3DXpert™ for SOLIDWORKS®

TILT SUPPORTS
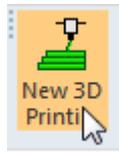
Tutorial_V2 - Updated: 14,0200,1599,1024(SP2)

3D SYSTEMS

Introduction

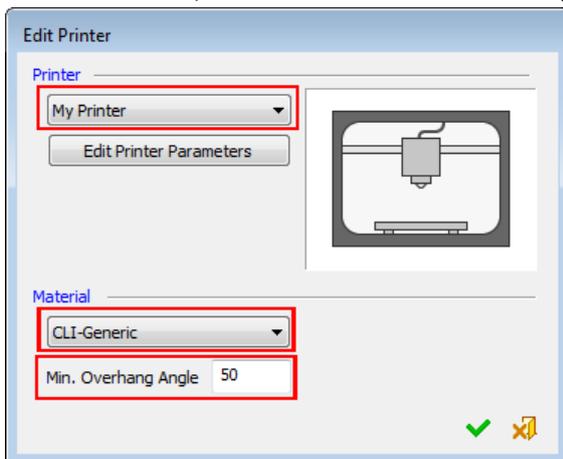In this exercise we will learn how to tilt and scale support

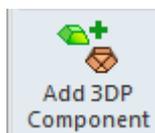|		
! Notice/ Remember		Left mouse button name is **"pick"**
		Middle mouse button name is **"Exit"**
		Right mouse button name is **"Click"**

1. Select New 3D printing project

2. Once the project is opened select Edit Printer
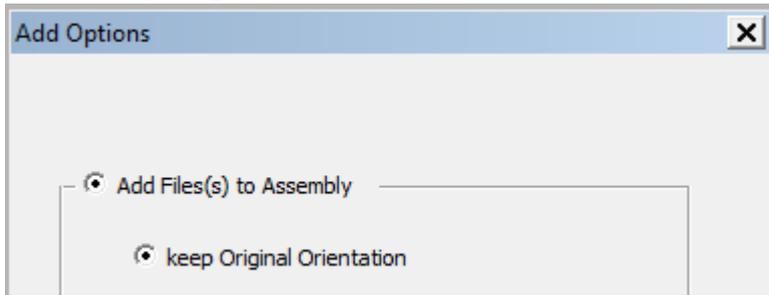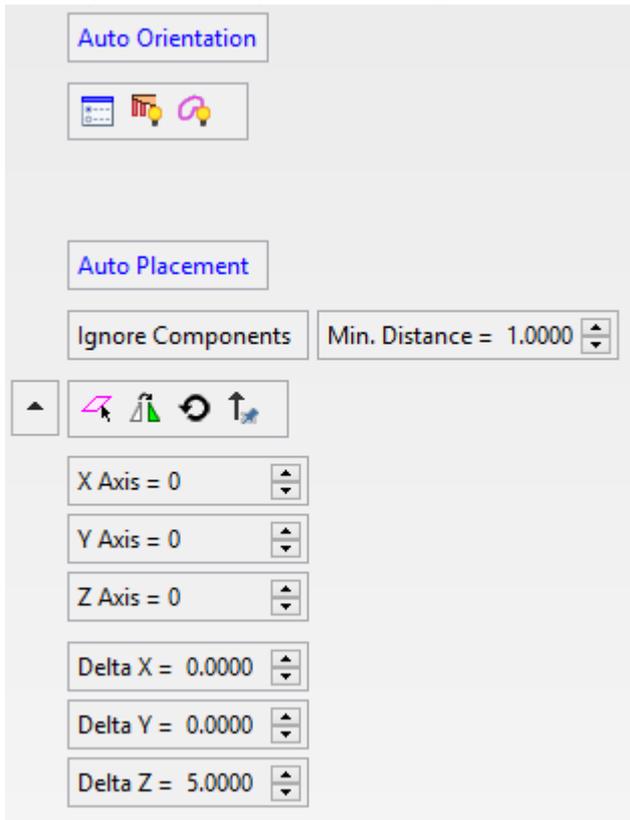3. Set the Printer, Material and Min. overhang angle as in the image below

Select OK

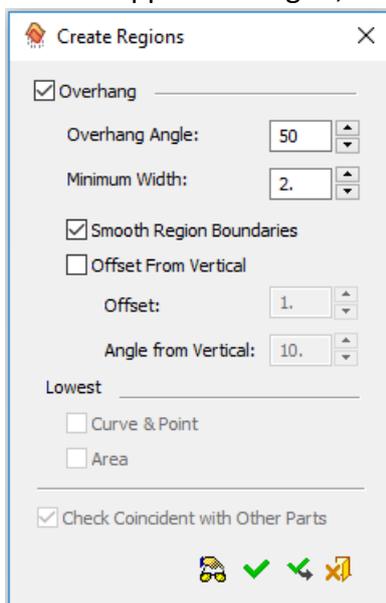4. Select **Add 3DP Component** to load the part. Pick Manifold_4SW.elt.

