**CNCTOPBAOS CF-38**

# CNCTOPBAOS CF-38 3D Trigger Edge Finder Instruction Manual

Model: CF-38

## Introduction

This manual provides comprehensive instructions for the safe and effective use of the CNCTOPBAOS CF-38 3D Trigger Edge Finder. The CF-38 is a high-precision, multifunctional measuring instrument designed for use with CNC machining centers, engraving machines, and lathe milling machines. It features a compact structure, waterproof and dustproof design, and gold-plated key components for extended service life.

## Safety Information

Always observe the following safety precautions to prevent injury or damage to the device:

- Ensure the device is securely mounted before operation.
- Do not attempt to disassemble or modify the probe beyond the instructions provided in this manual.
- Keep the probe away from strong magnetic fields, which may affect its accuracy.
- Always wear appropriate personal protective equipment (PPE) when operating machinery.
- Disconnect power to the machine before performing any installation or maintenance.

## Package Contents

Verify that all items are present upon unpacking:

- 1x CNCTOPBAOS CF-38 3D Trigger Touch Probe
- 1x Probe Tip (Style C)




Image: The CF-38 3D Trigger Edge Finder shown with its included probe tip.

## Specifications

| | |
|---|---|
| **Model Number** | CF-38 |
| **Repeat Positioning Accuracy** | ≤0.005 mm |
| **Probe Direction** | ±X, ±Y, +Z |
| **Probe Safety Stroke (X, Y plane)** | ±20° |
| **Probe Safety Stroke (Z direction)** | +2.5 mm |
| **Trigger Life** | ≤3 million times |

| | |
|---|---|
| **Power Source** | DC (CR1632 3V button cell, not included) |
| **Item Weight** | 5.9 ounces (approx. 167g) |
| **Package Dimensions** | 4.45 x 4.02 x 2.83 inches (approx. 11.3 x 10.2 x 7.2 cm) |
| **Material Support** | Insulating materials |

