

Epilog Fusion Edge Quick Walkthrough Booklet

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THE UNIVERSITY OF BRITISH COLUMBIA

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Faculties of Applied Science and Medicine



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Epilog Laser Operational Walkthrough

To begin the process of starting a laser cutter operation, whether engraving or cutting, a line drawing or image of the part / design must be first created. There are multiple ways to do so:

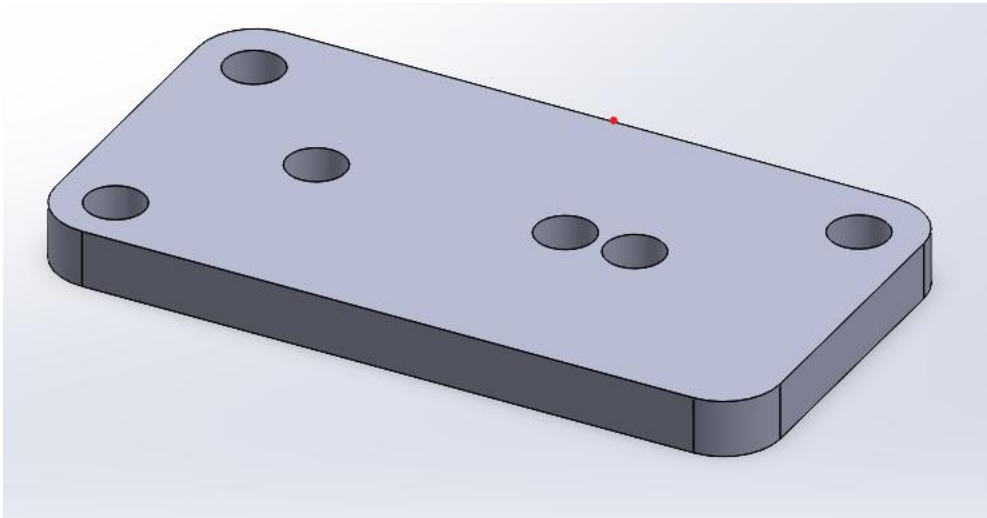
- 1) Use Solidworks to create a part and generate a dxf or dwg file.
- 2) Use Inkscape to create a design.
- 3) Find an image on the internet.

All of the above 3 methods allow for both engraving and cutting, but the steps may differ to reach a similar final product.

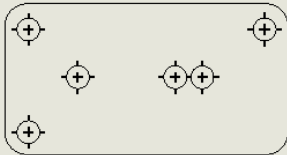
Section 1: Preparation of Design

Method 1: SolidWorks

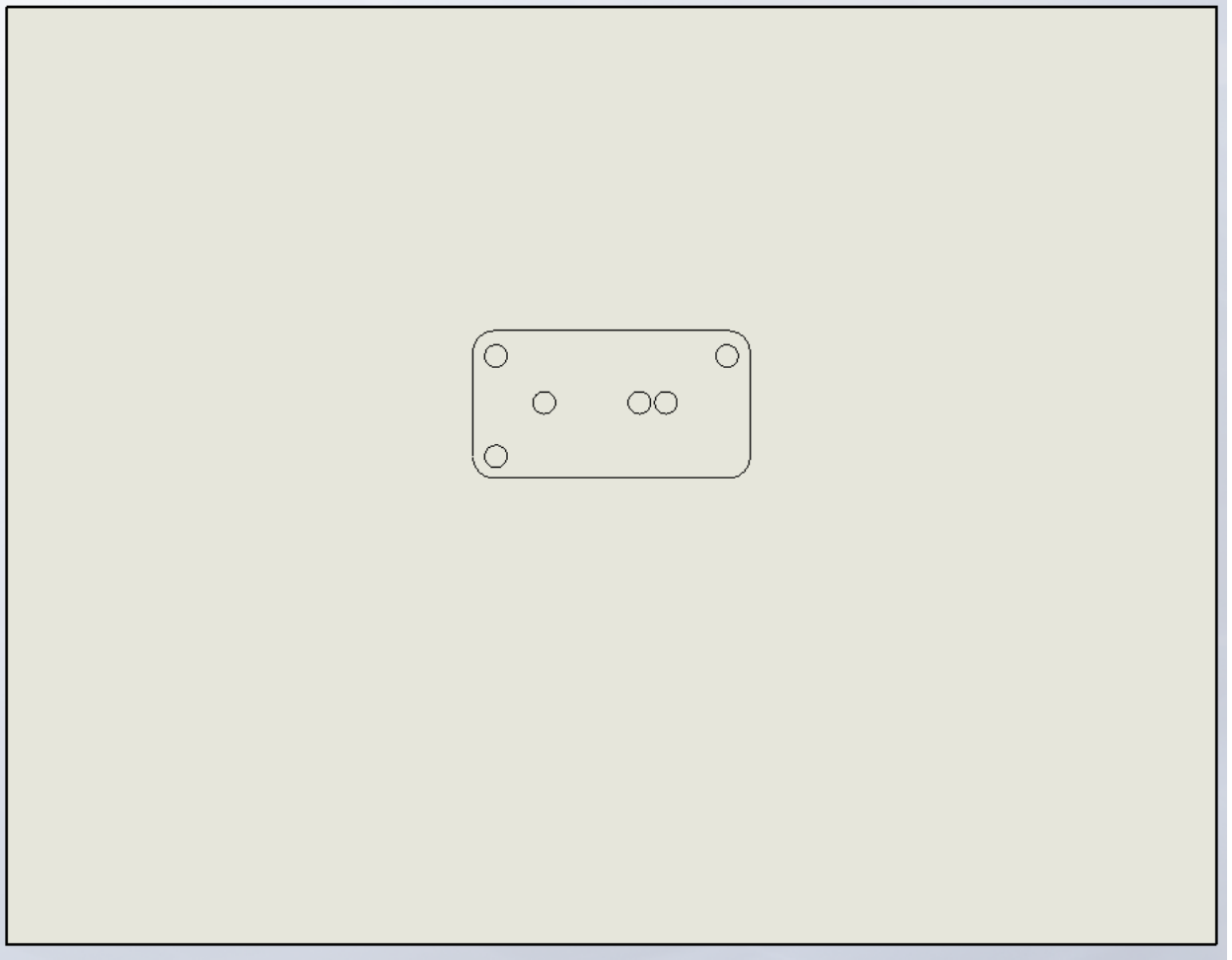
1. Create your 3D part in SolidWorks.



