



Learn to use (4) 3skeng Steelwork (ver.1.0)

This document contains all scene texts of the SketchUp file in case you have problems to fit the text on your screen.

Scene "Learn to use Steelwork"

How-to use this file:

Click on the next scene "1-Single Straight Profile".

Follow the description step-by-step (lines starting with "*" require action from you) and feel free to align the predefined view to fit your screen resolution and preference.

When successfully finished, click on the next scene and repeat until the last scene. It may be helpful to click on this scene "Learn to use Steelwork" for reference.

In the end, your design should look similar as shown below.

Scene "1-Single Straight Profile"

- 1) Click on the "Steelwork tool" in the 3skeng toolbar.
- 2) Select shape type and standard in "library" register:
 - * "T-Section" => "MT - USA - AISC".
- 3) Click to select the start point:
 - * drawing origin.
- 4) Select the direction of the first pipeline segment:
 - * hover over the blue axis and click.
 - Info: Main axes are highlighted in the specific colors.
- 5) Select the orientation of the profile by using the degree selection or entering the value with the keyboard:
 - * select "0/360°" with either method.
- 6) Available options:
 - a) "chamfered": More details in scene 3 and scene 4.
 - b) * Click on "change type/standard":
 - i) Select other shape type and standard in "library" register:
 - * "I-Section" => "H - USA - ASTM A6-A6M".
 - ii) Select other profile:
 - Move along the squares to see the available profiles:
 - horizontal = profile variations (e.g. flange/web thickness)
 - vertical = different profiles (e.g. height)
 - * select "H-HP200x53,0 ASTM A6/A6M (...mm)".
- 7) Move along the ruler to select the length or enter the value with the keyboard:
 - * select "1000 mm" with either method.
 - Info: One side of the ruler is always set to "inch", the other side uses the drawing unit (this drawing is "mm").

Scene "2-Attach Straight Profile"

- 1) Click on the "Steelwork tool" in the 3skeng toolbar.
- 2) Select side you want to attach a profile to.
 - * Hover over the side looking towards you and click when highlighted.
- 3) Available options:
 - a) "orientation": Geometric relation orthogonal or parallel.
 - * Select parallel relation.
 - b) * Click on "change type/standard":
 - i) Select other shape type and standard in "library" register:
 - * Keep "I-Section" => "H - USA - ASTM A6-A6M".
 - ii) Select other profile:
 - * select "H-W150x22,5 ASTM A6/A6M (...mm)".
 - c) "rotation": Change rotation by using the degree selection.
 - * select "90/270°" (keyboard input not possible).
- 4) To define the orthogonal position, go to outside, center or inside.

Info: You can hold the "Shift" key to lock the orthogonal position.

 - * Orthogonal position: Align to left side.

To define the parallel position:

 - a) Five red pins give you predefined docking points:
 - Aligned to ends from outside (1,5), inside (2,4) and center (3).
 - b) You can use a pin for distance reference:
 - Hover over a pin, move the mouse in any direction from there and enter the value with the keyboard (let go of "Shift").
 - c) You can also select any "free" position with the mouse.
 - * Parallel position: Select "150mm" from center in direction to top.
Click.
- 5) Available options:
 - a) "chamfered": More details in scene 3 and scene 4.
 - b) "change type/standard": no change(s).

6) Move along the ruler to select the length or enter the value with the keyboard:

* select "400 mm" with either method.

Scene "3-Chamfered Profile (fixed angle)"

- 1) Click on the "Steelwork tool" in the 3skeng toolbar.
- 2) Select side you want to attach a profile to.
 - * Hover over the side looking towards you and click when highlighted.
- 3) Available options:
 - a) "orientation": no change.
 - b) * Click on "change type/standard":
 - * Hover over long (larger) profile to inherit properties and click.
 - c) "rotation": no change.
- 4) Define orthogonal and parallel position
(see 2-Attach Straight Profile).
 - * Orthogonal position: Align to center.
 - * Parallel position: Select top from inside. Click.
- 5) Available options:
 - a) "change type/standard": no change(s).
 - b) * Click on "chamfered":
 - i) Select the cutting modes for start (top) and end (bottom) in "library" register.
 - * Select chamfered for start and rectangular for end.
 - ii) Select the starting axis for the chamfered profile.
Please try different axes to fully understand the effect.
 - * Select top red axis.
 - iii) Select the angle
by using the degree selection
or entering the value with the keyboard:
 - * select "45°" with either method.
- 6) Move along the ruler to select the length
or enter the value with the keyboard:
 - * select "400 mm" with either method.

Scene "4-Chamfered Profile (variable angle)"

- 1) Click on the "Steelwork tool" in the 3skeng toolbar.
- 2) Select side you want to attach a profile to (arrow).
 - * Hover over the side looking towards you and click when highlighted.
- 3) Available options:
 - a) "orientation": no change.
 - b) "change type/standard": no change.
 - c) "rotation": no change.
- 4) Define orthogonal and parallel position (see 2-Attach Straight Profile).
 - * Orthogonal position: Align to center.
 - * Parallel position: Select bottom from inside. Click.
- 5) Available options:
 - a) "change type/standard": no change(s).
 - b) * Click on "chamfered":
 - i) Select the cutting modes for start and end in "library" register.
 - * Select chamfered for start and end.
 - ii) Select the starting axis for the chamfered profile.
 - * Select bottom green axis.
 - iii) To fit profile length to grey profile:
 - * Hover over visible side of grey profile until highlighted.
 - * Hold "Shift" and move mouse to not visible side until highlighted.
 - * Slowly move to top red pin and click when highlighted.

The chamfered profile should now be aligned to the top of the grey profile.