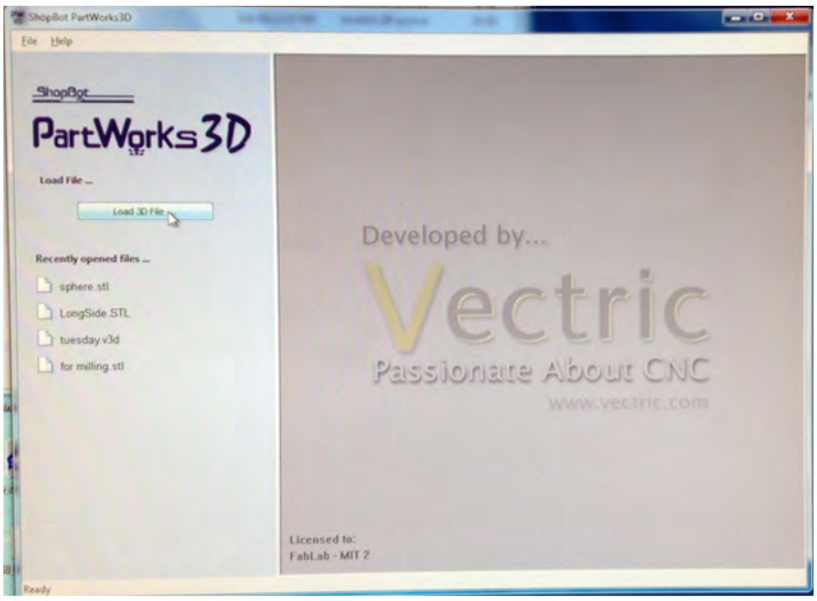
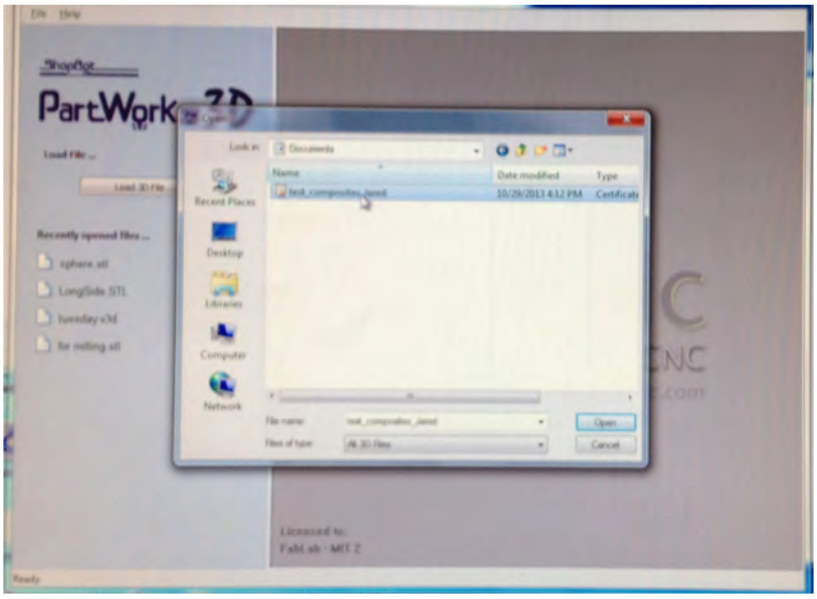
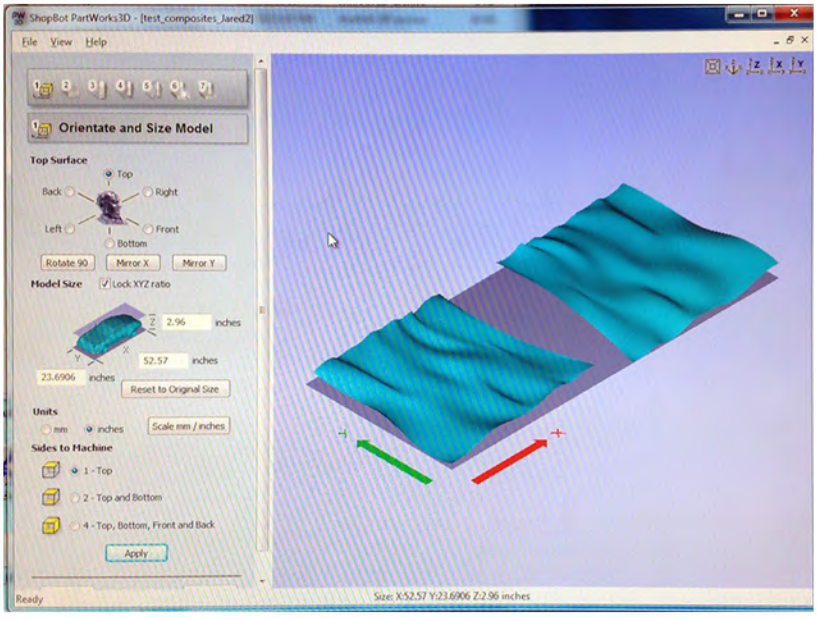
Open PartWorks 3D



