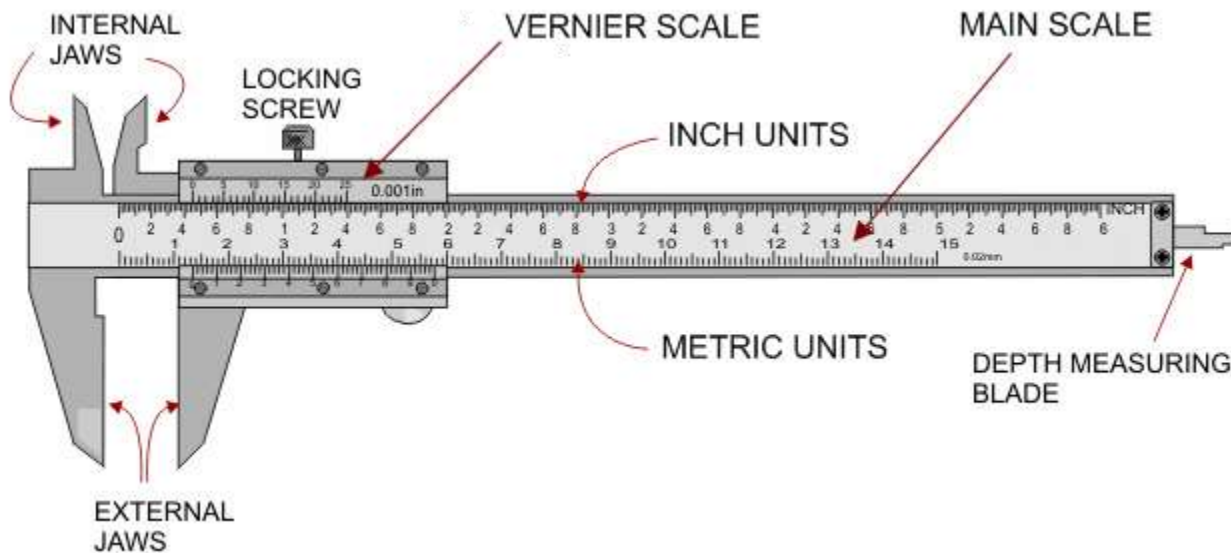


Reading a Vernier Caliper



Vernier Calipers

In this lesson you will learn about:

- The different kinds of calipers.
- The components of a typical caliper.
- Caliper usage.
- Reading English and metric measurements from calipers.

Vernier Calipers

- Calipers are tools used in home, small shop, and industrial settings.
- They are used to make precise length measurements.

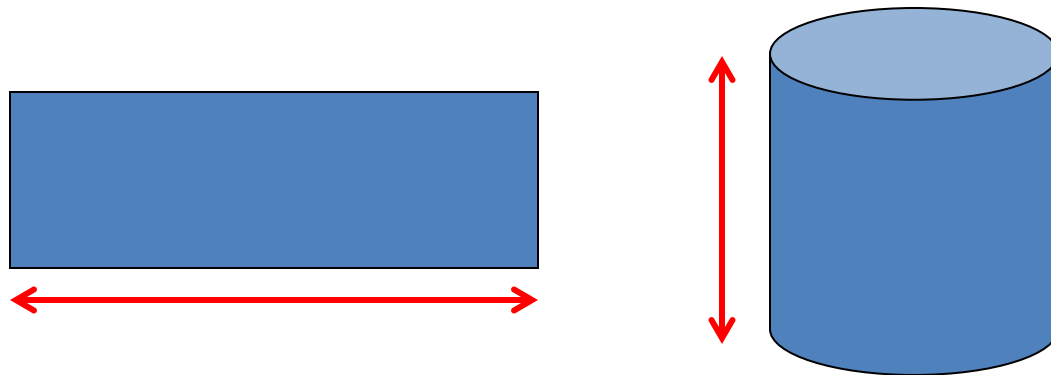
Vernier Calipers

Some reasons for their popularity include:

- Wide measuring *range* (usually 0 - 6”).
- *English and metric scales* are usually found on the same instrument.
- *Many different kinds of measurements* can be made with a caliper...

