Digital Micrometers

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Measuring & Inspection

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A digital micrometer measures thickness, diameter and depth to 0.001 mm using a precision screw thread and a digital readout. It is the standard tool for checking machined parts and materials to tight tolerances in metalwork and engineering lessons.

Key Features

- Ranges 0-25, 25-50, 50-75 mm and up
- Resolution 0.001 mm / 0.0001 inch
- Ratchet or friction thimble for consistent pressure
- Hardened, ground anvils and spindles
- LCD with inch/mm switching and hold

Typical Uses in the Workshop

- Measure shaft, rod and sheet thickness accurately
- Check turned and machined diameters
- Verify material stock against drawing tolerances
- Compare measurements between students

Safe Operation

1. Clean the anvils and zero the micrometer first
2. Close the spindle on the part with the ratchet
3. Read the digital display or vernier scales
4. Measure at several points and record the range
5. Release the spindle before removing the part

SAFETY NOTES

- Never close the micrometer on a spinning machine part
- Keep the anvils clean to avoid wear and error
- Do not drop the instrument
- Store in its case away from magnetic fields
- Do not measure hot parts that will cause drift

Maintenance & Consumables

- Wipe the anvils and oil lightly after use
- Check zero against the standard each session
- Replace the battery when the display dims
- Get the micrometer annually calibrated
- Keep the thimble moving freely

Specification & Buying Notes

A quality 0-25 mm digital micrometer with a calibration certificate is the classroom essential; add ranges as needed. Check the ratchet works and the display has a data output if logging is required.