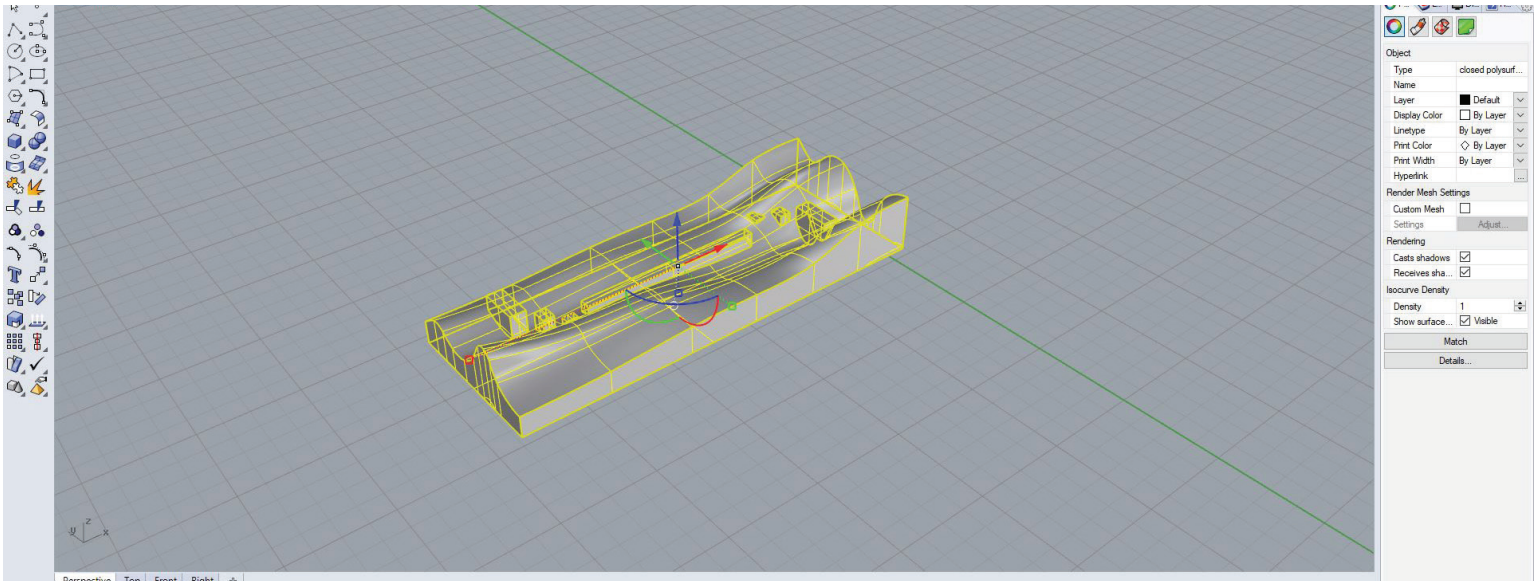
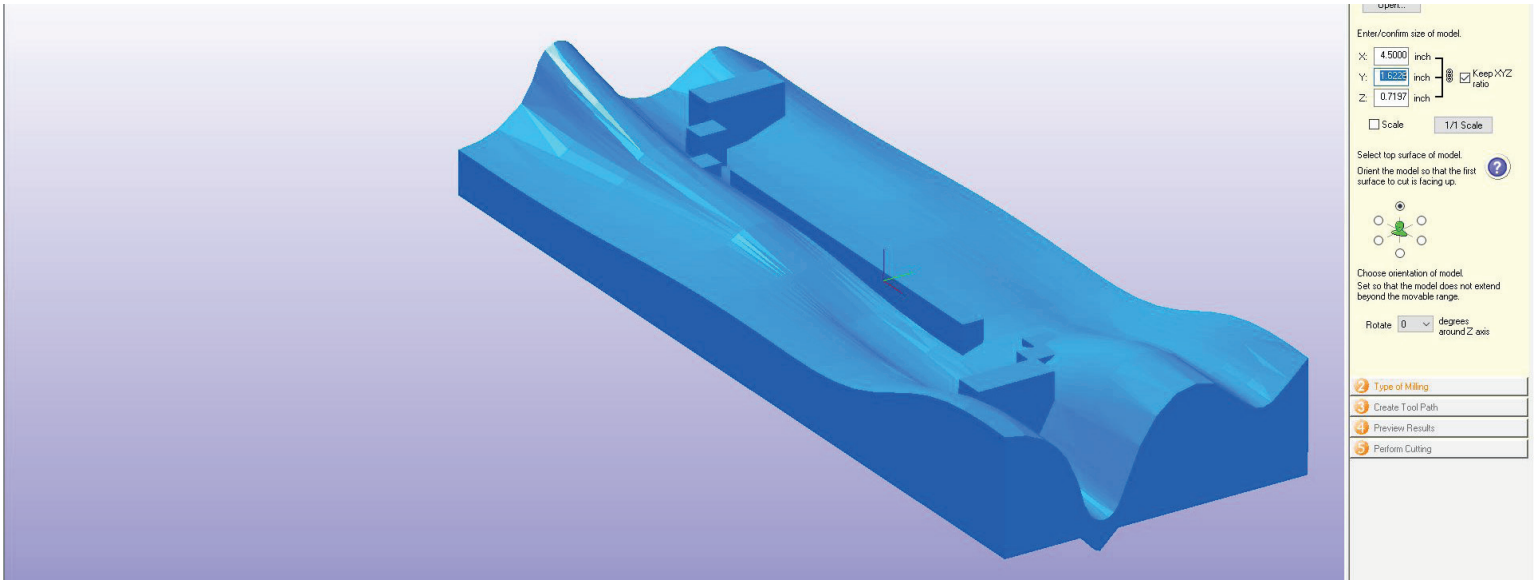
milling your model with MDX-50
in dFab lab





