

# Calipers

An industry standard measuring tool

## ABSOLUTE Coolant Proof Caliper SERIES 500 — with Dust/Water Protection Conforming to IP67 Level

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

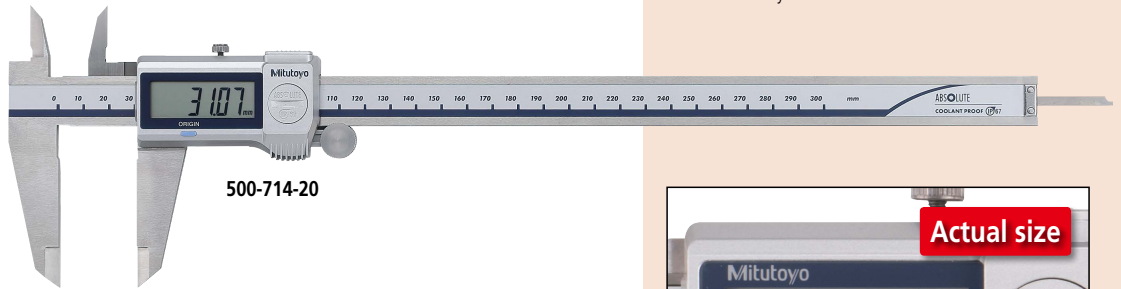
- ABS Coolant Proof Caliper with Dust/Water Protection conforming to IP67 Level. Can be used in workshop conditions exposed to coolant, water, dust or oil. 100% air-leak test ensures every caliper conforms to IP67.
- Large characters on the display provide better visibility, and high-contrast LCD reduces eyestrain.
- Easy to use — advanced ergonomic design uses only 1 button.
- The automatic power-on/off function shuts down the LCD display after 20 minutes inactivity, but the ABS scale origin is unaffected. Power is restored to the display when the slider is moved.
- Incorporates Mitutoyo's ABSOLUTE measurement system. No need to reset the origin.
- Allows step measurement.
- Battery cap does not require a screw driver for battery replacement (except for 0 - 300 mm/0 - 12 inch models).
- Extended battery life of Approx. 5 years due to low current integrated circuit (except for 0 - 300 mm/0 - 12 inch models).
- Can be integrated into statistical process control and measurement systems.
- An inspection certificate is supplied as standard. (However, this cannot be used as a calibration certificate as it is undated.)



500-712-20

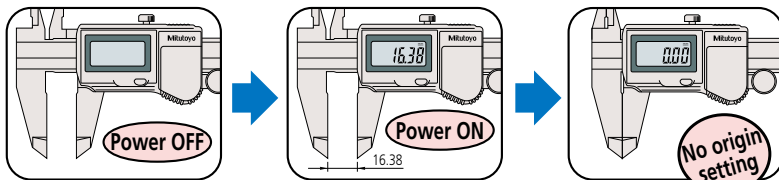


500-713-20



500-714-20

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

For details, refer to page D-38.



### Connecting cables for IT/DP/MUX\*

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

\* Cannot be used for other than water resistant type Digital calipers with external output function.



### USB Input Tool Direct

06AFM380A: SPC cable for USB-ITN-A (2 m)

- U-WAVE-T: 02AZD730G (IP67 type)
- 02AZD880G (Buzzer type)

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

### Connecting unit for U-WAVE-TC:

02AZF310 (IP67 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<sup>™</sup>

IP67



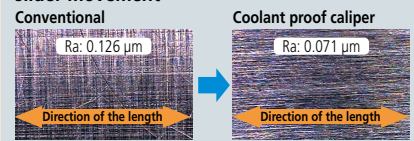
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An inspection certificate is supplied as standard. Refer to page U-11 for details.

Smooth slider movement makes for comfortable operation.

High quality guide surface finish for smooth slider movement



### Technical Data

- Resolution: 0.01 mm or 0.0005 in/0.01 mm
  - Repeatability: 0.01 mm or 0.0005 in/0.01 mm
  - Quantizing error: Excluding ±1 count
  - Dust/Water protection level: IP67 (IEC60529)\*
  - 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
- \* Although these models are IP67 rated, care should be taken to dry tool after use.



Actual size

Remarkably easy to read display

## Functions

Origin-set: Absolute origin position can be changed.

Data output: Measurement data output connector allows integration into statistical process control and measurement systems.

Automatic power on/off: LCD display will turn off after 20 minutes inactivity, but the ABS scale unit origin is stored. Power is restored when the slider is moved.

Alarm: Error message is displayed if error in calculation is found and measurement is stopped. Measurement will not be continued while error is displayed. Also, if the battery voltage becomes low, "B" appears to alert the user before measurement is no longer possible.



## IP67 protection level

IP67

First characteristic number	Protection from solid objects (people or things)		Second characteristic number	Protection from liquids (water, etc.)	
	Brief description	Description		Brief description	Description
6	Dust-proof	No ingress of dust allowed.	7	Protected against water penetration.	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water under standardized conditions of pressure and time.

For details of the test conditions used in evaluating each degree of protection, please refer to the original standard.

## SPECIFICATIONS

Metric						
Order No.	Range (mm)	Accuracy (mm)*	Mass (g)	Measurement data output port	Thumb roller	Remarks
500-702-20	0 - 150	±0.02	168	—	✓	
500-703-20	0 - 200		198			
500-706-20	0 - 150		168			
500-707-20	0 - 200		198			
500-716-20	0 - 150		168			
500-717-20	0 - 200		198			
500-712-20	0 - 150		168			
500-713-20	0 - 200		198			
500-719-20	0 - 150		168			
500-721-20	0 - 150		168			
500-722-20	0 - 200		198			
500-723-20	0 - 150		168			
500-724-20	0 - 200		198			
500-714-20	0 - 300		±0.03			350
500-718-20		345		—	—	
500-704-20		350		✓	✓	Depth bar ø1.9 mm
500-708-20		345		—	—	Carbide-tipped jaws for outside measurement
						Carbide-tipped jaws for outside and inside measurement

\* Excluding quantizing error of ±1 count in LSD

Inch/Metric						
Order No.	Range (in)	Accuracy*	Mass (g)	Measurement data output port	Thumb roller	Remarks
500-731-20	0 - 6	±0.001 in/ ±0.02 mm	168	—	✓	Carbide-tipped jaws for outside measurement
500-732-20	0 - 8		198			
500-733-20	0 - 6		168			
500-734-20	0 - 8		198			
500-735-20	0 - 6		168			
500-736-20	0 - 8		198			
500-737-20	0 - 6		168			
500-738-20	0 - 8		198			
500-752-20	0 - 6		168			
500-753-20	0 - 8		198			
500-762-20	0 - 6		168			
500-763-20	0 - 8		198			
500-768-20	0 - 6		168			
500-769-20	0 - 6		168			
500-764-20	0 - 12	±0.0015 in/ ±0.03 mm	350	✓	✓	Depth bar ø1.9 mm
			350	—	—	Depth bar ø1.9 mm

\* Excluding quantizing error of ±1 count in LSD

## DIMENSIONS

