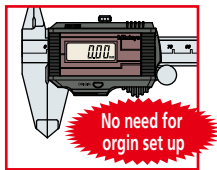
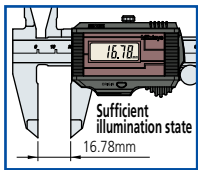
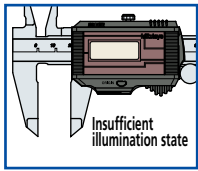


SuperCaliper

SERIES 500 — No battery or origin reset needed for IP67 digital caliper

FEATURES

- With no annoying origin restoration necessary, a measurement can be started any time and there is no restriction on operating speed.



- World's unique* solar-powered SuperCaliper that is eco-friendly with no battery
*According to Mitutoyo research in January, 2005
- The impact resistance of the display unit has been increased for improved usability in workshop conditions.
- IP67 protection assures waterproof reliability.
- This SuperCaliper uses components that do not contain harmful substances and is compatible with RoHS Directives.

High quality guide surface finish for smooth slider movement

Conventional	SuperCaliper



SPECIFICATIONS

Metric		
Range	Order No.	Remarks
0 - 150mm	500-776	with data output
0 - 150mm	500-774	w/o data output
0 - 200mm	500-777	with data output
0 - 200mm	500-775	w/o data output

Inch/Metric		
Range	Order No.	Remarks
0 - 6"	500-786	with data output
0 - 6"	500-784	w/o data output
0 - 8"	500-787	with data output
0 - 8"	500-785	w/o data output

DIMENSIONS

Range	L	a	b	c	d
0 - 150mm/0 - 6"	233	21	16.5	40	16
0 - 200mm/0 - 8"	290	24.5	20	50	16

Jaw thickness: 3.5mm



(Refer to page VIII for details.)



(Refer to the page VIII for details.)

Technical Data

Accuracy: $\pm 0.02\text{mm}$ (excluding quantizing error)
 Resolution: 0.01mm or .0005"/0.01mm
 Repeatability: 0.01mm
 Display: LCD
 Scale type: ABSOLUTE electromagnetic linear encoder
 Max. response speed: Unlimited
 Battery: Solar battery*
 Dust/Water protection level: IP67
 *Can be used continuously above 60lux ambient illumination.

Functions

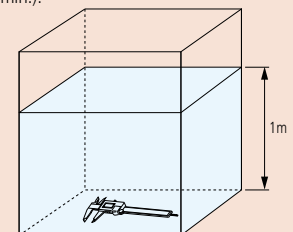
Origin-set, inch/mm conversion (inch/mm models)
 Alarm: Counting value composition error

Optional Accessories

- 05CZA624:** SPC cable with data switch (1m)
- 05CZA625:** SPC cable with data switch (2m)
- 02AZD790A:** SPC cable for U-WAVE w/ data switch (160mm)

IP67 protection level

Level 6: Dust-tight
 No ingress of dust.
 Level 7: Protected against the effects of temporary immersion in water.
 Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed 1 meter in water under standardized conditions of pressure and time (30 min.).



About the charge function (SuperCaliper)

The minimum illumination required in the uncharged state is 60lux. As shown in the table 'JIS Z 9110 Artificial Illumination Intensity Standard', this SuperCaliper can be used with confidence in a normal work environment.

The charge function allows the operator to use this SuperCaliper without interrupting work even if the ambient illumination is temporarily insufficient.

- In the fully charged state this SuperCaliper can operate for approximately an hour in an environment of 50lux illumination (less than the minimum necessary illumination intensity).
- The time necessary for full charge differs, depending on the charging conditions. If this SuperCaliper is left unused in an illumination of 500 lux (usual for manufacturing environments), it takes approximately one hour to reach full charge.



(Refer to page VIII for details.)