1. In Rhino, make sure your model is a closed polysurface or a closed mesh.

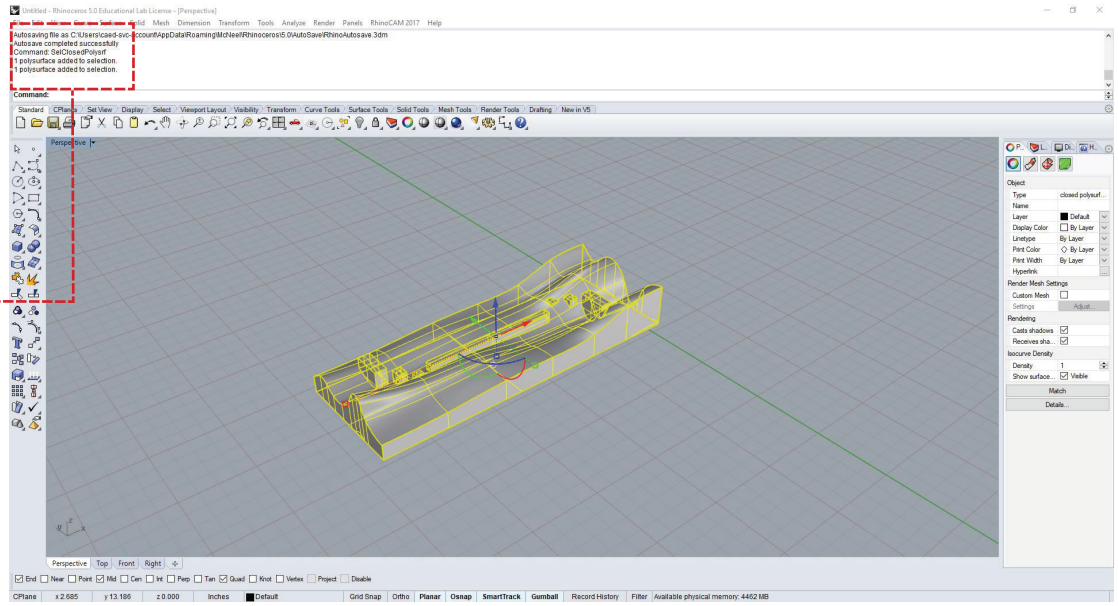
Rhino commands for checking if your model is a closed polysurface or a closed mesh:

SelClosedPolysrf

SelClosedMesh

If your model is closed, Rhino will select it and highlight it.

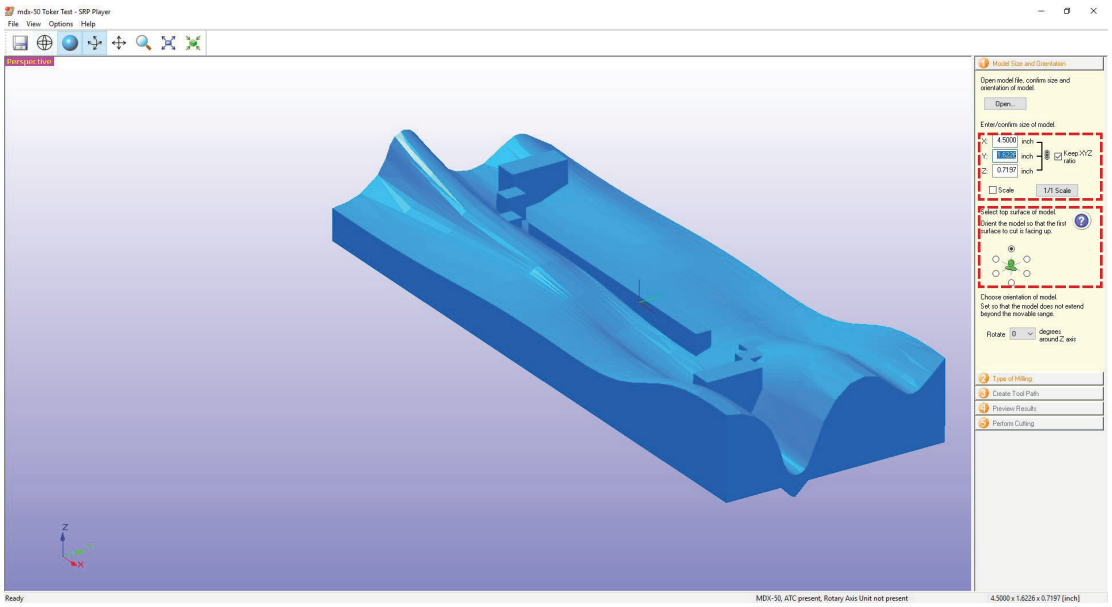
2. Export your model from Rhino in STL format.



3. Start SRP Player and open your STL file.

4. Check the orientation of your model, and enter the dimensions of your model accurately.

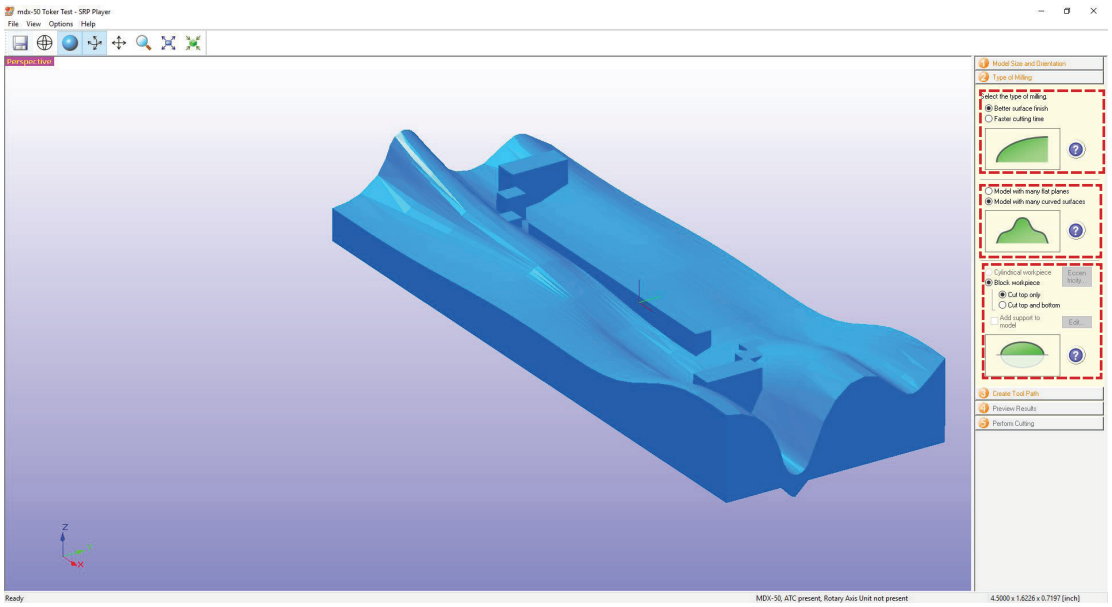
5. Select the top surface of your model.