2. Export the 3D part to a .DWG drawing file within Solidworks. Be sure to only show the face you wish to cut or engrave.

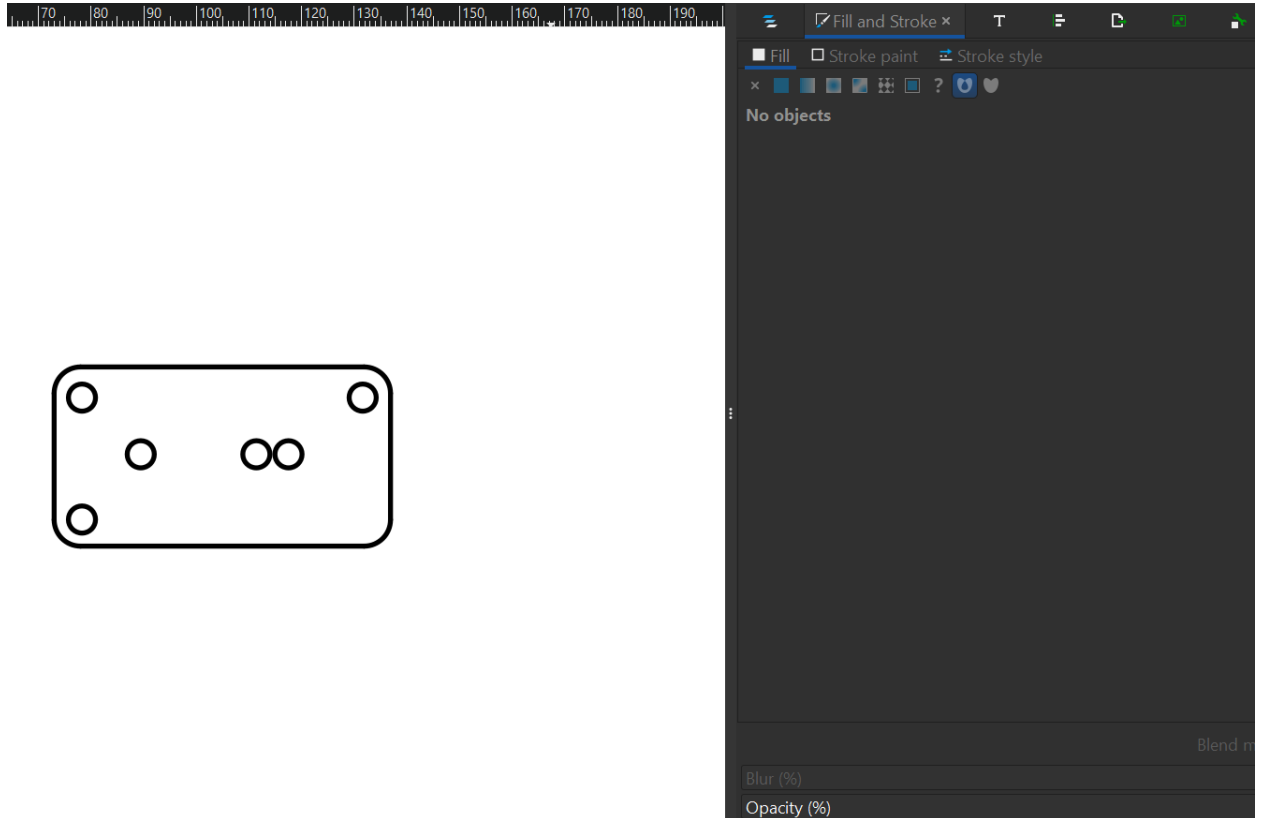
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PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF «INSERT COMPANY NAME HERE». ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF «INSERT COMPANY NAME HERE» IS PROHIBITED.		<table border="1"><tr><td colspan="2">UNLESS OTHERWISE SPECIFIED:</td><td>NAME</td><td>DATE</td></tr><tr><td colspan="2">DIMENSIONS ARE IN INCHES</td><td>DRAWN</td><td></td></tr><tr><td colspan="2">TOLERANCES:</td><td>CHECKED</td><td></td></tr><tr><td>FRACTIONAL: $\pm$</td><td>ANGULAR: MACH $\pm$ BEND $\pm$</td><td>ENG APPR.</td><td></td></tr><tr><td>TWO PLACE DECIMAL $\pm$</td><td>THREE PLACE DECIMAL $\pm$</td><td>MFG APPR.</td><td></td></tr><tr><td colspan="2">INTERPRET GEOMETRIC TOLERANCING PER:</td><td>Q.A.</td><td></td></tr><tr><td colspan="2">MATERIAL</td><td colspan="2">COMMENTS:</td></tr><tr><td>NEXT ASSY</td><td>USED ON</td><td colspan="2">FINISH</td></tr><tr><td colspan="2">APPLICATION</td><td colspan="2">DO NOT SCALE DRAWING</td></tr></table>		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	DIMENSIONS ARE IN INCHES		DRAWN		TOLERANCES:		CHECKED		FRACTIONAL: $\pm$	ANGULAR: MACH $\pm$ BEND $\pm$	ENG APPR.		TWO PLACE DECIMAL $\pm$	THREE PLACE DECIMAL $\pm$	MFG APPR.		INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.		MATERIAL		COMMENTS:		NEXT ASSY	USED ON	FINISH		APPLICATION		DO NOT SCALE DRAWING	
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3. Remove any extraneous information from the sheet (borders, text block, center and hidden lines, etc.).