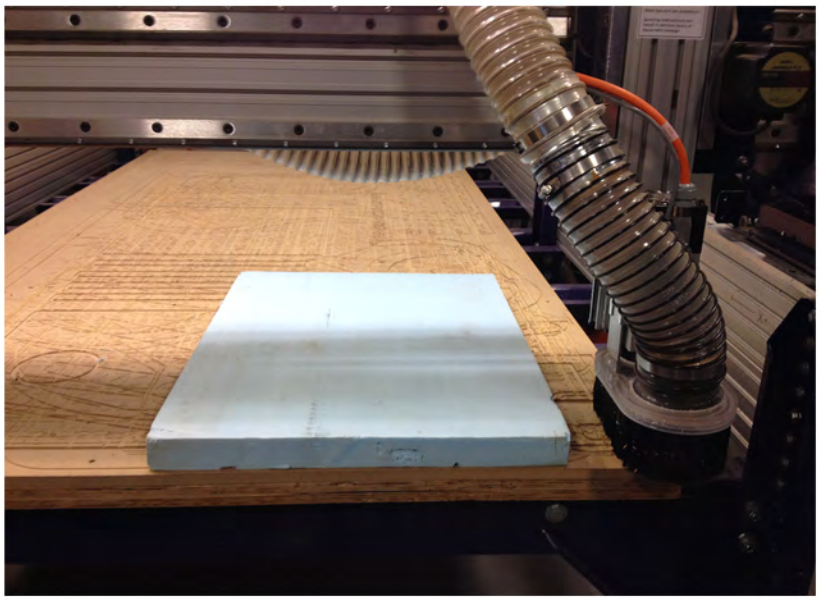
Select file (.stl)



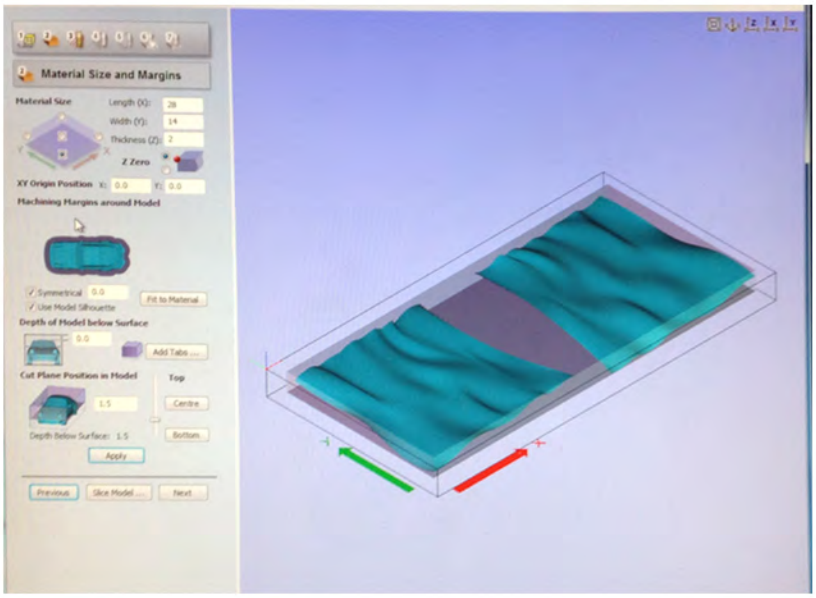
Check dimensions of your model



Position your material



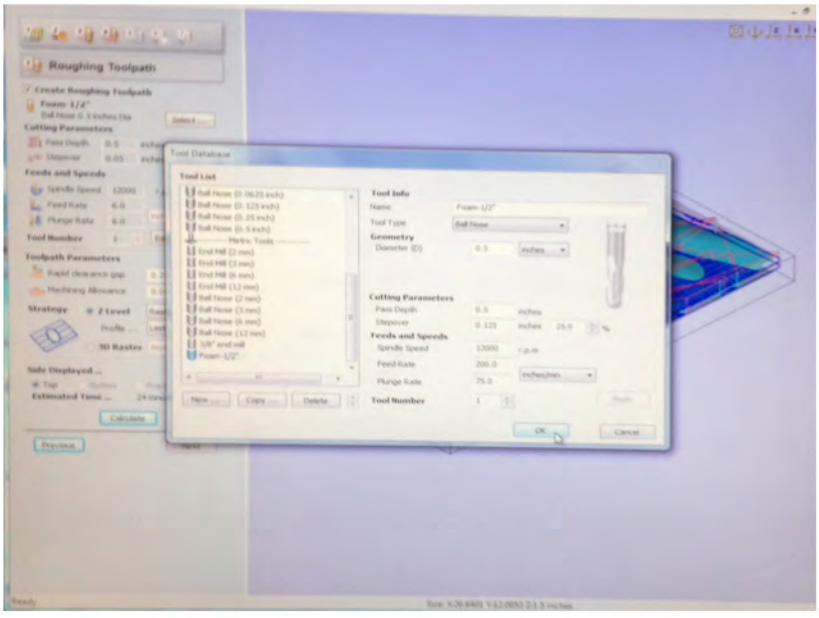
Define the origin of your model according to your material on the shopbot