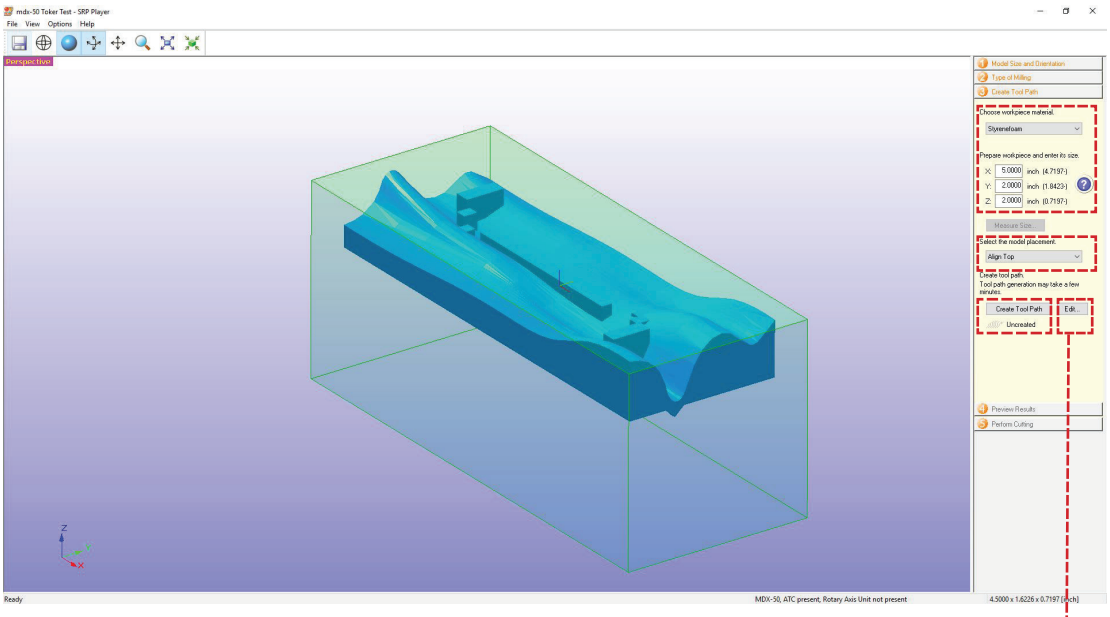


6. Select the type pf milling you prefer. Faster cutting time = rougher surface

7. Specify if your model has mostly flat planes or curved surfaces

8. Select “block workpiece” and “cut top only” for one-sided models. If you would like to mill a double sided object, ask for assistance.



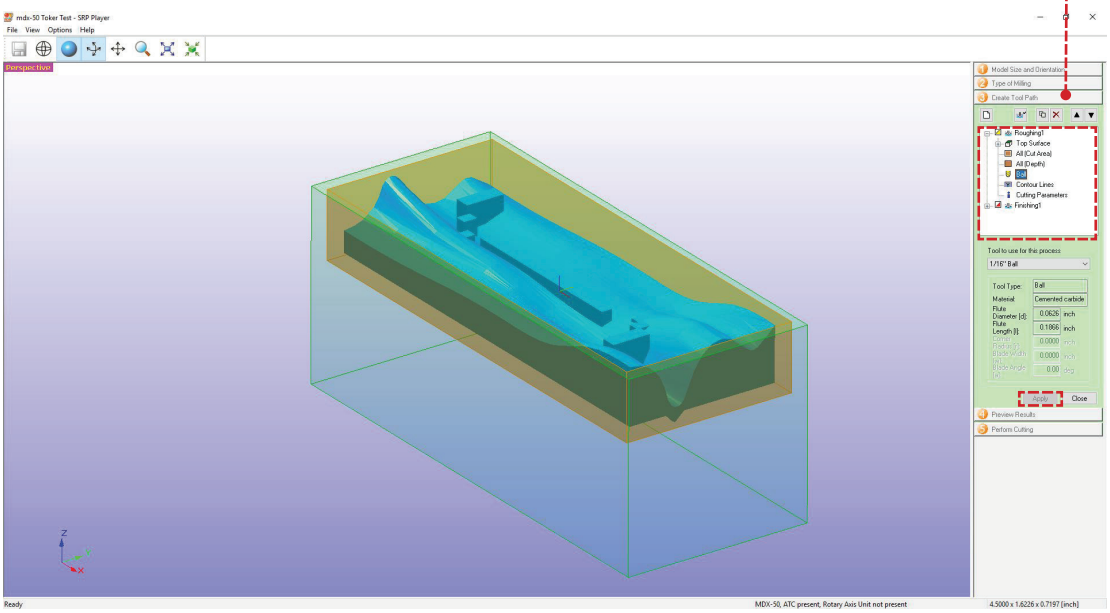


9. Choose your material, and enter its width, length and height accurately.

10. Click Align Top: Make sure your model is aligned to the top of the surface.

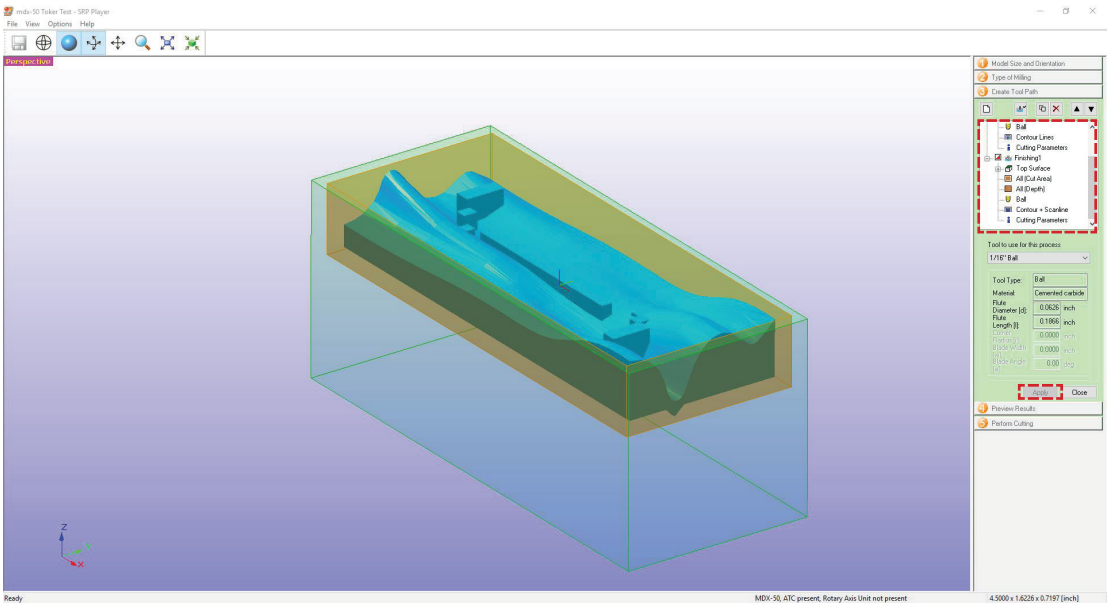
11. Click Create toolpath: for milling toolpath.

12. If you would like to edit the default tool allocations (radii of bits) you need to click edit, which will initiate the dialogue in the figure below.



