

TILT SUPPORTS

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





Introduction

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

Notice/ Remember	Left mouse button name is " <i>pick</i> "
	Middle mouse button name is " <i>Exit</i> "
	Right mouse button name is "Click"

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1. Select New 3D printing project



3. Set the Printer, Material and Min. overhang angle as in the image below

Edit Printer	
Printer My Printer Edit Printer Parameters	
CLI-Generic	
Min. Overhang Angle 50	
	✓ ×

Select OK



4. Select Component to load the part. Pick Manifold_4SW.elt.





5. Select 'keep Original Orientation' and ok



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

	Auto Orientation				
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	Auto Placement				
	Ignore Compone	nts	Min. Distan	ce = 1.000	0 🌲
•	4 й 9 î				
	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						
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8. Select region 6 and set the template marked in the image below

Supports Select Template	By Sele
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Manual CONE D15XY60 HS	
region CONE_D20XY40_FS	
LATT_B_D05L20	
LATT_B_D05L30	V
LATT_B_D05L40	
Create LATT_D05L20	
Regions LATT_D05L30	
LATT_D05L40	
LOWP_CRS_D10R45I90_TH00_P-2S_T	
LOWP_CRS_D20R45I90_TH00_P-2S_T	
LOWP_CRS_D30R45I90_TH00_P-2S_T	
SOLD	
SOLD_F_XY05W03A45	
SOLD_F_XY10W03A45	
SOLD_SK30	
	F
	E.
WALL HOLE THOO P-2L T M2	
WALL HOLE THOO P-2L T S1	
WALL HSG F B THO0 P-2S T M1	
WALL HSG F B THOO P-2S T M2	
WALL_HSG_F_B_TH00_P-2S_T_S1	
WALL_SW_TH05_P-2S_T_S1	
WALL_SW_TH10_P-2S_T_M2	
WALL_SW_TH15_P-2S_T_M1	
WALL_SW_TH20_P-2S_T_L2	

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' Support Manager Supports Template By Select Template Select Meta-Template Apply to All Regions • • Region Type C S Analysi... Min. Height 2D Area Max Angle Min Angle Name Support type Qua AN ♀ 50.0♀ 50.0 637.73 Region 1 Closed • 23.03 48.8 0.0 Closed • 37.07 49.6 3.0 16.89 Region 2 Ŷ Region 3 Closed 50.0 48.17 90.49 45.5 0.0 Region 4 Closed ₽ 50.0 44.65 18.50 51.2 45.1 § 50.0 Region 5 Closed • 23.03 637.73 48.8 0.0 Region 6 50.0 23.09 637.73 48.8 0.0 Wall Create Edit Tilting 50.0 769.06 42.4 0.0 Regions Region 7 9.82 Delete Supports 50.0 216.92 5.00 45.0 0.0 Region 8 Delete Pattern \$ 50.0 Region 9 38.11 88.63 48.0 2.8 Delete Region

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10. Select 'Tilt & Scale'

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Rename Template Region

Visibility

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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 TILT SUPPORTS





- 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)

