PUBLICATIONS - FRESH IDEAS

Bathroom Exhaust Fans - A Consumer Guide

Excess moisture has tremendous potential for damaging bathrooms. During a bath or shower, humidity levels rise significantly creating the perfect breeding ground for mold, mildew and microorganisms that can negatively impact health. In addition, long-term exposure to excess moisture and humidity can crack and peel paint and wallpaper, ruin wallboard, warp doors and rust cabinets and fixtures. Without control, it can even cause deterioration of joists and framing above the bathroom.

Most of today's new homes are highly insulated and practically air tight, saving energy but making proper mechanical ventilation essential to maintaining good indoor air quality. Good ventilation protects both your health and your home and is especially important in bathrooms which experience high levels of moisture and humidity.

What is a bathroom exhaust fan? What does it do?
A bathroom exhaust fan is a mechanical ventilation device which, when ducted to the exterior of the house, draws out stale, impure and very humid air thereby improving the quality of indoor air.

Why do I need one?
A properly installed bathroom exhaust fan will rid the bathroom air of excess moisture, humidity, odors and other pollutants. It also helps to remove water vapor that has accumulated on mirrors and walls. Occupants will be much more comfortable with proper ventilation. In addition to improved indoor air quality, deterioration of the home is minimized saving the homeowner costly repairs.

What do I look for when selecting a bath fan?
The proper bathroom exhaust fan should be selected on the basis of performance, style and features.

The correct air movement capacity is an important consideration. Air movement is typically measured in cubic feet per minute (CFM). Ventilation rates based upon eight air changes per hour are generally suggested. For most bathrooms this works out to one CFM per square foot of bathroom area. For example, a 7' x 10' bathroom would require a 70 CFM fan. A 50 CFM rating is recommended as a minimum for bathrooms 50 sq. ft. and smaller. Larger bathrooms require additional ventilation capacity. The following chart can be used as a guide for proper bathroom ventilation.

Bathroom Size	Minimum Ventilation (CFM) Required*
Less than 50 sq. feet	50 CFM
50-100 sq. feet	1 CFM per sqare foot of floor space
More than 100 sq. feet	Add the CFM requirement for each fixture: Toilet 50 CFM Shower 50 CFM Bathtub 50 CFM Jetted tub 100 CFM

**Note that these rates represent a minimum requirement. Higher ventilation rates are also acceptable and will have a minimal energy impact.*

Other ventilation considerations include:

- An enclosed toilet should have its own exhaust fan.
- Fans approved for installation in wet areas should be located over (or very near) the shower or tub when possible.
- Bathroom doors should have at least ¾" clearance to the floor to allow for proper entry of makeup air.
- Bathrooms with greater than an 8' ceiling may require additional ventilation.

Noise level is also a consideration when selecting bathroom ventilation. Bathroom fan sound levels are measured in sones: 4.0 sones is the sound of standard television operation; 3.0 sones is typical office noise; 1.0 sones is the sound of a refrigerator; and 0.5 sones is the sound of rustling leaves. For quiet bathroom ventilation the fan should be rated at 1.0 sones or less.

Finally, style and additional features are considerations when selecting the proper bath exhaust fan. There are many attractive options for bath fans to accommodate any budget or décor preference. Additional features may include a light, heating element or a timer or humidistat for automatic operation. Homeowners can easily select bathroom ventilation products that complement the bathroom design while also protecting the bathroom from the perils of moisture.

What else should I consider when purchasing a bathroom exhaust fan?
Consumers should always look for the 'HVI-Certified' label. This indicates the unit has gone through rigorous independent performance testing. Most manufacturers offer a wide range of products in different capacities to accommodate the air exchange requirements of the wide variety of bathrooms found in today's homes. A knowledgeable HVAC contractor is recommended for installation.

Why should I choose an 'HVI-Certified' product?
In short, peace of mind:

- Assurance that the product has been independently tested and certified to meet specific industry standards.
- Assurance that the product will perform as promised.
- Assurance that, when an appropriately sized model is chosen and installed properly, proper ventilation will be achieved to maximize indoor air quality.

Inflated performance ratings are common for bathroom exhaust fans that are not 'HVI-Certified'. Selecting products with 'HVI-Certified' performance ratings will ensure that ventilation expectations and building code requirements are met. HVI is the authority for performance testing of residential ventilation products. Using sophisticated lab facilities and accurate testing procedures, HVI tests submitted products. Once test data has been approved the product may display the 'HVI-Certified' label. HVI routinely verifies performance by independently purchasing products from the building supply market and retesting to ensure continuing compliance.

Where can I find additional information?
The HVI-Certified Products Directory is updated monthly and offers consumers a means to compare products using a variety of criteria.

HVI offers additional guidance for determining proper ventilation rates for both large and smaller bathrooms using intermittent or continuous ventilation.

HVI Certified Products Directory

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