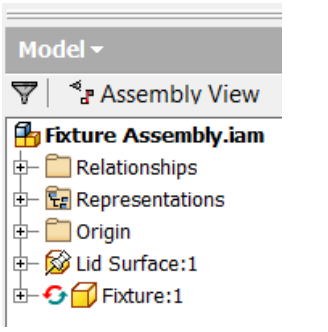
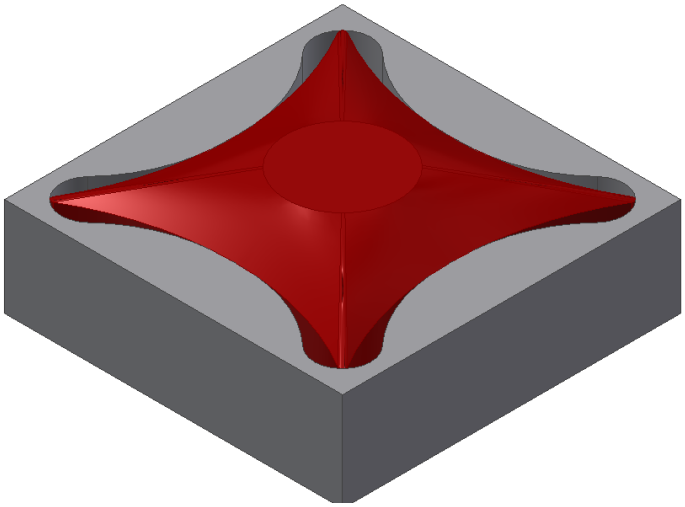
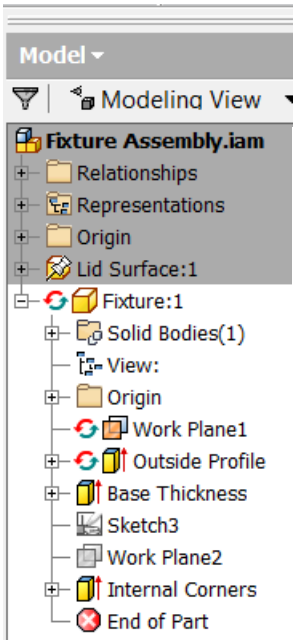
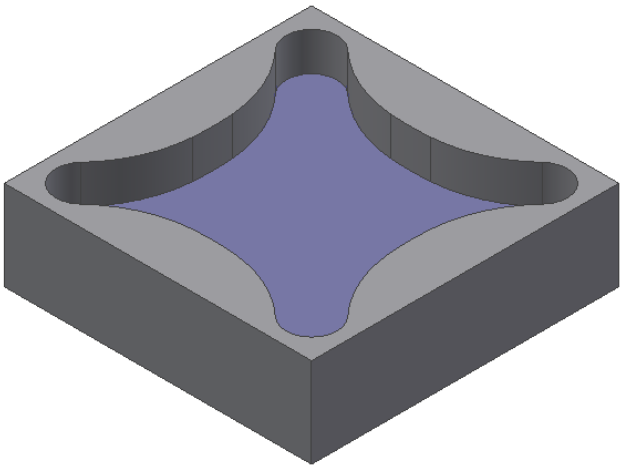
# CNC Container Cheat Sheet