ABSOLUTE Solar Caliper

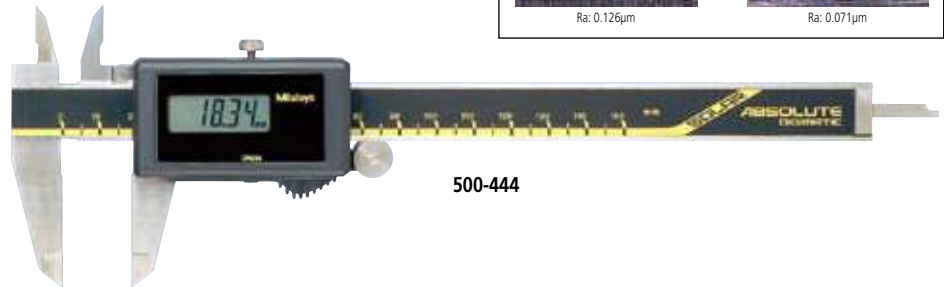
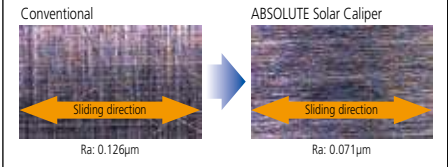
SERIES 500 — No battery or origin reset needed

Mitutoyo's Absolute Solar Digimatic Caliper retains its origin point even if the display turns off for the entire life of the caliper. At 60 Lux and above the ABSOLUTE solar caliper is turned on ready to start measurement.

FEATURES

- No more repeated zero setting caused by a shortage of light intensity.
- Hard-coated solar panel for safe operation.
- No fear of overspeed errors.

High quality guide surface finish for smooth slider movement



500-444

Technical Data

Accuracy: $\pm 0.02\text{mm}$ (excluding quantizing error)
 Resolution: 0.01mm or .0005"/0.01mm
 Repeatability: 0.01mm
 Display: LCD
 Scale type*: ABSOLUTE electrostatic linear encoder
 Max. response speed: Unlimited
 Battery: Solar battery*
 *Can be used continuously above 60lux ambient illumination.

Functions

Origin-set, Data hold, Data output, inch/mm conversion (inch/mm models)
 Alarm: Counting value composition error

Optional Accessories

- 959143: Data hold unit
- 959149: SPC cable with data switch (1m)
- 959150: SPC cable with data switch (2m)
- 02AZD790A: SPC cable for U-WAVE w/ data switch (160mm)

SPECIFICATIONS

Metric			
Range	Order No.	Depth bar	Fine adjustment
0 - 100mm	500-443	ø1.9mm rod	with thumb roller
0 - 100mm	500-453*	ø1.9mm rod	with thumb roller
0 - 150mm	500-444	Blade	with thumb roller
0 - 150mm	500-454*	Blade	with thumb roller
0 - 200mm	500-445	Blade	with thumb roller
0 - 200mm	500-455*	Blade	with thumb roller

*without SPC data output

Inch/Metric			
Range	Order No.	Depth bar	Fine adjustment
0 - 4"	500-463	ø3/40" rod	with thumb roller
0 - 4"	500-473*	ø3/40" rod	with thumb roller
0 - 6"	500-464	Blade	with thumb roller
0 - 6"	500-474*	Blade	with thumb roller
0 - 8"	500-465	Blade	with thumb roller
0 - 8"	500-475*	Blade	with thumb roller

*without SPC data output

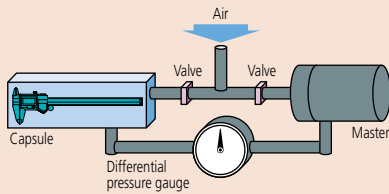
DIMENSIONS

Unit: mm

Range	L	a	b	c
0 - 100mm/0 - 4"	182	40	21	16.5
0 - 150mm/0 - 6"	233	40	21	16.5
0 - 200mm/0 - 8"	290	50	24.5	20

Air leakage detection system used for water-proof testing

Generally, air leakage tests are performed to evaluate water resistance. Testing begins by placing a measuring tool into the capsule. Next, air at the required test pressure is supplied to the capsule and the master capsule, then the valves are closed. If none of the air in the capsule seeps into the measuring tool, the capsule's air pressure will remain equal to that in the master, and the differential pressure gauge will continue to point to the center. However, if some air does seep into the measuring tool, it will create an air pressure difference that will be indicated by the differential pressure gauge. Thus, detection of air pressure differences is used as a criterion for judging leakage. Every single unit of ABS Coolant Proof caliper and Coolant Proof micrometer is tested this way to help ensure product quality.



