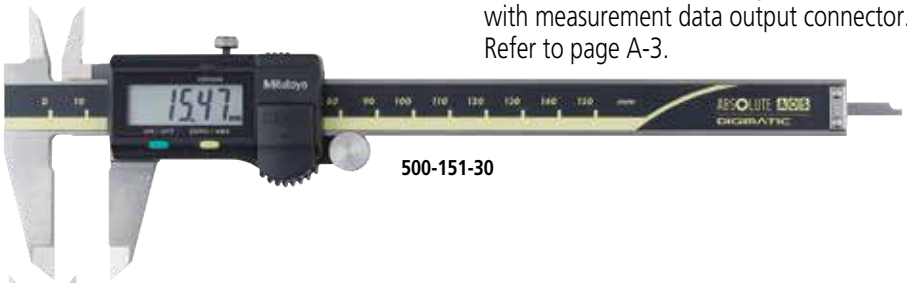
Calipers

An industry standard measuring tool

ABSOLUTE Digimatic Caliper 500 Series — with exclusive ABSOLUTE Encoder Technology

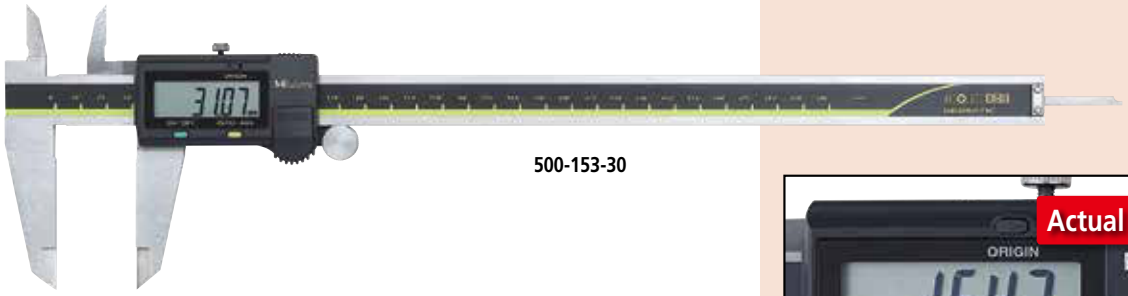
MeasurLink® ENABLED
Data Management Software by Mitutoyo

- An ABSOLUTE electromagnetic induction linear encoder system is incorporated.
- New ergonomic design with finger rest.
- The ZERO/ABS button allows the display to be Zero-Set at any slider position along the scale for comparison measurements. This button will also allow return to the absolute (ABS) mode and display of the true position from the origin (usually jaws closed point).
- Large and clear LCD readout.
- Smooth slider movement makes for comfortable operation.
- Extended battery life of Approx. 5 years due to low current integrated circuit (except for 0 - 300 mm/0 - 12 inch models).
- Allows step measurement.
- Carbide-tipped jaw calipers are optimal for rough finished parts, castings, grinding stones, etc.
- Allows integration into statistical process control and measurement systems for models with measurement data output connector. Refer to page A-3.



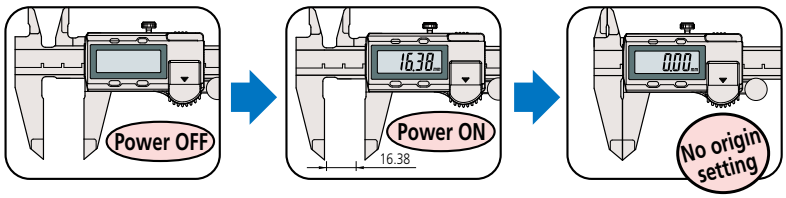
500-151-30

500-182-30



500-153-30

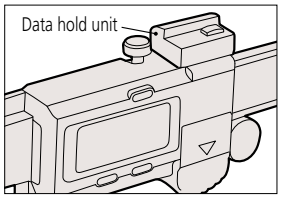
A built-in ABS (absolute) scale means that these calipers are ready to use immediately after power-on without origin resetting – just like using a vernier caliper.



Optional accessories

Dedicated for the models equipped with a digimatic output function. For details, refer to page D-38.

959143: Data hold unit



Connecting cables for IT/DP/MUX

959149: SPC cable with data button (1 m)
959150: SPC cable with data button (2 m)

USB Input Tool Direct

06AFM380C: SPC cable for **USB-ITN-C** (2 m)

Connecting cables for U-WAVE-T

02AZD790C: SPC cable with data button (160 mm)
02AZE140C: SPC cable for foot switch

Wireless data output U-WAVE fit
U-WAVE-TC: **264-620** (IP67 type)
264-621 (Buzzer type)

Connecting unit for U-WAVE-TC: 02AZF300 (Buzzer type)
Note: IP67 model is water/dust-proofed suitable for the factory floor.
Buzzer type is not water/dust-proofed.
Refer to page A-15 for details.

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Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink (refer to page A-5 for details).

ABSOLUTE™

PROPRIETARY INSPECTION CERTIFICATE

An inspection certificate is supplied as standard. Refer to page U-11 for details.