Vernier Calipers

- While both micrometers and calipers can make *outside* length measurements...



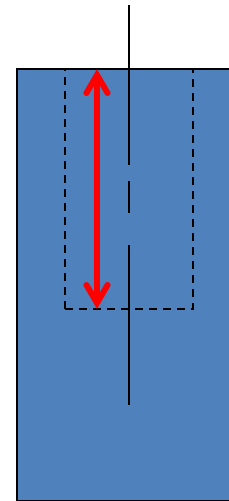
Vernier Calipers

Calipers can also make:

- *inside* measurements



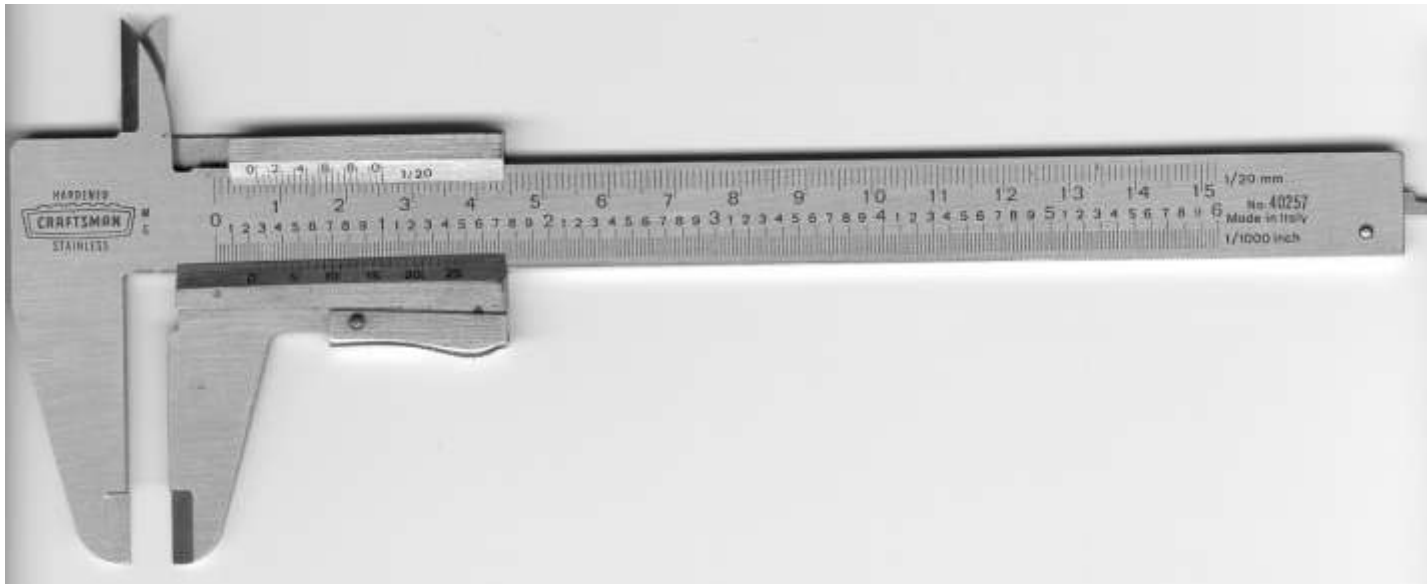
- *depth* measurements.



Vernier Calipers

There are three types of calipers:

- The *vernier* caliper:



Vernier Calipers

- The *dial* caliper:



Vernier Calipers

- ...and the digital *electronic* caliper.