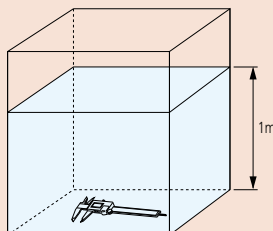
IP66 protection level

- Level 6: Dust-tight
No ingress of dust.
- Level 6: Protected against powerful water jets.
Water projected in powerful jets* against the enclosure from any direction shall have no harmful effects.
*Size of direct jets: 12.5 mm (inner diameter) nozzle emitting a 100 kPa jet of water at 100 liters per minute for at least 3 minutes from a distance of approx. 3 meters.



IP67 protection level

- Level 6: Dust-tight
No ingress of dust.
- Level 7: Protected against the effects of temporary immersion in water.
Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed 1 meter in water under standardized conditions of pressure and time (30 min.).



SPECIFICATIONS

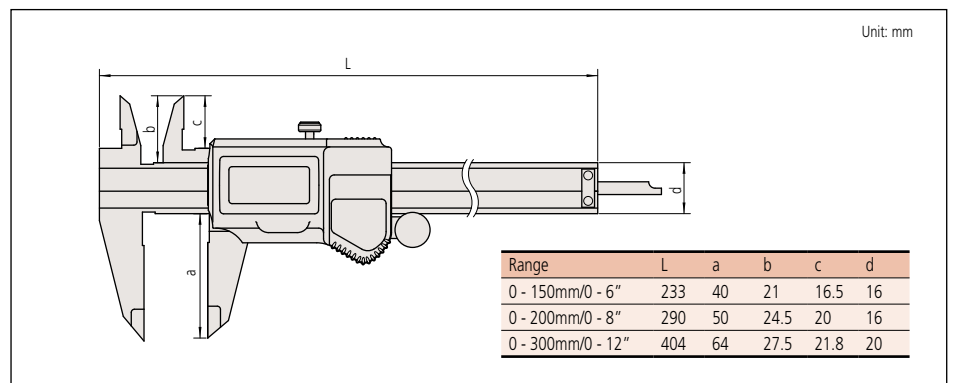
Metric				
Range	Order No.	Depth bar	Fine adjustment	Remarks
0 - 150mm	500-702-10*	Blade	with thumb roller	—
0 - 150mm	500-712-10	Blade	with thumb roller	—
0 - 150mm	500-706-11*	Blade	—	—
0 - 150mm	500-716-11	Blade	—	—
0 - 150mm	500-709-11*	ø1.9mm rod	—	—
0 - 150mm	500-719-10	ø1.9mm rod	with thumb roller	—
0 - 150mm	500-721-10	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 150mm	500-723-10	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 150mm	500-727-11	Blade	—	Carbide-tipped jaws for outside and inside measurement
0 - 200mm	500-703-10*	Blade	with thumb roller	—
0 - 200mm	500-713-10	Blade	with thumb roller	—
0 - 200mm	500-707-11*	Blade	—	—
0 - 200mm	500-717-11	Blade	—	—
0 - 200mm	500-722-10	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 200mm	500-724-10	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 200mm	500-728-11	Blade	—	Carbide-tipped jaws for outside and inside measurement
0 - 300mm	500-714-10	Blade	with thumb roller	—
0 - 300mm	500-718-11	Blade	—	—
0 - 300mm	500-704-10*	Blade	with thumb roller	—
0 - 300mm	500-708-11*	Blade	—	—

*without SPC data output

Inch/Metric				
Range	Order No.	Depth bar	Fine adjustment	Remarks
0 - 6"	500-752-10*	Blade	with thumb roller	—
0 - 6"	500-762-10	Blade	with thumb roller	—
0 - 6"	500-768-10*	ø3/40" rod	with thumb roller	—
0 - 6"	500-769-10	ø3/40" rod	with thumb roller	—
0 - 6"	500-731-10*	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 6"	500-735-10	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 6"	500-733-10*	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 6"	500-737-10	Blade	with thumb roller	Carbide-tipped jaws outside and inside measurement
0 - 8"	500-753-10*	Blade	with thumb roller	—
0 - 8"	500-763-10	Blade	with thumb roller	—
0 - 8"	500-732-10*	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 8"	500-736-10	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 8"	500-734-10*	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 8"	500-738-10	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 12"	500-764-10	Blade	with thumb roller	—
0 - 12"	500-754-10*	Blade	with thumb roller	—

*without SPC data output

DIMENSIONS

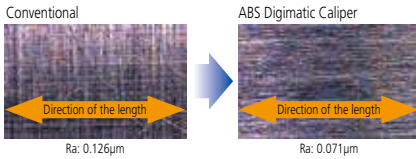


ABSOLUTE Digimatic Caliper

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 absolute encoder technology as well as no more concerns about overspeed errors.