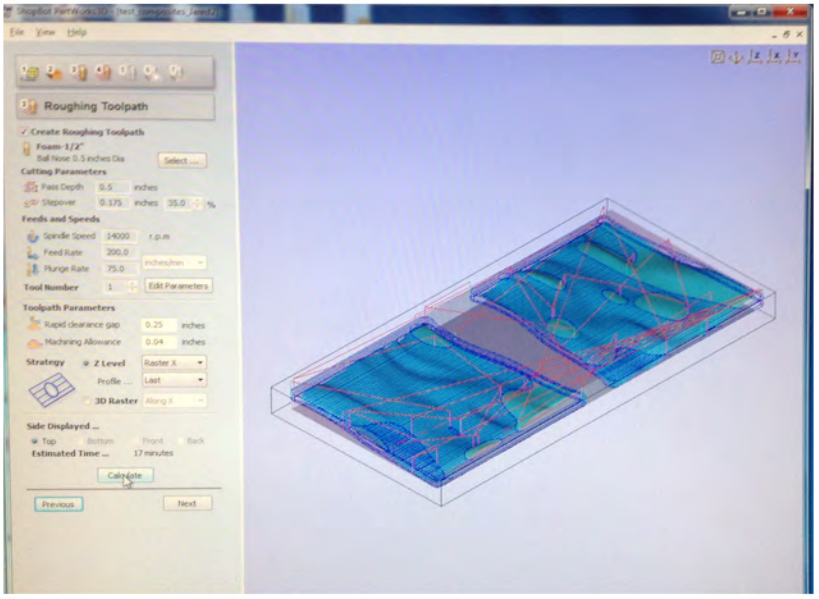
Define the dimensions of your material

Roughing Toolpath

Select tool
Suggested foam only:
1/2 " Ball end
Diameter: .5
Pass depth: .5
Steppover 25%
Spindle speed 12000
Feed rate: 200
Plunge rate: 75



Roughing Toolpath

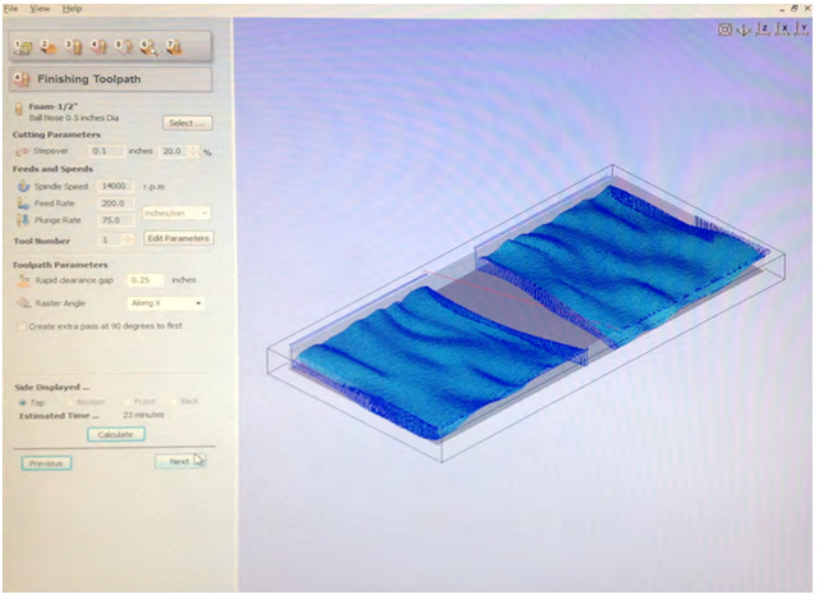


Calculate
Note, it usually takes
twice as long to do the job

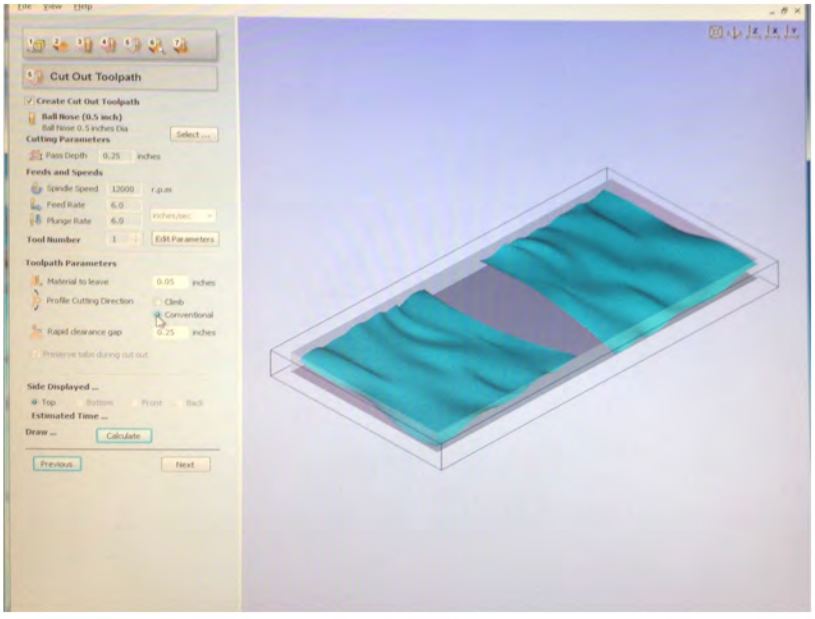
Finishing Toolpath

We used same tool and
only changed:

stepover to 15%



Calculate



Cut out toolpath

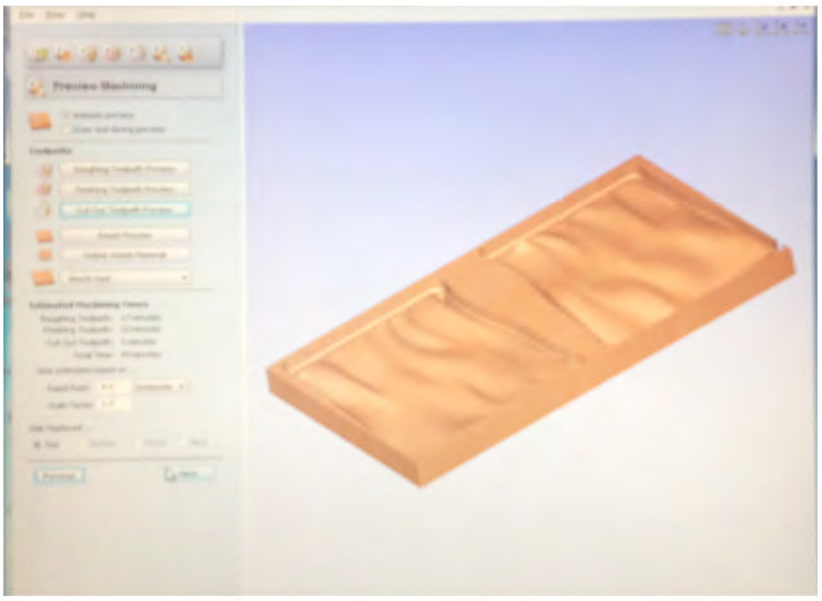
we used same tool

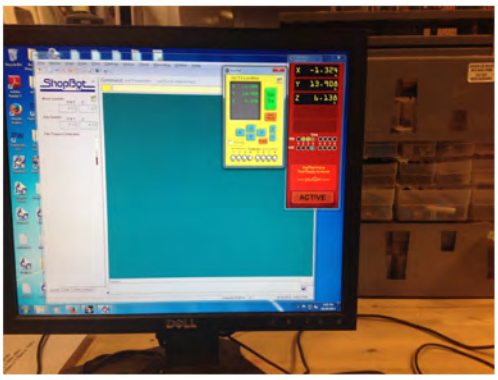
Material to leave: 0.05
Select Conventional

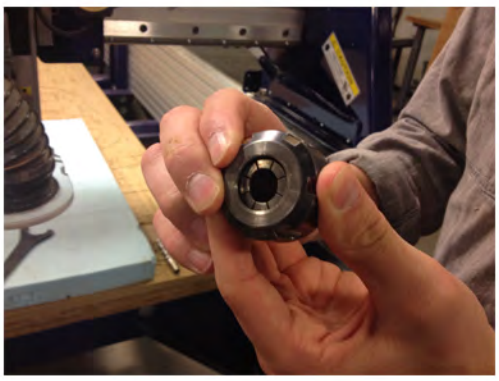
Preview

Next, save

If same tool is selected you can save it as a single file, otherwise you have to save it as different files for each toolpath





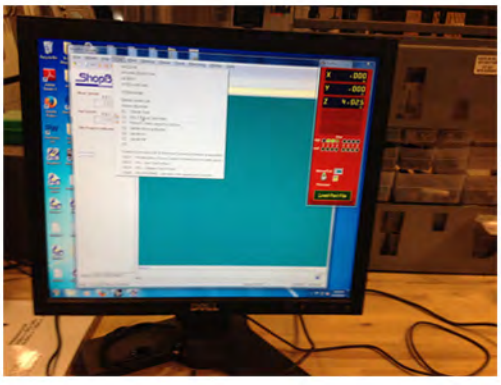
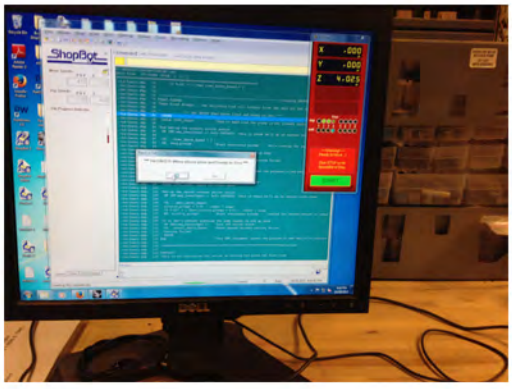


Open Shopbot, use yellow box to move the machine close to you, change tool, pick the right tool, secure it!





