

Summary Report on Vacuum Forming Machine

1. How to start the Machine

Plug the FormBox into the mains using the power cable already attached to the back of the machine. Plug in the Vacuum cleaner's power cable into the back of FormBox and switch on the machine. Switch on the vacuum. Turn the Red switch on by rotating it clockwise to point 1.

2. How to Operate Vacuum Forming Machine

Unclamp the tray handles by lifting the outer ring of each handle. Lift the top tray until it clicks into place near the heater. Then place the sheet properly on the lower tray with proper alignment. Next, pull up the lower tray along with the sheet to clamp with the upper tray. This will hold the sheet securely between the trays. Now place the object on the beads. Make sure the object is placed center of the bead. Set the timer and temperature according to the instructions given on the sheet. Hit the timer button. The light will flash orange as it heats up and go green when it's at the correct temperature. Push both the trays downwards by giving a jerk while bubbles are being formed on the sheet. Both the trays will hit the vacuum button and turn it on. Keep the trays as is for 5-6seconds while the vacuum cleaner is on. The vacuum cleaner will suck all the air out from around the shape and we will get the desired design.

3. How to Stop the Machine

- i. After the use of the machine clamps the lower tray with the upper tray.
- ii. Set the both timer and temperature button off.
- iii. Keep the machine turned on for 15-20 minutes after use.
- iv. Switch off the main power line where the form box is plugged in.
- v. **Mute**-If you would like to turn off the FormBox sounds, turn on the heater to any setting then press and hold the timer start button for 7 seconds. Repeat to turn them back on.
- vi. **Vacuum shut Off**-To turn the vacuum off in the middle of the suction, press the timer start button to cut the power to the vacuum cleaner.

4. Precautions

- i. **Space:** Ensure that the templates are as close to the center of the vacuum plate as possible.
- ii. **Don't touch the heater coils when the heater is on.**
- iii. **Don't push the trays downwards until bubbles are forming.**
Packing: While placing multiple objects on the plate, ensure that you leave at least a 3cm gap between them. Leave more space for taller and larger objects.
- iv. **Height/Width Ratio:** Templates should be wider than they are tall. This will help to avoid thinning at the top of the form.
- v. **Avoid webbing:** Avoid sharp angles less than 90°. This can cause webbing as the sheet material can bunch and fold onto itself.
- vi. **Compatible Materials for Forming:** The Mayku FormBox works best with thickness thermoplastic sheets of 0.25 - 1.5mm.

- vii. **Maintenance:** Aside from cleaning the forming tray from time to time, the machine is remarkably resilient and requires little upkeep.
- viii. Be careful not to include any undercuts when designing the templates. Undercuts prevent the removal of templates from forms.
- ix. Sheet materials have different temperatures and time ranges. Set the timer and temperature according to the instructions given on the sheet. Consider the environmental conditions like pressure, and temperature of the room also.