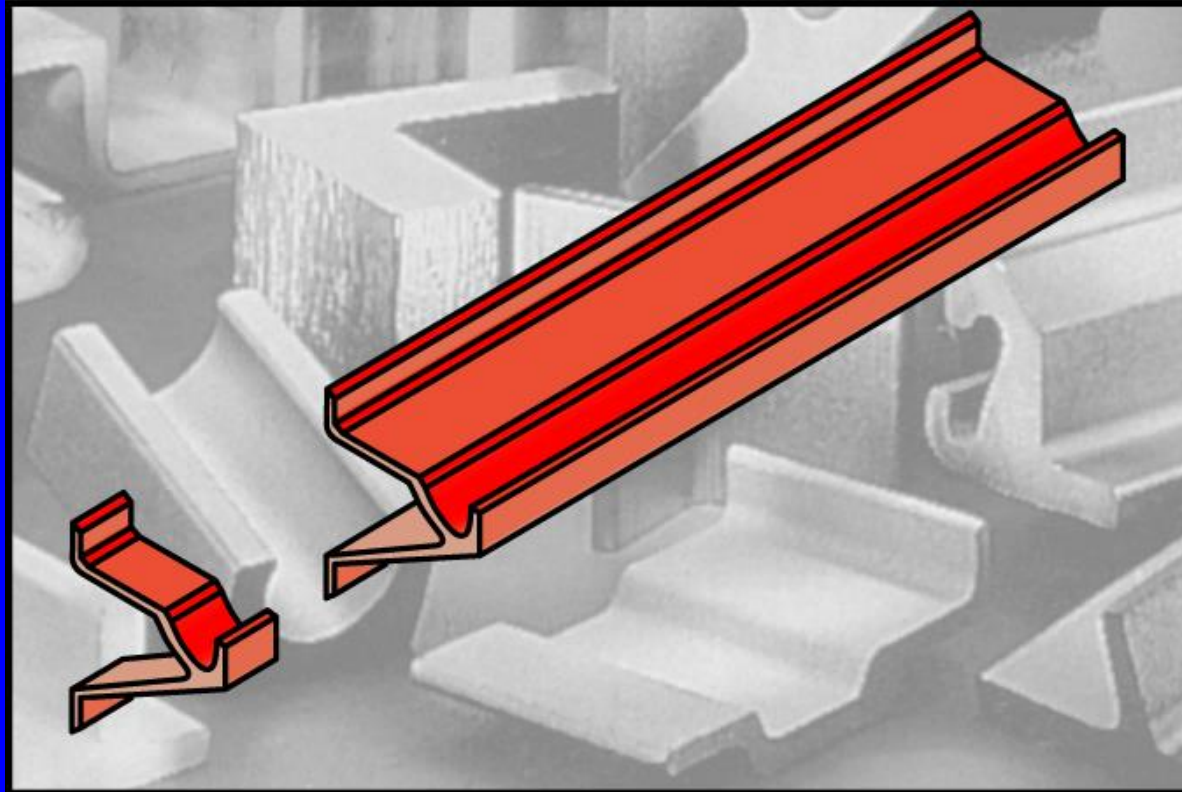


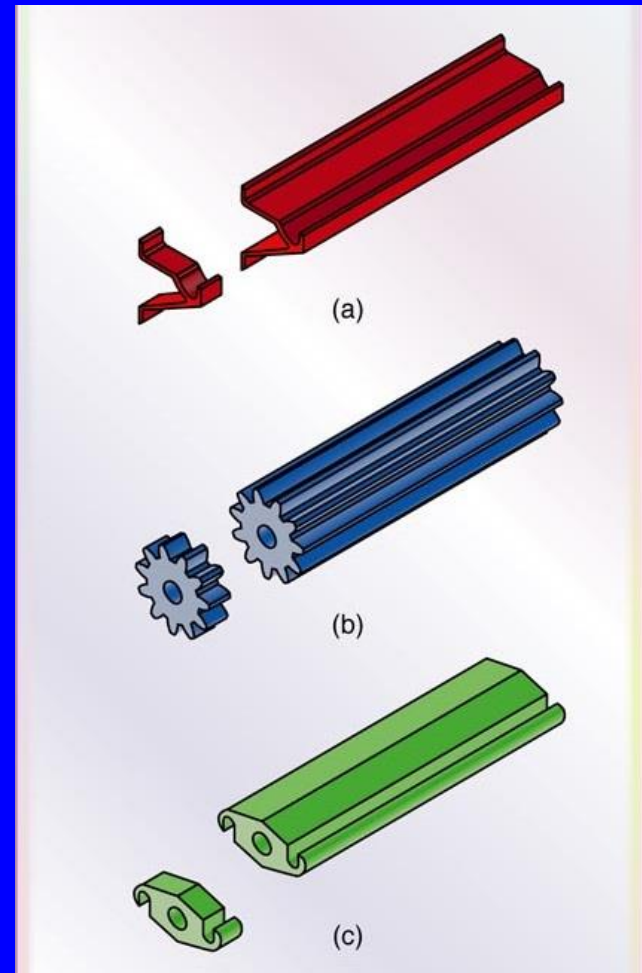
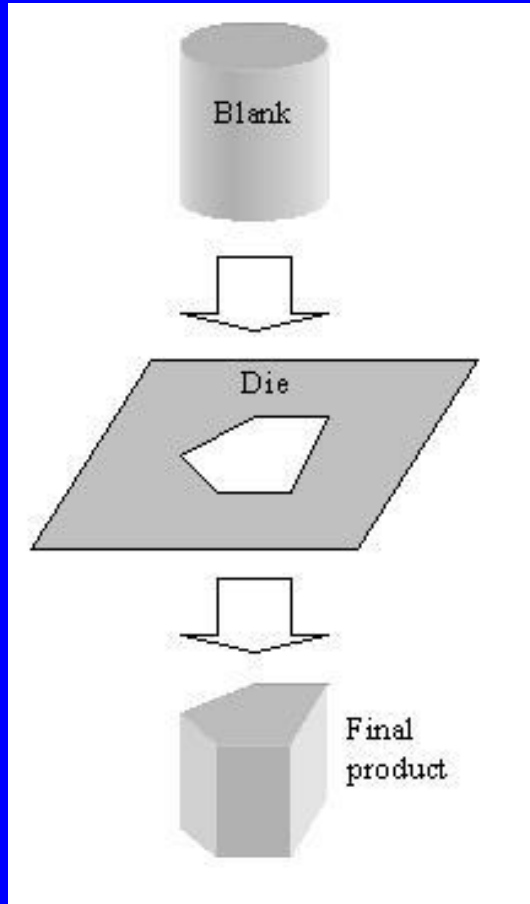
Manufacturing Process - Extrusion



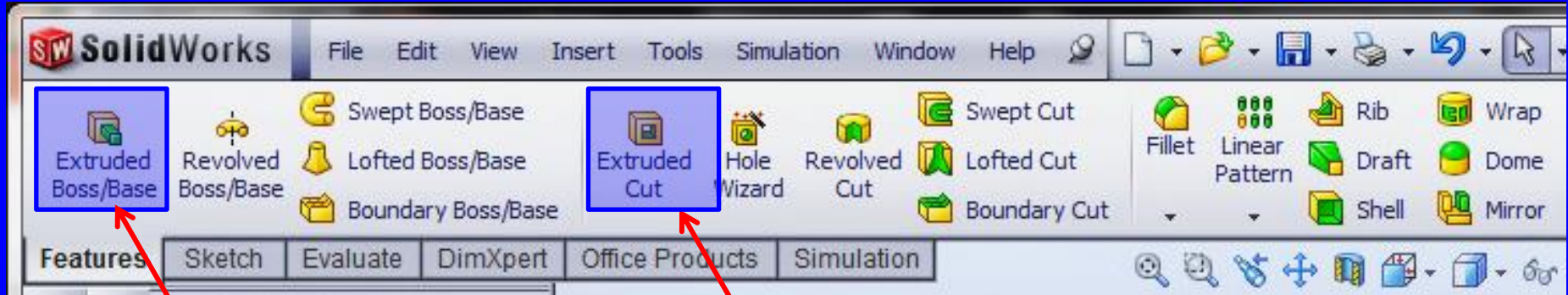
Parts have a uniform (constant) cross section

Extrusion

Material (billet), hot or cold, is either pushed or pulled through a die. The long piece can be cut to a desired thickness



