

## EXPORTING STL FILES

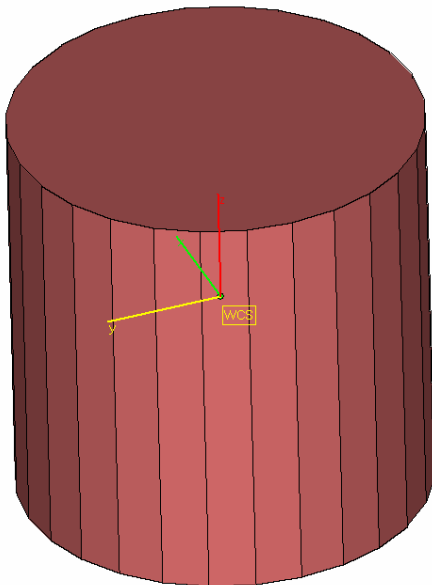
Rapid Prototyping Services work with STL files so to save you time and to help with generating an STL please see below the process specific to your CAD system.

Note: You should be able to adjust the resolution of the STL file prior to saving/exporting. If so then make sure that the triangle size/tolerance is set at fine or 0.005.

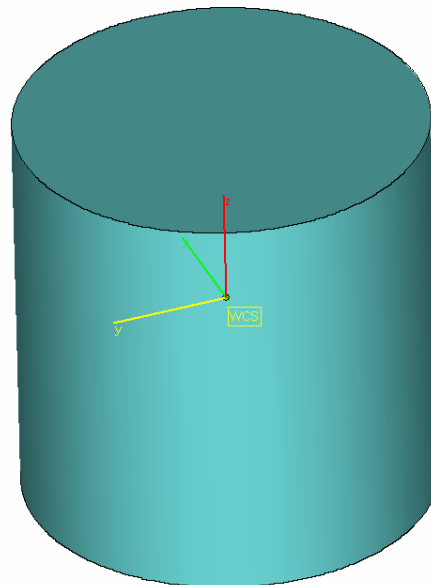
We also accept STEP, ParaSolid, IGS, SAT, OBJ files to name a few. If you would prefer to send us any of these file formats then feel free to do so as we can generate the STL file on your behalf. We always export STL files to a High Resolution so you get the best surface finish on your parts.

Below is a diagram of what a Low Resolution STL file looks like compared to a High Resolution one:

LOW RESOLUTION



HIGH RESOLUTION



These facets will show on the prototyped part

The CAD systems are as follows:

### Alibre

1. File
2. Export
3. Save As > STL
4. Enter File Name
5. Save

## AutoCAD (Versions: R14-2000i)

Your design must be a three-dimensional solid object to output an STL file.

1. At the command prompt type "STLOUT"
2. Select Objects
3. Choose "Y" for Binary
4. Choose Filename
  1. File > Export > Rapid Prototype File > OK
  2. Select the Part to be Prototyped
  3. Select Prototype Device > SLA500.dat > OK
  4. Set absolute facet deviation to 0.000395
  5. Select Binary > OK

## IronCAD

1. Right Click on the part
2. Part Properties > Rendering
3. Set Facet Surface Smoothing to 150
4. File > Export
5. Choose .STL

## Mechanical Desktop

1. Use the AMSTLOUT command to export your STL file.
2. The following command line options affect the quality of the STL and should be adjusted to produce an acceptable file.

Angular Tolerance – This command limits the angle between the normals of adjacent triangles. The default setting is 15 degrees. Reducing the angle will increase the resolution of the STL file.

Aspect Ratio – This setting controls the Height/Width ratio of the facets. A setting of 1 would mean the height of a facet is no greater than its width. The default setting is 0, ignored.

Surface Tolerance – This setting controls the greatest distance between the edge of a facet and the actual geometry. A setting of 0.0000 causes this option to be ignored.

Vertex Spacing – This option controls the length of the edge of a facet. The default setting is 0.0000, ignored.

## ProE

1. File > Export > Model
2. STL
3. Set chord height to 0. The field will be replaced by minimum acceptable value.
4. Set Angle Control to 1
5. OK

## Rhino

1. File > Save As
2. Select File Type > STL
3. Enter a name for the STL file .
4. Save
5. Select Binary STL Files

## SolidDesigner (Version 8.x)

1. File > Save
2. Select File Type > STL
3. Select Data
4. Click OK

## SolidEdge

1. File > Save As
2. Set Save As Type to STL
3. Options
4. Set conversion Tolerance to Inches of Millimeters
5. Save

## SolidWorks

1. File > Save As
2. Set Save As Type to STL
3. Options > Fine > OK
4. Save

### Think3

1. File > Save As
2. Set Save As Type to STL
3. Save

## I-DEAS

1. File > Export > Rapid Prototype File > OK.
2. Select the Part to be prototyped
3. Select Prototype Device then, SLA500.dat then OK
4. Set absolute facet deviation to 0.000395
5. Select Binary, then OK

## Unigraphics

1. File > Export > Rapid Prototyping
2. Set Output type to Binary
3. Set Triangle Tolerance to 0.0025
4. Set Adjacency Tolerance to 0.12
5. Set Auto Normal Gen to On
6. Set Normal Display to Off
7. Set Triangle Display to On

(Please note, these are only general guidelines and may not work or produce the best possible STL file in some cases. Please consult your user's guide or the software's developers for more information or technical support. Should we determine that your STL file is not adequate for production we will contact you for an updated file.)

## 3D studio Max

First check for errors:

An STL object must define a complete and closed surface. Use STL-Check modifier to test your geometry before export your object to STL.

1. Select an object.
2. Click <Modify>
3. Click <More...>
4. Select "STL-Check" under Object-Space Modifiers
5. Select <Check>

If there are no errors, continue to export the STL file by:

6. <File> <Export>
7. Select "StereoLitho [\*.STL]" in <Save as type>
8. Select location in <Save in>
9. Enter a name in <File name>
10. <Save>
11. <OK>

Export To STL dialog:

12. Object Name: Enter a name for the object you want to save in STL format.
13. Binary/ASCII: Choose whether the STL output file will be binary or ASCII (character) data. ASCII STL files are much larger than binary STL files.
14. Selected Only: Exports only objects that you selected in the 3D Studio scene.