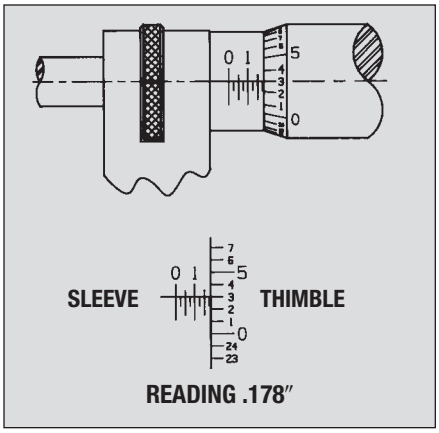
How to Read a Starrett Micrometer Graduated in Thousandths of an Inch (.001″)

The pitch of the screw thread on the spindle is 40 threads per inch. One revolution of the thimble advances the spindle face toward or away from the anvil face precisely 1/40″ or .025 inches.

The reading line on the sleeve is divided into 40 equal parts by vertical lines that correspond to the number of threads on the spindle. Therefore, each vertical line designates 1/40″ or .025 inches. Lines vary in length for easy reading. Every fourth line, which is longer than the others, designates a hundred thousandths. For example: the line marked “1” represents .100″ and the line marked “2” represents .200″, etc.

The beveled edge of the thimble is divided into 25 equal parts with each line representing .001″ and every line numbered consecutively. Rotating the thimble from one of these lines to the next moves the spindle longitudinally 1/25 of .025″, or .001″. Rotating two divisions represents .002″, etc. Twenty-five divisions indicate a complete revolution of .025″ or 1/40 of an inch.

To read the micrometer in thousandths, multiply the number of vertical divisions visible on the sleeve by .025″, and to this add the number of thousandths indicated by the line on the thimble which coincides with the reading line on the sleeve.



EXAMPLE:

The “1” line on sleeve is visible, representing . . . . . .100″

There are 3 additional lines visible, each representing .025″

3 x .025″ . . . . . = .075″

Line “3” on the thimble coincides with the reading line on the sleeve, each line representing .001″

3 x .001″ . . . . . = .003″

The micrometer reading is . . . . . .178″

How to Read a Starrett Micrometer Graduated in Ten-Thousandths of an Inch (.0001″)

Starrett micrometers graduated in ten-thousandths of an inch read like micrometers graduated in thousandths, except that an additional reading in ten-thousandths is obtained from a vernier scale on the sleeve.

The vernier consists of ten divisions on the sleeve, which occupy the same space as nine divisions on the thimble (Fig. B). Therefore, the difference between the width of one of the ten spaces on the vernier and one of the nine spaces on the thimble is one-tenth of a division on the thimble, or one ten-thousandth (.0001″).

To read a ten-thousandths micrometer, first obtain the thousandths reading, then see which of the lines on the vernier coincides with a line on the thimble. If it is the line marked “1” on the sleeve, add one ten-thousandth, if it is the line marked “2”, add two ten-thousandths, etc.

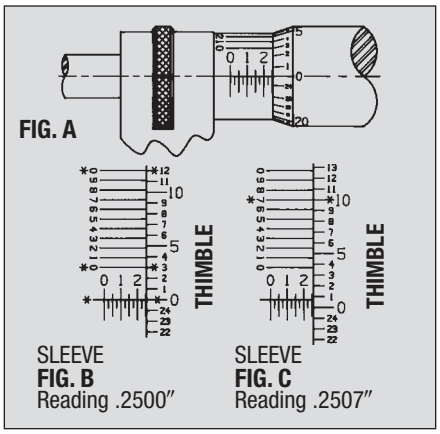


FIGURE C – READING .2507″

The “2” line on sleeve is visible, representing . . . . . .200″

There are two additional lines visible, each representing .025″ . . . . . .050″

The reading line on the sleeve lies between the “0” and “1” on the thimble indicating that a vernier reading must be added . . . . . ---------

The “7” line is the only line on the vernier that coincides with a line on the thimble, representing

7 x .0001″ . . . . . = .0007″

The micrometer reading is . . . . . .2507″