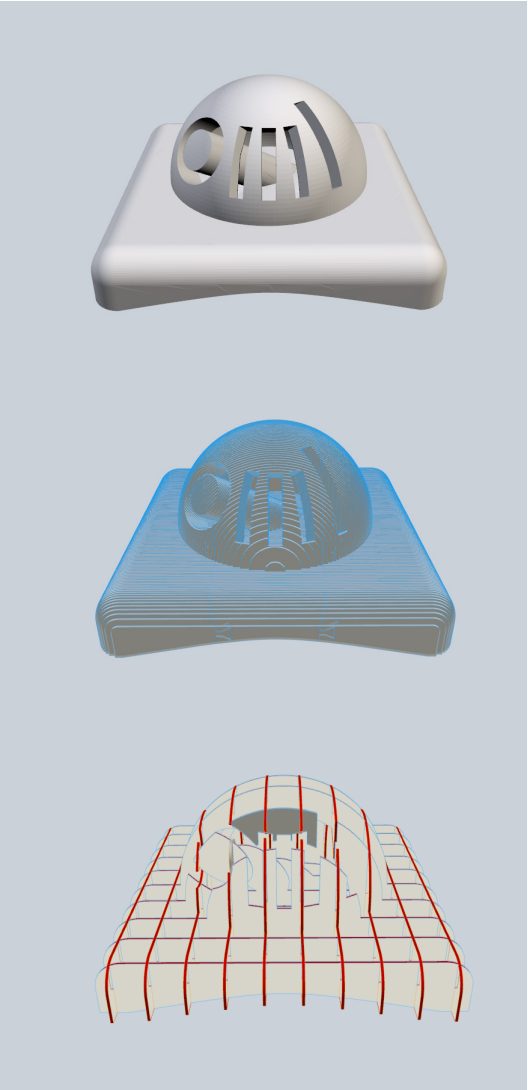


What is Slicer?

Laser cutting is a very fast production and manufacturing method that is limited to only cutting flat surfaces.

Slicer for Fusion 360 is an Autodesk software that allows you to create 3D objects with a laser cutter. It does it by converting 3D models into slices suitable for a laser cutter. Unlike creating 3D objects on a 3D printer or CNC routing, Slicer offers a great tool that saves a huge amount of time.

Get and install Slicer for Fusion360
Preparing your model for Slicer.
Five ways to Slice
Preparing your files for Laser cutting
Installing Slicer for Fusion360
Installing Slicer for Fusion360 is easy. Just download Slicer from Autodesk, and follow the install prompts. Once the install is complete restart Fusion360. Now you can find a link to Slicer in the 3D Print Menu.

