



Learn to use (4) 3skeng Channel (ver.2.2)

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

Scene "Explanation"

Important for MAC-users:

Clicking on and making changes in the 3skeng client give it focus!

So please click on the SketchUp window once you are done to give SketchUp back focus.

This will enable input of measurements with the keyboard.

Scene "Learn to use Channel"

How-to use this file:

Click on the next scene to start or use the PgUP and PgDN keys to advance to the previous or next scene.

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

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

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

Scene "1-Straight Channel"

- 1) Click on the "Channel Tool" in the 3skeng toolbar.
- 2) Click to select the start point:
 - * drawing origin.
- 3) Select the direction of the first pipeline segment:
 - * hover over the red axis and click.
 - Info: Main axes are highlighted in the specific colors.
- 4) Select type of pipeline segment:
 - * Click "Generate straight channels".
- 5) Move along the ruler to select the width or enter the value with the keyboard:
 - * select "800 mm" with either method.
- 6) Move along the ruler to select the height or enter the value with the keyboard:
 - * select "400 mm" with either method.
- 7) Move along the ruler to select the length or enter the value with the keyboard:
 - * select "1000 mm" with either method.

Scene "2-Straight Tee"

- 1) If not still active, click on the "Channel Tool".
- 2) * Hover over the end of the straight piece and click.
Select type of pipeline segment:
* Click "Select a T-Piece".
- 3) Move along the ruler to select the length of the tee segment
or enter the value with the keyboard:
* select "800 mm" with either method.
- 4) Select the orientation of the outlet with the degree selection
or enter the value with the keyboard:
* select "180°" (highlighted green like main axis) with either
method.
- 5) Move along the ruler to select the width of the outlet
or enter the value with the keyboard:
* select "400 mm" with either method.
- 6) Move along the ruler to select the height of the outlet
or enter the value with the keyboard:
* select "250 mm" with either method.
- 7) Move along the ruler to select the length of the outlet
or enter the value with the keyboard:
* select "500 mm" with either method.

Scene "3-Reducer to round"

- 1) If not still active, click on the "Channel Tool".
- 2) * Hover over the end of the outlet of the tee piece and click.
Select type of pipeline segment:
* Click "Select a Reducer".
- 3) Move along the ruler to select the length
or enter the value with the keyboard:
* select "400 mm" with either method.
- 4) Select type of reducer in client window:
* "Reducer to round (right)".
- 5) Select material and standard in library register:
* "Ventilation and Exhaust Duct" => "Metric Steel Ductwork".
- 6) Move along the line to select the diameter of the reducer end
or enter the value with the keyboard.
* select "250 mm" with either method.
- 7) Select reducer orientation for the width axis.
Option: The highlighted pins show concentric (middle)
and the two straight eccentric orientations.
You may also select any other configuration.
* select "0 mm (middle)" with either method.
- 8) Select reducer orientation for the height axis.
Option: The highlighted pins show concentric (middle)
and the two straight eccentric orientations.
You may also select any other configuration.
* select "0 mm (middle)" with either method.

Scene "4-Reducer to square"

- 1) If not still active, click on the "Channel Tool".
- 2) * Hover over the end of the tee piece and click.
Select type of pipeline segment:
* Click "Select a Reducer".
- 3) Move along the ruler to select the length
or enter the value with the keyboard:
* select "600 mm" with either method.
- 4) Select type of reducer in client window:
* "Reducer to square (left)".
- 5) Move along the ruler to select the width of the reducer end
or enter the value with the keyboard:
* select "400 mm" with either method.
- 6) Move along the ruler to select the height of the reducer end
or enter the value with the keyboard:
* select "250 mm" with either method.
- 7) Select reducer orientation for the width axis.
Option: The highlighted pins show concentric (middle)
and the two straight eccentric orientations.
You may also select any other configuration.
* select "-200 mm (left)" with either method.
- 8) Select reducer orientation for the height axis.
Option: The highlighted pins show concentric (middle)
and the two straight eccentric orientations.
You may also select any other configuration.
* select "75 mm (top)" with either method.

Scene "5-Elbow"

- 1) If not still active, click on the "Channel Tool".
- 2) * Hover over the end of the reducer to square and click.
Select type of pipeline segment:
* Click "Select the direction and an elbow".
- 3) Select type of elbow in client window:
"round elbow" or "square knee":
* "round elbow".
- 4) Select the orientation of the elbow by
moving the mouse over the degree selection
or entering the value with the keyboard:
* select "180°".
- 5) Select the elbow opening angle between 0 and 90 degree by
moving the mouse over the degree selection
or entering the value with the keyboard:
* select "90°".
- 6) Select the elbow bending radius.
You can use the pre-defined snap points
(set between 0.5 and 2.5 times the elbow diameter)
or enter a free value with the keyboard:
* select "r/d=1.5".

Scene "6-Channel-Elbow"

- 1) If not still active, click on the "Channel Tool".
- 2) * Hover over the end of the elbow and click.
Select type of pipeline segment:
* Click "Select an elbow and generate a channel".
- 3) Select type of elbow in client window:
"round elbow" or "square knee":
* "square knee".
- 4) Select the orientation of the elbow by
moving the mouse over the degree selection
or entering the value with the keyboard:
select "180°".
Option: A double-click to confirm the degree selection
will take over the configuration of the last elbow.
- 5) Select the length of the whole pipe-elbow combination.
The total length is the intersection of the pipe's centerline
and the centerline of the elbow outlet:
select "1500 mm".

Scene "7-Edit Channel"

The following edit handling is used for the Pipe and Channel tool.

1) Click on the "Edit and Rotate Tool" in the 3skeng toolbar.

Activate "Pipe and Channel" in the 3skeng client.

2) Slowly hover over the white pipeline.

Whenever you are close to an open pipeline end

or a connection of segments, you can see highlighted pins.

All possible options (axis) at the specific position are highlighted.

Info: There may be different options for each side of the pin.

3) Click to confirm the pin you want to use for starting edit.

4) Hover over the available options.

The affected elements for each options are highlighted.

Click to confirm your choice.

5) Use the ruler or degree selection as required.

Info: Use SketchUp or 3skeng elements for reference.

* Please edit the white pipeline to match the grey pipeline.

Scene "8-Connect Channel"

The following connect handling is used for the Pipe and Channel tool.

- 1) Select elements you want to move/copy.
 - a) Use SketchUp tools for your selection.
 - b) Make a right-click on the grey pipe.
 - Go to line "3s select" and click on "to next branch"
 - * Select all gray elements with method a) or b).
- 2) Click on the "Connect Tool" in the 3skeng toolbar.
- 3) Click on the pin you want to use as starting point
(this point of the selection will be hanging on your mouse tip).
 - * Click on the open end of the selection as starting point.
- 4) Press "Ctrl" to toggle between multi-copying and moving your selection.
 - * Press "Ctrl" for multi-copying the selection.
- 5) Click on both of the open ends of the tee to copy and attach the selection.

Press "Esc" to exit the multi-copy function of the "Connect Tool".
Press "Space" to exit the "Connect Tool".