

## Mitutoyo 500-196-30

# Mitutoyo 500-196-30 Digimatic Caliper 6" (150mm) Instruction Manual

## 1. INTRODUCTION

This manual provides essential information for the proper use, maintenance, and troubleshooting of your Mitutoyo 500-196-30 Digimatic Caliper. Designed for high-precision measurement, this instrument features an advanced AOS (Absolute Onsite Sensor) encoder, ensuring reliable and accurate readings in various professional and industrial applications. Please read this manual thoroughly before operating the caliper to ensure optimal performance and longevity.

## 2. SAFETY PRECAUTIONS

Observe the following safety guidelines to prevent injury and ensure the proper functioning of the caliper:

- Handle the instrument with care to avoid dropping or impact, which can affect accuracy.
- When handling the Volatile Corrosion Inhibitor (VCI) paper included with the product, ensure adequate ventilation.
- Use gloves or other protective measures when handling the VCI paper.
- Wash hands thoroughly after work or before eating when VCI paper has been handled.
- Avoid touching eyes or mucous membranes after handling the VCI paper. In case of contact or complications, consult a physician.
- Keep the caliper clean and free from dust, oil, and other contaminants.

## 3. PRODUCT OVERVIEW

The Mitutoyo 500-196-30 Digimatic Caliper is a robust and precise measuring tool crafted from high-quality stainless steel. It features a clear digital display and an ergonomic design for comfortable use. The AOS encoder technology enhances resistance to environmental factors, ensuring stable readings.



Figure 3.1: Mitutoyo 500-196-30 Digimatic Caliper in its protective case.



Figure 3.2: Close-up of the digital display and control buttons.

## 4. SETUP

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### 4.1. Battery Installation

1. Carefully remove the battery cover located on the side of the display unit.
2. Insert the provided SR44 1.55V button cell battery with the positive (+) side facing up.
3. Replace the battery cover, ensuring it is securely fastened.

### 4.2. Initial Power-On and Zero-Setting

1. Press the **ON/OFF** button to power on the caliper.
2. Close the measuring jaws completely.
3. Press the **ZERO/ABS** button to set the display to zero. This establishes the absolute zero point for subsequent measurements.

## 5. OPERATING INSTRUCTIONS

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### 5.1. Basic Measurements

The Mitutoyo Digimatic Caliper can perform various types of measurements:

- **Outside Measurement:** Use the large jaws to measure external dimensions.
- **Inside Measurement:** Use the small jaws to measure internal dimensions.
- **Depth Measurement:** Use the depth bar at the end of the sliding jaw to measure depths.
- **Step Measurement:** Use the step at the end of the fixed jaw to measure steps or offsets.

# AOS Absolute Digimatic Caliper

A new series of digimatic calipers derived from 30 years of accumulated experience, featuring an **induction type absolute encoder** and **AOS (Advanced Onsite Sensor)**.

The new electromagnetic inductive sensor repels dirt, oil and water ensuring 100% accuracy

