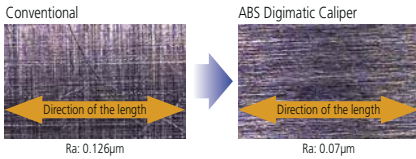


ABSOLUTE Digimatic Caliper

SERIES 500 — with Exclusive ABSOLUTE Encoder Technology

Mitutoyo's absolute Digimatic Caliper is the next generation of electronic calipers. It keeps track of its origin point once set. Whenever turned on, the large LCD screen displays the actual slider position ready to start measurement. No more repeated zero setting is necessary with the absolute encoder technology as well as no more care for overspeed errors.

High quality guide surface finish for smooth slider movement

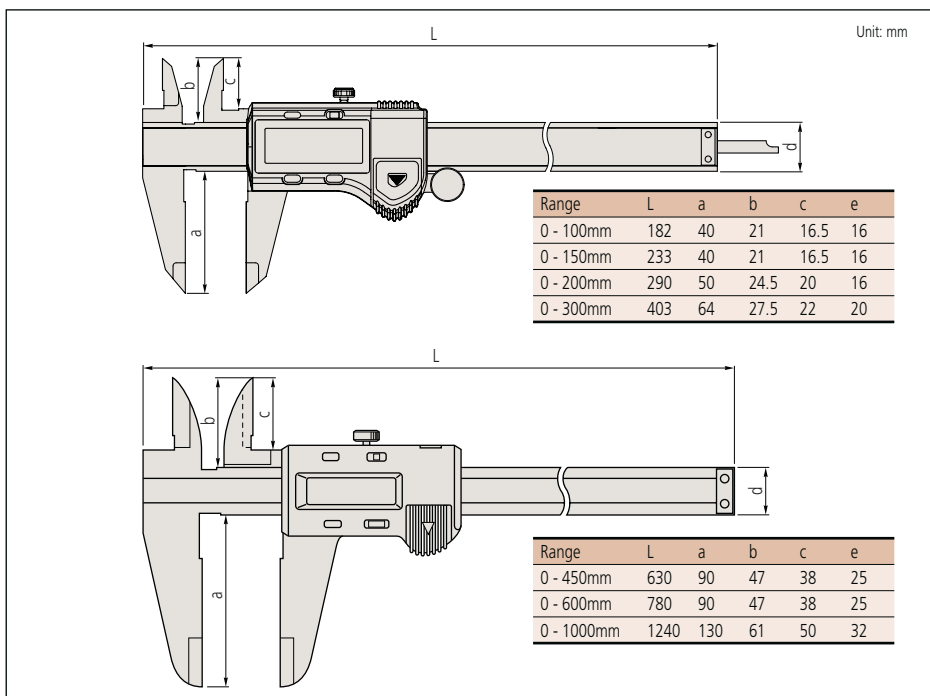


FEATURES

- Large and clear LCD readout.
- The ZERO/ABS key allows the display to be Zero-Set at any slider position along the scale for incremental comparison measurements. This switch will also allow return to the absolute (ABS) coordinate and display of the true position from the origin point (usually jaws-closed point).
- Data Hold Unit (959143) is optional.
- Carbide-tipped jaw type calipers are also available.



DIMENSION



(Refer to the page 9 for details.)



(Refer to the page 9 for details.)

Technical Data

Accuracy: $\pm 0.02\text{mm}$ ($\leq 200\text{mm}$), $\pm 0.03\text{mm}$ ($\leq 300\text{mm}$)
 $\pm 0.05\text{mm}$ ($\leq 600\text{mm}$), $\pm 0.07\text{mm}$ ($\leq 1000\text{mm}$)
 (excluding quantizing error)
 Resolution: 0.01mm or .0005"/0.01mm
 Repeatability: 0.01mm
 Display: LCD
 Length standard: ABSOLUTE electrostatic capacitance type linear encoder
 Max. response speed: Unlimited
 Battery: SR44 (1 pc.), **938882**
 Battery life: Approx. 3.5 years under normal use

Function

Origin-set, Zero-setting, Data output, inch/mm conversion (inch/mm models)
 Alarm: Low voltage, Counting value composition error

Optional Accessory

- 959143:** Data hold unit
- 959149:** SPC cable with data switch (1m)
- 959150:** SPC cable with data switch (2m)

