Mitutoyo

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Measuring Instruments Catalog

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02-214-0101

Mitutoyo

ABSOLUTE®
Absolute System Patented by MITUTOYO

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.

Improvement in surface finish of beam

500-774

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

DIMENSION

Unit: mm

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

Jaw thickness: 3.5mm

Technical Data

Accuracy:	±0.02mm (excluding quantizing error)
Resolution:	0.01mm
Repeatability:	0.01mm
Display:	LCD
Length standard:	ABSOLUTE electromagnetic induction linear encoder
Max. response speed:	Unlimited
Battery:	Solar battery*
Dust/Water protection level:	IP67

*Can be used continuously above 60lux ambient illumination.

Function

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

Optional Accessory

05CZA624: SPC cable with data switch (1m)
05CZA625: SPC cable with data switch (2m)

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 without problems 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 in sufficient.

- 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.

Mitutoyo

ABSOLUTE Solar Caliper

SERIES 500 — No battery or origin reset needed

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

FEATURES

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

500-444

Technical Data

Accuracy: ±0.02mm (excluding quantizing error)
Resolution: 0.01mm
Repeatability: 0.01mm
Display: LCD
Length standard: ABSOLUTE electrostatic capacitance type linear encoder
Max. response speed: Unlimited
Battery: Solar battery*
*Can be used continuously above 60lux ambient illumination.

Function

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

Optional Accessory

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

SPECIFICATIONS

Metric

Range	Order No.	Remarks (depth measuring bar / thumb roller)	
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

DIMENSION

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

Mitutoyo

ABSOLUTE Coolant Proof Caliper

SERIES 500 — with Dust/Water Protection Conforming to IP66/67 Level

ABSOLUTE®
Absolute System Patented by MITUTOYO

www.tuv.com TÜV TÜV Rheinland ID:2011207400 IP67

www.tuv.com TÜV TÜV Rheinland ID:3011207400 IP66

Mitutoyo guarantees the product quality. PROPRIETARY INSPECTION CERTIFICATE

FEATURES

- Can be used in workshop conditions exposed to coolant, water, dust or oil.
- Easy to use - no need to wipe or clean the scale.
- Advanced design styling.
- Incorporates absolute measurement system.
- Automatic power-on/off.
- Data output function.

500-712-10

IP67

500-702-10

IP67

Technical Data

Accuracy:	±0.02mm (≤200mm), ±0.03mm (>200mm) (excluding quantizing error)
Resolution:	0.01mm or .0005"/0.01mm
Repeatability:	0.01mm
Display:	LCD
Length standard:	ABSOLUTE electromagnetic induction linear encoder
Max. response speed:	Unlimited
Battery:	SR44 (1 pc. / 2 pcs*), 938882
Battery life:	Approx. 3 years under normal use (1 year: over 300mm models)
Dust/Water protection level:	IP66 or IP67

*0 - 300mm model

Function

Origin-set, Zero-setting, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)

Alarm:	Low voltage, Counting value composition error

Optional Accessory

05CZA624:	SPC cable with data switch (1m)
05CZA625:	SPC cable with data switch (2m)

05CZA624

Measurement data output function is available with a water-resistant SPC cable.

Certificate of inspection

CERTIFICATE OF INSPECTION / CERTIFICAT DE CONTROLE

Mitutoyo Corporation

Built-in ABS (absolute) scale means that these calipers are ready to use immediately after power-on without origin resetting. It's as easy as vernier caliper measurements.

SPECIFICATIONS

Metric

Rang	Order No.	Depth bar	Fine adjustment	Fine adjustment
0-150mm	**500-702-10***	Blade	with thumb roller	Remarks
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 jaw for outside measurement
0-150mm	**500-723-10**	Blade	with thumb roller	Carbide-tipped jaw for outside and inside measurement
0-150mm	**500-727-11**	Blade	-	Carbide-tipped jaw 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 jaw for outside measurement
0-200mm	**500-724-10**	Blade	with thumb roller	Carbide-tipped jaw for outside and inside measurement
0-200mm	**500-728-11**	Blade	-	Carbide-tipped jaw 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

Rang	Order No.	Depth bar	Fine adjustment	Fine adjustment
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 jaw for outside measurement
0-6"	**500-735-10**	Blade	with thumb roller	Carbide-tipped jaw for outside measurement
0-6"	**500-733-10***	Blade	with thumb roller	Carbide-tipped jaw for outside and inside measurement
0-6"	**500-737-10**	Blade	with thumb roller	Carbide-tipped jaw 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 jaw for outside measurement
0-8"	**500-736-10**	Blade	with thumb roller	Carbide-tipped jaw for outside measurement
0-8"	**500-734-10***	Blade	with thumb roller	Carbide-tipped jaw for outside and inside measurement
0-8"	**500-738-10**	Blade	with thumb roller	Carbide-tipped jaw 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

DIMENSION

Range	L	a	b	c	e
0 - 150mm	233	40	21	16.5	16
0 - 200mm	290	50	24.5	20	16
0 - 300mm	404	64	27.5	22	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 with equivalent pressure is supplied to the capsule and the master, 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 in the amount indicated by the differential pressure gauge. Thus, detection of air pressure differences is used as a criterion for judging leakage. Every single unit of the ABS Coolant Proof calipers and Coolant Proof micrometer is tested this way for air leakage to help ensure product quality.

