

ABSOLUTE! AOS! DIGIMATIC CALIPER

EQUIPPED WITH AOS (ADVANCED ONSITE SENSOR)
INDUCTION TYPE ENCODER

SMALL TOOL INSTRUMENTS
AND DATA MANAGEMENT



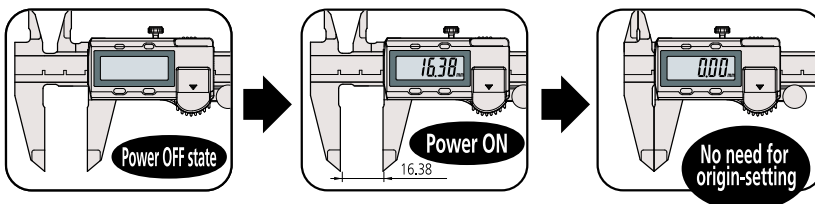
New! ABS DIGIMATIC Caliper

A new series of cost-effective standard DIGIMATIC caliper born of Mitutoyo's ground-breaking encoder technologies developed over the last 30 years. Now equipped with the same AOS (Advanced Onsite Sensor) induction type encoder used in top-of-the-line ABS coolant-proof calipers.

Benefits of this Caliper

- › Thanks to the adoption of the electromagnetic induction type ABS encoder, this caliper can be used without concern for contamination on the scale face during measurement. Detection signal is not affected by dirt (water, oil, etc.) on surface of a scale.
- › Character Height: 9 mm (alleviation of fatigue with the high-contrast LCD)
- › Carbide-tipped jaw models are ideally suited to the measurement of rough-machined workpieces, castings, grindstones, etc.
- › A battery life of approximately 3,5 years (18.000 h) has been achieved under normal use through the adoption of Mitutoyo's ABSOLUTE scale.
- › The slider provides smooth, stable and comfortable operation.
- › The data output function allows integration into statistical process control and measurement systems.
- › The ABS (absolute) scale requires no origin setting after power-on and also has no limit to response speed.

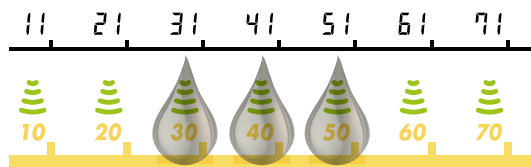
ABSOLUTE®



An inspection certificate is included standard with each caliper.

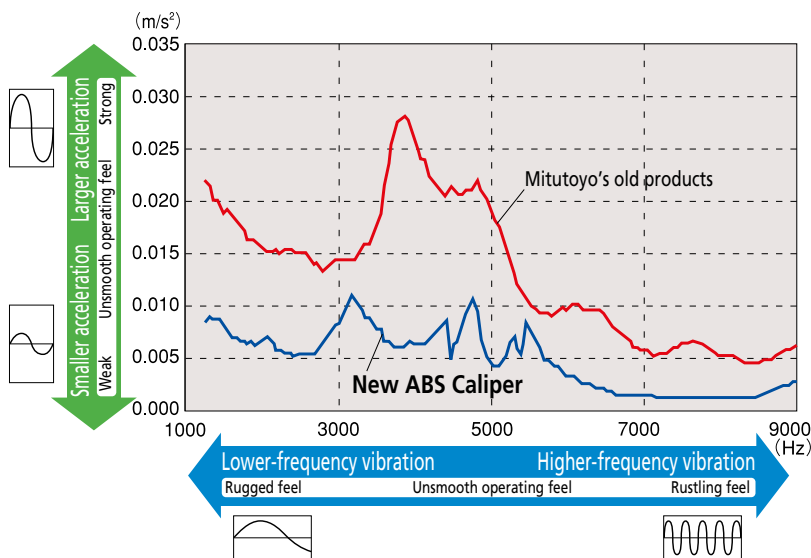
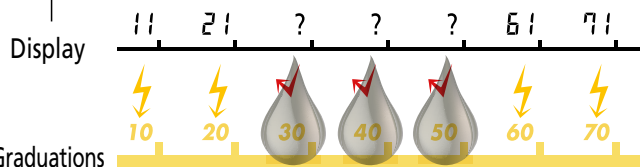
Electromagnetic Induction Type Absolute Encoder

Detection signal is not affected by dirt (water, oil, etc.) on surface of a scale.



