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How to Read and Use a Micrometer

A micrometer measures to a thousandth of an inch, and with a vernier scale to ten-thousandths.

The three scales

Scale	Value of one division	Why
Barrel, numbered lines	0.100 in	Tenths of an inch
Barrel, between the numbers	0.025 in	Four divisions per tenth; the screw has 40 threads per inch, so one turn of the thimble is 0.025 in
Thimble	0.001 in	25 divisions round the bevel edge
Vernier (where fitted)	0.0001 in	Splits each 0.001 in into ten

Typical mistakes

Mistake	What happens	Fix
Dropping it	Accuracy may be permanently affected	Handle with care; verify against a gauge
Sliding work between anvil and spindle	Wears the measuring faces	Open, place, close
Over-tightening the spindle	Frame springs, readings are wrong	Light, consistent pressure
Using a fraction without converting	Wrong target	Convert fractions to decimals first
Using a hermaphrodite caliper to measure	Imprecise	It is for layout, not precision measurement

Key points

- **Calibration.** No interval is given in the sources; follow the maker and your quality system.

SOURCES · FAA-H-8083-30B, AMT Handbook: General

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theaviationpoint.com/standard-practices/tools/micrometer/

 Educational reference only, not approved data. Always consult the applicable SRM, AMM, or AC 43.13-1B and your certifying authority.