High quality guide surface finish for smooth slider movement

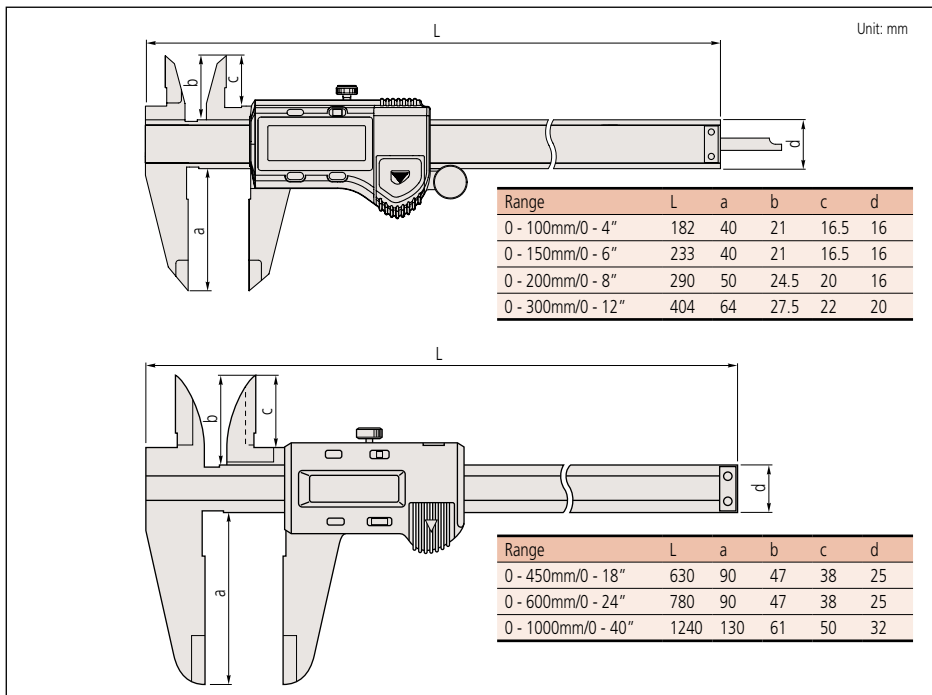


FEATURES

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



DIMENSIONS



(Refer to page VIII for details.)



(Refer to page VIII for details.)
*Up to 300mm/12" range models.

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
 Scale type*: ABSOLUTE electrostatic linear encoder
 Max. response speed: Unlimited
 Battery: SR44 (1 pc.), **938882**
 Battery life: Approx. 3.5 years under normal use

Functions

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

Optional Accessories

- 959143:** Data hold unit
- 959149:** SPC cable with data switch (1m)
- 959150:** SPC cable with data switch (2m)
- 02AZD790C:** SPC cable for U-WAVE w/ data switch (160mm)



SPECIFICATIONS

Metric

Range	Order No.	Depth bar	Fine adjustment	Remarks
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 outside measurement
0 - 150mm	500-155-20	Blade	with thumb roller	Carbide-tipped jaws for outside and inside 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 outside measurement
0 - 200mm	500-157-20	Blade	with thumb roller	Carbide-tipped jaws for outside and inside 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.	Depth bar	Fine adjustment	Remarks
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 outside measurement
0 - 6"	500-175-20	Blade	with thumb roller	Carbide-tipped jaws for outside and inside 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 outside measurement
0 - 6"	500-160-20*	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 8"	500-172-20	Blade	with thumb roller	—
0 - 8"	500-176-20	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 8"	500-177-20	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 8"	500-197-20*	Blade	with thumb roller	—
0 - 8"	500-163-20*	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 8"	500-164-20*	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 12"	500-173	Blade	with thumb roller	—
0 - 12"	500-167	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
0 - 12"	500-168	Blade	with thumb roller	Carbide-tipped jaws for outside and inside measurement
0 - 12"	500-193*	Blade	with thumb roller	—
0 - 12"	500-165*	Blade	—	Carbide-tipped jaws for outside measurement
0 - 12"	500-166*	Blade	—	Carbide-tipped jaws for outside and inside measurement
0 - 18"	500-505-10	—	—	—
0 - 24"	500-506-10	—	—	—
0 - 40"	500-507-10	—	—	—

