



### Micrometer head

Measuring range	Graduation	Accuracy
100-125mm	0.01mm	±4μm

### Extension rods

Length(L)	Accuracy	Material
25mm	±1.25μm	Steel
50mm	±1.25μm	Steel
100mm	±2μm	Steel
200mm	±3.5μm	Steel
400mm	±4.5μm	Steel
1000mm	±7.5μm	Carbon fiber

1m carbon fiber extension rod,  
light weight, no deform



- 1-Micrometer head
- 2-Thimble
- 3-Extension rod
- 4-Spanner

1. Micrometer is used to measure tubular inside size.

### 2. Measurement

---According to the measured workpiece to select extension rod, the number of extension rod is less to reduce cumulative error. The longest one connects to sleeve, the next is in turn by the length, the shortest is the last one. Install extension rod, first take down thimble, extension rod connects to sleeve, use spanner to tighten it, screw on thimble (Fig.1).

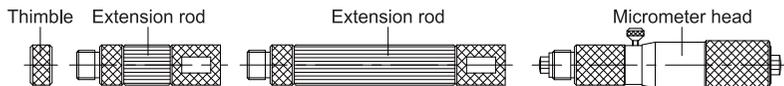


Fig.1

---During measurement, make sure there are no cutting chips or other debris on the measuring faces and workpiece surface to effect the result. Rotate barrel to set its size less than the hole's diameter, and then put micrometer into the hole. Put fixed measuring face to contact the measured hole, rotate barrel slowly, shake micrometer gently along hole's axial and radial to find the minimum value in axial direction(Fig.2) and the maximum value in radial direction(Fig.3), tighten the locking screw, take out micrometer to get the result.

### Caution:

- 1) Well control measuring force during measurement so as not to affect measurement result.
- 2) Gravity brings rod deformation. Vertical use as far as possible to avoid the effect on accuracy.

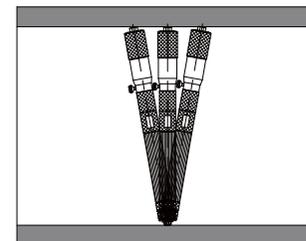


Fig.2

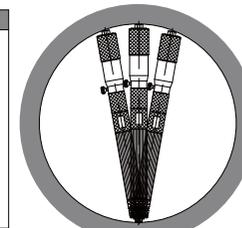
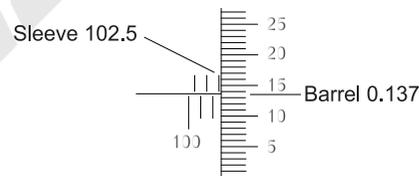


Fig.3

--- During reading, the sight should be perpendicular to the scale to avoid parallax reading. The reading is the sum of all extension rods and barrel reading. Take extension rod 25mm and 100mm for example, the reading method is following.

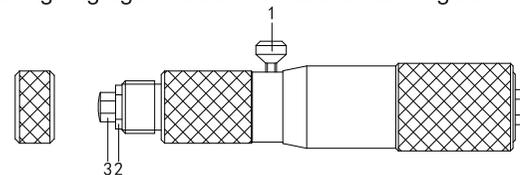


Extension rod: 125mm  
Barrel reading: 102.637mm  
Reading: 227.637mm

### 3. Calibration:

Calibrate micrometer after long use, accoring to below steps:

- Loosen thimble, set micrometer head to zero, tighten locking screw 1.
- Loosen locking nut 2 with spanner.
- Use micrometer to measure setting ring, rotate part no.3, adjust micrometer to same as setting ring, then tighten locking nut 2.
- Measure setting ring again to confirm. Loosen locking screw 1, finish calibraiton.



4. Take down extension rod and oil them to prevent rust after measurement.