Calipers for Turning (Inside and Outside)

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

Photo: U.S. Air Force photo by Airman 1st Class Thomas Calopedis — Public domain — via Wikimedia Commons (The_31st_AGE_flight_keeps_gears_turning_at_Aviano_AB_(7515558).jpg)

Turning calipers are C-shaped tools for transferring and comparing diameters on the lathe. Outside calipers check outside diameters of turned work, inside calipers measure bores and recesses, and both are set against rules to measure without stopping the lathe safely.

Key Features

- Spring or firm joint (screw) designs
- Outside and inside versions
- Leg lengths 100-300 mm typical
- Fine adjusting nuts on firm-joint types
- Wood and metal working versions

Typical Uses in the Workshop

- Compare turned diameters against a pattern or rule
- Check inside diameters of bowls, recesses and tenons
- Transfer diameters from drawings to work
- Set sizes for duplicate turnings

Safe Operation

1. Hold the calipers at right angles to the work
2. Spring the legs lightly against the surface
3. Lift away and measure against a rule
4. Adjust the firm-joint nut for exact sizes
5. Test-fit before the final pass

SAFETY NOTES

- Never measure while the lathe is running at speed
- Keep fingers off the rotating work
- Check caliper joints are firm before using
- Do not use calipers as scrapers or hammers
- Store calipers with legs closed

Maintenance & Consumables

- Check the joint tightens without play
- Wipe and lightly oil the joint
- Check the legs are not sprung or bent
- Keep a rule handy at the lathe station
- Store in the turning tool tray

Specification & Buying Notes

Buy spring calipers in 150 and 250 mm outside sizes plus an inside pair. Quality firm-joint calipers hold their setting for repeated checks. Avoid cast versions that spring apart.