959143



959149

SPECIFICATIONS

Metric

Range	Order No.	Remarks (depth measuring bar / thumb roller / others)		
0 - 100mm	500-150-20	ø1.9mm rod	with thumb roller	—
0 - 100mm	500-180-20*	ø1.9mm rod	—	—
0 - 150mm	500-151-20	Blade	with thumb roller	—
0 - 150mm	500-154-20	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 150mm	500-155-20	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 150mm	500-158-20	ø1.9mm rod	with thumb roller	—
0 - 150mm	500-181-20*	Blade	—	—
0 - 200mm	500-152-20	Blade	with thumb roller	—
0 - 200mm	500-156-20	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 200mm	500-157-20	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 200mm	500-182-20*	Blade	—	—
0 - 300mm	500-153	Blade	with thumb roller	—
0 - 450mm	500-500-10	—	—	—
0 - 600mm	500-501-10	—	—	—
0 - 1000mm	500-502-10	—	—	—

*without SPC data output

Inch/Metric

Range	Order No.	Remarks (depth measuring bar / thumb roller / others)		
0 - 4"	500-170-20	ø3/40" rod	with thumb roller	—
0 - 4"	500-195-20*	ø3/40" rod	with thumb roller	—
0 - 6"	500-171-20	Blade	with thumb roller	—
0 - 6"	500-174-20	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 6"	500-175-20	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 6"	500-178-20	ø3/40" rod	with thumb roller	—
0 - 6"	500-196-20*	Blade	with thumb roller	—
0 - 6"	500-159-20*	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 6"	500-160-20*	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 8"	500-172-20	Blade	with thumb roller	—
0 - 8"	500-176-20	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 8"	500-177-20	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 8"	500-197-20*	Blade	with thumb roller	—
0 - 8"	500-163-20*	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 8"	500-164-20*	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 12"	500-173	Blade	with thumb roller	—
0 - 12"	500-167	Blade	with thumb roller	Carbide-tipped jaws for OD measurement
0 - 12"	500-168	Blade	with thumb roller	Carbide-tipped jaws for OD & ID measurement
0 - 12"	500-193*	Blade	with thumb roller	—
0 - 12"	500-165*	Blade	—	Carbide-tipped jaws for OD measurement
0 - 12"	500-166*	Blade	—	Carbide-tipped jaws for OD & ID measurement
0 - 18"	500-505-10	—	with thumb roller	—
0 - 24"	500-506-10	—	with thumb roller	—
0 - 40"	500-507-10	—	with thumb roller	—

*without SPC data output

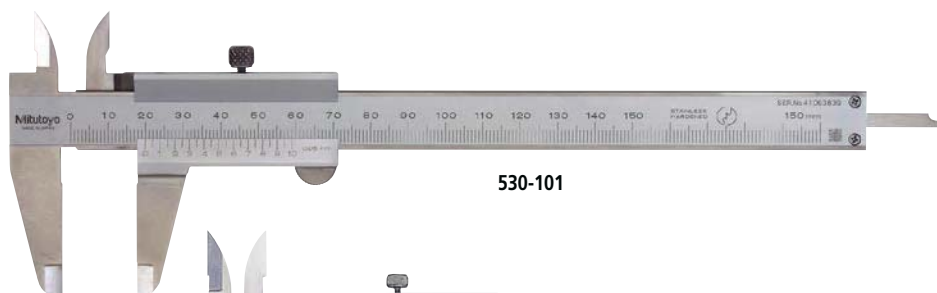
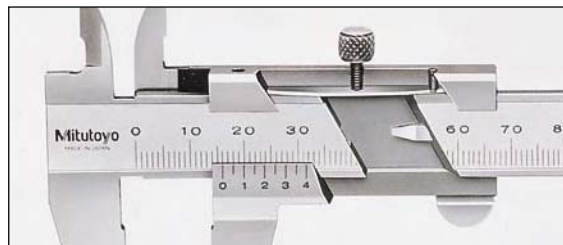
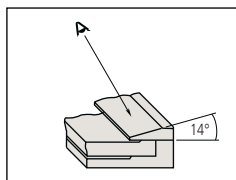


