

Mitutoyo



MEASURING INSTRUMENTS CATALOG



Calipers

An industry standard measuring tool

ABSOLUTE Digimatic Caliper SERIES 500 — with exclusive ABSOLUTE Encoder Technology

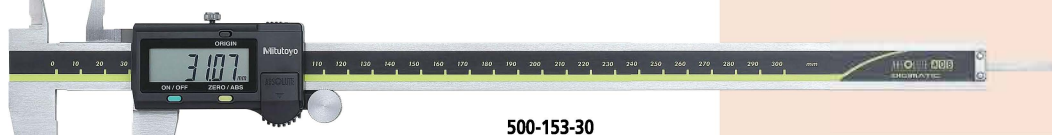
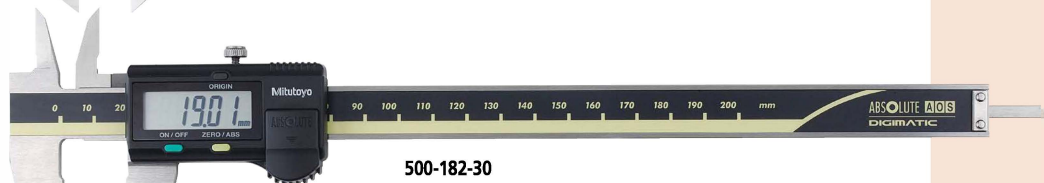
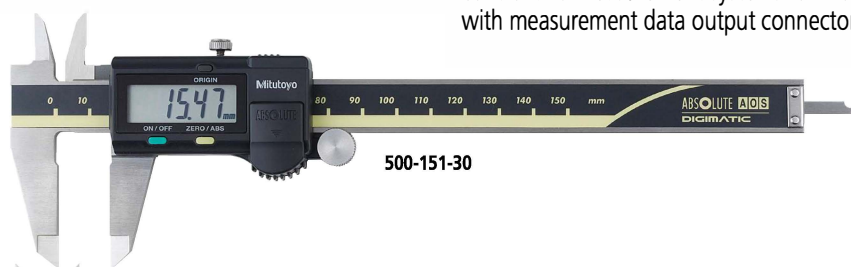
MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink

ABSOLUTE[™]

- 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. Scale overspeed-error has been eliminated for maximum reliability.
- 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 to 300 mm/0 to 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.



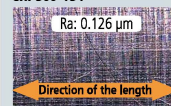
Technical Data

- 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
- 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

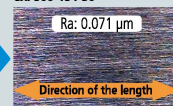
Smooth slider movement makes for comfortable operation.

High quality guide surface finish for smooth slider movement

Conventional ex. 500-151

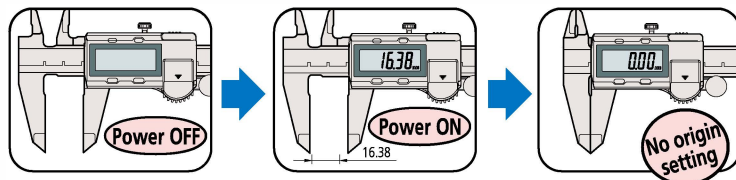


ABSOLUTE Digimatic Caliper ex. 500-151-30



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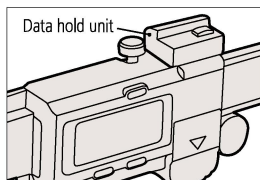
No need to reset the origin after switching on



Optional accessories

Dedicated for the models equipped with a digimatic output function.

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[®]

U-WAVE-TC: 264-621 (Buzzer type)

- **U-WAVE-TCB Transmitter** (Mitutoyo Bluetooth[®] U-WAVE)
- 264-625** (Buzzer type)



Remarkably easy to read display

Mitutoyo

Connecting unit for U-WAVE-TC/TCB **02AZF300** (Buzzer type)

Mitutoyo reserves the right to change any or all aspects of any product specification, including prices, designs and service content, without notice.

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 (optional), measurement data can be output.

Data hold: By using the data hold unit (optional), 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	143	ø1.9 mm rod	with thumb roller	—
500-180-30*1					—	
500-151-30					—	
500-154-30	0 - 150	±0.02	168	Blade ø1.9 mm rod	with thumb roller	Carbide-tipped jaws for outside measurement
500-155-30					—	Carbide-tipped jaws for outside and inside measurement
500-158-30					—	—
500-181-30*1	0 - 200	±0.02	198	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-152-30					—	Carbide-tipped jaws for outside and inside measurement
500-156-30					—	—
500-157-30	0 - 300	±0.03	350		with thumb roller	—
500-182-30*1					—	—
500-153-30						