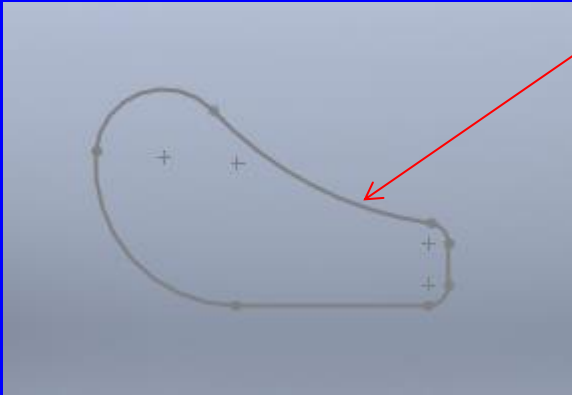
Extrude Command in SolidWorks



Adds material

Removes material

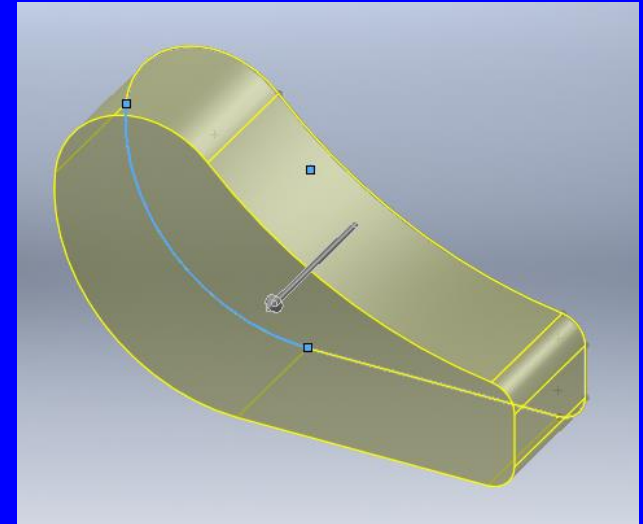
Create a 2D sketch



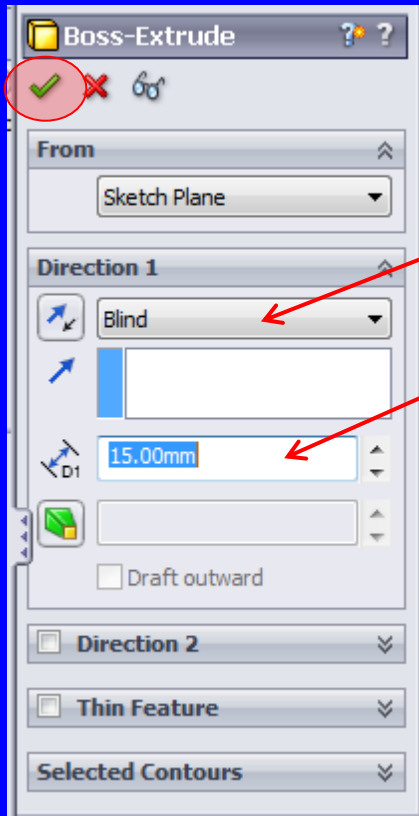
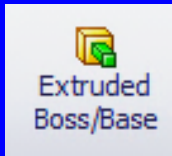
Select the sketch

Extrusion

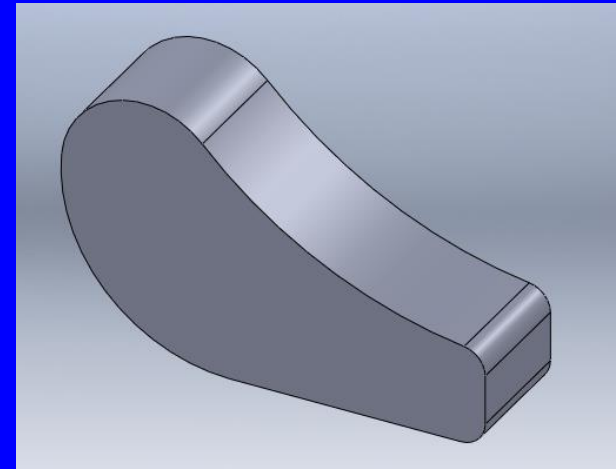
Preview of the solid, there is a problem with the sketch if the preview does not appear, most likely the sketch is not continuous



Select Extruded Boss/Base

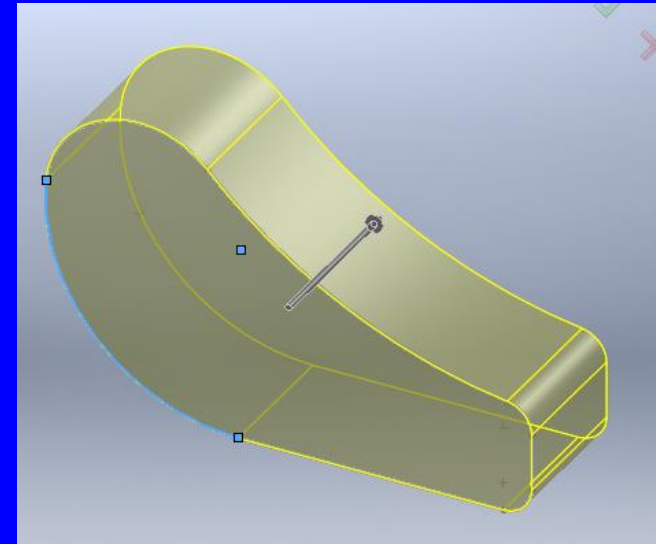
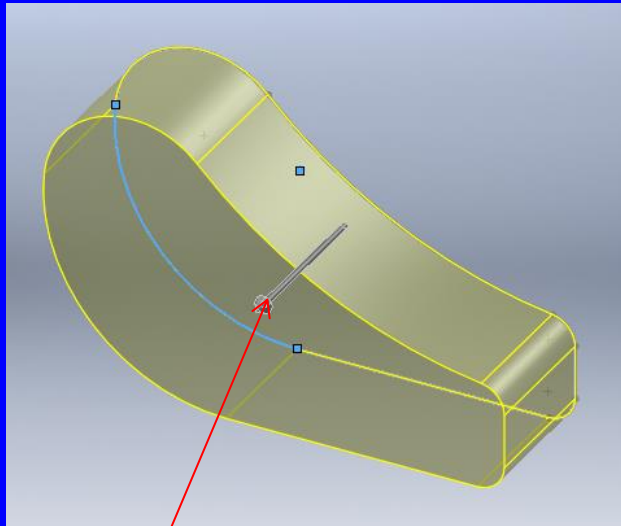