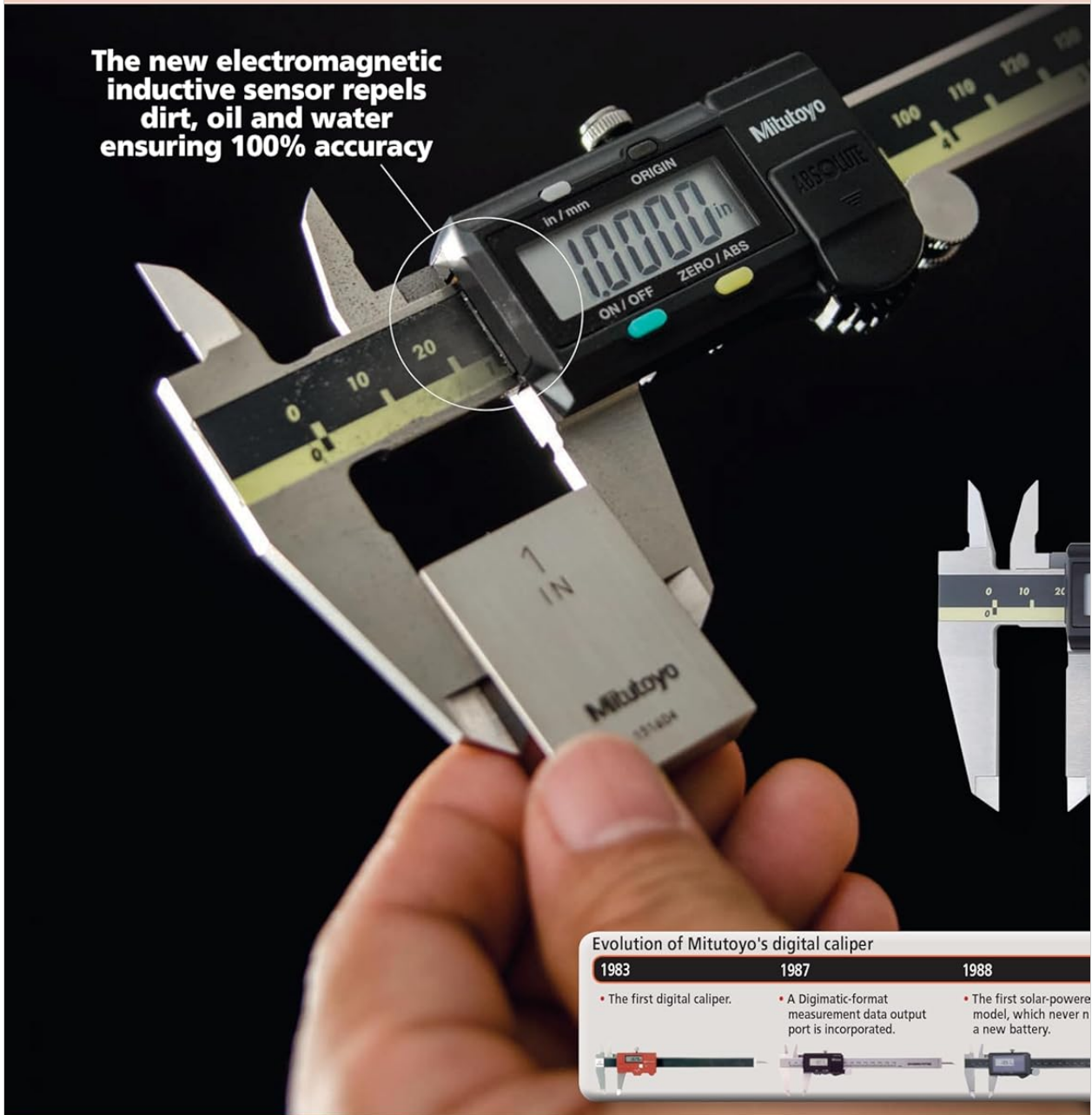


Figure 5.1: Measuring outside dimensions.





Figure 5.2: Measuring inside dimensions.

