

## ROTARY FIXTURE

The Rotary Fixture allows the laser system to engrave and mark on cylindrical objects including open-ended objects such as wine glasses, mugs, cups, and vases. It is equipped with an external conical fixture and a chuck, which can be mounted to the fixed, motorized end and an internal conical fixture which can be attached to the adjustable end.

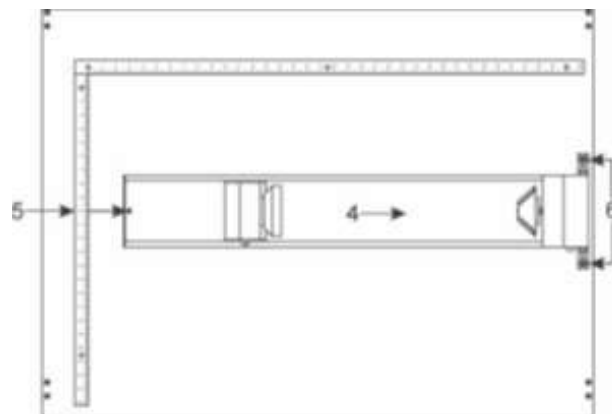


### Installation

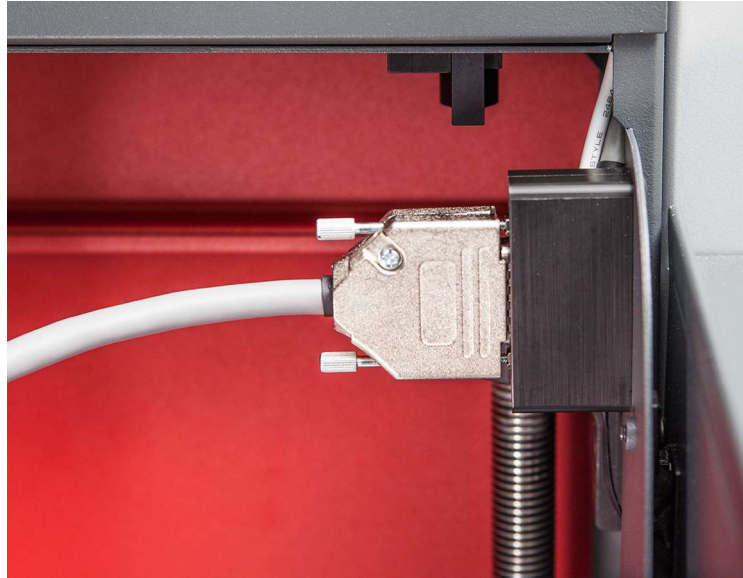
1. Lower the laser system material support table enough to install the Rotary Fixture. Make sure the motion system will clear the top of the Rotary Fixture.
2. Now turn the laser system **OFF**.
3. Place the Rotary Fixture support bracket (1) on the table positioned over the mounting holes (2) on the right side of the Table. Install the provided thumbscrews, but leave the thumbscrews loose enough to allow adjustment of the Rotary Fixture.



4. Place the Rotary Fixture on top of the bracket so that its pivot bolts sit in the forks on the mounting bracket. Adjust the Rotary Fixture so the front edge lines up with the 14" (355.6 mm) mark (5) on the Y ruler. Tighten the thumbscrews. (6)



5. With the power to the system still **OFF**, connect the Rotary Fixture control cable to the receptacle on the laser system.



### ***Loading Material***

Before loading material into the Rotary Fixture, use a caliper or similar measuring device to measure the diameter of the material in the area where the engraving or marking is to be located. A wine glass is used as an example here.

1. Place the open end of the wine glass on the fixed end of the Rotary Fixture. Lift the lever on the adjustable end of the Rotary Fixture and slide it up against the base of the wine glass so the material rests firmly centered inside of the inverted cone. Push the adjustable end of the Rotary Fixture to the right firmly against the bottom of the wine glass. Lower the lever on the end of the fixture to lock the wine glass in place. The rubber pads should keep the wine glass from slipping.