Secure your material, place screws on the perimeters

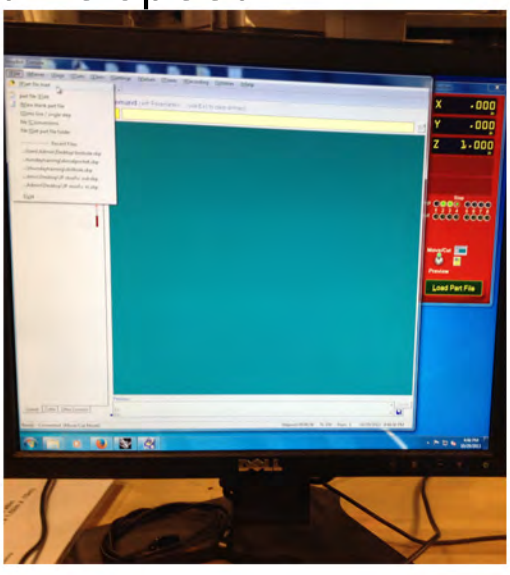




Zero X & Y using the yellow box
Under cuts, find Zero Z using plate... follow instructions and place steel plate under the tool

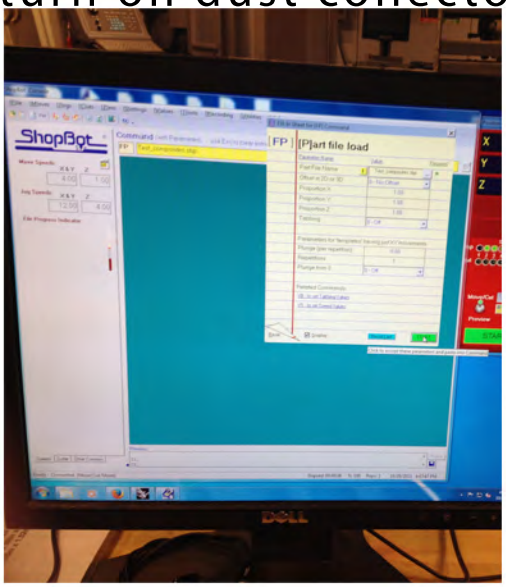
turn on key

use same speed

turn on dust collector

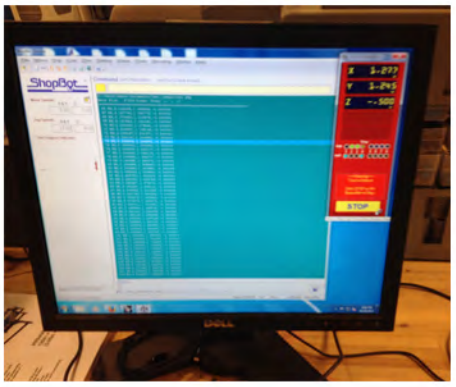


load file

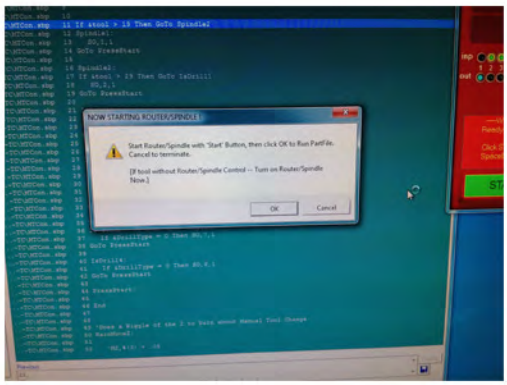


press start

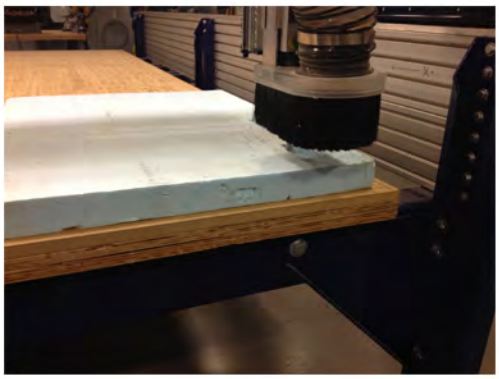
turn on spindle

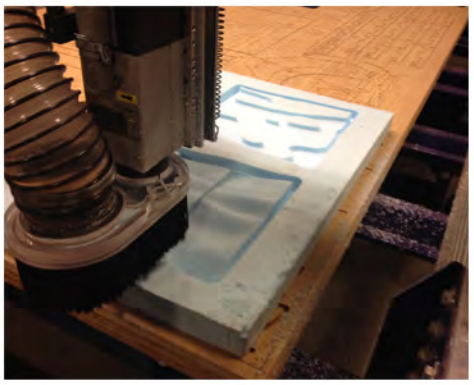


start!