## Fixture Layout and Design





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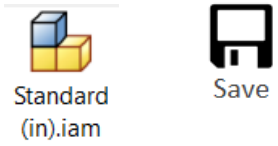
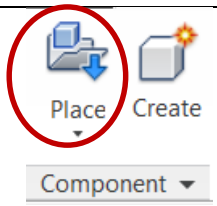
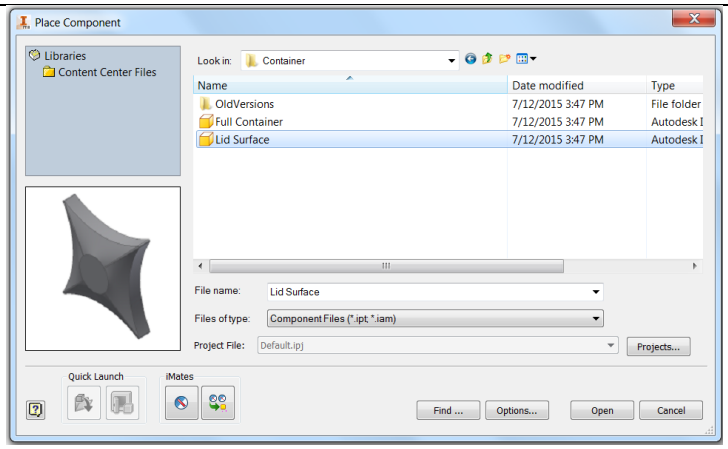
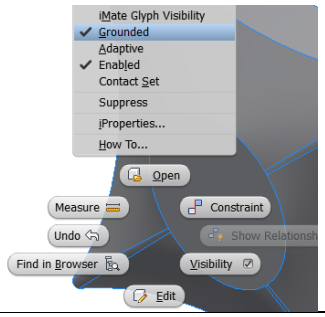
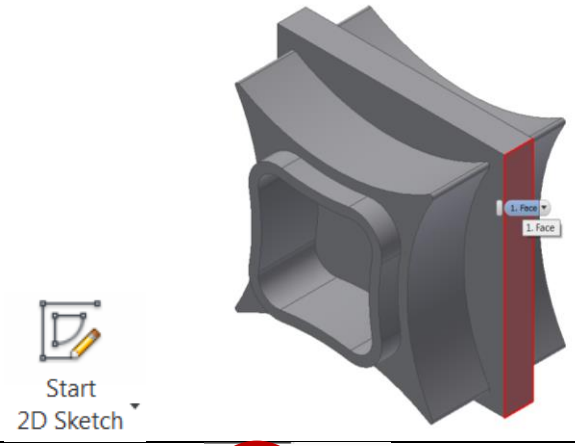
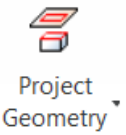
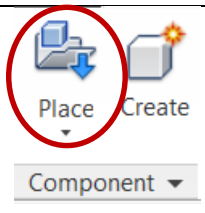
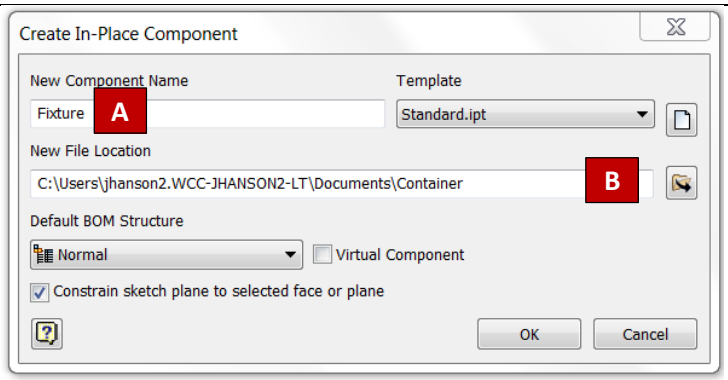
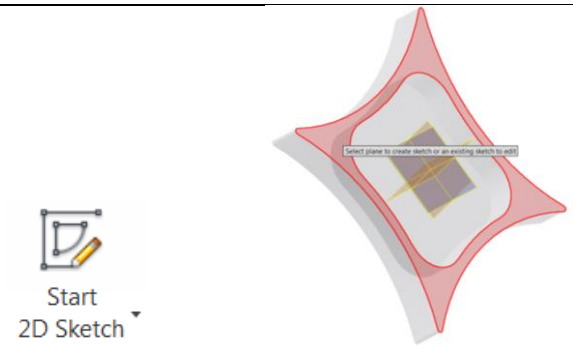
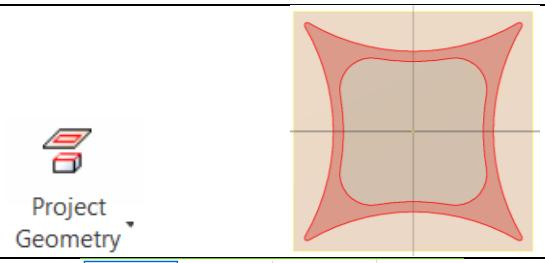
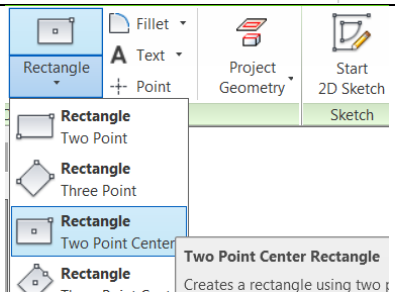
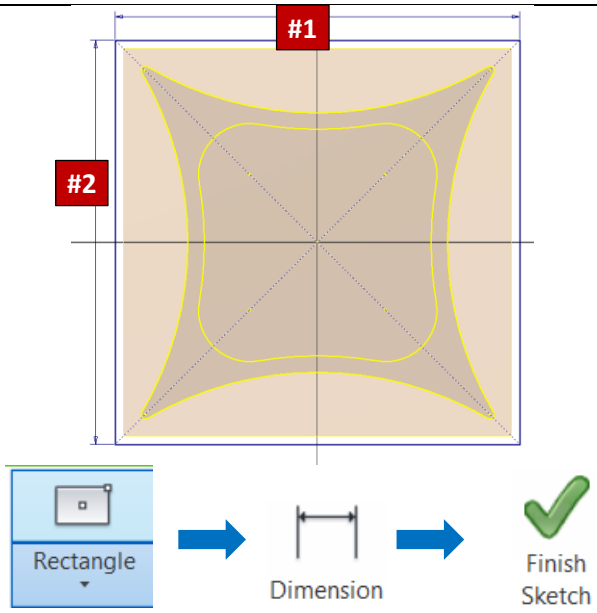
|  | Start a new Standard Assembly File (.iam)<br><br>Save the file as “LastName_Fixture_Assembly” |
|  | Select PLACE from the top ribbon |
|  | Navigate to the folder containing the Lid Surface<br><br>Select and Open LastName_Lid_Surface<br><br>Place the part by clicking somewhere in the work environment<br><br>Note: If auto grounding is not turned ON (part can freely move around when grabbed), Right click anywhere on the part and select grounded<br><br>  |
|  | Place a new 2D SKETCH on the side surface of the ***Clamping Boss***<br><br>  If auto project edges is not on by default (you get yellow edges every time a new sketch is created), please project the geometry of the top surface |
|  | Select CREATE from the top ribbon. With this tool, we will create and design the fixture’s part file in the assembly.<br><br>This strategy is known as Components in Place |