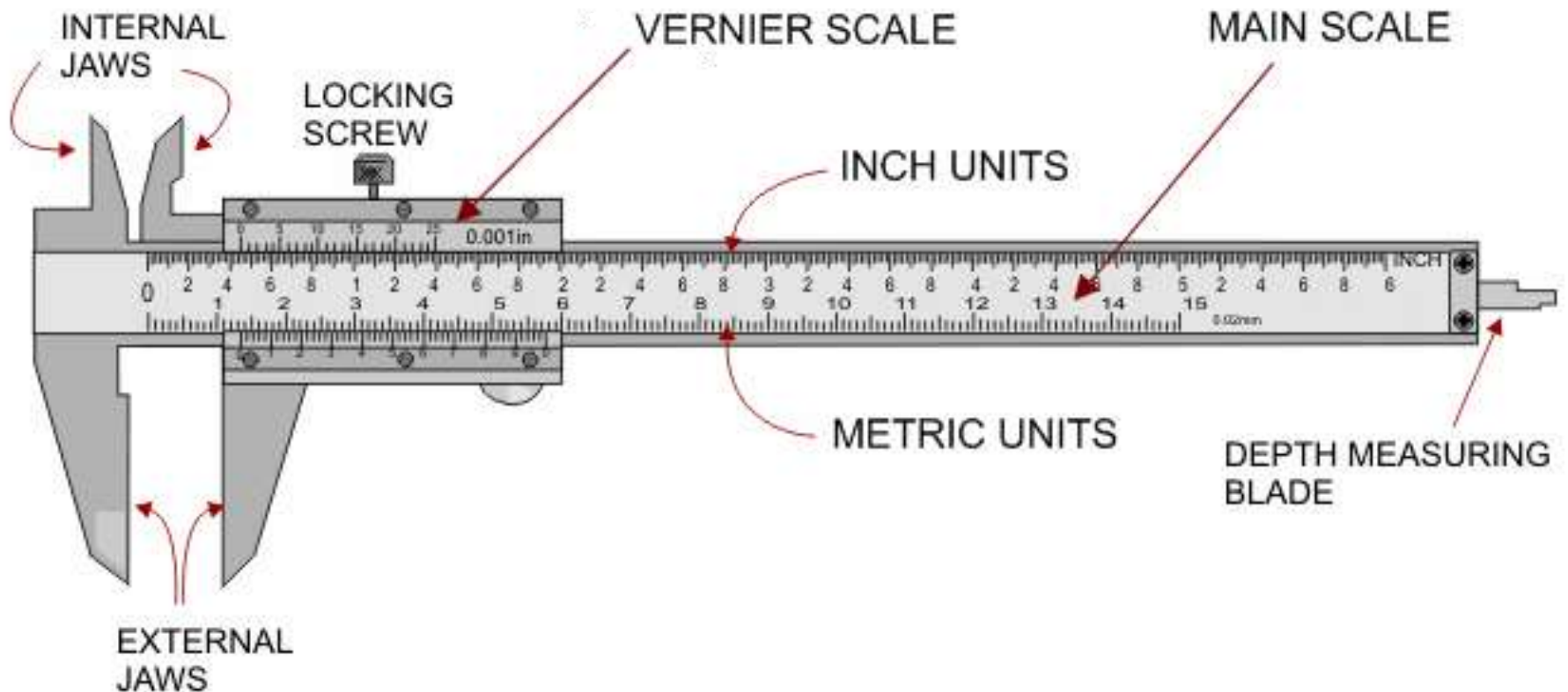


Vernier Calipers

- In this lesson, we will concentrate on the *vernier* caliper since it takes the most skill to read.
- You will learn to measure with a vernier caliper in inch and metric units.

