

Digital Torque Multipliers

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

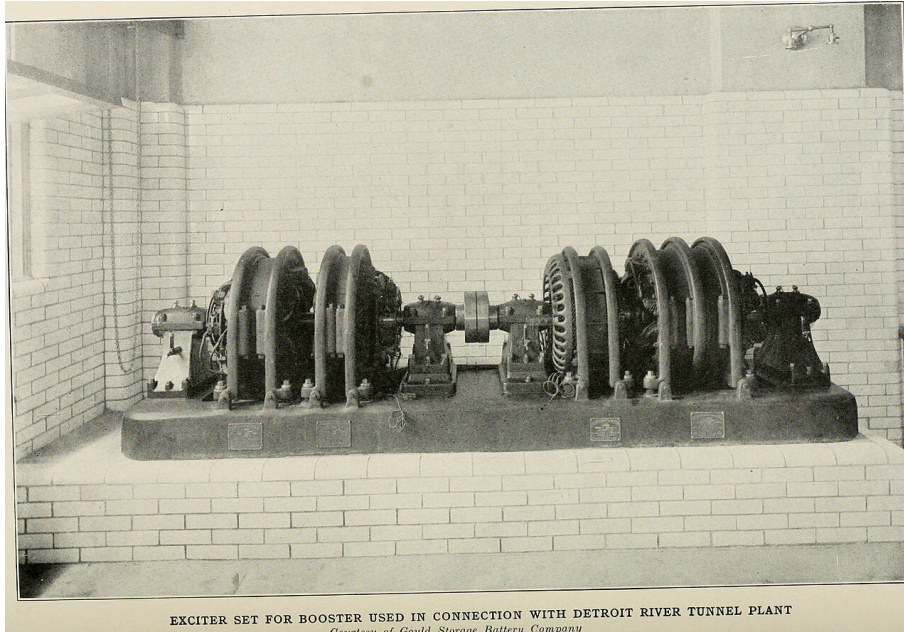


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A digital torque multiplier is a gearbox tool that multiplies input torque to loosen or tighten high-torque fasteners beyond the range of a hand torque wrench, with the output measured and shown digitally. It brings aircraft-style torque control to heavy workshop fasteners.

Key Features

- Gear ratios of 3:1 to 25:1
- Digital torque readouts
- Reaction arms for support
- Inputs for standard square drive
- Capacities to 500+ Nm

Typical Uses in the Workshop

- Tighten large wheel and flange fasteners
- Loosen seized heavy bolts
- Apply precise torque to big fixings
- Verify torque on machinery bolts

Safe Operation

1. Check the reaction arm rests against a solid point
2. Fit the socket and set the return spring
3. Apply the input torque smoothly
4. Read the output torque on the display
5. Retract and release the torque slowly

SAFETY NOTES

- Never exceed the tool's rated capacity
- Wear eye protection - stored energy can release
- Keep hands clear of the reaction arm
- Check the multiplier is held square
- Calibrate the digital indicator yearly

Maintenance & Consumables

- Clean and lubricate the gearbox
- Check the reaction arm condition
- Protect the digital display
- Calibrate the transducer regularly
- Store in its case

Specification & Buying Notes

Choose a multiplier with a ratio and capacity matching the largest fasteners. Calibrated digital units are worth the price for machinery work. Buy the correct sockets and extensions with it.