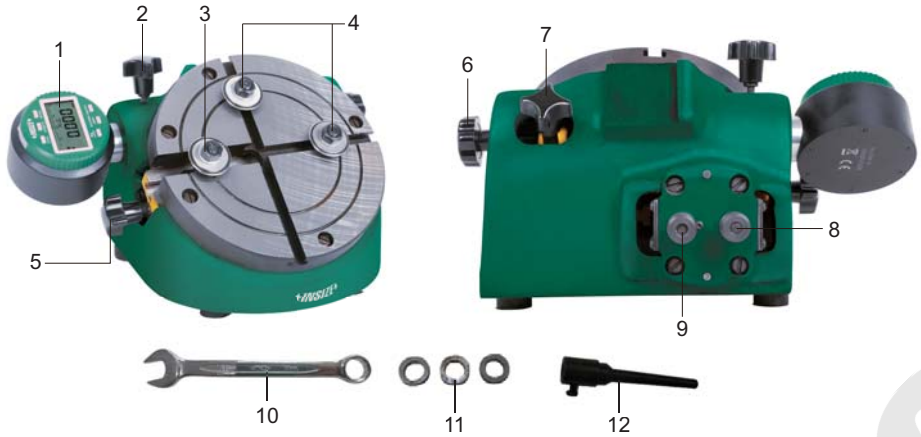
OPERATION INSTRUCTION

Internal And External Diameter Comparison Instrument

Code	Range of internal diameter	Range of external diameter	Accuracy	Repeatability
6843-140	50-140mm/2-5.5"	30-120mm/1.2-4.7"	±0.001mm	0.001mm

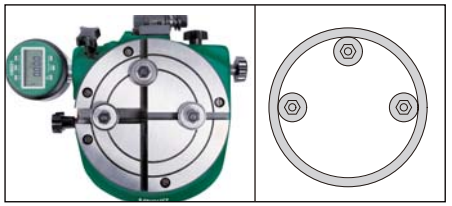


1-Digital indicator(optional)
2-Indicator lcoking screw
3-movable point
4-Fixed points
5-Handle to move movable point
6-Indicator fine adjustment
7-Locking screw for indicator fine adjustment
8-Position adjustment of movable point
9-Internal/external diameter measurement switch and measuring force adjustment
10-Open end wrench
11-Replaceable gasket 3mm
12-Extended point

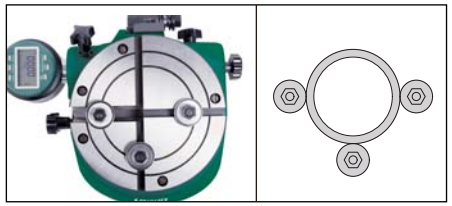
1. Measure internal/external diameter, variation and taper.
   total range of movable point: 2mm, effective range of movable point: ±0.1mm

2. Adjustment and use:
   ---Before measurement, prepare corresponding calibration standard parts based on the inner and outer diameters and height dimensions of the measured workpiece. The measuring head can be replaced with a 3mm gasket (11) to measure different heights.
   ---Before measuring, adjust the movable (3) and fixed points (4) to the appropriate position based on the measured size of the workpiece, and then use an open end wrench (10) for pre tightening.
   ---Place the calibration standard part in the movable (3) and fixed points (4), and after the position is appropriate, use an open end wrench (10) to lock the points.
   ---Installation of extended point for digital indicator, than install the digital indicator (1) so that it contacts the measuring rod inside the Indicator fine adjustment (6) of the head, and then tighten the indicator locking wrench (2).
   ---Adjust the contact between the movable point (3) and the calibration workpiece by position adjustment of movable point (8) to move it within a suitable range; Rotate the force adjusting nut (9) and adjust the force of the movable point (3) to meet the force measurement requirements.
   ---Place the calibration standard parts in the movable and fixed points for calibration. After calibration, the measurement can be repeated multiple times. If the value remains unchanged or the change in momentum is within the allowable range, the calibration of the measuring instrument is completed and the measurement of the workpiece can begin; If the variability is significant and the value is unstable, the measuring instrument has not been calibrated. The locking condition of the measuring head and components should be checked, and the standard parts should be cleaned before re calibration.
   ---The measuring instrument can directly measure the diameter error of the workpiece.
   ---When measuring, rotating the measured workpiece for more than one cycle can measure the diameter variation of the workpiece.
   ---When measuring, after measuring from the front, reverse the workpiece to measure the other side, and the difference in values between the two sides is the taper of the measuring surface.
   Note 1: the height of the movable and fixedpoints must be consistent.
   Note 2: rotating the internal/external diameter measurement switch nut (9) can switch the internal/external diameter measurement mode.
   Note 3: when measuring the inner and outer diameters, it is necessary to change the position of the fixed points (4).

internal diameter measurement



external diameter measurement



3. Optional accessory: Ø28mm/Ø8mm bush (code **6843-B8**),
   high precision digital indicators (code **2140-6**, **2140-6WL**)

4. Matters needing attention:
   ---Pay attention to product protection after measurement. If it is not used for a long time, it should be stored.
   ---Oil shall be applied for protection during long-term storage to avoid rusting of products.

MN-6843-C/E

V0