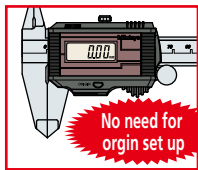
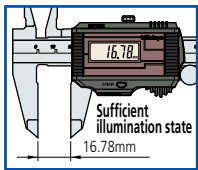
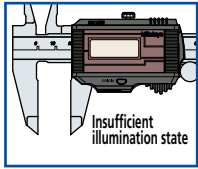


SuperCaliper

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

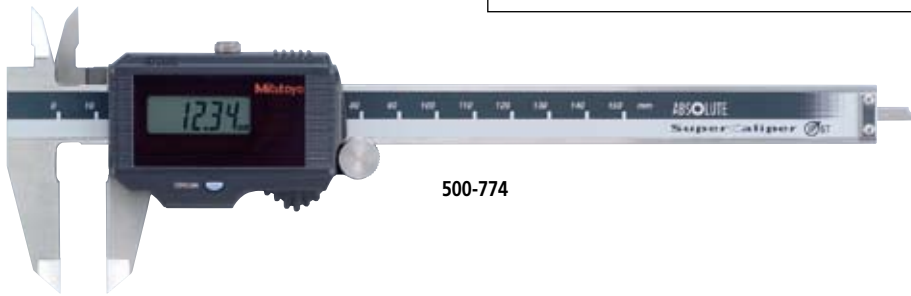
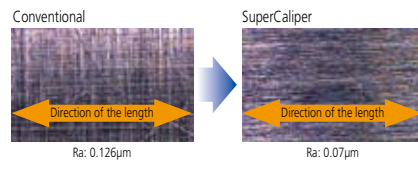
FEATURES

- 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

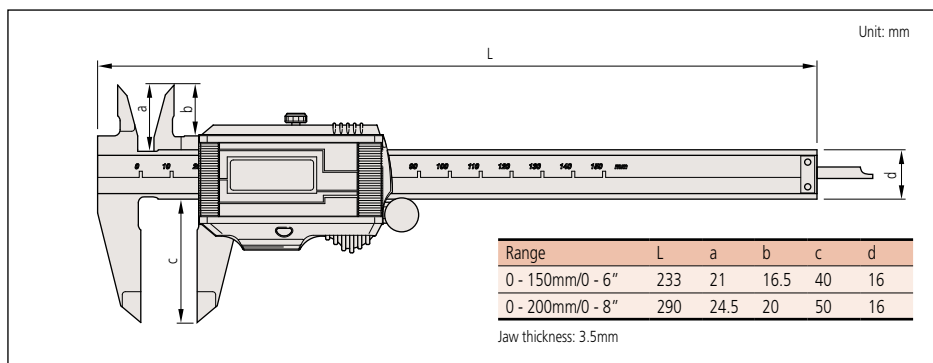


SPECIFICATIONS

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



(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

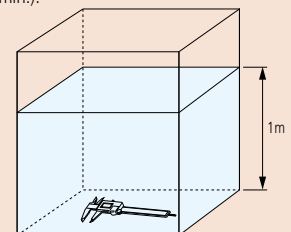
Origin-set, inch/mm conversion (inch/mm models)
 Alarm: Counting value composition error

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.)

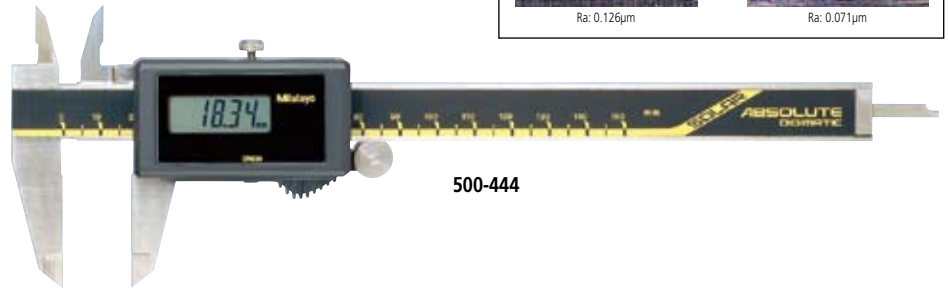
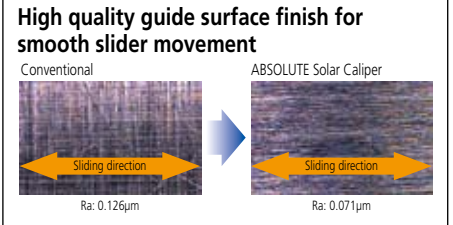
ABSOLUTE Solar Caliper

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.



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

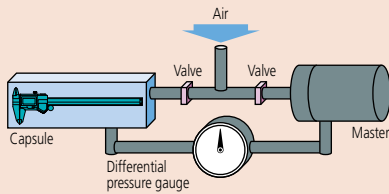
DIMENSIONS

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.



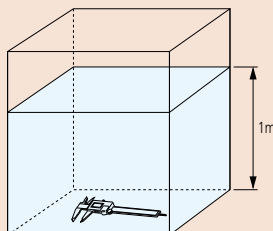
IP66 protection level

- 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

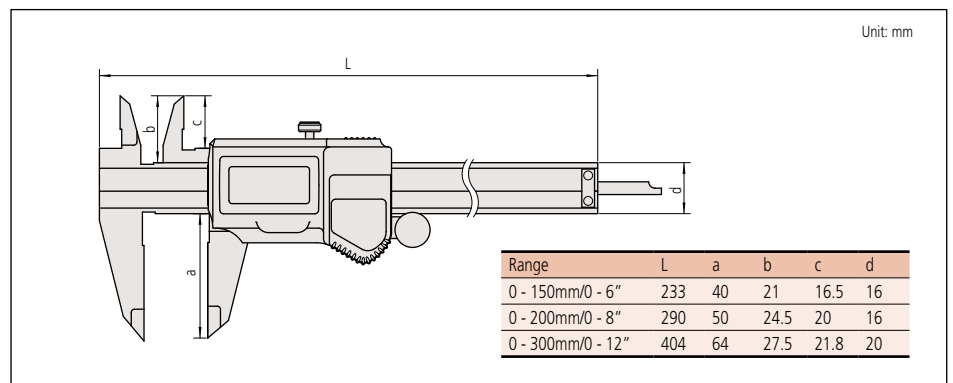
Metric				
Range	Order No.	Depth bar	Fine adjustment	Remarks
0 - 150mm	500-702-10*	Blade	with thumb roller	—
0 - 150mm	500-712-10	Blade	with thumb roller	—
0 - 150mm	500-706-11*	Blade	—	—
0 - 150mm	500-716-11	Blade	—	—
0 - 150mm	500-709-11*	ø1.9mm rod	—	—
0 - 150mm	500-719-10	ø1.9mm rod	with thumb roller	—
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

