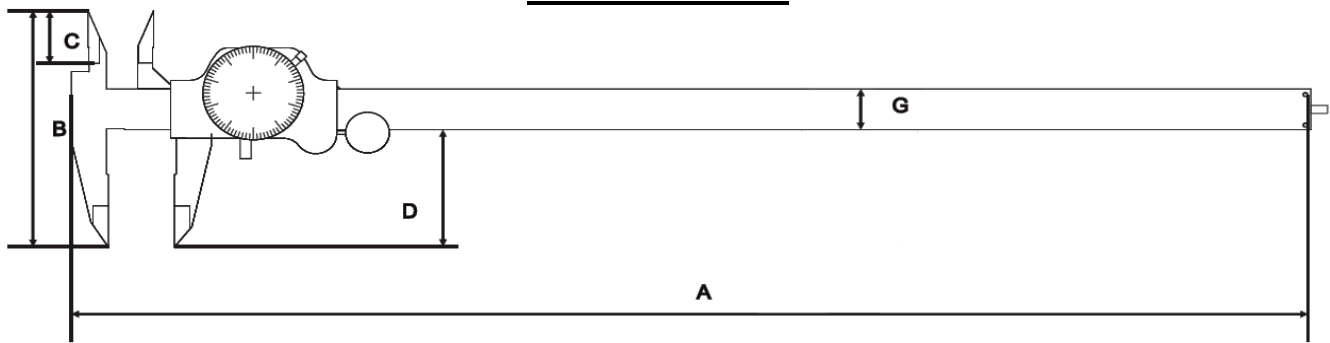


INSTRUCTION MANUAL FOR DIAL CALIPER(200-150)

➤ About Dial Caliper

Nowadays, the **dial caliper** has become considerably more popular than the vernier caliper. The reason is simple: compared to the vernier caliper, a dial caliper is much easier to use and read. Additionally, compared to the digital calipers, a dial caliper is more durable.

DIAL CALIPER



Code	A	B	C	D	G
200-150	238	87	13	40	16
200-200	288	97	13	50	16
200-300	388	111	13	63	16

The dial caliper features the beam lock, dial, depth rod, dial calibration lock, main scale, two fixed jaws and two moveable jaws. The two upper jaws and the two lower jaws are used to measure inside areas and outside areas respectively. The depth rod can measure the depth of the holes or crevices. The most outstanding feature of it is that a dial indicator mounted on the movable jaw, which provides a direct reading in inches or millimeters. Inch-type dial calipers are accurate to 0.001". While millimeter dials, calipers are accurate to 0.02mm or 0.01mm. Metric dial calipers typically measure from 0 to 150mm & 0 to 200 mm however, there are also 300mm dial calipers. They come in two versions. Perhaps more common is the type with 0.02-millimeter divisions on the dial face and in which one full revolution of the pointer corresponds to 2 millimeters. The other version is the 0.01-millimeter division; one revolution of the dial indicator needle equals 1 mm. The main scale of a British Imperial dial caliper is divided into one-thousandth (0.001) inch graduations. Therefore, one revolution of the dial indicator needle equals one-tenth inch on the bar scale. On a metric dial calipers the bar scale is divided into 2-mm increments.

Below are the basic steps to use the millimeter dial caliper, which are accurate to 0.02mm correctly:

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➤ Preparation

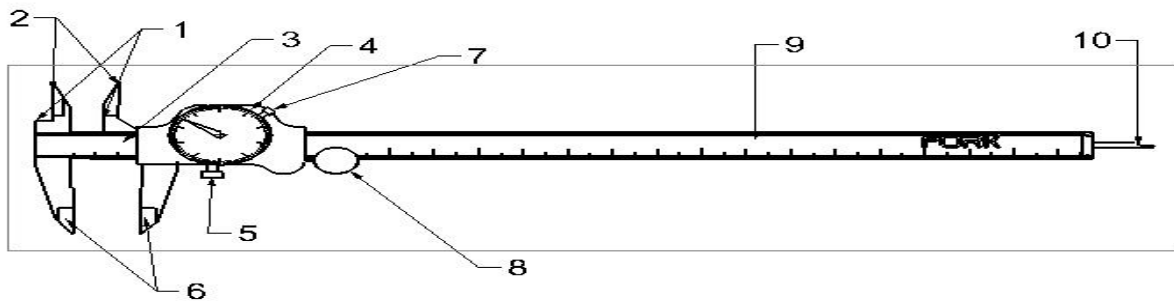
Step 1: Dry and clean the measuring surface of the item being measured with clean cloth (or soaked with cleaning oil);

Step2: Dry and clean the protective sticker of the dial caliper with clean cloth (or soaked with cleaning oil);

Step3: Loosen the beam lock of the dial caliper.