IP66 protection level

Level 6: Dust-tight
No ingress of dust.

Level 6: Protected against powerful water jet.
Water projected in powerful jets* against the enclosure from any direction shall have no harmful effects.
*Size of direct jets: uses 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.).

Mitutoyo

ABSOLUTE Digimatic Caliper

SERIES 500 — with Exclusive ABSOLUTE Encoder Technology

SPC

ABSOLUTE®
Absolute System Patented by MITUTOYO

Mitutoyo guarantees the product quality
PROPRIETARY INSPECTION CERTIFICATE
Mitutoyo guarantees the product quality

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.

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.

High quality guide surface finish for smooth slider movement

500-150-20

500-181-20

Technical Data

Accuracy:	±0.02mm (≤200mm), ±0.03mm (≤300mm) ±0.05mm (≤600mm), ±0.07mm (≤1000mm) (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

DIMENSION

Unit: mm

Range	L	a	b	c	e
0 - 100mm	182	40	21	16.5	16
0 - 150mm	233	40	21	16.5	16
0 - 200mm	290	50	24.5	20	16
0 - 300mm	403	64	27.5	22	20

Range	L	a	b	c	e
0 - 450mm	630	90	47	38	25
0 - 600mm	780	90	47	38	25
0 - 1000mm	1240	130	61	50	32

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

500-502-10 500-501-10 500-500-10

Mitutoyo

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.

Technical Data

Accuracy: ±0.05mm (≤200mm), ±0.08mm (≤300mm)
±0.10mm (≤600mm), ±0.15mm (≤1000mm)
High accuracy type:
±0.03mm (≤200mm), ±0.04mm (≤300mm)

Graduation: 0.05mm, 0.05mm (1/128") or .001" (1/128")
High accuracy type:
0.02mm or 0.02mm (.001")

530-101

530-109

Carbide-tipped jaw type

Round depth bar type

DIMENSION

Unit: mm

Range	L	a	b	c	d
0 - 150mm	229	40	21	17	16
0 - 200mm	288	50	24.5	20.5	16
0 - 300mm	403	64	27.5	22	20
0 - 600mm	780	90	47	38	25
0 - 1000mm	1240	130	60	50	32

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

Vernier Caliper

SERIES 560, 536 — Parellex-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

Measurement Applications

OD measurement

ID measurement

Step measurement

Depth measurement

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Technical Data

Accuracy: ±0.05mm (≤200mm), ±0.08mm (≤300mm)
High accuracy type:
±0.02mm (≤150mm), ±0.03mm (≤200mm)
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	ø1.9mm rod	—	—
0 - 150mm	560-101	Blade	—	—
0 - 150mm	536-310	Blade	—	Left-handed type
0 - 150mm	560-122*	Blade	—	High accuracy model: ±0.03mm
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: ±0.03mm

*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

Technical Data

Accuracy: ±0.03mm (≤180mm), ±0.04mm (≤280mm)
Graduation: 0.02mm, 0.02mm (.001") or .001" (1/128")

FEATURES

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

532-101

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

DIMENSION

Unit: mm

Range	L	a	b	c	d
0 - 130mm	229	40	21.5	17	16
0 - 180mm	288	50	25	20.5	16
0 - 280mm	403	64	27.5	22	20

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

DIMENSION

Unit: mm

Range	L	a	b	c	d
0 - 150mm	229	40	21.5	17	16
0 - 200mm	288	50	25	20.5	16
0 - 300mm	403	64	27.5	22	20

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

Mitutoyo

Dial Caliper

SERIES 505

PROPRIETARY INSPECTION CERTIFICATE

FEATURES

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

505-671

505-681

505-673

505-683

Titanium coating

Wear: 0μm

Conventional

Wear: 4μm

Technical Data

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

SPECIFICATIONS

Metric

Range	Order No.	Accuracy	Remarks (dial reading / others)	
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 OD measurement
0 - 150mm	505-711	±0.03mm	0.02mm, 2mm/rev	Carbide-tipped jaws for OD & ID 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

DIMENSION

Unit: mm

Range	L	a	b	c	d
0 - 100mm	180	40	21	16.5	16
0 - 150mm	231	40	21	16.5	16
0 - 200mm	288	50	24.5	20	16
0 - 300mm	403	64	27.5	22	20

Mitutoyo

ABSOLUTE Digimatic & Vernier Caliper

SERIES 550, 160 — with Nib Style Jaws

FEATURES

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

SPECIFICATIONS

Metric Digital model

Range*	Order No.	Accuracy	Remarks
0 (10) - 200mm	550-201-20	±0.03mm	—
0 (10) - 300mm	550-231-10	±0.03mm	with offset/preset function for easy ID measurement
0 (20) - 450mm	550-203-10	±0.05mm	—
0 (20) - 600mm	550-205-10	±0.05mm	—
0 (20) - 1000mm	550-207-10	±0.07mm	—