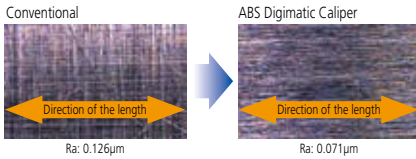


ABSOLUTE Digimatic Caliper

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

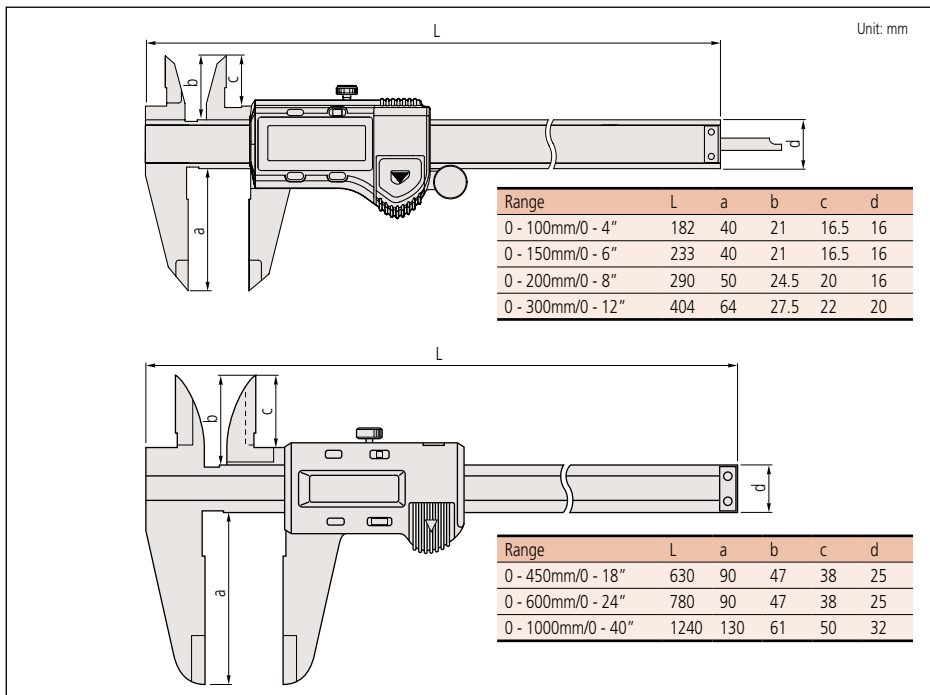


FEATURES

- 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

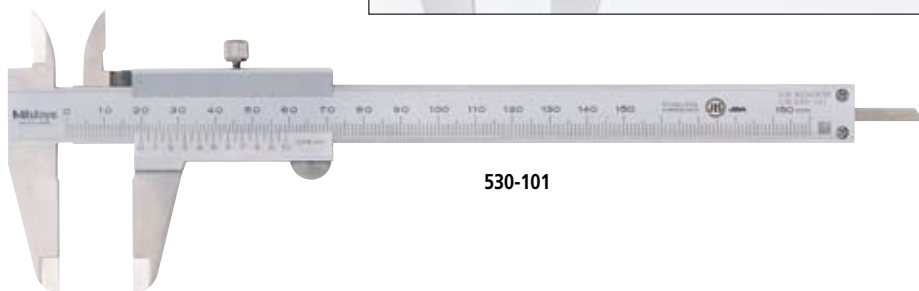
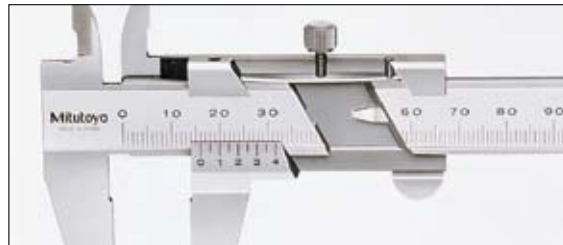
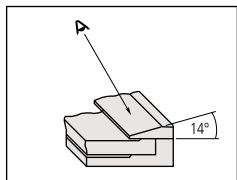


Vernier Caliper

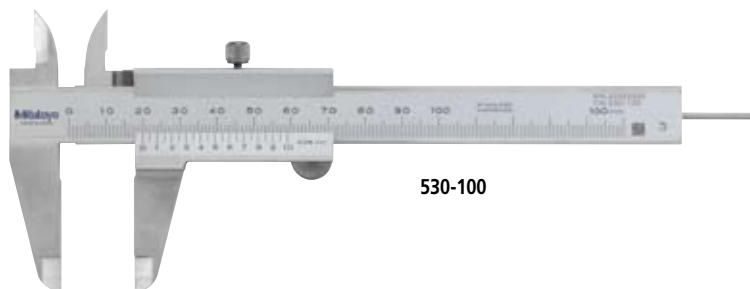
SERIES 530 — Standard model

FEATURES

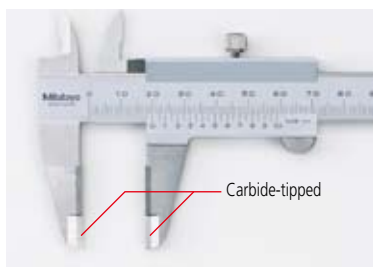
- Plain and basic design.
- Can measure outside and inside diameter (OD and ID), depth, and steps.
- The small vernier face angle (14°) provides easy reading.
- Different reading scales on vernier. (metric/inch and inch models only)
- Clamping screw atop the slider.
- Carbide-tipped jaw type calipers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



530-101



530-100



Carbide-tipped

Carbide-tipped jaw type

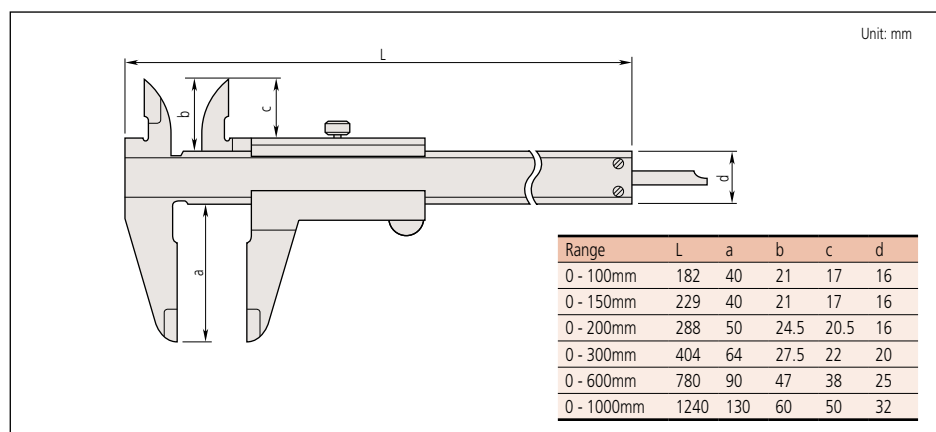


Round depth bar type

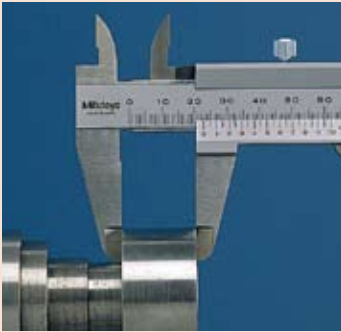
Technical Data

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")

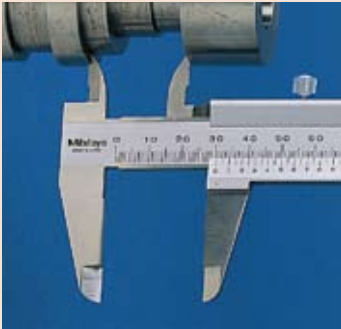
DIMENSIONS



Measurement Applications



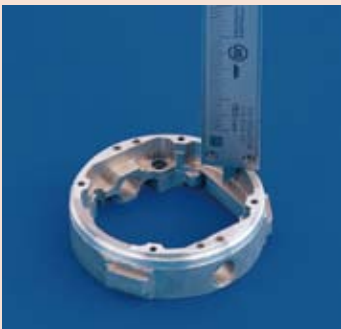
OD measurement



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

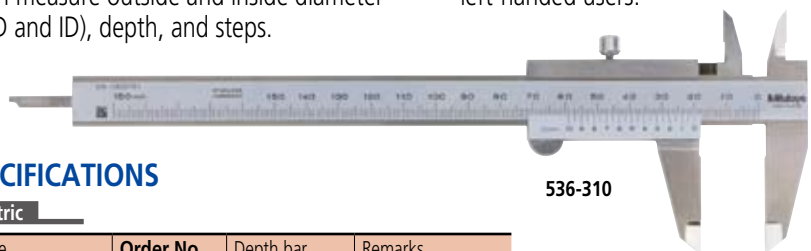
Range	Order No.	Depth bar	Inch graduation	Remarks
0 - 6"	530-105	Blade	1/128"	—
0 - 8"	530-116	Blade	1/128"	—

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.



