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› RACO 688 1-Gang Masonry Box Instruction Manual

## RACO 688



# RACO 688 1-Gang Masonry Box Instruction Manual

Model: 688

## INTRODUCTION

This manual provides detailed instructions for the installation and use of the RACO Model 688 1-Gang Masonry Box. This durable steel electrical box is designed for secure and efficient electrical installations within masonry structures. Its gangable design allows for flexible configurations, and the TKO knockouts simplify wiring connections.

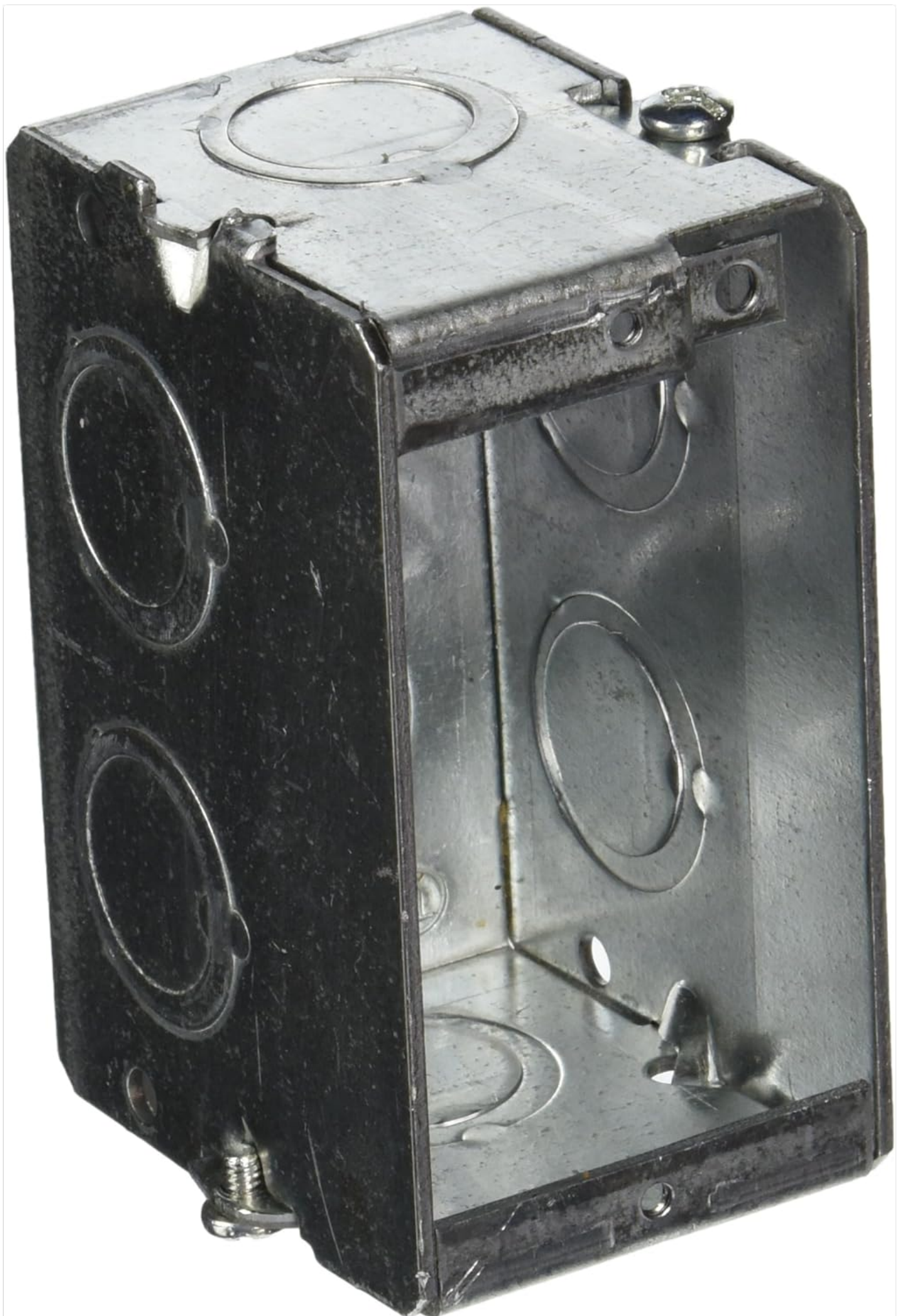


Image: The RACO 688 1-Gang Masonry Box, a gray steel electrical box with multiple knockouts.

## SAFETY INFORMATION

**WARNING:** Electrical work can be hazardous. Always consult a qualified electrician if you are unsure about any part of the installation process. Failure to follow these instructions can result in electric shock, fire, or serious injury.

- Always turn off power at the circuit breaker or fuse box before beginning any electrical work.
- Verify that the power is off using a voltage tester before touching any wires.
- Use appropriate personal protective equipment (PPE), such as safety glasses and insulated gloves.
- Ensure all wiring complies with local and national electrical codes (e.g., NEC in the USA).
- Do not exceed the maximum wire fill capacity of the box.
- Proper grounding is essential for safety.

## PRODUCT FEATURES

The RACO 688 Masonry Box offers several key features designed for robust and flexible electrical installations:

- **Rectangular Shape:** Neatly fits square cuts in concrete block, measuring 3-3/4 inches by 1-15/16 inches.
- **Device Ears:** Formed inside the box to prevent mortar from entering device screw holes, ensuring clean installation.
- **Convenient Grounding:** Grounding provision is located near the front of the box for easy attachment of grounding pigtails.
- **Gangable Design:** Allows for building an unlimited number of gangs to accommodate multiple devices, providing flexibility for various electrical needs.
- **Rugged Welded Construction:** Ensures durability and prevents the box from falling apart during construction.
- **TKO Knockouts:** Eight combination 1/2 inch and 3/4 inch knockouts offer greater flexibility for conduit connections.