*( ): Minimum dimension in ID measurement

Inch/Metric Digital model

Range*	Order No.	Accuracy	Remarks
0 (.4") - 8"	550-221-20	±.001"	—
0 (.4") - 12"	550-241-10	±.0015"	with offset/preset function for easy ID measurement
0 (.5") - 18"	550-223-10	±.002"	—
0 (.5") - 24"	550-225-10	±.002"	—
0 (1") - 40"	550-227-10	±.003"	—

*( ): Minimum dimension in ID measurement

Metric with metric/metric double scal

Range*	Order No.	Accuracy	Remarks
0 (10) - 200mm	160-170	±0.03mm	High accuracy model with parallax-free vernier scale (0.02mm graduation)
0 (10) - 300mm	160-180	±0.04mm	High accuracy model with parallax-free vernier scale (0.02mm graduation)
0 (20) - 450mm	160-130	±0.10mm	—
0 (20) - 600mm	160-131	±0.10mm	—
0 (20) - 1000mm	160-132	±0.15mm	—

*( ): Minimum dimension in ID measurement

DIMENSION

Range	L	a	b	d
0 - 200mm	288 (290)	60	8	16
0 - 300mm	445	75	12	20
0 - 450mm	632	100	18	25
0 - 600mm	780	100	18	25
0 - 1000mm	1240	140	24	32

( ): Digital models

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
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

*Digital models **Analog models

Function of Digital Model

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

Alarm:	Low voltage, Counting value composition error

Optional Accessory for Digital Model

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

Round surface of jaws for accurate CD measurement

Mitutoyo

Vernier Caliper

SERIES 160 — with Nib Style Jaws and Fine Adjustment

FEATURES

- The jaws have round measuring faces for accurate ID measurement.
- With fine adjustment carriage to feed the slider finely. (without 160-130~134)
- Inside and outside measurements can be directly read from the upper and lower slider graduations, respectively.

160-131

160-101

Technical Data

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

Round surface of jaws for accurate CD measurement

SPECIFICATIONS

Metric with metric/metric double scale

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

*( ): Minimum dimension in ID measurement

Metric with metric/metric double scale

Range*	Order No.	Accuracy	Remarks (lower scale graduation / upper scale graduation / Others)		
0 (10) - 300mm	160-127	±0.04mm	0.02mm	0.02mm	—
0 (20) - 450mm	160-128	±0.05mm	0.02mm	0.02mm	—
0 (20) - 600mm	160-101	±0.05mm	0.02mm	0.02mm	—
0 (20) - 1000mm	160-104	±0.07mm	0.02mm	0.02mm	—
0 (20) - 1500mm	160-110	±0.09mm	0.02mm	0.02mm	—
0 (20) - 2000mm	160-113	±0.12mm	0.02mm	0.02mm	—

*( ): Minimum dimension in ID measurement

Metric/Inch with metric/inch double scale

Range*	Order No.	Accuracy	Remarks (lower scale graduation / upper scale graduation / Others)		
0 (10) - 300mm	160-150	±0.04mm	0.02mm	.001"	+10mm/.394" to reading in ID measurement
0 (20) - 450mm	160-151	±0.05mm	0.02mm	.001"	+20mm/.787" to reading in ID measurement
0 (20) - 600mm	160-153	±0.05mm	0.02mm	.001"	+20mm/.787" to reading in ID measurement
0 (20) - 1000mm	160-155	±0.07mm	0.02mm	.001"	+20mm/.787" to reading in ID measurement
0 (20) - 1500mm	160-157	±0.09mm	0.02mm	.001"	+20mm/.787" to reading in ID measurement
0 (20) - 2000mm	160-159	±0.12mm	0.02mm	.001"	+20mm/.787" to reading in ID measurement

*( ): Minimum dimension in ID measurement

Inch/Metric with inch/metric double scale

Range*	Order No.	Accuracy	Remarks (lower scale graduation / upper scale graduation / Others)		
0 (.3") - 12"	160-125	±.0015"	.001"	0.02mm	+.3"/7.62mm to reading in ID measurement
0 (.5") - 18"	160-118	±.002"	.001"	0.02mm	+.5"/12.7mm to reading in ID measurement
0 (.5") - 24"	160-103	±.002"	.001"	0.02mm	+.5"/12.7mm to reading in ID measurement
0 (1") - 40"	160-106	±.003"	.001"	0.02mm	+1"/25.4mm to reading in ID measurement
0 (1") - 60"	160-112	±.004"	.001"	0.02mm	+1"/25.4mm to reading in ID measurement
0 (1") - 80"	160-115	±.005"	.001"	0.02mm	+1"/25.4mm to reading in ID measurement

*( ): Minimum dimension in ID measurement

DIMENSION

Unit: mm

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

Long Jaw Vernier Caliper

SERIES 534

FEATURES

- Long jaws for measuring hard-to-reach portions.

