

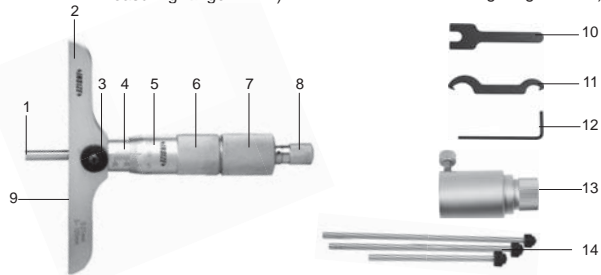


OPERATION INSTRUCTION

Depth Micrometer Series 3241

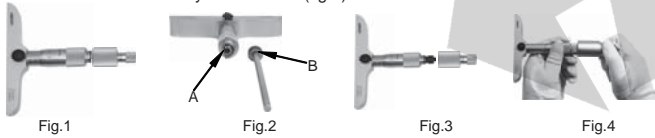
Graduation: 0.01mm
 Micrometer head accuracy: $\pm 3\mu\text{m}$
 Rod accuracy: $\pm(2+L/75)\mu\text{m}$ (L is the measuring range in mm)

Graduation: .001"
 Micrometer head accuracy: $\pm .00012''$
 Rod accuracy: $\pm[.001+.0005(L/3)]''$ (L is the measuring range in inch)



- 1-Measuring tip
- 2-Base
- 3-Locking screw
- 4-Sleeve
- 5-Barrel
- 6-Thimble 1
- 7-Thimble 2
- 8-Ratchet knob
- 9-Base plane
- 10-Spanner 1
- 11-Spanner 2
- 12-Wrench
- 13-Holder(Use it to control power)
- 14-Rod

- First, select rod according to the measured size, install rod as following:
 - Hold thimble 1, rotate thimble 2 counterclockwise(Fig.1)
 - Clean rod and the contact face A of thimble 1 and the contact face B of rod(Fig.2)
 - Insert rod from the bottom of thimble 1, rotate rod gently to make two faces fit, and then install thimble 2 to thimble 1, don't tighten it(Fig.3)
 - Put the holder on thimble 2, tighten the locking screw of the holder. Rotate the ratchet knob of the holder until you hear click (fig.4). Loosen screw and then remove the holder

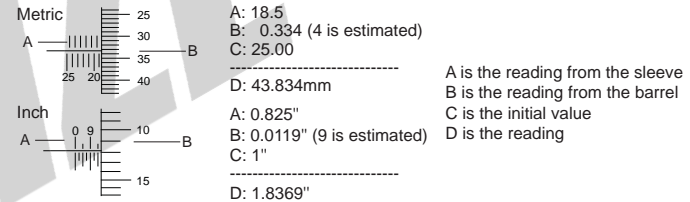


- It is necessary to set zero on the inspection plate before measuring. Clean the measuring faces and inspection plate surface with soft cloth. It's directly to set zero when the range is 0-25mm: rotate barrel until zero scale is visible, then put the base plane on the

inspection plate, keep pressing the base, rotate the ratchet knob of the micrometer until the tip of rod gets into the inspection plate. When cluck is heard, measuring faces contact completely, there is no deviation in zero, it's ready to measure. Micrometer's range is more than 25mm or scale is in inch, do calibration with calibrated tool(or gauge block): put calibrated tool on inspection plate, put the base plane on the calibrated tool to set zero. Micrometer should be checked regularly to make sure that it is properly zero set.

Caution: When the measuring faces is close to, but not in contact with the inspection plate, do not apply excessive force to rotate the ratchet thimble, as it will lead to inaccurate results and may damage the internal precision threads.

- 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 and may damage base plane.
- After measuring operation, loosen locking screw, take off micrometer to read the result. During reading, the sight is perpendicular to the scale to avoid parallax reading. The reading is the sum of sleeve, barrel. If range is more than 25mm or scale is in inch, the reading is needed a initial reading. For example, the rod's range is 25-50mm in metric or 1"-2" in inch, the reading is the sum of the initial, sleeve, barrel.



- When micrometer is set zero, if there is a deviation, adjust it according to the following method:
 - Zero deviation is less than $\pm 0.01\text{mm}/\pm .001''$, tighten locking screw, use spanner 2 the bigger half arc side adjust sleeve(Fig.5) till setting zero;
 - Zero deviation is more than $\pm 0.01\text{mm}/\pm .001''$, take off rod. Adjust the fixed end of the rod, use wrench to loosen two allen screws(Fig.6), then use spanner 1 to rotate the bottom screw gently(Fig.7). Deviation is positive number, rotate the bottom screw counterclockwise. Deviation is negative number, rotate the bottom screw clockwise.



- Measuring tip and base should be carefully prevented from being scratched or damaged. Tip and base should be oiled to prevent rust after measurement.

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