



Learn to use (1.2) 3skeng Pipe detail basics (ver.2.1)

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

Scene "Explanation"

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 Pipe detail"

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 Pipe"

- 1) Click on the "Pipe Tool" in the 3skeng toolbar.
- 2) In 3skeng (client) window:
 - * Make sure that the switch is on the side "Detail".
- 3) Select material and standard in "library" register:
 - * "Plastic Piping"
 - => "PVC-C Pipe (mm) PN16 (SDR9-SDR 13.6), gray".
- 4) Click to select the start point:
 - * drawing origin.
- 5) Select the direction of the first pipeline segment:
 - * hover over the red axis and click.
 - Info: Main axes are highlighted in the specific colors.
- 6) Select type of pipeline segment:
 - * Click "Generate straight pipelines".
- 7) Move along the line to select the diameter of the straight pipe (just click on a highlighted square)
 - * select "Pipe d63mm".
- 8) Move along the ruler to select the length of the pipe segment 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-Tee"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the straight piece and click to select type of pipeline segment:
 - * Click "Select a T-Piece".
- 3) Select type of tee in 3skeng (client) window:
(for PVC-C only one category of tee is available)
 - * "PVC-C Tee (mm), gray".
- 4) Move along the squares to see the available fittings:
vertical = different tees (e.g. different outlet sizes)
horizontal = available docking points of same tee
 - * select "Tee straight 90° d63mm-d63mm PVC-C PN16"
for straight run.
- 5) Select the orientation of the tee outlet
by using the degree selection
or entering the value with the keyboard:
 - * select "180°" with either method.

Scene "3-Reducer"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the outlet of the tee piece and click.
Select type of pipeline segment:
* Click "Select a Reducer".
- 3) Select type of reducer in 3skeng (client) window:
(for PVC-C only one category of reducer is available)
* "PVC-C Reducing bush (mm), gray".
- 4) Move along the squares to see the available fittings:
vertical = different reducers (e.g. different sizes)
* select "Reducing bush long d63-d32mm PVC-C PN16".

Scene "3a-Straight Pipe"

This step is necessary as the elbow of PVC-C requires a straight piece to connect to!

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the tee and click.
Select type of pipeline segment:
* Click "Generate straight pipelines".
- 3) Move along the ruler to select the length of the pipe segment or enter the value with the keyboard:
* select "500 mm" with either method.

Scene "4-Elbow"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the straight piece and click.
Select type of pipeline segment:
* Click "Select the direction and an elbow".
- 3) Select type of elbow in 3skeng (client) window:
(for PVC-C only one category of elbow is available)
* "PVC-C Elbow (mm), gray".
- 4) Move along the squares to see the available elbows:
vertical = different elbows (e.g. different shapes)
* select "Bend 90° r=2d d63mm PVC-C PN16".
- 5) Select the orientation of the elbow by
moving the mouse over the degree selection
or entering the value with the keyboard:
* select "180°".

Scene "4a-Straight Pipe"

This step is necessary as some fittings of PVC-C require a straight piece to connect to!

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the elbow and click.
Select type of pipeline segment:
* Click "Generate straight pipelines".
- 3) Move along the ruler to select the length of the pipe segment
or enter the value with the keyboard:
* select "500 mm" with either method.

Scene "5-Fitting"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the straight piece and click.
Select type of pipeline segment:
 - * Click "Select a fitting".
- 3) Select type of fitting in 3skeng (client) window:
 - * "PVC-C Cross (mm), gray".
- 4) For this size and type of fitting, only one is available:
 - * select "Cross d63mm PVC-C PN16".
- 5) Select the orientation of the fitting by moving the mouse over the degree selection or entering the value with the keyboard:
 - * select "90°" or "270°" (same size on both outlets).

Scene "5a-Straight Pipe"

This step is necessary as some connectors of PVC-C require a straight piece to connect to!

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the elbow and click.
Select type of pipeline segment:
 - * Click "Generate straight pipelines".
- 3) Move along the ruler to select the length of the pipe segment or enter the value with the keyboard:
 - * select "500 mm" with either method.

Scene "6-Connector"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the straight piece and click.
Select type of pipeline segment:
* Click "Select a pipe connector".
- 3) Select type of connector in 3skeng (client) window:
* "PVC-C Loose Flange Assembly (mm), gray".
- 4) For this size and type of connector, only one is available:
* select "Loose Flange Assembly DN50-d63mm PVC-C PN16".

Scene "7-Instrument"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the flange and click.
Select type of pipeline segment:
* Click "Select an instrument".
- 3) Select type of instrument in 3skeng (client) window:
* "PVC-C Ball, Diaphragm and Butterfly Valve (mm), gray".
- 4) Move to second triangle from left and along the squares to see the available instruments:
horizontal = different docking points of same instrument
vertical = different instruments (e.g. different shapes)
* select "Butterfly Valve (Handle) DN50mm PVC-C PN10" (left PIN for handle orientation).
- 5) Select the orientation of the instrument by moving the mouse over the degree selection or entering the value with the keyboard:
* select "90°".

Information: The orange circle indicates that the valve (PN10) has a different class as the flange (PN16).

Scene "8-Pipe-Elbow"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over the end of the reducer and click.
Select type of pipeline segment:
* Click "Select an elbow and generate a pipe".
- 3) Select type of pipe in 3skeng (client) window:
(for PVC-C only one category of pipe is available)
* "PVC-C Pipe (mm) PN16 (SDR9-SDR 13.6), gray"
- 4) * Click to confirm pipe.
- 5) Select type of elbow in 3skeng (client) window:
(for PVC-C only one category of elbow is available)
* "PVC-C Elbow (mm), gray".
- 6) Move along the squares to see the available elbows:
horizontal = different docking points of same elbow
* select "Bend 90° r=2d d32mm PVC-C PN16".
- 7) Select the orientation of the elbow
by using the degree selection
or entering the value with the keyboard:
* select "270°".
- 8) Select the length of the whole pipe-elbow combination
by entering the value with the keyboard
or hovering over an element for reference and alignment.
The total length is the intersection of the pipe's centerline
and the centerline of the elbow outlet.
* hover over the outlets of the cross for length reference.

Scene "9-Add tee in straight piece"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over a straight piece and click on tee symbol to add a tee in the straight piece.
- 3) Select type of tee in 3skeng (client) window:
(for PVC-C only one category of tee is available)
* No selection possible.
- 4) Move along the squares to see the available tees:
vertical = different tees (e.g. different outlet sizes/shapes)
* select "Tee reduced 90° d63-d50mm PVC-C PN16".
- 5) Select the position of the tee
by clicking on one of the three pins (start, middle and end)
or hovering first over a pin, then on the straight piece
and entering the value with the keyboard
(start=maximum, middle=0mm, end=maximum):
* select "200mm from middle towards start of straight piece".
- 6) Select the orientation of the tee
by using the degree selection
or entering the value with the keyboard:
* select "90°".

Scene "10-Add connector in straight piece"

- 1) If not still active, click on the "Pipe Tool".
- 2) * Hover over a straight piece and
click on connector symbol to add a connector in the straight piece.
- 3) Select type of connector in 3skeng (client) window:
* select "PVC-C Threaded Union"
- 4) For this size and type of connector, only one is available:
* select "Union male/female G2,75in-d63mm PVC-C PN16".
- 5) Select the position of the connector
by clicking on one of the three pins (start, middle and end)
or hovering over the straight piece
and entering the value with the keyboard
(start=maximum, middle=0mm, end=maximum):
* select middle pin.