*without SPC data output

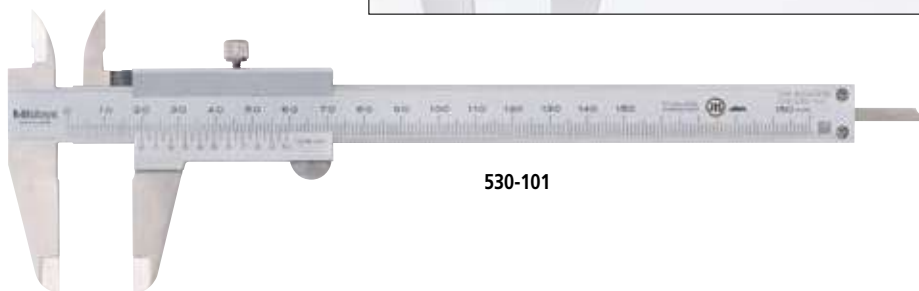
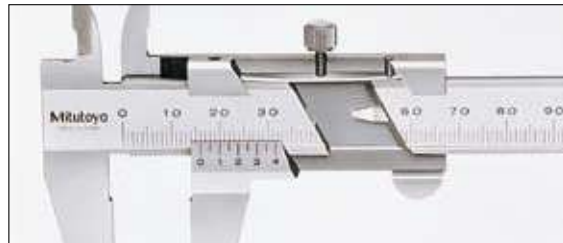
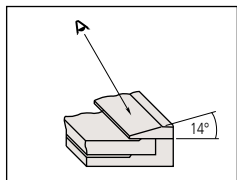


Vernier Caliper

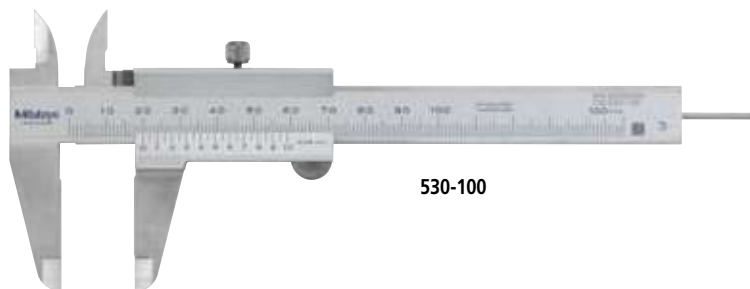
SERIES 530 — Standard model

FEATURES

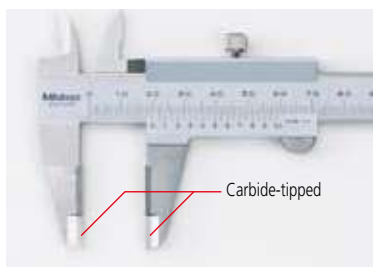
- Plain and basic design.
- Can measure outside and inside diameter (OD and ID), depth, and steps.
- The small vernier face angle (14°) provides easy reading.
- Different reading scales on vernier. (metric/inch and inch models only)
- Clamping screw atop the slider.
- Carbide-tipped jaw type calipers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



