

3227-4  
Graduation: 0.001mm



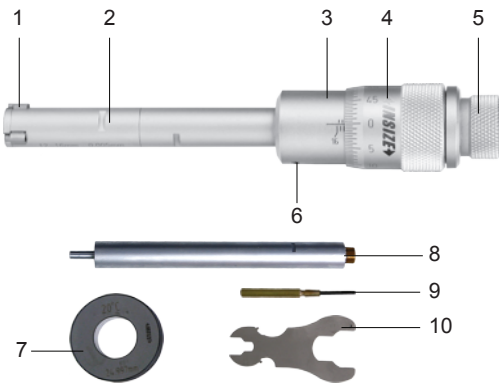
Code	Range	Accuracy	Setting Ring
3227-2	2-2.5mm	4μm	Φ2.5mm
3227-3	2.5-3mm	4μm	Φ2.5mm
3227-4	3-4mm	4μm	Φ4mm
3227-5	4-5mm	4μm	Φ5mm
3227-6	5-6mm	4μm	Φ6mm

3227-8  
Graduation: 0.001mm



Code	Range	Accuracy	Setting Ring
3227-8	6-8mm	4μm	Φ6mm
3227-10	8-10mm	4μm	Φ8mm
3227-12	10-12mm	4μm	Φ10mm

3227-16  
Graduation: 0.005mm



Code	Range	Accuracy	Setting Ring
3227-16	12-16mm	4μm	Φ16mm
3227-20	16-20mm	4μm	Φ16mm
3227-25	20-25mm	4μm	Φ25mm
3227-30	25-30mm	4μm	Φ25mm
3227-40	30-40mm	4μm	Φ40mm
3227-50	40-50mm	5μm	Φ40mm
3227-63	50-63mm	5μm	Φ62mm
3227-75	62-75mm	5μm	Φ62mm
3227-88	75-88mm	5μm	Φ87mm
3227-100	87-100mm	5μm	Φ87mm

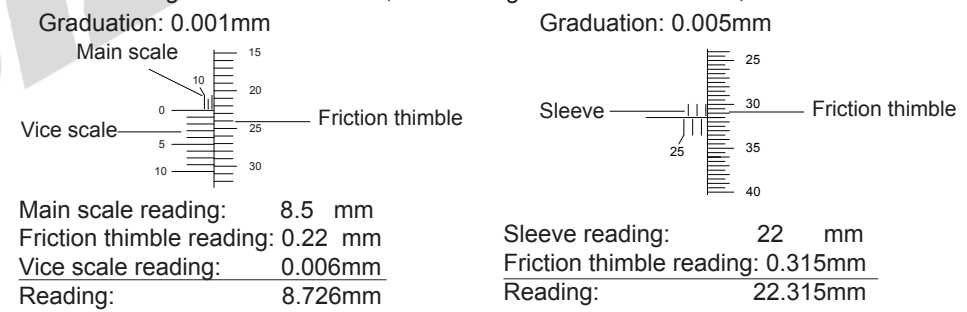
- 1-Measuring jaws
- 2-Measuring head
- 3-Sleeve
- 4-Friction thimble
- 5-Ratchet stop

- 6-Adjustment screw
- 7-Setting ring
- 8-Extension rod(except 3227-2 to 3227-6)
- 9-Screwdriver
- 10-Spanner(3227-8 to 3227-100 have two spanners)

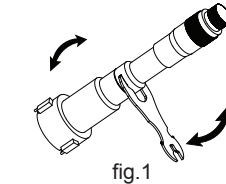
- The micrometer is used for measuring internal diameter.
- Before measurement, it is necessary to calibrate the micrometer with setting ring. Clean the measuring jaws and setting ring face with soft cloth, then measure the setting ring. If result is equal to the normal value of setting ring, micrometer is ready to measure, otherwise, please set the reading. Using screwdriver to loose adjustment screw, then rotate sleeve until reading is equal to the normal value of setting ring, lock the adjustment screw. The micrometer should be calibrated regularly.
- During measurement, rotate ratchet stop to make sure measuring jaws' diameter less than the hole's. Put micrometer into measured hole vertically, and then rotate ratchet stop, shake micrometer gently to make sure measuring jaws to contact hole fully. Now you can get result until you hear click. When finishing, rotate ratchet stop to return back measuring jaws firstly, take micrometer out of the hole vertically.

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

- During reading, the sight is perpendicular to the scale to avoid parallax reading. The reading method as follow:  
Micrometer graduation 0.001mm, the reading is the sum of sleeve main scale, friction thimble, sleeve vice scale.  
Micrometer graduation 0.005mm, the reading is the sum of sleeve, friction thimble.



- Install extension rod to measure deep hole. Use spanner to separate measuring head from main stem, install extension rod between measuring head and main stem, and use spanner to tight it (fig.1). Caution: Don't hold the micrometer head by hand.

