

Pillar-Mounted Mortisers

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

A pillar-mounted mortiser cuts square or rectangular mortise slots for mortise-and-tenon joints. It drives a hollow square chisel with a rotating auger inside, so the slot comes out square-sided. It is the quickest, most accurate way to cut the mortise half of thousands of common furniture joints.

Key Features

- Hollow square chisel with internal auger bit
- Mortise width usually 6, 8, 10, 12 and 13 mm
- Lever or rack-and-pinion feed mechanism
- Fence and clamp for holding work squarely
- Depth stop for consistent slot depth

Typical Uses in the Workshop

- Cut mortises for table and chair frames
- Make through and stopped mortise joints
- Cut slots for loose tenon joinery
- Drill square holes for traditional furniture construction

Safe Operation

1. Mark mortise position and size on the workpiece
2. Clamp work to the table against the fence
3. Align the chisel with the marked lines
4. Lower the chisel with short, steady strokes
5. Chisel out the slot in overlapping passes

SAFETY NOTES

- Wear eye protection - chips eject at speed
- Keep fingers clear of the chisel while feeding
- Clamp work firmly; never hold it by hand
- Remove the chisel key before starting
- Report blunt chisels; sharp chisels cut cleanly

Maintenance & Consumables

- Keep the auger and chisel sharp and clean
- Wipe the columns and grease the slides weekly
- Check the fence for squareness before use
- Store chisel sets in a labelled box
- Vacuum chips from the table and motor area

Specification & Buying Notes

A floor-standing pillar mortiser with a decent fence beats cheap bench models. Look for smooth rack-and-pinion feed, a solid cast-iron table and a supplied set of chisel sizes 6-13 mm.