530-101



530-100



Carbide-tipped

Carbide-tipped jaw type

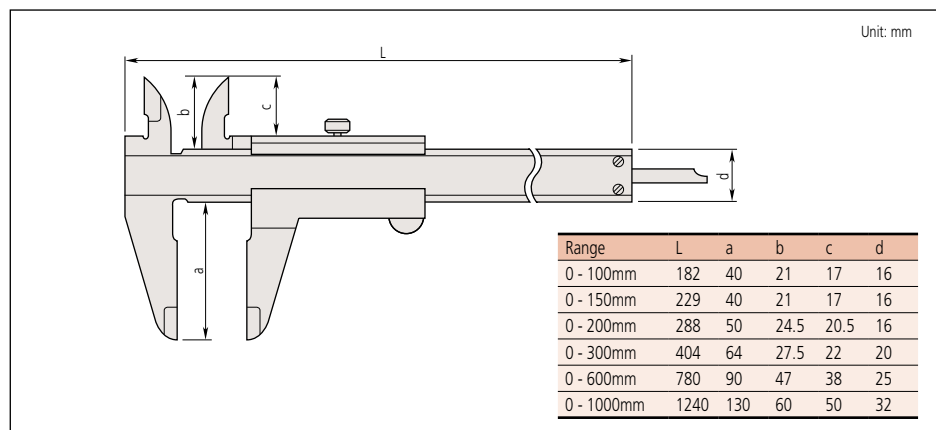


Round depth bar type

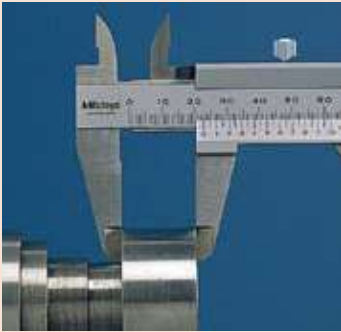
Technical Data

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")

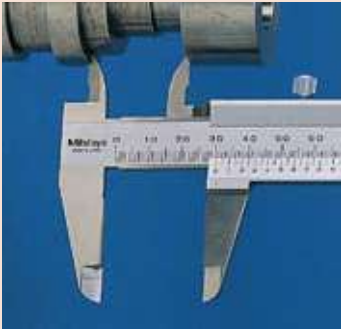
DIMENSIONS



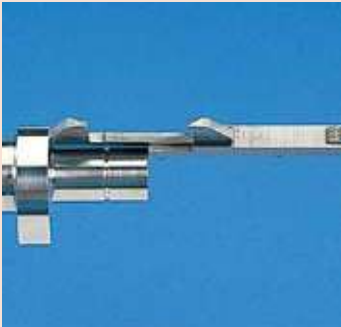
Measurement Applications



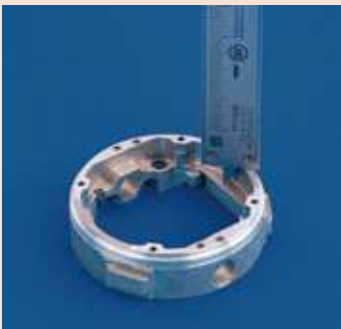
OD measurement



ID measurement



Step measurement



Depth measurement

Technical Data

Accuracy: $\pm 0.05\text{mm}$
 Graduation: 0.05mm



SPECIFICATIONS

Metric

Range	Order No.	Depth bar	Remarks
0 - 100mm	530-100	$\varnothing 1.9\text{mm}$ rod	—
0 - 150mm	530-102	$\varnothing 1.9\text{mm}$ rod	—
0 - 150mm	530-101	Blade	—
0 - 150mm	530-320	Blade	Carbide-tipped jaws for outside measurement
0 - 150mm	530-335	Blade	Carbide-tipped jaws for outside and inside measurement
0 - 150mm	530-122*	Blade	High accuracy model: $\pm 0.03\text{mm}$
0 - 200mm	530-108	Blade	—
0 - 200mm	530-321	Blade	Carbide-tipped jaws for outside measurement
0 - 200mm	530-123*	Blade	High accuracy model: $\pm 0.03\text{mm}$
0 - 300mm	530-109	Blade	—
0 - 300mm	530-322	Blade	Carbide-tipped jaws for outside measurement
0 - 300mm	530-124*	Blade	High accuracy model: $\pm 0.04\text{mm}$
0 - 600mm	530-501	—	—
0 - 1000mm	530-502	—	—

*Graduation: 0.02mm

Metric/Inch with metric/inch double scale

Range	Order No.	Depth bar	Inch graduation	Remarks
0 - 150mm	530-104	Blade	1/128"	—
0 - 150mm	530-316	Blade	1/128"	Clamping screw below the slider
0 - 150mm	530-312*	Blade	.001"	High accuracy model: $\pm 0.03\text{mm}$
0 - 200mm	530-114	Blade	1/128"	—
0 - 200mm	530-118*	Blade	.001"	High accuracy model: $\pm 0.03\text{mm}$
0 - 300mm	530-115	Blade	1/128"	—
0 - 300mm	530-119*	Blade	.001"	High accuracy model: $\pm 0.04\text{mm}$