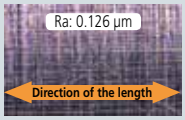
Technical Data

- Accuracy: ±0.02 mm (≤200 mm), ±0.03 mm (≤300 mm) (excluding quantizing error)
- Resolution: 0.01 mm or 0.0005 in/0.01 mm
- Repeatability: 0.01 mm
- Display: LCD
- Scale type: ABSOLUTE electromagnetic induction linear encoder
- Max. response speed: Unlimited
- Battery: SR44 (1 pc), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 5 years under normal use

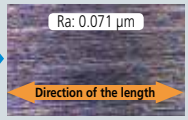
Smooth slider movement makes for comfortable operation.

High quality guide surface finish for smooth slider movement

Conventional ex. No.500-151



ABSOLUTE Digimatic Caliper ex. No.500-151-30



Remarkably easy to read display

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Functions

Absolute measurement: After power is turned ON, measurement can be started without zero-setting if origin-setting was previously performed. The Absolute origin position can be changed by the ORIGIN button.

Incremental measurement: Display can be set to zero at any arbitrary position for comparative measurements.

Low-voltage alert: If the battery voltage becomes low, a "B" appears in the display to alert the user before measurement is no longer possible. A battery change advisory alert precedes this alert.

Data output: By using the connecting cable (option), measurement data can be output.

Data hold: By using the data hold unit (option), the displayed value can be held. This cannot be used with the data output function.

SPECIFICATIONS

Metric

Order No.	Range (mm)	Accuracy (mm)*2	Mass (g)	Depth bar	Fine adjustment	Remarks
500-150-30	0 - 100	±0.02	137	ø1.9 mm rod	with thumb roller	—
500-180-30*1					—	
500-151-30	0 - 150		162	Blade	with thumb roller	—
500-154-30						Carbide-tipped jaws for outside measurement
500-155-30						Carbide-tipped jaws for outside and inside measurement
500-158-30				ø1.9 mm rod		—
500-181-30*1				Blade	—	
500-152-30	0 - 200		192		with thumb roller	—
500-156-30						Carbide-tipped jaws for outside measurement
500-157-30						Carbide-tipped jaws for outside and inside measurement
500-182-30*1					—	—
500-153-30	0 - 300	±0.03	350		with thumb roller	

*1 Without SPC data output
*2 Excluding quantizing error of ±1 count in LSD

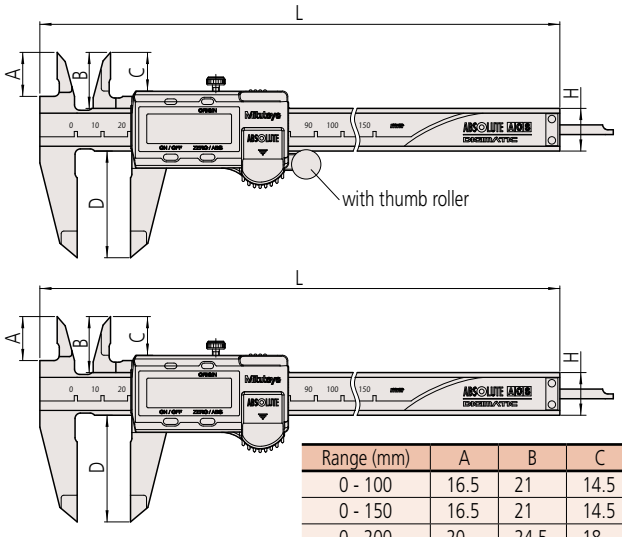
Inch / Metric

Order No.	Range (in)	Accuracy*2	Mass (g)	Depth bar	Fine adjustment	Remarks
500-170-30	0 - 4	±0.001 in/ ±0.02 mm	137	0.075 inch rod	with thumb roller	—
500-195-30*1						
500-171-30	0 - 6		162	Blade		—
500-174-30						Carbide-tipped jaws for outside measurement
500-175-30						Carbide-tipped jaws for outside and inside measurement
500-178-30				0.075 inch rod		—
500-196-30*1				Blade		
500-159-30*1						Carbide-tipped jaws for outside measurement
500-160-30*1						Carbide-tipped jaws for outside and inside measurement
500-172-30	0 - 8		192			—
500-176-30						Carbide-tipped jaws for outside measurement
500-177-30						Carbide-tipped jaws for outside and inside measurement
500-197-30*1						—
500-163-30*1						Carbide-tipped jaws for outside measurement
500-164-30*1						Carbide-tipped jaws for outside and inside measurement
500-173-30	0 - 12	±0.0015 in/ ±0.03 mm	350			—
500-167-30						Carbide-tipped jaws for outside measurement
500-168-30						Carbide-tipped jaws for outside and inside measurement
500-193-30*1						—
500-165-30*1						Carbide-tipped jaws for outside measurement
500-166-30*1						Carbide-tipped jaws for outside and inside measurement

*1 Without SPC data output
*2 Excluding quantizing error of ±1 count in LSD

DIMENSIONS

Unit: mm



Range (mm)	A	B	C	D	H	L
0 - 100	16.5	21	14.5	40	16	182
0 - 150	16.5	21	14.5	40	16	233
0 - 200	20	24.5	18	50	16	290
0 - 300	22	27.5	19.8	64	20	404

Jaw thickness: 3.5 mm for 0-100 mm/0-150 mm/0-200 mm models and 3.8 mm for 0-300 mm model

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