This set contains a selection of measuring tools most suitable for students and apprentices
Set contents:
Metric Set: 50-600-025
Fine Adjustment Vernier Caliper: 145mm / 5 ½”
Mechanical Micrometer: 0-25mm
Satin Chrome Rule: 150mm/6”
Inch Set: 50-600-001
Fine Adjustment Vernier Caliper: 145mm / 5 ½”
Mechanical Micrometer: 0-25mm
Satin Chrome Rule: 150mm/6”

Vernier Caliper Fine Adjustment Style

Hardened stainless steel body
Satin chrome finish
Fine adjustment
Depth Rod
Four-way measurement:
Outside
Inside
Step
Depth
Raised sliding surface to prevent wear to scale

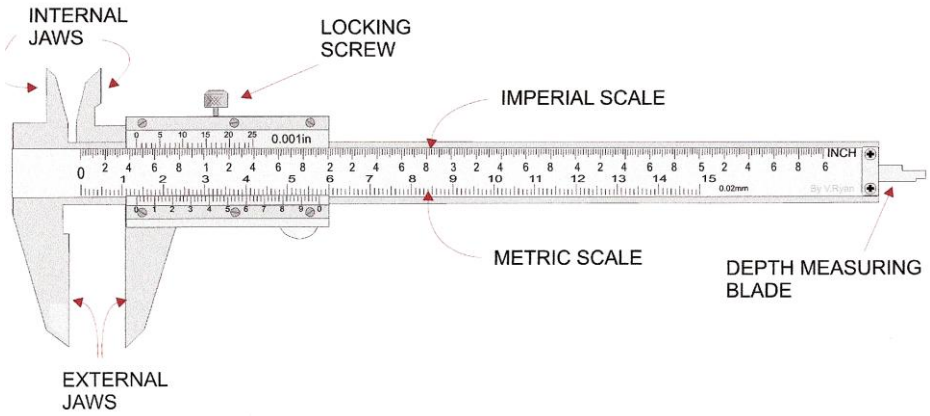
Code	Range	Metric Grads	Inch Grads	Accuracy	External Jaw Depth	Internal Jaw Depth
51-100-006	145mm/5 ½”	0.02	0.001	±0.02mm	40mm	18mm

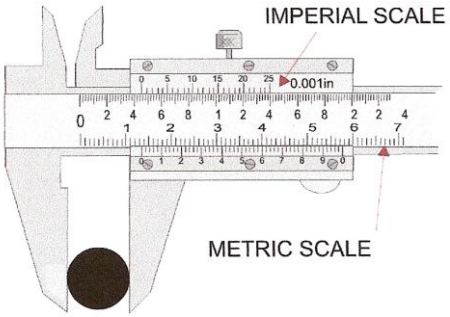
Vernier Caliper

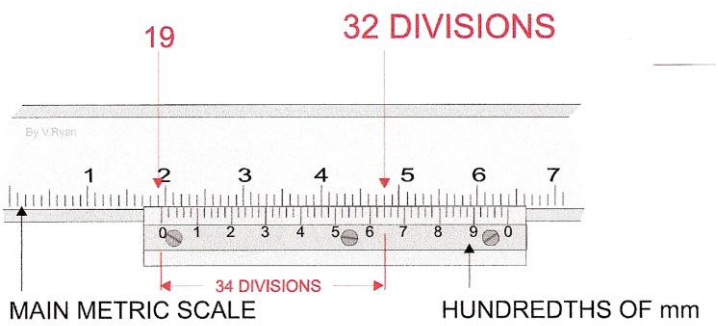
A Brief History

The Vernier Caliper is an instrument for making very accurate linear measurements.
The instrument was first introduced in 1631 by Pierre Vernier of France
It utilises two graduated scales:
The main scale which is similar to that on a rule plus a specially graduated sliding scale (called the Vernier scale)
The Vernier scale slides parallel to the main scale and enables readings to be made to a fraction of a division on the main scale.