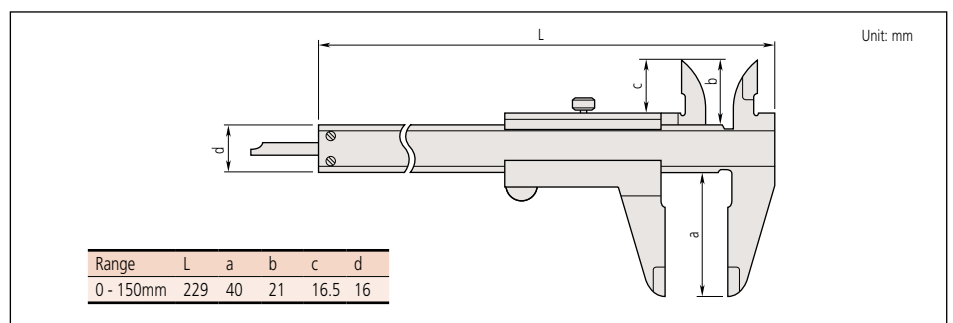
536-310

SPECIFICATIONS

Metric

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

DIMENSIONS

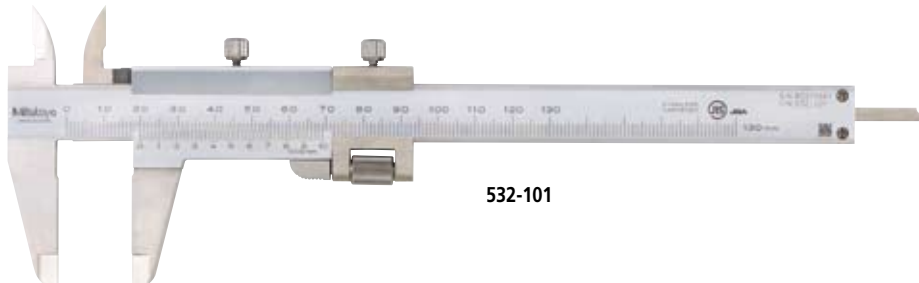


Vernier Caliper

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

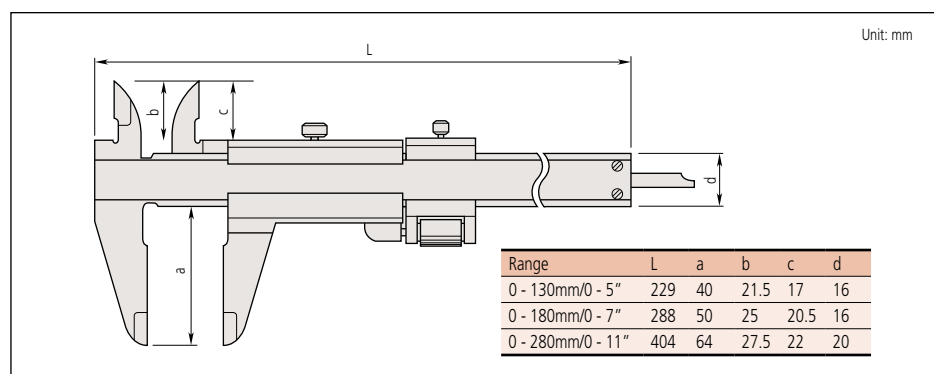
Accuracy: $\pm 0.03\text{mm}$ ($\leq 180\text{mm}$), $\pm 0.04\text{mm}$ ($\leq 280\text{mm}$)
 Graduation: 0.02mm, 0.02mm (.001") or .001" (1/128")

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



Vernier Caliper

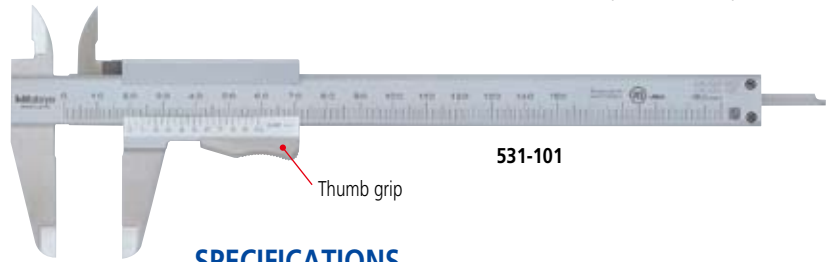
SERIES 531 — with Thumb Clamp

FEATURES

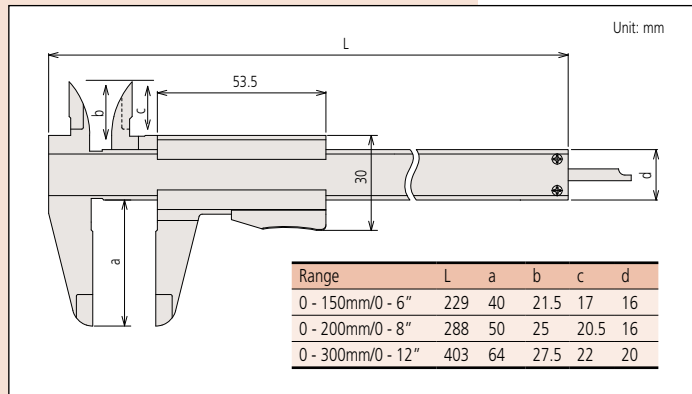
- The slider moves only when the spring-loaded thumb grip is depressed.
- Can measure outside and inside diameter (OD and ID), depth, and steps.

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")



DIMENSIONS



SPECIFICATIONS

Metric					
Range	Order No.	Accuracy	Depth bar	Remarks	
0 - 150mm	531-101	±0.05mm	Blade	—	
0 - 200mm	531-102	±0.05mm	Blade	—	
0 - 300mm	531-103	±0.08mm	Blade	—	

*Graduation: 0.02mm

Metric/Inch with metric/inch double scale					
Range	Order No.	Accuracy	Depth bar	Inch graduation	Remarks
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

Vernier Caliper

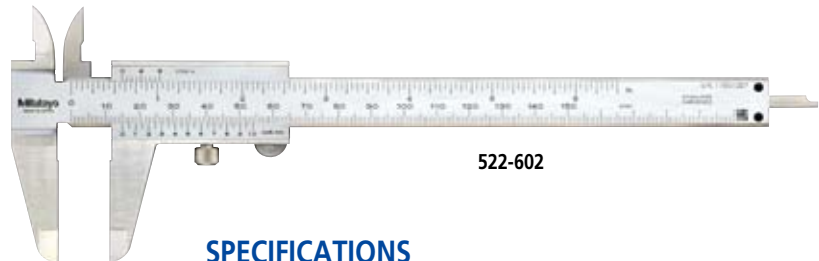
SERIES 522 — Parallax-Free Type

FEATURES

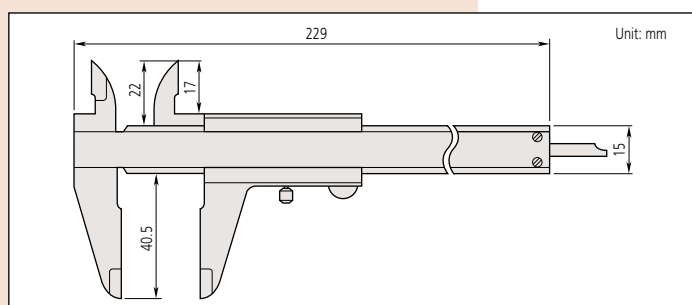
- The main and vernier scales are flush-fitted to eliminate parallax errors because of the diamond-shape (octagonal) cross section of the main scale.
- Can measure outside and inside diameter (OD and ID), depth, and steps.
- With locking screw below the slider.

