

Residential Ventilating Products Not Rated for Sound Performance by HVI

The Home Ventilating Institute is dedicated to providing only the most useful and relevant information possible to consumers. HVI certifies sound ratings for bathroom exhaust fans, kitchen exhaust fans, range hood exhaust fans, kitchen downdraft exhaust fans, other-room exhaust fans, and heat or energy recovery products that are two-duct and wall or ceiling mount only. In addition, if a range hood is supplied by the manufacturer with an inline or remote exterior mounted ventilator, HVI will certify the sound of the assembly because this offers valuable and relevant information to the consumer.

The Home Ventilating Institute does not certify sound performance for:

- ◆ HRVs or ERVs that have 4 or more duct connections and are intended to be installed in a closet, basement, attic or other location separate from the living space.
- ◆ Inline fans
- ◆ Remote Exterior Mounted Ventilators
- ◆ Powered Attic Ventilators

As is the case with residential air conditioners, which are also not rated for sound performance, the sound levels of these products are more dependent on installation factors than on the sound power emitted from the product into the ducts and/or emitted through the enclosure of the product to the occupied space.

The installation variables are nearly infinite as the location of the installed product (e.g. basement, attic, or closet), the types of duct that is utilized (rigid, flexible, or insulated flexible), the distance from the inlet or outlet in the occupied space to the ventilator, the type of inlet and outlet fittings, the type of material used to construct walls and ceilings, and insulation thicknesses, all significantly influence the sound characteristics. For all of these reasons, HVI determined that a sound rating would add confusion rather than value to the consumer's decision making process.



Other organizations such as ASHRAE, Energy Star, Lawrence Berkeley National Laboratory, USGBC and the California Energy Commission also recognize that sound ratings for these types of ventilation products are not appropriate. Additionally, the states of Washington, Oregon, Minnesota and California have codes language that requires sound ratings for ventilation fans, but exempts remote mounted products from these sound ratings requirements.

HVI recommended best practices to reduce the sound level of your installation:

Refer to and follow manufacturers' installation instructions and local code requirements.

- ◆ For inline fans and remote exterior mounted ventilators, utilize a minimum of 4 feet of insulated flexible duct or a silencer between fan and the ventilation opening into the living space. This will reduce sound that can be transmitted through rigid materials.
- ◆ Avoid elbows or sharp turns in the ductwork at the inlets or outlets to reduce velocity noise and pressure drop.
- ◆ Select registers or grilles that have sufficient "net free area" to allow the air to move through efficiently. If the openings are not large enough, velocity noise can be generated.