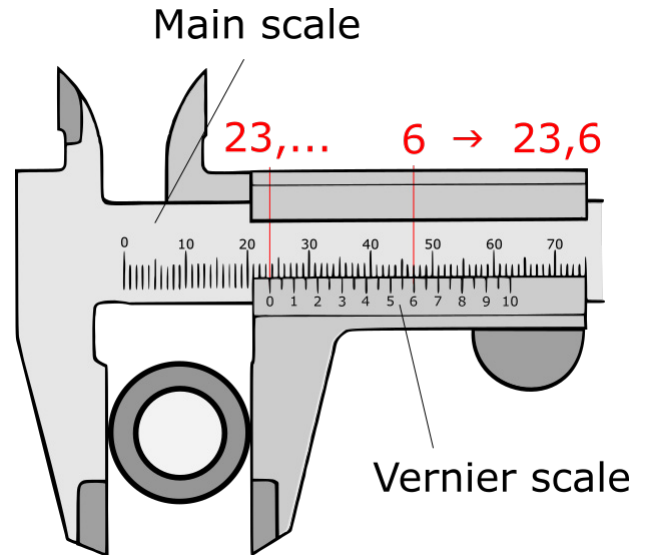


Calipers are precise instruments that can measure both internal and external ranges/distances with very high accuracy. The measurement results are interpreted by the user on the basis of the instrument scale. Manual calipers have two scales, the main scale and the vernier.

Compared to digital calipers, no battery is needed here, but reading and interpreting the measured value is more difficult.

To measure the outer dimensions of an object, the object is placed between the outer legs. The outer legs are pushed together until the object is held.

The first significant digit is read from the main scale, immediately to the left of the „zero“ on the vernier scale. In the example shown, this is 23.



The decimal place is now determined on the vernier scale. The numerical value on the vernier scale is searched for whose scale line lies exactly on the same line as one off the scale lines on the main scale. In the example, this is the value 6 on the vernier scale. This results in a measured value of 23.6.

Make sure that the main scale and the vernier are always viewed parallel and never read sideways. This prevents parallax errors and thus incorrect measurement results.