Technical Data

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



DIMENSIONS



SPECIFICATIONS

Metric					
Range	Order No.	Accuracy	Depth bar	Remarks	
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	Depth bar	Inch resolution	Remarks
0 - 150mm	522-601	±0.05mm	Blade	1/128"	—
0 - 150mm	522-602*	±0.03mm	Blade	.001"	High accuracy model

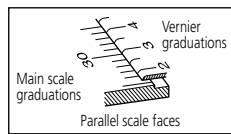
*Graduation: 0.02mm

ABSOLUTE Digimatic & Vernier Caliper

SERIES 550, 160 — with Nib Style Jaws

FEATURES

- The rounded faces of the jaws are ideal for accurate inside diameter (ID) measurement.
- Inside and outside measurements can be read directly from the upper and lower vernier scales (Series 160).
- Fine-adjustment type is available (Series 160).
- Parallax-free vernier scale type is available for easy and positive measurement (Series 160).
- SPC output (Series 550).



550-301-10



160-130

SPECIFICATIONS

Metric Digital model

Range*	Order No.	Accuracy	Remarks
0 - 200mm (10 - 210mm)	550-301-10	±0.03mm	IP67
0 - 300mm (10 - 310mm)	550-331-10	±0.04mm	IP67, with offset/preset function for easy inside measurement
0 - 450mm (20 - 470mm)	550-203-10	±0.05mm	—
0 - 600mm (20 - 620mm)	550-205-10	±0.05mm	—
0 - 1000mm (20 - 1020mm)	550-207-10	±0.07mm	—

*(): Inside measurement

Inch/Metric Digital model

Range*	Order No.	Accuracy	Remarks
0 - 8" (.4" - 8.4")	550-311-10	±.0015"	IP67
0 - 12" (.4" - 12.4")	550-341-10	±.002"	IP67, with offset/preset function for easy inside measurement
0 - 18" (.5" - 18.5")	550-223-10	±.002"	—
0 - 24" (.5" - 24.5")	550-225-10	±.002"	—
0 - 40" (1" - 41")	550-227-10	±.003"	—

*(): Inside measurement

Metric with metric/metric double scale

Range*	Order No.	Accuracy	Remarks
0 (20) - 450mm	160-130	±0.10mm	—
0 (20) - 600mm	160-131	±0.10mm	—
0 (20) - 1000mm	160-132	±0.15mm	—

*(): Minimum dimension in inside measurement

DIMENSIONS

Series 550 / 160		Series 551 / 533		Unit: mm	
Range	a b c R	Range	a b c d R		
0 - 200mm	60 40.5 8 5	0 - 200mm	60 43 8 30 5		
0 - 300mm	75 50.5 12 5	0 - 300mm	90 68 10 40.1 5		
0 - 450mm	100 65 18 10	0 - 450mm	150 115 15 56 10		
0 - 600mm	100 65 18 10	0 - 600mm	150 115 15 56 10		
0 - 1000mm	140 95 24 10	0 - 1000mm	150 115 20 56 10		



(Refer to page VIII for details.)

Technical Data

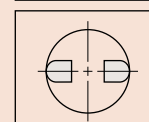
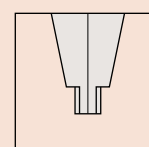
Accuracy: Refer to the list of specifications.
(excluding quantizing error for digital models)
Resolution*: 0.01mm or .0005"/0.01mm
Graduation**: 0.02mm
Display*: LCD
Scale type*: ABSOLUTE electrostatic linear encoder
Max. response speed*: Unlimited
Battery*: SR44 (1 pc.), **938882**
Battery life*: Approx. 3 years under normal use
(1 year: 300mm models)
(3.5 years: over 300mm models)
Dust/Water protection level*: IP67 (models up to 300mm)
*Digital models **Analog models

Functions of Digital Model

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

Optional Accessories for Digital Model

- 05CZA624**: SPC cable with data switch (1m)*
 - 05CZA625**: SPC cable with data switch (2m)*
 - 02AZD790A**: SPC cable for U-WAVE w/ data switch (160mm)*
 - 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)
- *For IP67 models (up to 300mm)



Round surface of jaws for accurate CD measurement



(Refer to page VIII for details.)

Technical Data

Accuracy: Refer to the list of specifications.
(excluding quantizing error for digital models)

Resolution: 0.01mm or .0005"/0.01mm

Display: LCD

Scale type: ABSOLUTE electrostatic linear encoder

Max. response speed: Unlimited

Battery: SR44 (1 pc.), **938882**

Battery life: Approx. 3 years under normal use
(1 year: 300mm models)
(3.5 years: over 300mm models)

Dust/Water protection level: IP67 (models up to 300mm)

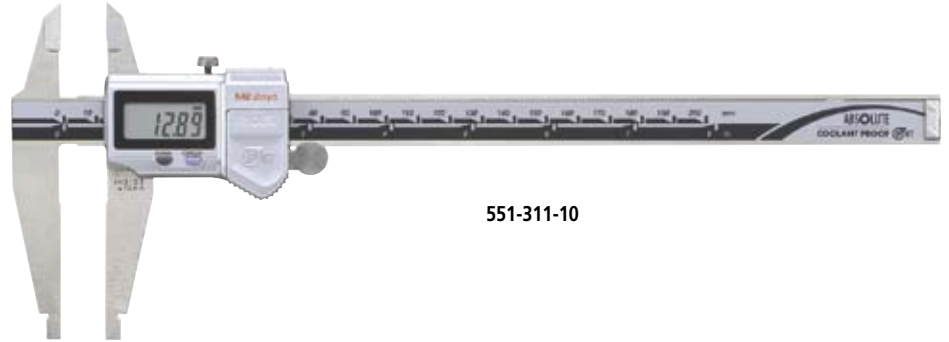
Functions of Digital Model

Origin-set, Zero-setting, Data output, inch/mm conversion
(inch/mm models)

Alarm: Low voltage, Counting value composition error



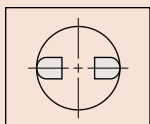
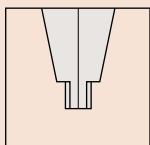
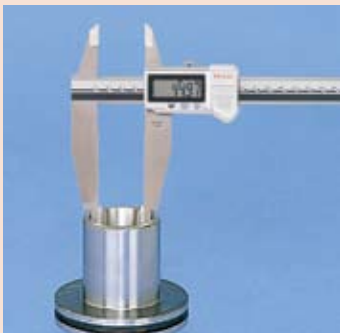
551-311-10



533-404

Optional Accessories for Digital Model

- 05CZA624:** SPC cable with data switch (1m)*
 - 05CZA625:** SPC cable with data switch (2m)*
 - 02AZD790A:** SPC cable for U-WAVE w/ data switch (160mm)*
 - 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)
- *For IP67 models (up to 300mm)



Round surface of jaws for accurate CD measurement

ABSOLUTE Digimatic Caliper

SERIES 551, 533 — with Nib Style and Standard Jaws

FEATURES

- The rounded faces of the jaws are ideal for accurate inside diameter (ID) measurement.
- SPC output. (Series 551)
- Inside and outside measurements can be read directly from the upper and lower vernier scales (Series 533).

