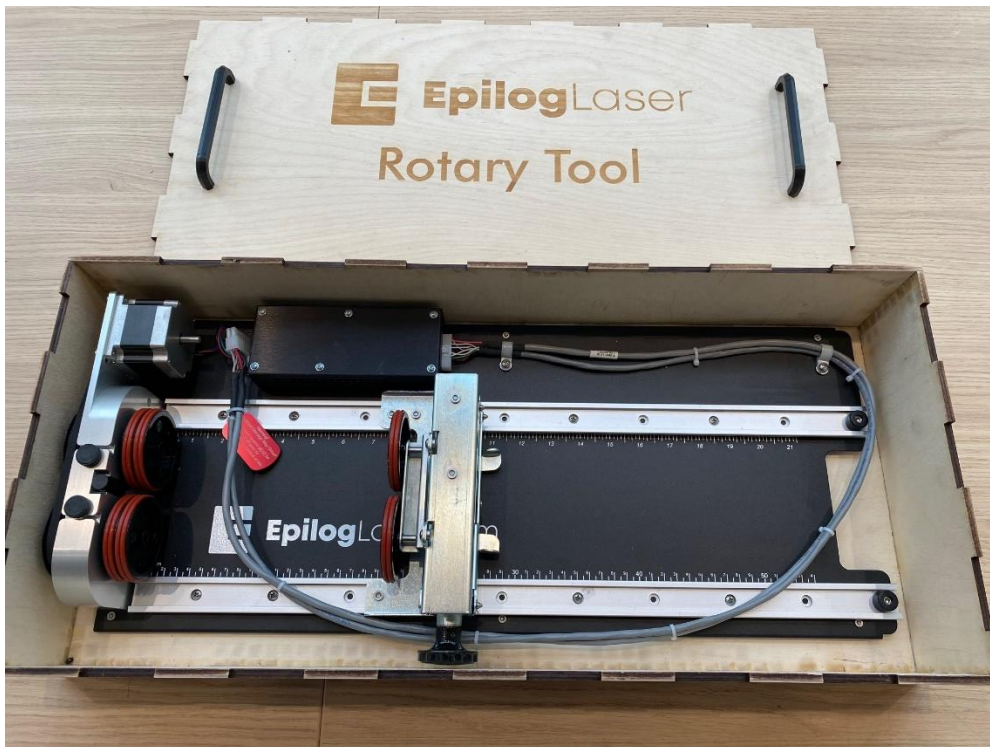


MANUAL: ENGRAVING ROUND OBJECTS WITH THE EPILOG ROTARY TOOL_



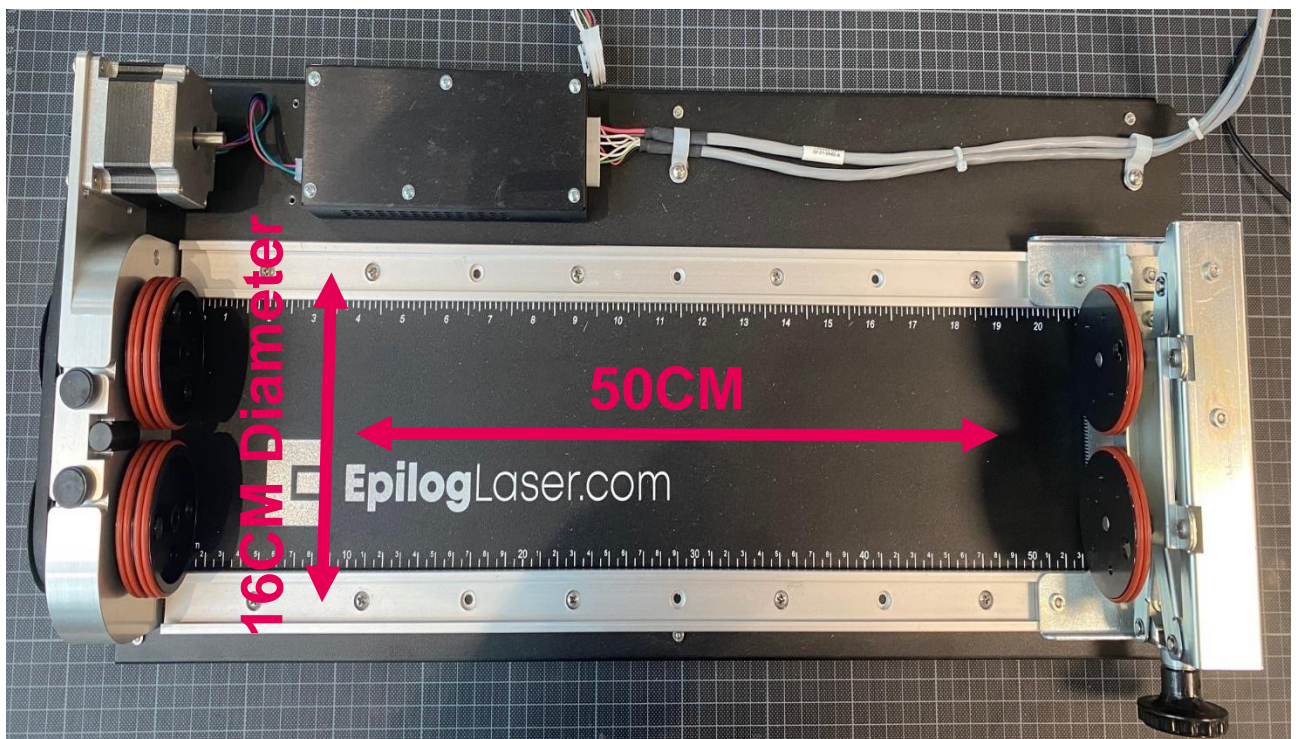
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1 INTRODUCTION

The Epilog Rotary Tool lets you mark and engrave on round / cylindrical objects. You are only allowed to use this tool if you have a good understanding of the Epilog Laser. Otherwise ask one