

Renovators Ltd.

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Summer 2004

Fan-tastic! How to find good, energy-efficient ceiling fans

by Michele Dawson

As the mercury starts to rise, so too does the urge to flip on the air conditioner. For those days when it's warm, but not quite hot enough to turn on the air conditioner, a ceiling fan is a great option—if you buy a good one that is energy-efficient.

In the last 10 years ceiling fans have become more technologically advanced, providing cooling in the summer months and warming in the winter months and ultimately helping you save on your energy bill.

Ceiling fans don't actually reduce the temperature, but during warm weather, they have a wind-chill effect. So if it's 85 degrees in your family room and you have a ceiling fan purring above, it will feel like 78 degrees. And in the winter, fans recirculate the heat to the living areas.

An efficient ceiling fan can reduce your energy bill up to 40 percent in the summer and 10 percent in the winter, using only as much as energy as a 100-watt light bulb.

Fans can coordinate your individual home style, and most offer options in color, finish, blade design, size, accessories and lighting. Styles include polished brass, antique brass, iron,

copper, nickel, pewter, chrome, black, vibrant colors, oak, rosewood and other real wood veneers.

And as with most other appliances, you can even find energy efficient models from Energy Star, a national symbol for energy efficiency developed by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

Ceiling fans that have earned the Energy Star label are 10 percent more efficient than standard ceiling fans, which translates into saving \$13 to \$24 a year on utility bills.

EPA officials say the proper way to operate a fan includes switching the fan and light off when you leave the room; reversing the fan motor in winter months; and hanging the fan so that its blades are at least one foot below the ceiling, seven feet above the floor, and two feet from the nearest wall.

The American Lighting Association and EPA offer the following suggestions for choosing the most efficient fan.



SIZE

For rooms up to 225 square feet and larger, use a fan with a blade span of 50, 52, 54, or 56 inches. In rooms up to 144 square feet, use fans with blade spans of 42 or 44 inches. Smaller rooms up to 64 square feet should use a fan with a 32-inch blade span. Fan blades must be at least seven feet above the floor. A blade height of eight to nine feet above the floor will provide the most efficient cooling effect. Downrods are

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"... **ceiling fans** have become more technologically advanced, providing **cooling in the summer** months and **warming in the winter** months and ultimately helping you **save on your energy bill.**"

In the News

Duston Sieglaff was awarded the Super Star CLC (Certified Lead Carpenter) and Milwaukee NARI employee of the year award.

Bryan Ward was awarded the Certified Kitchen and Bath Remodeler, a National NARI certification.

Pamela Pelot joined the **Renovators** design team April 2004. Pamela is currently a graduate student at UWM School of Architecture and Urban Planning. She received a bachelors degree in architectural studies. With only 6 credits to go, she plans on receiving her masters degree in Winter 2004.

Noises from the heating and cooling system

You may have noticed unexplained noises from your central heating/cooling system. What causes them, and what can you do about them?

A typical problem: when the air conditioning starts, there is often a loud "pop" from the ductwork. This may not occur when the furnace switches on.

When the central air conditioning runs, the furnace fan must move more air through the system than when the unit is used for heating. Often the fan will automatically run at a higher speed for greater volume and pressure.

Because of this increased pressure, the duct work is more likely to pop outward slightly. You can locate the problem area by listening for the sound and watching the ductwork when the air conditioner starts up. You'll probably notice movement and sound in the large, flat pieces of sheet metal near the furnace.

When you find the duct that is moving or popping, reinforce it with a small brace-screw a lightweight angle iron into the sheet metal over the part that is moving.

"You can locate the problem area by **listening** for the sound and **watching** the ductwork when the air conditioner starts up."

Now, how about noises you hear from your forced-air furnace? When the heating system starts and runs for a few minutes, there is often clicking and slight pounding of the ductwork in the basement.

This problem occurs as the metal ductwork heats up. The expanding metal needs room to move. The ductwork is trapped between the framing members of the house. Watch and listen for the problem area(s) as the furnace runs. You may need to loosen mounting brackets or adjust ductwork that is forced against wood framing.

Courtesy of Just Fix It, by Tom Feiza

Ceiling Fans ...

continued from cover

used with eight-foot ceilings, though some fans do require a nine or ten foot ceiling to hang properly. Extension downrods may be used when hanging a ceiling fan on either flat or sloped ceilings.

MOTOR

Poor motor design can create most of the problems that are associated with ceiling fans. If the fan has an annoying click, buzz, or hum during operation, the motor is the most likely culprit. A motor that works too hard will burn itself out. A motor that is too powerful will be inefficient, wasting energy. Ideally, a ceiling fan should be designed to strike a balance between power and efficiency, ensuring that the blades are the proper pitch to move large amounts of air. Different motors are designed for different operating conditions.