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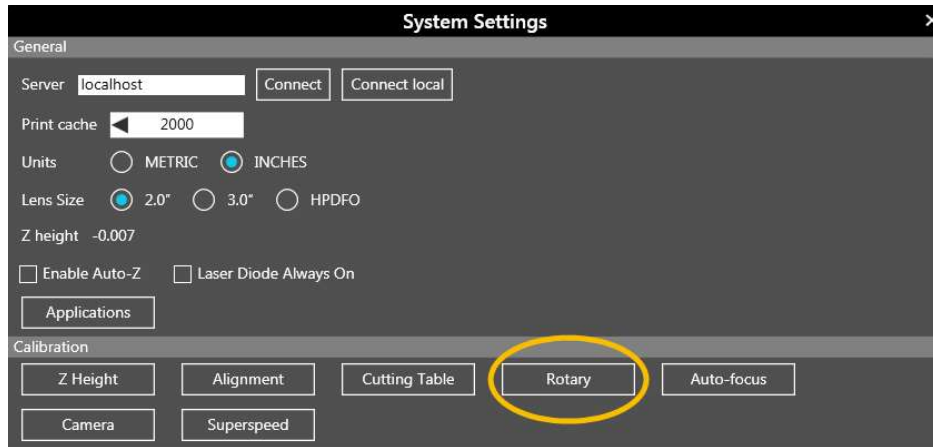
***NOTE:*** *If the material you are using does not have an open end, you can purchase an additional internal cone fixture to hold the material. If the material has two open ends you can purchase an additional external cone fixtures to hold the material. To change out fixtures, loosen the setscrew that holds the fixture to the Rotary shaft, remove the unneeded fixture and replace with the new one.*

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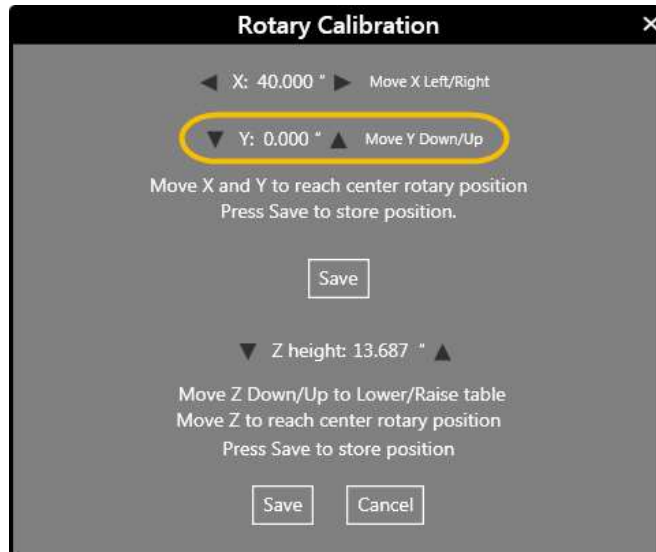
2. If engraving a tapered object, the Rotary Fixture can be tilted to maintain proper focus on the tapered surface. To do this, lift the left end of the fixture and place a spacer underneath. Slide the spacer left and right until the tapered surface of the object is parallel to the material support table.
3. Power the laser system **ON**. If you are using the Rotary Fixture for the first time, Calibration may be needed, so proceed to the next step. If Calibration is not needed, proceed to **Determining Graphic Placement**.

## Rotary Fixture Calibration

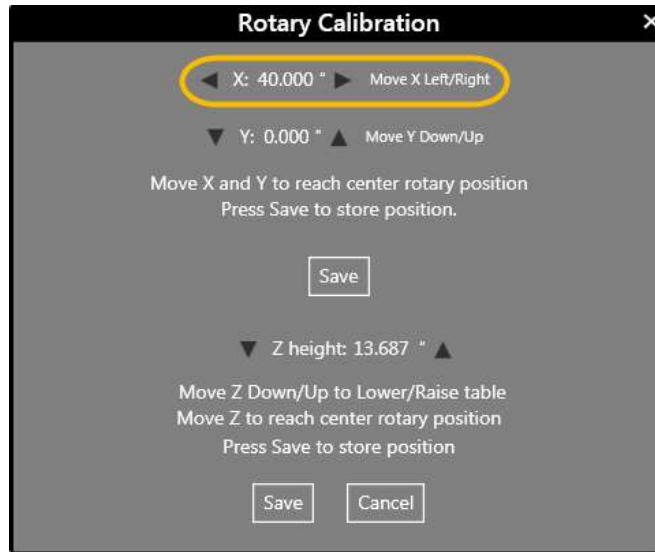
1. On the **System Configuration** window of the **LSM**, click or tap the **Rotary** button.



2. In the **Y Position** box, use the **Y-axis** arrows shown to move the Carriage so that the Y-axis position indicated is aligned with the rotational axis of the Rotary Fixture. In the installation section above it was recommended that you align the front edge of the Rotary Fixture with the 14" (355.6 mm) position on the Y rule. If you did this you can set the Y-axis position to 11.385" (289.179 mm).



3. Next, use the **X-axis** arrows to move the Carriage left or right and place the Red Laser Pointer over the flat part of the internal conical fixture normally located on the left side of the Rotary Fixture.



- Now use the **Z-axis** buttons in the **Rotary Calibration** dialog box or the **Z-axis** buttons on the **Control Panel** to move the table up and down into focus using the Focusing Tool on top of the flat surface of the internal conical fixture.