of the instructors for help. The fiber laser is used for engraving metal objects while the CO2 laser is used for engraving other materials such as wood and acrylic.

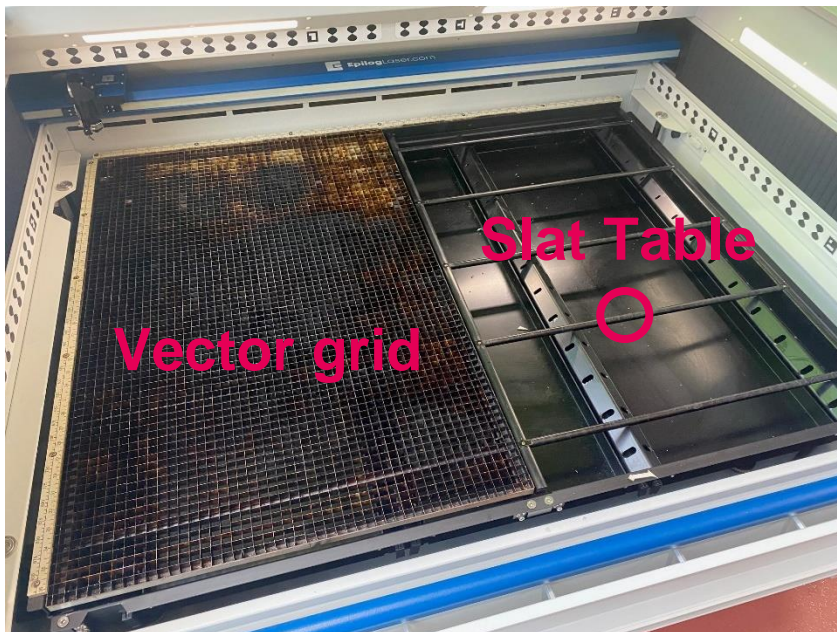
The rotary tool can support objects with a length of maximum 50cm. The maximum diameter of the object is 16cm. (Objects cannot and should not extend past the drive wheels in the horizontal direction).