Appendix

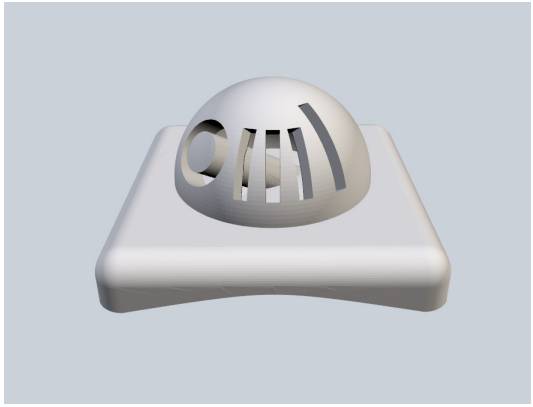
1. Import and File Setup Pg 3

2. Construction Techniques Pg 5

3. Modelling a Site from DWG Pg 10

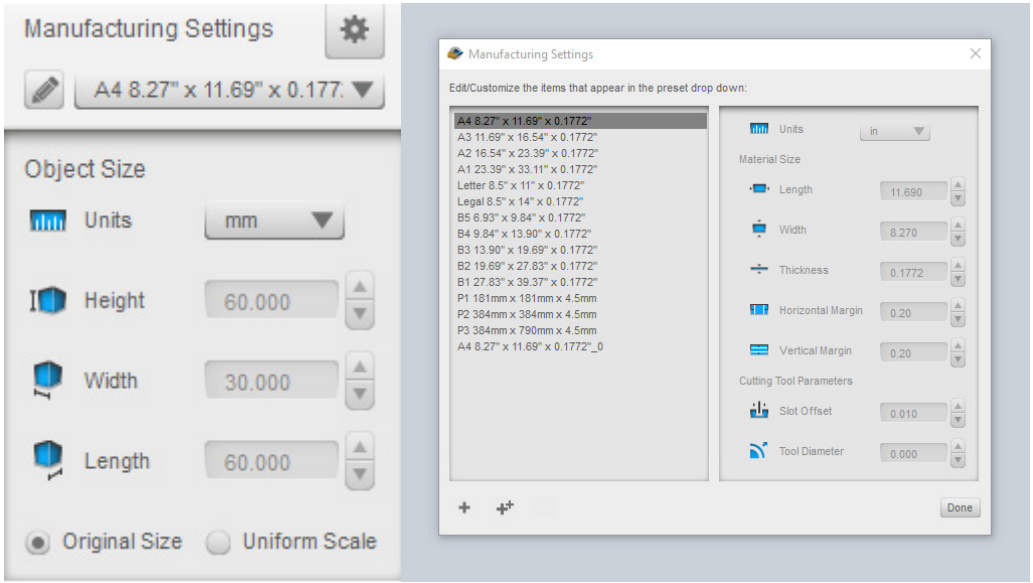
4. Fabrication with CNC / 3d Print Pg 17

5. Fabrication with Laser Cutting Pg 21



1. IMPORT AND FILE SETUP

Interface

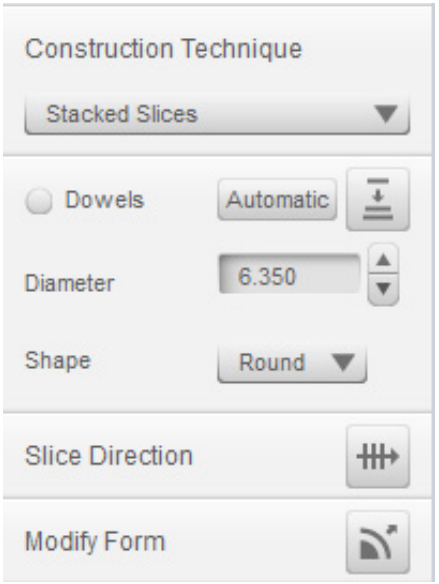


Interface

1. Import an STL file into Slicer through the Menu on the top left.

2. After Importing, the material dimensions and thickness is set through the Manufacturing Settings tab. Click on the pencil icon to open this menu:
Units: mm
Width/Length: Set these in mm units (e.g. A3, 297x420mm)
Thickness: Choose a thickness to match your stock material (e.g. 2mm)