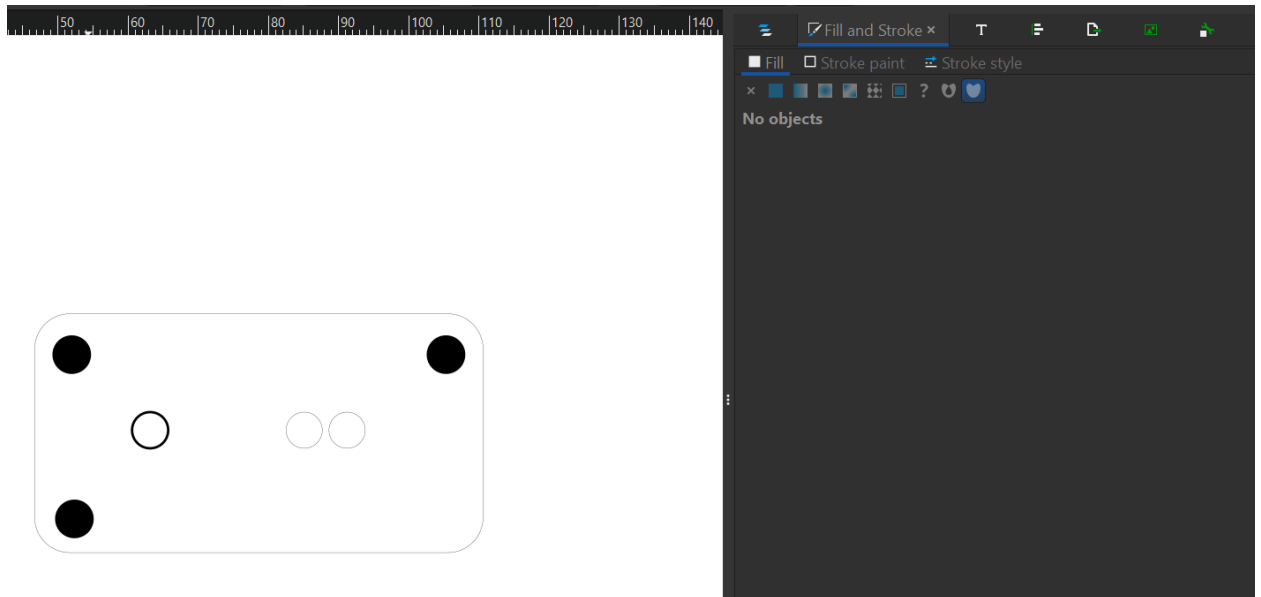


4. Export the file as a .DXF.

5. Import .DXF into inkscape. Choose “Read from File” for method of scaling.



6. Confirm scaling through use of measurement tool. Correct if needed.
7. Adjust line widths and fills depending on whether a section is being cut or engraved. If cut, set line width to 0.1 pt and remove the fill. If engraved, set line width >0.1 pt, fill is based on desired look of engraving.