2 SETUP

2.1 Preparing the laser for engraving

The rotary tool must be installed on the **engraving table**! Please open the (front) laser door by pulling it towards you and remove the vector cutting grid and supporting slat table grid (if necessary) to place the engraving table.

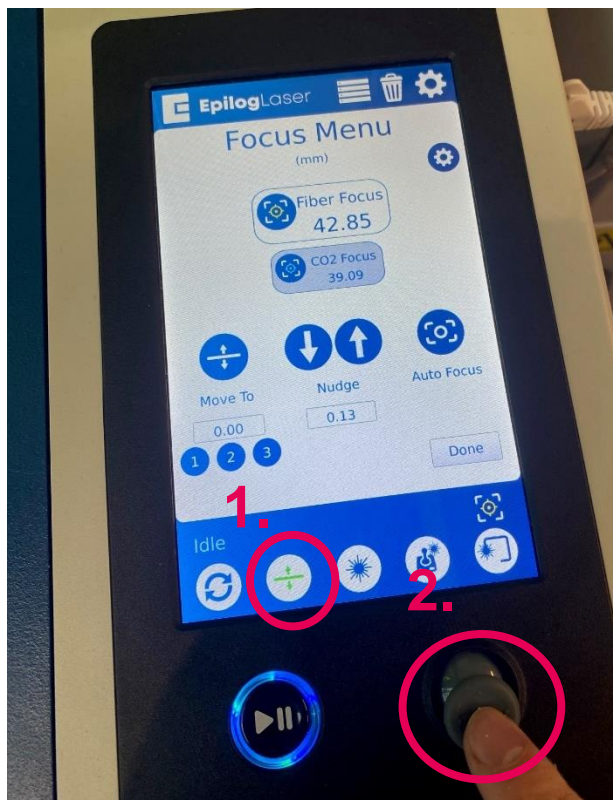


2.2 Preparing the laser for the rotary tool

First turn on the Epilog **without** the rotary tool installed.



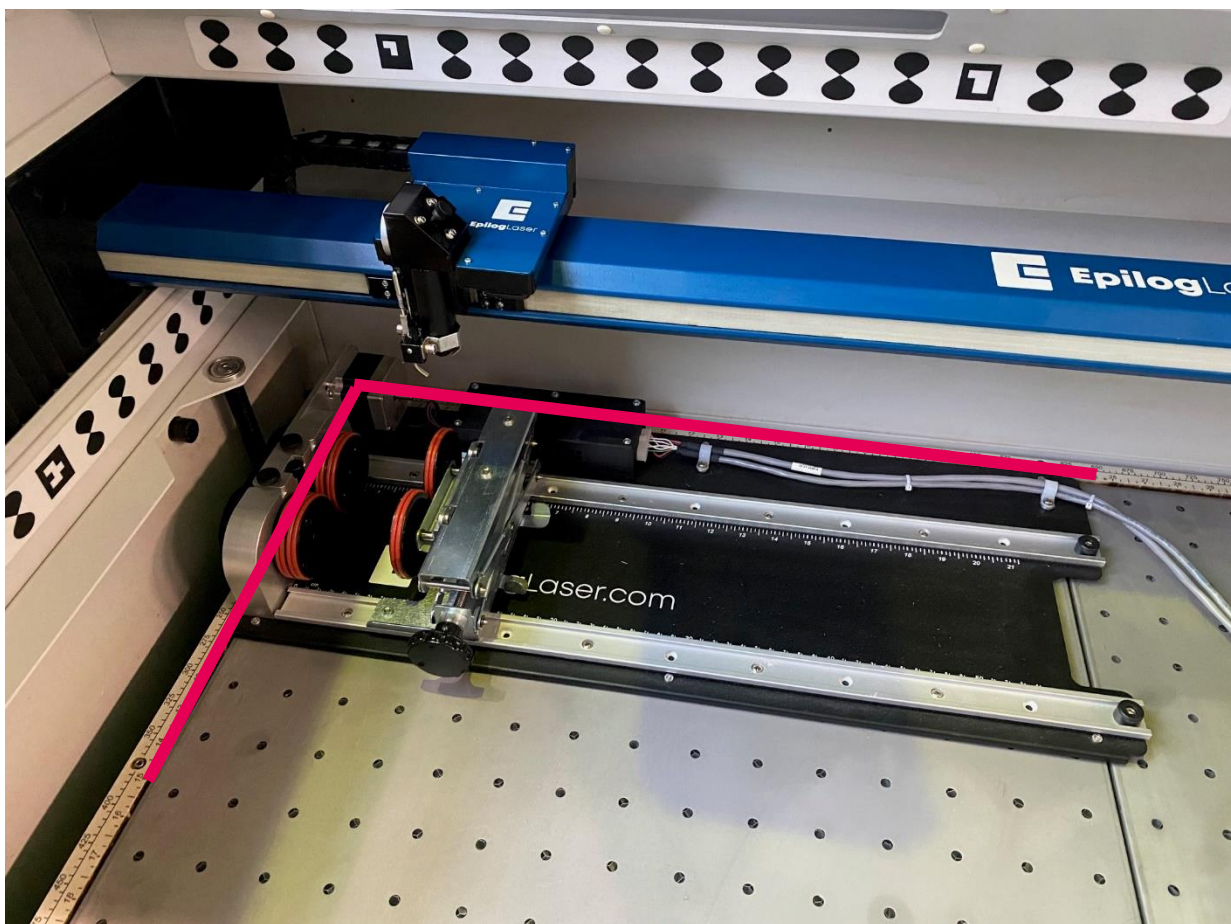
You can now lower the bed using the touch screen. First select the 'bed menu (1)' and then use the 'joystick (2)' to lower it at least **20cm** so that you have enough room to position the rotary tool.