*1 Without SPC data output

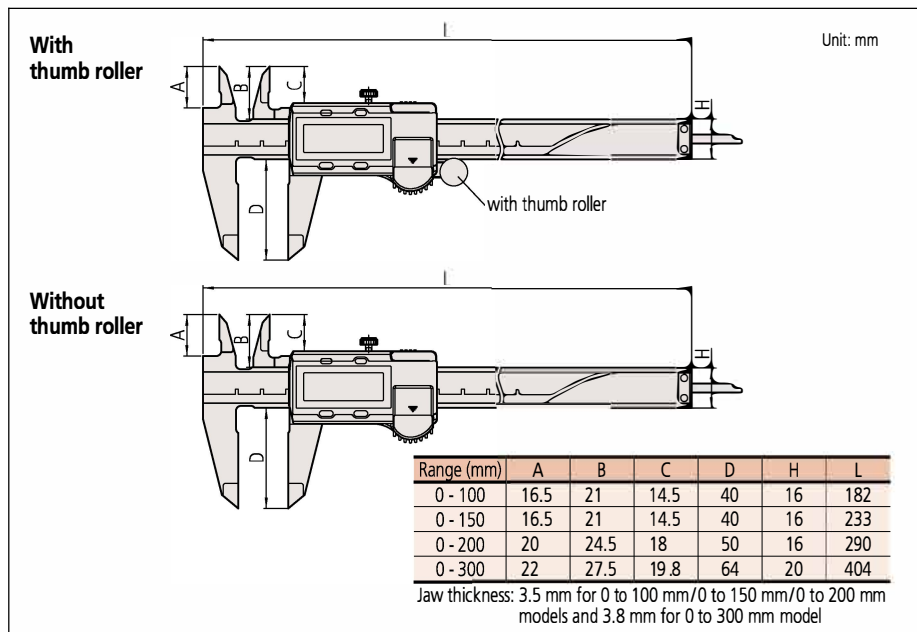
*2 Excluding quantizing error of ±1 count in LSD

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		—
500-195-30*1						—
500-171-30						—
500-174-30	0 - 6	±0.001 in/ ±0.02 mm	162	Blade 0.075 inch rod		Carbide-tipped jaws for outside measurement
500-175-30						Carbide-tipped jaws for outside and inside measurement
500-178-30						—
500-196-30*1	0 - 8	±0.001 in/ ±0.02 mm	192	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-159-30*1						Carbide-tipped jaws for outside and inside measurement
500-160-30*1						—
500-172-30	0 - 12	±0.0015 in/ ±0.03 mm	350			—
500-176-30						Carbide-tipped jaws for outside measurement
500-177-30						Carbide-tipped jaws for outside and inside measurement
500-197-30*1	0 - 12	±0.0015 in/ ±0.03 mm	350			—
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	0 - 12	±0.0015 in/ ±0.03 mm	350			—
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



Calipers

An industry standard measuring tool

Products equipped with the measurement data output function can be connected to the measurement data network system MeasurLink

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ABSOLUTE[™]

Long ABSOLUTE Digimatic Caliper SERIES 500 — with Exclusive ABSOLUTE Encoder Technology

MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

- Long Digital caliper incorporating an ABSOLUTE scale and available with a measuring range from 450 mm to 1000 mm.
- Allows step measurement.
- Allows integration into statistical process control and measurement systems for models with measurement data output connector. (Refer to page A-3.)
- For details of the Absolute scale and its function, refer to page D-6.



Technical Data

- Battery: SR44 (1 pc), **938882**, for initial operational checks (standard accessory)
- Battery life: Approx. 3.5 years under normal use
- Max. response speed: Unlimited

SPECIFICATIONS

Metric

Order No.	Range (mm)	Accuracy* (mm)	Resolution (mm)	Repeatability (mm)	Mass (g)
500-500-10	0 - 450	±0.05	0.01	0.01	1170
500-501-10	0 - 600				1350
500-502-10	0 - 1000	±0.07			3300

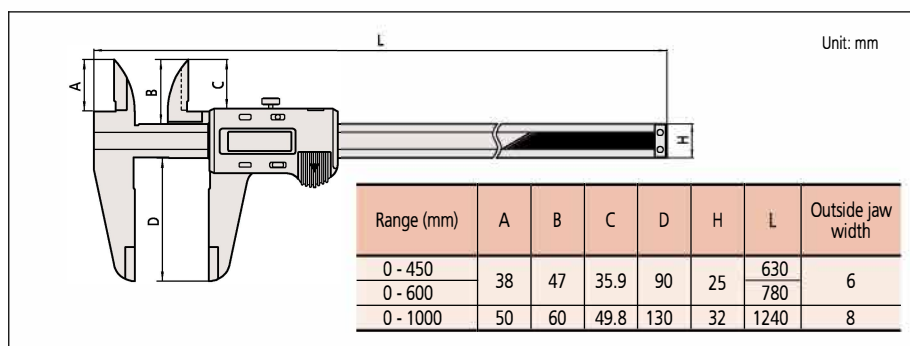
* Excluding quantizing error.
Note: Without SPC data output

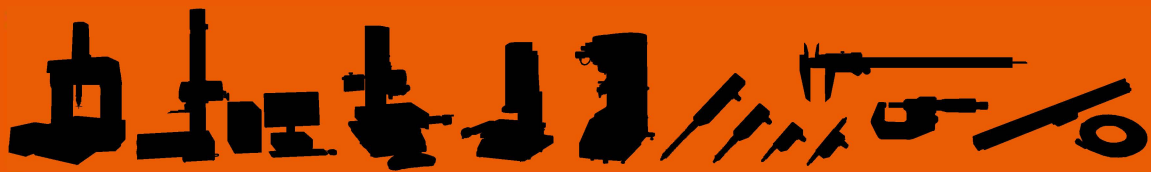
Inch / Metric

Order No.	Range (in)	Accuracy* (mm)	Resolution	Repeatability (mm)	Mass (g)
500-505-10	0 - 18	±0.05	0.0005 in/0.01 mm	0.01	1170
500-506-10	0 - 24				1350
500-507-10	0 - 40	±0.07			3300

* Excluding quantizing error.
Note: Without SPC data output

DIMENSIONS





FOR MORE INFORMATION PLEASE CONTACT:



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