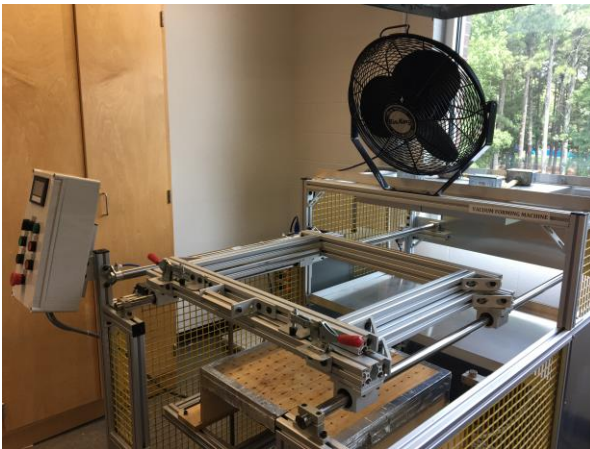


## Vacuum Former Usage Guide

The vacuum former machine is perhaps the most straight-forward machine to operate at the Digital Fabrication Lab, however preparing the object to be molded (called a “buck”) properly is key for a successful outcome. If you are looking for information on best practices for creating a positive master mold, please check out the Materials Prep List guide listed on the website.

### Vacuum Former Policy

- The vacuum former may only be used for its intended purpose
- Only verified thermoplastics are permitted for use within the machine
- Do not reach into the vacuum former machine while the equipment is operating



*The vacuum forming machine, located in the back corner of the Digital Fabrication Lab.*



*The associated air-assist lever, located to the left of the vacuum forming machine, behind the wood cabinet.*

### Removing Objects from Formed Plastic:

Objects that have been formed can be removed from the plastic once it has fully cooled. Any methods used to remove the buck from the formed plastic should be done so carefully to prevent damage to the plastic and potentially to the user.

1. Spatulas and cutting tools may be provided to assist with the removal of the object/buck from the plastic
2. Compressed air (accessible in the Woodshop) may also assist in the removal of the buck
  - a. Contact woodshop staff for additional assistance regarding the removal of the buck from the formed plastic
3. Plastic may be further trimmed down with a boxcutter or blade, working slowly and carefully

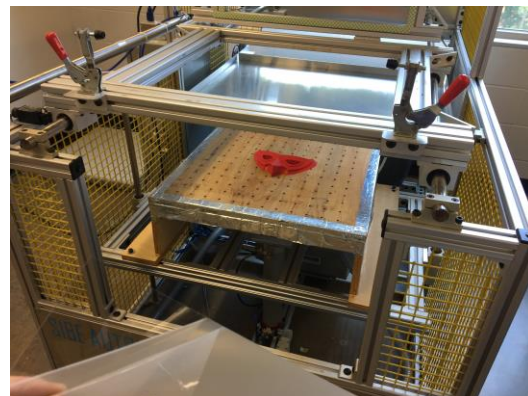
### Vacuum Former Initial Setup:

1. Turn on 3 dials (Power, Heater, Pump) to ON position and allow former to heat up for 15 minutes prior to usage
2. Turn on compressed air (on left wall)
3. Turn console dial to "Hand" operation



### Loading Materials into Vacuum Former:

1. Spray the buck (object to form plastic around) with mold release outside and wait 5 minutes
2. Place buck in center of vacuum former bed
3. Remove protective coating from thermoplastic and place in machine frame, ensuring no gaps
4. Tape sides of plastic to metal frame with tape
5. Close frame clamps firmly (they should snap)



### Operating Machine:

Press the following console buttons in sequence to operate. All steps are time sensitive; the operator must be prepared to closely monitor the job and act quickly.

1. *START* – Frame and plastic will slide under the heaters
  - a. Wait for thermoplastic to sag or “bowl” about 2” at the center
2. *STOP* – Frame will slide forward above the perforated table
3. *UP* – Perforated table will lift into plastic
4. *UP* – Vacuum will turn on
  - a. Allow the vacuum time to pull in the plastic fully prior to the next action
5. *UP* – Cooling fan will turn on
  - a. Allow 20-30 seconds for plastic to adequately cool prior to the next action
6. *DOWN (hold)* – Will release the vacuum and lower the perforated table to the starting position