Now turn off the Epilog again. Never install or remove the rotary tool with the Epilog turned on as this will damage the electronics!



Place the Rotary tool in the upper left corner of the table so that the baseplate is positioned against the sides of the left and top rulers. The rotary rests on the table against the rulers and does not need to be locked in place.



With the Fusion Pro powered off, mate the cable connector to the plug located at the right side of the cabinet as shown in the photo. Make sure that you position the connector in the right position.



Once the Rotary tool cable is connected, you can power on the laser system. The Fusion Pro senses that the Rotary has been installed.

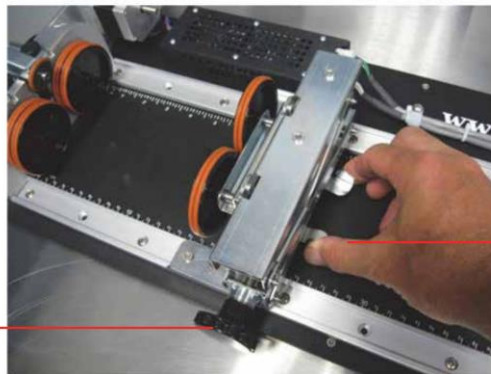
During machine initialization the lens carriage will find its new Home Position over the center of the Rotary tool. The control panel on the Epilog will now only let you move the laser head in the horizontal direction. Moving in the vertical direction results in turning the rotary tool instead of moving the laser carriage.



