

Calipers

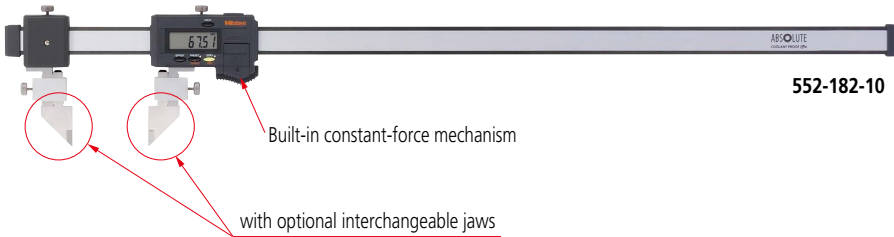
MeasurLink[®] ENABLED
Data Management Software by Mitutoyo

ABSOLUTE[™]



ABSOLUTE Coolant Proof Carbon Fiber Caliper SERIES 552 — with Interchangeable Jaws

- Digimatic Calipers employ CFRP (Carbon-Fiber Reinforced Plastics) in the beam and jaws. Lightweight and easy to handle. The range of applications can be expanded by using interchangeable jaws.
- Rated to IP66: can be used in adverse environments where the caliper is subject to splashing by cutting fluid or coolant. The digital display can reduce human error by preventing incorrect reading of measurement results.



SPECIFICATIONS

Metric				
Code No.	Range (mm)	Resolution (mm)	Maximum permissible error (mm)*1	
			<i>E</i> _{MPE}	<i>S</i> _{MPE}
552-181-10	0 - 450	0.01	±0.04	
552-182-10	0 - 600			
552-183-10	0 - 1000			
552-184-10	0 - 1500			
552-185-10	0 - 2000			

Inch / Metric				
Code No.	Range	Resolution	Maximum permissible error*1	
			<i>E</i> _{MPE}	<i>S</i> _{MPE}
552-191-10	0 - 18 in/0 - 450 mm	0.0005 in/0.01 mm	±0.002 in/±0.04 mm	
552-192-10	0 - 24 in/0 - 600 mm			
552-193-10	0 - 40 in/0 - 1000 mm			
552-194-10	0 - 60 in/0 - 1500 mm			
552-195-10	0 - 80 in/0 - 2000 mm			

- Dust/Water protection level: IP66 (IEC 60529)*2
- Power source: SR44 battery (1 pc.), **938882** included as standard (for operational checks)
- Battery life: Approx. 5,000 hours in continuous use
- Response speed: Unlimited

*1 The Partial Surface Contact Error (*E*_{MPE}) and Shift Error (*S*_{MPE}) are terms defined by ISO 13385-1:2019.

*2 Rustproofing shall be applied after use if caliper was in contact with coolant.

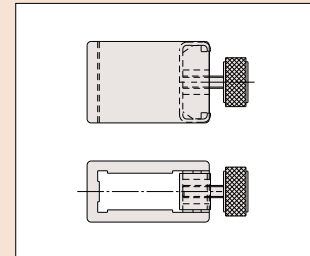
Note1: The Maximum permissible error (MPE) values described above were measured using a dedicated outside measurement inspection tool.

Note2: A constant-force mechanism is used in the finger rest; however, this is only an auxiliary mechanism to avoid measurement error caused by excessive measuring force. To measure with good accuracy, use the minimum necessary measuring force for the caliper measuring faces to make sufficient contact with the workpiece. Refer to page 13-21 for details.

Functions

- Zero-setting
- Data hold: Pressing the HOLD switch displays "H" on the LCD display and holds (retains) the display of value. Moving the slider in this state does not change the displayed value. Pressing the switch again cancels the state, allowing you to start measuring again.
- Offsetting: Pressing the OFFSET switch adds an offset for inside measurement to the displayed value so that you can directly obtain an inside measurement value.
- Presetting: This function presets a desired value as the displayed value at the origin. When using optional jaws, presetting an offset of the jaws enables you to directly obtain the necessary measurement value.
- Data output: Measurement data can be output, allowing easy incorporation of this instrument into a statistical process control or measurement system.
- Low-power and low-voltage alert: When the battery voltage becomes low, "B" appears on the LCD, signaling the need for battery replacement before the caliper stops working.
- Counting value composition error: If a measurement error occurs due to dirt on the scale, etc., an error message appears on the display and measurement stops.
- Automatic power on/off, inch/mm reading (inch/mm models): LCD display turns off after 20 minutes inactivity but the ABS scale unit origin is stored. Moving the slider restores the display.

Standard Accessories (2 pcs.)