Vernier Caliper

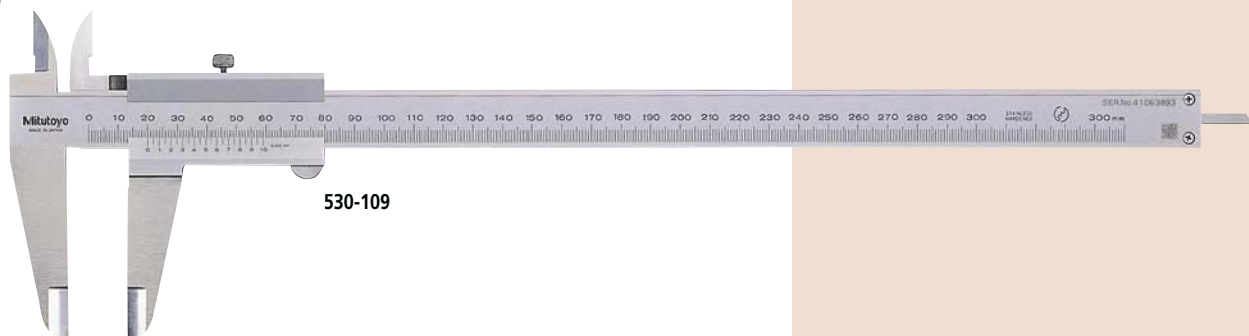
SERIES 530 — Standard model

FEATURES

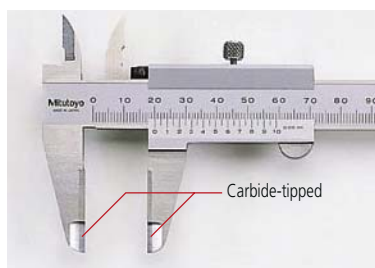
- Plain and basic design.
- Can measure OD (outside diameter), ID (inside diameter), depth, and steps.
- The small vernier face angle (14°) provides easy reading.
- Different reading scales on vernier. (metric/inch and inch models only)
- Clamping screw atop the slider.
- Carbide-tipped jaw type calipers are also available.



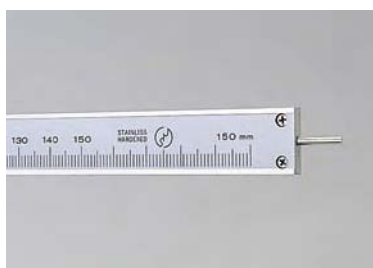
530-101



530-109



Carbide-tipped jaw type

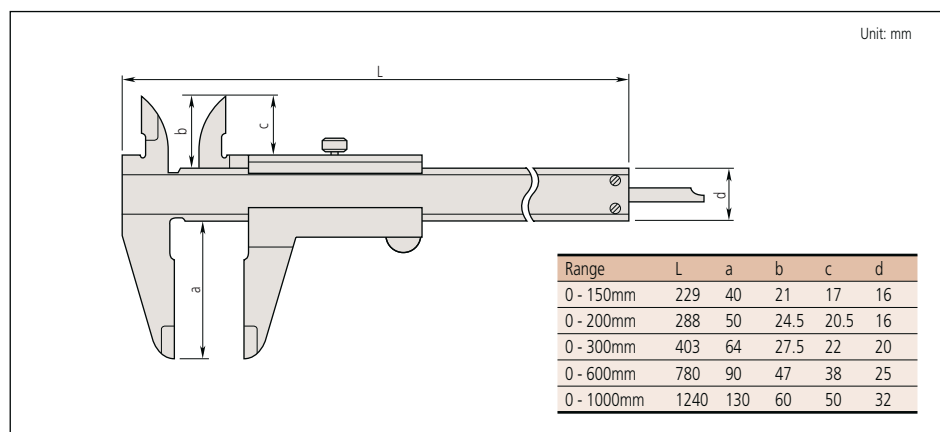


Round depth bar type

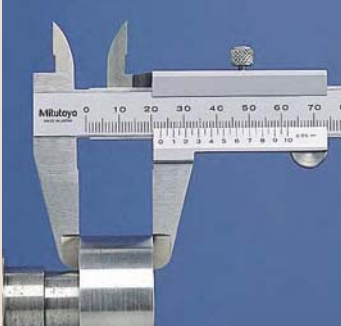
Technical Data

Accuracy: $\pm 0.05\text{mm}$ ($\leq 200\text{mm}$), $\pm 0.08\text{mm}$ ($\leq 300\text{mm}$)
 $\pm 0.10\text{mm}$ ($\leq 600\text{mm}$), $\pm 0.15\text{mm}$ ($\leq 1000\text{mm}$)
 High accuracy type:
 $\pm 0.03\text{mm}$ ($\leq 200\text{mm}$), $\pm 0.04\text{mm}$ ($\leq 300\text{mm}$)
 Graduation: 0.05mm, 0.05mm (1/128") or .001" (1/128")
 High accuracy type:
 0.02mm or 0.02mm (.001")