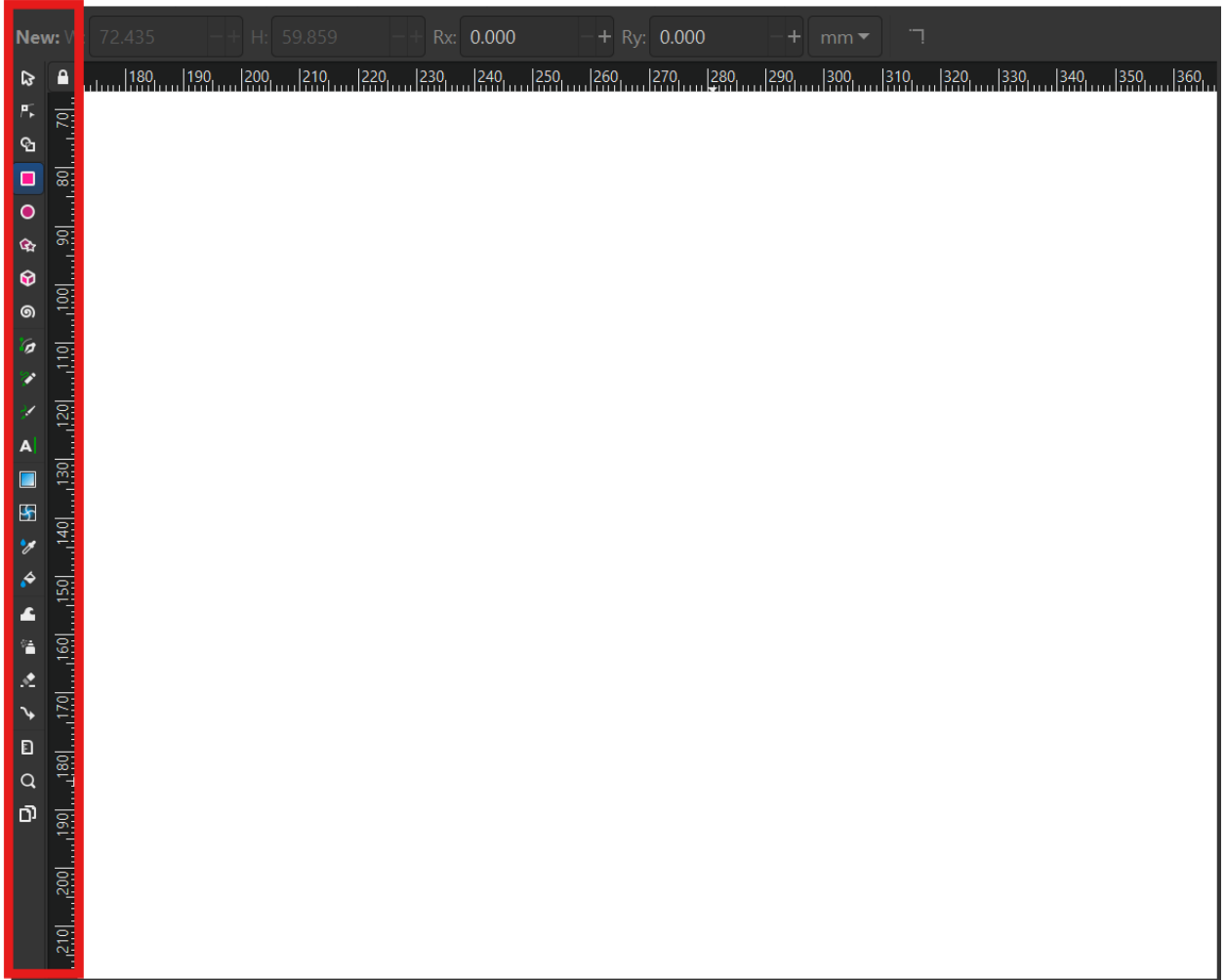


8. Confirm all lines / fills/ dimensions and send to laser cutter by selecting File → Print → Epilog Engraver.

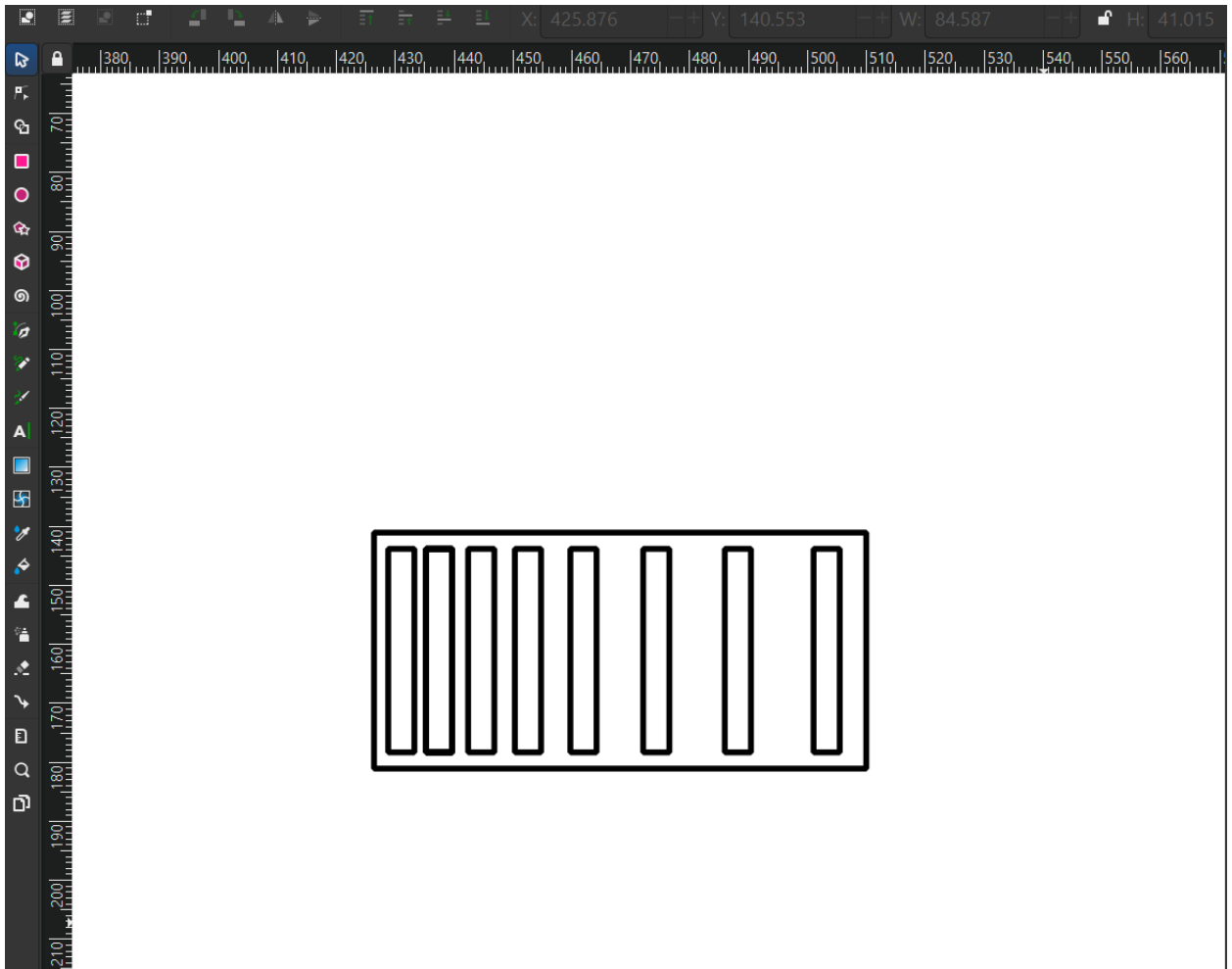
9. Skip to Section 2: Setting up the Laser.

Method 2: Create an Inkscape Design

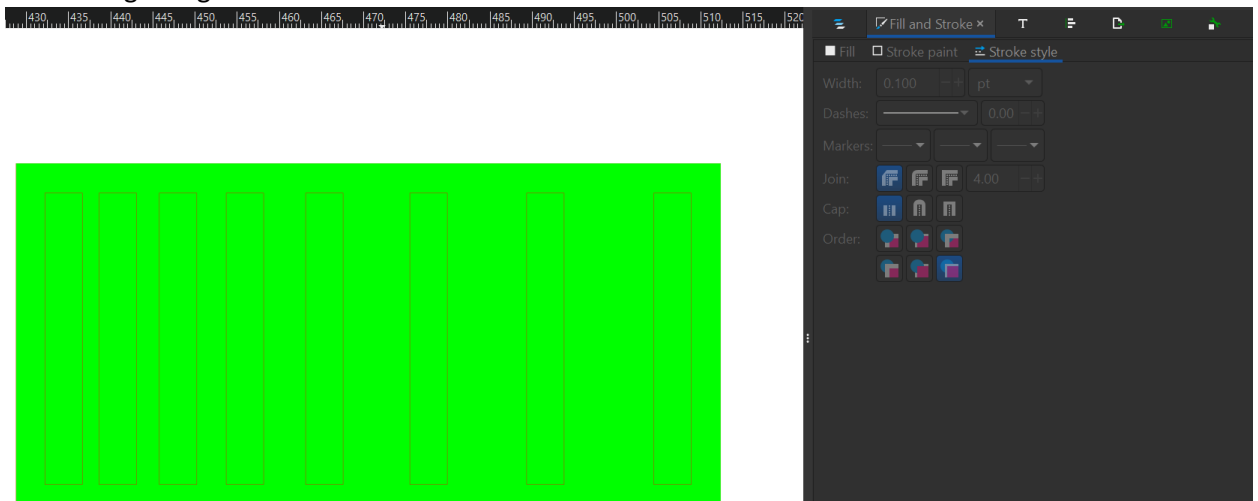
1. Open a blank Inkscape document.
2. Use the drawing tools to create a design. Ensure dimensions are as intended (check units).