Choose **Blind** and enter the **thickness** and accept

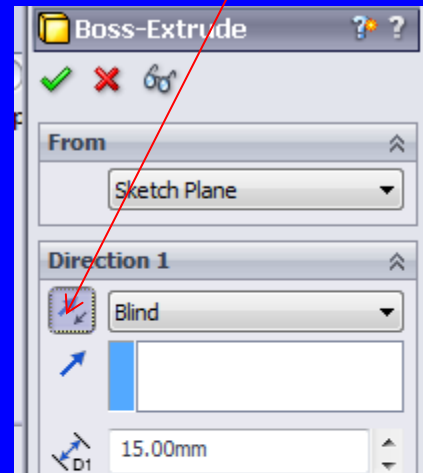


Extrusion

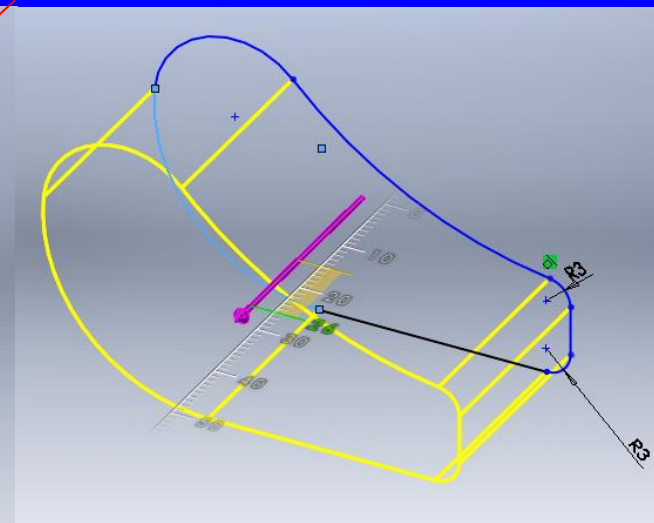
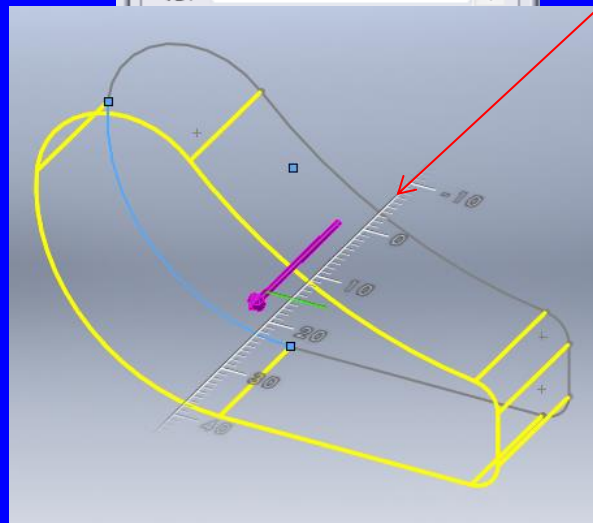
Click to change the direction of the extrusion



Click on the arrow and drag to change the thickness using the scale on the screen