Technical Data

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

Round surface of jaws for accurate CD measurement

SPECIFICATIONS

Metric with metric/metric double scale

Range*	Order No.	Accuracy	Remarks (lower scale graduation / upper scale graduation / Others)		
0 (10) - 300mm	534-109	±0.07mm	0.05mm	0.05mm	without fine adjustment
0 (20) - 500mm	534-110	±0.13mm	0.05mm	0.05mm	without fine adjustment

*( ): Minimum dimension in ID measurement

Metric with metric/metric double scale

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

*( ): Minimum dimension in ID measurement

Metric/Inch with metric/inch double scale

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

*( ): Minimum dimension in ID measurement

Inch with inch/inch double scale

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

*( ): Minimum dimension in ID measurement

DIMENSION

Unit: mm

Range	L	a	b	c	d	e
0 - 300mm	445	110	90	12	20	7
0 - 500mm	682	225	200	18.5	25	12
0 - 750mm	995	232	200	18.5	32	12
0 - 1000mm	1230	232	200	18.5	32	12

Mitutoyo

ABSOLUTE Digimatic & Vernier Caliper

SERIES 551, 533 — with Nib Style and Standard Jaws

SPC

ABSOLUTE®
Absolute System Patented by MITUTOYO

FEATURES

- The rounded faces of the jaws are ideal for accurate ID (inside diameter) measurement.
- Inside and outside measurements can be directly read from the upper and lower slider graduations (series 533).
- With fine-adjustment carriage type is available (series 533).
- Parallax-free vernier scale type is available for easy and positive measurement (series 533).
- With SPC output (series 551).

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 or 0.05mm
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
*Digital models **Analog models

Function of Digital Model

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

Optional Accessory for Digital Model

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

Round surface of jaws for accurate CD measurement

SPECIFICATIONS

Metric Digital model

Range*	Order No.	Accuracy	Remarks
0 (10) - 200mm	551-201-20	±0.03mm	—
0 (10) - 300mm	551-231-10	±0.04mm	with offset/preset function for easy ID measurement
0 (20) - 450mm	551-204-10	±0.06mm	—
0 (20) - 600mm	551-206-10	±0.06mm	—
0 (20) - 1000mm	551-207-10	±0.07mm	—

*( ): Minimum dimension in ID measurement

Inch/Metric Digital model

Range*	Order No.	Accuracy	Remarks
0 (.4") - 8"	551-221-20	±.001"	—
0 (.4") - 12"	551-241-10	±.002"	with offset/preset function for easy ID measurement
0 (.5") - 20"	551-224-10	±.0025"	—
0 (.5") - 30"	551-226-10	±.0025"	—
0 (1") - 40"	551-227-10	±.003"	—

*( ): Minimum dimension in ID measurement

Metric with metric/metric double scale

Range*	Order No.	Accuracy	Remarks
0 (10) - 200mm	533-401	±0.05mm	with parallax-free vernier scale
0 (10) - 300mm	533-403	±0.08mm	with parallax-free vernier scale
0 (20) - 450mm	533-404	±0.10mm	—
0 (20) - 600mm	533-405	±0.12mm	—
0 (20) - 1000mm	533-406	±0.15mm	—

*( ): Minimum dimension in ID measurement

Metric with metric/metric double scale and fine adjustment

Range*	Order No.	Accuracy	Remarks
0 (10) - 280mm	533-503*	±0.04mm	High accuracy model with parallax-free vernierscale (0.02mm graduation)
0 (20) - 500mm	533-504*	±0.05mm	High accuracy model with 0.02mm graduation
0 (20) - 750mm	533-505*	±0.06mm	High accuracy model with 0.02mm graduation
0 (20) - 1000mm	533-506*	±0.07mm	High accuracy model with 0.02mm graduation

*( ): Minimum dimension in ID measurement

Digimatic Carbon Fiber Caliper

SERIES 552 — with Interchangeable Jaws

SPC

FEATURES

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

552-181

SPECIFICATIONS

Metric

Range	Order No.	Accuracy
0 - 450mm	552-181	±0.04mm
0 - 600mm	552-182	±0.04mm

Inch/Metric

Range	Order No.	Accuracy
0 - 18"	552-191	±.002"
0 - 24"	552-192	±.002"

Interchangeable Jaws (Optional)

Unit: mm

Standard Type

Order No.	Components	a	b
07CZA056	Right (07CAA044), Left (07CAA045)	28mm (1.1")	36mm (1.4")

Surface Plate Type

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

Centerline Type

Metric

Order No.	Components	a	b
07CZA057	07CZA039 x 2pcs.	30mm	30mm

Inch

Order No.	Components	a	b
07CZA060	07CZA047 x 2pcs.	1.2"	1.2"

Scriber Type

Metric

Order No.	Components	a	b
07CZA055	Right (07CZA042), Left (07CZA043)	8mm	30mm

inch

Order No.	Components	a	b
07CZA061	Right (07CZA042), Left (07CZA049)	031"	1.2"

Inside Point Type

Metric

Order No.	Components	a	b
07CZA058	07CZA041 x 2pcs.	25mm	50mm

Inch

Order No.	Components	a	b
07CZA059	07CZA048 x 2pcs.	1"	2"