3. Confirm dimensions.



4. Adjust line widths and fills depending on whether a section is being cut or engraved. If cut, set line width to 0.1 pt and remove the fill. If engraved, set line width >0.1pt, fill is based on desired look of engraving.

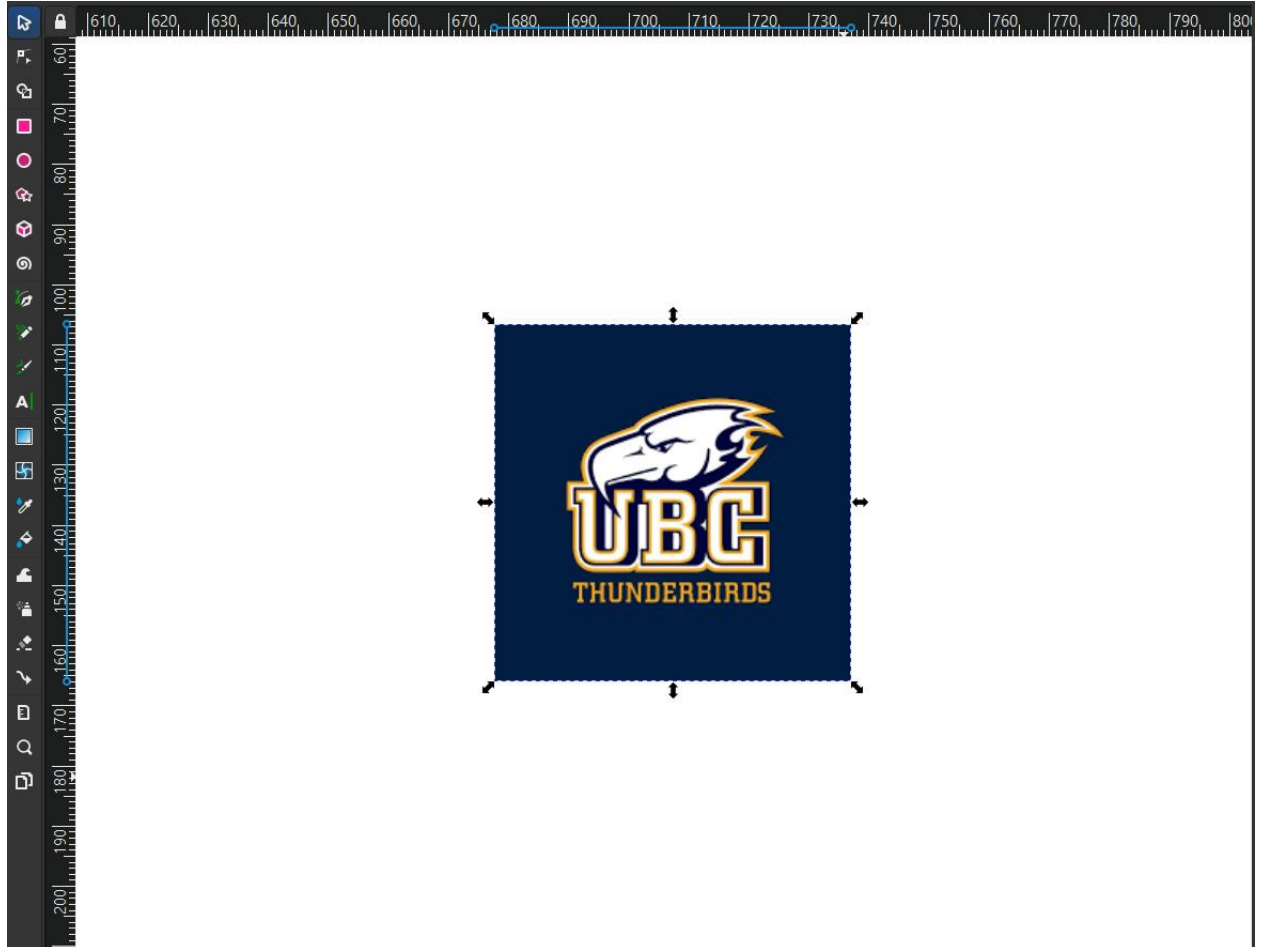


5. Confirm all lines / fills/ dimensions and send to laser cutter by selecting File → Print → Epilog Engraver.

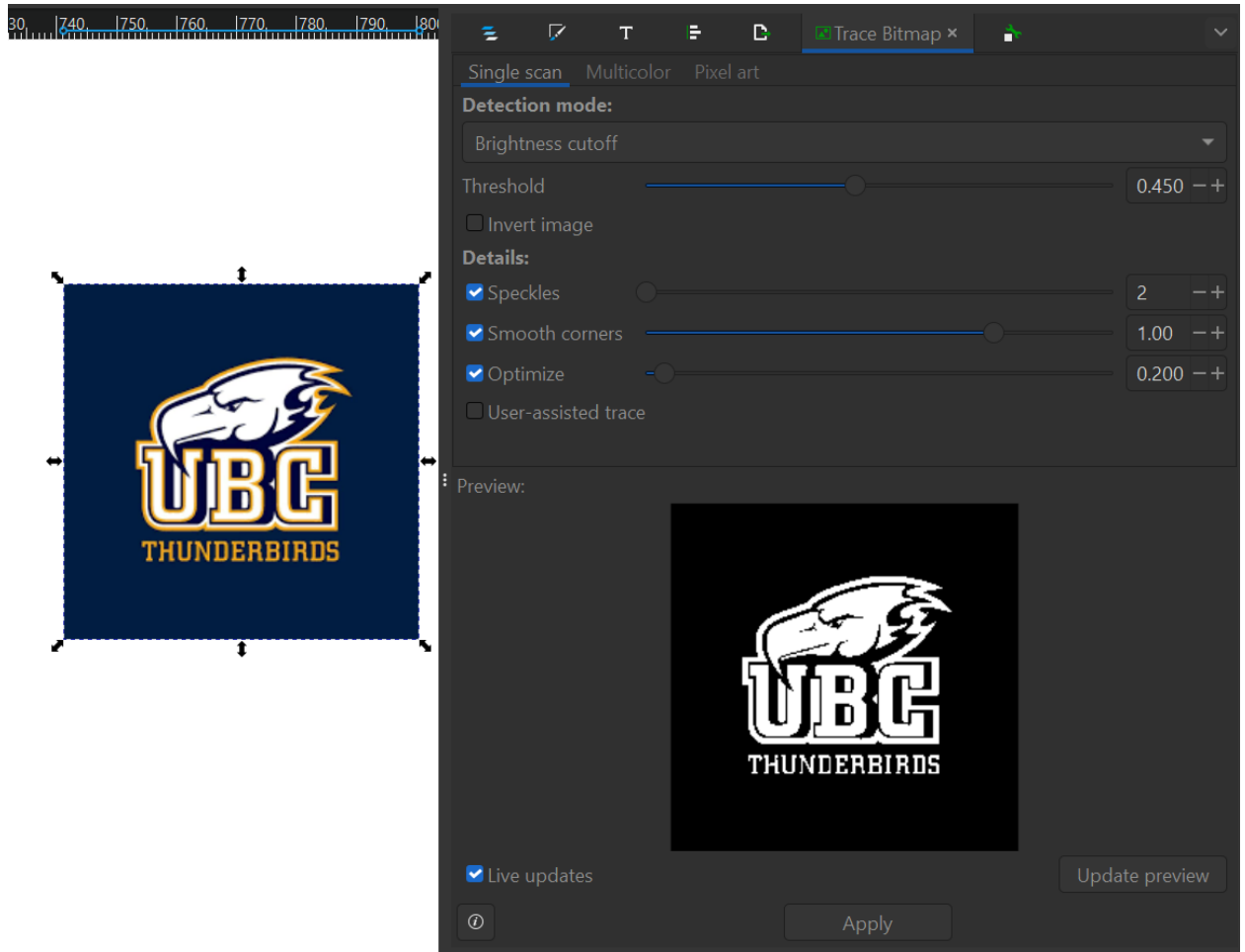
6. Skip to Section 2: Setting up the Laser.

Method 3: Import an Online Image

10. Find an image online you wish to use.
11. Import image into Inkscape.