| | |
|---|---|
|  | A. Create a name for the new file<br>○ LastName_Fixture<br>B. Choose a location to save the file<br>○ Needs to be the same location that everything<br>C. Select OK |
|  | Flip the part over and select the bottom surface of the lid to place the Fixture.ipt into the assembly environment and constrain it with a mate constraint to the bottom of the lid |
|  | Place a new 2D SKETCH on the exact same surface you just selected to place the part in the environment |
|  | PROJECT GEOMETRY of the same surface the sketch was place onto.<br><br>Note: In an assembly, even with auto project geometry turned on, it will not find the geometry from another part. It will need to be defined manually |
|  | Select TWO-POINT-CENTER rectangle |

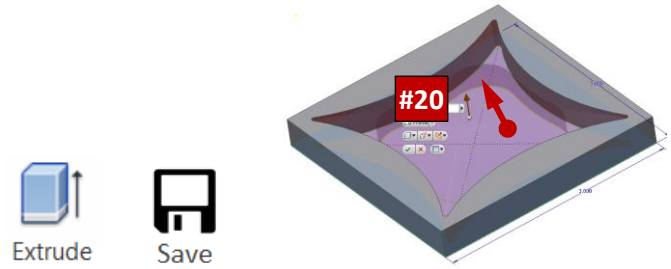



Select the origin to start the rectangle

- Place a ***Stock Width*** dimension of
  - #1 _____
- Place a ***Stock Height*** dimension of
  - #2 _____

