How to use a Vernier Caliper

An ordinary **vernier caliper** has jaws you can place around an object, and on the other side jaws made to fit inside an object. These secondary jaws are for measuring the inside diameter of an object. Also, a stiff bar extends from the caliper as you open it that can be used to measure depth.

The basic steps are as follows:
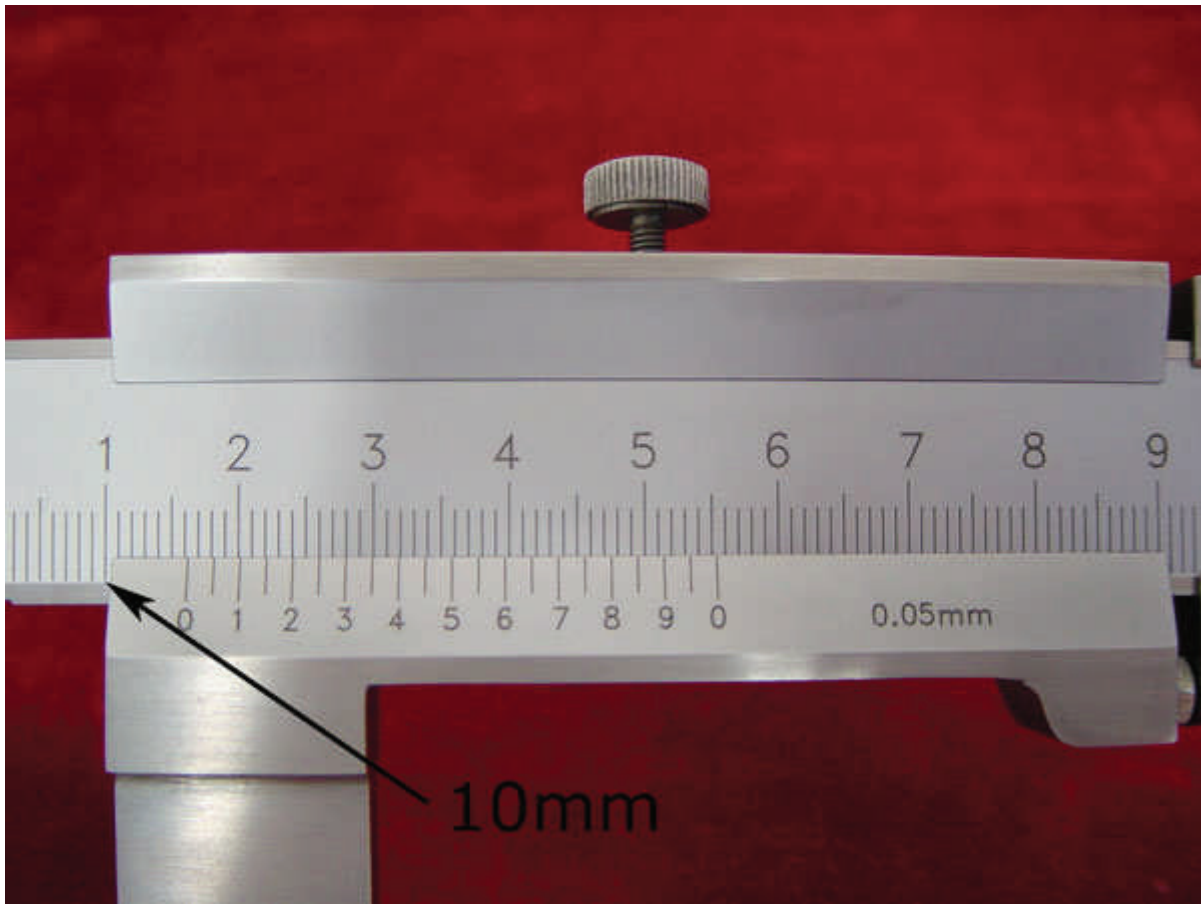
1. Preparation to take the measurement:

   a. Loosen the locking screw and move the slider to check if the vernier scale works properly.
   b. Before measuring, do make sure the caliper reads 0 when fully closed. If the reading is not 0, adjust the caliper's jaws until you get a 0 reading. If you can't adjust the caliper, you will have to remember to add to subtract the correct offset from your final reading.
   c. Clean the measuring surfaces of both the vernier caliper and the object, then you can take the measurement.
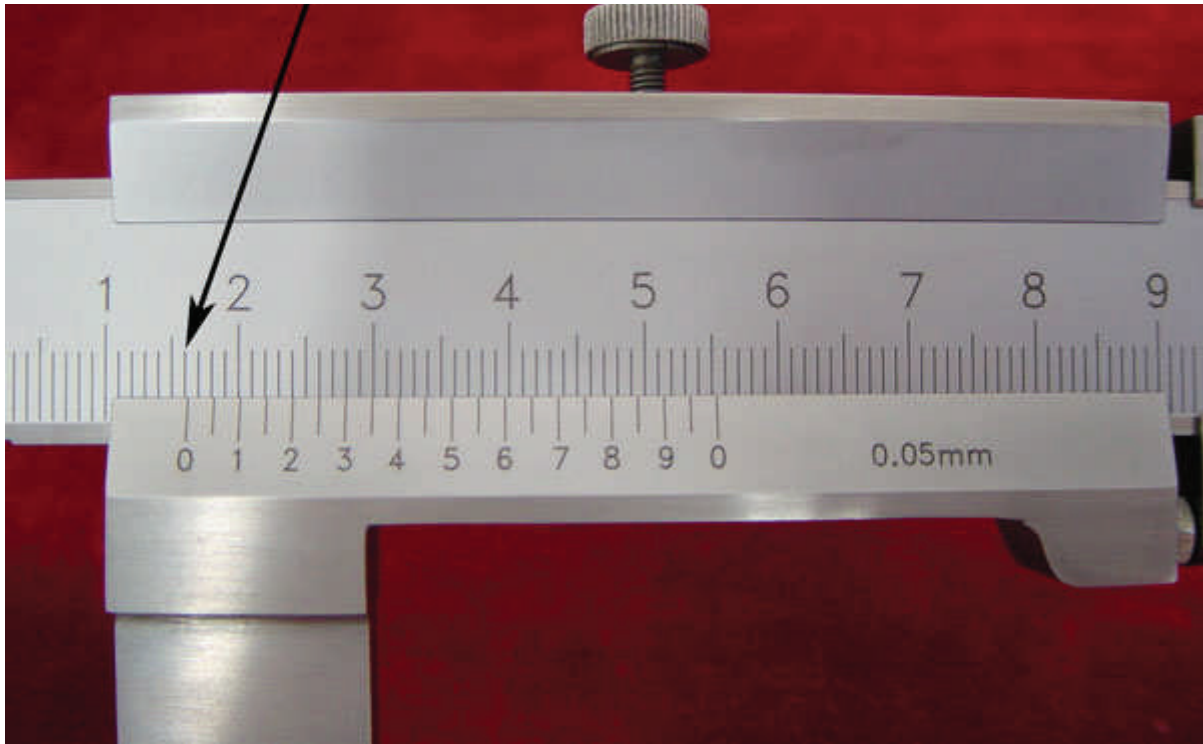
2. Take the measurement:

   a. **Be careful not to pull on the jaws**. Using the screw, close the jaws lightly on the item which you want to measure.
   b. If you are measuring something round, be sure the axis of the part is perpendicular to the caliper. Namely, make sure you are measuring the full diameter.
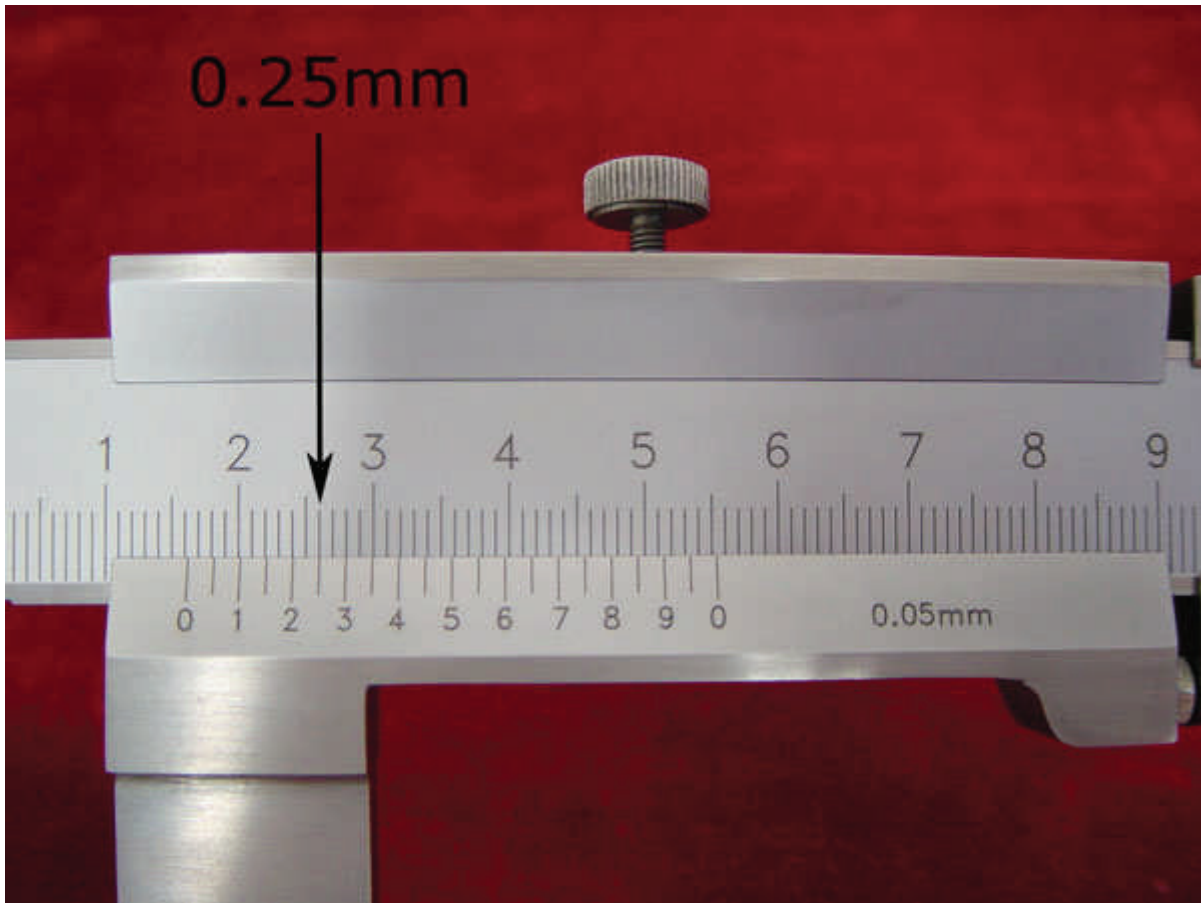
3. How to read the measured value:

a. Read the centimeter mark on the fixed scale to the left of the 0-mark on the vernier scale. (10mm on the fixed caliper)
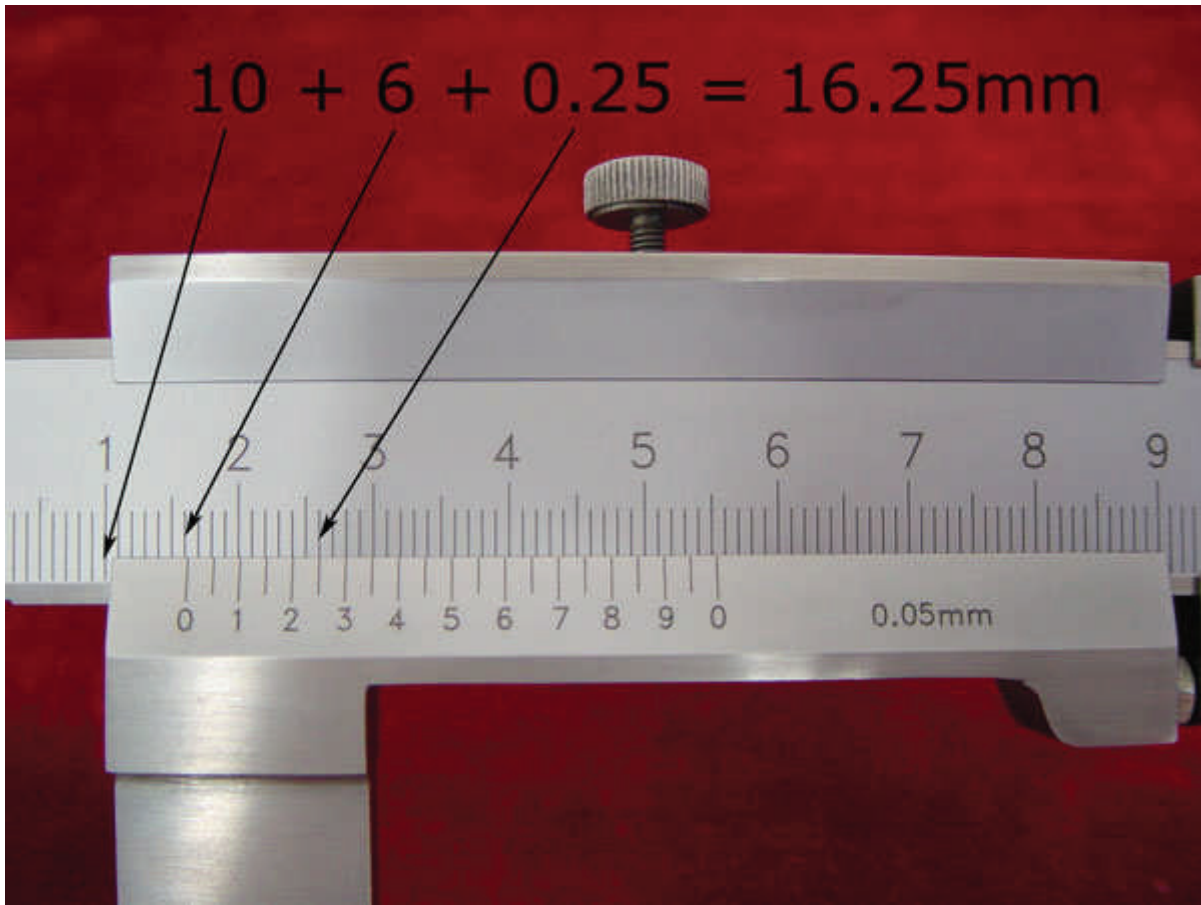
b. Find the millimeter mark on the fixed scale that is just to the left of the 0-mark on the vernier scale. (6mm on the fixed caliper)

c.   Look along the ten marks on the vernier scale and the millimeter marks on the adjacent fixed scale, until you find the two that most nearly line up. (0.25mm on the vernier scale)

d.   To get the correct reading, simply add this found digit to your previous reading. (10mm + 6mm + 0.25mm= 16.25 mm)

4.Maintenance

Clean the surface of the vernier caliper with dry and clean cloth (or soaked with cleaning oil) and stock in a dry environment if it stands idle for a long time.