12. If only engraving the image, skip to Section 2. Otherwise, apply a bitmap trace to create a line drawing representation of the image.



13. Create 2 copies of the trace. One will be for cutting operations, one for engraving.



14. On the 2 images, enter the node tool, and delete any parts of the image not being engraved or cut on the respective images.

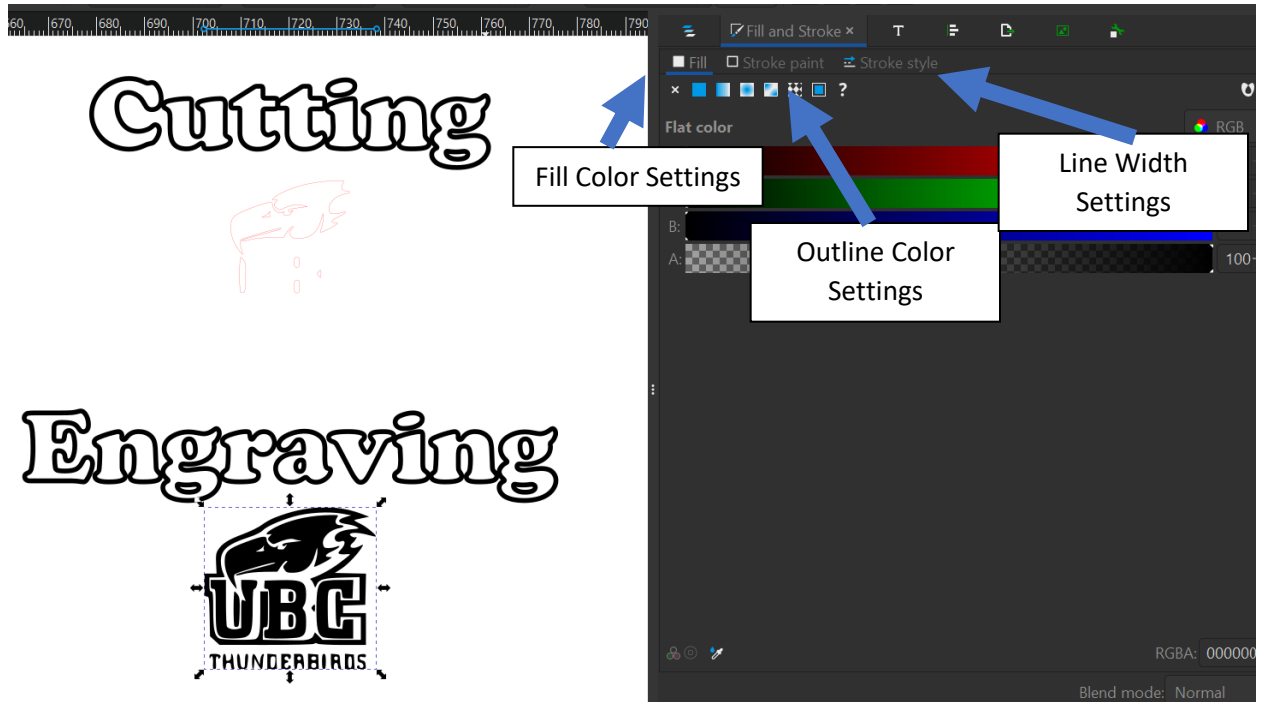
Cutting



Engraving



15. For the engraving copy, set fill color to full black and remove the outline on the image. On the cutting copy, remove the fill color, and set the outline to solid red, with a line width of 0.1pt.