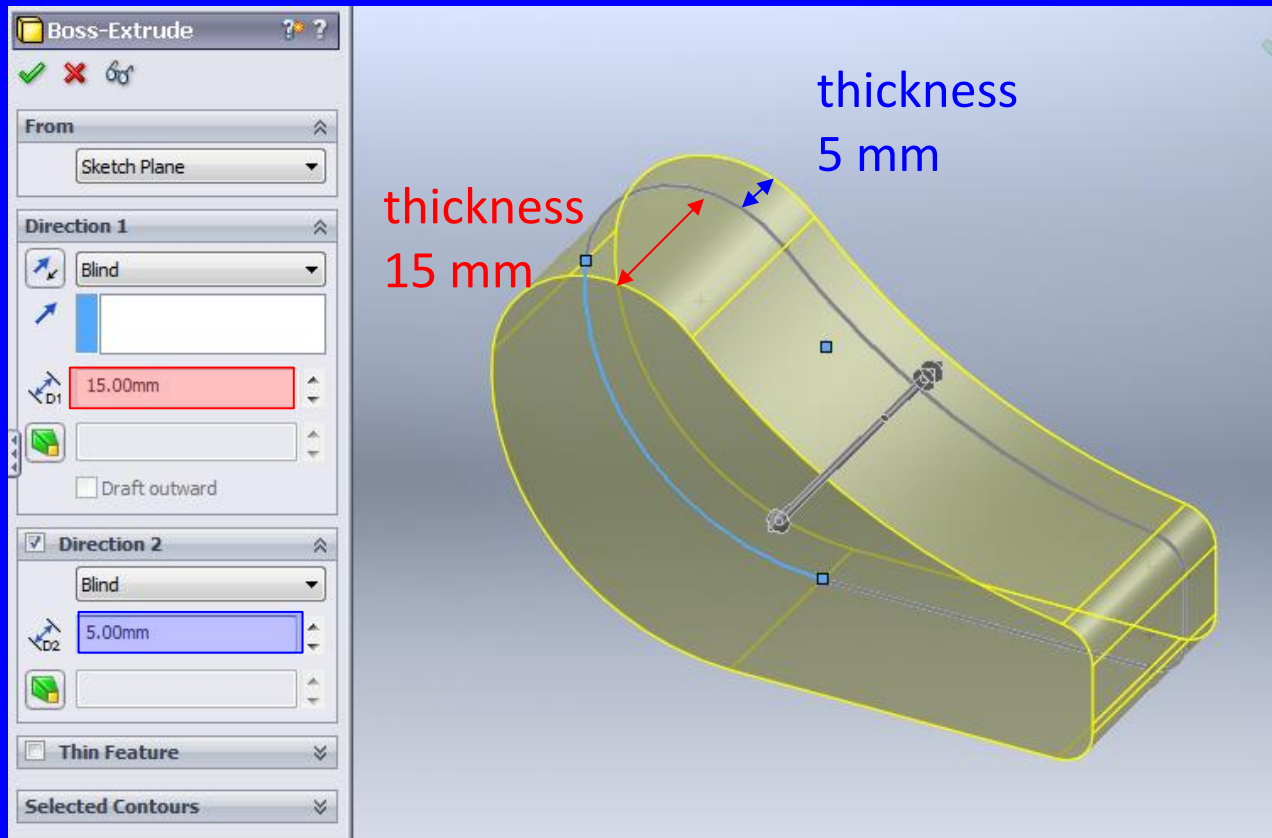


On screen scale



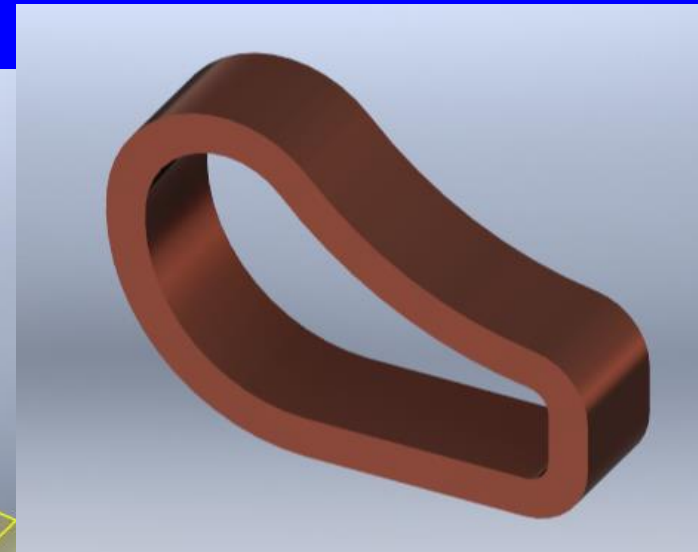
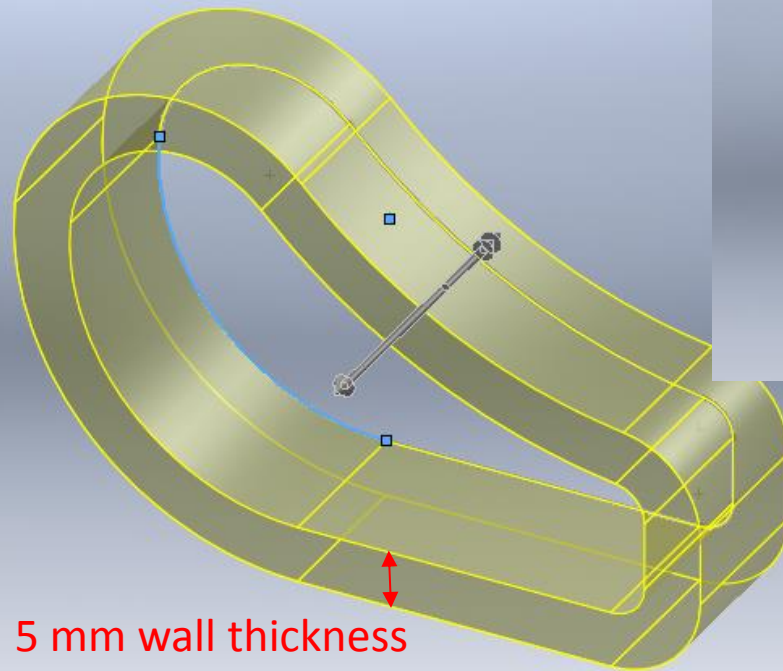
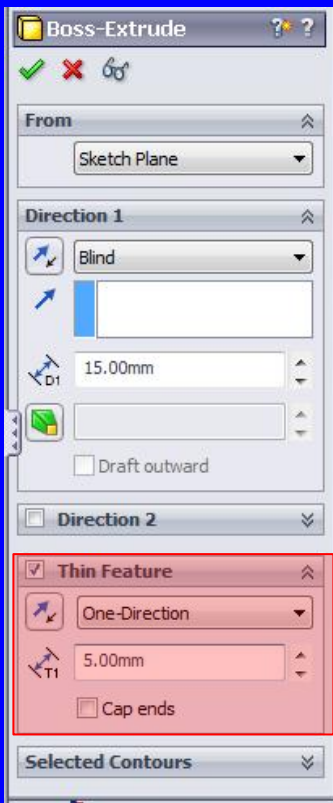
Extrusion