3 PREPARING YOUR OBJECT ON THE ROTARY TOOL

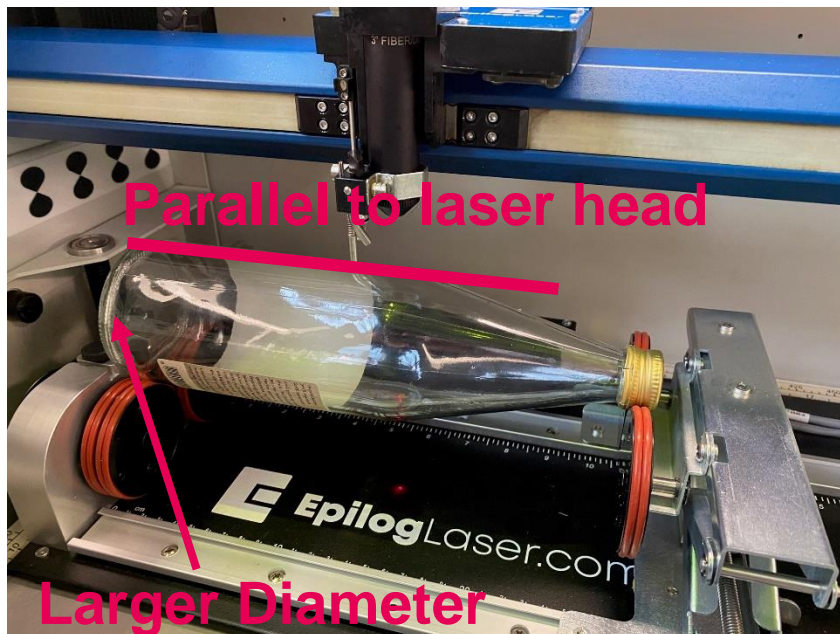
The wheels on the left are the drive wheels which spin the cylinder. The wheels on the right are for support. The right-side wheels are mounted on a scissor jack so they can be raised or lowered to level the top surface of your cylinder with the X-beam. The scissor jack can be moved left and right to accommodate cylinders of different lengths.

Rotate the knob to lift or lower the scissor jack.

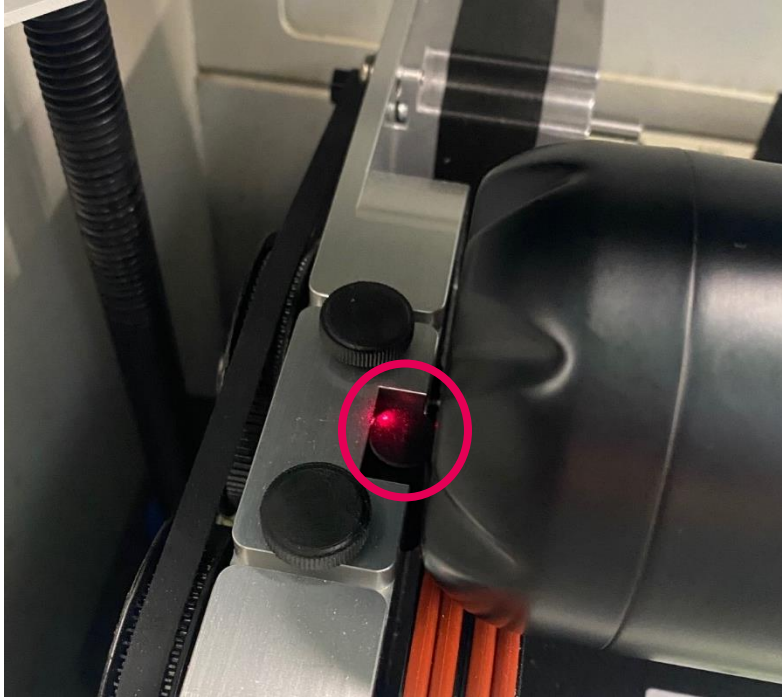


Squeeze the tabs to move the scissor jack left and right.

In most cases you will want to load your cylinder with the larger diameter on the left (drive wheel side). The scissor jack is used to elevate the right side of your cylinder so that the top surface is horizontal.



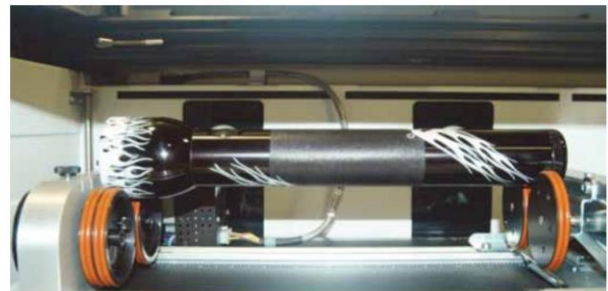
Make sure to load your cylinder onto the Rotary tool so that it is just touching the black bumper on the left side. This is the '0' position (left side of your document).



