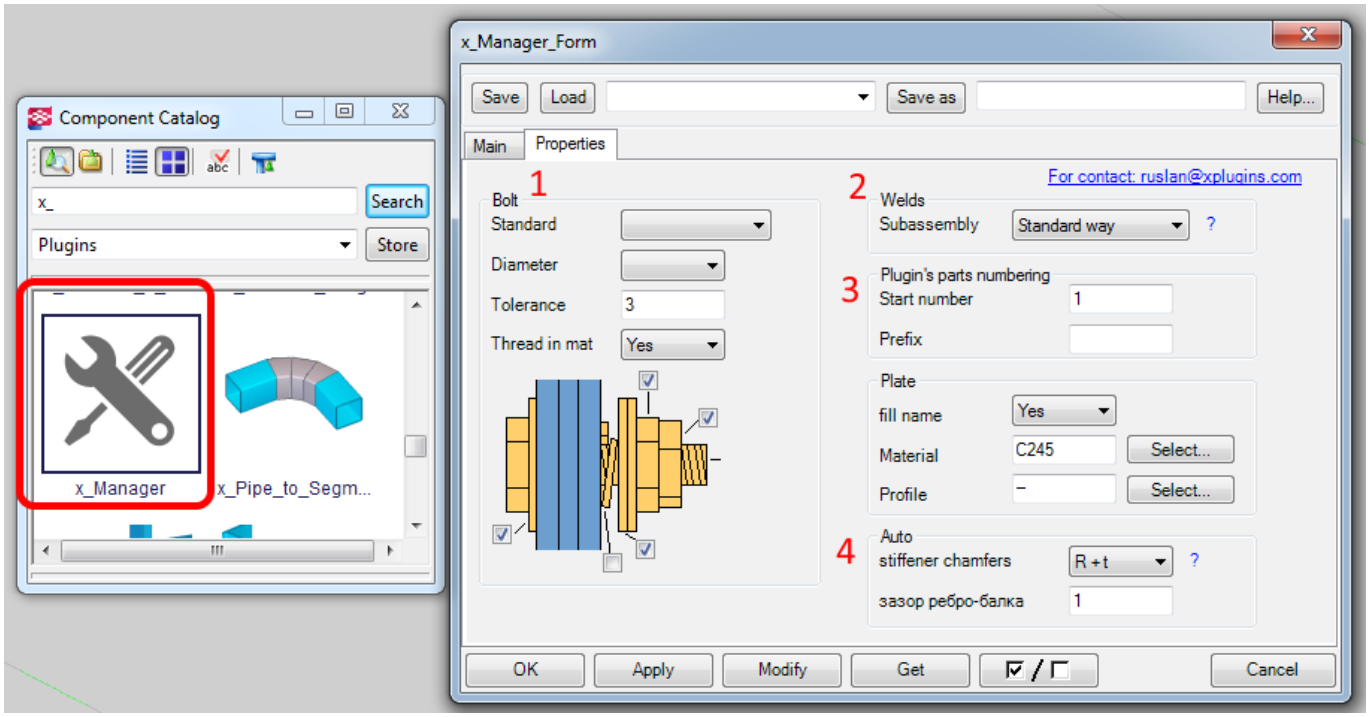
Mark	#	Count	Description	Length	Weight One	Weight All
A-95	513	1	−10x110	150	7.00	7.00
A-110	64	2	−10x180	390	7.00	14.00
	68	1	−8x280	476	7.00	7.00

Each weld seam is able to prepare a bevel along the edge of the part, for this you need to specify the thickness of the part, specify the angle and dulling of the bevel, specify the type of welding ( - chamfer only one part,  - chamfer both parts)



Default values

When the plugin is insert into the model without the specified settings (for the first time), it uses the values specified in x_Manager, this is also a plugin and is located in the components directory.



№1 - "Bolt" - defines the bolt structure (size / standard / tolerance / number of nuts / ...)

№2 - '' Welds '' - selection of the subassembly assignment option. Standard - the subassembly will be done just like the Tekla program does, and after the numbering, the subassembly will receive its assembly number.

Shop weld - will be created by a shop weld with a 1mm size that will adds the part into the assembly, after numbering such an item the assembly number will not be received (it simply gets the position number in the assembly)

№3 - default parameters for plate parts. If signing is enabled, the plugin writes its constructive name into the "name" field of the part.