*Graduation: 0.02mm

Inch with inch/inch double scale

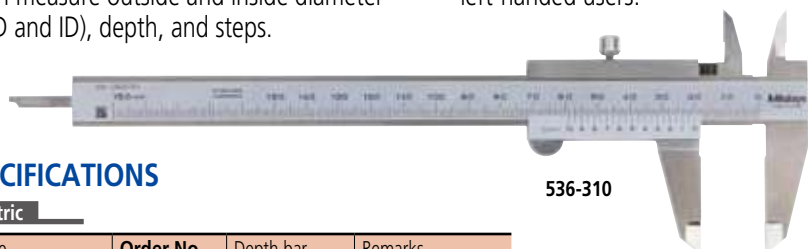
Range	Order No.	Depth bar	Inch graduation	Remarks
0 - 6"	530-105	Blade	1/128"	—
0 - 8"	530-116	Blade	1/128"	—

Vernier Caliper

SERIES 536 — Parallax-Free Type

FEATURES

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



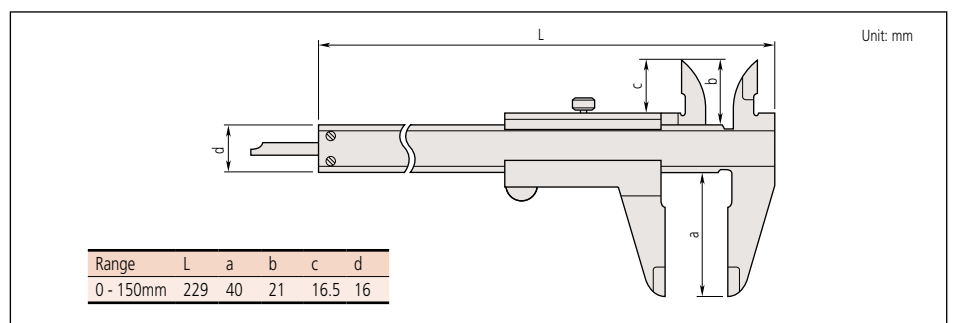
536-310

SPECIFICATIONS

Metric

Range	Order No.	Depth bar	Remarks
0 - 150mm	536-310	Blade	Left-handed type

DIMENSIONS

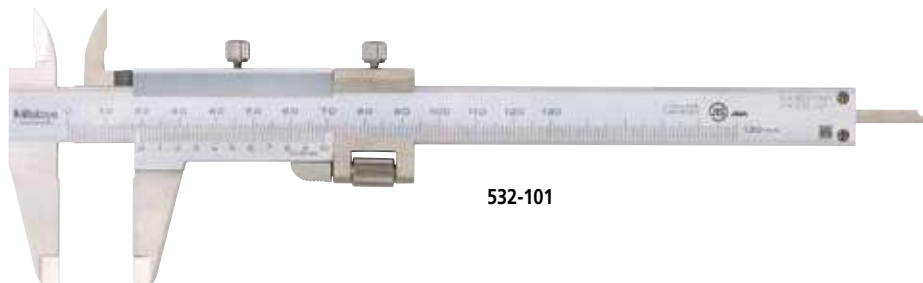


Vernier Caliper

SERIES 532 — with Fine Adjustment

FEATURES

- Fine-adjustment aids slider positioning.
- Can measure outside and inside diameter (OD and ID), depth, and steps.



532-101

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.	Depth bar	Remarks
0 - 130mm	532-101	Blade	with fine adjustment
0 - 180mm	532-102	Blade	with fine adjustment
0 - 280mm	532-103	Blade	with fine adjustment

Metric/Inch with metric/inch double scale				
Range	Order No.	Depth bar	Inch graduation	Remarks
0 - 130mm	532-119	Blade	.001"	with fine adjustment
0 - 180mm	532-120	Blade	.001"	with fine adjustment
0 - 280mm	532-121	Blade	.001"	with fine adjustment

DIMENSIONS

