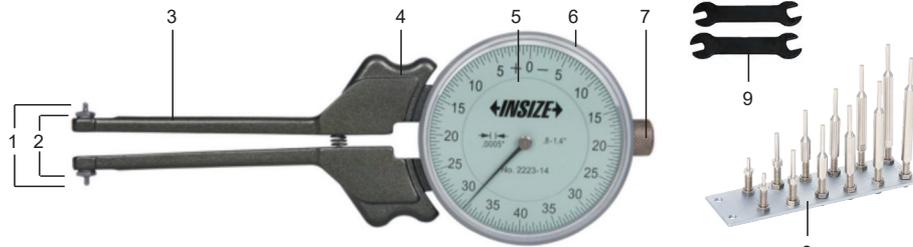




OPERATION INSTRUCTION

Internal Dial Caliper Gauge With Interchangeable Points

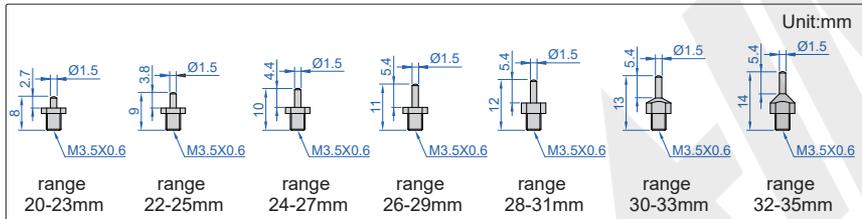
Code	Range	Dial indicator range	Graduation	Accuracy
2223-35	20-35mm	2mm	0.01mm	±0.02mm
2223-62	30-62mm	2mm	0.01mm	±0.02mm
2223-153	55-153mm	2mm	0.01mm	±0.02mm



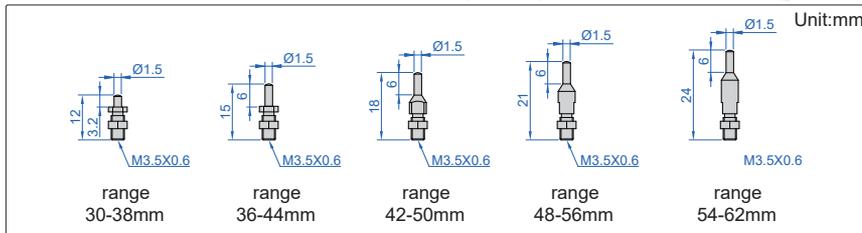
- 1-Measuring point
- 2-Lock nut
- 3-Caliper arm
- 4-Handle
- 5-Dial
- 6-Bezel
- 7-Dial lock nut
- 8-Measuring points
- 9-Wrench (1 pair)

Sizes and measuring ranges of points

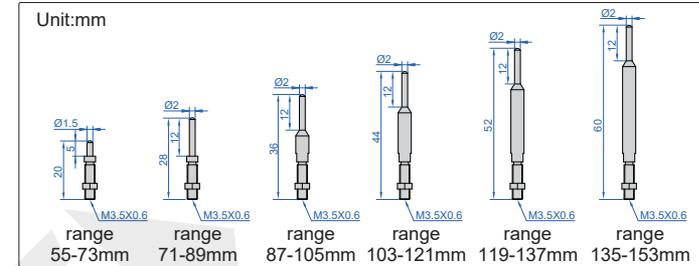
2223-35 points (included)



2223-62 points (included)

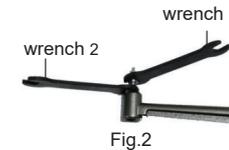
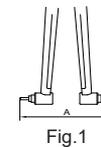


2223-153 points (included)



1. Set initial value:

- According to the size of the workpiece to be measured, select the appropriate point to install on the caliper. Attention when installing the point: according to the measured size, when under the free state of the caliper, the maximum size of the point at both ends should be 0.5mm-1.5mm larger than the measured size.
For example, if the measured size is 57.5mm and the point with measuring range of 55mm-73mm is installed, the distance A between the two points should be controlled at about 58mm-59mm when the caliper is under the free state (Fig.1).
- After adjusting the size of the point to a proper position, use a wrench to lock and fix it. (As shown in Fig.2, first fix the point with wrench 1, and then lock it with wrench 2)
- Select the external micrometer or ring gage which is similar to the measured size, and set the initial value of the caliper. In order to achieve higher accuracy, the initial value can be set to be the same as the measured size. For example, if the measured size is 57.5mm, the micrometer can be adjusted to 57.5mm, then measured with a caliper, and find the minimum point, and then initial value can be set to 57.5mm (Fig.3).
- Use caliper to measure micrometer or ring gage again to confirm the accuracy of initial value.



- 2. During measurement, press handle to make distance between two measuring points less than the hole's diameter. And then put caliper into the measured hole, release handle to make measuring points to contact the hole completely, shake caliper gently along hole's axial direction and radial direction to find the minimum reading in axial direction and the maximum reading in radial direction, then get the result. When measuring width, it is to find minimum reading to get the result.
- 3. When reading, the sight line should be perpendicular to the dial to avoid parallax. The reading method is as follows: read the integer from the small pointer and the decimal from the large pointer.