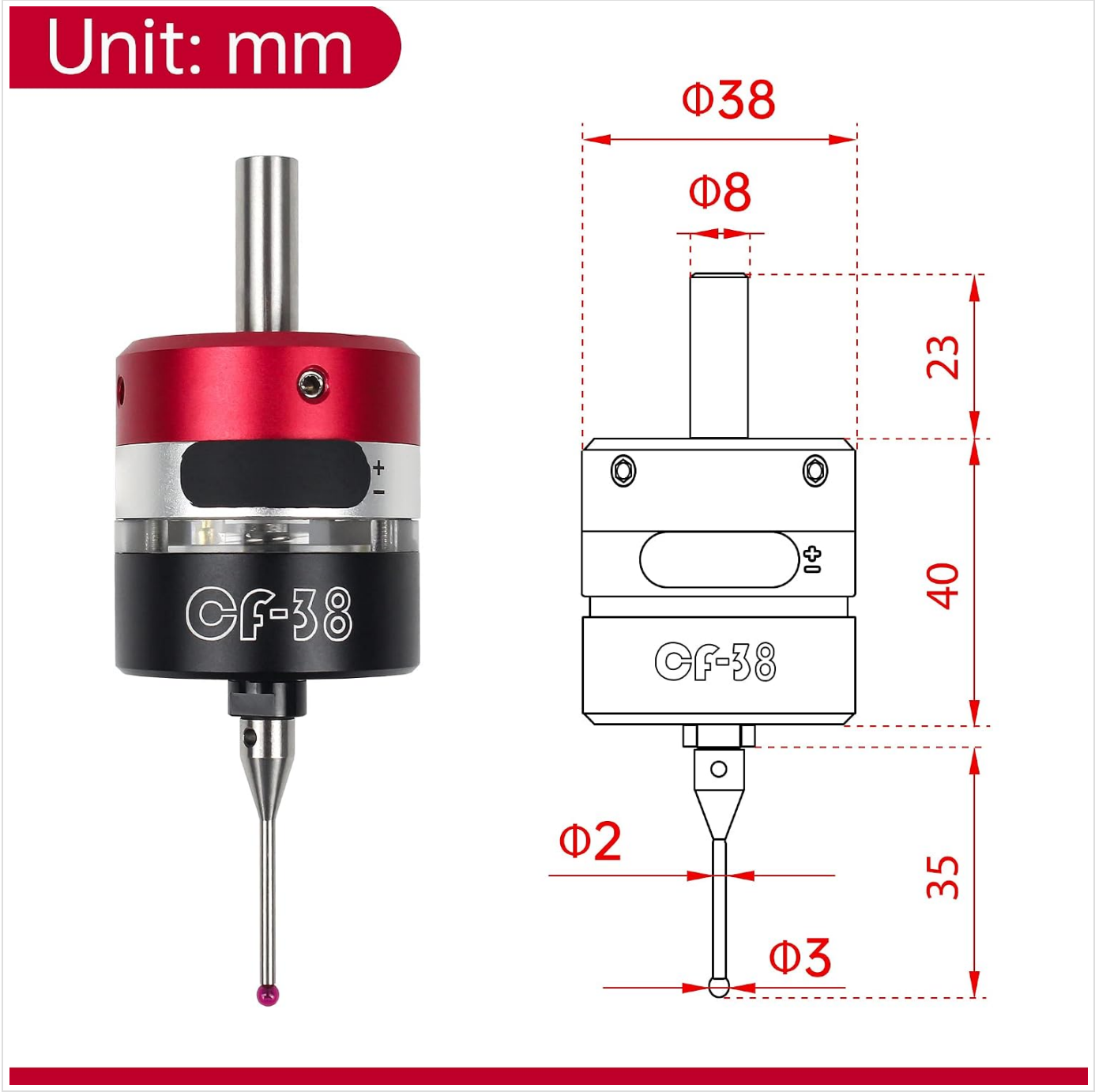



Image: Dimensional drawing of the CF-38 probe in millimeters.

## Setup and Installation

1. **Install the Probe Tip:**

   The probe tip is installed at the bottom interface of the main unit. There is a wrench slot at the probe interface. When

installing the probe tip, you must hold the probe seat to prevent it from rotating. Failure to do so may damage the internal components of the probe.



Image: Detail of the probe tip connection point, highlighting the wrench slot for secure installation.

2. **Battery Installation (CR1632 3V Button Cell):**

   The CR1632 3V button cell battery is not included and must be installed separately. First, carefully remove the rubber plug covering the battery compartment. Use tweezers to remove any old battery (if present) and insert the new CR1632 battery, ensuring the "+" mark on the battery aligns with the indicator on the side of the compartment. After installation, securely plug the battery rubber back into place to maintain the waterproof seal.

3. **Mounting the Probe:**

   Mount the CF-38 3D Trigger Edge Finder into your CNC machine's spindle. Ensure it is held firmly and securely to prevent any movement during operation.

4. **Adjusting Center Deflection (Runout Correction):**

   To achieve optimal precision, it is necessary to adjust the center deflection (runout) of the probe ball. Use a dial gauge to measure the runout of the probe ball. The CF-38 has four silver adjustment screws. Carefully adjust these

screws to minimize the runout, aiming for a value of 0. This ensures the probe tip is perfectly centered.




Image: Visual guide for probe installation, battery replacement, and adjustment of center deflection.

## Operation

The CNCTOPBAOS CF-38 3D Trigger Edge Finder is designed for precise edge finding and workpiece measurement on CNC machines. It operates by detecting contact with a workpiece, triggering a signal to the machine controller.

### Basic Usage:

1. **Connect to Machine:** Ensure the probe is correctly wired to your CNC machine's input for tool setting or edge finding. Refer to your CNC machine's manual for specific connection details.
2. **Approach Workpiece:** Carefully move the probe towards the workpiece surface. The probe can detect contact in the ±X, ±Y, and +Z directions.
3. **Trigger Detection:** Upon contact, the probe will trigger, sending a signal to the CNC controller. The probe has a safety stroke of ±20° in the X, Y plane and +2.5mm in the Z direction to prevent damage from overtravel.
4. **Record Coordinates:** The CNC machine will record the precise coordinates at the point of contact, allowing for accurate workpiece zeroing or feature measurement.

### Key Features for Operation:

- **Waterproof & Dustproof Design:** The probe is built with multiple waterproof and dustproof features, making it suitable for various machining environments.
- **Gold-Plated Components:** Key internal components are gold-plated to enhance durability and extend the product's operational life.
- **High Precision:** With a repeat positioning accuracy of ≤0.005 mm, the CF-38 provides reliable and consistent

measurements.

