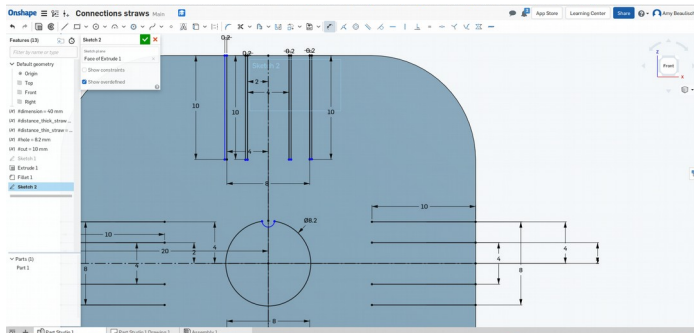# From Onshape to lasercutter

This manual works for the next two extentions:
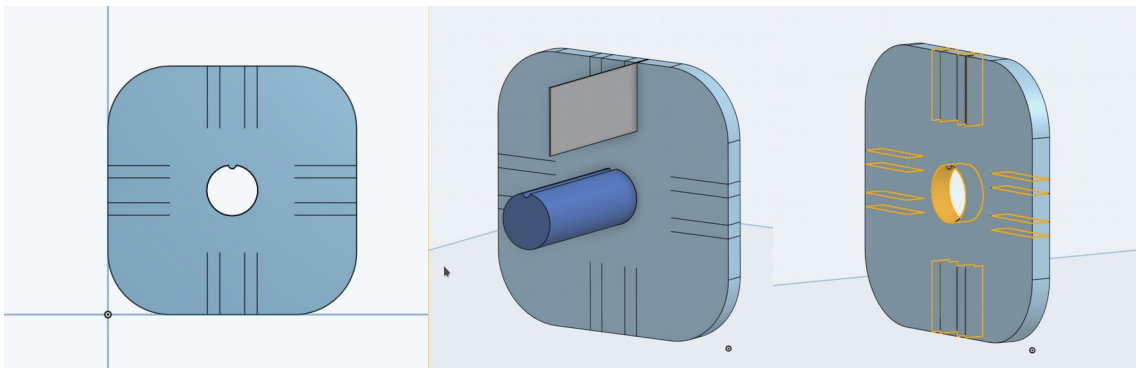1. .DXF
2. .PDF

.dwg and .dwt can't be loaded into Inkscape.

1. Making the sketch

When making the sketch in Onshape, make sure that you give the cutlines a actual thickness (kerf of the machine). If you just draw a line and expect it to come into the drawing option later one, you can restart your work.
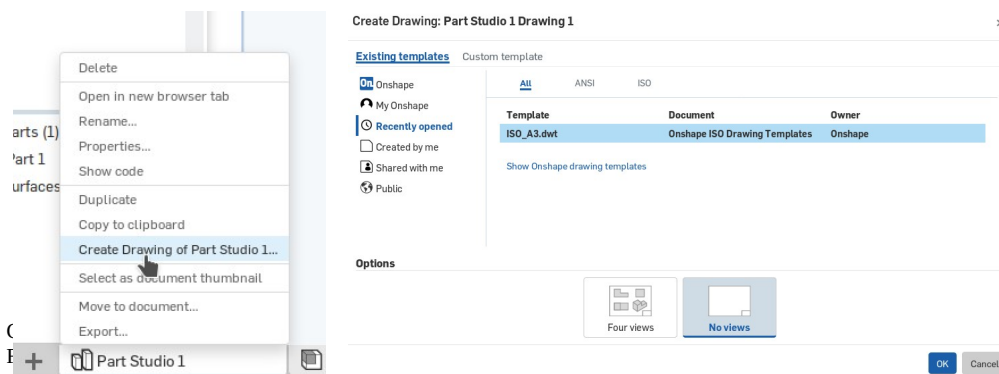

1. With lines in Sketch   2. Lines don't extrude as solids.   3. Solids do extrude
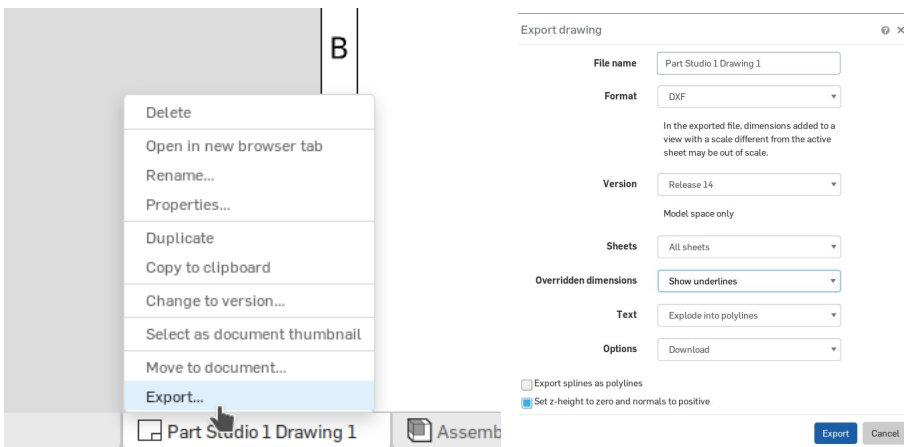
2. Make a drawing of your design.

The next step exists out of converting the design to a .dxf or .pfd file. Other options are .dwg and .dwt but we won't cover those here.

1. Right click on the 'Part Studio' tab and select 'create drawing of part studio 1'
2. Select the right template
3. Add the right view to your drawing. If you drew correctly, it will be the top view.

3. Export the file as .dxf or .pdf

1. Right click on the drawing tap and select export.
2. Select .dxf or .pdf
3. You'll find the exported file back in downloads (or the place where you save downloaded files)
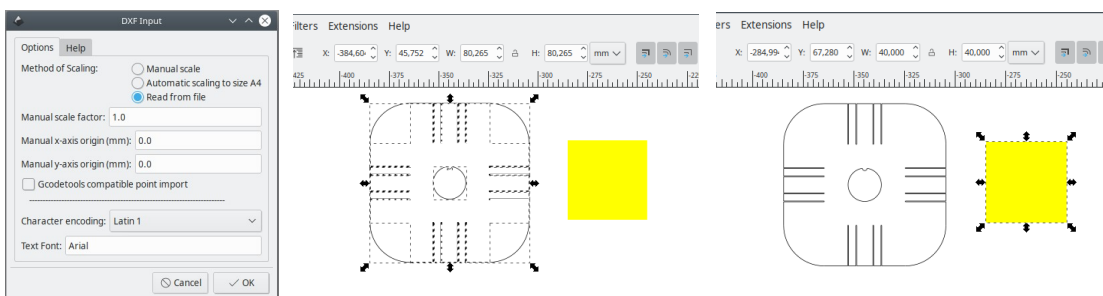

4. Extra step: edit in Inkscape

Inkscape is my standard vector editing program. As you can see, when downloading the files from Onshape, you still have the borders from your technical drawing standing on it. You don't want that to be lasercutted.
Another reason to open the file in Inkscape is to have more than just one piece cut out.

1. Open Inkscape
2. Drag the file into Inkscape (or use import)
3. Select the right parameters
4. Resize! See how the drawing from .dxf and .pfd is about 2x as big as wanted.
5. Adjust line colours

5. Lasercut your file

Send your files to the lasercutter though your prefered method