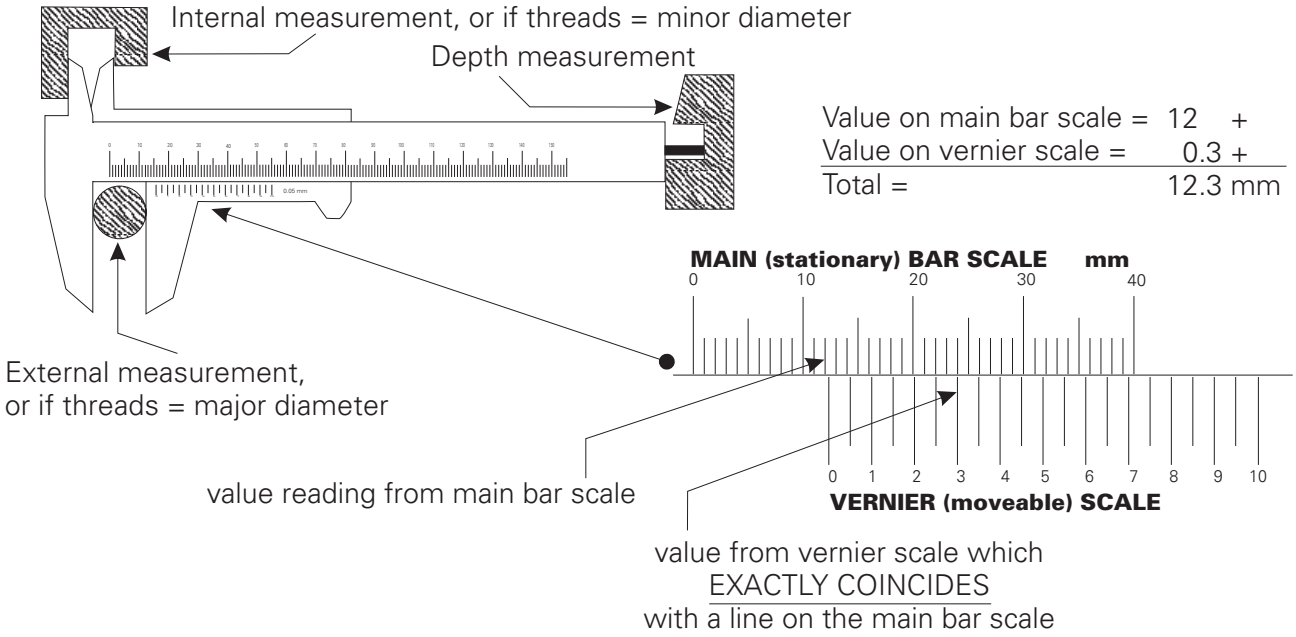
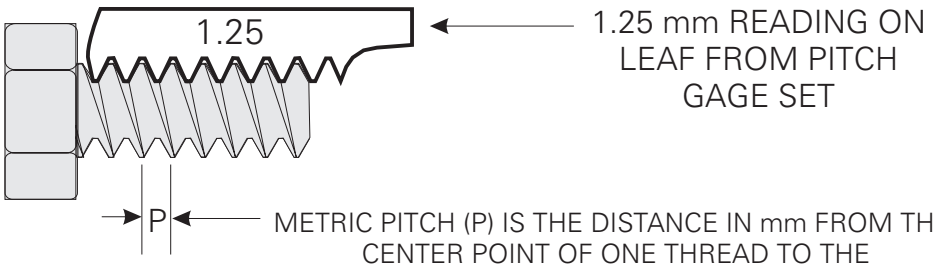
HOW TO READ THE METRIC VERNIER CALIPER

1. READ THE VALUE OF THE MAIN (stationary) BAR SCALE WHICH IS JUST TO THE LEFT AND ABOVE THE '0' ZERO READING ON THE VERNIER (moveable) SCALE. VALUES WILL BE IN mm
2. THEN ADD THE VALUE ON THE VERNIER (moveable) SCALE WHICH EXACTLY COINCIDES WITH A LINE ON THE MAIN (stationary) BAR SCALE. VALUES WILL BE IN 0.1 OR 0.15 mm



HOW TO USE A THREAD PITCH GAGE

1. SELECT THE INDIVIDUAL THREAD GAGE FROM THE SET WHICH EXACTLY MATCHES THE PITCH OR NUMBER OF THREADS PER INCH ON THE ITEM TO BE MEASURED.
2. NOTE THE MARKING ON THE INDIVIDUAL GAGE. IT MAY BE IN METRIC PITCH (P) OR IN THREADS PER INCH (TPI)



Example: If the major diameter value is 8 mm and the pitch is 1.25 mm then the thread is: M8 x 1.25

A helpful formula is:

$$TPI = \frac{25.4}{P}$$

READ THE VALUES FROM THE VERNIER CALIPER, AND THE DATA FROM THE THREAD PITCH GAGE. THEN DETERMINE THE SIZE AND IDENTITY OF THE THREAD (metric, USA, or British) FROM THE THREAD IDENTIFICATION CHART DATA.

Note: If you are measuring an internal (female) thread; then this yields the minor diameter of the item. The necessary (external male) major diameter (OD) value will have to be calculated. See the instructions below.

1. Multiply the factor value (F) of 1.0825 by the pitch (P) which yields result (R). (F x P = R) Example: 1.0825(F) x 1.75(P) = 1.8944(R)
2. Add the carefully measured value for the internal diameter (ID) to the result (R) which yields the nominal major diameter (OD) of the internal thread. (ID + R = OD) Example: measured value 10.036 (ID) + result (R) 1.8944 = approximate nominal major diameter (OD) 12.