

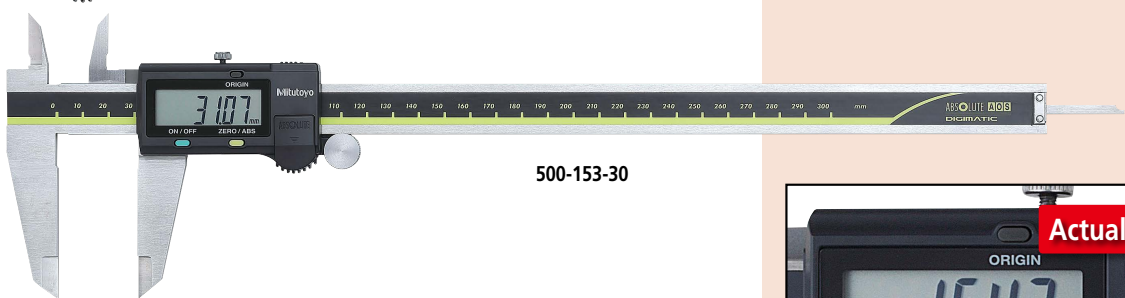
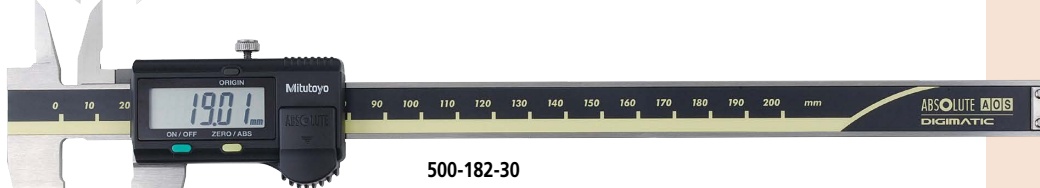
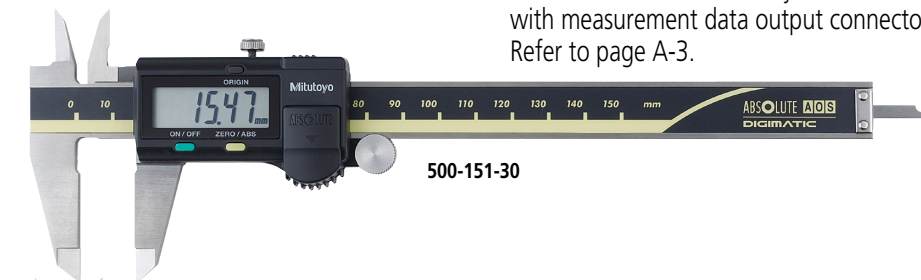
# Calipers

An industry standard measuring tool

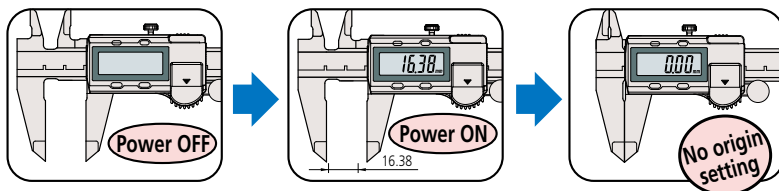
## ABSOLUTE Digimatic Caliper 500 Series — with exclusive ABSOLUTE Encoder Technology

**MeasurLink<sup>®</sup> 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.



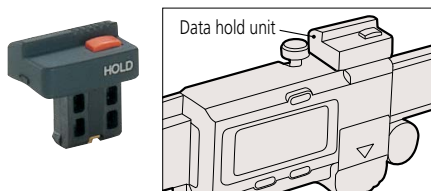
A built-in ABS (absolute) scale means that these calipers are ready to use immediately after power-on without origin resetting – just like using a vernier caliper.



### 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<sup>fit</sup> Connecting unit for U-WAVE-TC: 02AZF300 (Buzzer type)

- U-WAVE-TC: 264-620 (IP67 type)
- 264-621 (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.

**MeasurLink<sup>®</sup> ENABLED**  
Data Management Software by Mitutoyo

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<sup>™</sup>**



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

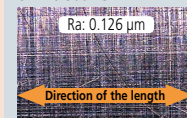
### Technical Data

- Accuracy:  $\pm 0.02$  mm ( $\leq 200$  mm),  $\pm 0.03$  mm ( $\leq 300$  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

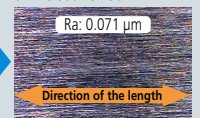
### Smooth slider movement makes for comfortable operation.

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

## 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					with thumb roller	
500-154-30	0 - 150	±0.02	162	Blade	with thumb roller	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					—	—
500-152-30	0 - 200	±0.02	192	Blade	with thumb roller	Carbide-tipped jaws for outside measurement
500-156-30					—	Carbide-tipped jaws for outside and inside measurement
500-157-30					—	—
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							Blade
500-174-30	0 - 6	±0.001 in/ ±0.02 mm	162	0.075 inch rod	with thumb roller	Carbide-tipped jaws for outside and inside measurement	
500-175-30						—	—
500-178-30						—	—
500-196-30*1						—	—
500-159-30*1	0 - 8	±0.001 in/ ±0.02 mm	192	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-160-30*1						—	Carbide-tipped jaws for outside and inside measurement
500-172-30						—	—
500-176-30						—	—
500-177-30	0 - 8	±0.001 in/ ±0.02 mm	192	Blade	with thumb roller	Carbide-tipped jaws for outside measurement	
500-197-30*1						—	Carbide-tipped jaws for outside and inside measurement
500-163-30*1						—	—
500-164-30*1						—	—
500-173-30	0 - 12	±0.0015 in/ ±0.03 mm	350	—	with thumb roller	Carbide-tipped jaws for outside measurement	
500-167-30						—	Carbide-tipped jaws for outside and inside measurement
500-168-30						—	—
500-193-30*1						—	—
500-165-30*1	0 - 12	±0.0015 in/ ±0.03 mm	350	—	with thumb roller	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

