Foam Cutter - Using the Turntable
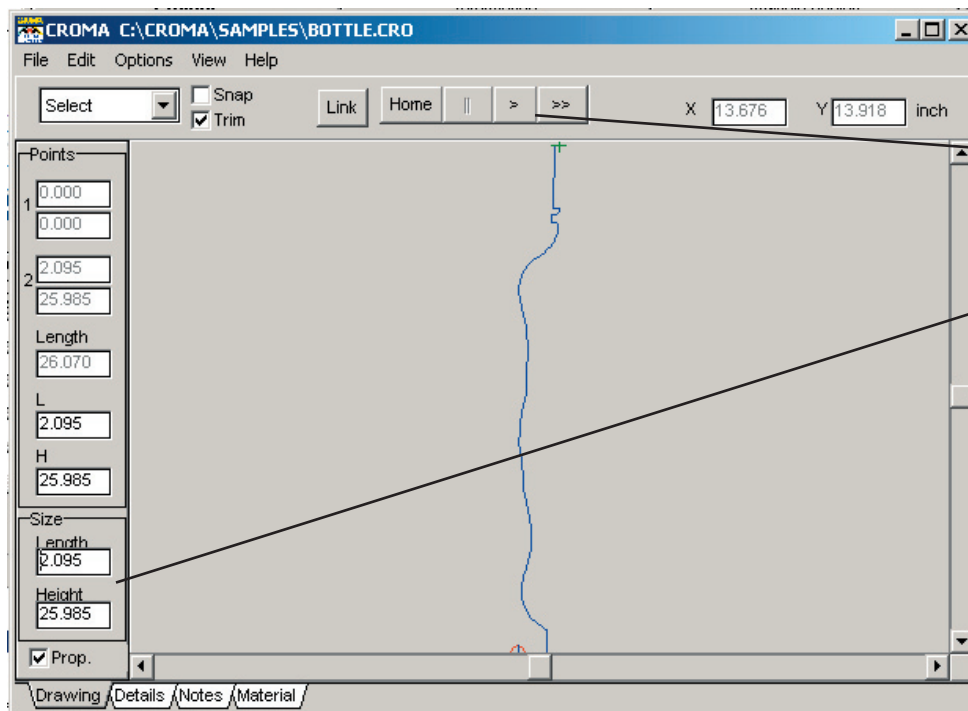
Digital Media Fabrication Lab Tutorial

The CROMA Hot Wire Foam Cutter is equiped with a turntable that can be programmed to rotate foam while the wire is cutting. This is useful for creating symmetrical objects with multiple facets.

For information on importing and setting up files to be cut on the Foam Cutter, view the Foam Cutter Tutorial, listed at: http://www.architecture.yale.edu/dmonline/equipment/foamcutter.pdf.

To correctly utilize the turntable feature to cut a symmetrical model, a single 2D profile should be created.

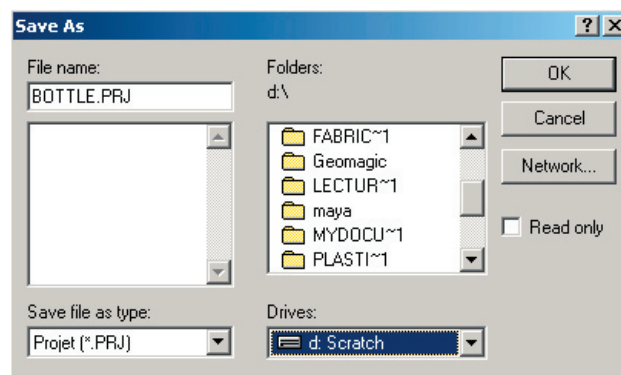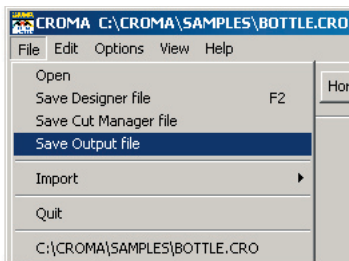**Step 1**: Import your 2D single profile .dxf file in Croma Designer.