Two directions could be used for extrusion: direction 1 15 mm, direction 2 5 mm



Extrusion

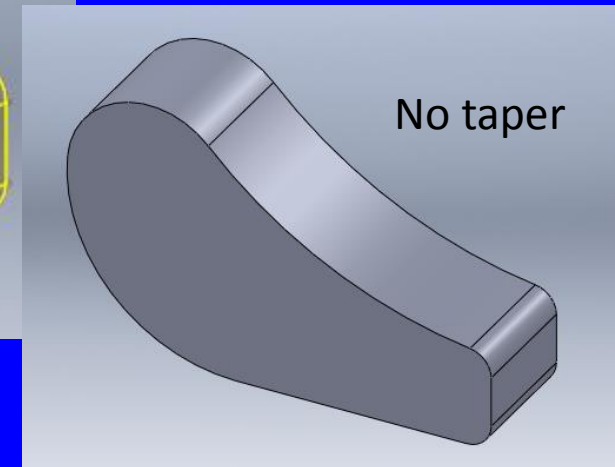
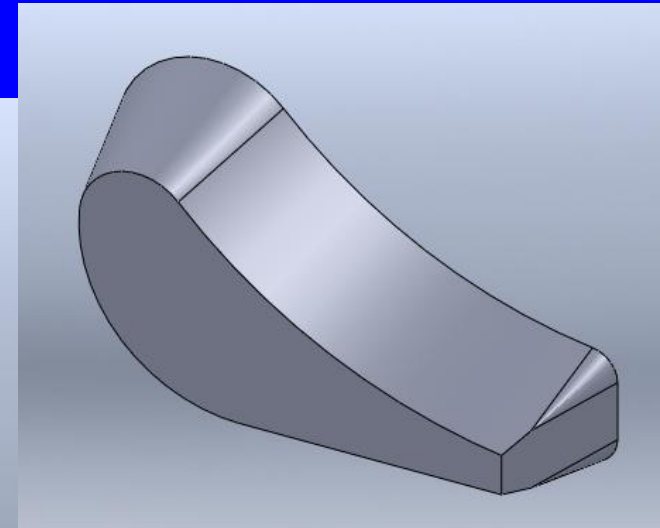
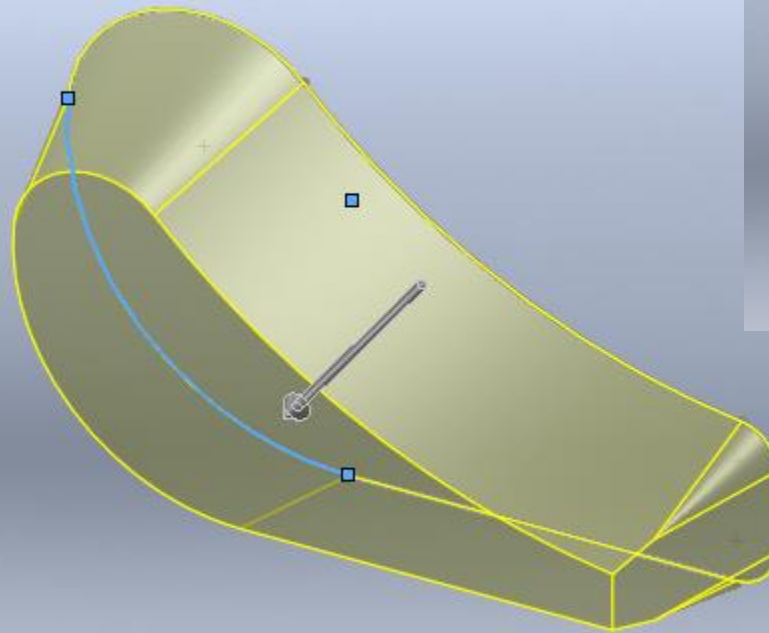
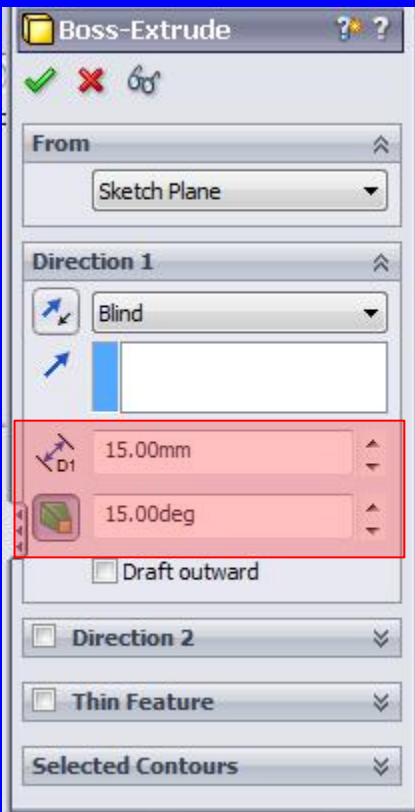
The part can be hollowed out by selecting the **Thin Feature** option and assigning a value for the wall thickness



