Broan-NuTone 634M

Broan-NuTone 634M Steel Roof Cap User Manual

Model: 634M | Brand: Broan-NuTone

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1. Introduction

This manual provides detailed instructions for the safe and effective installation, operation, and maintenance of your Broan-NuTone 634M Steel Roof Cap. This roof cap is specifically designed for use with 6-inch round duct systems, commonly found in range hoods, LoSone fans, and bath ventilation fans. It features durable steel construction, a built-in backdraft damper, and a bird screen to ensure efficient and reliable performance for your ventilation needs. Please read this manual thoroughly before beginning installation or use.

2. Safety Information

Always observe basic safety precautions when installing or servicing ventilation equipment. Failure to do so may result in personal injury or property damage.

- **Read All Instructions:** Familiarize yourself with the entire manual before installation.
- **Personal Protective Equipment (PPE):** Always wear safety glasses, gloves, and appropriate head protection when working on a roof or with sheet metal.
- **Working at Heights:** Exercise extreme caution when working on roofs. Use stable ladders, scaffolding, or fall protection equipment as necessary. Ensure the roof surface is dry and free of debris.
- **Electrical Safety:** If connecting to an existing fan or range hood, ensure all power to the circuit is turned OFF at the service panel before beginning any work.
- **Consult Professionals:** If you are unsure about any part of the installation process, consult a qualified contractor or electrician.
- **Local Codes:** Ensure all installation procedures comply with local building codes and regulations.
- **Sharp Edges:** Metal components may have sharp edges. Handle with care to prevent cuts.

3. Product Components

The Broan-NuTone 634M Steel Roof Cap includes the following key components:

- **Steel Roof Cap Housing:** The main protective structure, constructed from sturdy 24-gauge CRCQ steel with a black electrically-bonded epoxy finish.
- **Built-in Backdraft Damper:** An internal flap mechanism designed to prevent outside air from entering the duct system when the ventilation fan is not in operation.
- **Bird Screen:** A protective mesh located at the exhaust opening to prevent birds, insects, and large debris from entering the ductwork while allowing airflow.
- **6-inch Round Duct Connection:** A collar designed to securely connect to standard 6-inch round ventilation ducting.
- **Flashing Base:** The flat base of the roof cap, measuring approximately 18.75 inches by 14.25 inches, designed for secure mounting and sealing to the roof surface.



Image 1: Broan-NuTone 634M Steel Roof Cap. This image displays the complete roof cap unit, highlighting its black finish, sloped design, and the integrated flashing base for roof mounting.

4. Installation

Proper installation is crucial for the optimal performance and longevity of your roof cap. Follow these steps carefully.

4.1 Tools and Materials Required

- Safety glasses and gloves
- Measuring tape
- Pencil or marker
- Jigsaw or reciprocating saw (for roof opening)
- Drill with appropriate bits
- Roofing nails or screws
- Roofing cement or sealant (weather-resistant)
- Caulking gun
- Duct clamps or foil tape (for duct connection)
- Flexible or rigid 6-inch round ductwork

4.2 Installation Steps

1. **Determine Location:** Choose a suitable location on the roof that allows for direct and efficient duct routing from the ventilation fan. Ensure the location is clear of obstructions and allows for proper flashing.
2. **Prepare Roof Opening:** From inside the attic or ceiling, mark the center point for the duct. Drill a pilot hole through the roof. From the roof, use the pilot hole as a guide to mark a circular opening. For a 6-inch round duct, a hole slightly larger than 6 inches (e.g., 6.25 to 6.5 inches) is typically required to allow the duct collar to pass through. *Always refer to local building codes and specific fan manufacturer instructions for precise hole sizing.*
3. **Position Roof Cap:** Place the roof cap over the prepared opening, ensuring the duct collar extends into the attic space. The flashing base should lie flat against the roof surface. Orient the cap so the exhaust opening faces away from prevailing winds, if possible, to minimize wind-driven rain entry.
4. **Secure the Cap:** Fasten the flashing base of the roof cap to the roof deck using roofing nails or screws. Place fasteners at regular intervals around the perimeter of the flashing, ensuring a secure attachment.
5. **Seal the Flashing:** Apply a generous bead of high-quality roofing cement or sealant under the edges of the flashing base where it meets the roof. Also, apply sealant over the heads of all fasteners to prevent water penetration. For shingled roofs, lift shingles and slide the top edge of the flashing underneath, then seal the lifted shingles back down.
6. **Connect Ductwork:** From inside the attic, connect the 6-inch round ductwork from your ventilation fan to the collar of the roof cap. Secure the connection using duct clamps or foil tape to ensure an airtight seal.
7. **Verify Damper and Screen:** Before completing the installation, ensure the backdraft damper moves freely and the bird screen is securely in place and free of obstructions.