Simulate cutting.
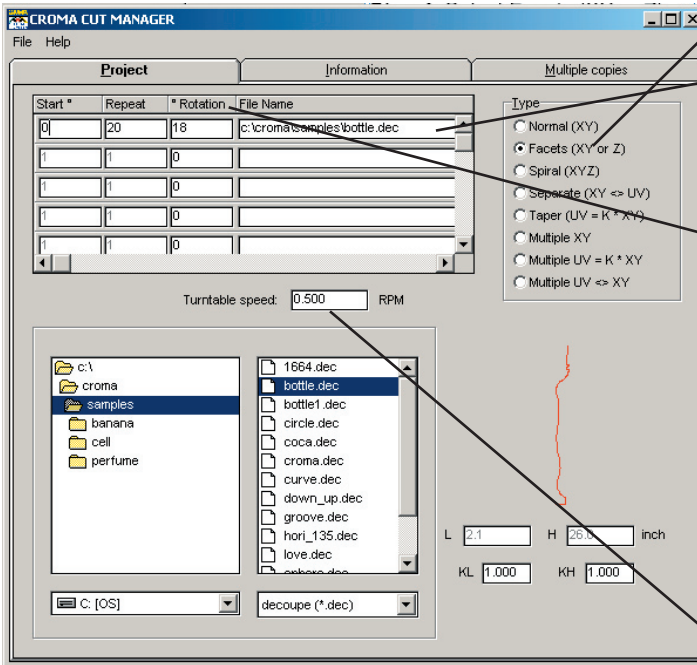
Step 2: Adjust the scale of the profile.

When using a single profile, the length displayed is half of your final project.

This cut will result in a length of approximately 4.2 inches. (2.095 x 2)

Step 3: Save the output file as a .prj file.

Step 4: Open Croma Manager.

Step 5: Select Facets (XY or Z).

Step 6: Input your file name.
Select by browsing to the directory below or enter the file path manually.

Step 7: Set the rotation parameters.

All Facets (XY or Z) projects will start at 0°.

In the Repeat field enter the number of times the profile is to be repeated.

In the Rotation field, enter the degree the turntable should rotate each time.

Note: Repeat x Rotation should equal 360° to complete a full turn.
(20 x 18° = 360°)

Step 8: Set the turntable speed

Step 9: Save your file as a .prj file.

Step 10: Open your file in Croma Output.

Select the Parameters tab to verify your rotation settings are correct.
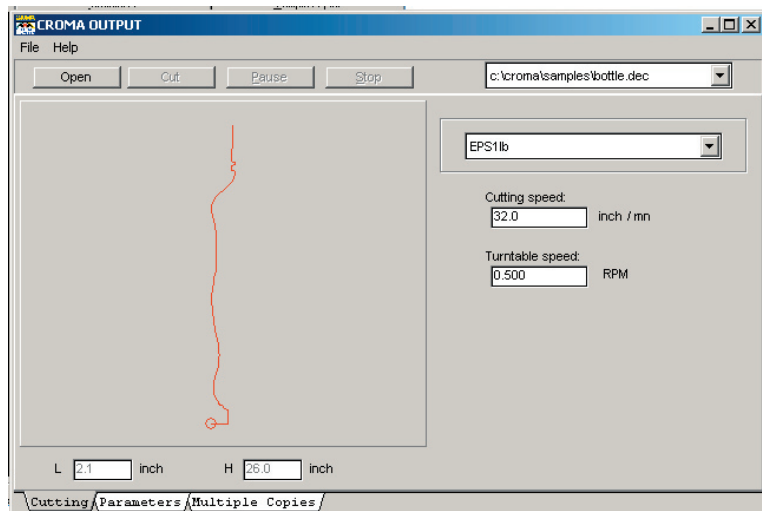
The cutting time will be given.

Step 11: Select the Cutting tab.

Verify the Length and Height are correct, and adjust the foam type and cutting speed accordingly.

Step 12: Position your foam on the foam cutter. To successfully cut at the correct length, the foam must be accurately centered on the turntable.

Step 13: Move the wire over the center of the foam *(do not cut into the foam yet)*.

Once the wire is centered, move the wire to the left the exact size of the profile *(2.1 inches for the example given)*.

Move the wire down into the foam far enough in to cover the height of the profile *(26 inches for the example given)* and allow for extra space.

Step 14: Your wire and foam should now be accurately positioned to start cutting.

Select Cut in Croma Output to begin cutting.