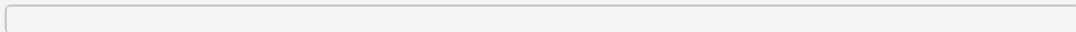


Image: Visual representation of key product attributes: Safe and Secure, Easy Install, Tamper Resistant, and Heavy-Duty construction.

## INSTALLATION INSTRUCTIONS

Follow these steps for proper installation of the RACO 688 1-Gang Masonry Box:

1. **Prepare the Opening:** Create a rectangular opening in the masonry wall that matches the dimensions of the box (3-3/4 in. x 1-15/16 in. for the face, with a depth of 2-1/2 in.). Ensure the opening is clean and free of debris.
2. **Select Knockouts:** Identify the appropriate TKO knockouts for your conduit or cable entry. Use a screwdriver or knockout punch to remove the desired knockouts.



Image: Preparing the electrical box for conduit entry using a drill.

3. **Install Conduit/Cables:** Route your electrical conduit or cables into the box through the selected knockouts. Secure conduits with appropriate connectors.

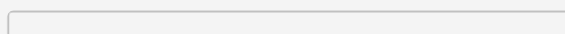


Image: Routing electrical cable into the box.

4. **Position the Box:** Insert the masonry box into the prepared opening. Ensure it is flush with the finished surface of the masonry.

5. **Secure the Box:** Use appropriate fasteners (not included) to secure the box firmly within the masonry. The rugged welded design ensures stability during this process.
6. **Gangable Feature (Optional):** If installing multiple devices, align additional RACO 688 boxes side-by-side. The gangable design allows them to connect securely, creating a continuous enclosure for multiple devices.
7. **Wiring Connections:** Make all necessary electrical connections inside the box. Utilize the forward-mounted grounding provision for easy attachment of grounding pigtails. The internal device ears prevent mortar from interfering with device screw holes.

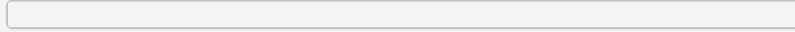


Image: Installing an electrical device, highlighting the internal device ears.

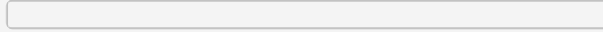


Image: A completed installation of an electrical outlet in the box.

8. **Install Device and Cover:** Mount the electrical device (e.g., switch, receptacle) into the box using the provided screw holes. Attach the appropriate cover plate.



Image: Securing the electrical device or cover plate with a screwdriver.

9. **Restore Power:** Once all connections are secure and the installation is complete, restore power at the circuit breaker.

## OPERATING INSTRUCTIONS

The RACO 688 1-Gang Masonry Box functions as a protective enclosure for electrical wiring and devices within masonry walls. Once properly installed and wired, it provides a secure and code-compliant housing for switches, receptacles, or other electrical components. There are no operational controls on the box itself; its function is passive, providing structural support and protection for the electrical system.

## MAINTENANCE

The RACO 688 1-Gang Masonry Box requires minimal maintenance once installed. Periodically inspect the box and any installed devices for signs of wear, damage, or loose connections. Ensure that cover plates are securely fastened to prevent dust and debris ingress. If any damage is observed, disconnect power immediately and replace or repair components as necessary by a qualified professional.

## TROUBLESHOOTING

Most issues related to electrical boxes are typically associated with the wiring or devices installed within them, rather than the box itself. If you experience electrical problems:

- **No Power to Device:** Check the circuit breaker for a tripped breaker. Verify all wire connections within the box are secure and correctly terminated.
- **Loose Device/Cover Plate:** Ensure all mounting screws for the device and cover plate are tightened.
- **Interference with Mortar:** If mortar has entered the device screw holes, carefully clean them out before attempting to install a device. The device ears are designed to minimize this, but proper installation technique is crucial.

For any persistent electrical issues, always consult a licensed electrician.

## SPECIFICATIONS

Attribute	Detail
Model Number	688
Brand	RACO
Material	Metal (Steel)
Color	Gray
Depth	2-1/2 inches
Product Dimensions	2.5 x 3.75 x 1.94 inches
Capacity	15.5 Cubic Inches
Knockouts	Eight TKO's (combination 1/2 in. and 3/4 in.)
Installation Type	Screw-In
Specification Met	UL Listed
UPC	050169006887
Item Weight	9.9 ounces

## WARRANTY INFORMATION

Specific warranty details for the RACO 688 1-Gang Masonry Box are typically provided at the point of purchase or on the manufacturer's official website. Generally, RACO products are manufactured to high-quality standards and are expected to be free from defects in material and workmanship under normal use. Please retain your proof of purchase for any warranty claims. For the most current and detailed warranty information, refer to the official RACO website or contact customer support.

## SUPPORT

For technical assistance, product inquiries, or support regarding your RACO 688 1-Gang Masonry Box, please contact RACO customer service. You can typically find contact information on the official RACO website ([www.hubbell.com/raco/en/](http://www.hubbell.com/raco/en/)) or through your authorized distributor. When contacting support, please have your product model number (688) and any relevant purchase information available.

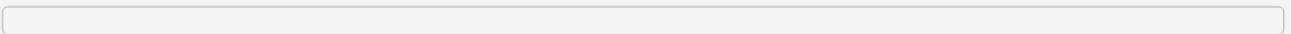


Image: RACO's commitment to quality: Trusted, Quality, and Certified solutions.