SPECIFICATIONS

Metric Digital model

Range*	Order No.	Accuracy	Remarks
0 - 200mm (10 - 210mm)	551-301-10	±0.03mm	IP67
0 - 300mm (10 - 310mm)	551-331-10	±0.04mm	IP67, with offset/preset function for easy inside measurement
0 - 500mm (20 - 520mm)	551-204-10	±0.06mm	—
0 - 750mm (20 - 770mm)	551-206-10	±0.06mm	—
0 - 1000mm (20 - 1020mm)	551-207-10	±0.07mm	—

*(): inside measurement

Inch/Metric Digital model

Range*	Order No.	Accuracy	Remarks
0 - 8" (.4" - 8.4")	551-311-10	±.0015"	IP67
0 - 12" (.4" - 12.4")	551-341-10	±.002"	IP67, with offset/preset function for easy inside measurement
0 - 20" (.5" - 20.5")	551-224-10	±.0025"	—
0 - 30" (.5" - 30.5")	551-226-10	±.0025"	—
0 - 40" (1" - 41")	551-227-10	±.003"	—

*(): inside measurement

Metric with metric/metric double scale

Range*	Order No.	Accuracy	Remarks
0 (20) - 500mm	533-404	±0.10mm	—
0 (20) - 750mm	533-405	±0.12mm	—
0 (20) - 1000mm	533-406	±0.15mm	—

*(): inside measurement

Dial Caliper

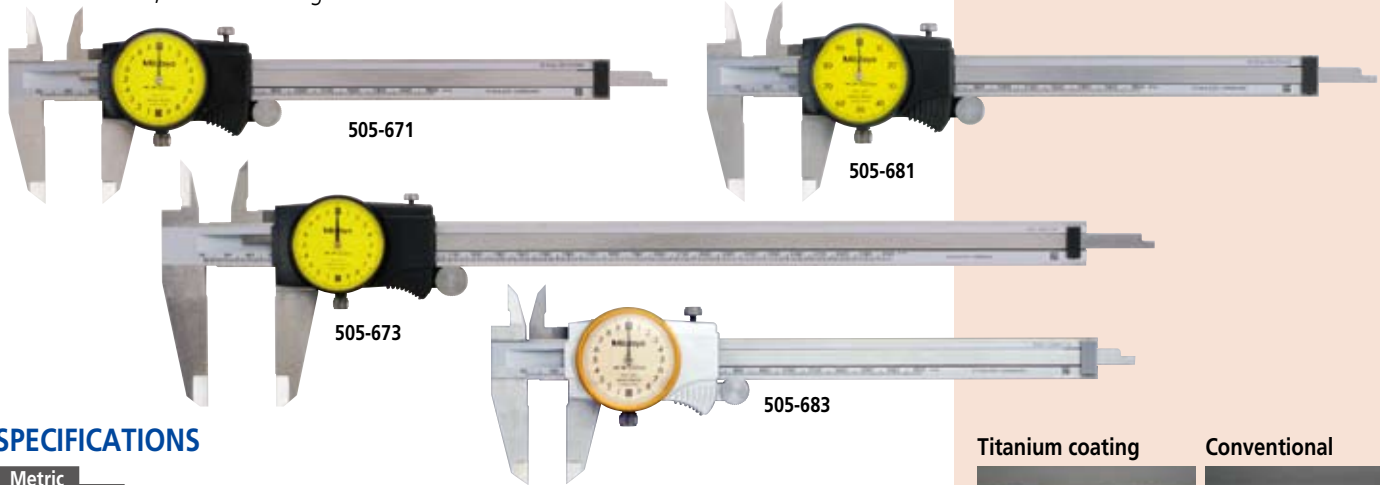
SERIES 505

FEATURES

- Newly designed dial movement for ultra smooth sliding and high shock protection.
- Titanium coating is applied to the sliding surfaces to enhance the durability (except for 0 - 300mm and 0 - 12" model). No wear over 100,000-time sliding test.
- Can measure outside and inside diameter (OD and ID), depth, and steps.
- Clamping screw atop the slider.
- Special models available with carbide-tipped outside and inside jaws.



(Refer to page VIII for details.)



SPECIFICATIONS

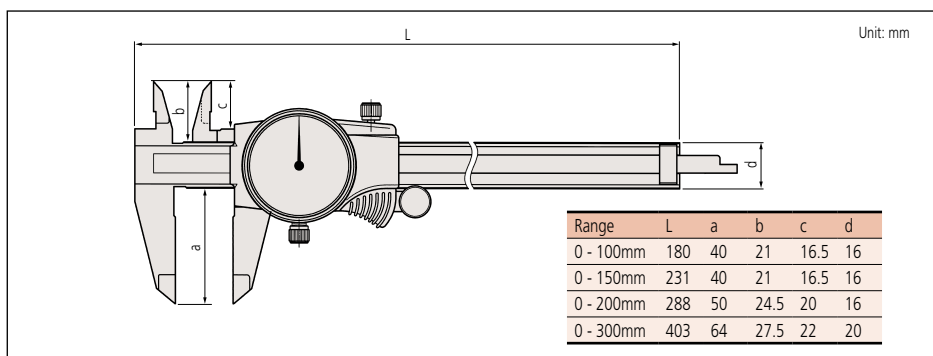
Metric				
Range	Order No.	Accuracy	Graduation	Remarks
0 - 100mm	505-680	±0.015mm	0.01mm, 1mm/rev	—
0 - 150mm	505-671 / 505-683*	±0.03mm	0.02mm, 2mm/rev	—
0 - 150mm	505-707	±0.03mm	0.02mm, 2mm/rev	Carbide-tipped jaws for outside measurement
0 - 150mm	505-711	±0.03mm	0.02mm, 2mm/rev	Carbide-tipped jaws for outside and inside measurement
0 - 150mm	505-681 / 505-685*	±0.02mm	0.01mm, 1mm/rev	—
0 - 200mm	505-672 / 505-684*	±0.03mm	0.02mm, 2mm/rev	—
0 - 200mm	505-682 / 505-686*	±0.03mm	0.01mm, 1mm/rev	—
0 - 300mm	505-673	±0.04mm	0.02mm, 2mm/rev	—

*Silver cover type

Inch				
Range	Order No.	Accuracy	Graduation	Remarks
0 - 4"	505-674	±.001"	.001", .1"/rev	—
0 - 6"	505-675 / 505-689*	±.001"	.001", .1"/rev	—
0 - 6"	505-708	±.001"	.001", .1"/rev	Carbide-tipped jaws for outside measurement
0 - 6"	505-712	±.001"	.001", .1"/rev	Carbide-tipped jaws for outside and inside measurement
0 - 8"	505-676 / 505-690*	±.002"	.001", .1"/rev	—
0 - 8"	505-709	±.002"	.001", .1"/rev	Carbide-tipped jaws for outside measurement
0 - 8"	505-713	±.002"	.001", .1"/rev	Carbide-tipped jaws for outside and inside measurement
0 - 12"	505-720	±.002"	.001", .2"/rev	—
0 - 12"	505-677*	±.002"	.001", .1"/rev	—
0 - 12"	505-721	±.002"	.001", .2"/rev	Carbide-tipped jaws for outside measurement
0 - 12"	505-710*	±.002"	.001", .1"/rev	Carbide-tipped jaws for outside measurement
0 - 12"	505-714*	±.002"	.001", .1"/rev	Carbide-tipped jaws for outside and inside measurement

*Silver cover type

DIMENSIONS



Titanium coating



Wear: 0µm

Conventional



Wear: 4µm

Technical Data

Accuracy: Refer to the list of specifications.
Dial reading: Refer to the list of specifications.