3.Lastly, tick the “Original Size” Option

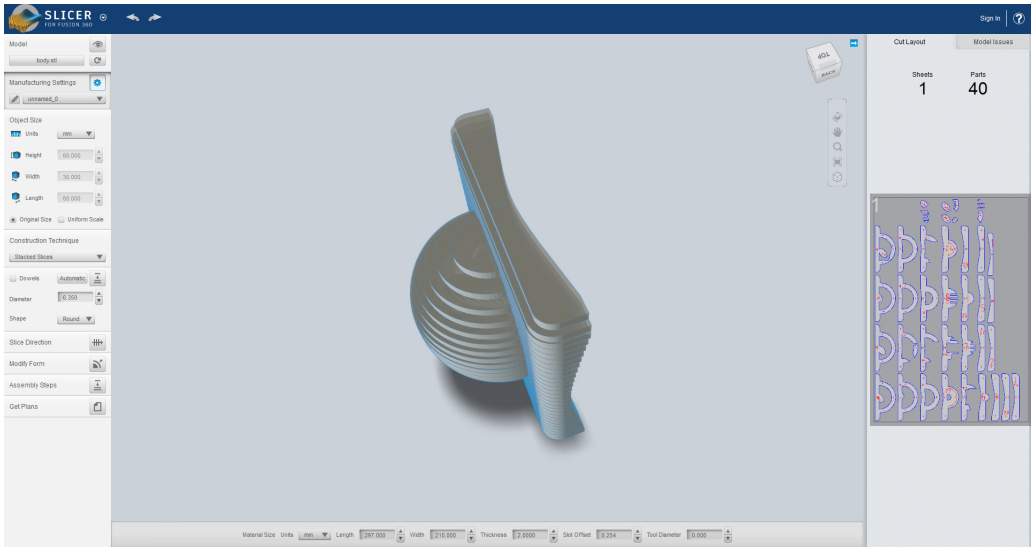


1. GENERAL CONTROLS

Construction Techniques

Slice Direction

Modifying Form

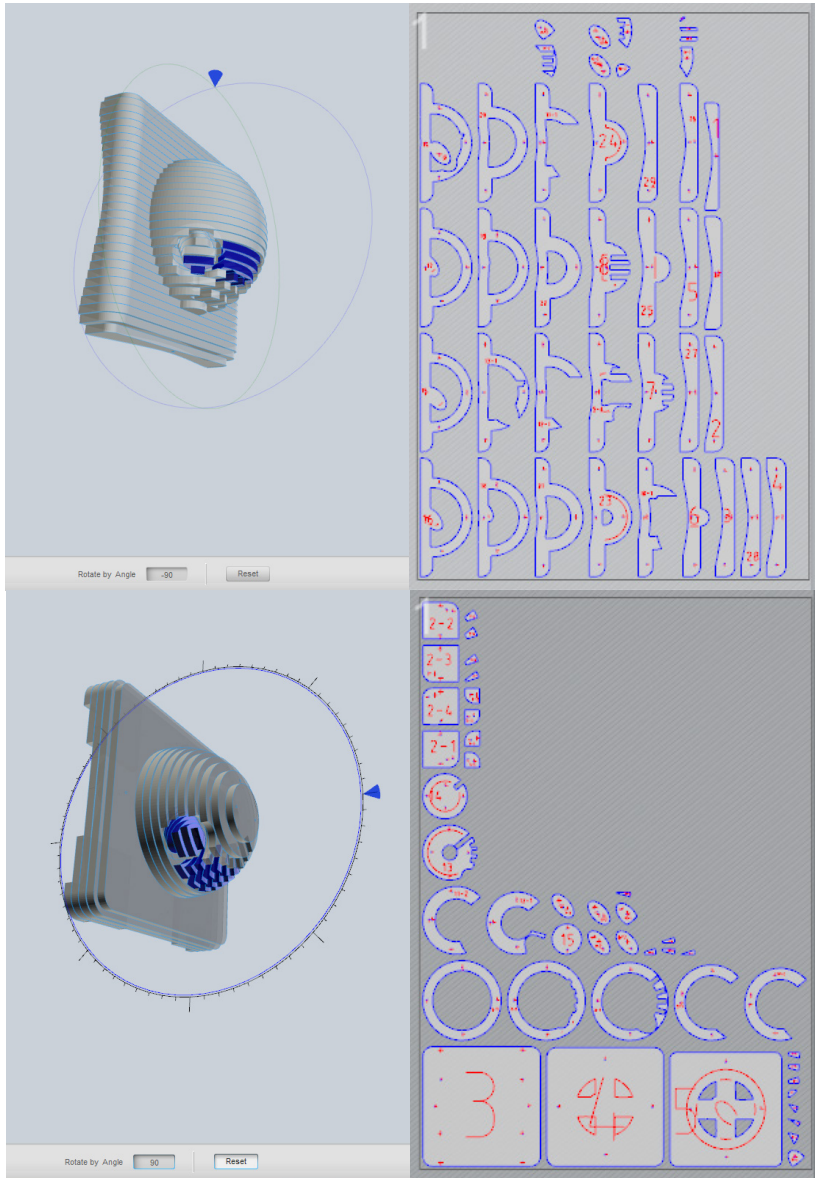


Construction Techniques

1. Below the Object Size controls, a construction technique is selected.
Click on the drop down menu and select Stacked Slices
Note: most of the other techniques involve waffling and other types of slicing; stacked is the most conventional type to use.