5. Select 'keep Original Orientation' and ok

Add Options ✕
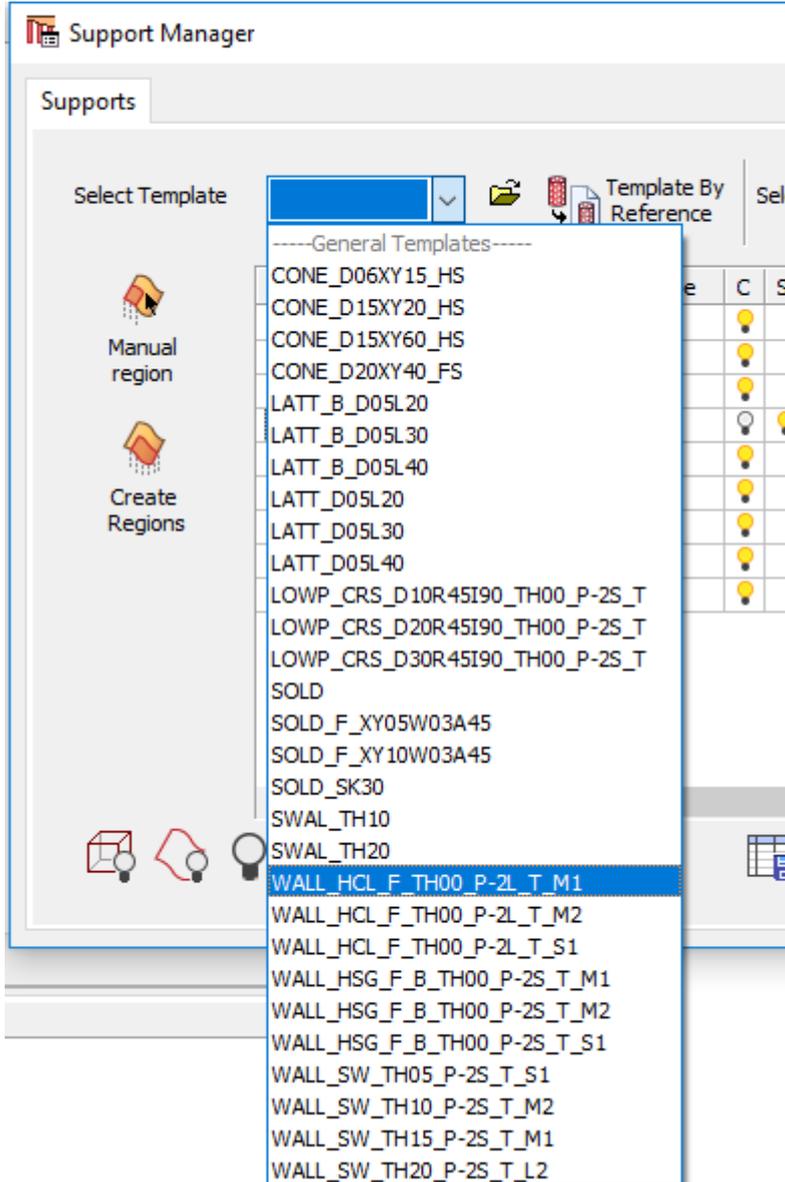
○ Add Files(s) to Assembly

○ keep Original Orientation

6. Select position body and see the parameters as below and select Cancel

Auto Orientation

Auto Placement

Ignore Components | Min. Distance = 1.0000

X Axis = 0
Y Axis = 0
Z Axis = 0
Delta X = 0.0000
Delta Y = 0.0000
Delta Z = 5.0000

7. Select 'Support Manager', Set the parameters as below and OK on the dialog below

Create Regions ✕

☑ Overhang

Overhang Angle: 50
Minimum Width: 2.

☑ Smooth Region Boundaries
☐ Offset From Vertical
Offset: 1.
Angle from Vertical: 10.