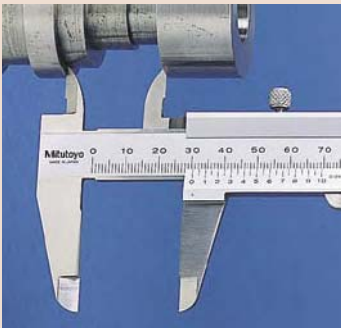
DIMENSION



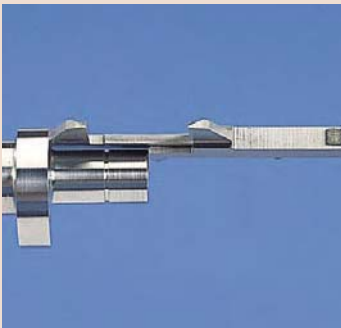
Measurement Applications



OD measurement



ID measurement



Step measurement



Depth measurement

SPECIFICATIONS

Metric

Range	Order No.	Remarks (depth measuring bar / second scale graduation / others)		
0 - 150mm	530-102	ø1.9mm rod	—	—
0 - 150mm	530-101	Blade	—	—
0 - 150mm	530-320	Blade	—	Carbide-tipped jaws for OD measurement
0 - 150mm	530-335	Blade	—	Carbide-tipped jaws for OD & ID measurement
0 - 150mm	530-319	Blade	—	Clamping screw below the slider
0 - 150mm	530-122*	Blade	—	High accuracy model: ±0.03mm
0 - 200mm	530-108	Blade	—	—
0 - 200mm	530-321	Blade	—	Carbide-tipped jaws for OD measurement
0 - 200mm	530-123*	Blade	—	High accuracy model: ±0.03mm
0 - 300mm	530-109	Blade	—	—
0 - 300mm	530-322	Blade	—	Carbide-tipped jaws for OD measurement
0 - 300mm	530-124*	Blade	—	High accuracy model: ±0.04mm
0 - 600mm	530-501	—	—	—
0 - 1000mm	530-502	—	—	—

*Graduation: 0.02mm

Metric/Inch

with metric/inch double scale

Range	Order No.	Remarks (depth measuring bar / second scale graduation / others)		
0 - 150mm	530-104	Blade	1/128"	—
0 - 150mm	530-316	Blade	1/128"	Clamping screw below the slider
0 - 150mm	530-125	Blade	1/128"	—
0 - 150mm	530-312*	Blade	.001"	High accuracy model: ±0.03mm
0 - 200mm	530-114	Blade	1/128"	—
0 - 200mm	530-118*	Blade	.001"	High accuracy model: ±0.03mm
0 - 300mm	530-115	Blade	1/128"	—
0 - 300mm	530-119*	Blade	.001"	High accuracy model: ±0.04mm

*Graduation: 0.02mm

Inch

with inch/inch double scale

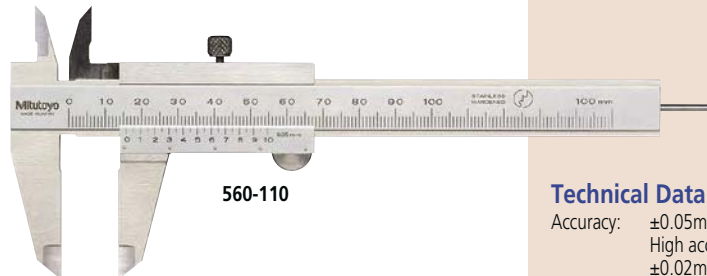
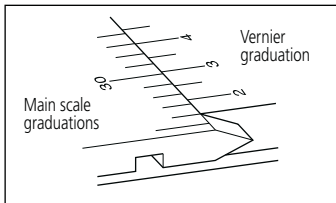
Range	Order No.	Remarks (depth measuring bar / second scale graduation / others)		
0 - 6"	530-105	Blade	1/128"	—
0 - 6"	530-314	Blade	1/128"	Carbide-tipped jaws for OD measurement
0 - 8"	530-116	Blade	1/128"	—