Double check that your object is positioned correctly. An object that is not horizontal will result in bad laser quality since the distance to the object (and therefore also focus) differs along the engraving path. Not positioning your object against the bumper results in a misaligned engravings.



Incorrect Setup: The flashlight is not horizontal. Raise the right side of the flashlight by turning the jack screw.



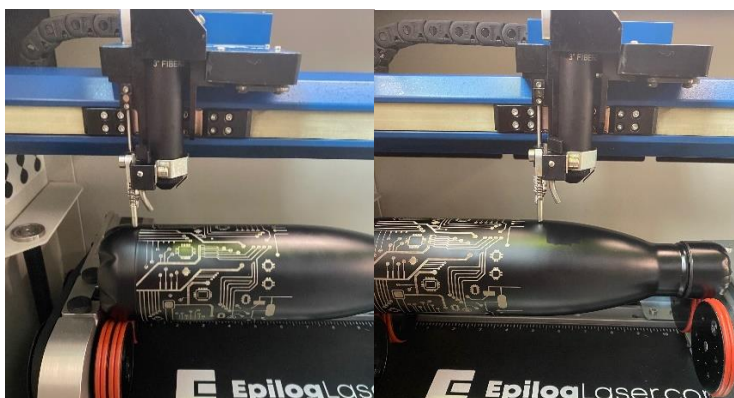
Correct Setup: The flashlight is horizontal to the X-beam

4 SETTING THE FOCUS

With your cylinder in place on the Rotary tool, select the Jog menu (1) and move the lens carriage above the cylinder. Check your focus with the Manual Focus Gauge (2). (The ‘Park Rotary’ button moves the laser head back to the standard home position. However, if the ‘Center Rotary’ button is visible, you have to press this before continuing to focus as this will move the focus gauge to the center of the cylinder).



To check that the focus is even across the entire surface, use the focus gauge while jogging the carriage back and forth across your cylinder. You may have to move the bed further down if the focus gauge doesn't fit between the object and the carriage in the first place. The object is in focus if the gauge barely touches the surface evenly across the engraving path.



When you are finished focusing, press ‘Park Rotary’ on the Touch Screen. Pressing “Park Rotary” will send the lens carriage back to its standard Home Position at the front of the black bumper. You are now ready to start the job

5 PREPARING YOUR FILE

You might be used to using the camera's in the Epilog laser. Unfortunately the camera's don't work with cylindrical objects because of the distortion. Aligning our engraving onto the object thus purely depends on your design file and manual measurements. Because the Rotary tool automatically compensates for the diameter of the object, artwork setup is relatively easy.

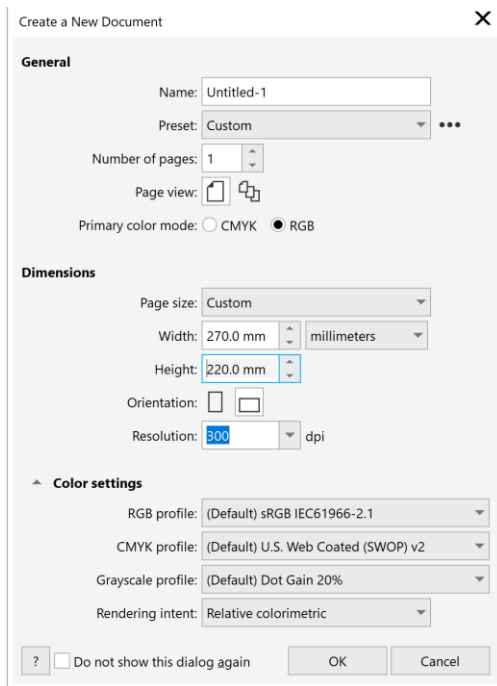
Coreldraw:

Set the width of your page (in the X direction) to the length of the object you are engraving. For this bottle the width of the page is 270mm.