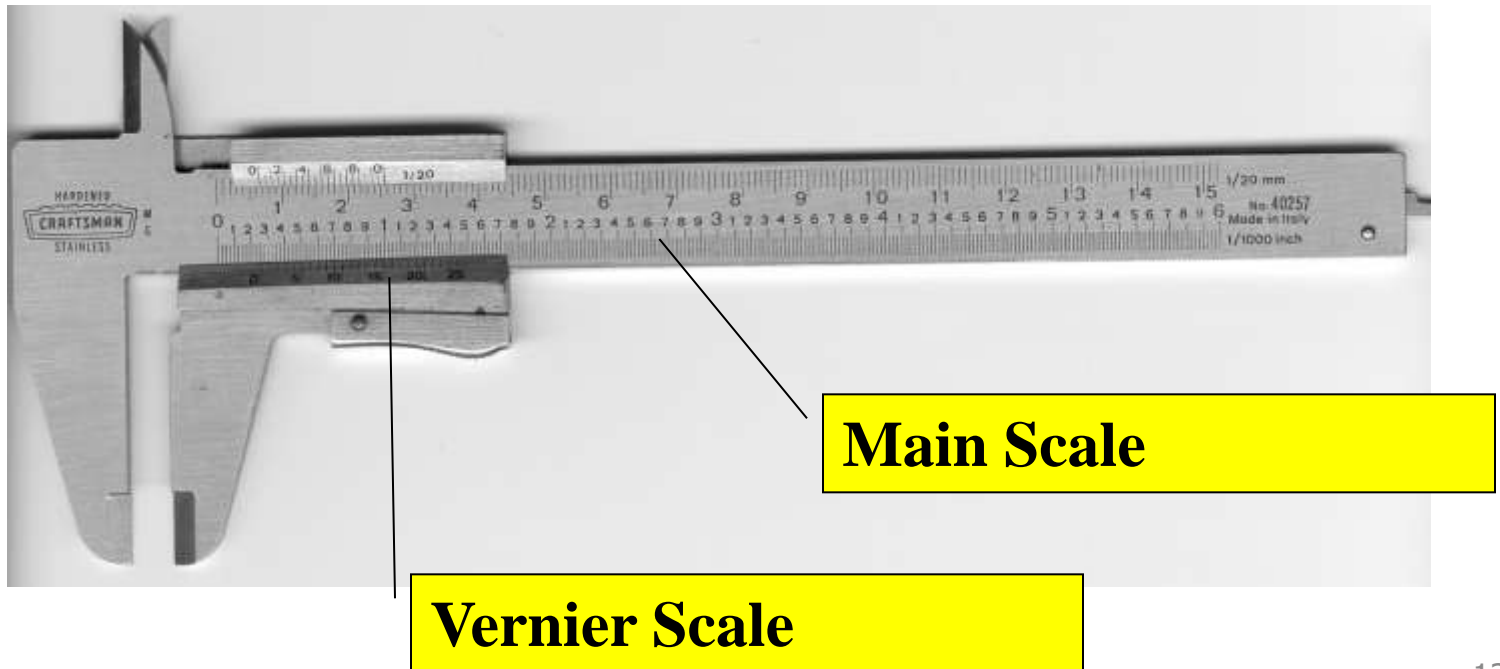
Vernier Calipers

Main features of a typical vernier caliper:



