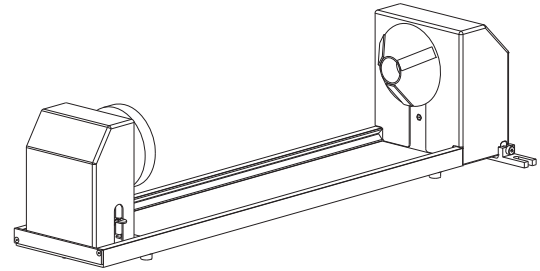


Rotary Fixture

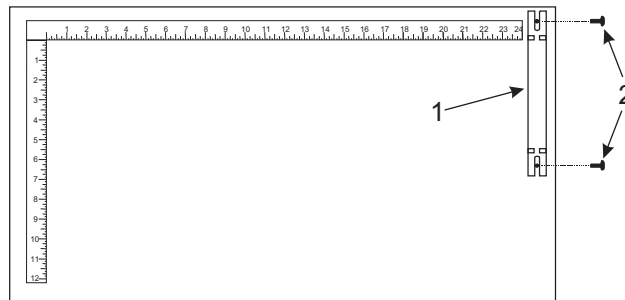
The Rotary Fixture has been designed to engrave cylindrical objects. Two attachments come with the fixture: a cone shaped disk attached to the motorized end of the fixture and an inverted cone shaped disk attached to the adjustable end of the fixture. These attachments are used to hold wine glasses, mugs, cups, baseball bats, etc.



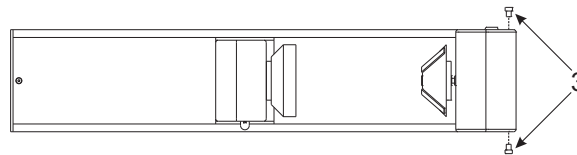
Note: If the rotary is installed and mounted on the table in any other manner than the one mentioned below, please contact the Customer Service Department at 480-609-0297 (USA), +43 1 402 22 50 (Austria), +81 (45) 224-2270 (Japan) or support@ulsinc.com for further instructions.

Installation

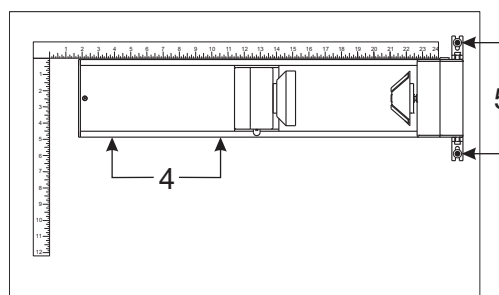
1. Turn the UCP and laser system ON.
2. Remove any materials that may be underneath the engraving table and lower the table **all the way** down to the bottom or at least far enough down so that the focus carriage will clear the top of the Rotary Fixture when it is installed on the table.
3. Now turn the laser system OFF.
4. Open the top door. Place the bracket on the table (1). Insert the thumbscrews and washers (2) into the screw holes, but do not tighten completely. Leave the thumbscrews loose enough so that the bracket can slide.



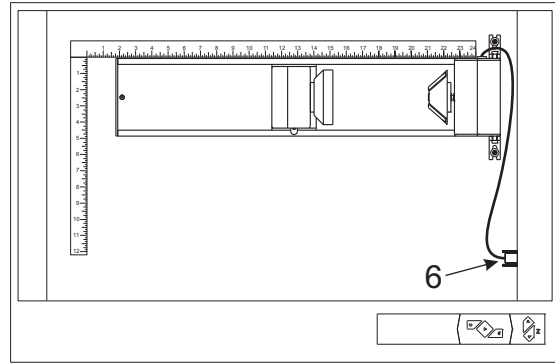
5. Place the Rotary Fixture on a flat surface. Using an Allen wrench, attach the two socket head shoulder screws (3) to the side of the base plate.



6. Place the Rotary Fixture on top of the bracket so that its pivot bolts set into the forks in the bracket. Gently push the fixture (4) flat up against the top ruler. Now tighten down the thumbscrews (5).