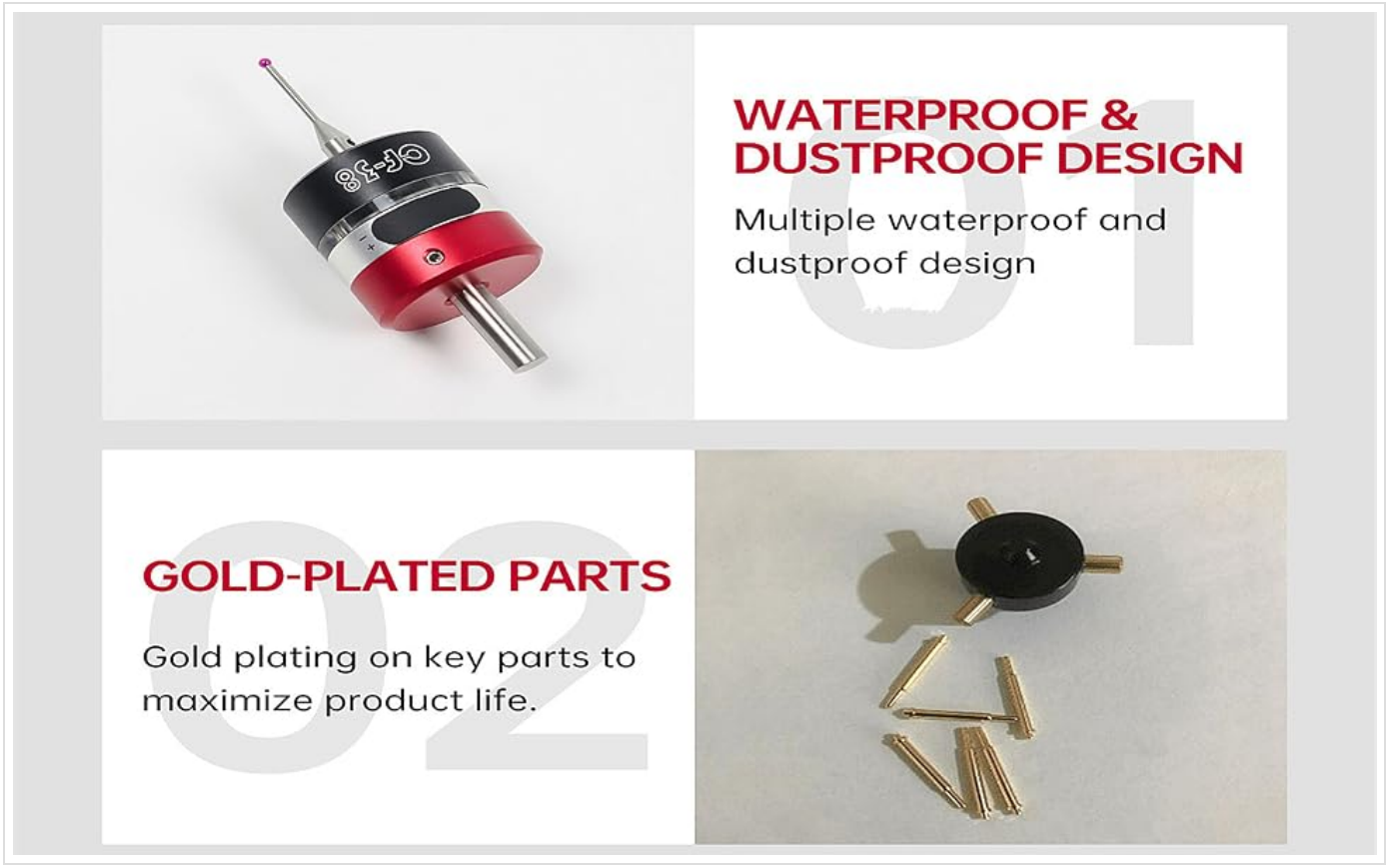



Image: Features highlighting the waterproof/dustproof design and gold-plated parts for enhanced durability.

## Maintenance

Proper maintenance ensures the longevity and accuracy of your CF-38 3D Trigger Edge Finder.

### Battery Replacement:

When the probe's performance degrades or it fails to trigger, the CR1632 3V button cell battery may need replacement. Follow these steps:

1. Locate and carefully remove the rubber plug covering the battery compartment.
2. Using tweezers, gently remove the old CR1632 battery.
3. Insert a new CR1632 3V button cell battery, ensuring the positive (+) side is facing up as indicated.
4. Securely re-insert the rubber plug to maintain the waterproof and dustproof integrity of the probe.

### Cleaning:

- Regularly clean the probe tip and the main body with a soft, lint-free cloth.
- For stubborn grime, use a mild, non-abrasive cleaning solution. Avoid harsh chemicals that could damage the probe's finish or seals.
- Ensure the probe tip is free of debris, as this can affect measurement accuracy.

### Storage:

When not in use, store the probe in its original packaging or a protective case to prevent damage from impacts or environmental factors. The probe tip is separately packaged in a transparent box for protection during transport and

storage.

## Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| Probe does not trigger upon contact. | Dead or improperly installed battery.<br>Loose or incorrect wiring to CNC machine.<br>Probe tip damaged or obstructed. | Replace the CR1632 battery, ensuring correct polarity.<br>Check all electrical connections between the probe and the CNC controller.<br>Inspect the probe tip for damage or debris; clean or replace if necessary. |
| Inaccurate measurements or inconsistent triggering. | Excessive runout (center deflection).<br>Probe not securely mounted.<br>Debris on probe tip or workpiece. | Perform runout adjustment using a dial gauge as described in the Setup section.<br>Ensure the probe is tightly secured in the spindle.<br>Clean the probe tip and workpiece surface thoroughly. |
| Probe tip rotates during installation. | Probe seat not held during installation. | Always hold the probe seat with a wrench at the designated slot when installing or removing the probe tip to prevent internal damage. |

## Warranty and Support

For warranty information or technical support, please contact CNCTOPBAOS directly through their official channels. Keep your purchase receipt as proof of purchase.
Manufacturer: Changzhou Rattm Motor Co.,Ltd
For further assistance, visit the CNCTOPBAOS Store on Amazon.

© 2023 CNCTOPBAOS. All rights reserved.

### Ask a question about this manual

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**

Anonymous

**Email**

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

**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