Vernier Caliper

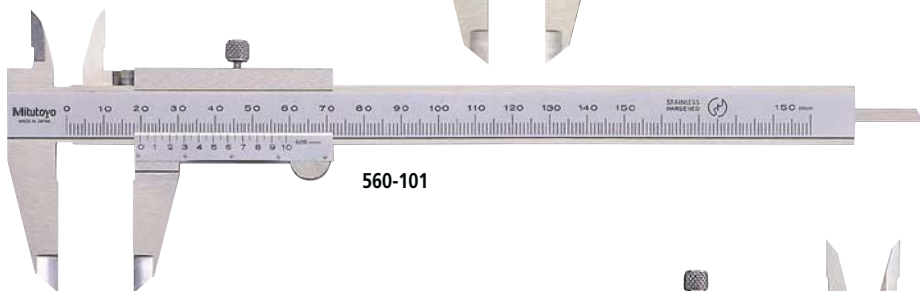
SERIES 560, 536 — Parallax-Free Type

FEATURES

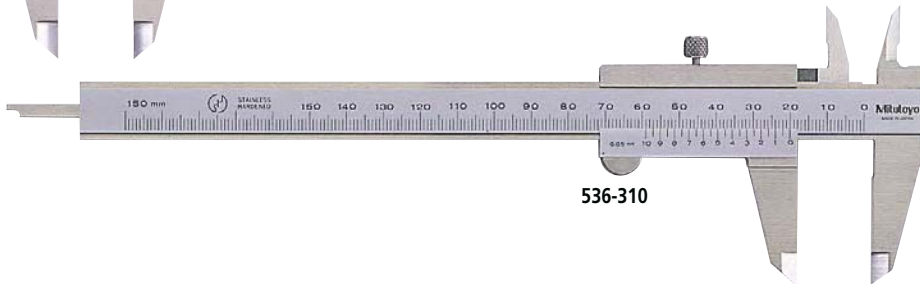
- Parallax-free vernier scales for easy and positive measurement.
- Can measure OD, ID, depth, and steps.
- With clamping screw atop the slider.
- Special model (Series 536) is also available designed for left-handers.



560-110



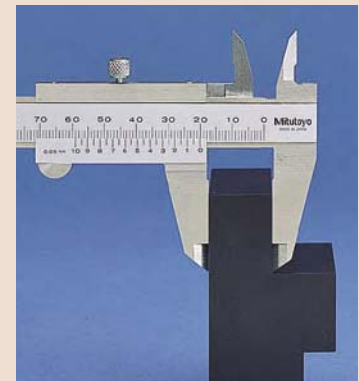
560-101



536-310

Technical Data

Accuracy: $\pm 0.05\text{mm}$ ($\leq 200\text{mm}$), $\pm 0.08\text{mm}$ ($\leq 300\text{mm}$)
 High accuracy type:
 $\pm 0.02\text{mm}$ ($\leq 150\text{mm}$), $\pm 0.03\text{mm}$ ($\leq 200\text{mm}$)
 Graduation: 0.05mm or 0.05mm ($1/128''$)
 High accuracy type:
 0.02mm or 0.02mm ($.001''$)



SPECIFICATIONS

Metric

Range	Order No.	Remarks (depth measuring bar / second scale graduation / others)
0 - 100mm	560-110	$\phi 1.9\text{mm}$ rod — —
0 - 150mm	560-101	Blade — —
0 - 150mm	536-310	Blade — Left-handed type
0 - 150mm	560-122*	Blade — High accuracy model: $\pm 0.03\text{mm}$
0 - 200mm	560-108	Blade — —
0 - 300mm	560-109	Blade — —