ABSOLUTE Coolant Proof Carbon Fiber Caliper

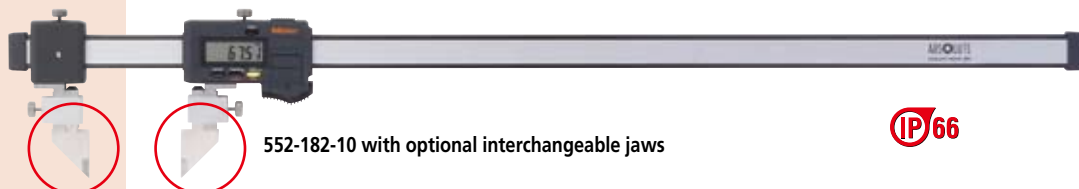
SERIES 552 — with Interchangeable Jaws



(Refer to page VIII for details.)

FEATURES

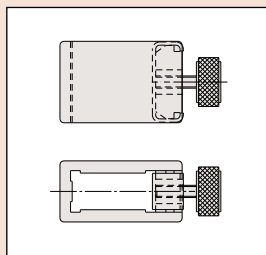
- The range of applications can be expanded by using interchangeable jaws (optional).
- Quick and easy exchanging of jaws due to the unique clamping mechanism. (A pair of clamping wheels is a standard accessory.)
- Provided with preset function for setting a desired starting point, which allows direct readout of offset measurements.
- SPC data output.



552-182-10 with optional interchangeable jaws

Technical Data

Accuracy: Refer to the list of specifications.
(excluding quantizing error)
Resolution: 0.01mm or .0005"/0.01mm
Display: LCD
Scale type: ABSOLUTE electromagnetic linear encoder
Max. response speed: Unlimited
Battery: SR44 (1 pc.), **938882**
Battery life: Approx. 5,000 hours in continuous use
Dust/Water protection level: IP66
Standard accessory: Jaw clamps (2 pcs.), **05GZA033**



Functions

Origin-set, Zero-setting, Presetting, Offsetting, Data hold,
Automatic power on/off, Data output, inch/mm conversion
(inch/mm models)
Alarm: Low voltage, 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)



SPECIFICATIONS

Metric		
Range	Order No.	Accuracy
0 - 450mm	552-181-10	±0.04mm
0 - 600mm	552-182-10	±0.04mm
0 - 1000mm	552-183-10	±0.05mm
0 - 1500mm	552-184-10	±0.09mm
0 - 2000mm	552-185-10	±0.12mm

Inch/Metric		
Range	Order No.	Accuracy
0 - 18"	552-191-10	±.002"
0 - 24"	552-192-10	±.002"
0 - 40"	552-193-10	±.002"
0 - 60"	552-194-10	±.004"
0 - 80"	552-195-10	±.005"

Interchangeable Jaws (Optional)

Standard Type			
Order No.	Components	a	b
07CZA056	Right (07CAA044), Left (07CAA045)	28mm (1.1")	30mm (1.2")

Inside Point Type			
Order No.	Components	a	b
07CZA058	07CZA041 x 2pcs.	25mm	50mm
07CZA059	07CZA048 x 2pcs.	1"	2"

Scriber Type			
Order No.	Components	a	b
07CZA055	Right (07CZA042), Left (07CZA043)	8mm	30mm
07CZA061	Right (07CZA042), Left (07CZA049)	0.31"	1.2"

Surface Plate Type			
Order No.	a	b	
07CZA044	90mm (3.5")	28mm (1.1")	

Centerline Type			
Order No.	Components	a	b
07CZA057	07CZA039 x 2pcs.	30mm	30mm
07CZA060	07CZA047 x 2pcs.	1.2"	1.2"

ABSOLUTE Coolant Proof Carbon Fiber Caliper

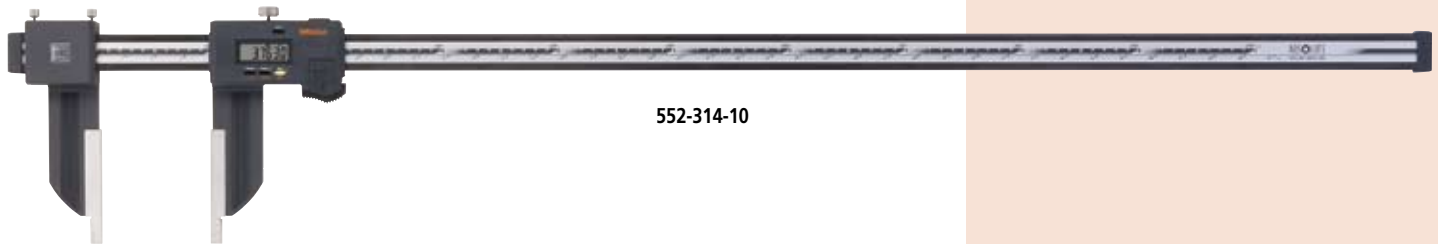
SERIES 552

FEATURES

- Lightweight Digimatic Calipers that employ CFRP (Carbon Fiber Reinforced Plastics) in the beam and jaws.
- Highly durable and easy to handle.
- The range of applications can be expanded by using the optional attachments.
- Direct readout of inside measurements from the LCD. (Offset value can be set easily by using the Offset key.)
- Preset function for setting a desired starting point.
- SPC data output.
- Special model available with ceramic jaws suitable for measuring magnetic products.



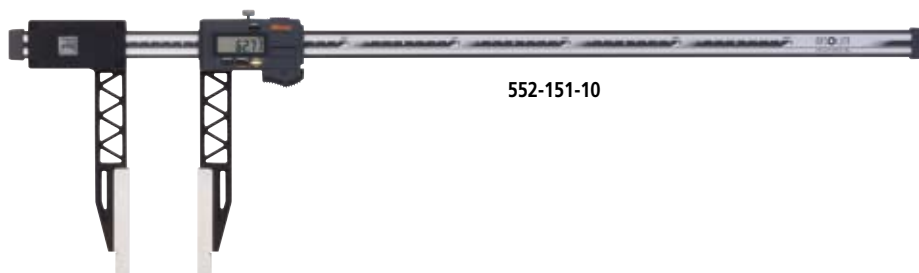
(Refer to page VIII for details.)



552-314-10



552-155-10



552-151-10

SPECIFICATIONS

Metric		
Range*	Order No. (standard / long jaws / ceramic jaws)	Accuracy (standard / long jaws / ceramic jaws)
0 (20) - 450mm	552-302-10 / 552-150-10 / 552-155-10	±0.04mm / ±0.06mm / ±0.04mm
0 (20) - 600mm	552-303-10 / 552-151-10 / 552-156-10	±0.04mm / ±0.06mm / ±0.04mm
0 (20) - 1000mm	552-304-10 / 552-152-10	±0.05mm / ±0.07mm
0 (20) - 1500mm	552-305-10 / 552-153-10	±0.09mm / ±0.11mm
0 (20) - 2000mm	552-306-10 / 552-154-10	±0.12mm / ±0.14mm

*(): Minimum dimension in inside measurement

Inch/Metric		
Range*	Order No. (standard / long jaws / ceramic jaws)	Accuracy (standard / long jaws / ceramic jaws)
0 (.5") - 18"	552-312-10 / 552-160-10 / 552-165-10	±.002" / ±.0025" / ±.002"
0 (.5") - 24"	552-313-10 / 552-161-10 / 552-166-10	±.002" / ±.0025" / ±.002"
0 (1") - 40"	552-314-10 / 552-162-10	±.002" / ±.003"
0 (1") - 60"	552-315-10 / 552-163-10	±.004" / ±.0045"
0 (1") - 80"	552-316-10 / 552-164-10	±.005" / ±.0055"