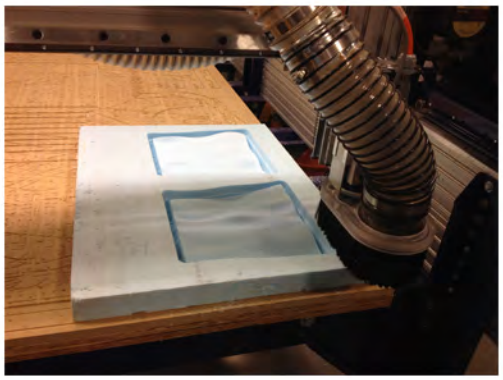


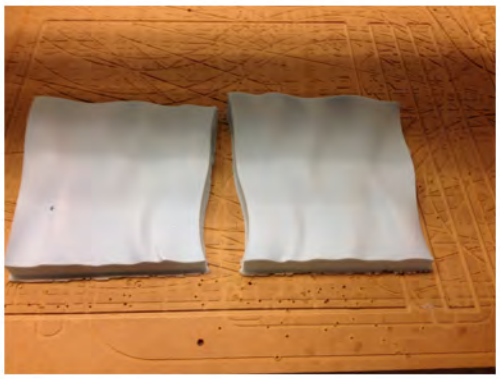
press Ok ONLY if spindle is on





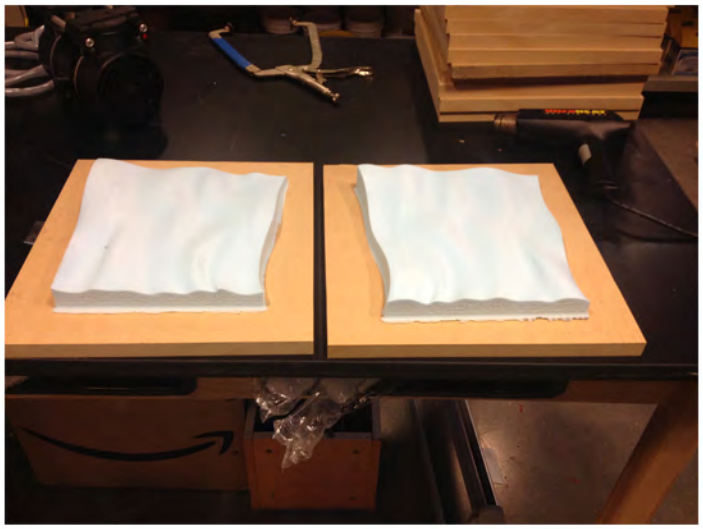
work in progress, be ready to stop the work if the machine does something that it is not OK





work done!
unscrew your material

VACUUM THE MESS!



Place both pieces on top of MDF

Use heat gun to smooth surface

closed tool method

place foam

wear gloves

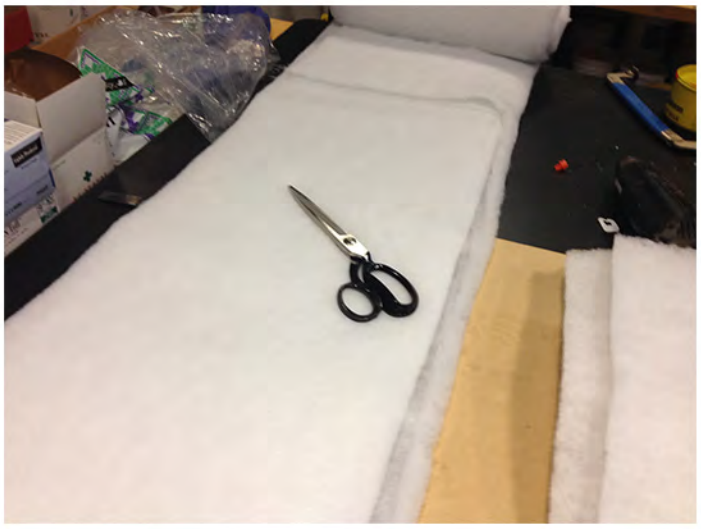
measure fabric

cut fabric (optional laser cut)