Technical Data

Accuracy: Refer to the list of specifications. (excluding quantizing error)
Resolution: 0.01mm
Display: LCD
Length standard: Electrostatic capacitance type linear encoder
Max. response speed: 1600mm/s
Battery: SR44 (1 pc.), 938882
Battery life: Approx. 3.000 hours in continuous use
Standard accessory: Attachment clamps (2 pcs.), 05GZA033

Function

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

Optional Accessory

905338: SPC cable (straight, 1m)
905409: SPC cable (straight, 2m)
905689: SPC cable (L-type, 1m)
905690: SPC cable (L-type, 2m)

SPC

Mitutoyo

Digimatic Carbon Fiber Caliper

SERIES 552 — with Interchangeable Jaws

Technical Data

Accuracy: Refer to the list of specifications. (excluding quantizing error)
Resolution: 0.01mm or .0005"/0.01mm
Display: LCD
Length standard: Electrostatic capacitance type linear encoder
Max. response speed: 1600mm/s
Battery: SR44 (1 pc.), 938882
Battery life: Approx. 3.000 hours in continuous use

Function

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

Optional Accessory

905338: SPC cable (straight, 1m)
905409: SPC cable (straight, 2m)
905689: SPC cable (L-type, 1m)
905690: SPC cable (L-type, 2m)
914055: Centerline attachments (mm)*
914056: Centerline attachments (inch)*
914057: Pointed ID measuring attachments (mm)*
914058: Pointed ID measuring attachments (inch)*
914053: Attachment clamps (for models up to 600mm/24" range)
914054: Attachment clamps (for models over 600mm/24" range)

* Attachment clamps are required and not available for long jaw type.

Centerline Attachments

Pointed ID Measuring Attachments

Attachment Clamps

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 ID measurements from the LCD. (Offset value can be set easily by pressing the Offset key.)
- Preset function for setting a desired starting point.
- With SPC data output.
- Special model available with ceramic jaws which are suitable to measure magnetic products.

552-302

552-155

SPECIFICATIONS

Metric

Range*	Order No.	Accuracy	Remarks
0 (20) - 300mm	552-301	±0.04mm	—
0 (20) - 450mm	552-302 / 552-155	±0.05mm	552-155: with ceramic jaws
0 (20) - 600mm	552-303 / 552-156	±0.05mm	552-156: with ceramic jaws
0 (20) - 1000mm	552-304	±0.07mm	—
0 (20) - 1500mm	552-305	±0.09mm	—

*( ): Minimum dimension in ID measurement

Metric Long jaw type

Range*	Order No.	Accuracy	Remarks
0 (20) - 450mm	552-150	±0.07mm	—
0 (20) - 600mm	552-151	±0.07mm	—

*( ): Minimum dimension in ID measurement

552-151

DIMENSION

Unit: mm

Range	L	a	b	c	d	e
0 - 300mm	490	100	18	41.2	25	91.8
0 - 450mm	640	100	18	41.2	25	91.8
0 - 600mm	790	100	18	41.2	25	91.8
0 - 1000mm	1240	150	24	62.8	32	113.8
0 - 1500mm	1740	150	24	62.8	32	113.8

Mitutoyo

Offset Caliper

SERIES 573, 536 — ABSOLUTE Digimatic and vernier type

SPC

ABSOLUTE®
Absolute System Patented by MITUTOYO

FEATURES

- Main scale jaw can be slid up and down to facilitate measurement of stepped sections. (Hard-to-get-at dimensions such as A, B, C can be accurately measured.)
- With depth bar.
- With SPC data output. (series 573)

573-101

536-101

Technical Data

Accuracy:	Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution*:	0.01mm
Graduation**:	0.05mm
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

*Digital models **Analog models

Function of Digital Model

Origin-set, Zero-setting, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)

Alarm:	Low voltage, Counting value composition error

Optional Accessory for Digital Model

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

SPECIFICATIONS

Metric — Digital model

Range	Order No.	Accuracy
0 - 150mm	573-101-20 (NEW 573-601)	±0.02mm
0 - 200mm	573-102-20 (NEW 573-602)	±0.02mm
0 - 300mm	573-103-10 (NEW 573-604)	±0.03mm

Metric

Range	Order No.	Accuracy
0 - 150mm	536-101	±0.05mm
0 - 200mm	536-102	±0.05mm
0 - 300mm	536-103	±0.08mm

DIMENSION

Unit: mm

Vernier model

Digital model

Range	a	b	c	d
0 - 150mm	95	10	40	30
0 - 200mm	95	10	50	38.5
0 - 300mm	135	15	64	51

Mitutoyo

Offset Centerline Caliper

SERIES 534, 536 — ABSOLUTE Digimatic and vernier type

SPC

ABSOLUTE
Absolute System Patented by MITUTOYO

FEATURES

- Specially designed for center to center distance measurements on the same and offset planes.
- Can also measure from edge to center.
- Hole diameter should be in the range of 1.5mm - 10mm
- With SPC data output. (series 573)