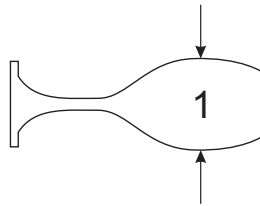


7. With the power to the system still OFF, connect the 7-pin Rotary Fixture control cable to the receptacle on the laser system (6).

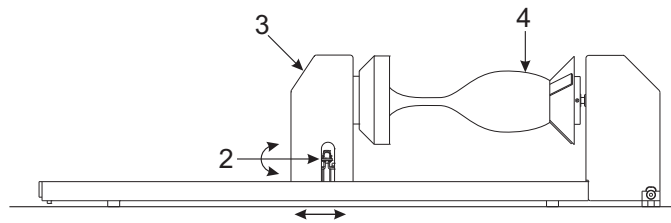


Loading Material

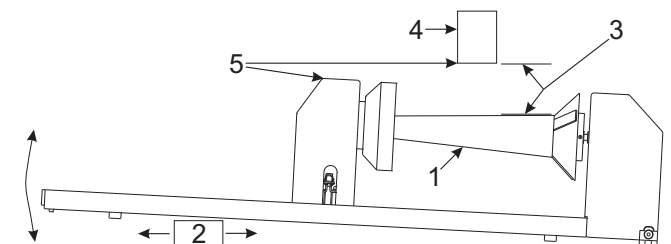
1. Before loading the glass into the fixture, measure the diameter (1) of the glass in the area where the engraving is to be located by using a caliper or similar measuring device. Make a note of the measurement.



2. Place the open end of the glass (4) on the right side of the Rotary Fixture. Lift the lever (2) on the adjustable end of the fixture and slide it up against the base of the glass so the glass rests firmly centered inside of the inverted cone. Push the adjustable end of the fixture (3) to the right firmly against the bottom of the glass. Do not to apply too much pressure, especially with glass. You only need enough pressure to prevent the object from slipping on the cone while it rotates. Lower the lever on the end of the fixture to lock it in place.



Note: If engraving a tapered object (1), the Rotary Fixture can be rotated to maintain proper focus. To do this, lift up the left end of the fixture and place a spacer underneath the fixture (2) to prop it up. Slide the spacer left and right until the surface of the object is parallel (3) to the Focus Carriage. Be careful not to raise the Rotary Fixture too high (5), otherwise parts of it might interfere with the Focus Carriage (4). If you operate the fixture in this manner, you might need to taper your graphic in your software so that it matches the taper angle of your object. Otherwise your graphic might appear to be tapered when it is engraved.



3. Power ON the laser system. The rotary will run through a self test and will slightly rotate. This movement is normal. If you are using the rotary for the first time or replaced the laser system's CPU, rotary calibration is needed, so proceed to the next step. If rotary calibration is not needed proceed to the next page and see "Determining Graphic Placement."

Rotary Calibration

1. Select the System Tab and click on the CALIBRATE button in the Rotary box.
2. In the Y Position box, use the Y-Axis buttons to move the focus carriage back and forth. Place the focus carriage exactly at 2.625" (66.675 mm).



3. Next, use the X-Axis buttons to move the focus carriage left and right and place the red dot pointer over the flat part of the concave metal fixture normally located on the left hand side of the rotary.



4. Now use the Z-Axis buttons or the Z-Axis buttons on your keypad (recommended) to move the table up and down and continue to the next step.



5. Use the Focus Tool to focus on top of the flat surface of the concave metal fixture with the focus tool. **Do not** focus on top of the black metal cover that is located on the left hand side of the rotary.