13. You can edit tool allocations for roughing on this dialogue after clicking edit.

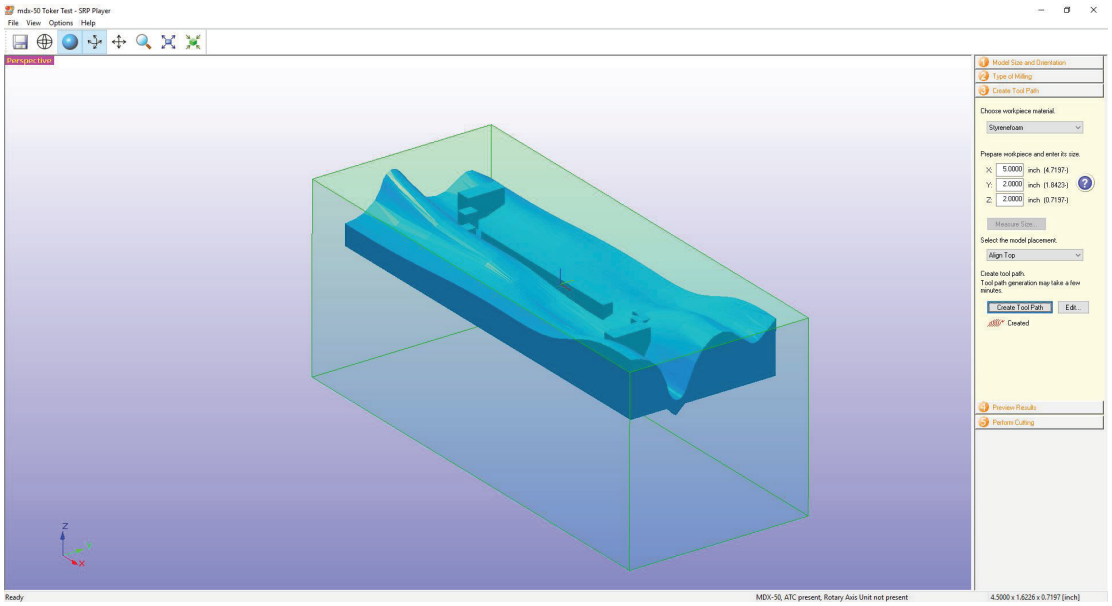
After you finish your edits, be sure to click apply.



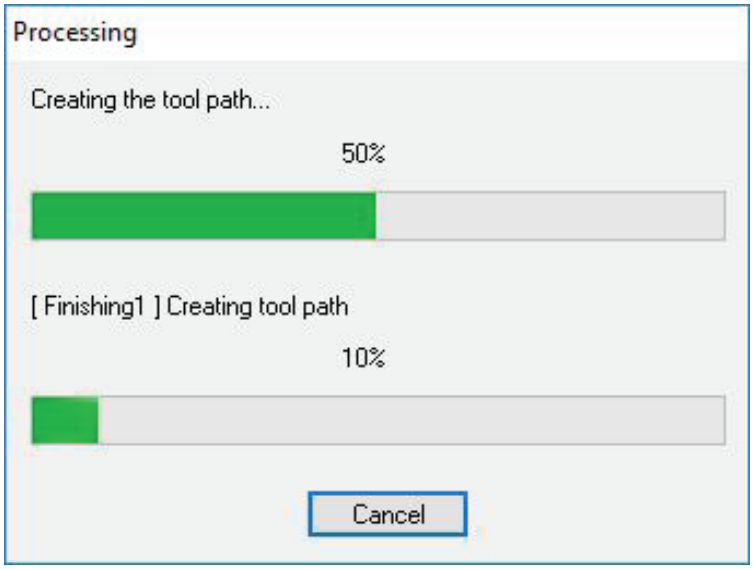
14. You can edit tool allocations for finishing on this dialogue after clicking edit.

After you finish your edits, be sure to click apply.

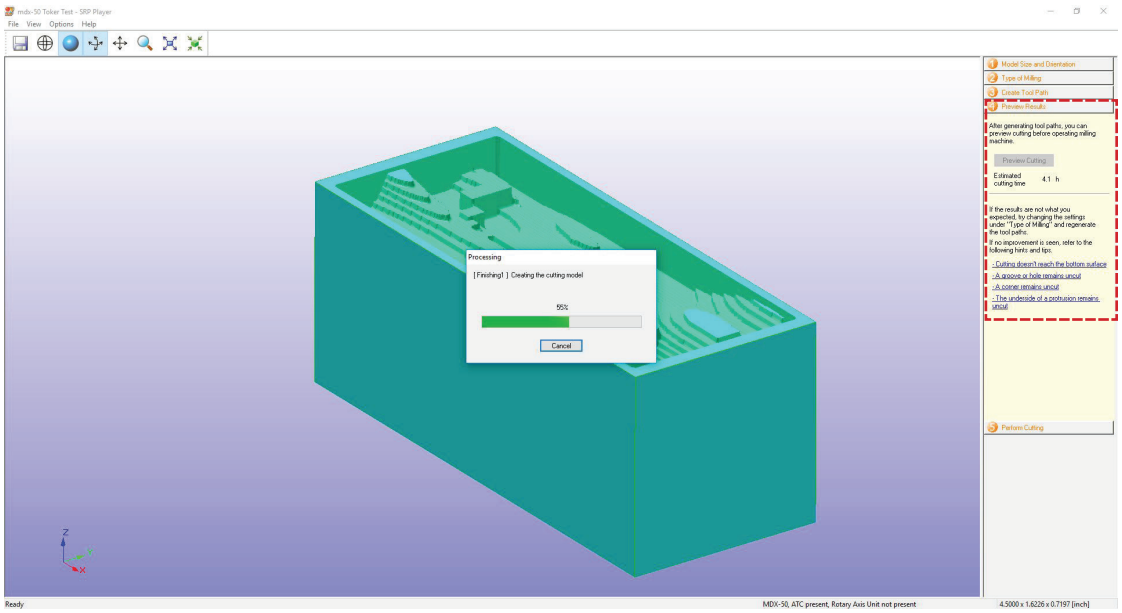
16. Once your edits to tool allocations are complete, click “create tool path”.