*(): Minimum dimension in inside measurement

Technical Data

Accuracy: Refer to the list of specifications. (excluding quantizing error)
 Resolution: 0.01mm or .0005"/0.01mm
 Display: LCD
 Scale type: ABSOLUTE electromagnetic linear encoder
 Max. response speed: Unlimited
 Battery: SR44 (1 pc.), **938882**
 Battery life: Approx. 5,000 hours in continuous use
 Dust/Water protection level: IP66

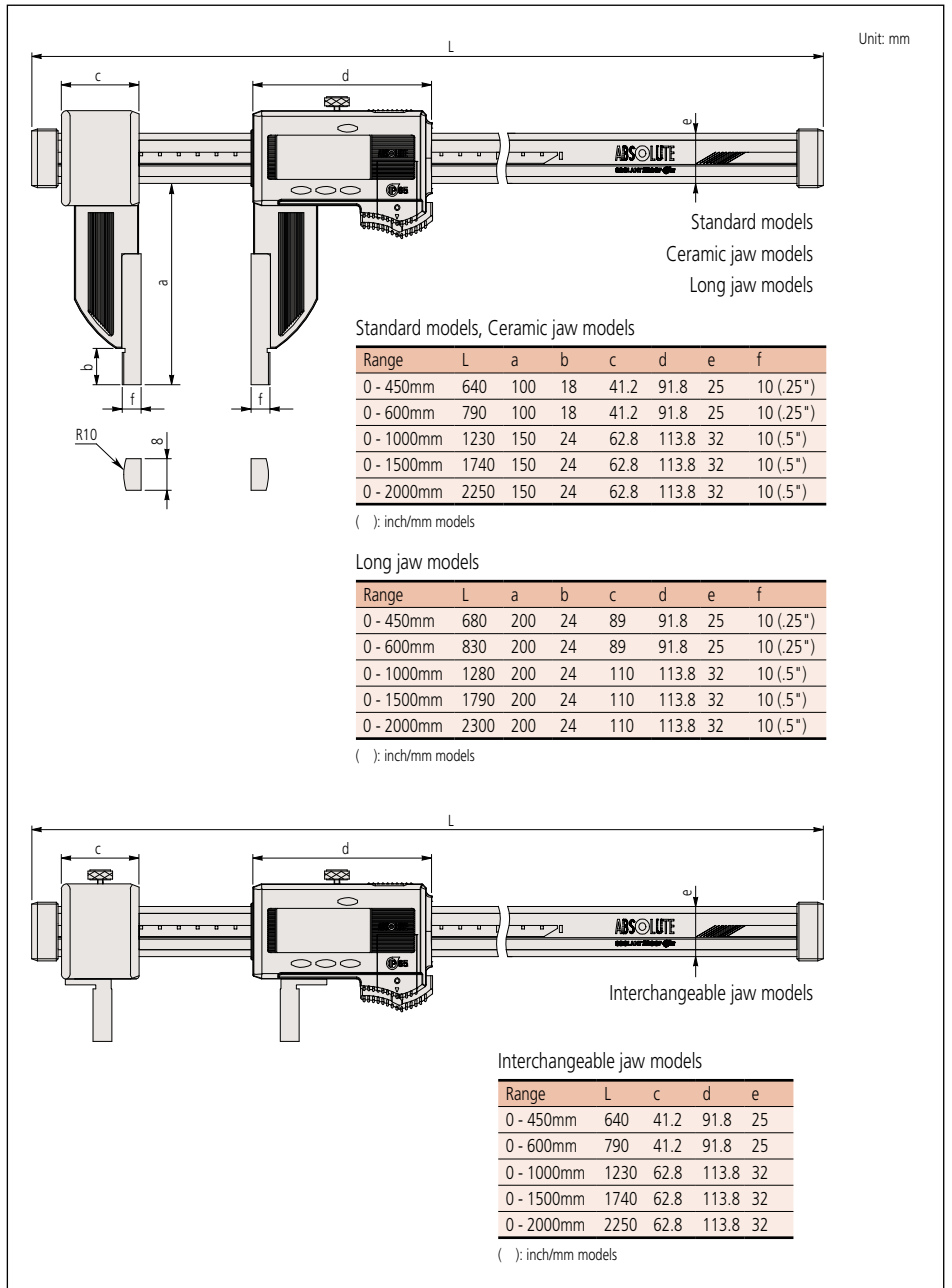
Functions

Origin-set, Zero-setting, Presetting, Offsetting, Data hold, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)
 Alarm: Low voltage, 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)

DIMENSION

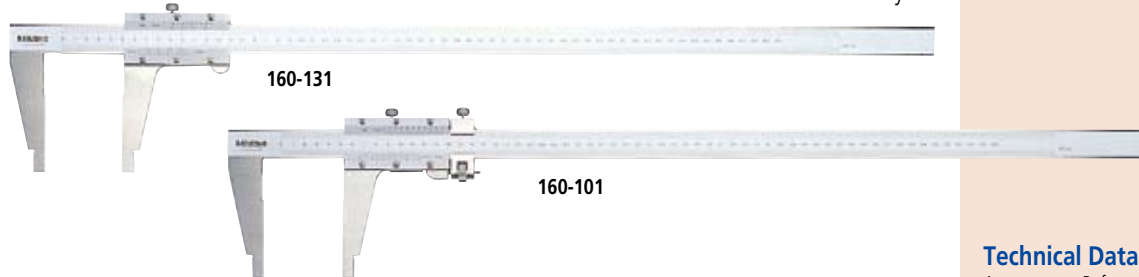


Vernier Caliper

SERIES 160 — with Nib Style Jaws and Fine Adjustment

FEATURES

- The jaws have round measuring faces for accurate inside diameter (ID) measurement.
- With fine adjustment (excepting **160-130/131/132/133/134**).
- The single main scale models feature an additional (offset) vernier scale to enable inside measurements to be read directly.



SPECIFICATIONS

Metric with inside measurement vernier scale

Range*	Order No.	Accuracy	Graduations	Remarks
0 (20) - 450mm	160-130	±0.10mm	0.05mm	without fine adjustment
0 (20) - 600mm	160-131	±0.10mm	0.05mm	without fine adjustment
0 (20) - 1000mm	160-132	±0.15mm	0.05mm	without fine adjustment
0 (20) - 1500mm	160-133	±0.22mm	0.05mm	without fine adjustment
0 (20) - 2000mm	160-134	±0.28mm	0.05mm	without fine adjustment

*(): Minimum dimension in ID measurement

Metric with inside measurement vernier scale

Range*	Order No.	Accuracy	Graduations	Remarks
0 (10) - 300mm	160-127	±0.04mm	0.02mm	—
0 (20) - 450mm	160-128	±0.05mm	0.02mm	—
0 (20) - 600mm	160-101	±0.05mm	0.02mm	—
0 (20) - 1000mm	160-104	±0.07mm	0.02mm	—
0 (20) - 1500mm	160-110	±0.1mm	0.02mm	—
0 (20) - 2000mm	160-113	±0.12mm	0.02mm	—