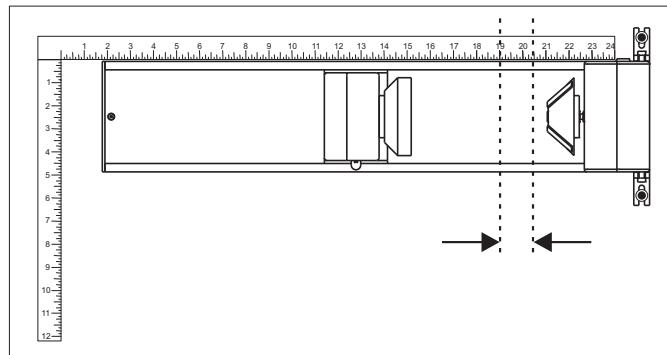


6. After focusing is complete, click both SAVE buttons on the Rotary Calibration window. If asked to overwrite an existing position, accept the new value by clicking on YES.
7. Once complete, click the CLOSE button and the focus carriage will re-home once you exit the window.
8. Calibration is now complete.

Determining Graphic Placement

Now you need to determine where the engraving should appear on the glass. You can use the top ruler as a visual aid in referencing the engraving area of the glass or you can use the Red Diode Laser and the X-Y coordinate system to precisely place the graphic in your graphics program. To be more precise, use the Red Diode Laser Pointer.

1. Open the top door.
2. Using the Navigation buttons on the UPC, position the Focus Carriage above the glass.
3. Stop movement where you would like the top of the graphic (the right dotted line in the engraving area) to begin. Look at the X and Y positions on the UCP and read the "X" position. Make a note of this number.
4. Now, position the red dot at the lowest point (the left dotted line in the engraving area) on the glass where you would like the engraving to end. Make a note of this "X" coordinate.



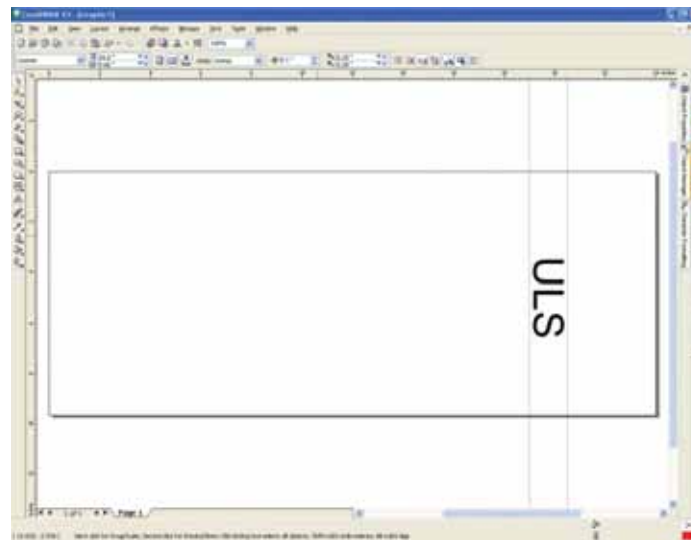
5. Close all doors of the laser system, go to your computer and open your graphics software and proceed to the next page.

Printer Driver Settings

1. With your graphics software open, proceed immediately to "Printer Setup" and open the printer driver.
2. In the printer driver, click on the Engraving Field sub-tab within the Manual Control Tab.
3. Click on the "Max Size" button.
4. Then click on the "Enable" selection box in the Rotary section.
5. Type in the diameter of the glass that was measured.
6. Notice that while typing in the diameter, the size of the height dimension changes automatically. Make a note of this new page size.



7. Once you have the new height, exit the printer driver.
8. Go back to the graphics software and change the page height to the exact number the printer driver established.
9. This new vertical page size is now the actual circumference of the object that is going to be engraved.
10. Position the graphic on screen so that it will fit vertically within the new vertical page height and horizontally within the upper and lower engraving limits that we earlier determined with the Red Diode Laser Pointer.



11. Once you are ready to engrave, proceed to the printer driver.
12. Enable the Rotary under the Engraving Field sub-tab.
13. Type in the diameter of the glass that was measured.
14. Then set the appropriate power and speed settings in the printer driver before engraving the object.
15. You are now ready to print to the laser system. Make sure that your system is ready to engrave and then begin the process.