Reading a Vernier

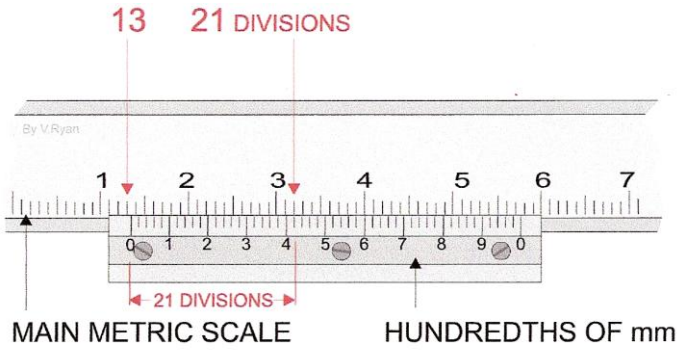






Example 1:

19 + 32 x 0.02
19 + 0.64
19.64 = Correct reading

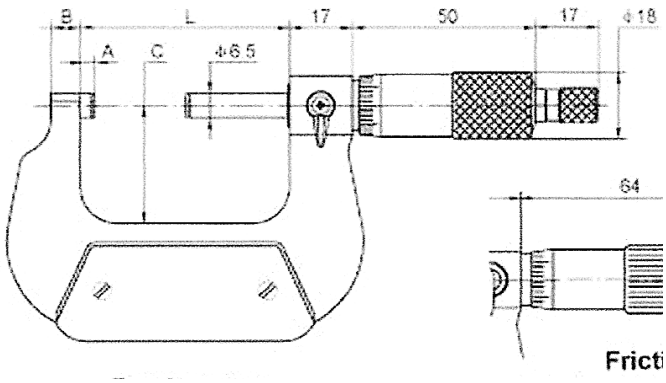


Example 2:

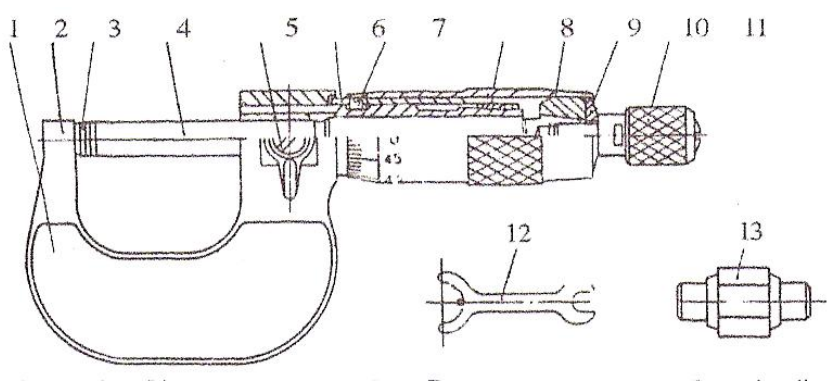
13 + 21 x 0.02
13 + 0.42
13.42 = Correct reading

Mechanical Micrometers 50-100-Series

Accuracy conforms to DIN 863
Resolution: Metric 0.01mm, Inch 0.0001”
Models above 25mm / 1” supplied with setting rod
Micro fine graduations for accurate reading
Tungsten carbide measuring faces
Spindle locking lever
Ratchet stop
Non-glare satin chrome barrel and sleeve
Blue baked enamel hammer tone finish
Supplied in fitted case with adjustment tools



Code	Range	Code	Range	Style	A mm	B mm	C mm	L mm	Accuracy mm
Metric	mm	Inch	inch						
50-100-025	0-25	50-100-001	0-1	A	3.0	6	24.0	32	0.004



1 Heat Resistant Plate
2 Frame
3 Anvil
4 Spindle
5 Spindle Lock
6 Sleeve
7 Thimble
8 Barrel
9 Taper
10 End Cap
11 Ratchet Stop
12 Spanner
13 Setting Standard

Mechanical Micrometers 50-100-Series

Cleaning and Basic Checking Procedure

Remove any oil, grease, dust or small particles which may cause damage to the micrometer or affect its accuracy when taking measurements. Use a soft lint free cloth or paper together with a proprietary instrument cleaning agent. Do not use acetone as this can damage parts of the micrometer

