

# ~ FABRICATION ~



PLASTICS

## OPERATING INSTRUCTIONS

INTRODUCING



PLASTICS

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# HOT WIRE CUTTER



CR Clarke 280 (or equivalent) Foam Hot Wire Cutter and Wire Shaper  
Access Level 1 (see Metal Workshop Induction Guide on Access Levels)  
Low-voltage hot wire machine for the cutting and shaping of plastic foams

### PPE Basic

- Suitable work coat (provided)
- Spectacles, goggles or face shield rated to BS/EN 166 (provided)

### What to do before use

- VISUALLY check the machine for signs of damage
- IF STUDENT, report any faults to any member of workshop academic technical staff
- IF STAFF, log in the fault via the Fault Reporting Log Book – then email technical team to report if machine requires maintenance or servicing and whether it will be out of operation and for how long
- ENSURE the foam-cutting wire is TAUT and not loose. PLUCK the wire several times – if no vibration is heard, the wire may not be secured above or below the work table.
- If GUARDS are fitted, are they in good condition?
- GOOD VENTILATION or LEV/Extraction fitted and operational?

### How to Use This Hot Wire Cutter

- REFER TO any written manual or instructions that may be offered during training or timetabled workshops
- ENSURE only 1 person is operating and IN CONTROL of the machine

- **ENSURE** the extraction or ventilation is functioning **BEFORE** switching on the machine at the socket. It can get **LOUD**, so **COMMUNICATION WITH** others is **ESSENTIAL**. This is especially **IMPORTANT** during training
- **SET THE CONTROLS TO EITHER** the **HOT WIRE** mode or the **SCULPTER** mode and to the correct **HEAT SETTING**. The **LARGER NUMBERS** are for thicker wire and more dense foams – use a mid-range setting first for either mode.
- **PLUG IN THE MACHINE** to a fused, 230 volt 3-pin socket
- If using a machine with a **CENTRAL BOSS** as the heat actuator, push the foam block **AGAINST** the wire. The actuator should **CLICK** and as you push gently against the wire, the wire **HEATS**, melting the foam
- If using a **FOOT SWITCH** as an actuator, use **ONLY THE TOES** of your foot to **PUSH GENTLY** down on the switch, again listening for the **CLICK** in the machine
- If, after about 20 seconds, the wire is still **NOT CUTTING** the foam, try the **NEXT HIGHER SETTING** on the mode of your machine and **WAIT** for the extra power to heat the wire
- If the wire **DOES START** cutting foam, it should cut relatively cleanly with **LITTLE FUMING**, though the use of **LEV/Extraction** should remove any that does appear.
- **DON'T PUSH** too hard on the wire, all you do is **DEFORM THE WIRE** and make poor cuts
- If using the **SCULPTING TOOL**, use the tool **LIGHTLY** to gouge away material, rather than removing all of it in one go
- When you are **FINISHED**, switch **OFF** the machine and **UNPLUG** from the wall. If there is a **HOT WORKING SIGN** nearby, use it – the wire may **STILL BE HOT** for some minutes
- **WAIT** for a minute or so when the **WIRE HAS COOLED** to **REMOVE** any fused foam from the wire, using sandpaper or a sharp knife. **DO NOT** use water while the unit is on or when the wire is hot – this is **NOT** a safe practice

Date

I verify that I have read and understood the information detailed within this document

Name

Signature