

OnShape: Export Stereolithography Files

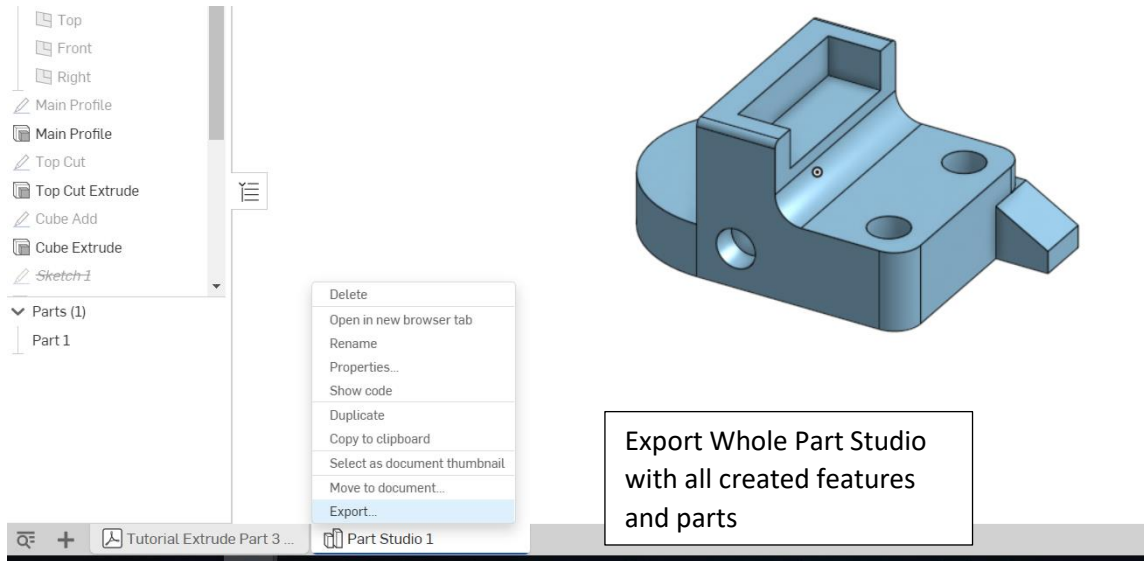
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1. Part Studio or Assembly Tab:

- a. Right Click on the Tab to Export > Select Export

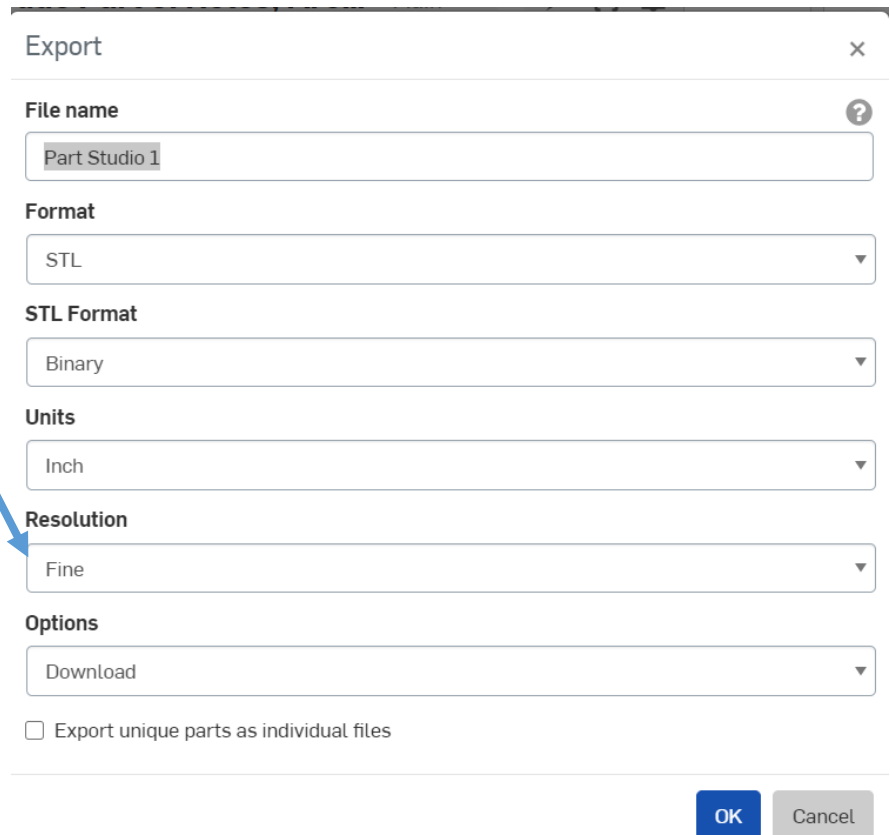
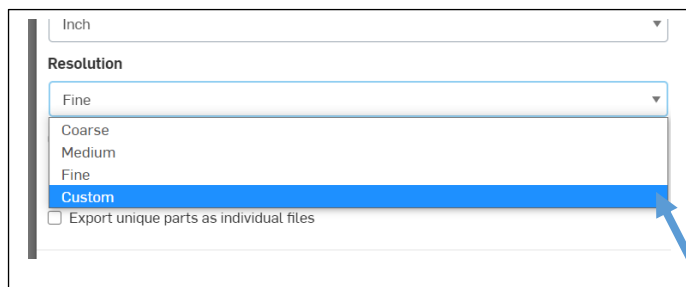
Note: Assembly Tabs may also be exported as a whole model and assemblies done in a Part Studio User may select which parts to export



b. Properties Menu Pop-Up

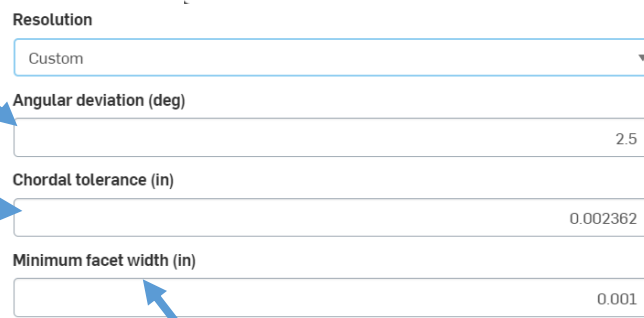
- i. Modify File Name
- ii. Select the Type of File: stl
- iii. Units: Choose the units linked with the file
- iv. Resolution
 1. Coarse = High Chord Height: Will make holes and arcs appear to be small polygons (i.e. Hexagon, Octagon, etc.)
 2. Medium = Average Chord Height: Will make holes and arcs appear more circular but larger polygons
 3. Fine = Very Low Chord Height: Will Make holes and arcs appear fully circular
 4. Custom: User can set the Chord Height for the part. NOTE a preview is not provided

NOTE: Preview of the object will not be shown. User will need to import the stl file into the Printer Slicing Software



Angular deviation: Puts a limit on the max angle between two faces (measured as angle between outward normal)

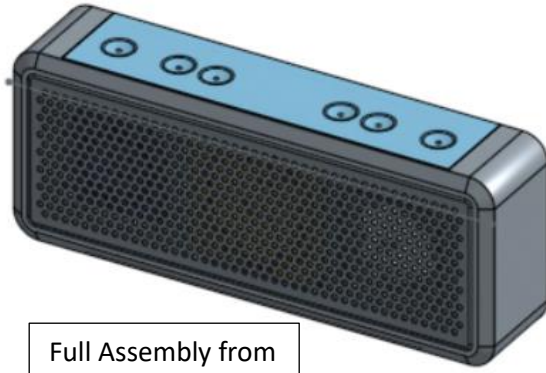
Chordal tolerance: Controls the spacing between points
Lower Number = High Resolution
High Number = Low resolution