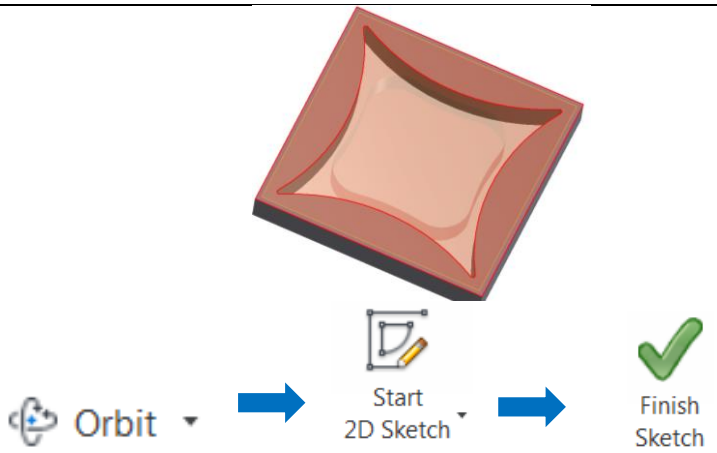
**NOTE:** The fixture may need to be larger if too many features extend close to the edge (not enough thick material left to hold/squeeze the part)

FINISH STOCK




EXTRUDE the fixture stock up on the lid

- Set an extrusion ***Lid Minimum Wall Height*** of
  - #20 _____

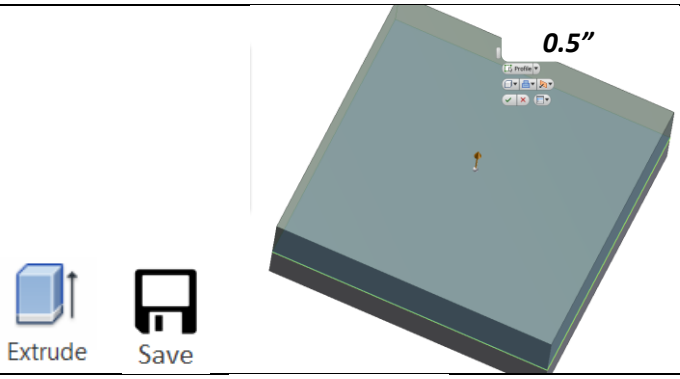
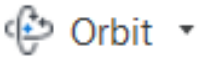
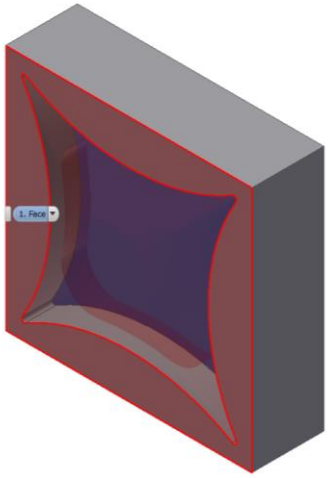
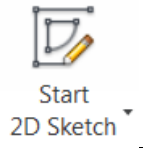
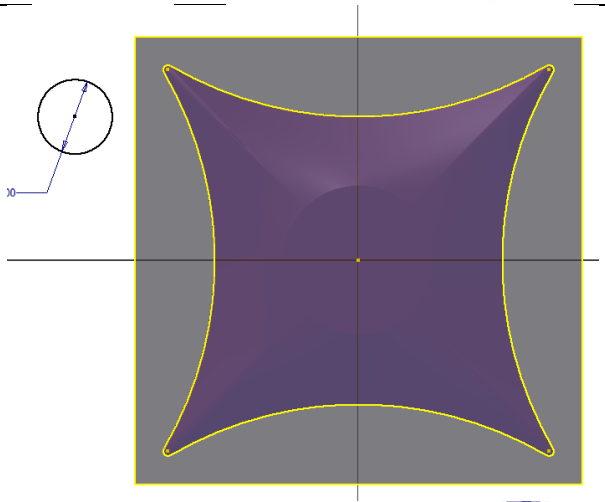
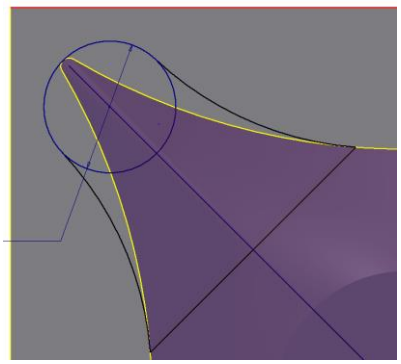
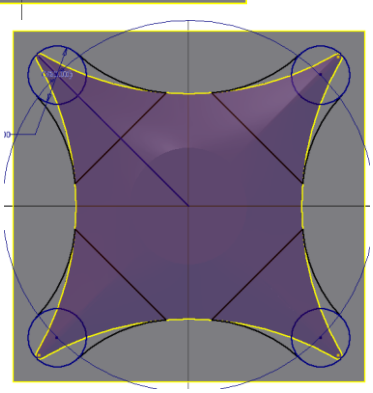