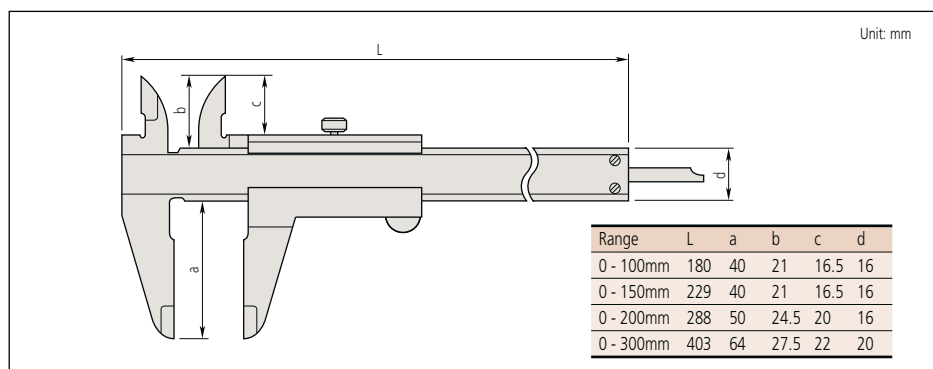
*Graduation: 0.02mm

Metric/Inch with metric/inch double scale

Range	Order No.	Remarks (depth measuring bar / second scale graduation / others)
0 - 100mm	560-104	Blade $1/128''$ —
0 - 200mm	560-118*	Blade $.001''$ High accuracy model: $\pm 0.03\text{mm}$

*Graduation: 0.02mm

DIMENSION



Unit: mm

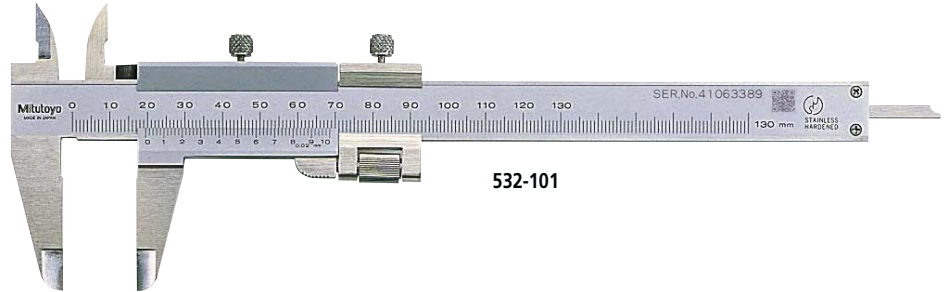
Range	L	a	b	c	d
0 - 100mm	180	40	21	16.5	16
0 - 150mm	229	40	21	16.5	16
0 - 200mm	288	50	24.5	20	16
0 - 300mm	403	64	27.5	22	20

Vernier Caliper

SERIES 532 — with Fine Adjustment

FEATURES

- Provided with a fine-adjustment carriage to feed the slider finely.
- Can measure OD, ID, depth, and steps.



Technical Data

Accuracy: $\pm 0.03\text{mm}$ ($\leq 180\text{mm}$), $\pm 0.04\text{mm}$ ($\leq 280\text{mm}$)
 Graduation: 0.02mm, 0.02mm (.001") or .001" (1/128")

SPECIFICATIONS

Metric

Range	Order No.	Remarks (depth measuring bar / second scale graduation / others)
0 - 130mm	532-101	Blade — with fine adjustment carriage
0 - 180mm	532-102	Blade — with fine adjustment carriage
0 - 280mm	532-103	Blade — with fine adjustment carriage

Metric/Inch

with metric/inch double scale

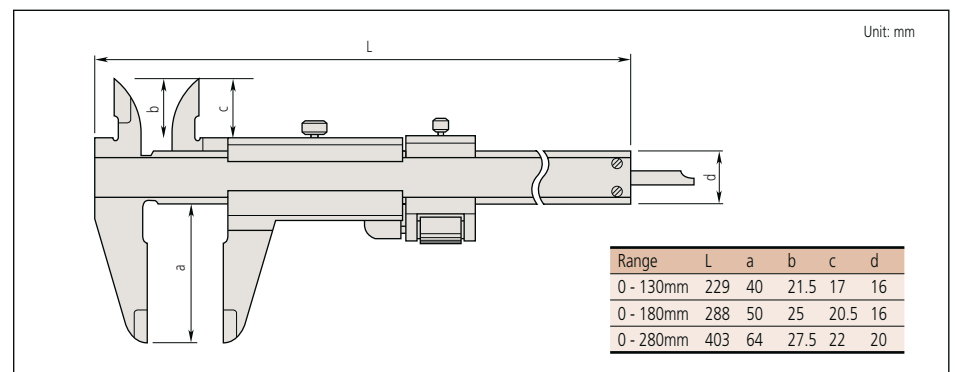
Range	Order No.	Remarks (depth measuring bar / second scale graduation / others)
0 - 130mm	532-119	Blade .001" with fine adjustment carriage
0 - 180mm	532-120	Blade .001" with fine adjustment carriage
0 - 280mm	532-121	Blade .001" with fine adjustment carriage