573-105-20

536-105

Technical Data

Accuracy: Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution*: 0.01mm
Graduation**: 0.05mm
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

*Digital models **Analog models

Function of Digital Model

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

Optional Accessory for Digital Model

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

SPECIFICATIONS

Metric — Digital model

Range	Order No.	Accuracy
10-160mm	573-105-20 (New 573-605)	±0.03mm
10-210mm	573-106-20 (New 573-606)	±0.03mm
10-310mm	573-608	±0.04mm

Metric

Range	Order No.	Accuracy
10 - 150mm	536-105	±0.05mm
10 - 200mm	536-106	±0.05mm
10 - 300mm	536-107	±0.08mm

DIMENSION

Unit: mm

Range	a	t
0 - 150mm	75	3
0 - 200mm	75	3
0 - 300mm	100	3.8

Mitutoyo

SPC

ABSOLUTE®
Absolute System Patented by MITUTOYO

ABSOLUTE Back-Jaw Centerline Caliper

SERIES 537 — Center-to-center & edge-to-center Types

FEATURES

- Specially designed to measure the distance between two centers or the distance from an edge to center.
- Provided with jaws on the back of the slider, measurements can be read easily by looking down.
- Direct reading of pitch measurements is available due to the offset value setting function.
- With SPC data output.

573-116-10
(Center-to-center type)

573-118-10
(Edge-to-center type)

Technical Data

Accuracy:	Refer to the list of specifications.(excluding quantizing error for digital models)
Resolution:	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, Automatic power on/off, 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)

SPECIFICATIONS

Metric — Center-to-center distance type

Range	Order No.	Accuracy
10 - 200mm	573-116-10	±0.10mm
10 - 300mm	573-117-10	±0.15mm

Metric — Edge-to-center distance type

Range	Order No.	Accuracy
10 - 200mm	573-118-10	±0.10mm
10 - 300mm	573-119-10	±0.15mm

DIMENSION

Unit: mm

Mitutoyo

Point Caliper

SERIES 573, 536 — ABSOLUTE Digimatic and vernier type

FEATURES

- Narrow tip jaws fit into very small grooves and tracks, making many previously difficult outside measurements far easier to obtain.
- With depth bar.
- With SPC data output. (series 573)

573-121-20

536-121

Technical Data

Accuracy:	Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution*:	0.01mm
Graduation**:	0.05mm
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

*Digital models **Analog models

Function of Digital Model

Origin-set, Zero-setting, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)

Alarm:	Low voltage, Counting value composition error

Optional Accessory for Digital Model

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

SPECIFICATIONS

Metric — Digital model

Range	Order No.	Accuracy
0 - 150mm	573-121-20 (NEW 573-621)	±0.02mm
0 - 150mm	573-125-20 (NEW 573-625)	±0.02mm

Metric

Range	Order No.	Accuracy
0 - 150mm	536-121	±0.05mm

DIMENSION

Unit: mm

Mitutoyo

Blade Type Caliper

SERIES 573, 536 — ABSOLUTE Digimatic and vernier type

SPC

ABSOLUTE®
Absolute System Patented by MITUTOYO

FEATURES

- The thin blade type jaws fit into very small grooves and making previously difficult outside measurements far easier to obtain.
- The OD measuring faces are carbide-tipped.
- With depth bar.
- With SPC data output. (series 573)

573-134-20

536-134

Technical Data

Accuracy:	Refer to the list of specifications.(excluding quantizing error for digital models)
Resolution*:	0.01mm
Graduation**:	0.05mm
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

*Digital models **Analog models

Function of Digital Model

Origin-set, Zero-setting, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)

Alarm:	Low voltage, Counting value composition error

Optional Accessory for Digital Model

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

SPECIFICATIONS

Metric — Digital model

Range	Order No.	Accuracy
0 - 150mm	573-134-20 **(NEW 573-634)**	±0.02mm

Metric

Range	Order No.	Accuracy
0 - 150mm	536-134	±0.05mm
0 - 200mm	536-135	±0.05mm
0 - 300mm	536-136	±0.08mm

DIMENSION

Unit: mm

Virnier model

Digital model

Range	a	b	c	t
0 - 150mm	40	20	0.75	3
0 - 200mm	50	25	0.75	3
0 - 300mm	64	30	1	3.8

Mitutoyo

Neck Caliper

SERIES 573, 536 — ABSOLUTE Digimatic and vernier type

SPC

ABSOLUTE®
Absolute System Patented by MITUTOYO

Technical Data

Accuracy:	Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution*:	0.01mm
Graduation**:	0.05mm
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

*Digital models **Analog models

Function of Digital Model

Origin-set, Zero-setting, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)

Alarm:	Low voltage, Counting value composition error

Optional Accessory for Digital Model

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

FEATURES

- Can measure wall thickness inside bores and recesses.
- With SPC data output. (series 573)

573-151-20

536-151

Point jaw type

536-152

SPECIFICATIONS

Metric — Digital model

Range	Order No.	Accuracy
0 - 150mm	573-151-20 (NEW 573-651)	±0.03mm
0 - 150mm	573-152-20* (NEW 573-652*)	±0.03mm