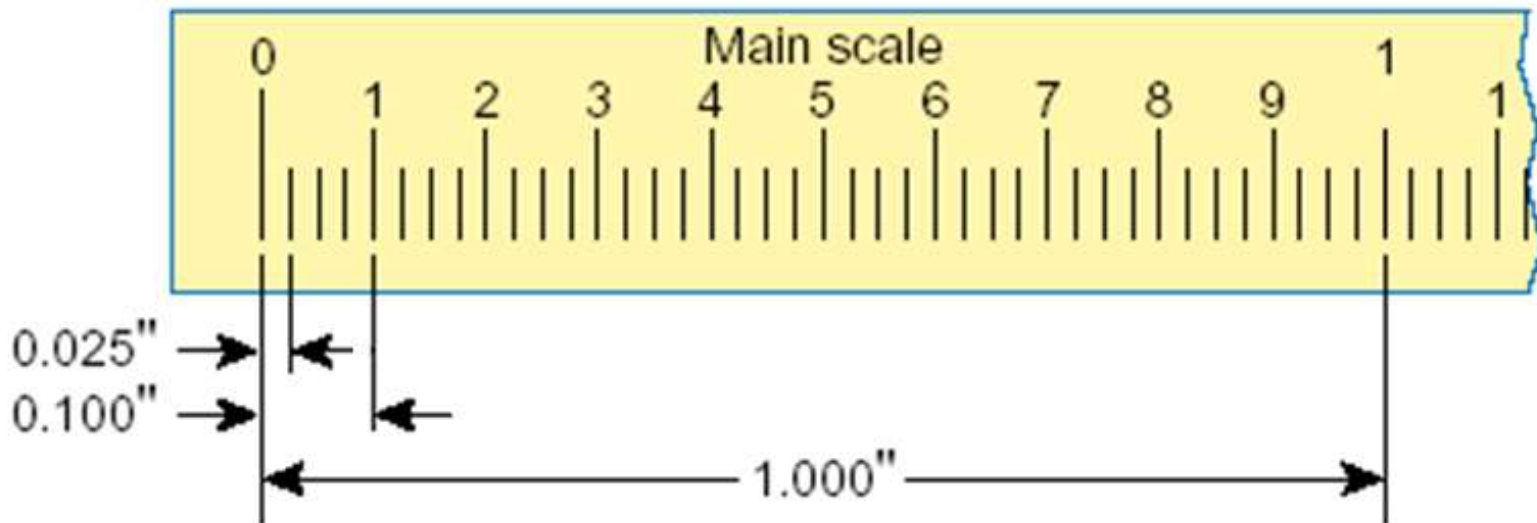
Vernier Calipers

- To determine the length of an object in *inches*, you must be able to read the **Main Scale** and the **Vernier Scale** on the caliper.



