



# Install Exhaust Fan Flex Duct (Bath Fan Only)

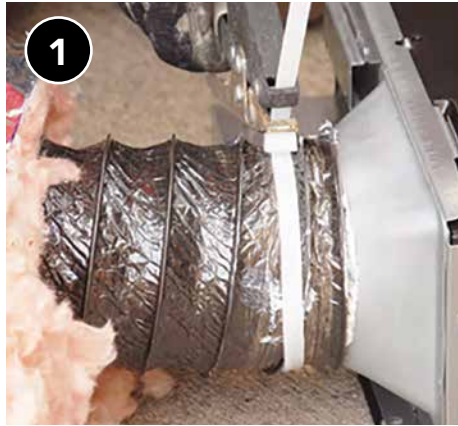
Job Aid for Install Ducting for Bath or Kitchen Range Fan Badge

Aligns With Standard Work Specifications 6.0101.1, 6.0101.2, 6.0201.1

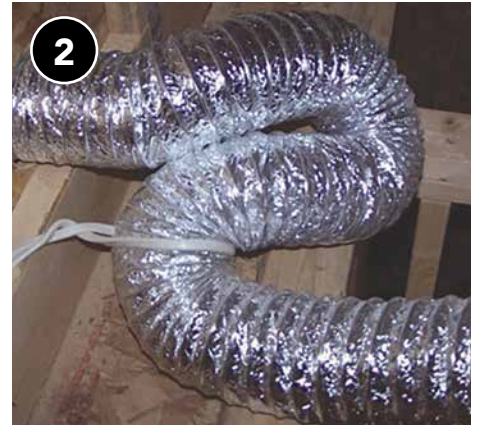
## BEFORE



Exhausting moisture from bath fans into the attic or crawl space can cause mold and rot in building materials.



Ensure proper connection of duct to bath fan. The size of the ducting should be equal to or larger than the outlet (no downsizing or reducers).



Ensure flex ducting is pulled tight with no kinks or u-turns.



Create the shortest run possible to an exterior termination and provide adequate support as needed without compressing the duct. Ducting that runs through unconditioned spaces must be insulated.

## AFTER



Bath fans must exhaust to the exterior of the home. Follow the manufacturer's installation instructions when installing the vent hood to ensure a water tight land durable install.



## Checklist

# Install ducting for a bath or kitchen range fan

## DESIRED OUTCOME

Installed ducts effectively move the required volume of air and prevent condensation.<sup>1</sup>

- ☐ Duct run is as short, straight, and smooth as possible.
- ☐ Ducts are at least as large as the connections they're attached to.
- ☐ Ducts are supported as needed to prevent bending and sagging:
  - ☐ Flexible and duct board ducts and plenums are supported every 4 feet using a minimum of 1½-inch wide material.
  - ☐ Metal ducts are supported by 1/2 inch or wider 18-gauge strapping or 12-gauge or thicker galvanized wire no more than 10 feet apart.
  - ☐ Support materials do not cause the interior dimensions of the ductwork to be smaller than specified.
- ☐ All connections are sealed and fastened according to the EXHAUST FAN DUCT CONNECTIONS table at right; in addition to mechanical fasteners, duct connections are sealed with UL 181B or 181B-M listed material.
- ☐ Fan is ducted to exterior. (This does NOT include unconditioned attics, crawl spaces and other areas that are ventilated to the outdoors.)
- ☐ Duct connectors or other fasteners will not obstruct exhaust flow.

- ☐ Where they run through unconditioned space, ducts are insulated to at least R-8 (as required by the authority having jurisdiction [BATH FANS only]).
- ☐ Work area is clean.

### EXHAUST FAN DUCT CONNECTIONS

CONNECTING DUCTS	APPROVED MATERIALS/ TECHNIQUES
Metal-to-metal (round) Metal-to-PVC (round)	Minimum of three equally spaced screws
Other metal-to-metal connections	Fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems, or tapes
PVC-to-PVC connections	Approved PVC cement
Flexible duct-to-metal or flexible duct-to-PVC	Tie bands, using a tie band tensioning tool
Other specialized duct fittings	In accordance with manufacturer specifications

1. Relevant Standards: 6.0101.1, 6.0101.2, 6.0201.1

The Weatherization Installer Job Aids were developed by Simonson Management Services under contract (GS-10F-0065U/89243422FEE400259) and published by the National Renewable Energy Laboratory under contract (DE-AC36-08GO28308) with the U.S. Department of Energy. These job aids were funded by the Weatherization Assistance Program with contributions from the weatherization training network.