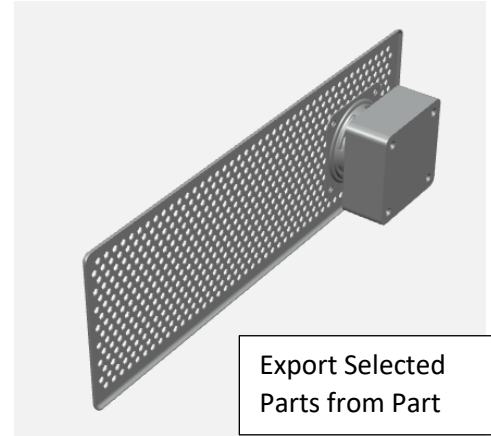
Min. facet width: reduce extremely small facets from odd interactions of the Angular deviation and Chordal tolerance

c. Press Ok > File will download to the Downloads Folder on the computer

2. Assembly: Export Specific Parts

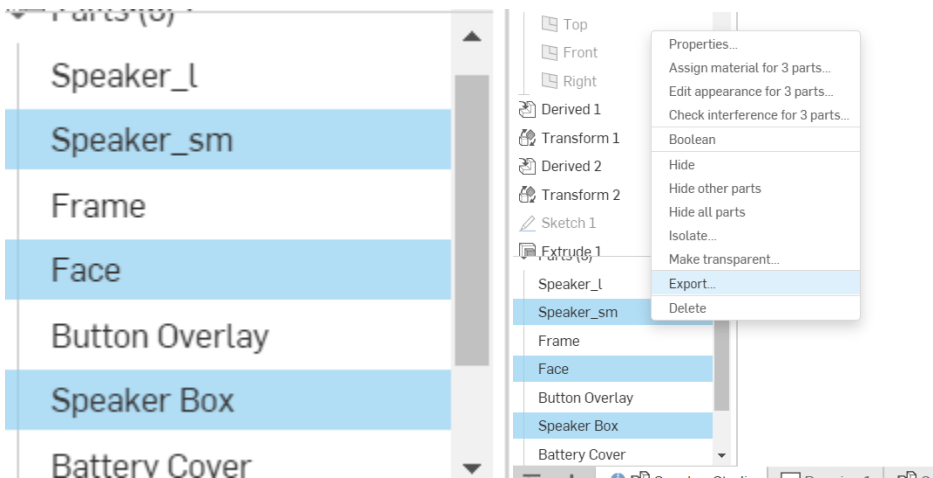


Full Assembly from Part Studio



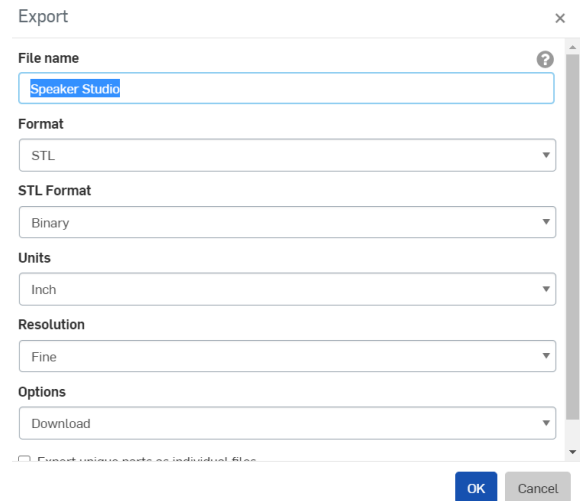
Export Selected Parts from Part

- a. Select Parts from Model Tree > Right Click on Parts > Select Export > Set Settings > Click OK > File will be downloaded to the Downloads Folder on the Computer