Electrostatic Capacitance Absolute Encoder

Detection signal is affected by dirt (water, oil, etc.) on surface of a scale.



Assessment of slider operating 'feel'

This assessment is obtained from FFT analysis of vibrations during sliding with acceleration sensors mounted on the slider.

The quality of the slider working surface has improved with the latest machining technology.



New! ABS DIGIMATIC Caliper



500-151-30

Slider with measurement data output port and thumb roller



500-161-30

Slider with a measurement data output port

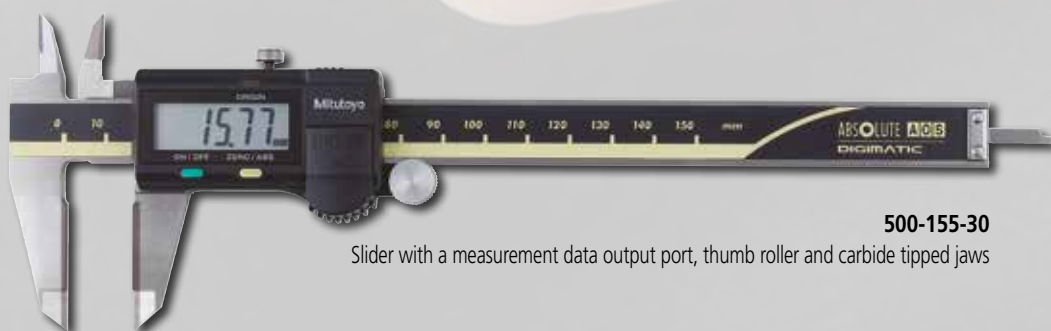
Digital Caliper

Digital Caliper



500-182-30

Slider (200 mm Typ) without a measurement data output port or thumb roller



500-155-30

Slider with a measurement data output port, thumb roller and carbide tipped jaws

New! ABS DIGIMATIC Caliper

Common Specifications

- Digital step: 0,01 mm
- Repeatability: 0,01 mm (Quantizing error excluded)
- Power supply: Button-type silver oxide battery SR44 (No. 938882), 1 piece supplied as standard (The standard supplied battery is for the monitor.)
- Battery life: Approx. 3,5 years (18.000 h) under normal use
- Maximum response speed: Unlimited

Functions

ABS (absolute) measurement function:

Enables absolute-mode measurement to be started without any zero-setting after switch-on. The absolute origin position can be set, or reset, with the ORIGIN switch at any time.

INC (incremental) measurement function:

Enables the display value to be set to zero, temporarily, at the current slider position to enable easy incremental-mode measurement.

Low battery alarm:

Indicates (with a 'B' symbol in the display) that the battery needs replacing. This allows timely battery replacement before the caliper becomes unusable.

External output function:

Allows measurement data to be exported using the optional data cable.

Hold function:

Allows a display value to be held using the optional Data Hold unit. (This function cannot be used along with the external output function.)