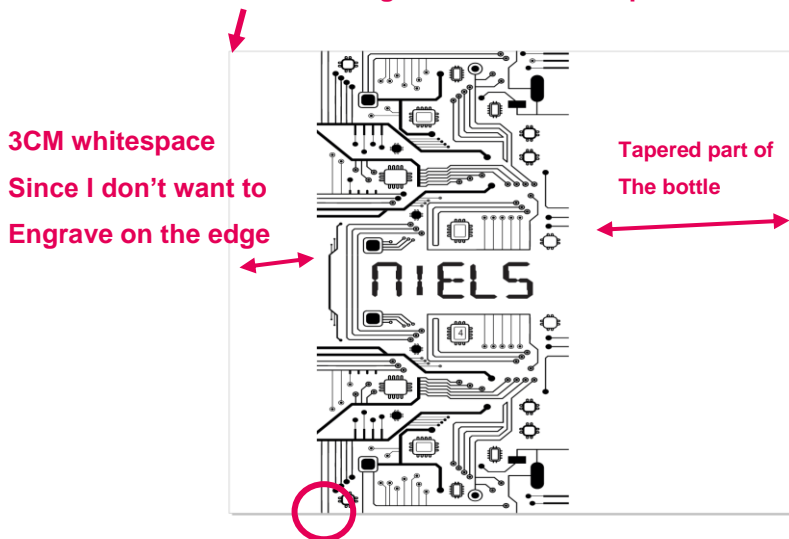
Set the height of your page (in the Y direction) to the circumference of the glass you are engraving. Measuring the circumference precisely is extremely important when you have design features that connect all the way across the cylinder. If you do not set this correctly, they will not align/or overlap instead. (Measure twice, engrave once). I got the circumference by multiplying the diameter with Pi (roughly $70 \times 3.14 = \sim 220$). A flexible tape measure might also be useful.





Place your artwork to the top edge of the page. When the job starts, the first part of the process is for the cylinder to rotate through any white space that is between the top of your page and the top of your artwork. Once it has rotated through the white space it will begin to laser your artwork. The edge of the black bumper on your Rotary Attachment corresponds to the left edge of your page in CorelDraw.

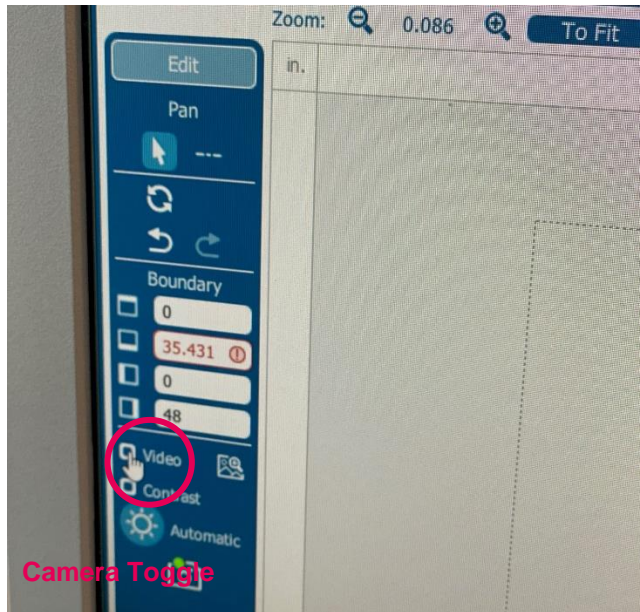
This is the edge of the black bumper where the laser wants to start engraving



If my circumference is correct, these lines will perfectly align with the lines on the top of the page

6 CUTTING

I recommend turning off the camera (since this is only confusing). Afterwards, continue engraving as usual by pressing 'print' in the CorelDRAW design and then setting up the usual engraving settings in the Epilog dashboard.



7 REMOVING THE ROTARY TOOL

Always turn off the power before disconnecting the rotary tool connector! Then simply remove the tool and place it back in its original case. Also place the vector grid back in place so that other people can directly use the laser again for cutting.