Lowest

☐ Curve & Point
☐ Area

☑ Check Coincident with Other Parts

3D SYSTEMS

8. Select region 6 and set the template marked in the image below

! Notice	The naming convention of the templates is explained in a separate document

See that immediately a Wall Support was created on that region

3D SYSTEMS
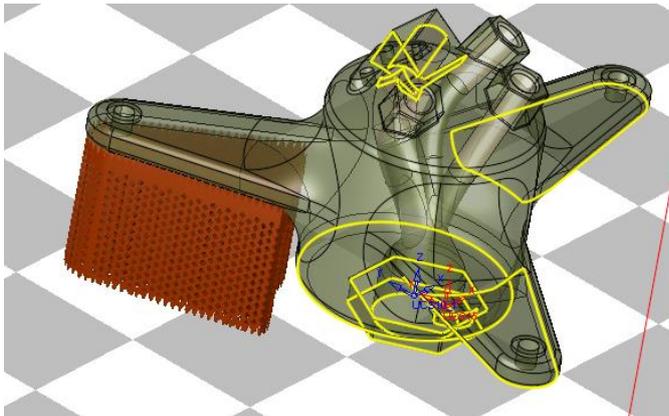
Tilting:

A dashed black reference line appears along the supports. To tilt the support, pick the purple ball at the bottom of the line and drag it. As you release the mouse, the supports will move accordingly. An Angle box displays the current tilt angle of the support.

Scaling:

To add scaling to any point along the support height, pick anywhere on the support's reference line to add a breakpoint and set the scale factor in the displayed Scale value box.
A scale factor can also be set to non-tilted supports.
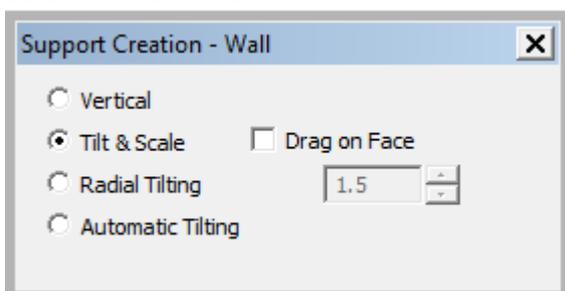
Note:

A breakpoint can also be tilted by dragging it. While dragging, if the line color changes from black to red, this means that the tilt angle is too big and therefore these supports cannot hold themselves.
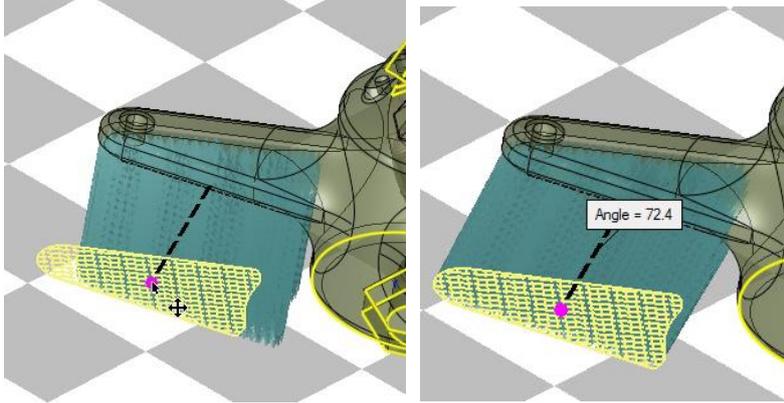In this case, if the mouse is released, the Angle box and value also appear in red.