Jaw clamps: **05GZA033**

Optional Accessories

Code No.	Type	Description
264-020	—	USB Input Tool Series USB Keyboard Signal Conversion Type IT-020U
05CZA624	A	Connection cable for IT/DP/MUX (1 m)
05CZA625	A	Connection cable for IT/DP/MUX (2 m)
06AFM380A	A	USB Input Tool Direct (2 m)
02AZD730G	IP67	U-WAVE-T
02AZD880G	Buzzer	U-WAVE-T
02AZE200	—	U-WAVE-T mounting bracket
02AZD790A	A	Connection cable for U-WAVE-T (160 mm)
02AZE140A	A	Connection cable for U-WAVE-T For foot switch



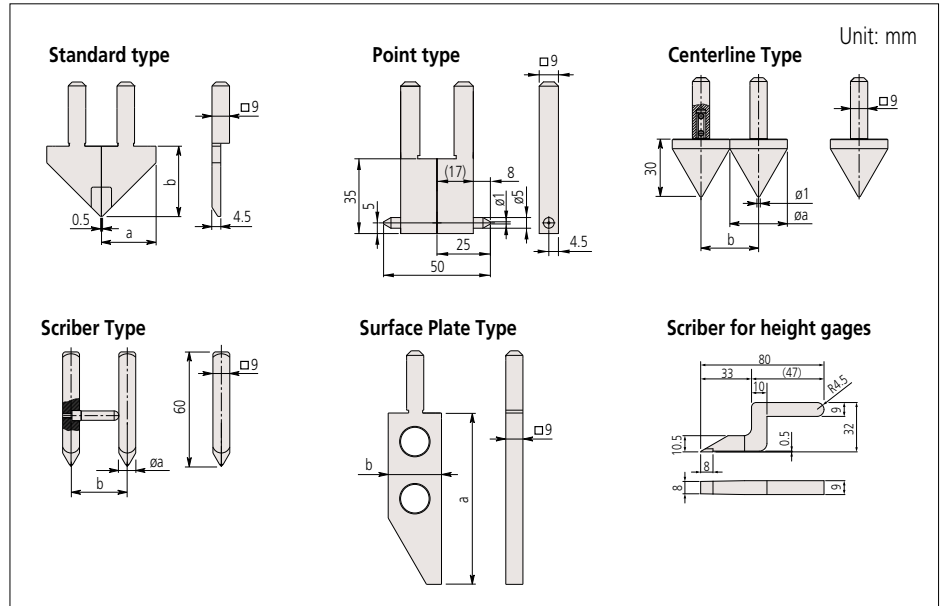
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Optional accessories

Interchangeable jaws

SPECIFICATIONS



Standard Type

Code No.	Components	a	b
07CZA056	Right (07CAA044), Left (07CAA045)	28 mm (1.1 in)	36 mm (1.2 in)

Note: 1 set

Point Type

Code No.	Components	a	b
07CZA058	07CZA041x2 pcs.	25 mm	50 mm
07CZA059	07CZA048x2 pcs.	1 in	2 in

Centerline Type

Code No.	Components	a	b
07CZA057	07CZA039x2 pcs.	30 mm	30 mm
07CZA060	07CZA047x2 pcs.	1.2 in	1.2 in

Scriber Type

Code No.	Components	a	b
07CZA055	Right (07CZA042), Left (07CZA043)	8 mm	30 mm
07CZA061	Right (07CZA042), Left (07CZA049)	0.31 in	1.2 in

Surface Plate Type

Code No.	a	b
07CZA044	90 mm (3.5 in)	28 mm (1.1 in)

Note: Note that the error arising from the combination of surface plates is outside the scope of accuracy guarantee.