BLADES

These can complete a room's decor, but they also need to perform effectively. Look for a blade pitch of at least 14 degrees, which is excellent for maximum air movement efficiency. Steer clear of blades constructed of particle board, printed paper or solid wood. Blades should weigh the same to avoid a wobbly fan.

LIGHTING

Either built-in or added on, lighting can enhance your room's decor while meeting your lighting needs. Energy Star offers fans with and without lighting. If your fan doesn't include lighting, be sure to purchase an Energy Star-qualified light kit, which has either pin-based compact fluorescent lamps (CFLs) or screw-based CFLs. This lighting is compact, attractive, efficient, and long lasting, so you won't have to make frequent bulb changes.

CONTROLS

These make the difference between a fan that is merely functional and a fan that offers a world of convenience, energy efficiency, and even home security advantages. The most basic fan controls are a pull chain on the fan that varies the fan speed, and a switch on the fan that controls the blade direction. This is all many homeowners want to control their ceiling fan. You may also purchase a variety of optional controls to upgrade three-speed, pull-chain models.

PRICE

The prices of ceiling fans can vary. Cheap ceiling fans will wobble, click, and hum over time. They will not move air in your home efficiently or effectively, and they are likely to fail within a few years.

Upgrading—from the top down

[FINISHED PROJECT]



[BEFORE]



When a previous client approached us with the desire to add a master bedroom suite onto the second floor, and an enlarged laundry/mud room to the first floor, we were up to the challenge.

Originally, the second story master bedroom was converted into a bedroom for one of the couple's daughters.

The new design for the second floor addition is comprised of a master bedroom, an exercise room, a large walk-in closet and the master bathroom. The master bedroom is 16' x 18' 6", and was built over the footprint of the existing garage. It boasts a cathedral ceiling, giving the room expanse and spaciousness. It includes a built-in entertainment center and built-in bookshelves with enclosed storage below.

The exercise room, a roomy 12'6" x 11'6", also has the lovely cathedral ceiling. French doors separate it from the master bedroom.

The entry hall leading to the master closet and bath also have two additional closets for extra storage. The master walk-in closet is quite large at 7' x 12', and has a niche for everything. It has built-in shoe storage, sweater storage and double-tiered hanging space. The cathedral ceiling makes the space feel even larger.

The master bathroom includes a beautiful double vanity, and a shower with hand spray and body spray. A large linen closet completes the room, providing ample storage for sundry items.

The first floor addition was built to add space to the laundry room and eliminate congestion when entering

the home from the attached garage. The addition increased the space to 9' x 8'. Built-in wall cabinets added much needed storage space. Base cabinets with countertops give the room additional work-surface for folding laundry.

Final touches included completely re-roofing the house using dimensional shingles. We also re-sided the house using premium double four inch siding with scalloped siding, as an accent on one of the forward-facing gables.

Home Improvement Tips

Reduce basement dampness in summer ...

- If you have central air conditioning and the supply/return ducts are connected to the basement, you can air condition the space. This will remove the humidity and will mix basement air with overall home air. There will be a marginal cost for this, but the basement is cool already, and most of the energy will go toward removing the humidity.
- If you don't have air conditioning but there is central hot air heat and ductwork connected to the basement, you can run the furnace fan to ventilate the basement. Mixing the upstairs air, which is drier, with the basement air will help dry out the basement. This is an inexpensive option.
- If there is no ductwork in the basement, consider opening the basement windows on dry days to ventilate the area. Open at least two windows and run a fan in one of them to speed up the process. When it is humid outside, close the windows.
- Your final option is to run a dehumidifier in the basement. In this case, do not ventilate the basement; allow the dehumidifier to remove the moisture. A dehumidifier works by moving the moist air across a coil (similar to an air conditioner) where the moisture condenses into liquid. Remember that mechanical refrigeration with a dehumidifier is relatively expensive compared with natural ventilation. It takes almost 1000 Btu to condense one pound of water from water vapor. This can be more expensive than a refrigerator.

I prefer to open the windows and use natural ventilation. This allows the basement to air out so that it smells like the great outdoors.

Courtesy of Just Fix It, by Tom Feiza

KUDOS to you!

We take pride in the quality work and attention to detail we provide for you. Nothing shows us that you value this more than when you share our name with your family and friends. We want to take this opportunity to express our appreciation.

- **Eric and Susan Hoaglund** thank you for referring **Gene and Pam Nellen**.
- **Tom and Jeanine Schoen** thank you for referring **Chad and Laurie Lehman**.
- **Eric and Debbie Babula** thank you for referring **Scott and Sue McCutcheon**.
- **Tom Feiza** thank you for referring **Bill Best**.
- **David Meyer** thank you for referring **Alan Pearson**.

This newsletter is a forum to learn about new techniques, industry standards, methods and individual stories. If you have ideas, articles, photos, questions or a subject you would like to see published, for consideration please contact us at our office:

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