Inch

with inch/inch double scale

Range	Order No.	Remarks (depth measuring bar / second scale graduation / others)
0 - 5"	532-104	Blade 1/128" with fine adjustment carriage
0 - 7"	532-105	Blade 1/128" with fine adjustment carriage
0 - 11"	532-106	Blade 1/128" with fine adjustment carriage

DIMENSION

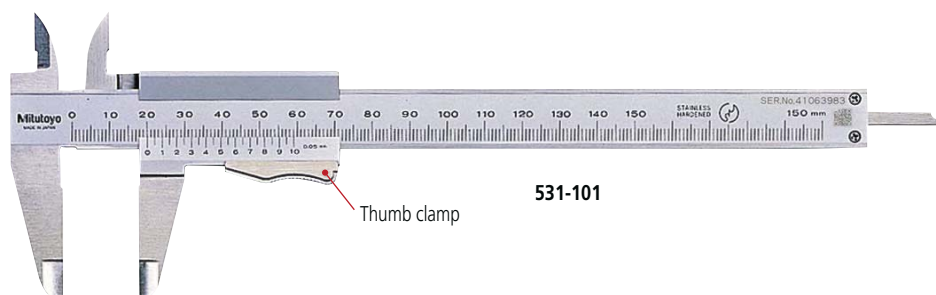


Vernier Caliper

SERIES 531 — with Thumb Clamp

FEATURES

- The slider moves only when the spindle loaded thumb clamp is depressed.
- Can measure OD, ID, depth, and steps.



531-101

Technical Data

Accuracy: Refer to the list of specifications.
 Graduation: 0.05mm, 0.05mm (1/128") or .001" (1/128")
 High accuracy type:
 0.02mm or 0.02mm (.001")

SPECIFICATIONS

Metric

Range	Order No.	Accuracy	Remarks (depth measuring bar / Second scale graduation / Others)
0 - 150mm	531-101	±0.05mm	Blade —
0 - 150mm	531-140*	±0.03mm	Blade — High accuracy model
0 - 200mm	531-102	±0.05mm	Blade —
0 - 200mm	531-141*	±0.03mm	Blade — High accuracy model
0 - 300mm	531-103	±0.08mm	Blade —
0 - 300mm	531-142*	±0.04mm	Blade — High accuracy model

*Graduation: 0.02mm

Metric/Inch with metric/inch double scale

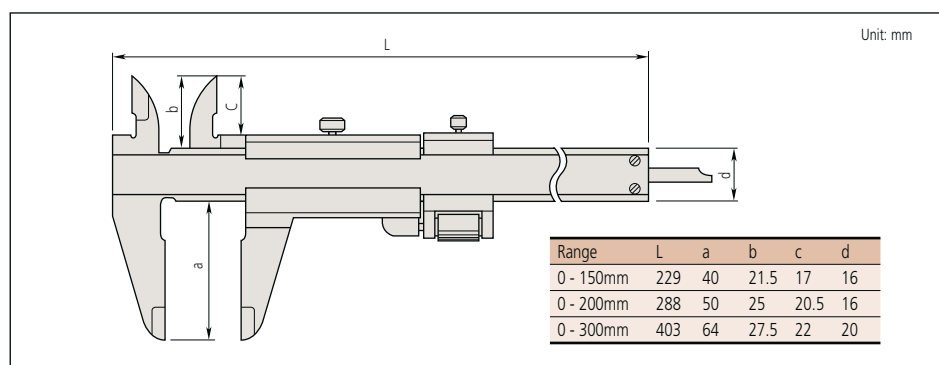
Range	Order No.	Accuracy	Remarks (depth measuring bar / Second scale graduation / Others)
0 - 150mm	531-107	±0.05mm	Blade 1/128" —
0 - 150mm	531-122	±0.05mm	Blade 1/128" with inch/mm conversion label
0 - 150mm	531-128*	±0.03mm	Blade .001" High accuracy model
0 - 200mm	531-108	±0.05mm	Blade 1/128" —
0 - 200mm	531-129*	±0.03mm	Blade .001" High accuracy model
0 - 300mm	531-109	±0.08mm	Blade 1/128" —
0 - 300mm	531-112*	±0.04mm	Blade .001" High accuracy model