Specifications

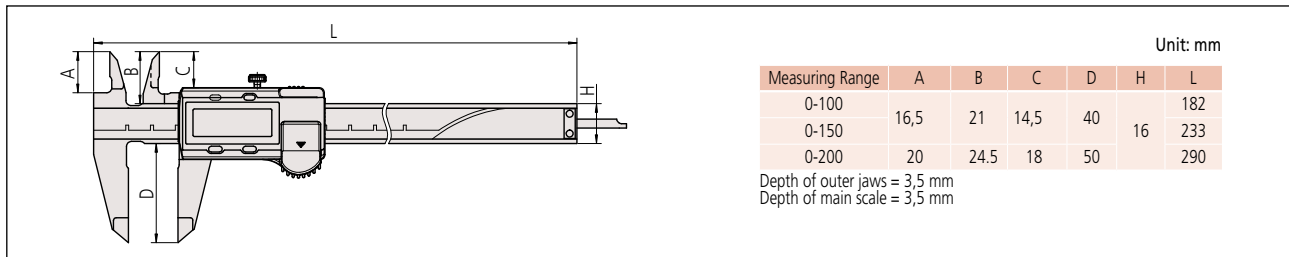
Order No.	Range	Accuracy*	Mass	Data Output	Thumb roller	Remarks
500-150-30	0-100 mm	± 0,02 mm	143 g	■	■	Depth bar ø 1,9 mm rod
500-180-30	0-100 mm	± 0,02 mm	143 g			Depth bar ø 1,9 mm rod
500-201-30	0-100 mm	± 0,02 mm	143 g	■		Depth bar ø 1,9 mm rod
500-151-30	0-150 mm	± 0,02 mm	168 g	■	■	-
500-154-30	0-150 mm	± 0,02 mm	168 g	■	■	Carbide-tipped jaws for outside measurement
500-155-30	0-150 mm	± 0,02 mm	168 g	■	■	Carbide-tipped jaws for outside and inside measurement
500-158-30	0-150 mm	± 0,02 mm	168 g	■	■	Depth bar ø 1,9 mm rod
500-161-30	0-150 mm	± 0,02 mm	168 g	■		-
500-181-30	0-150 mm	± 0,02 mm	168 g			-
500-184-30	0-150 mm	± 0,02 mm	168 g			Depth bar ø 1,9 mm rod
500-203-30	0-150 mm	± 0,02 mm	168 g	■		Depth bar ø 1,9 mm rod
500-233-30	0-150 mm	± 0,02 mm	168 g	■		Carbide-tipped jaws for outside measurement
500-234-30	0-150 mm	± 0,02 mm	168 g	■		Carbide-tipped jaws for outside and inside measurement
500-152-30	0-200 mm	± 0,02 mm	198 g	■	■	-
500-156-30	0-200 mm	± 0,02 mm	198 g	■	■	Carbide-tipped jaws for outside measurement
500-157-30	0-200 mm	± 0,02 mm	198 g	■	■	Carbide-tipped jaws for outside and inside measurement
500-162-30	0-200 mm	± 0,02 mm	198 g	■		-
500-182-30	0-200 mm	± 0,02 mm	198 g			-
500-235-30	0-200 mm	± 0,02 mm	198 g	■		Carbide-tipped jaws for outside measurement
500-236-30	0-200 mm	± 0,02 mm	198 g	■		Carbide-tipped jaws for outside and inside measurement

* Quantizing error excluded

Digital Caliper

Digital Caliper

External View/Dimensions Chart

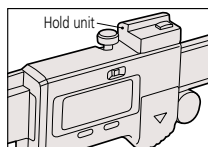


Optional Accessories*

- **Data Hold unit**
Order No.959143



- **USB Input Tool Direct**
USB-ITN-C (2 m): Order No.06ADV380C



- **Connecting cable**
Used for Printer DP-1VR or DMX interface.
1 m cable: Order No.959149
2 m cable: Order No.959150



- **U-WAVE-T dedicated connecting cable**
Cable for standard use: Order No.02AZD790C
Cable for foot switch: Order No.02AZE140C

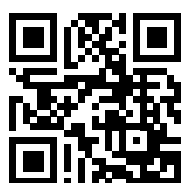
* These accessories are available only for those models with the measurement data output function.



**Whatever your challenges are,
Mitutoyo supports you from start to finish.**

Mitutoyo is not only a manufacturer of top quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed up by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver bespoke measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.



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Note: Product illustrations are without obligation. Product descriptions, in particular any and all technical specifications, are only binding when explicitly agreed upon.

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