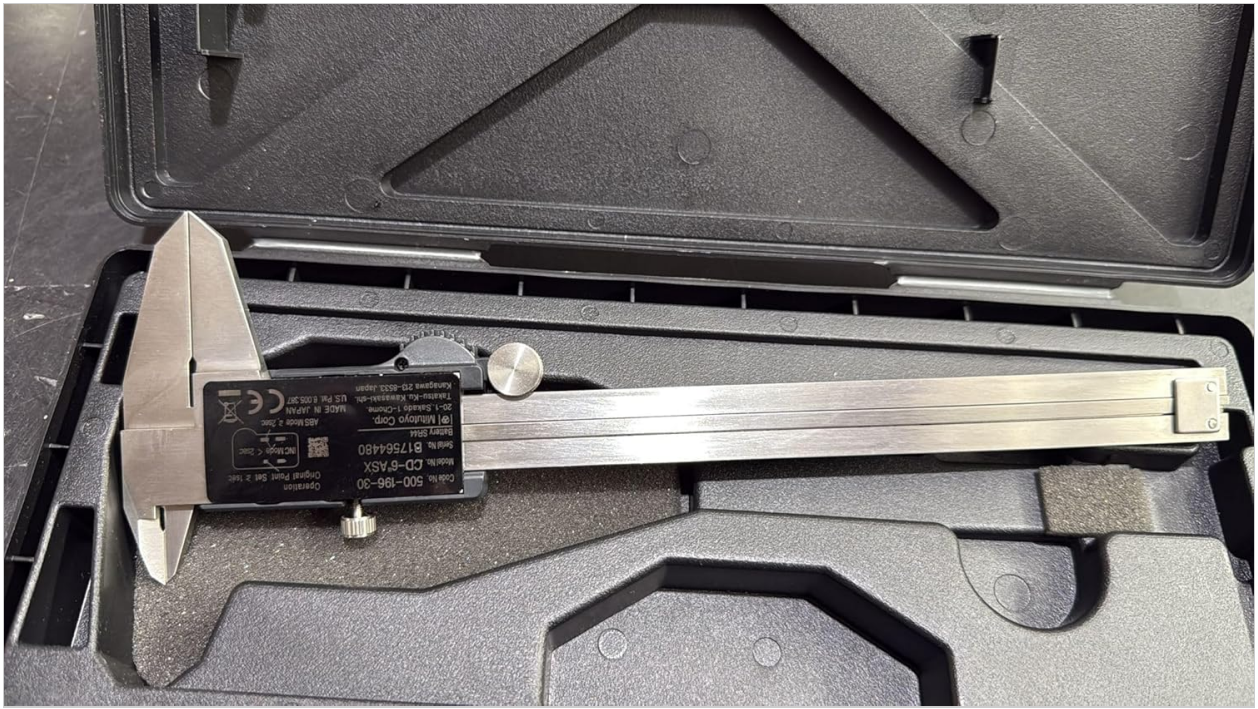


Figure 5.3: Measuring depth.

## 5.2. Unit Conversion

Press the **in/mm** button to switch between inch and millimeter display units. The selected unit will be indicated on the digital display.

## 5.3. ABS (Absolute) Mode

The caliper features an ABS (Absolute) mode, which retains the origin point even after the power is turned off. This means you do not need to re-zero the caliper every time you power it on, as long as the battery is functional. Simply power on and begin measuring.

## 6. MAINTENANCE

### 6.1. Cleaning

Regular cleaning is crucial for maintaining the accuracy and lifespan of your caliper. Use a soft, lint-free cloth to wipe down the measuring surfaces and the main beam. For stubborn dirt or oil, a small amount of isopropyl alcohol can be used. Ensure the caliper is completely dry before storage.

### 6.2. Battery Replacement

When the display becomes dim or shows erratic readings, it is time to replace the battery. Follow the steps outlined in Section 4.1. Battery Installation. Always use a fresh SR44 1.55V battery for optimal performance.

## 7. TROUBLESHOOTING

### 7.1. Flashing Dashes on Display After Battery Replacement

If the display shows flashing dashes after replacing the battery and the buttons are unresponsive, a manual reset is required. This often occurs after a power interruption or battery change.

1. Ensure the new battery is correctly installed.
2. Press and hold the **ORIGIN** button for approximately 1 second.
3. The display should reset to 0.00 mm or 0.0000 in, and the caliper will be ready for use.

## 8. SPECIFICATIONS

Feature	Specification
Model	500-196-30 (CD-6"ASX)
Measuring Range	0-150mm / 0-6in
Resolution	0.01mm / .0005in
Measurement Accuracy	+/-0.001"
Material	Stainless Steel
Encoder Technology	AOS (Absolute Onsite Sensor)
Battery Type	SR44 1.55V

## 9. WARRANTY AND SUPPORT

Mitutoyo products are known for their high quality and precision. This caliper comes with a Certificate of Inspection, verifying its adherence to stringent quality standards (ISO13385-1, ASME B89.1.10, JIS B 7507). For warranty information, technical support, or service inquiries, please refer to the official Mitutoyo website or contact your authorized dealer. Keep your purchase receipt and the Certificate of Inspection for any warranty claims.