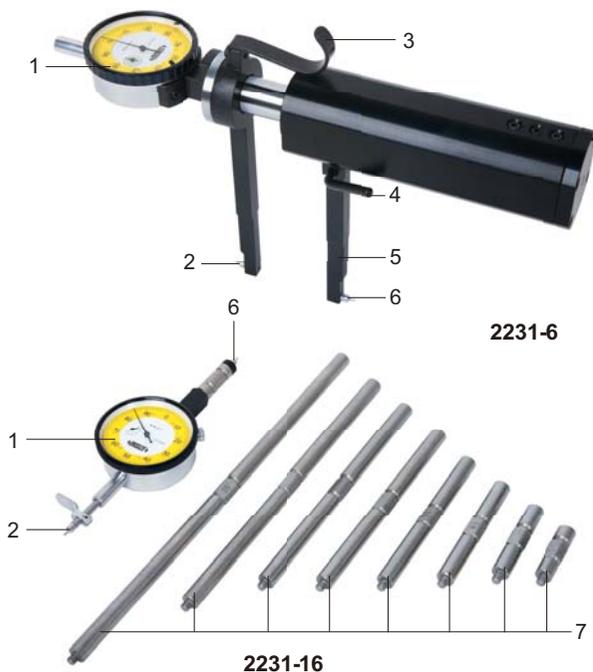


# OPERATION INSTRUCTION

## Internal Thread Taper Measuring Instruments

Code	Range (L)	Dial indicator stroke	Graduation	Accuracy
2231-6	1.5-6"/38.1-152.4mm	1"	0.001"	0.0015"
2231-16	5 1/2"-16"/139.7-406.4mm	0.5"	0.001"	0.0015"



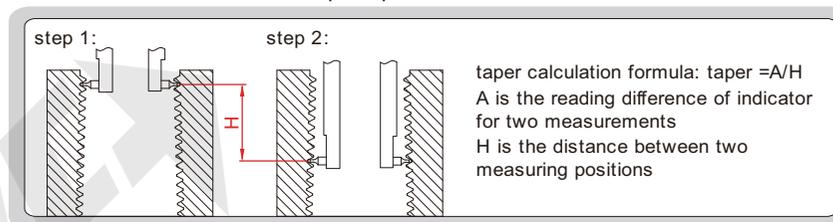
- 1-Dial indicator
- 2-Movable point
- 3-Press handle
- 4-Spanner
- 5-Movable claw
- 6-Fixed point
- 7-Extension rods

1. Measure the taper of internal thread.
2. Measurement 2231-6:

- Mark the measured thread and determine the measuring position.
- Select the appropriate thread points according to the type of thread to be tested and the number of threads per inch (refer to the table of thread ball points)
- Turn spanner to loosen the movable measuring claw, adjust the movable measuring claw to the diameter position of the internal thread and fix it in rotation, press down the press handle, place the fixed point in the groove of the first (or last) tooth of the complete thread, place the movable point in the alveolar opposite to the same tooth diameter, and dial indicator needs to reserve a certain amount of preload.

- Fixed point remains fixed, and the movable point swings in a small arc in the alveolar, after finding the maximum reading position, turn the dial indicator ring to coincide with the maximum reading position, lock the dial indicator ring and complete the measurement steps.
- Repeat the above measurement steps along the marked position on the measured thread and record the reading of the dial indicator.
- The difference between the two measuring positions of the dial indicator is the taper value of the measured thread in this interval.
- Compare the calculated taper value with the measured thread standard taper value to determine whether the thread taper is qualified.

principle of measurement



### 3. Measurement 2231-16:

- Mark the measured thread and determine the measuring position.
- Select the appropriate thread points according to the type of thread to be tested and the number of threads per inch (refer to the table of thread ball points); with specifications of 6 5/8in, 7in, 7 5/8in, 8 5/8in, 9 5/8in, 10 3/4in, 11 3/4in, 13 3/8in, 16in, 9 specifications of extension rods
- Repeat the measurement steps of 2231-6 and record the measurement data

For example, the measured thread is 1:16 round thread, with 8 teeth per inch, two measuring marks are made on the measured thread, and the screw teeth at the two marked points are 4 teeth apart, the dial indicator difference between the two measuring positions is 0.032in (A), the distance between the two measuring points is 4/8in (H), the taper is  $0.032/0.5=0.064$ , it can be compared with the standard taper (0.0625) of 1:16 round thread tested.

### 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.

principle of measurement