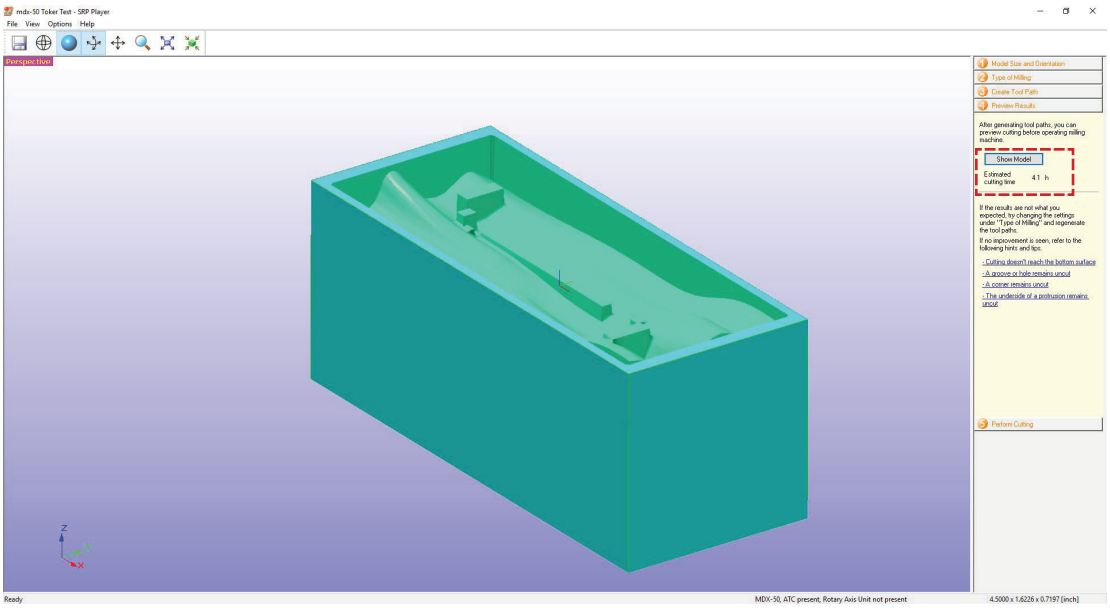


17. You will see a progress dialogue like this.

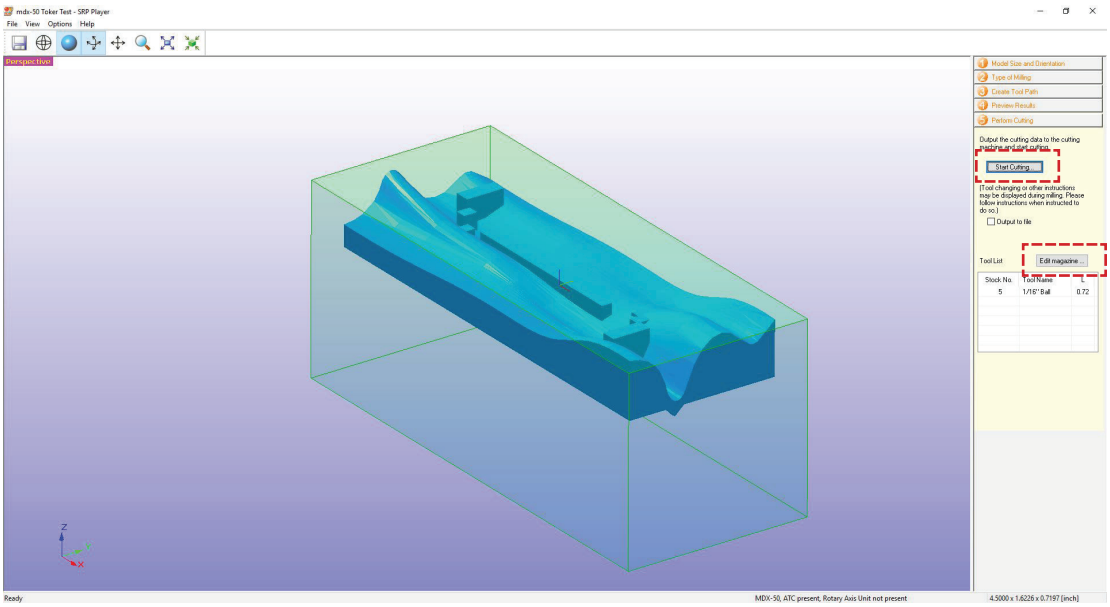


18. Once the tool path is created, click “preview results” and select “preview cutting”.

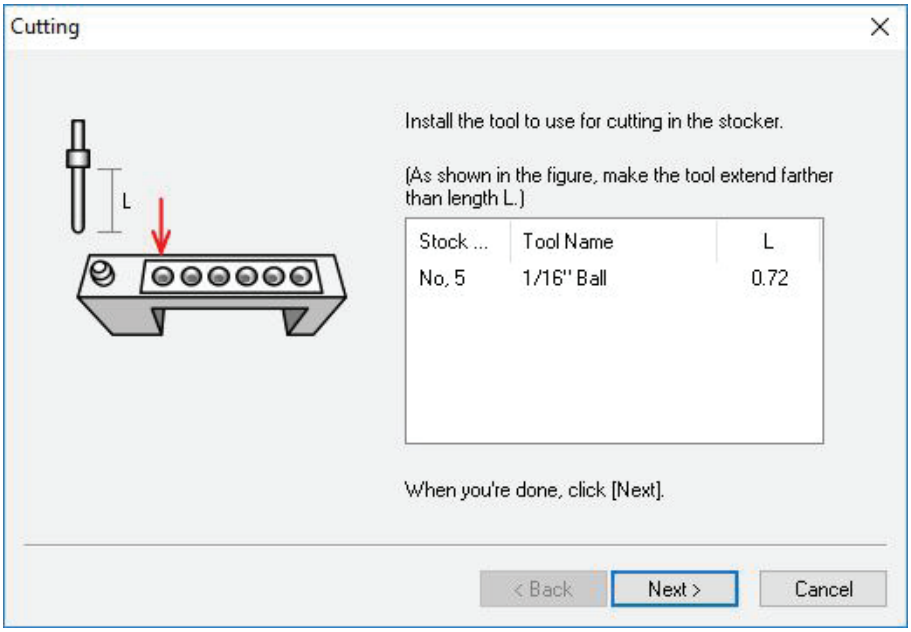




19. You will see a preview of the milling result (and an estimate of cutting time), like the image on the left. Click “show model”