16. Align the 2 copies so the features overlap properly.



17. Send to laser cutter by selecting File → Print → Epilog Engraver.

18. Skip to Section 2: Setting up the Laser.

Section 2: Setting up the Laser

1. Turn on room ventilation (green button at front of makerspace rooms). The green light should be on.

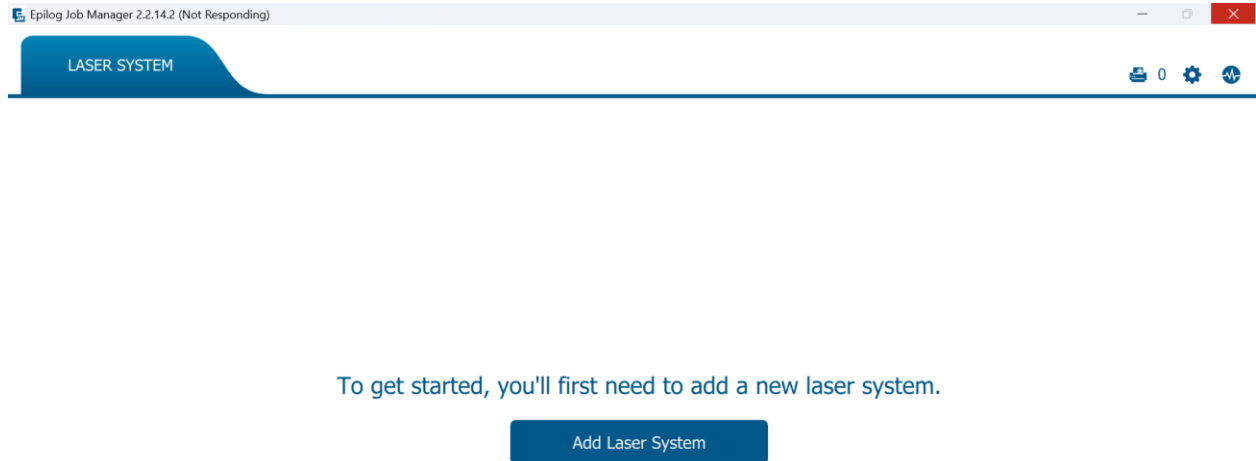


2. Turn on air pump underneath desk by laser.



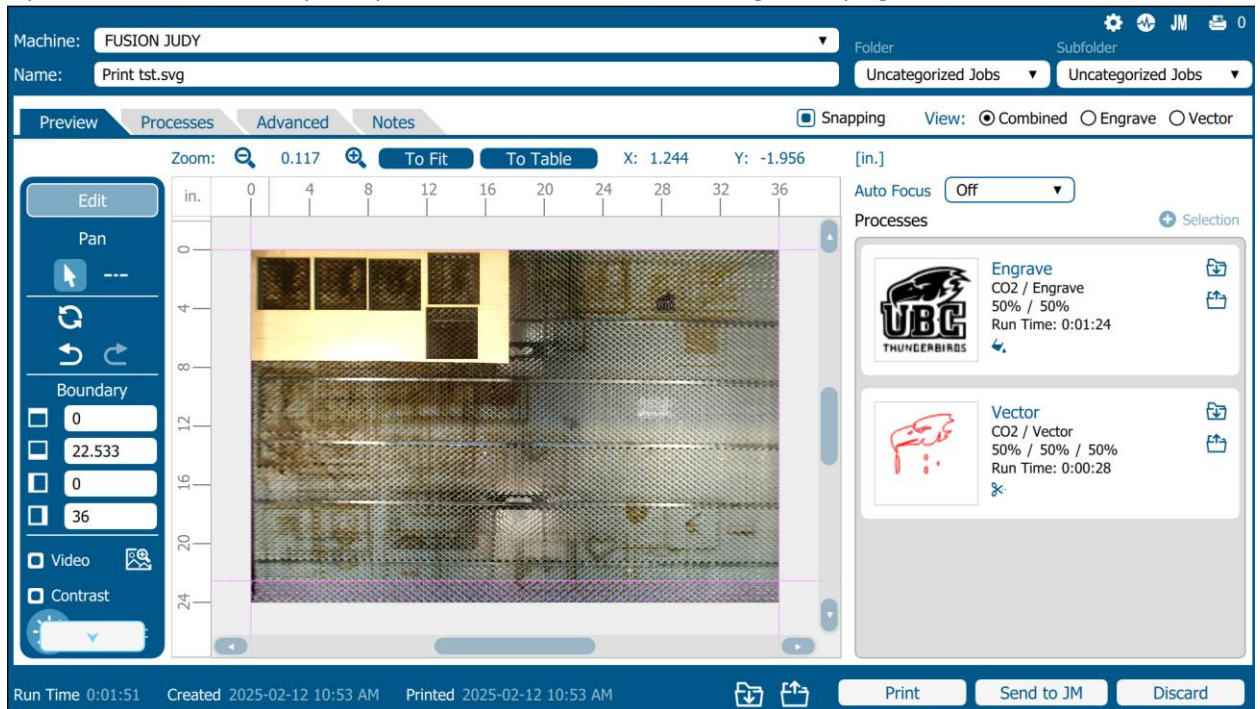
- 3.
4. Connect computer via USB to laser and power on laser cutter.
5. If computer has been previously connected to the laser, skip to step 5. Otherwise:

a. Launch Epilog Job Manager.