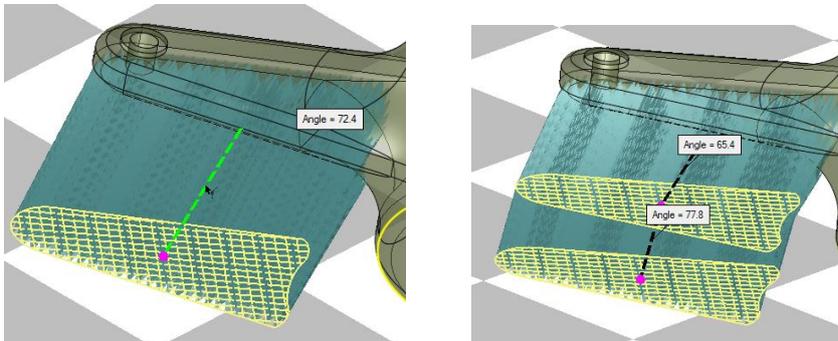9. Click Right mouse button on Region 6 and select 'Edit Tilting'
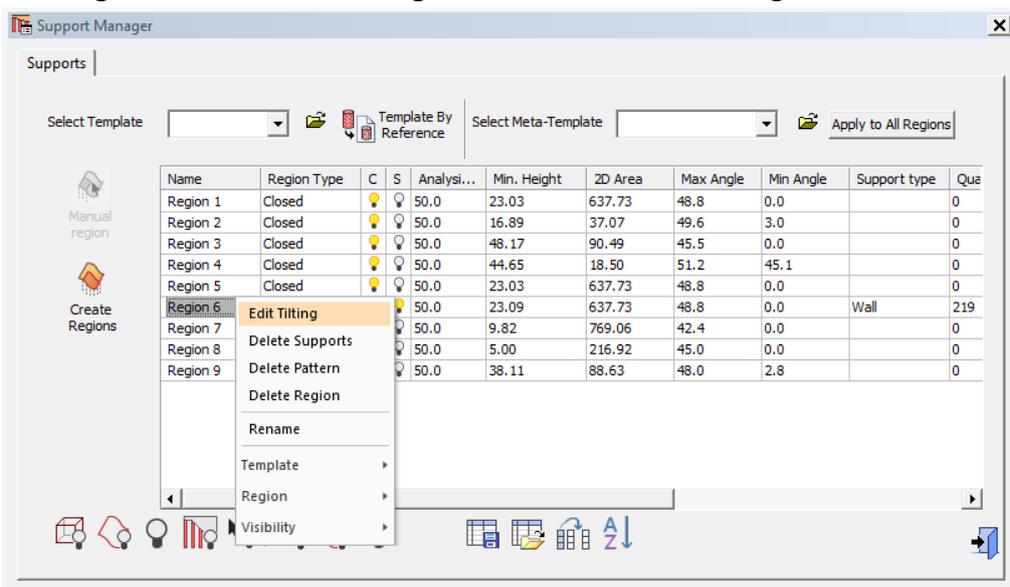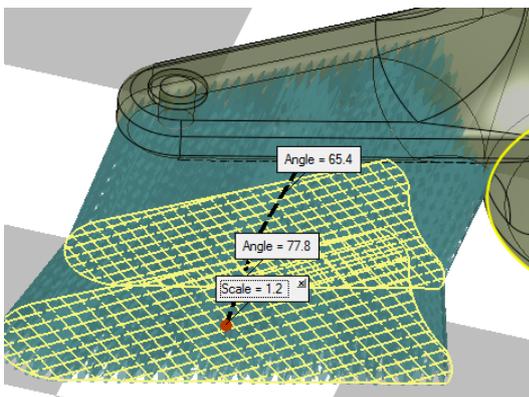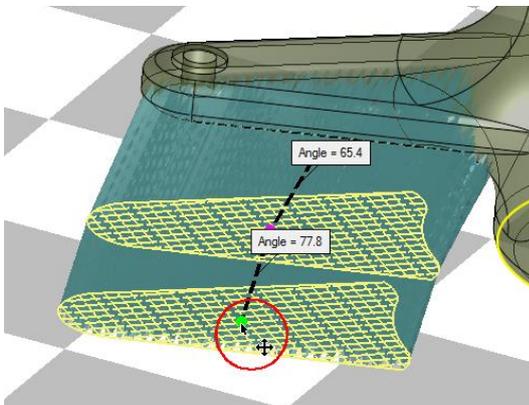

10. Select 'Tilt & Scale'

11. Select the pink dot and move the pattern on the tray to any value so that the support will be tilted as in the right image below