2.Use the right mouse button to orbit around the object, scroll wheel click to pan.

3. By default the object will be rotated by 90 degrees and will make horizontal slices, but the slice direction can be changed very easily.



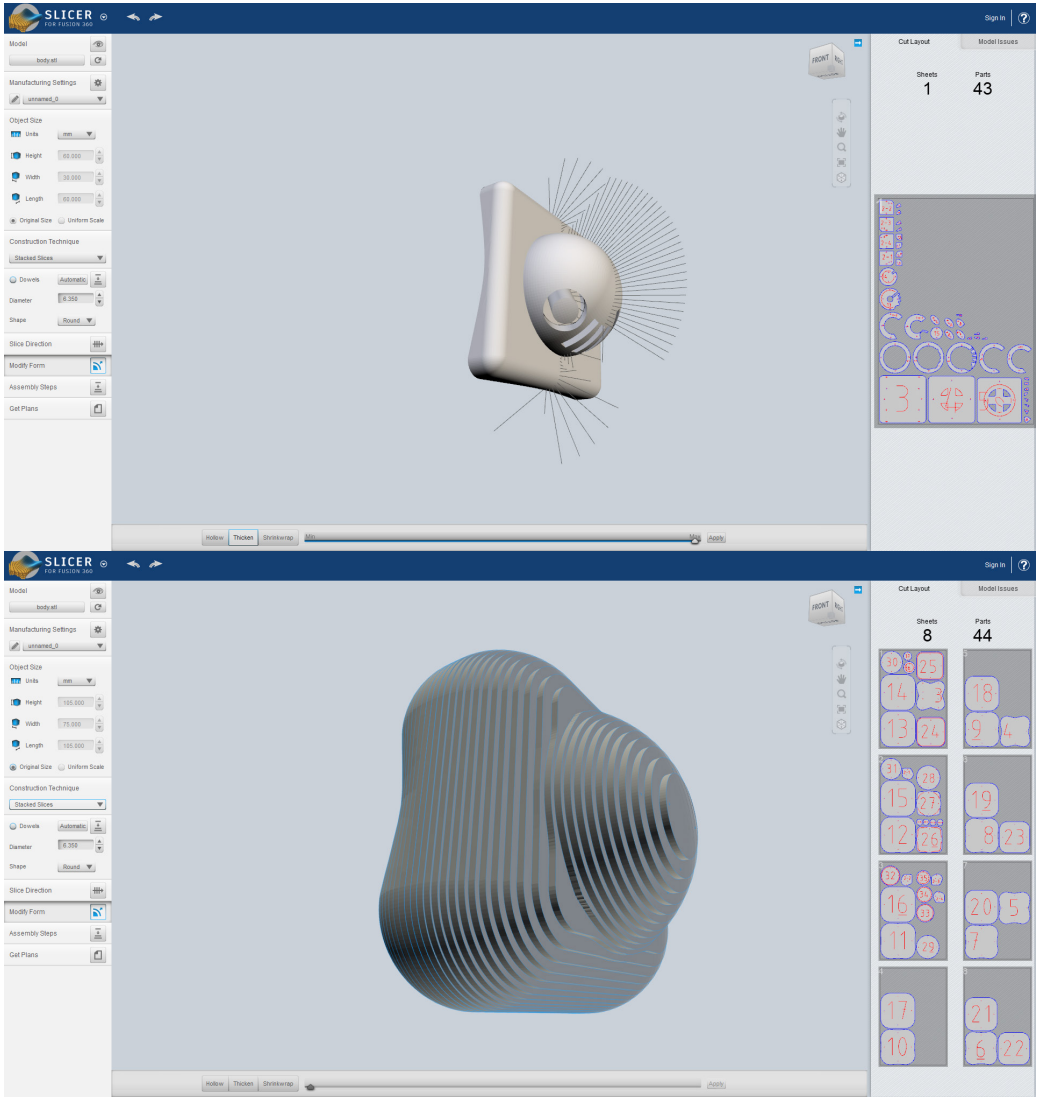
Slice Direction

1. The direction of the slices can be changed using the axis; clicking and dragging them straight from the model. Click on the Slice Direction tab and click on an axis on the model.

2. Clicking and dragging the axis to rotate the slice direction does work; however can yield innacurate results.

3. Clicking on an axis and instead typing in an angle in the field at the bottom middle menu is the best way to adjust the slices.
Notice that the cut sheet on the right side will automatically update and place the pieces in order.
(e.g. clicking on the blue axis and rotating by 90 degrees)

Note: Slicer will usually rotate objects as they import by 90 degrees on the Z axis. So in the case of a contour model that requires horizontal slices, rotating the slice direction by 90 will automatically.



