Hot Wire Foam Cutters

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

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A hot wire foam cutter uses a heated wire to slice polystyrene and foam quickly and cleanly, cutting straight sheets, shapes and freeform forms by melting through the material. Bow cutters, table cutters and handheld wands cover model, packaging and prototyping work.

Key Features

- Heated wire cutting elements
- Bow, table and wand formats
- Variable power or temperature controls
- Cutting tables with guides
- Wire thicknesses for fine or fast cuts

Typical Uses in the Workshop

- Cut foam sheet for models and packaging
- Shape freeform foam forms
- Make architectural and set models
- Cut EPS insulation and craft foam

Safe Operation

1. Set the wire temperature for the foam
2. Mark the cut line and guide the wire
3. Move steadily through the foam
4. Use a table guide for square cuts
5. Clean fume with ventilation

SAFETY NOTES

- Fumes from hot foam are irritating - ventilate well
- The wire is hot - avoid skin contact
- Do not cut PVC foams that emit toxic fumes
- Keep foam away from flames
- Unplug when not in use

Maintenance & Consumables

- Clean melted foam off the wire
- Check the wire tension
- Inspect the power lead and switch
- Store with the wire guarded
- Replace the wire when it sags or breaks

Specification & Buying Notes

A table hot-wire cutter with a straightedge guide suits school foam work; a wand adds freehand cutting. Choose variable power for different foam densities.