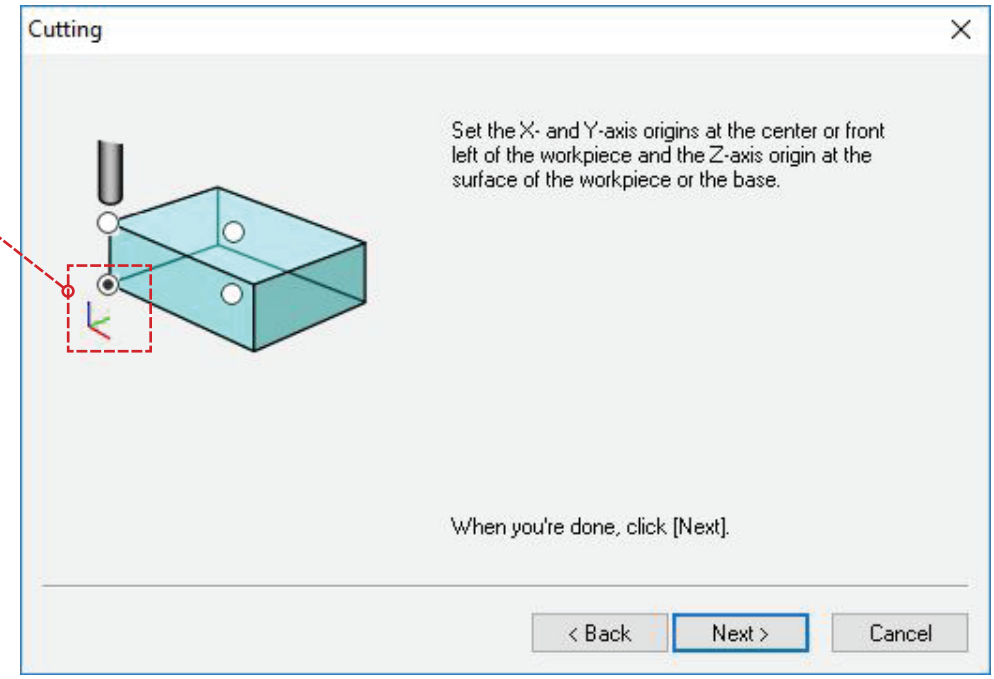


20. Now you are ready to start cutting. Before clicking “Start Cutting”, if you would like to physically change the tools in the magazine, click “edit magazine.



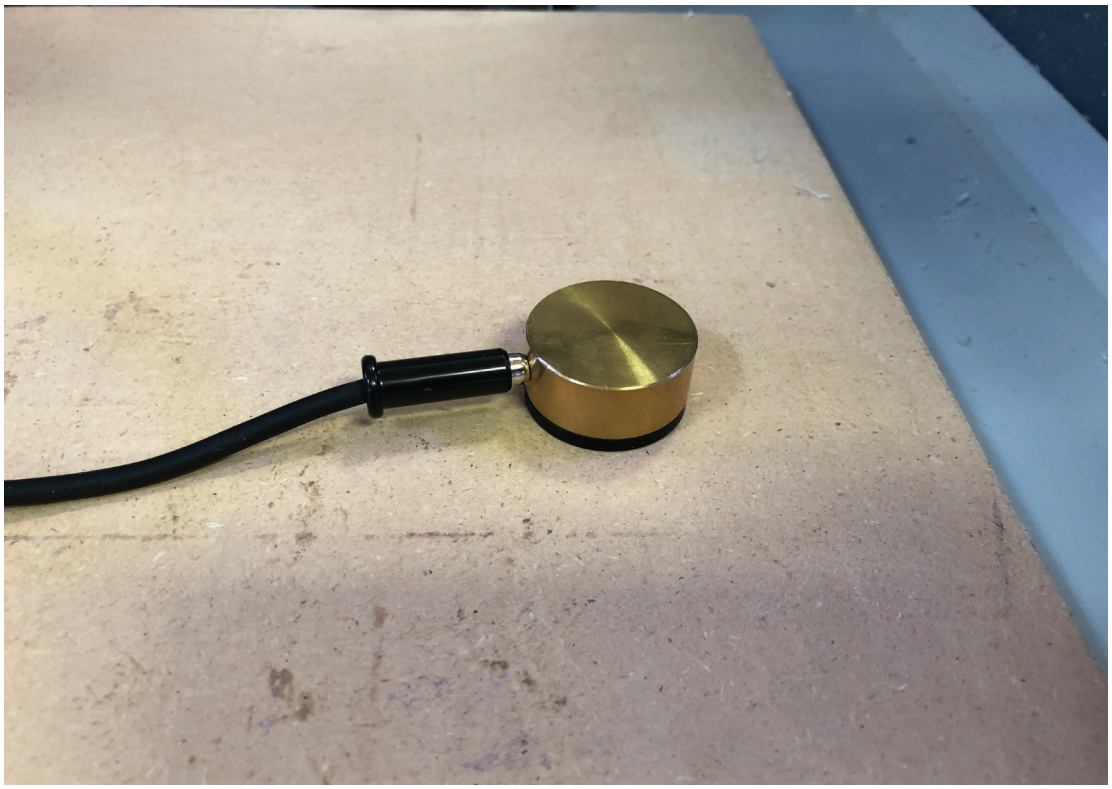
21. After installing the tool click “next”.

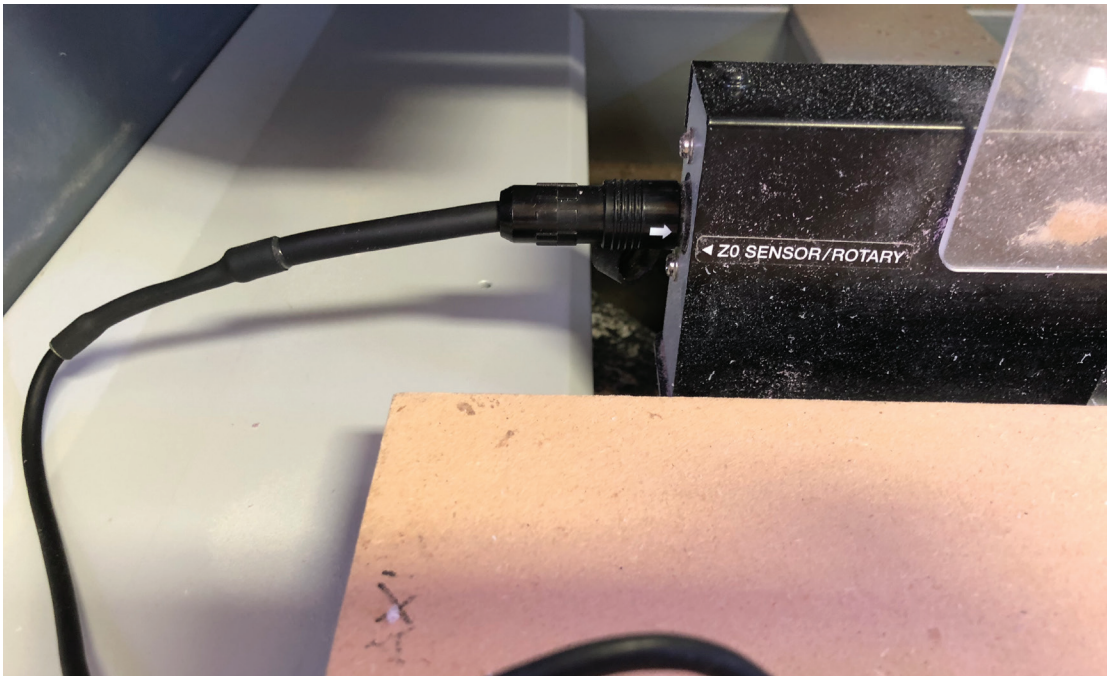
22. Specify the XY origins on the front left, and the Z origin on the vase of the work piece by selecting this button:



23. Before starting the cut, you need to set the XY origin on the MDX-50 router.

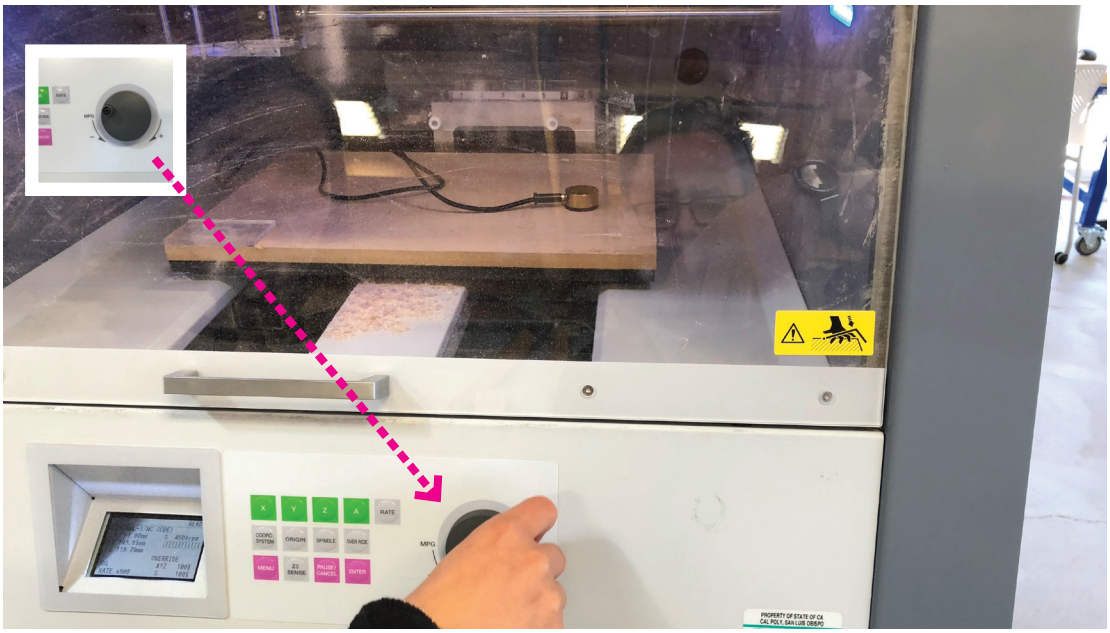
Request the Z-sensor from the front desk of dFab lab. Place it on the router base.





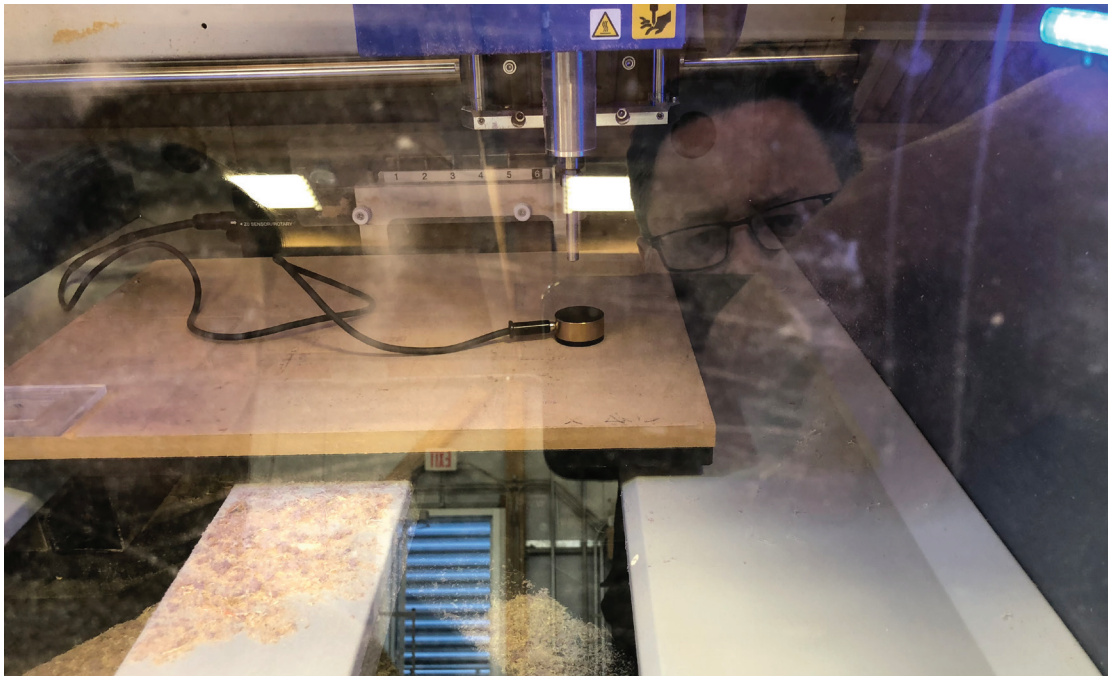
24. Connect the Z-sensor to MDX-50 as shown on the photo.