Zero Point Checking and Adjustment

Use the ratchet stop to move the spindle until it touches the fixed anvil. Allow the ratchet to turn 1 ½ to 2 revolutions for the final positioning
The zero point on the thimble should now coincide with the reference graduated base line on the sleeve
For micrometers above 25mm / 1" use the supplied setting standard or a gauge block to check the zero position
If the zero point does not line up as required, it can be corrected by using the following procedure
When the zero point deviation on the thimble is under 2 divisions from the graduated base line
Turn the sleeve using the "C" spanner provided until correct alignment is achieved
When the zero point deviation on the thimble is over 2 divisions from the graduated base line
Hold the frame and the thimble and loosen the ratchet stop using the spanner provided
Disconnect the coupling of the thimble to the spindle by giving a light shock to the side of the thimble
Turn the thimble until the zero point is in alignment with the base line on the sleeve
Press the thimble against the spindle and re tighten with the spanner to achieve a positive coupling
Re check the zero position, any final small adjustment can now be made using the "C" spanner to re position the sleeve to the thimble zero

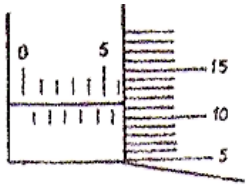
Reading the Micrometer

When reading the micrometer ensure that your line of sight is directly above the graduated scale on the sleeve and the thimble scale to avoid parallax reading errors

Ensure that the micrometer and the work piece are at the same temperature

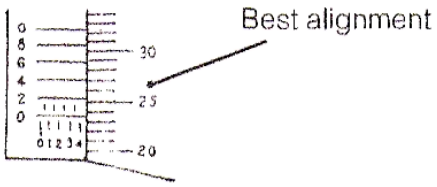
Handle the instrument with care, if it is dropped or knocked in any way it must be rechecked for correct working and accuracy as above

Reading Example: Metric



Example for division 0.01mm
Reading:
From Sleeve: 6mm
From thimble: 0.11mm
Final readings should be
6. + 0.11 = 6.11mm

Reading Example: Inch



Example for division 0.002mm
Reading:
From Sleeve: 4mm
From thimble: 0.23mm
From vernier of sleeve:
0.004mm
Final readings should be
4 + 0.23 + 0.004 = 4.234mm

Steel Rule Metric and Inch Two Sided with Round End

Conform to EEC-Class 1, Ref 73/362/EEC
Manufactured from high quality steel
Fully hardened and tempered
Non-glare satin chrome finish
Graduations etched from precise glass masters for repeated accuracy

Code	Length	Type	Width and Thickness	Rule Marking Front Face (inch)	Rule Marking Reverse Face Metric)	Style	End Style
678-006F	150mm / 6”	Rigid	19 x 0.5mm	16ths, 32nds, 64ths 10ths, 20ths, 50ths, 100ths	1.0mm and 0.5mm	64R	D End

Accuracy Specification

EEC Directive 73-362 / EEC: Rules Class 1 and 2

For Metric Scales Only: (there is no specification for Inch Scales)

Permissible Errors: For EEC Class 1 Rules
Maximum permissible error between 2 intervals upto 1mm = 0.1mm
Maximum permissible error between two intervals not exceeding 10mm = 0.2mm
From Rule End: Above tolerance increased by 0.1mm

Examples:

Rule End to 1mm graduation = Normal Tol. 0.1mm + Additional Tol. 0.1mm = 0.2mm

Rule End to 10mm graduation = Normal Tol. 0.2mm + Additional Tol. 0.1mm = 0.3mm

Overall Length Tolerance

Tol = [a + (b x L)]

a = 0.1 for class 1
b = 0.1 for class 1
L = Length of scale rounded up to the nearest metre

Example for a 300mm rule, when measurement is taken from the 10mm graduation to the 300mm graduation:
Tol = [0.1 +(0.1 x 1)] = 0.2mm

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for linear tools ***manufacturer:***

Other Similar products are found below :

59-017-150 49-923-150 59-650-747 59-605-005