Select Parts to Export together with

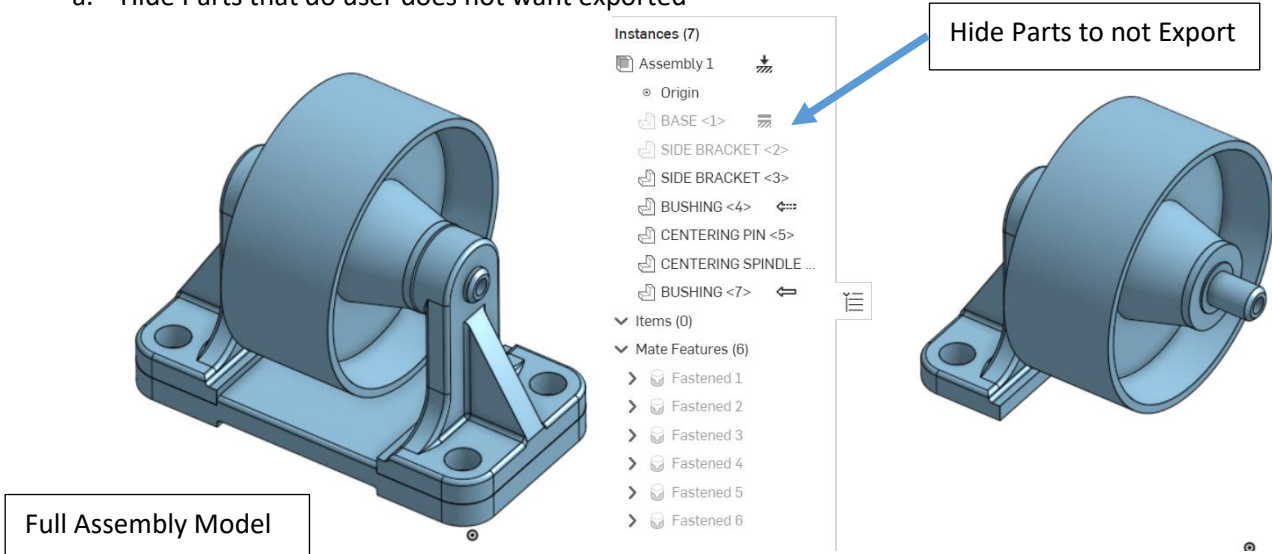
Right Click on 1 one of the selected parts > Select Export



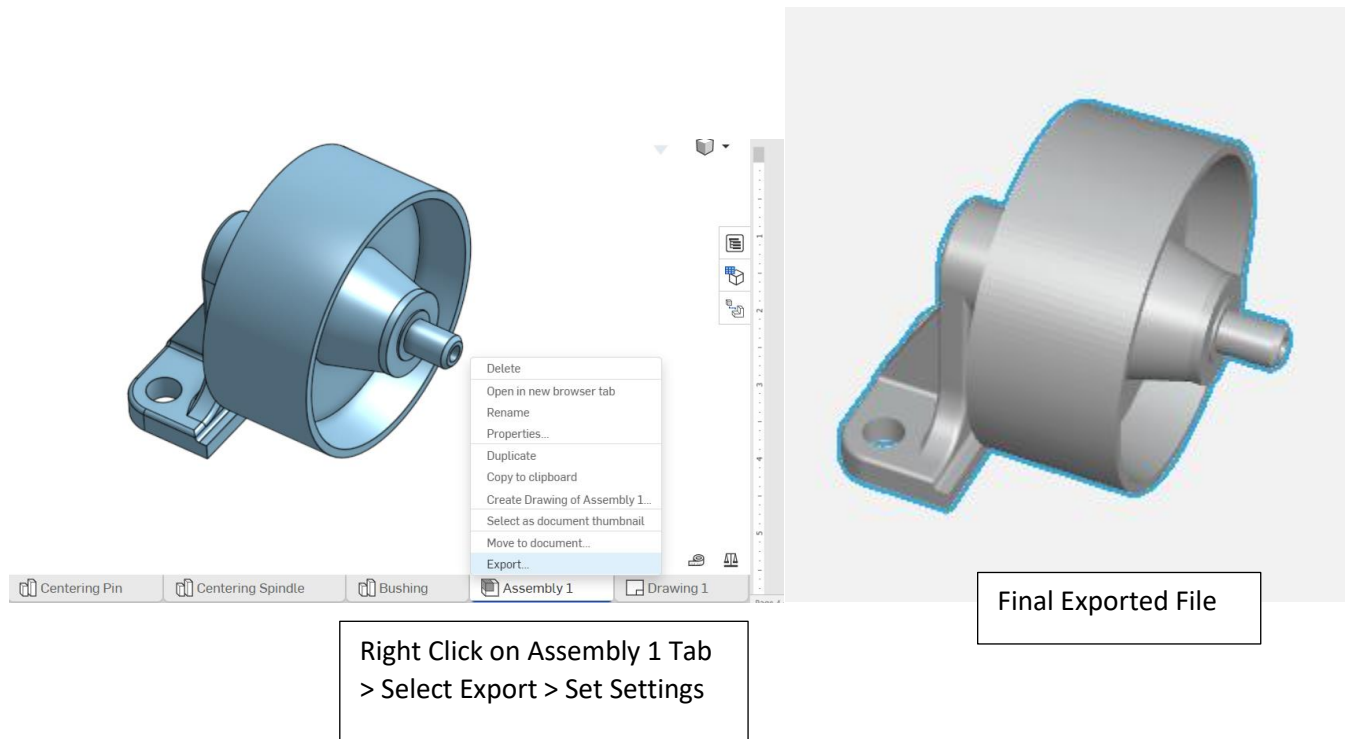
Set Settings (See Below)