*Graduation: 0.02mm

inch with inch/inch double scale

Range	Order No.	Accuracy	Remarks (depth measuring bar / Second scale graduation / Others)
0 - 6"	531-113	±.0015"	Blade 1/128" —
0 - 8"	531-114	±.0015"	Blade 1/128" —

DIMENSION

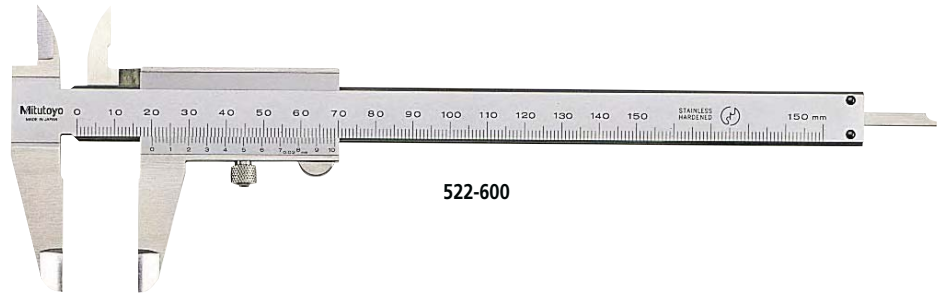
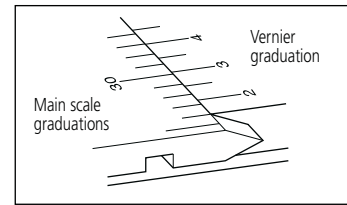


Vernier Caliper

SERIES 522 — Parallax-Free Type

FEATURES

- The main and vernier scales are flush-fitted to eliminate parallax errors because of the diamond-shape (octagonal) cross section of the main scale.
- Can measure OD, ID, depth, and steps.
- With clamping screw below the slider.



522-600

Technical Data

Accuracy: Refer to the list of specifications.
 Graduation: 0.05mm or 0.05mm (1/128")
 High accuracy type:
 0.02mm or 0.02mm (.001")

SPECIFICATIONS

Metric

Range	Order No.	Accuracy	Remarks (depth measuring bar / Second scale graduation / Others)		
0 - 150mm	522-600	±0.05mm	Blade	—	—
0 - 150mm	522-606*	±0.03mm	Blade	—	High accuracy model

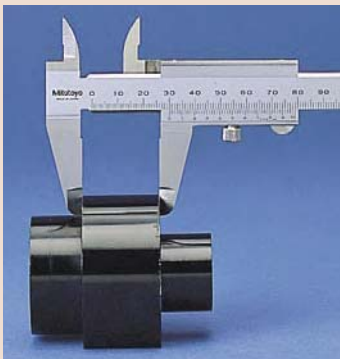
*Graduation: 0.02mm

Metric/Inch

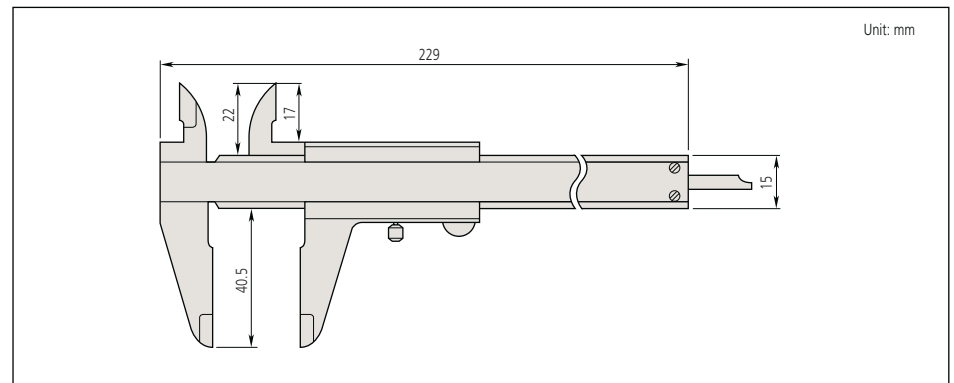
with metric/inch double scale

Range	Order No.	Accuracy	Remarks (depth measuring bar / Second scale graduation / Others)		
0 - 150mm	522-601	±0.05mm	Blade	1/128"	—
0 - 150mm	522-602*	±0.03mm	Blade	.001"	High accuracy model

*Graduation: 0.02mm



DIMENSION



Unit: mm