

Bathroom Fans

Advances in modern construction techniques have resulted in new homes that are both more efficient and air tight than they have been at any time in our history. This “tightness” makes proper ventilation more critical than ever. A properly chosen exhaust fan will help to remove odors, stale or stagnant air, and most importantly humidity from your home’s bathroom. The following eZtip will help guide you through the things to consider when shopping for a Bathroom Fan.

Bathroom Fan CFM Calculation

The volume of air a fan can move is rated in CFM (Cubic Feet per Minute). The box below contains some simple information you can use to determine the CFM requirement for a bathroom, based on the guidelines of the Home Ventilating Institute. Once the CFM requirements have been determined, next consider your mounting location.

Mounting Location

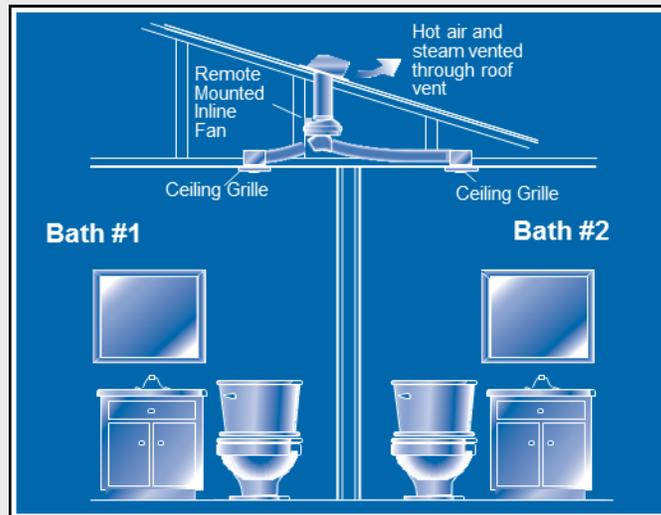
While the typical mounting location is horizontal in the ceiling, some fans are capable of being mounted either vertically or horizontally for situations that may prevent mounting in a traditional location. Also available, are remote mounted inline fans that allow the fan unit to be mounted in a remote location like an attic. A ceiling grille is connected to a box or boot in the ceiling, which is then ducted to the fan unit and exhausted through the roof. A properly sized inline fan can be used to service two separate bathrooms from a single fan, since only the ceiling grill and ducting is required at the intake.

Sound level

Bathroom fans are an electrical device with a motor and a spinning blade or two, the amount of noise the unit makes is also a specification to check. Bath fan sound levels are rated in sones, instead of the more common sound rating of decibels that most people might be familiar with. Like decibels, the lower the rating number, the quieter the fan will be. The average sone rating for inexpensive economy fans is around 4.0, and any fan rated at 1.0 will be extremely quiet (comparable to a modern refrigerator running).

Additional Features

Lastly, consider any other functions you may want the fan to perform. Bath fans are available as a fan only, fan and light combination, or heat, fan, light combinations. In the case of heat capable units, the source can be either internal fan forced air, single or double heat lamps. Some of the latest developments in fans include models with humidity sensing capability. When the fan senses a rapid rise in moisture at the ceiling, it turns on automatically and shuts off when moisture is back within acceptable levels.



Bathroom Fan Sizing

According to the guidelines established by the Home Ventilating Institute (HVI) bathrooms 100 sq. ft. or smaller require 1 CFM per square foot or a minimum of 50 CFM of air flow.

For bathrooms in excess of 100 sq. ft. ventilation is determined based on the fixtures within the space. Standard toilets, showers, or tubs should be allowed 50 CFM each, and jetted or whirlpool tubs should be calculated at 100 CFM each. The total for all the fixtures will be the minimum CFM requirement for the fan.

Example: 10' x 12' bathroom with a toilet, shower, and whirlpool tub. Bathroom square footage is over 100 sq.ft., so calculation is done based on the fixtures in the space. Toilet = 50 CFM, shower = 50 CFM, and whirlpool tub = 100 CFM.

Therefore, 50 + 50 + 100 = 200 CFM required for this space.

Unless otherwise noted, fans are not speed controllable.



Information sources include Grainger, Fantech, Broan

If you are still having difficulty choosing a Bathroom Fan, please contact us at askzoro@zoro.com or 855-289-9676

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