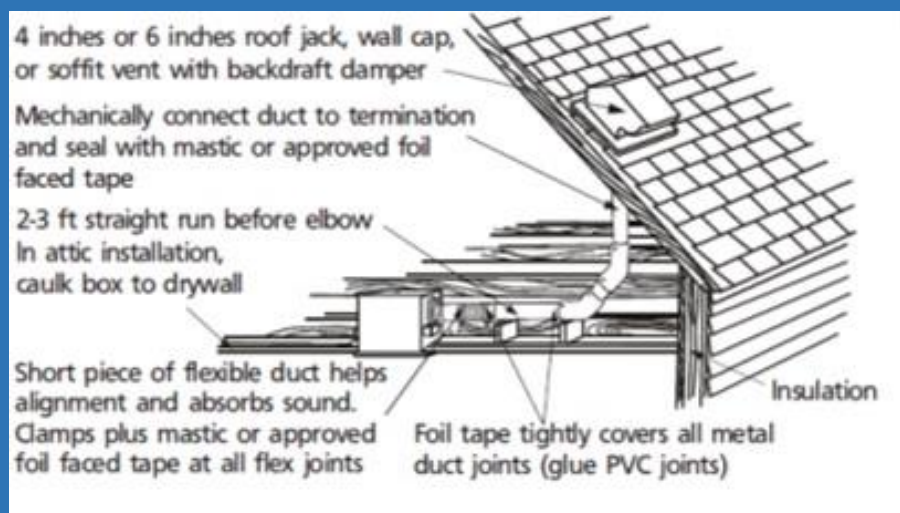


Bathroom Exhaust Ventilation Best Practices:

Install a properly sized, ENERGY STAR® rated ceiling mounted exhaust fan to remove moist air and odors from bathrooms.

- Select an exhaust fan that is capable of providing desired ventilation rate (accounting for pressure drop of ductwork).
- If the exhaust fan has two ducting collar size options (typically 4" and 6"), always use the larger duct size if possible.
- The exhaust fan should be located at the highest point in the bathroom (typically ceiling) and located near (within ~5 feet) the shower. If locating directly over bathtubs or showers, ensure that the fan unit is UL listed for use over those areas. It will also need to be connected to a GFCI protected branch circuit.
- Fan outlet should be oriented toward the direction of the duct run to the final termination location to avoid extra bends or elbows in ducting.
- A backdraft damper will be installed between the outlet side of the fan and the exterior to prevent reverse air flow when the fan is off. Many exhaust fan housings come with an integrated backdraft damper. Ensure that the backdraft damper is not impeded when securing ductwork to the exhaust fan housing collar.
- Fan should be ducted in accordance with manufacturer specifications. Provide two feet of straight duct run from the fan exhaust port to the first elbow in the duct run. Smooth metal duct is preferred over flex duct and the ductwork should be slightly pitched to have any potential condensation drain to the exterior rather than back into the bathroom.
- Exhaust ducts should always terminate outdoors (refer to applicable codes for vent termination clearance requirements). Running exhaust ductwork up to a vented attic or just in front of an attic vent (gable, ridge, or soffit) is not sufficient. The exhaust should be fully ducted to a point exterior to the home.
- Carefully select the duct end termination, as they can have significant performance differences. Select an HVI-certified termination whenever possible. In addition, terminating the exhaust ductwork in a soffit vent can be challenging. Unless an energy-heel truss is used, there is typically minimal space to adequately transition the ductwork to a vertically connected soffit termination without kinking the ductwork. If a soffit vent is used, select a horizontal duct connection.
- Duct connections should be sealed with appropriate tape or mastic.
- Insulate ductwork if it passes through unconditioned space(s) prior to the exterior termination.



Steven Winter Associates, Inc.
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