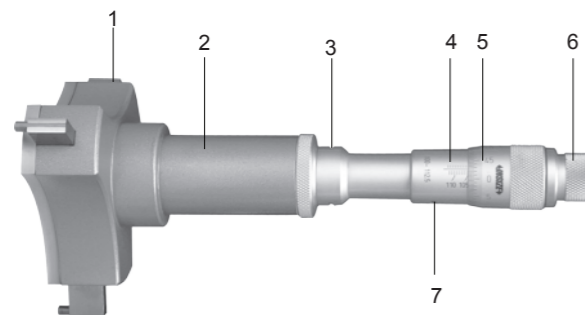




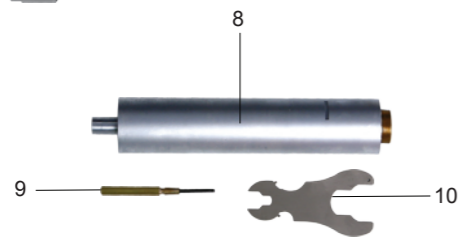
## OPERATION INSTRUCTION

### Three Points Internal Micrometer Serial 3227

Graduation: 0.005mm



Code	Range	Accuracy
3227-125	100-125mm	5 $\mu$ m
3227-150	125-150mm	5 $\mu$ m
3227-175	150-175mm	5 $\mu$ m
3227-200	175-200mm	5 $\mu$ m
3227-225	200-225mm	7 $\mu$ m
3227-250	225-250mm	7 $\mu$ m
3227-275	250-275mm	7 $\mu$ m
3227-300	275-300mm	7 $\mu$ m



- 1-Measuring jaws
- 2-Measuring head
- 3-Slot
- 4-Sleeve
- 5-Friction thimble
- 6-Ratchet stop
- 7-Adjustment screw
- 8-Extension rod
- 9-Screwdriver
- 10-Spanner(two spanners)
- 11-Interchangeable jaws

- The micrometer is used for measuring internal diameter.
- Install measuring jaws:

According to the measured workpiece to select a set of measuring jaws, measuring jaws are labeled(1, 2, 3) and scale, and a set has three jaws. The bottom of measuring head is labeled(1, 2, 3)(Fig.1). During installation, the measuring jaw is only fit to the hole when the label of the measuring jaw is the same as the holes'. Rotate the ratchet stop counterclockwise to the end to install measuring jaws according to the label, install measuring jaw as the picture(Fig.2). The jaws are installed correctly when you hear a lock sound. If replace measuring jaws, install the other set of measuring jaws as before.

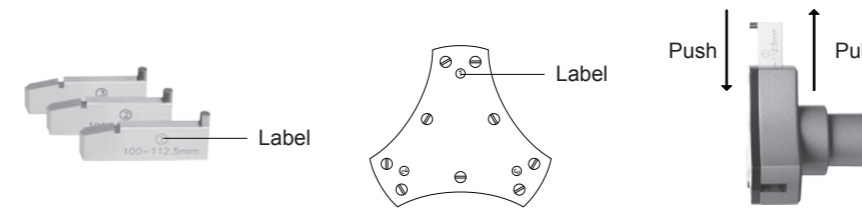


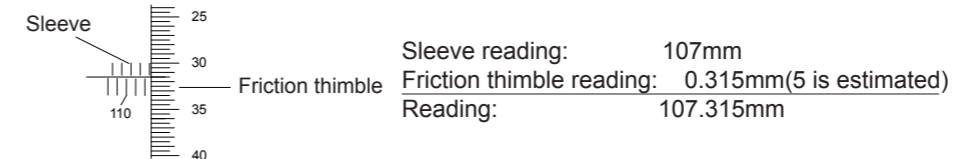
Fig.1

Fig.2

- Before measurement, it is necessary to calibrate the micrometer with setting ring. Clean the measuring jaws and setting ring face with soft cloth, then measure the setting ring. If result is equal to the normal value of setting ring, micrometer is ready to measure, otherwise, please set the reading. Using screwdriver to loose adjustment screw, then rotate sleeve until reading is equal to the normal value of setting ring, lock the adjustment screw. The micrometer should be calibrated regularly.
- During measurement, rotate ratchet stop to make sure measuring jaws' diameter less than the hole's. Put micrometer into measured hole vertically, and then rotate ratchet stop, shake micrometer gently to make sure measuring jaws to contact hole fully. Now you can get result until you hear click. When finishing, rotate ratchet stop to return back measuring jaws firstly, take micrometer out of the hole vertically.

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

- During reading, the sight is perpendicular to the scale to avoid parallax reading. The reading method as following: the reading is the sum of sleeve, friction thimble. There are two scale lines on sleeve to two sets of measuring jaws, according to the measured workpiece to select the scale line to read. If the range is 100-112.5mm, the reading results are as follows:



- Install extension rod to measure deep hole. Use spanner to separate measuring head from main stem, install extension rod between measuring head and main stem, and use spanner to tight it. Caution: Don't hold the micrometer head by hand.

MN-3227-2-E