

# Calipers

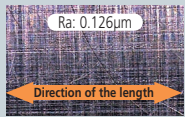
An industry standard in measuring tools

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

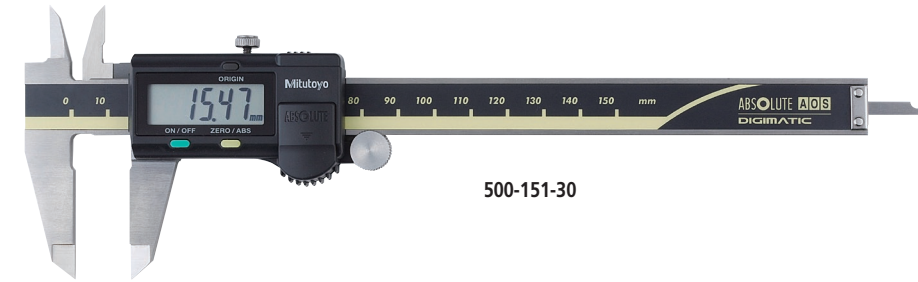
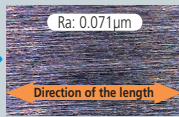
- Electromagnetic induction system allows use in workshop conditions exposed to coolant, water, dust oil.
- New ergonomic design with finger rest.
- The ZERO/ABS button allows the display to be Zero-Set at any slider position along the scale for comparison measurements. This button will also allow return 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.
- 18,000 hours battery life.
- 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.

### High quality guide surface finish for smooth slider movement

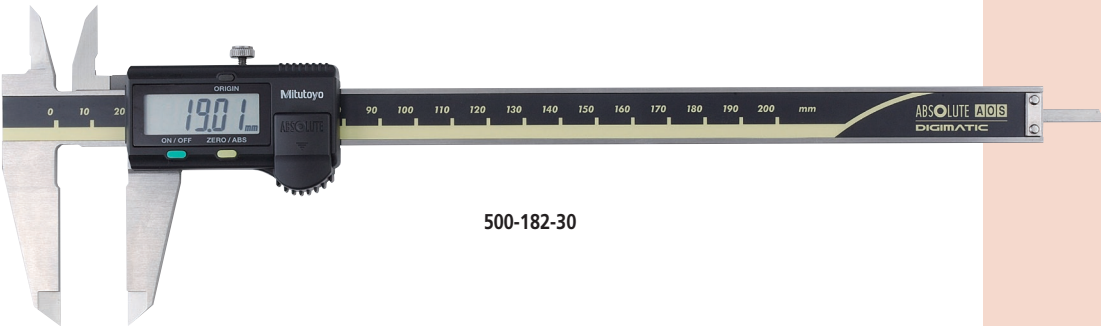
Conventional ex. No.500-151



ABSOLUTE Digimatic Caliper ex. No.500-151-30

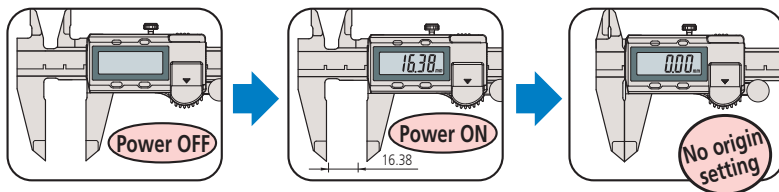


500-151-30



500-182-30

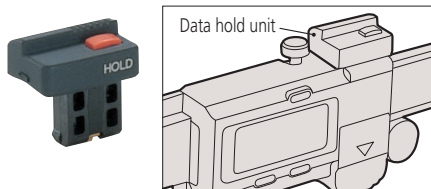
A built-in ABS (absolute) scale means that these calipers are ready to use immediately after power-on without origin resetting – just like using a vernier caliper.



### Optional accessories

Dedicated for the models equipped with a digimatic output function. For details, refer to page A-21.

#### 959143: Data hold unit



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

- 959149: SPC cable with data button (1m)
- 959150: SPC cable with data button (2m)



#### USB Input Tool Direct

- 06ADV380C: SPC cable for USB-ITN-C (2m)

#### Connecting cables for U-WAVE-T

- 02AZD790C: SPC cable for U-WAVE with data button (160mm)
- 02AZE140C: SPC cable for footswitch

ABSOLUTE™ (Refer to page IX for details.)



An inspection certificate is supplied as standard. Refer to page IX for details.

### Technical Data

- Accuracy:  $\pm 0.02\text{mm}$  ( $\leq 200\text{mm}$ ),  $\pm 0.03\text{mm}$  ( $\leq 300\text{mm}$ ) (excluding quantizing error)
- Resolution: 0.01mm or .0005"/0.01mm
- Repeatability: 0.01mm
- 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. 3.5 years under normal use (18,000 hours for continuous use)

## 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     | Depth bar  | Fine adjustment   | Remarks  |
| 500-150-30  | 0 - 100mm | ø1.9mm rod | with thumb roller | —  |
| 500-180-30* |           |            | —                 |  |
| 500-151-30  | 0 - 150mm | Blade      | with thumb roller | Carbide-tipped jaws for outside measurement            |
| 500-154-30  |           |            |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-155-30  |           |            |                   | —  |
| 500-158-30  | 0 - 200mm | ø1.9mm rod | —                 | —  |
| 500-181-30* |           |            |                   |  |
| 500-152-30  | 0 - 200mm | 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* | 0 - 300mm | —          | —                 | —  |
| 500-153     |           |            |                   |  |

\* without SPC data output

| Inch/Metric |         |           |                   |  |
|-------------|---------|-----------|-------------------|--|
| Order No.   | Range   | Depth bar | Fine adjustment   | Remarks  |
| 500-170-30  | 0 - 4"  | .075" rod | —                 | —  |
| 500-195-30* |         |           |                   |  |
| 500-171-30  | 0 - 6"  | Blade     | with thumb roller | Carbide-tipped jaws for outside measurement            |
| 500-174-30  |         |           |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-175-30  |         |           |                   | —  |
| 500-178-30  | 0 - 8"  | .075" rod | —                 | Carbide-tipped jaws for outside measurement            |
| 500-196-30* |         |           |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-159-30* | 0 - 12" | Blade     | with thumb roller | Carbide-tipped jaws for outside measurement            |
| 500-160-30* |         |           |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-172-30  |         |           |                   | —  |
| 500-176-30  | 0 - 12" | —         | —                 | Carbide-tipped jaws for outside measurement            |
| 500-177-30  |         |           |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-197-30* | 0 - 12" | —         | —                 | Carbide-tipped jaws for outside measurement            |
| 500-163-30* |         |           |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-164-30* | 0 - 12" | —         | —                 | Carbide-tipped jaws for outside measurement            |
| 500-173     |         |           |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-167     | 0 - 12" | —         | —                 | Carbide-tipped jaws for outside measurement            |
| 500-168     |         |           |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-193*    | 0 - 12" | —         | —                 | Carbide-tipped jaws for outside measurement            |
| 500-165*    |         |           |                   | Carbide-tipped jaws for outside and inside measurement |
| 500-166*    | 0 - 12" | —         | —                 | Carbide-tipped jaws for outside and inside measurement |

\* without SPC data output

## DIMENSIONS