Step4: Dry and clean all the measuring surfaces of the four jaws of the caliper with clean cloth (or soaked with cleaning oil);

Step5: Then fully close the dial caliper to check whether the needle points to 0 or not. If it points to 0, then you can begin to take a measurement.



1-Step measuring faces
2-Internal measuring jaws
3-Vernier
4-Bezel
5-Locking screw

6-External measuring jaws
7-Bezel locking screw
8-Thumb wheel
9-Beam
10-Depth measuring bar

➤ Taking the Measurements

During the process of taking the measurement, bear in mind that do not touch the measuring surface of the material being measured and the measuring surfaces of the dial calipers with your hands for it might result in inaccuracy due to the sweat on your hands. You need to keep them clean all the time.

Similarly, to the digital calipers, dial calipers can also take the outside, inside, step and depth measurements.

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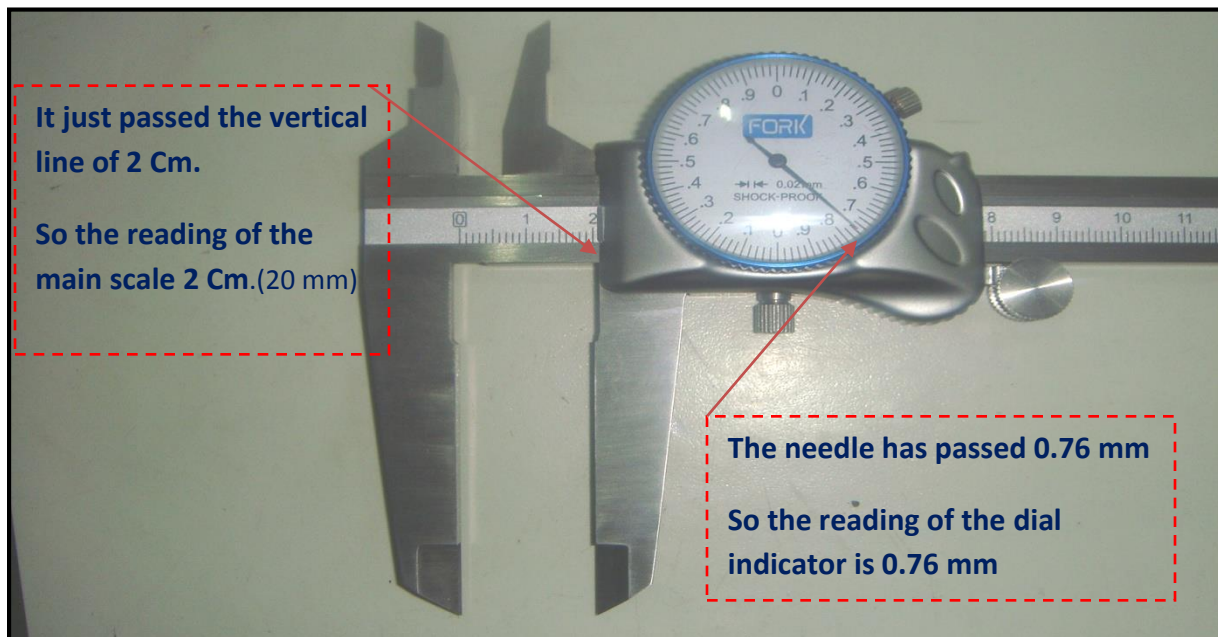
(1) Taking the outside measurements:

Step1: Open the lower jaws of the dial caliper on the outside parts of the item by sliding the movable jaws of the dial caliper.

Step2: Hold the material being measured in your left hand, then move the measuring jaws on the object being measured. Make sure the caliper jaws lay flat on or around the object. If the jaws are tilted in any way, you will not obtain an accurate measurement.

Step3: Read the measured value. As shown, the main scale value is first determined by reading the value shown to the left of the reference edge. In this case, the measurement value is 2.00cm. (Each vertical line on the main scale represents 1cm, namely, 10mm.)

Then read the value on the indicator dial. The needle has pointed to 0.76 mm, so the reading of dial indicator is 0.76mm here. Finally, add the two reading together and the total reading is 20.76 mm...



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(2) Taking the inside measurements:

Step1: Firstly, insert the internal jaws of the dial caliper into the hole.

Step2: Secondly, open the internal jaws up to fit the hole perfectly.

Step3: Read the measured value. Here, the main scale value is 7.80cm; the value on the indicator dial is 0.50mm. The total reading is 78.50 mm.