3. Assembly: Specific Parts from an Assembly File

a. Hide Parts that do user does not want exported

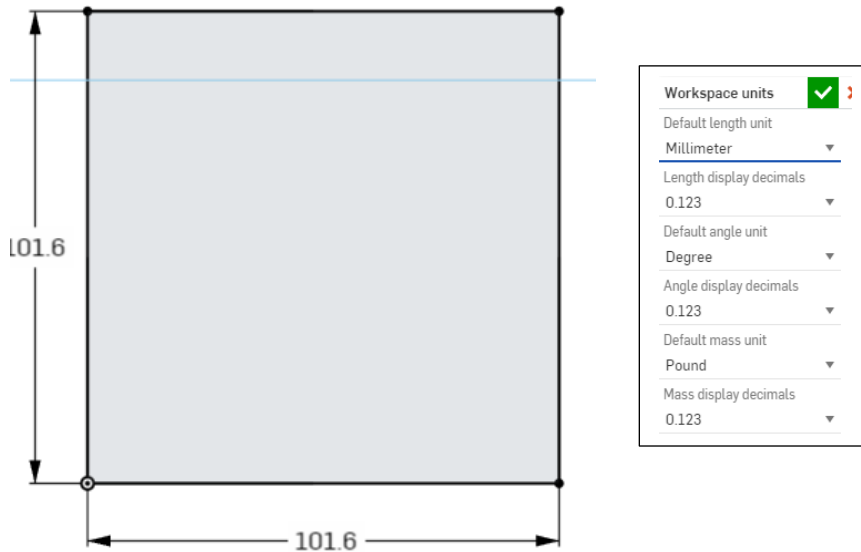
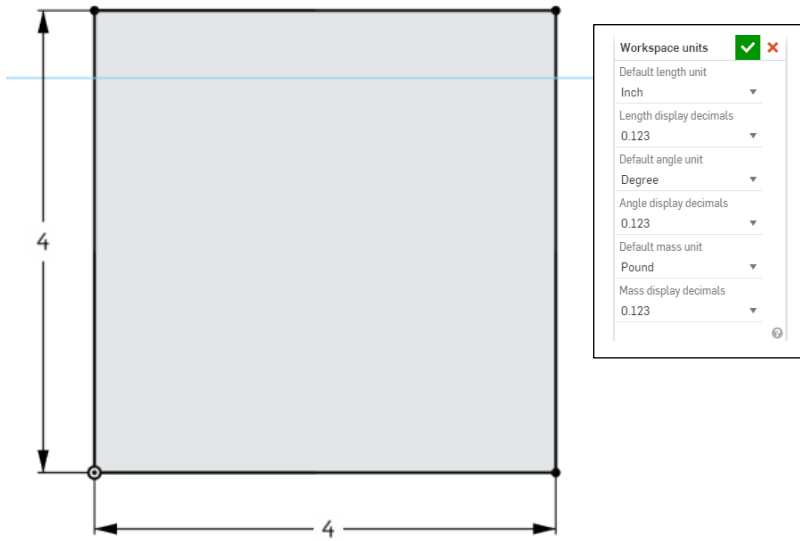
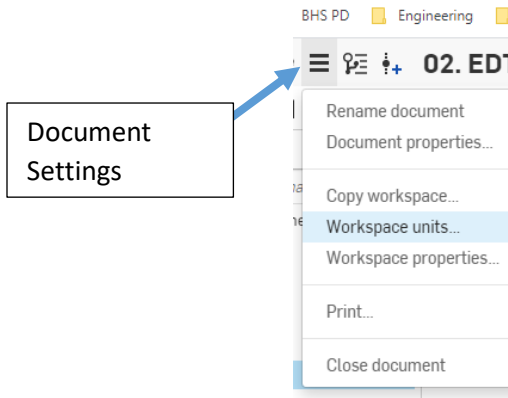