Copper material rendered

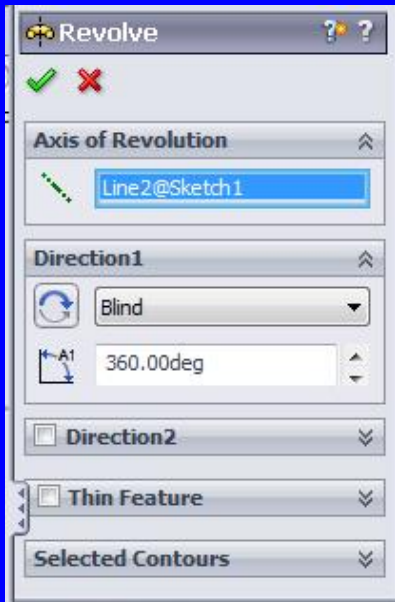
Extrusion

To taper the extrusion: select the taper option and assign the desired taper angle in degrees, 15 degrees.

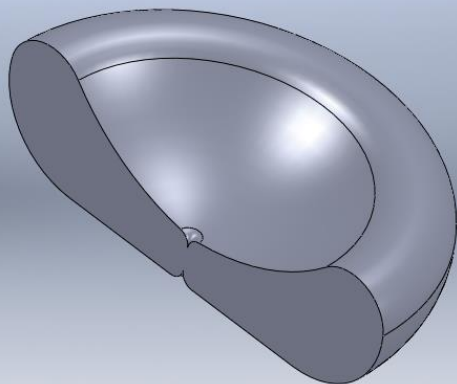
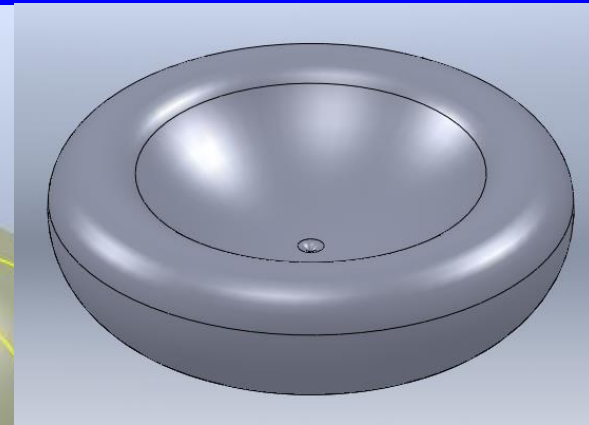
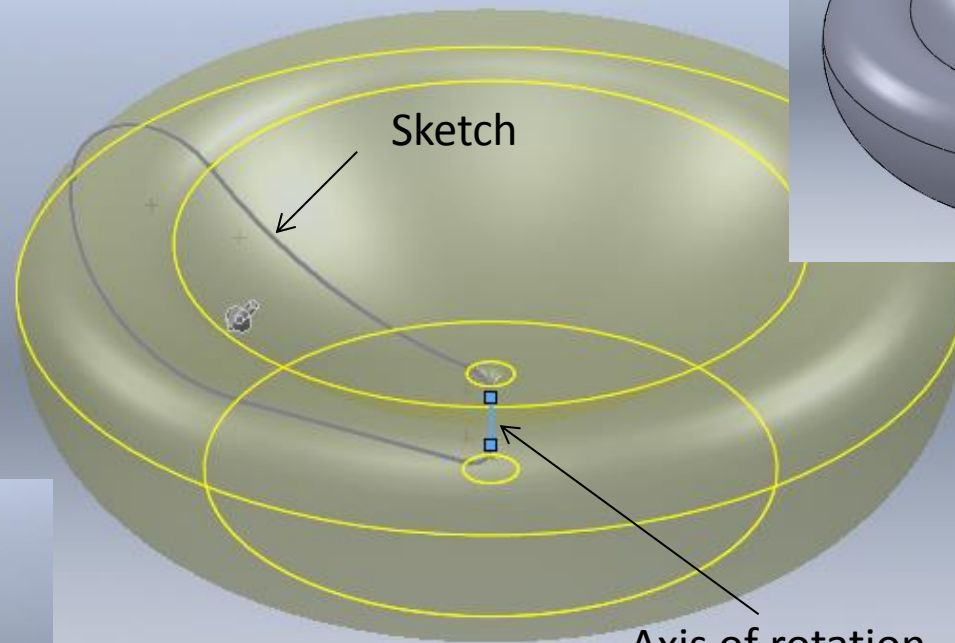