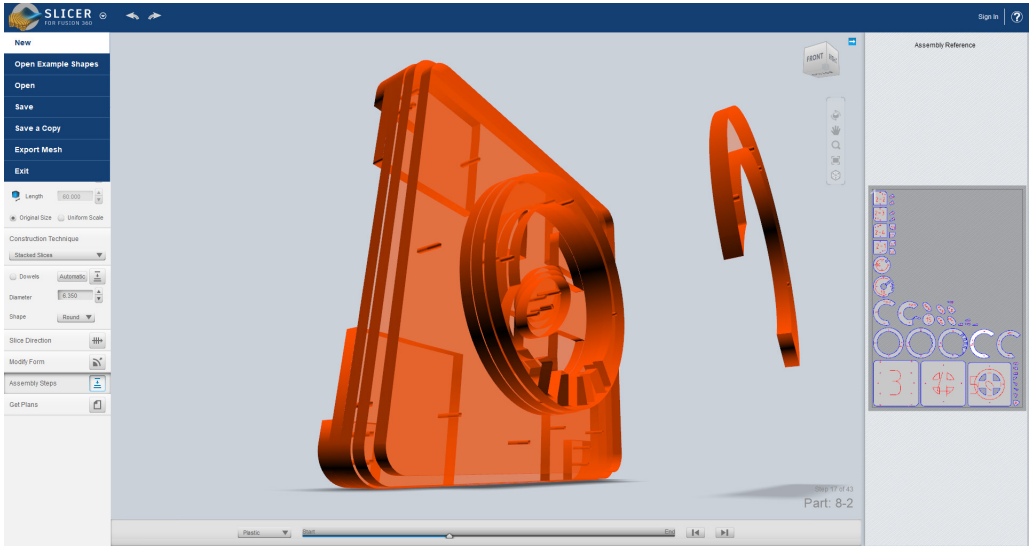
Modifying Form

1. The Modify Form Panel allows three kinds of editing to be done on the model, Hollowing, Shrinkwrapping and Thickening. Usind a slider on the middle bottom menu, these can be adjusted and used as part of the slicing process.
(e.g. Thicken may be useful if there are thin parts in the model that may loose detail after slicing).

3. FILE COMPLETION

Assembly Steps

File Export



Assembly Steps

1.This panel simply shows an animated process of the parts coming together in the model. Refer to these after the parts are cut and use the slider to see the steps of assembly.

File Export

1.Clicking on the Get Plans tab allows the file to be exported.

2. Typically detailed models would be Laser Cut file or CNC routed; Select the file type to export as a DXF, units in mm, then Export to My Computer.

3. The file can be imported to Rhino to CNC or to illustrator to be set up as a Laser Cut file.