5. Operation

The Broan-NuTone 634M Steel Roof Cap operates passively in conjunction with your connected ventilation fan. Its primary functions are:

- **Exhaust Airflow:** When the connected range hood, LoSone fan, or bath ventilation fan is activated, it pushes air through the 6-inch duct and out through the roof cap's exhaust opening.
- **Backdraft Prevention:** The integrated backdraft damper is designed to open when air is being exhausted by the fan and close automatically when the fan is off. This prevents cold air, hot air, or outdoor elements from entering your home through the ductwork when the system is not in use.
- **Debris and Pest Protection:** The bird screen at the exhaust outlet acts as a barrier, preventing birds, rodents, large insects, and significant debris from entering and nesting within your ventilation duct.

No direct user interaction is required for the operation of the roof cap itself once installed.

6. Maintenance

Regular inspection and minor maintenance will ensure the continued efficient operation of your Broan-NuTone 634M Steel Roof Cap.

6.1 Recommended Maintenance Schedule

- **Annually (or more frequently in dusty/leafy environments):** Inspect the roof cap.

6.2 Inspection and Cleaning

1. **Safety First:** Always ensure proper safety precautions are taken when accessing the roof.
2. **Check for Debris:** Inspect the bird screen and the area around the exhaust opening for any accumulation of leaves, twigs, bird nests, or other debris. Carefully remove any obstructions to ensure unrestricted airflow.
3. **Damper Functionality:** Manually check the backdraft damper to ensure it opens and closes freely without sticking. Clear

any debris that might impede its movement.

4. **Inspect for Damage:** Look for any signs of physical damage to the steel housing, flashing, or bird screen. Check for rust, dents, or loose fasteners.
5. **Sealant Integrity:** Examine the roofing sealant around the flashing base. If you notice any cracks, peeling, or deterioration, reapply sealant as needed to maintain a watertight seal.
6. **Duct Connection:** If accessible, verify that the duct connection in the attic remains secure and airtight.

7. Troubleshooting

This section addresses common issues you might encounter with your roof cap.

Problem	Possible Cause	Solution
Reduced airflow from fan	Bird screen clogged with debris. Backdraft damper stuck closed or partially open.	Inspect and clean the bird screen. Check the backdraft damper for obstructions and ensure it moves freely.
Drafts or cold air entering through duct	Backdraft damper not closing properly.	Inspect the damper for debris or damage preventing it from fully closing. Clear any obstructions. If damaged, consider replacement.
Water leaks around roof cap	Improperly sealed flashing. Damaged flashing or roof cap.	Inspect the sealant around the flashing. Reapply roofing cement or sealant as needed. Check for physical damage to the cap or flashing; repair or replace if necessary. Ensure fasteners are sealed.
Unusual noises from roof cap	Loose components. Damper rattling in wind.	Check all fasteners for tightness. Inspect the damper for proper seating and movement. Ensure the bird screen is secure.

If you are unable to resolve an issue after following these steps, please contact Broan-NuTone customer support or a qualified professional.

8. Specifications

- **Model:** 634M
- **Material:** 24-gauge CRCQ Steel
- **Finish:** Black Electrically-Bonded Epoxy
- **Duct Compatibility:** 6-inch Round Duct
- **Footprint Dimensions:** 18.75 inches (Length) x 14.25 inches (Width)
- **Features:** Built-in Backdraft Damper, Bird Screen
- **Application:** Range Hoods, LoSone Fans, Bath Ventilation Fans

9. Warranty Information

Broan-NuTone products are manufactured to high-quality standards and are backed by a limited warranty. For specific details regarding the warranty period and terms for your 634M Steel Roof Cap, please refer to the warranty card included with your purchase or visit the official Broan-NuTone website. Keep your proof of purchase for warranty claims.

10. Customer Support

For technical assistance, replacement parts, or further inquiries regarding your Broan-NuTone 634M Steel Roof Cap, please contact Broan-NuTone customer service. You can find contact information and additional resources on their official website:

Visit Broan-NuTone Official Website

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