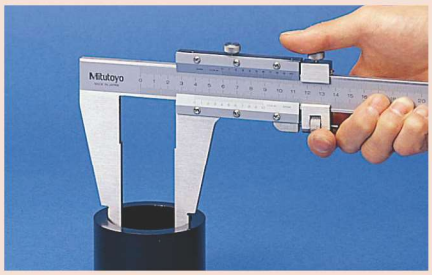
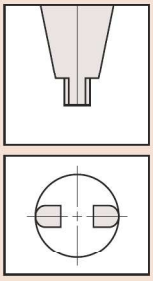
Vernier Caliper
SERIES 160 — with Nib Style Jaws and Fine Adjustment

- The jaws have radiused measuring faces for accurate inside diameter (ID) measurement Inside and outside measurements can be directly read from the upper and lower slider graduations, respectively.
- With fine adjustment (**Code No. 160-127/128/101/104**).

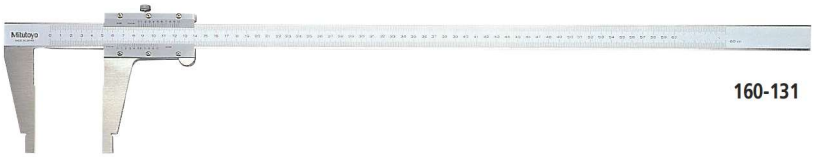
Measurement example



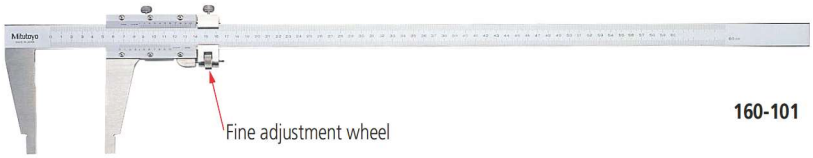


Radiused jaws for accurate ID measurement

Measurement example



160-131



160-101

SPECIFICATIONS

Metric with inside measurement vernier scale

Code No.	Range (mm)*1	Minimum reading (mm)	Maximum permissible error (mm)*2		Remarks
			E_{MPE}	S_{MPE}	
160-130	0 (20.1) - 450	0.05	±0.10	±0.10	without fine adjustment
160-131	0 (20.1) - 600				
160-132	0 (20.1) - 1000		±0.15	±0.15	

*1 ( ): Minimum dimension in ID measurement
*2 The Partial Surface Contact Error (E_{MPE}) and Shift Error (S_{MPE}) are terms defined by ISO 13385-1:2019.

Metric with inside measurement vernier scale

Code No.	Range (mm)*1	Minimum reading (mm)	Maximum permissible error (mm)*2		Remarks
			E_{MPE}	S_{MPE}	
160-127	0 (10.1) - 300	0.02	±0.04	±0.04	with fine adjustment
160-128	0 (20.1) - 450		±0.05	±0.05	
160-101	0 (20.1) - 600				
160-104	0 (20.1) - 1000		±0.07	±0.07	

*1 ( ): Minimum dimension in ID measurement
*2 The Partial Surface Contact Error (E_{MPE}) and Shift Error (S_{MPE}) are terms defined by ISO 13385-1:2019.

Metric/Inch with metric/inch double scale

Code No.	Range*1	Minimum reading	Maximum permissible error*2		Remarks
			E_{MPE}	S_{MPE}	
160-150	0 - 300 mm/0 - 12 in (10.1 - 300 mm/0.398 - 12 in)	0.02 mm/ 0.001 in	±0.04 mm/ ±0.0015 in	±0.04 mm/ ±0.0015 in	+10 mm/0.394 in to reading in inside measurement
160-151	0 - 450 mm/0 - 18 in (20.1 - 450 mm/0.791 - 18 in)		±0.05 mm/ ±0.002 in	±0.05 mm/ ±0.002 in	+20 mm/0.787 in to reading in inside measurement
160-153	0 - 600 mm/0 - 24 in (20.1 - 600 mm/0.791 - 24 in)				
160-155	0 - 1000 mm/0 - 40 in (20.1 - 1000 mm/0.791 - 24 in)		±0.07 mm/ ±0.003 in	±0.07 mm/ ±0.003 in	

*1 ( ): Minimum dimension in ID measurement
*2 The Partial Surface Contact Error (E_{MPE}) and Shift Error (S_{MPE}) are terms defined by ISO 13385-1:2019.

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Inch with inside measurement vernier scale

Code No.	Range (in)*1	Minimum reading (in)	Maximum permissible error (in)*2		Remarks
			E_{MPE}	S_{MPE}	
160-124	0 (0.304) - 12	0.001	±0.0015	±0.0015	—
160-116	0 (0.504) - 18		±0.002	±0.002	
160-102	0 (0.504) - 24				
160-105	0 (1.004) - 40		±0.003	±0.003	

*1 ( ): Minimum dimension in ID measurement
*2 The Partial Surface Contact Error (E_{MPE}) and Shift Error (S_{MPE}) are terms defined by ISO 13385-1:2019.

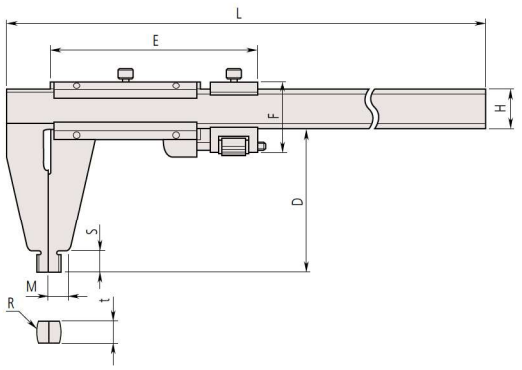
Inch/Metric with inch/metric double scale

Code No.	Range*1	Minimum reading	Maximum permissible error*2		Remarks
			E_{MPE}	S_{MPE}	
160-125	0 - 12 in/0 - 300 mm (0.304 - 12 in/7.72 - 300 mm)	0.001 in/ 0.02 mm	±0.0015 in/ ±0.04 mm	±0.0015 in/ ±0.04 mm	-0.3 in/7.62 mm to reading in inside measurement
160-119	0 - 18 in/0 - 450 mm (0.504 - 18 in/12.8 - 450 mm)		±0.002 in/ ±0.05 mm	±0.002 in/ ±0.05 mm	-0.5 in/12.7 mm to reading in inside measurement
160-103	0 - 24 in/0 - 600 mm (0.504 - 24 in/12.8 - 600 mm)				
160-106	0 - 40 in/0 - 1000 mm (1.004 - 40 in/25.5 - 1000 mm)		±0.003 in/ ±0.07 mm	±0.003 in/ ±0.07 mm	+1 in/25.4 mm to reading in inside measurement

*1 ( ): Minimum dimension in ID measurement
*2 The Partial Surface Contact Error (E_{MPE}) and Shift Error (S_{MPE}) are terms defined by ISO 13385-1:2019.

DIMENSIONS

Unit: mm



Range	D	E	F	H	L	M	R	S	t
0 - 300 mm/0 - 12 in	75	103	38	20	445	10	R5	12	3.8
0 - 450 mm*	100	89	—	25	630	14.8	R10	18	6
0 - 450 mm/0 - 18 in		112	51						
0 - 600 mm*		89	—		780				
0 - 600 mm/0 - 24 in		112	51						
0 - 1000 mm*	140	111	—	32	1240	17		24	8
0 - 1000 mm/0 - 40 in		150	62.5						

* Without fine adjustment