*Point type

Inch/Metric — Digital model

Range	Order No.	Accuracy
0 - 6"	573-751	±.0015"
0 - 6"	573-752*	±.0015"

*Point type

Metric

Range	Order No.	Accuracy
0 - 150mm	536-151	±0.05mm
0 - 300mm	536-152*	±0.05mm

*Point type

DIMENSION

Unit: mm

536-151

573-151-20, 573-751

Point jaw type
536-152

Point jaw type
573-152-20, 573-752

Mitutoyo

ABSOLUTE Inside Caliper

SERIES 573, 536 — Knife-edge/Inside Groove/Point Jaw Type

FEATURES

- Specially designed for inside measurements in hard-to-reach places.
- With SPC data output. (series 573)

Knife-edge type

573-142-20

536-142

Inside groove type

573-145-20

536-145

Point jaw type

573-146-20

536-146

Technical Data

Accuracy:	Refer to the list of specifications.(excluding quantizing error for digital models)
Resolution*:	0.01mm
Graduation**:	0.05mm
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

*Digital models **Analog models

Function of Digital Model

Origin-set, Zero-setting, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)

Alarm:	Low voltage, Counting value composition error

Optional Accessory for Digital Model

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

Knife-edge type

Inside groove type

Point jaw type

SPECIFICATIONS

Metric — Digital model

Range	Order No.	Accuracy	Remarks
10 - 200mm	573-142-20 (NEW 573-642)	±0.05mm	Knife-edge type, Measurable min. hole diameter: ø10mm
10 - 160mm	573-145-20 (NEW 573-645)	±0.05mm	Inside groove type, Measurable min. hole diameter: ø10mm
20 - 170mm	573-146-20 (NEW 573-646)	±0.03mm	Point jaw type, Measurable min. hole diameter: ø20mm

Metric

Range	Order No.	Accuracy	Remarks
10 - 200mm	536-142	±0.12mm	Knife-edge type, Measurable min. hole diameter: ø10mm
10 - 150mm	536-145	±0.05mm	Inside groove type, Measurable min. hole diameter: ø10mm
20 - 150mm	536-146	±0.05mm	Point jaw type, Measurable min. hole diameter: ø20mm
30 - 300mm	536-147	±0.08mm	Point jaw type, Measurable min. hole diameter: ø30mm
70 - 450mm	536-148	±0.10mm	Point jaw type, Measurable min. hole diameter: ø70mm
70 - 600mm	536-149	±0.12mm	Point jaw type, Measurable min. hole diameter: ø70mm

Mitutoyo

DIMENSION

Unit: mm

Knife-edge type

Inside groove type

Point jaw type

Range	a	b	c	d	e	f	g
150mm	229	16	38	31	5	5	2
300mm	403	20	98	89	5	10	2
450mm	610	25	145	136	10	25	5
600mm	750	25	145	136	10	25	5

Mitutoyo

Tube Thickness Caliper

SERIES 573, 536 — ABSOLUTE Digimatic and vernier type

FEATURES

- The main scale jaw is a round bar that facilitates measurements of tube wall thickness.
- With SPC data output. (series 573)

573-161-20

536-161

SPECIFICATIONS

Metric — Digital model

Range	Order No.	Accuracy
0 - 150mm	573-161-20 (NEW 573-661)	±0.05mm

Metric

Range	Order No.	Accuracy
0 - 150mm	536-161	±0.05mm

DIMENSION

Technical Data

Accuracy:	Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution*:	0.01mm
Graduation**:	0.05mm
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

*Digital models **Analog models

Function of Digital Model

Origin-set, Zero-setting, Automatic power on/off, Data output, inch/mm conversion (inch/mm models)

Alarm: Low voltage, Counting value composition error

Optional Accessory for Digital Model

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

Mitutoyo

Hook Type Vernier Caliper

SERIES 536

FEATURES

•Can measure width of grooves and lands inside bores and recesses.

536-171

536-172

Technical Data

Accuracy: ±0.03mm
Graduation: 0.02mm

SPECIFICATIONS

Metric

Range*	Order No.	Accuracy	Remarks
0 (10) - 200mm	536-171	±0.03mm	—
0 (2) - 200mm	536-171	±0.03mm	with fine adjustment

*( ): Minimum dimension in ID measurement

DIMENSION

Unit: mm

Range	L	a	b	c	d	e	f	g
536-171	320	28	—	—	12	4	5	3.5
536-172	320	28	28.5	20	12	4	1	3.5

Swivel Vernier Caliper

SERIES 536 — With moving jaw type

FEATURES

•The moving jaw can be rotated to measure sectioned shafts.
•With depth bar.

536-212

Technical Data

Accuracy: ±0.05mm
Graduation: 0.05mm

SPECIFICATIONS

Metric

Range	Order No.	Accuracy
0 - 200mm	536-212	±0.05mm

DIMENSION

Unit: mm

ABSOLUTE Low Force Caliper

SERIES 573

FEATURES

- Due to the low measuring force these calipers are ideal for elastic or resilient workpieces such as plastic parts and rubber parts that standard calipers cannot measure.
- With SPC data output.

