

Mahr MarCal 16 EWRI-V

Mahr MarCal 16 EWRI-V Digital Universal Caliper User Manual

Model: 4118907

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and effective use of your Mahr MarCal 16 EWRI-V Digital Universal Caliper. Please read this manual thoroughly before operating the device to ensure proper function and to prevent damage.

The Mahr MarCal 16 EWRI-V is a high-precision digital universal caliper designed for accurate measurements. It features a step measurement function and provides instant measurements through its reliable reference system. The design incorporates raised guideways for enhanced scale protection and offers excellent resistance to dust, coolants, and lubricants, thanks to dirt wipers integrated into the slider.

Key Features:

- High-contrast analog display for clear readings.
- Top locking screw for secure measurements.
- Curved guide for smooth operation.
- Measuring knives for precise internal measurements.

2. PRODUCT OVERVIEW

The Mahr MarCal 16 EWRI-V Digital Universal Caliper comes with various components to facilitate precise measurements.



Figure 1: Mahr MarCal 16 EWri-V Digital Universal Caliper and included accessories. The image shows the main caliper unit with a digital display, along with various attachments such as a screwdriver, L-shaped wrench, measuring blocks, and other specialized measuring tools.

Included Components:

- Mahr MarCal 16 EWri-V Digital Caliper
- Accessories (as shown in Figure 1)

3. SETUP

Before first use, ensure all components are present and undamaged.

1. **Unpacking:** Carefully remove the caliper and all accessories from the packaging. Retain the original packaging for future storage or transport.
2. **Initial Inspection:** Inspect the caliper for any visible damage. Ensure the digital display is clear and functional.
3. **Cleaning:** Gently wipe down the measuring surfaces with a clean, lint-free cloth. Avoid using harsh chemicals.

4. **Power On:** The caliper is ready for immediate use due to its reference system. No battery installation is required for initial operation, as indicated by the product specifications.
5. **Zero Setting:** Close the measuring jaws completely and press the "ZERO" button (if available) to set the display to zero. This ensures accurate measurements.

4. OPERATING INSTRUCTIONS

The Mahr MarCal 16 EWRI-V is designed for various types of measurements. Always ensure the measuring surfaces are clean before taking a reading.

4.1. External Measurement

1. Open the external measuring jaws wider than the object to be measured.
2. Place the object between the jaws.
3. Gently close the jaws until they make firm contact with the object. Do not apply excessive force.
4. Read the measurement directly from the digital display.
5. Use the top locking screw to secure the measurement if needed for later reading or transfer.

4.2. Internal Measurement

Use the smaller measuring knives located on the top of the caliper for internal measurements.

1. Insert the internal measuring knives into the opening of the object.
2. Open the knives until they make firm contact with the inner surfaces.
3. Read the measurement from the digital display.

4.3. Depth Measurement

The depth rod extends from the end of the sliding jaw.

1. Place the end of the main beam firmly on the top surface of the object.
2. Extend the depth rod into the hole or recess until it touches the bottom.
3. Read the measurement from the digital display.

4.4. Step Measurement

The step measurement function allows for measuring the height of a step or shoulder.

1. Place the end face of the fixed jaw on the higher surface.
2. Extend the sliding jaw until its end face rests on the lower surface.
3. The digital display will show the step height.

5. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your Mahr MarCal 16 EWRI-V Digital Universal Caliper.

- **Cleaning:** After each use, wipe the caliper clean with a soft, lint-free cloth. Pay special attention to the measuring surfaces and the scale. The integrated dirt wipers help keep the scale clean.
- **Lubrication:** Periodically apply a thin film of light machine oil to the sliding surfaces to ensure smooth movement and prevent corrosion.

- **Storage:** Store the caliper in its protective case in a clean, dry environment, away from direct sunlight, extreme temperatures, and humidity.
- **Battery (if applicable):** While the product specifications indicate no batteries are necessary, if your model requires them, replace them as soon as the low battery indicator appears to avoid loss of function.
- **Calibration:** For professional and highly accurate applications, periodic calibration by a certified laboratory is recommended to maintain measurement accuracy.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your digital caliper.

Problem	Possible Cause	Solution
Inaccurate readings	Dirt or debris on measuring surfaces or scale; improper zero setting; worn jaws.	Clean measuring surfaces thoroughly. Re-zero the caliper. Inspect jaws for wear; consider professional calibration or repair.
Display not showing readings / Blank display	(If applicable) Low or dead battery; internal electronic issue.	(If applicable) Replace battery. If issue persists, contact Mahr customer support.
Jaws not sliding smoothly	Lack of lubrication; dirt accumulation in guideways.	Clean guideways and apply a thin film of light machine oil.
Locking screw not holding position	Screw is loose or worn.	Tighten the screw. If worn, contact Mahr for replacement parts or service.

7. SPECIFICATIONS

Detailed technical specifications for the Mahr MarCal 16 EWri-V Digital Universal Caliper.

Attribute	Detail
Brand	Mahr
Model Number	4118907
Manufacturer Reference	4118907
Measurement Range	0-200 mm (200 millimeters)
Measurement Accuracy	+/-0.5%
Item Weight	1.14 Kilograms
Product Dimensions	50 x 50 x 50 cm
Included Components	Caliper
Batteries Required	No
GTIN (Global Trade Identification Number)	04059192057305
First Available on Amazon.de	21. October 2019

8. WARRANTY AND SUPPORT

Mahr GmbH provides high-quality precision measuring instruments. For specific warranty information, please refer to the documentation included with your purchase or visit the official Mahr website.

If you require technical assistance, service, or have questions regarding your Mahr MarCal 16 EWri-V Digital Universal Caliper, please contact Mahr customer support through their official channels. Details can typically be found on the manufacturer's website or in the product packaging.

For parts and accessories, please contact an authorized Mahr distributor.

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question