



OPERATION INSTRUCTION

Outside Micrometers

Metric (ratchet stop type)

Code	Range	Accuracy
3203-25A	0-25mm	±2μm
3203-50A	25-50mm	±2μm
3203-75A	50-75mm	±2μm
3203-100A	75-100mm	±3μm
3203-125A	100-125mm	±3μm
3203-150A	125-150mm	±3μm
3203-175A	150-175mm	±4μm
3203-200A	175-200mm	±4μm
3203-225A	200-225mm	±4μm
3203-250A	225-250mm	±5μm
3203-275A	250-275mm	±5μm
3203-300A	275-300mm	±5μm

Imperial (ratchet stop type)

Code	Range	Accuracy
3203-1A	0-1"	±.0001"
3203-2A	1-2"	±.0001"
3203-3A	2-3"	±.0001"
3203-4A	3-4"	±.00015"
3203-5A	4-5"	±.00015"
3203-6A	5-6"	±.00015"
3203-7A	6-7"	±.0002"
3203-8A	7-8"	±.0002"
3203-9A	8-9"	±.0002"
3203-10A	9-10"	±.00025"
3203-11A	10-11"	±.00025"
3203-12A	11-12"	±.00025"

Imperial (friction thimble type)

Code	Range	Accuracy
3203-1FA	0-1"	±.0001"
3203-2FA	1-2"	±.0001"
3203-3FA	2-3"	±.0001"



- 1-Anvil
- 2-Frame
- 3-Carbide measuring probe
- 4-locking screw
- 5-Sleeve
- 6-Thimble
- 7-Ratchet stop
- 8-Spanner
- 9-Setting anvil (except 0-25mm and 0-1")
- 10-Friction thimble

1. Calibration the outside micrometers before measuring:

- Clean the measuring surface of the micrometer with soft cloth.
- Loosen the locking screw, rotate the thimble, when the two measuring surface are closed, but not in contact, rotate the ratchet stop, and reading after hearing squeak. If the zero position has deviation, use the spanner to set zero.
- For the micrometers above 25mm and 1", do calibration with setting standard. Same as the above method.

How to use spanner:

- Tighten the locking screw, use spanner to rotate sleeve (Fig.1), adjust the reading to be zero.
- Finish calibration.

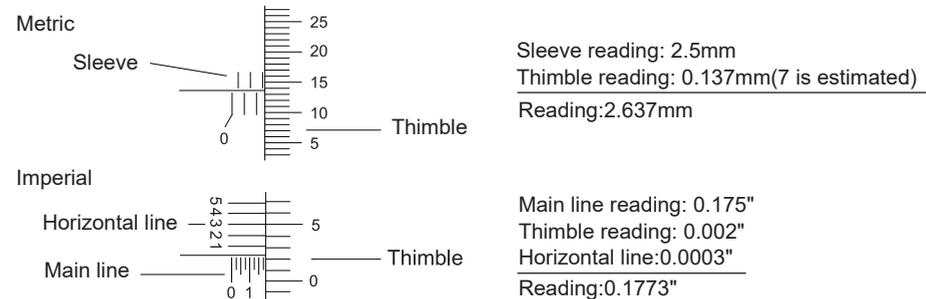


Fig.1

2. Measurement:

- During measurement, make sure there are no cutting chips or other debris on the measuring faces and workpiece surface, or it will lead to inaccurate results.
- Rotate the micrometer to be slightly larger than the measured workpiece, put the workpiece into the micrometer, rotating the thimble. When the measuring surface is in contact with the workpiece to rotate the ratchet stop. Then get the reading after hear squeak.

3. During reading, the line of sight should be perpendicular to the scale surface to avoid parallax. The reading results are as follows:



4. Notes:

- During storage, a gap of 0.1mm to 1mm shall be left between the measuring surfaces, and the outside micrometers shall not be stored in a clamped state.
- After a long time to store the outside micrometers, the spindle has a protective oil film, use dust-free cloth to wipe the oil film before measuring.

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