25. Select tool 6 from the menu.

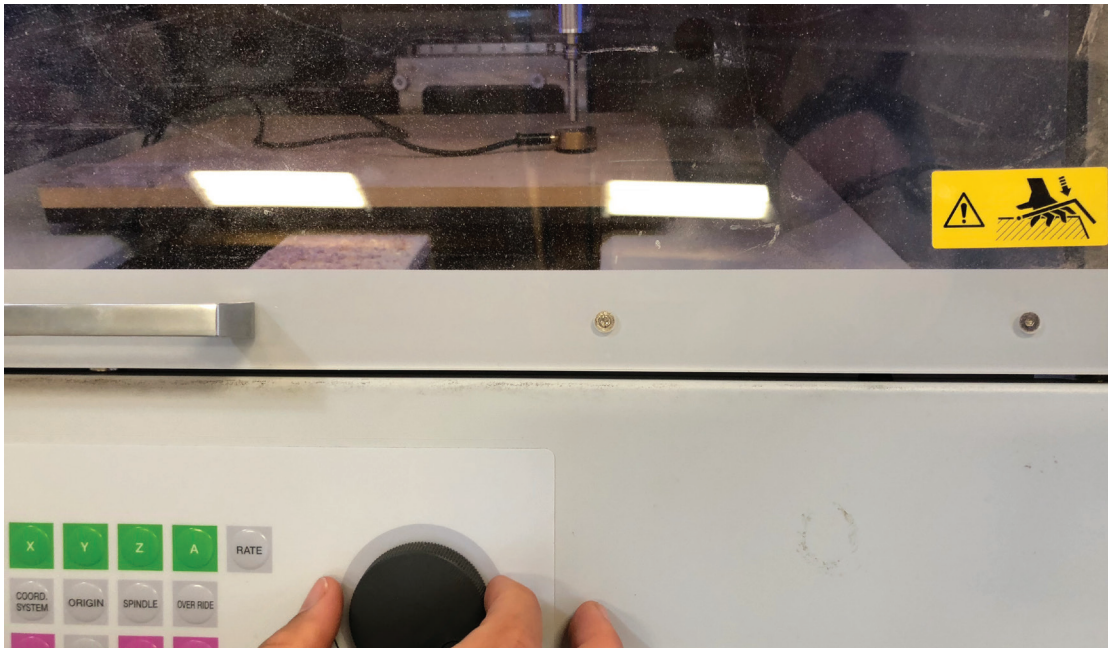


26. Using the coordinate knowb bring the tool bit over the Z-sensor.

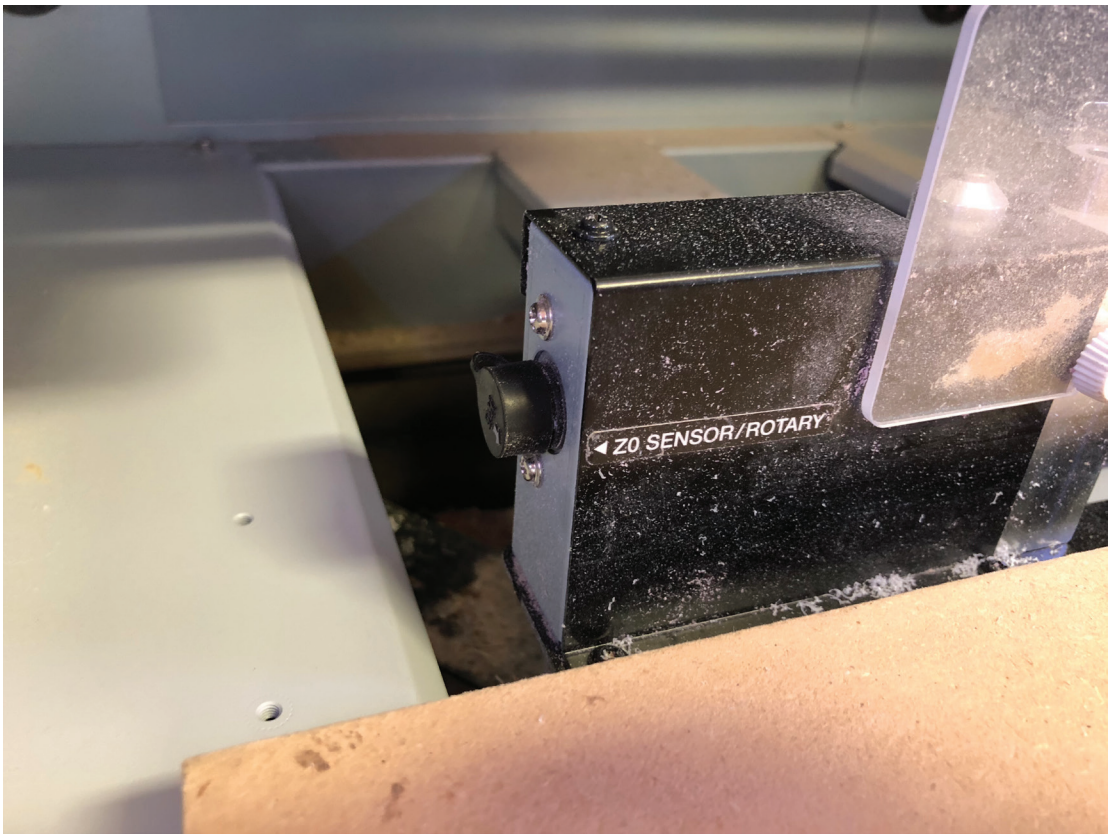
27. Slowly lower the tool bit towards the Z-sensor on the Z-axis.



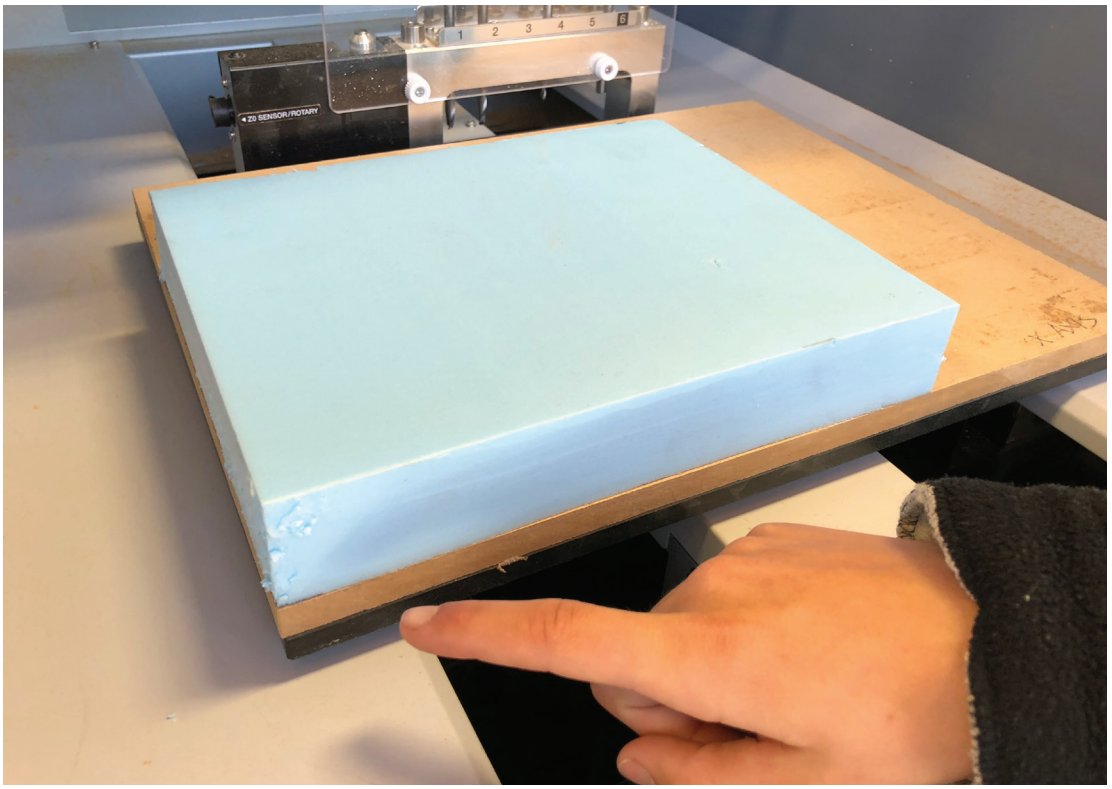
28. Once the tool bit touches the Z-sensor,



29. click the “Z0 SENSE” button and set the z-axis.



30. Don't forget to disconnect the Z-sensor, close the connection cap, and return the Z-sensor to the front desk before you run your file.



Your material musy be placed on the XY-plane origin as shown in the photohgraph. Make sure it is secured on the base using double-sided tape.

Now you can run your file.