

Starrett 780XTZ-258

Starrett 780XTZ-258 Electronic Internal Micrometer Instruction Manual

Model: 780XTZ-258

1. PRODUCT OVERVIEW

The Starrett 780XT Series Electronic Internal Micrometer is designed for precise internal measurements. It features an IP65 rating, providing protection against coolant, water, dirt, and dust, making it suitable for demanding shop environments. This micrometer offers extended travel, which minimizes the need to change anvils during operation. Its ground contact points ensure faster and more accurate seating compared to spherical contacts found on other gauges. Key features include:

- Wide measurement range without requiring anvil changes.
- Carbide measuring faces on sizes above 1/2-inch (12.5mm) diameter for enhanced durability and accuracy.
- Extensions are available for measuring deep holes.
- A precision ratchet stop ensures consistent contact pressure for reliable readings.
- Each micrometer bore gauge includes a wooden case, setting ring, contacts, adjusting wrench, spare battery, and instructions.



Figure 1: Starrett 780XTZ-258 Electronic Internal Micrometer. This image shows the main body of the micrometer with its digital display, control buttons, and the 3-point contact measuring head. The display shows a reading of "2.62495 ins".

2. SETUP AND INITIAL USE

2.1 Unpacking and Inspection

Carefully remove the micrometer and its accessories from the wooden case. Inspect all components for any signs of damage that may have occurred during shipping. Ensure all listed accessories (setting ring, contacts, adjusting wrench, spare battery) are present.

2.2 Battery Installation

The micrometer requires one CR2 battery, which is included. To install or replace the battery:

1. Locate the battery compartment cover, typically on the side of the digital display unit.
2. Use a small screwdriver or the provided adjusting wrench to carefully open the compartment.
3. Insert the CR2 battery, ensuring correct polarity (+/-) as indicated inside the compartment.
4. Securely close the battery compartment cover.

2.3 Initial Calibration (Setting Ring)

Before taking measurements, the micrometer must be calibrated using the provided setting ring. This ensures accuracy for the specific measurement range.

1. Turn on the micrometer by pressing the "ON" button.
2. Carefully insert the measuring head into the setting ring.
3. Rotate the thimble until the three contact points firmly engage with the inner surface of the setting ring. The precision ratchet stop will click when the correct contact pressure is achieved.
4. Press the "SET" button to zero the display or set it to the known dimension of the setting ring. Refer to the specific

instructions in the included paper manual for detailed calibration procedures for your model.

3. OPERATING INSTRUCTIONS

3.1 Taking a Measurement

1. Ensure the micrometer is clean and properly calibrated.
2. Gently insert the measuring head into the bore or internal feature to be measured.
3. Rotate the thimble clockwise until the three contact points make firm and even contact with the internal surface. The ratchet stop will click, indicating optimal measuring pressure.
4. Read the measurement directly from the digital display.
5. To switch between units (e.g., inches/millimeters), press the "IN/MM" button if available on your model.

3.2 Using Extensions (Optional)

For measuring deep holes, extensions can be attached to the micrometer head. Refer to the specific instructions provided with your extension kit for proper attachment and recalibration procedures.

4. MAINTENANCE AND CARE

Proper maintenance ensures the longevity and accuracy of your Starrett 780XTZ-258 micrometer.

- **Cleaning:** After each use, wipe down the micrometer with a clean, lint-free cloth. For stubborn dirt, a mild, non-corrosive cleaning solution can be used, followed by thorough drying. Avoid harsh chemicals that may damage the finish or electronic components.
- **Storage:** Store the micrometer in its original wooden case in a dry, temperature-controlled environment to prevent corrosion and damage.
- **Battery Replacement:** Replace the battery when the low battery indicator appears on the display or when the display becomes dim. Always use the specified CR2 battery type.
- **Calibration Checks:** Periodically check the calibration using the setting ring, especially before critical measurements or after long periods of storage.
- **Avoid Impact:** Do not drop or subject the micrometer to severe impact, as this can affect its accuracy and functionality.

5. TROUBLESHOOTING

This section addresses common issues you might encounter with your micrometer.

Problem	Possible Cause	Solution
Display is blank or dim.	Low or dead battery.	Replace the CR2 battery. Ensure correct polarity.
Inaccurate readings.	<ul style="list-style-type: none">• Improper calibration.• Dirt or debris on contact points.• Incorrect measuring technique (e.g., not using ratchet stop).• Environmental factors (temperature fluctuations).	<ul style="list-style-type: none">• Recalibrate using the setting ring.• Clean contact points thoroughly.• Ensure the ratchet stop clicks 2-3 times for consistent pressure.• Allow the micrometer to acclimate to the measurement environment.

Problem	Possible Cause	Solution
Buttons are unresponsive.	<ul style="list-style-type: none"> Battery issue. Internal electronic malfunction. 	<ul style="list-style-type: none"> Replace battery. If issue persists, contact Starrett customer support.

6. SPECIFICATIONS

Feature	Detail
Model Number	780XTZ-258
Brand	Starrett
Measurement Range	1/4-12 inches
Contact Points	3-Point Contact, Fixed Anvil
Measuring Faces	Carbide (on sizes above 1/2-inch / 12.5mm diameter)
Protection Rating	IP65 (against coolant, water, dirt, dust)
Power Source	1 CR2 battery (included)
Material	Stainless Steel
Product Dimensions	10.5 x 11.9 x 4.8 inches
Weight	6.9 Pounds
UPC	049659120301

7. WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation included with your product or visit the official Starrett website. Starrett products are known for their quality and precision, and typically come with a manufacturer's warranty against defects in materials and workmanship.

For technical assistance, service, or to inquire about replacement parts, please contact Starrett customer support:

- **Website:** www.starrett.com
- Refer to the contact section on their website for phone numbers and email support.