b. Right Click on Assembly Tab > Select Export > Set Settings > Click OK > downloaded file will be in the Computer Download Folder

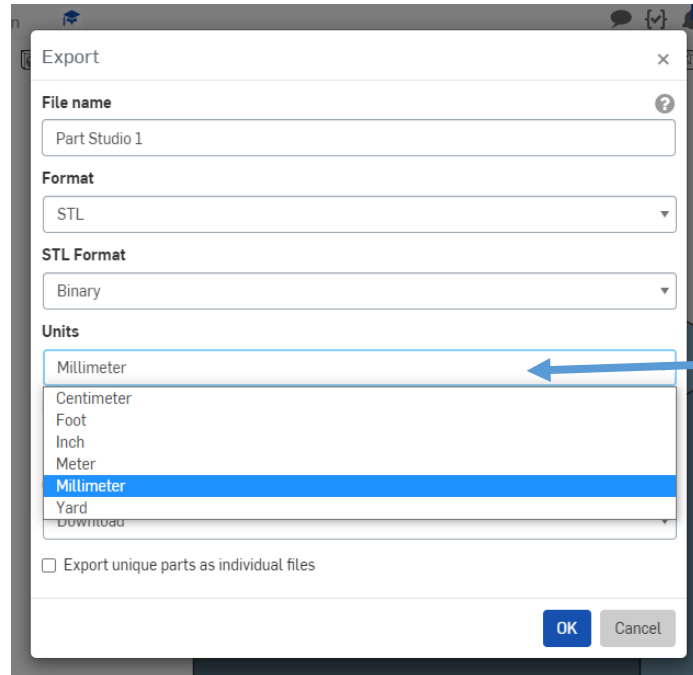


4. Units

- a. Document Setting: In OnShape when the Units are changed via the Document Setup OnShape Converts the measurements (1" = 25.4mm), so if we had a measurement that is 4x4



- b. Exporting: When Exporting a Part and setting the units OnShape will do a straight Interpret ($1'' = 1\text{mm}$)
For Example the original part was designed as a $4'' \times 4'' \times 4''$ Cube when exporting Units millimeters was chosen > the export results in a $4\text{mm} \times 4\text{mm} \times 4\text{mm}$ Cube. This is useful when a software (i.e Cura 3D Slicing Software) only reads millimeter parts, but the original CAD model was created in Inches.



Choose desired units. OnShape will interpret the model dimensions to selected units.