

Vacuum Formers

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Machinery & Power Tools



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A vacuum former heats a sheet of thermoplastic (usually HIPS or PETG) until soft, then pulls it down over a mould with suction, forming a thin shell. It is the fastest way to make packaging, masks, trays, model parts and product casings in a school workshop.

Key Features

- Heating frame sizes from A4 to A3 for schools
- Thermostat or timer control on the heater
- Vacuum bed with a grid of small holes
- Quick release clamps for the plastic frame
- Acrylic or clear lid for viewing the melt

Typical Uses in the Workshop

- Form packaging trays and product covers
- Make moulds for chocolates, soap and models
- Produce mask shells and costume pieces
- Form panels for robots and electronic enclosures

Safe Operation

1. Place the mould on the bed and align the sheet in the frame
2. Heat until the sheet sags evenly by the set amount
3. Lower the frame and switch on the vacuum quickly
4. Hold the vacuum until the plastic cools and hardens
5. Trim the formed part with scissors or a knife

SAFETY NOTES

- Never touch the heater or hot sheet - it is 150+ degrees
- Give the formed part time to cool before handling
- Use proper plastic types; check smoke and fume risks
- Vent the workshop when forming
- Keep flammable materials away from the heater

Maintenance & Consumables

- Clean melted plastic off the frame and bed grid
- Check the vacuum pump and hoses for leaks
- Replace worn heater elements only when cold
- Store sheets flat in a clean, dry rack
- Keep spare sheets in common sizes

Specification & Buying Notes

A school vacuum former should have a strong vacuum pump, even heating and a timer. A4 models suit most projects but A3 gives more scope. Check replacement sheet sizes and heating element cost before purchase.