

Handheld Wood Routers

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Woodworking Machines

A handheld router is a high-speed motor with a collet that spins a cutter, used freehand or against guides to cut grooves, rebates, edges and decorative profiles in wood and board. It is one of the most versatile power tools in the workshop, equal to a small shaper.

Key Features

- Routers from 1/4 to 1/2 inch collet capacity
- Variable speeds up to 30,000 rpm
- Plunge and fixed base versions
- Depth adjustment mechanisms
- Guide bushes and edge guides available

Typical Uses in the Workshop

- Cut grooves and housing joints for shelves
- Trim edges flush with template or bearing bits
- Shape decorative profiles on edges
- Rebate hinge and locking plates

Safe Operation

1. Select the bit and fit it fully in the collet
2. Set the depth of cut to no more than one-third of bit diameter
3. Move the router left to right against the rotation
4. Use the guide fence or bearing for consistent cuts
5. Clear dust and keep the base flat

SAFETY NOTES

- Keep both hands on the router handles
- Unplug before changing bits
- Use the correct speed for the bit size
- Take light passes rather than deep cuts
- Work with the router stable; never one-handed freehand

Maintenance & Consumables

- Clean the collet and shaft with a brush
- Keep the base smooth and waxed
- Check the brushes (motor) and replace when worn
- Store bits in cases, edges protected
- Vacuum vents and keep the body clean

Specification & Buying Notes

A 1/2 inch collet fixed-plus-plunge combo router with 2.2 kW is a workshop workhorse. Variable speed matters for big bits. Buy a compatible bit set with bearing-guided cutters.