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**NOTE:** *If you do not have an internal conical fixture, you will need to carefully bring the table into focus on the edge of the external conical fixture. Care is required when doing this step as an out-of-focus Lens will result in poor engraving and marking quality.*

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- After focusing, tap both **SAVE** buttons on the **Rotary Calibration** dialog box. If asked to overwrite an existing position, accept the new value by tapping **YES**.
- Once complete, tap **CLOSE** and the Carriage re-homes.
- Calibration is now complete.

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**NOTE:** *Auto Z and Autofocus mode are disabled while the Rotary Fixture is in use.*

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## Determining Graphic Placement

The next step is to align the graphics to be printed with the material inserted in the Rotary Fixture. Use the X-axis ruler or, to be more precise, use the Red Laser Pointer and the X-Y coordinate display in the **LSM** to position the graphics in the X-axis.

- Using the **Navigation** buttons on the **LSM**, position the Carriage above the material.
- Move the Carriage left or right until the center of the Carriage or the Red Laser Pointer is located where you would like the top of the graphic to start on the material, as indicated by the rightmost line in the picture below. Make note of the **X** Coordinate on the ruler or in the **LSM**.
- Position the center of the Carriage so the Red Laser Pointer is located where you would like the graphic to end on the material, as indicated by the leftmost line in the picture below. Make note of the **X** Coordinate on the ruler or in the **LSM**.
- Rotate the material by hand until the location for the center of the graphic is facing directly up.

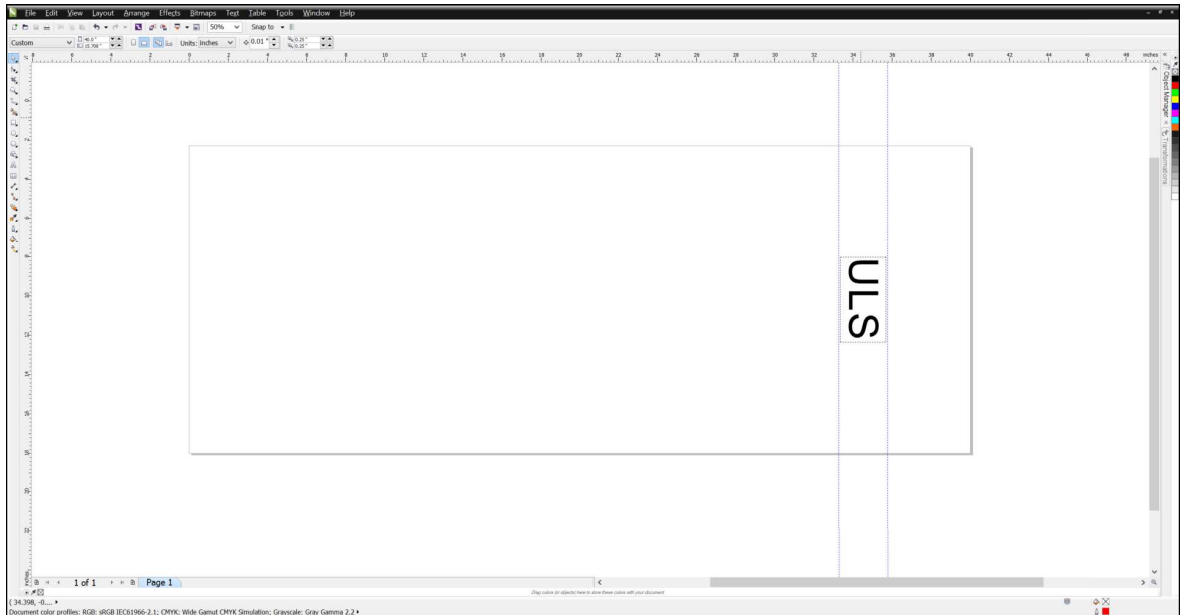
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**NOTE:** *Keep in mind that the Rotary Fixture does not have a home location in the rotational axis, so the topmost part of the material, the part facing straight up, is always the center of the graphic.*

