

Torque Wrenches

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



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A torque wrench tightens fasteners to a specified tightening force, measured in newton-metres, so bolts are done up neither too loose nor too tight. It is essential for bicycle, engine and machine work where overtightening damages threads or parts.

Key Features

- Click-type mechanism signals the set torque
- Ranges from 5-60 Nm up to 10-200 Nm
- Digital or beam readout options
- Reversible ratchet heads
- Lengths and handles sized for control

Typical Uses in the Workshop

- Tighten bicycle and wheelchair fasteners correctly
- Assemble engines and machinery to specification
- Set wheel nuts and suspension bolts
- Teach correct torque values for fixings

Safe Operation

1. Set the torque on the scale or digital readout
2. Fit the correct socket and seat it fully
3. Pull smoothly until the click or signal sounds
4. Stop immediately at the click - do not over-pull
5. Release the setting after use

SAFETY NOTES

- Never use a torque wrench as a breaker bar
- Do not exceed the wrench rated range
- Store at the lowest setting to protect the spring
- Keep the wrench away from drops and knocks
- Check calibration yearly

Maintenance & Consumables

- Wipe the wrench clean and oil the ratchet head
- Return the setting to minimum after use
- Store in its case, protected from dust
- Recalibrate at a certified lab annually
- Replace the ratchet head when worn

Specification & Buying Notes

A click-type 5-60 Nm wrench covers school bikes and machines. Buy a quality brand with a calibration certificate and a case. Digital versions help students read torque directly.