Scriber for height gages

Code No.
07GZA000

Type	Applicable calipers	Range	Maximum permissible error*	
			EMPE	SMPE
Standard type	552-181-10 (552-191-10)	0 - 450 mm (0 - 18 in)	±0.06 mm (±0.0025 in)	/
	552-182-10 (552-192-10)	0 - 600 mm (0 - 24 in)	±0.07 mm (±0.0030 in)	
	552-183-10 (552-193-10)	0 - 1000 mm (0 - 40 in)	±0.11 mm (±0.0045 in)	
	552-184-10 (552-194-10)	0 - 1500 mm (0 - 60 in)	±0.14 mm (±0.0055 in)	
	552-185-10 (552-195-10)	0 - 2000 mm (0 - 80 in)	±0.17 mm (±0.0070 in)	
Point type	552-181-10 (552-191-10)	Inside: 50.1 - 500 mm (2.004 - 20 in) Outside: 0 - 450 mm (0 - 18 in)	— ±0.09 mm (±0.0035 in)	±0.09 mm (±0.0035 in)
	552-182-10 (552-192-10)	Inside: 50.1 - 650 mm (2.004 - 26 in) Outside: 0 - 600 mm (0 - 24 in)	— ±0.09 mm (±0.0035 in)	±0.09 mm (±0.0035 in)
	552-183-10 (552-193-10)	Inside: 50.1 - 1050 mm (2.004 - 42 in) Outside: 0 - 1000 mm (0 - 40 in)	— ±0.10 mm (±0.0040 in)	±0.10 mm (±0.0040 in)
	552-184-10 (552-194-10)	Inside: 50.1 - 1550 mm (2.004 - 62 in) Outside: 0 - 1500 mm (0 - 60 in)	— ±0.14 mm (±0.0055 in)	±0.14 mm (±0.0055 in)
	552-185-10 (552-195-10)	Inside: 50.1 - 2050 mm (2.004 - 82 in) Outside: 0 - 2000 mm (0 - 80 in)	— ±0.17 mm (±0.0070 in)	±0.17 mm (±0.0070 in)
Centerline type	552-181-10 (552-191-10)	30.1 - 480 mm (1.204 - 19.2 in)	/	±0.08 mm (±0.0030 in)
	552-182-10 (552-192-10)	30.1 - 630 mm (1.204 - 25.2 in)		±0.10 mm (±0.0040 in)
	552-183-10 (552-193-10)	30.1 - 1030 mm (1.204 - 41.2 in)		±0.13 mm (±0.0055 in)
	552-184-10 (552-194-10)	30.1 - 1530 mm (1.204 - 61.2 in)		±0.16 mm (±0.0065 in)
	552-185-10 (552-195-10)	30.1 - 2030 mm (1.204 - 81.2 in)		±0.18 mm (±0.0070 in)
Scriber type	552-181-10 (552-191-10)	30.1 - 480 mm (1.204 - 19.2 in)	/	±0.11 mm (±0.0045 in)
	552-182-10 (552-192-10)	30.1 - 630 mm (1.204 - 25.2 in)		±0.15 mm (±0.0060 in)
	552-183-10 (552-193-10)	30.1 - 1030 mm (1.204 - 41.2 in)		±0.18 mm (±0.0070 in)
	552-184-10 (552-194-10)	30.1 - 1530 mm (1.204 - 61.2 in)		±0.18 mm (±0.0070 in)
	552-185-10 (552-195-10)	30.1 - 2030 mm (1.204 - 81.2 in)		±0.18 mm (±0.0070 in)
Surface plate type + Scriber type for height gages	552-181-10 (552-191-10)	0 - 450 mm (0 - 17.7 in)	/	±0.10 mm (±0.0040 in)
	552-182-10 (552-192-10)	0 - 600 mm (0 - 23.7 in)		±0.11 mm (±0.0045 in)
	552-183-10 (552-193-10)	0 - 1000 mm (0 - 39.4 in)		±0.15 mm (±0.0060 in)
	552-184-10 (552-194-10)	0 - 1500 mm (0 - 59.4 in)		±0.18 mm (±0.0070 in)
	552-185-10 (552-195-10)	0 - 2000 mm (0 - 79.6 in)		±0.18 mm (±0.0070 in)
Surface plate type + Point type	552-181-10 (552-191-10)	Outside: 0 - 450 mm (0 - 18 in)	/	±0.12 mm (±0.0050 in)
	552-182-10 (552-192-10)	Outside: 0 - 600 mm (0 - 24 in)		±0.13 mm (±0.0055 in)
	552-183-10 (552-193-10)	Outside: 0 - 1000 mm (0 - 40 in)		±0.17 mm (±0.0070 in)
	552-184-10 (552-194-10)	Outside: 0 - 1500 mm (0 - 60 in)		±0.20 mm (±0.0080 in)
	552-185-10 (552-195-10)	Outside: 0 - 2000 mm (0 - 80 in)		±0.20 mm (±0.0080 in)
Surface plate type + Centerline type	552-181-10 (552-191-10)	15.1 - 465 mm (0.6 - 18.6 in)	/	±0.11 mm (±0.0045 in)
	552-182-10 (552-192-10)	15.1 - 615 mm (0.6 - 24.6 in)		±0.12 mm (±0.0050 in)
	552-183-10 (552-193-10)	15.1 - 1015 mm (0.6 - 40.6 in)		±0.16 mm (±0.0065 in)
	552-184-10 (552-194-10)	15.1 - 1515 mm (0.6 - 60.6 in)		±0.19 mm (±0.0075 in)
	552-185-10 (552-195-10)	15.1 - 2015 mm (0.6 - 80.6 in)		±0.19 mm (±0.0075 in)

() : Inch/Metric models

Note: The values described in the above table are MPE values when attached to a caliper.



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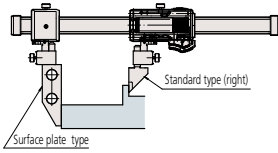
Calipers

Optional accessories

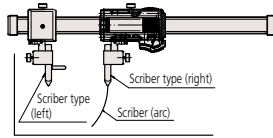
Interchangeable jaws

Typical applications

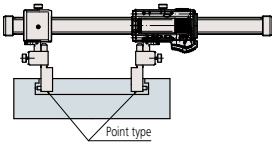
Surface plate type + Standard type



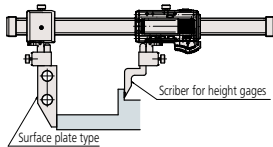
Scriber type



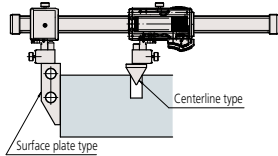
Point type



Surface plate type + Scriber for height gages



Surface plate type + Centerline type



The above combinations are examples only.
Contact us for advice on accuracy when using a contact point in a combination other than as shown above.



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