Revolve Command

Select the revolve command, choose the axis of rotation and the amount of rotation in degrees. The axis of revolution could be any line in the sketch.



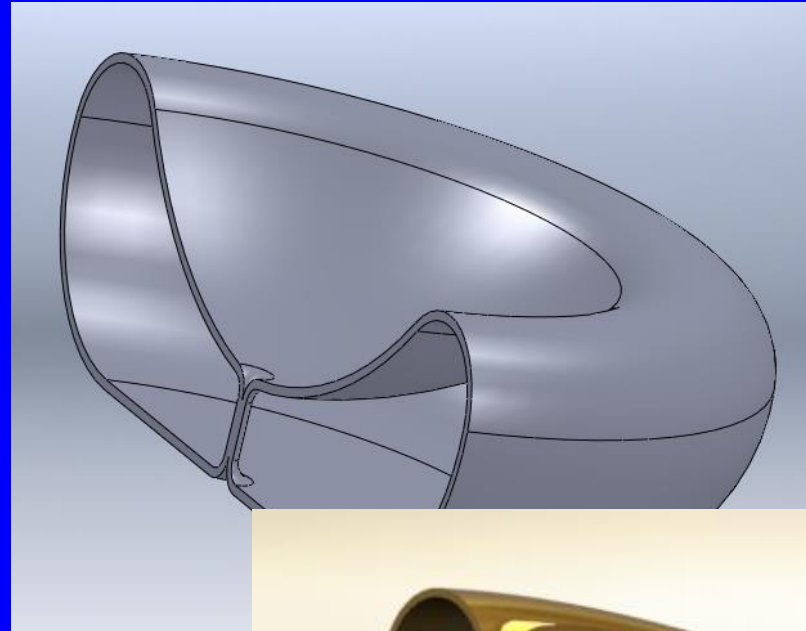
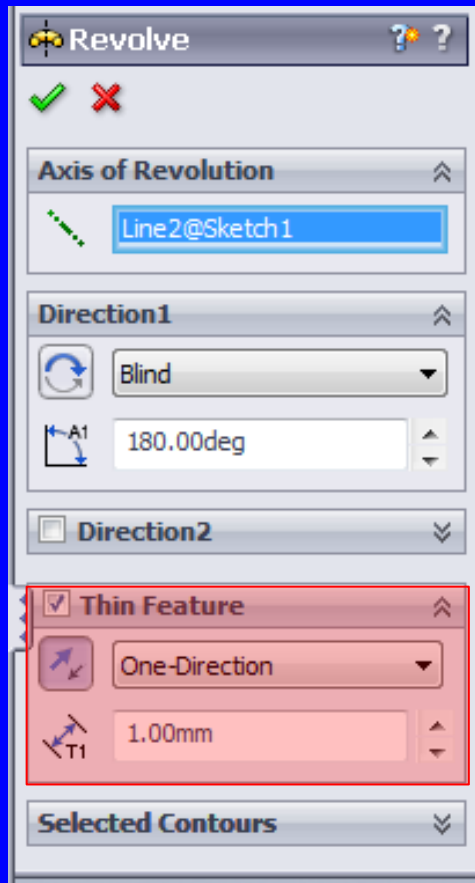
360 deg. revolution



180 deg.
revolution

Revolve

The part can be hollowed out by selecting the **Thin Feature** option and assigning a value for the wall thickness



Rendered model