573-191-20

SPECIFICATIONS

Metric

Range	Order No.	Accuracy
0 - 180mm	573-191-20	±0.05mm

Inch/Metric

Range	Order No.	Accuracy
0 - 7"	573-291-20	±.002"

DIMENSION

Technical Data

Accuracy: Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution: 0.01mm
Display: LCD
Length standard: ABSOLUTE electrostatic capacitance type linear encoder
Measuring force: 0.49N to 0.98N (50gf to 100gf)
Jaw retraction: 0.3mm
Max. response speed: Unlimited
Battery: SR44 (1 pc.), 938882
Battery life: Approx. 3.5 years under normal use

Function

Origin-set, Zero-setting, Automatic power on/off, 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)

Measurement procedures

To measure resilient workpieces take the measurement when the pointer is between the two index lines.

ABSOLUTE Snap Caliper

SERIES 573

FEATURES

- The ABSOLUTE Digimatic snap caliper features a spring-loaded mechanism to allow quick and efficient GO/NO-GO inspection for mass production parts..
- With SPC data output.

573-181-20

SPECIFICATIONS

Metric

Range	Order No.	Accuracy
0 - 100mm	573-181-20	±0.02mm
0 - 150mm	573-182-20	±0.02mm

Inch/Metric

Range	Order No.	Accuracy
0 - 4"	573-281-20	±.001"
0 - 6"	573-282-20	±.001"

DIMENSION

Range	L	a	b	c	d
0 - 100mm	233	40	21	16.5	16
0 - 150mm	290	50	24.5	20	16

Technical Data

Accuracy: Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution: 0.01mm
Repeatability: 0.01mm
Display: LCD
Length standard: ABSOLUTE electrostatic capacitance type linear encoder
Measuring force: 7N to 14N (700gf to 1400gf)
Jaw retraction: 2mm
Max. response speed: Unlimited
Battery: SR44 (1 pc.), 938882
Battery life: Approx. 3.5 years under normal use

Function

Origin-set, Zero-setting, Automatic power on/off, 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)

Mitutoyo

Scribing Caliper

SERIES 573, 536 — ABSOLUTE Digimatic and vernier type

SPC

ABSOLUTE
Absolute System Patented by MITUTOYO

FEATURES

- The carbide-tipped jaws facilitate fine scribing on workpiece.
- With depth bar.
- With SPC data output. (series 573)

573-171-20

Technical Data

Accuracy: Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution: 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, Automatic power on/off, 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)

SPECIFICATIONS

Metric — Digital model

Range	Order No.	Accuracy
0 - 150mm	573-171-20 (NEW 573-676)	±0.02mm
0 - 200mm	573-172-20 (NEW 573-677)	±0.02mm
0 - 300mm	573-173-10 (NEW 573-679)	±0.03mm

Metric

Range	Order No.	Accuracy
0 - 150mm	536-221	±0.05mm
0 - 200mm	536-222	±0.05mm
0 - 300mm	536-223	±0.08mm

DIMENSION

Unit: mm

Range	L	a	b	c	d	e
0 - 150mm	229	46	21.5	17	16	33
0 - 200mm	288	50	25	20.5	16	43
0 - 300mm	403	64	27.5	22	20	54

MyCAL-Lite

SERIES 700 — Digital Caliper for DIY

FEATURES

- The "MyCAL-Lite" is an ideal measuring tool for DIY.
- The LCD screen allows error-free readout of measurements.
- With depth measuring bar.

700-113

SPECIFICATIONS

Inch/Metric

Range	Order No.	Accuracy
0 - 6"	700-113	±.005"

DIMENSION

Technical Data

Accuracy:	Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution:	0.1mm
Display:	LCD
Length standard:	Electrostatic capacitance type linear encoder
Max. response speed:	1800mm/s
Battery:	SR44 (1 pc.), 938882
Battery life:	Approx. 2 years under normal use

Function

Zero-setting, Power on/off

Alarm:	Low voltage, Counting value composition error

Plastic Caliper

SERIES 700 — Digital Caliper for DIY

FEATURES

- Plastic construction for durable and lightweight use.
- Also ideal for use in Lab, wood-shop, nursery, doctor's, office, etc.

700-127

700-128

SPECIFICATIONS

Metric

Range	Order No.	Accuracy
0 - 150mm	700-127	±0.2mm
0 - 150mm	700-128*	±0.5mm

*Deep throat type without inside measuring jaws.

Inch/Metric

Range	Order No.	Accuracy
0 - 6"	700-126	±.008"

DIMENSION

Technical Data

Accuracy:	Refer to the list of specifications. (excluding quantizing error for digital models)
Resolution:	0.1mm or .001"/0.1mm
Display:	LCD
Length standard:	Electrostatic capacitance type linear encoder
Max. response speed:	1800mm/s
Battery:	SR44 (1 pc.), 938882
Battery life:	Approx. 2 years under normal use

Function

Zero-setting, Power on/off

Alarm:	Low voltage, Counting value composition error

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