

# Install Roof Vent

Job Aid for Install Exterior Roof Penetration  
(e.g., roof vents or bath fan termination) Badge

Aligns With Standard Work Specifications 6.0101.2, 6.0201.1,  
6.0201.2, 4.0188.2

## BEFORE



Kitchens, bathrooms, and dryers all exhaust air from the home and should be terminated to the exterior. Steps 1–5 can also be followed for installing passive attic roof vents.



Determine the appropriate vent dependent on its use—attic ventilation, kitchen hood, bath fan, dryer exhaust, etc.



Locate the ideal location for the vent and, from the attic side of the roof, drill a small pilot hole centered between the roof rafters. Exterior exhaust terminations should be located at least 3 feet from property lines, operable openings (windows and doors) to the home, and at least 10 feet from mechanical intakes or distances specified by the authority having jurisdiction.



Mark out size and location of hole on roof deck, verifying size of termination collar.



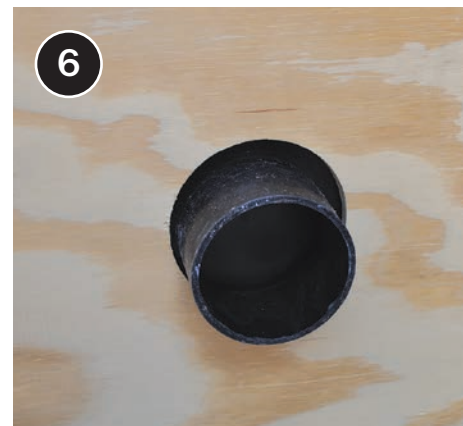
From roof side, cut hole slightly larger than termination collar. Note that when installing passive attic roof vents, a reciprocating saw is typically used.



If shingle roof, cut just below one layer of shingles in order to preserve overlap.



Run sealant around perimeter of vent and tuck under any surrounding uphill shingles. Seal uphill shingles over vent.



Collar should extend down through roof into attic.



Slide vent ducting to collar, sized to match the duct diameter, and attach with mechanical fasteners.



Seal duct joints with mesh and mastic to complete vent installation. Insulate as required.



A properly installed vent preserves the integrity of the roof while safely exhausting pollutants from the home.

## CHECKLIST

# Install exterior roof penetration (e.g., roof vents or bath fan termination)

### DESIRED OUTCOME

Securely installed weatherproof termination fittings with unrestricted airflow.<sup>1</sup>

- Hole through building shell is no greater than ¼ inch larger than the termination fitting.
- Termination fitting is galvanized or stainless steel or copper (KITCHEN RANGE only).
- Termination fitting includes an integrated collar/flashing.
- Collar is same diameter as exhaust fan outlet OR if collar is larger than exhaust fan outlet, rigid metal transition of appropriate size is used.
- Fittings are appropriate for regional weather conditions.
- Duct to terminations connections align with TERMINATION FITTINGS table on this page.
- Duct connections are sealed with UL 181B or 181B-M listed materials, in addition to mechanical fasteners listed in table.
- Fasteners do not inhibit damper operation.
- Exterior terminations are flashed/weather sealed and direct water away from penetration.
- Exterior termination is covered with pest exclusion screen material with holes between ¼ and ½ inch.

- Exterior termination is located:
  - At least 3 feet away from property lines.
  - At least 3 feet away from operable openings in the home.
  - At least 10 feet away from mechanical intake.
  - Otherwise sited as required by authority having jurisdiction.

#### TERMINATION FITTING TO DUCT CONNECTIONS

DUCT-TO-TERMINATION CONNECTION TYPE		ACCEPTABLE MECHANICAL FASTENERS
Metal-to-metal or Metal-to-PVC	Round	3 equally spaced screws
	Other	Sealed welds, gaskets, mastic, mastic-plus-embedded-fabric, tapes
Flexible duct-to-metal or Flexible duct-to-PVC		Tie bands, using tie-band tensioning tool
PVC-to-PVC		Approved PVC cement
Other, specialized fittings		According to manufacturer specifications

1. Relevant Standards: 6.0101.2, 6.0201.1, 6.0201.2, 4.0188.2

For more information, visit: [energy.gov/eere/wap](https://energy.gov/eere/wap)

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