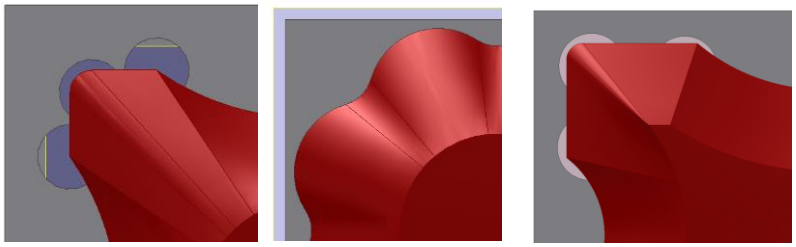

Flip the part over to see the bottom

Place a new 2D SKETCH on the bottom surface of the ***FIXTURE***

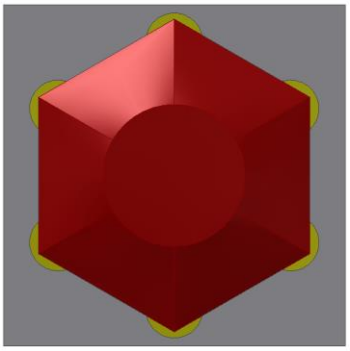

If auto project edges is not on by default (you get yellow edges every time a new sketch is created), please project the geometry of the top surface

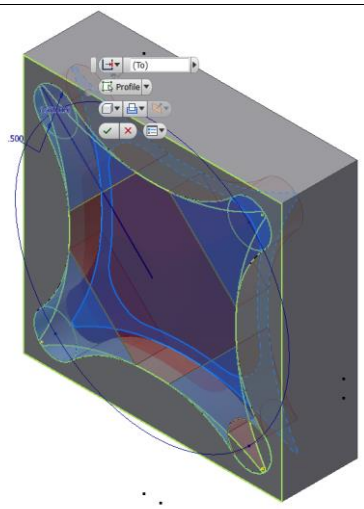
FINISH SKETCH

| | |
|---|---|
|  | EXTRUDE CUT both the Middle and the bottom profile of the fixture<br>• Set an extrusion<br>○ 0.5”<br>  <br>Save |
|  | Flip the part over to see the top surface |
|   | Place a new 2D SKETCH on the top surface of the ***FIXTURE*** |
|     | Off to the side of the part, create a CENTER POINT CIRCLE with a diameter of the bit to be used to profile the outside of the lip. (this will represent the tool to be used)<br>To ensure the tool can create the desired feature:<br>• Manually grab and hold the center point of the circle<br>• Drag the circle around the edge of the lip created<br>• Ensure there are no areas the tool cannot create<br>If any areas exist that the tool cannot create, they must be fixed now |



Examples

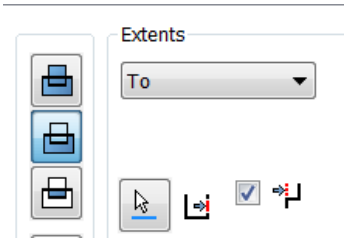




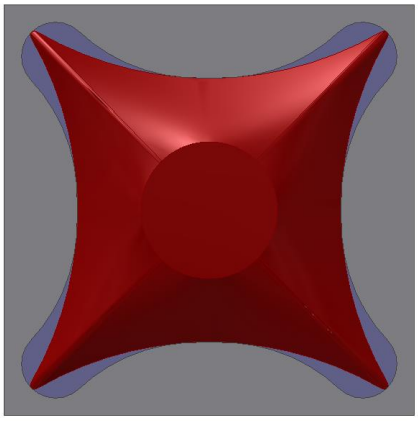
Extrude

Save

EXTRUDE cut the outside profile(s) TO the bottom face of the fixture pocket




Save



Save

**THIS COMPLETES THE CONTAINER SURFACE**

Save