make sure that fabric is the right size

measure Bleeder breather

closed tool method



cut 2 layers

make sure is the right size

cover foam with plastic wrap

make sure that all foam is nicely covered

place Bleeder breather

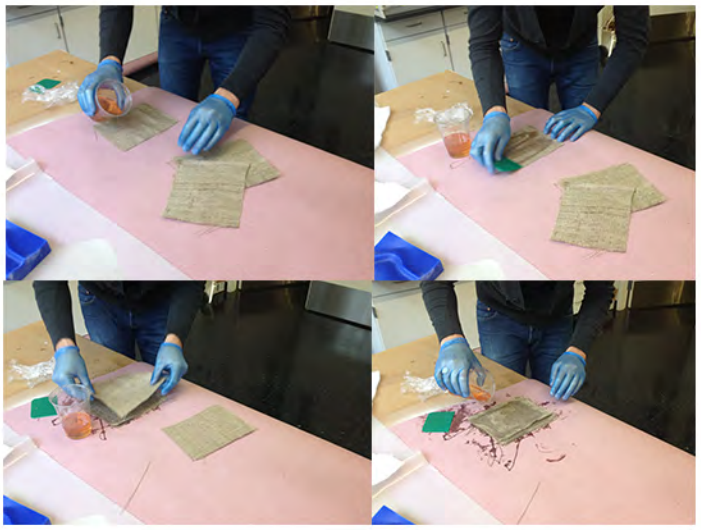
measure & cut plastic wrap

closed tool method

use roller for perforatations

place plastic wrap perforated

mixing ratio: check the bottle
use 4 fabric layers



pour mixed resin on fabric
distributed evenly

place fabric on model and
add second layer of plastic
wrap perforated

add second layer of Bleeder
breather

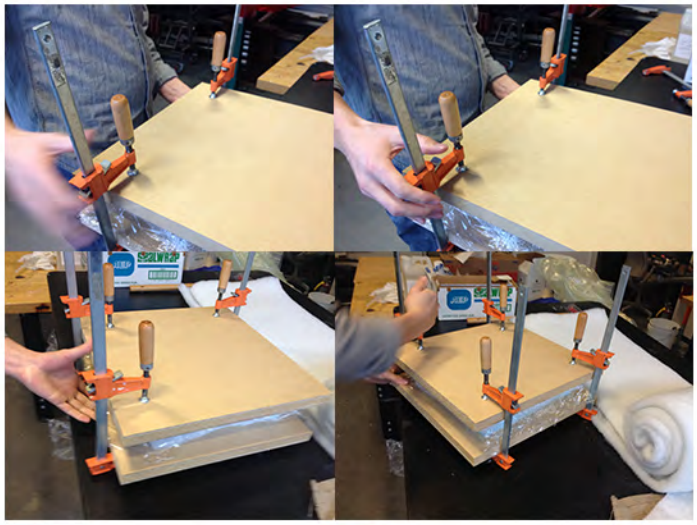
closed tool method

cover second layer of foam with plastic wrap

make sure is nicely covered

place second second layer of foam

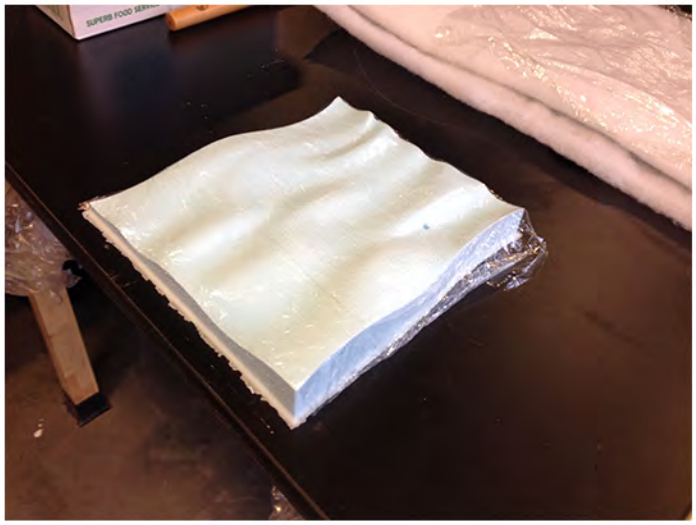
place top mdf layer



secure the layers with 4-6 clamps

use cure time described on resin container