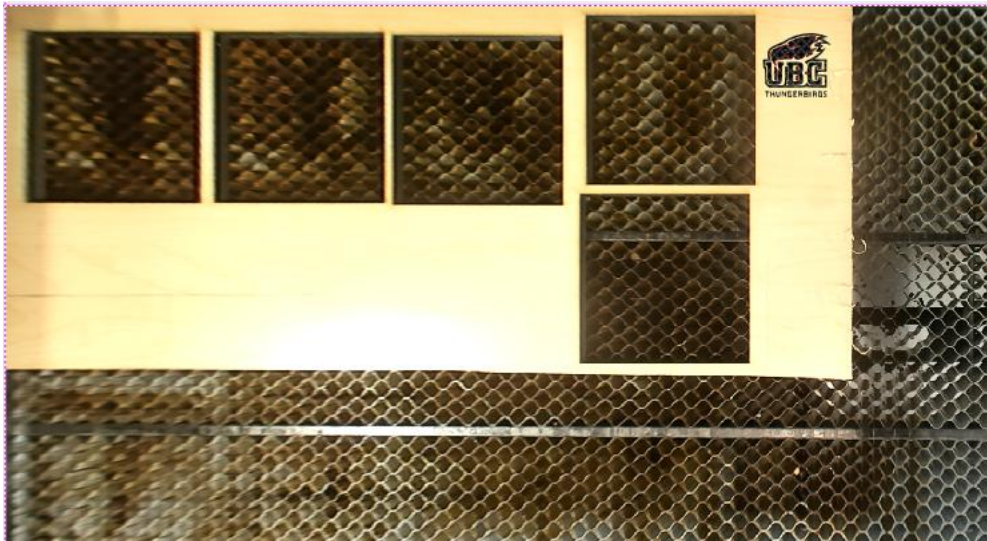


- b. Choose "Add Laser System".
 - c. Select "Fusion Judy".
 - d. Close Epilog Job Manager.
6. In Inkscape, select "File" → "Print" → "Epilog Engraver". This will launch the Epilog Dashboard.
7. If the laser is properly connected to your computer system, the epilog dashboard will show a camera view of the laser's cutting bed.

- Open the laser door and place your material onto bed, ensuring it is laying flat.

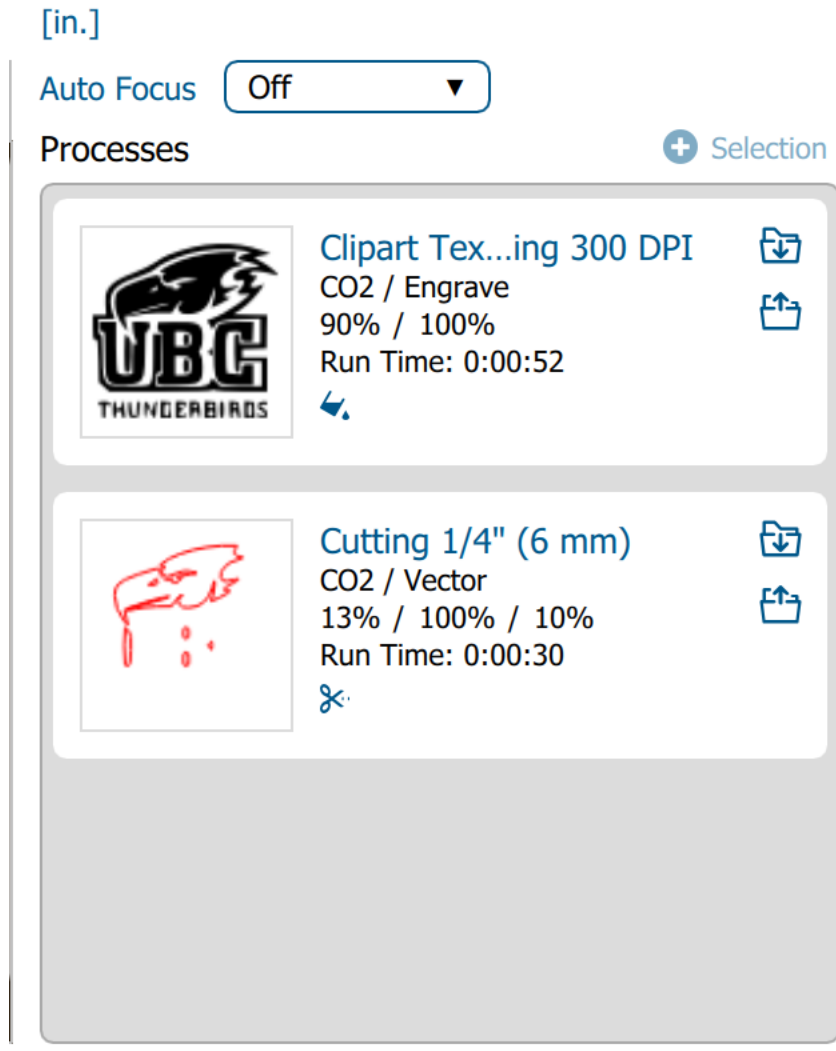


- Move the image of your design in the dashboard to the location on the material stock you wish to cut / engrave.



- Enter the material settings for all operations and choose the correct material and cutting depth / engraving resolution.





11. Select "print" to send the job to the laser once confirmed.
12. On the laser control screen, select the job just received. Select the bottom right "trace" button.
13. View the red dot laser as it move around the area to be cut. If the laser falls off your material, the location must be updated.
14. Select the button second from the right that has a joystick icon. Move the laser to over the center of where the design will be located and choose "Auto-Focus", this will set the height offset between the material and laser head.
15. Return to the main screen by selecting the 4 horizontal lines and choose the design to be cut. Press the Start/Stop button to begin.