

MIG Welders

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Welding & Thermal Cutting



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A MIG welder feeds a continuous wire electrode through a gun into a weld pool, shielded by gas, making it the easiest arc welding process to learn and the most common in workshops. It welds steel, stainless and aluminium with the right wire and gas.

Key Features

- Outputs from 130 to 250 A
- Wire feed speed and voltage controls
- Gas or gasless (flux-core) modes
- Torch with contact tip and gas nozzle
- Euro or fixed torch connections

Typical Uses in the Workshop

- Weld frames, brackets and steel projects
- Repair and fabricate mild steel structures
- Weld stainless with the correct wire and gas
- Weld thin sheet with lower settings

Safe Operation

1. Set the gas flow and wire speed
2. Ground the work securely
3. Hold the torch at the correct angle and travel
4. Keep the arc at the leading edge of the pool
5. Stop and check penetration and weld shape

SAFETY NOTES

- Wear a welding helmet with the right shade - arc flash burns
- Ventilate - MIG fumes are hazardous
- Keep flammables away and watch for sparks
- Use dry gloves and insulating mat work
- Disconnect before changing wire or tips

Maintenance & Consumables

- Clean the torch liner and contact tip
- Replace tips when worn or blocked
- Check gas hoses and regulators for leaks
- Keep the wire feed path clean
- Service the drive rollers

Specification & Buying Notes

A 180-200 A MIG with gas kit suits school work on steel up to 5 mm. Gasless mode is handy outdoors. Buy a quality torch, spare tips, liners and a full cylinder of CO2/argon mix.