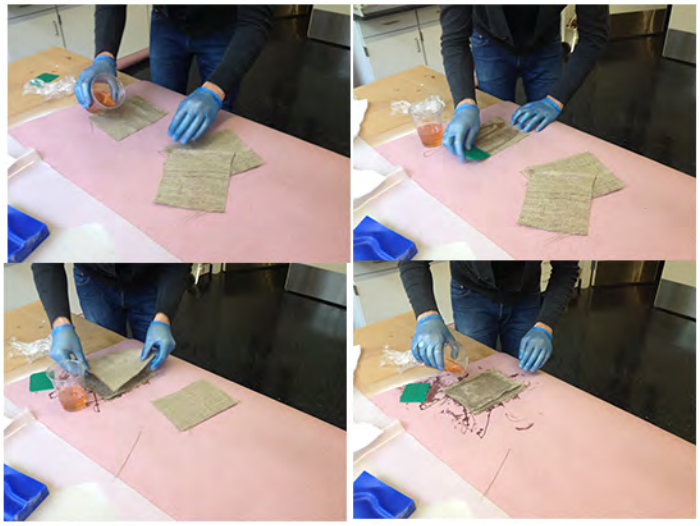
vacuum bag method



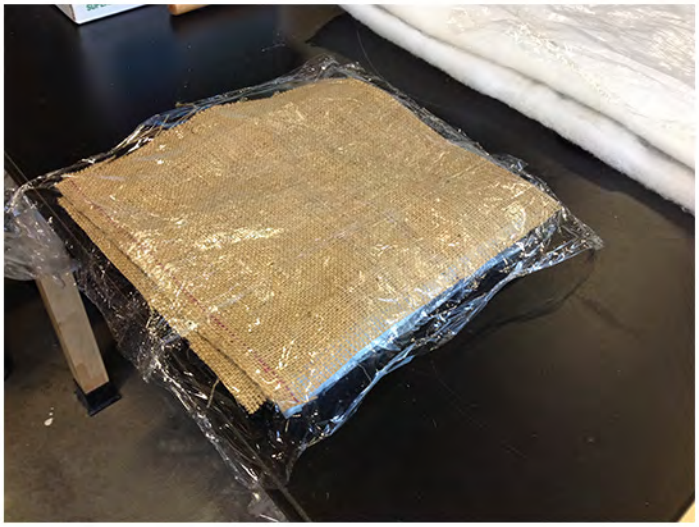
place foam and cover it with plastic wrap

use 4 layers of fabric

mixing ratio: check the bottle
use 4 fabric layers



pour mixed resin on fabric distributed evenly



place fabric on model and add second layer of plastic wrap perforated

add two layers of Bleeder breather

vacuum bag method

open vacuum bag

use easy demold, apply over the area to place model

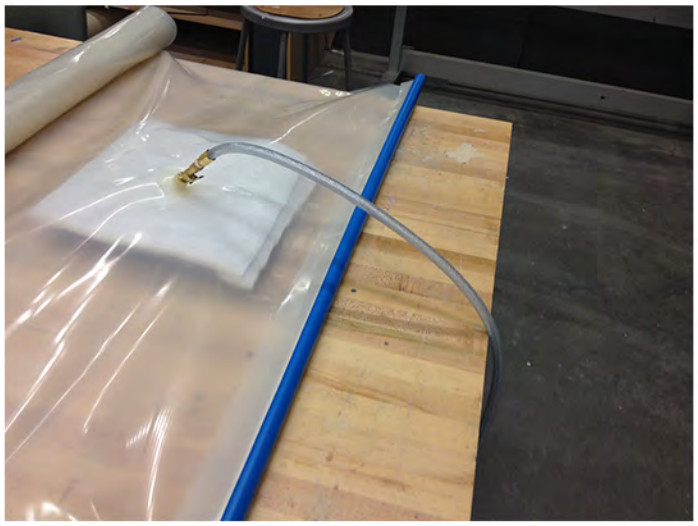
place model under the valve

roll the rest of the vacuum bag

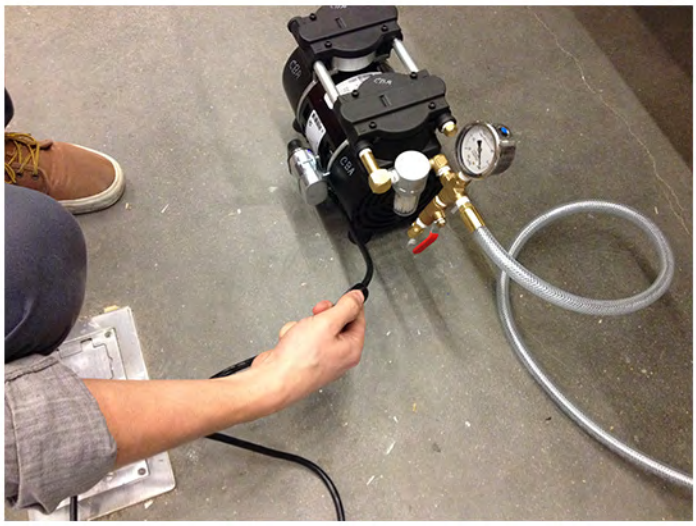
roll the end part of the vacuum bag with white tube

close the bag

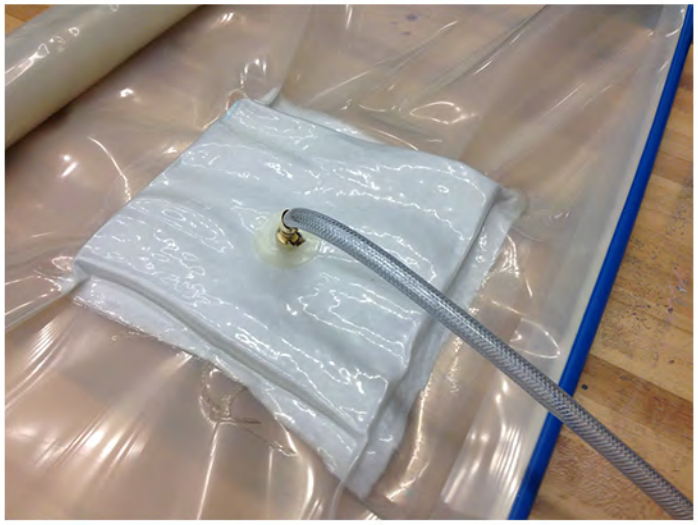
vacuum bag method



make sure that is properly sealed



turn on vacuum pump



compress your mold to make sure that the bag is fully compressed

debag time: 4-8 hours
use curing time described on resin container