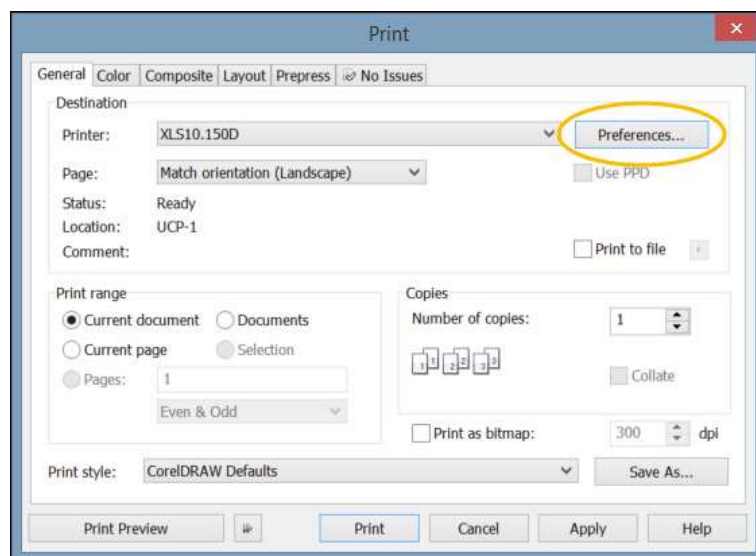
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## Creating a Rotary Design File

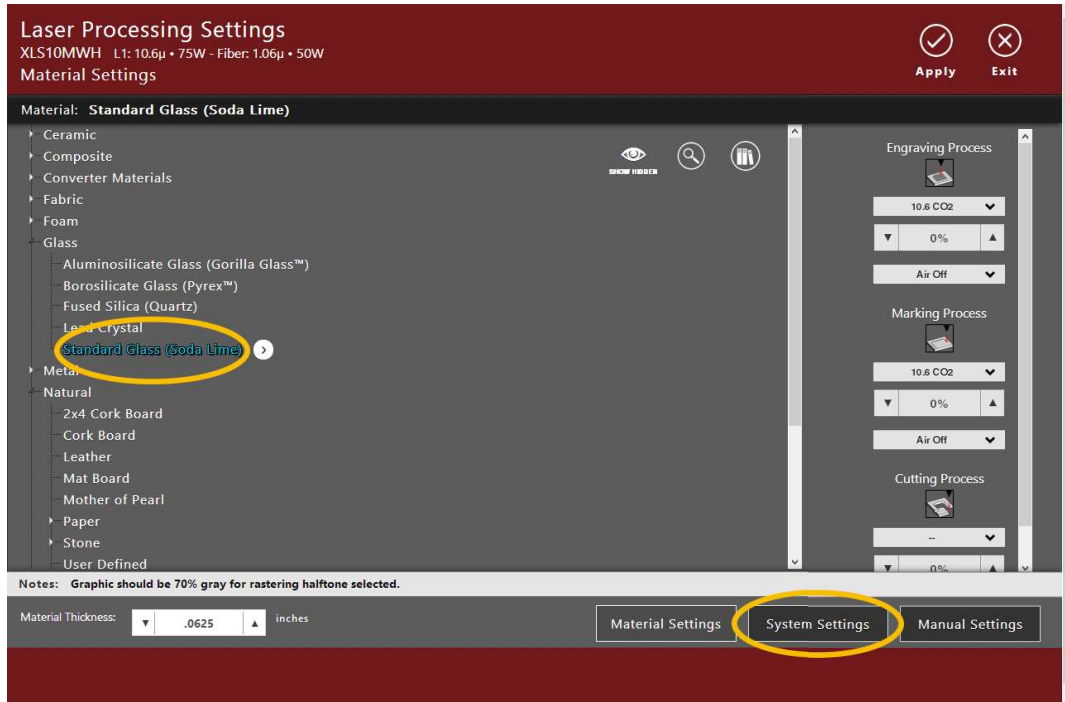
1. In your graphics software, open or create the artwork to be printed to the laser system (this example uses CoreDRAW).
2. Position the graphic on the page so that it is located horizontally within the upper and lower engraving limits determined earlier, and center the graphic vertically as shown below.



3. When the artwork is ready to print, open the **Print Setup** dialog box in your graphics software.
4. Select the XLS10 on the printer **drop-down** list, then open the **Printer Preferences** dialog box. This will launch the **Laser Processing Settings** module.



5. Select the *material* being processed from the Materials Database.



6. Switch to the **System Settings** page. Under **Fixture Type** in the **Fixture Selection** section, select **Rotary** from the **drop-down** list.
7. Enter the *Diameter* of the material being processed. If needed, adjust the *Rotation Factor*.

**NOTE:** The *Rotation Factor* is used to make small adjustments so that 360 degrees is equal to one full rotation of the Rotary.

8. Tap **Apply**  to save the changes, then tap **Exit**  to close the **Laser Processing Settings** window and return to the **Print Setup** dialog box in your graphics software.
9. Select **Print** to create the design file and place it into the laser processing system queue.

**NOTE:** Before running a Rotary job, rotate the material by hand until the center position of the graphic is facing directly up. Keep in mind that the Rotary Fixture does not have a home location in the rotational axis so the topmost portion of the material (the part facing straight up) is always the center of the graphic when printing.