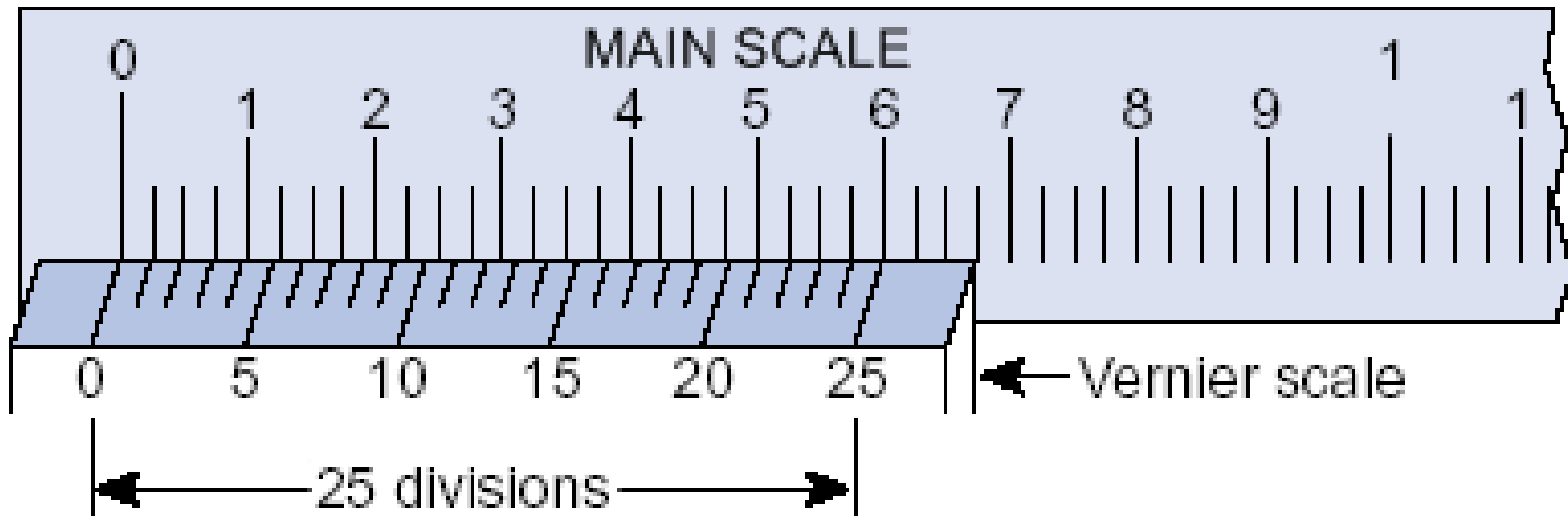
Vernier Calipers

- The **Main Scale** on a Vernier Caliper is divided into inches.
- Each inch is divided into 1/10ths (0.100")
- The area between the 0.100" increments is divided into fourths. Each graduation is equal to 0.025"

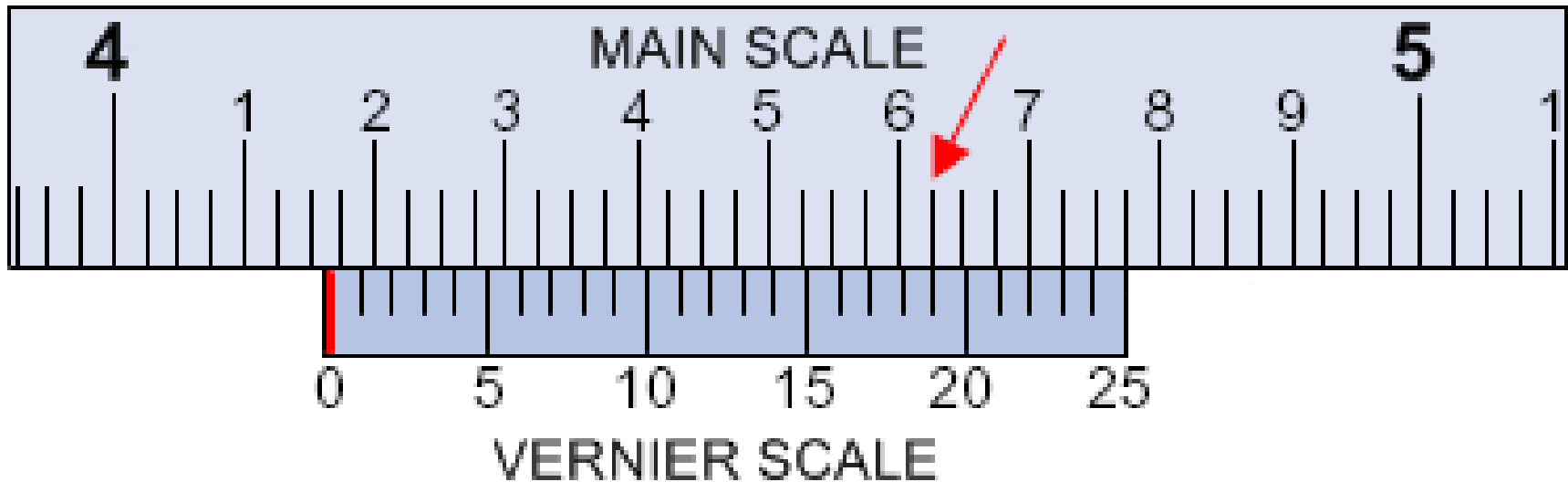


Vernier Calipers

- The **Vernier Scale** divides each of the 0.025" sections on the **Main Scale** into 25 parts, each equal to 0.001"



Example



- Inch **4.000** - Use the 0 line on the Vernier Scale.
- 1/10 **0.100** - Use the 0 line on the Vernier Scale.
- .025 **0.050** - Use the 0 line on the Vernier Scale.
- .001 **0.019** - Select the first line on the Vernier Scale line that lines up with any line on the Main Scale.
- Total **4.169"**