12. Select the line in the middle and drag it to set a break point tilting
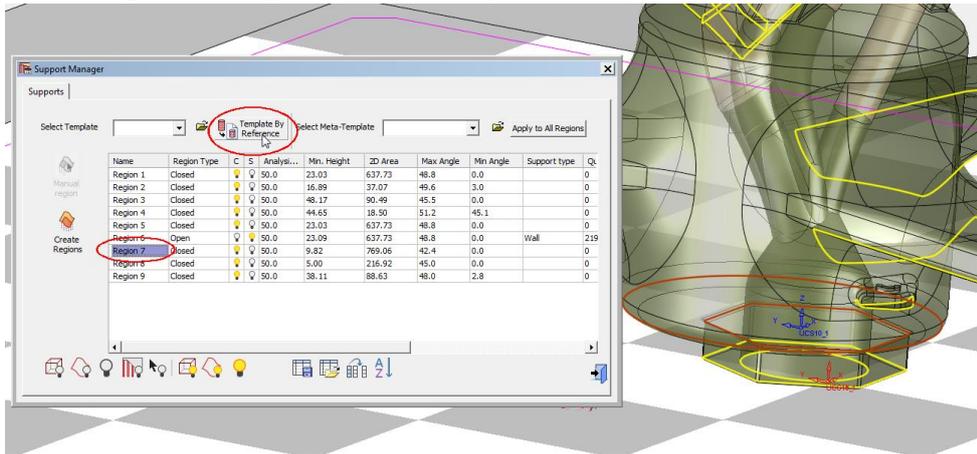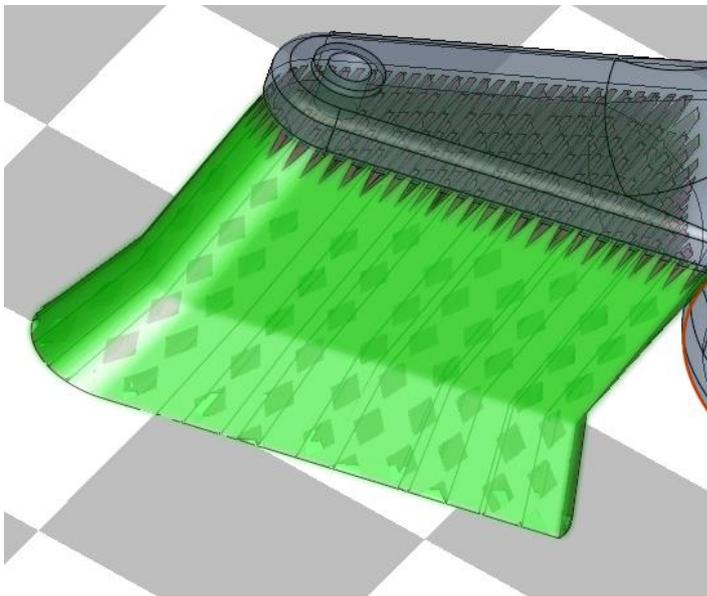

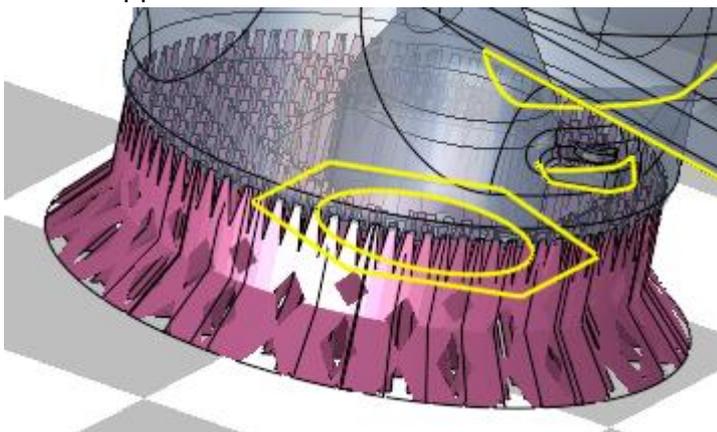13. Select the pink dot and set 1.2 scaling

14. Select OK

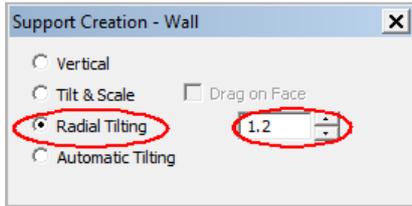15. Select Region 7 and pick 'Template by Referece'

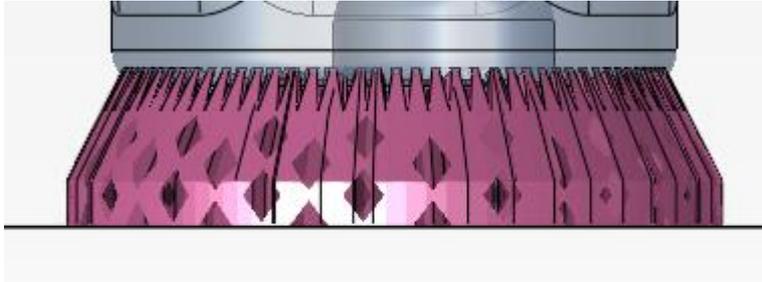16. Pick the previously created support

17. A new support is created

18. RMB the region and select 'Edit Tilting'
19. Select Radial Tilting and set factor of 1.2

20. Examine the result

21. Edit the tilting again and Pick the Radial Scale Center (purple plus sign) at the bottom of the dashed line and drag it to the required position to change the angle (again, set any value so that the support will be tilted as in the image below)

3D SYSTEMS