*(): Minimum dimension in ID measurement

Metric/Inch with metric/inch double scale

Range*	Order No.	Accuracy	Graduations	Remarks
0 (10) - 300mm	160-150	±0.04mm	0.02mm/.001"	+10mm/.394" to reading in inside measurement
0 (20) - 450mm	160-151	±0.05mm	0.02mm/.001"	+20mm/.787" to reading in inside measurement
0 (20) - 600mm	160-153	±0.05mm	0.02mm/.001"	+20mm/.787" to reading in inside measurement
0 (20) - 1000mm	160-155	±0.07mm	0.02mm/.001"	+20mm/.787" to reading in inside measurement
0 (20) - 1500mm	160-157	±0.1mm	0.02mm/.001"	+20mm/.787" to reading in inside measurement
0 (20) - 2000mm	160-159	±0.12mm	0.02mm/.001"	+20mm/.787" to reading in inside measurement

*(): Minimum dimension in ID measurement

Inch with inside measurement vernier scale

Range*	Order No.	Accuracy	Graduations	Remarks
0 (.3") - 12"	160-124	±.0015"	.001"	—
0 (.5") - 18"	160-116	±.002"	.001"	—
0 (.5") - 24"	160-102	±.002"	.001"	—
0 (1") - 40"	160-105	±.003"	.001"	—
0 (1") - 60"	160-111	±.004"	.001"	—
0 (1") - 80"	160-114	±.005"	.001"	—

*(): Minimum dimension in ID measurement

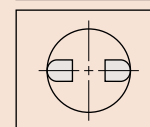
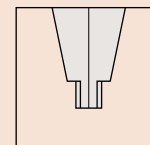
Inch/Metric with inch/metric double scale

Range*	Order No.	Accuracy	Graduations	Remarks
0 (.3") - 12"	160-125	±.0015"	.001"/0.02mm	+3"/7.62mm to reading in inside measurement
0 (.5") - 18"	160-119	±.002"	.001"/0.02mm	+5"/12.7mm to reading in inside measurement
0 (.5") - 24"	160-103	±.002"	.001"/0.02mm	+5"/12.7mm to reading in inside measurement
0 (1") - 40"	160-106	±.003"	.001"/0.02mm	+1"/25.4mm to reading in inside measurement
0 (1") - 60"	160-112	±.004"	.001"/0.02mm	+1"/25.4mm to reading in inside measurement
0 (1") - 80"	160-115	±.005"	.001"/0.02mm	+1"/25.4mm to reading in inside measurement

*(): Minimum dimension in ID measurement

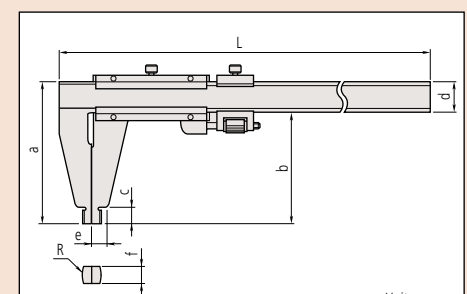
Technical Data

Accuracy: Refer to the list of specifications.
Graduation: Refer to the list of specifications.



Round-faced jaws for accurate ID measurement

DIMENSIONS



Unit: mm

Range	L	a	b	c	d	e	f	R
0 - 300mm	445	95	25	12	20	10	3.8	R5
0 - 450mm	630	125	100	18	25	14.8	6	R10
0 - 600mm	780	125	100	18	25	14.8	6	R10
0 - 1000mm	1240	172	140	24	32	17	10	R10
0 - 1500mm	1800	212	180	30	32	19	10	R10
0 - 2000mm	2300	220	180	30	40	23	12	R10

Long Jaw Vernier Caliper

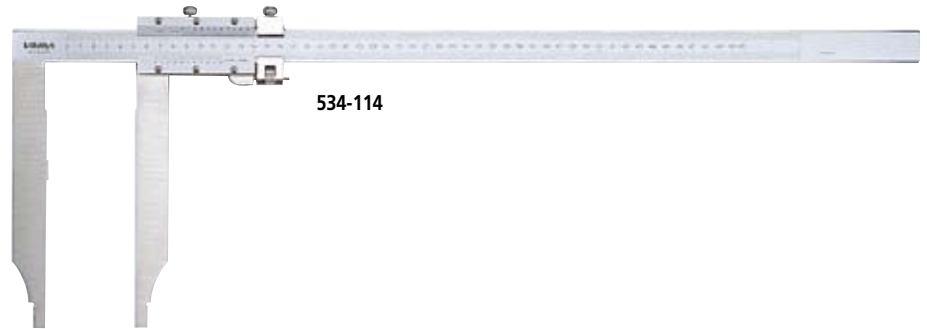
SERIES 534

FEATURES

- Long jaws for measuring hard-to-reach workpiece features.



534-110



534-114

SPECIFICATIONS

Metric with inside measurement vernier scale

Range*	Order No.	Accuracy	Graduation	Remarks
0 (10) - 300mm	534-109	±0.07mm	0.05mm	without fine adjustment
0 (20) - 500mm	534-110	±0.13mm	0.05mm	without fine adjustment

*(): Minimum dimension in inside measurement

Metric with inside measurement vernier scale

Range*	Order No.	Accuracy	Graduation	Remarks
0 (10) - 300mm	534-113	±0.04mm	0.02mm	—
0 (20) - 500mm	534-114	±0.06mm	0.02mm	—
0 (20) - 750mm	534-115	±0.08mm	0.02mm	—
0 (20) - 1000mm	534-116	±0.10mm	0.02mm	—

*(): Minimum dimension in inside measurement

Metric/Inch with metric/inch double scale

Range*	Order No.	Accuracy	Graduation	Remarks
0 (10) - 300mm	534-101	±0.07mm	0.05mm/ 1/128"	+10mm/.394" to reading in inside measurement
0 (10) - 300mm	534-105	±0.04mm	0.02mm/.001"	+10mm/.394" to reading in inside measurement
0 (20) - 500mm	534-102	±0.13mm	0.05mm/ 1/128"	+20mm/.787" to reading in inside measurement
0 (20) - 500mm	534-106	±0.06mm	0.02mm/.001"	+20mm/.787" to reading in inside measurement
0 (20) - 700mm	534-103	±0.16mm	0.05mm/ 1/128"	+20mm/.787" to reading in inside measurement
0 (20) - 700mm	534-107	±0.08mm	0.02mm/.001"	+20mm/.787" to reading in inside measurement
0 (20) - 1000mm	534-104	±0.20mm	0.05mm/ 1/128"	+20mm/.787" to reading in inside measurement
0 (20) - 1000mm	534-108	±0.10mm	0.02mm/.001"	+20mm/.787" to reading in inside measurement

*(): Minimum dimension in inside measurement

Inch with inside measurement vernier scale

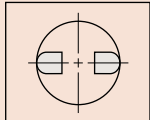
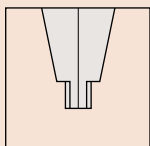
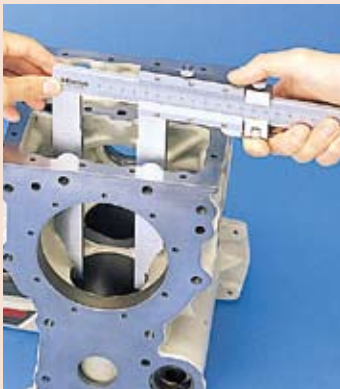
Range*	Order No.	Accuracy	Graduation	Remarks
0 (.3") - 12"	534-117	±.002"	.001"	—
0 (.8") - 20"	534-118	±.003"	.001"	—
0 (.8") - 30"	534-119	±.004"	.001"	—
0 (.8") - 40"	534-120	±.004"	.001"	—

*(): Minimum dimension in inside measurement

Technical Data

Accuracy: Refer to the list of specifications.

Graduation: Refer to the list of specifications.



Round-faced jaws for accurate ID measurement

DIMENSIONS

