



## ENERGY SERIES: What About Using Ceiling Fans?

### Can Ceiling Fans Lower My Utility Bill?

Ceiling fans create a breeze, so room occupants feel cooler and more comfortable. With a ceiling fan running, you can raise the thermostat setting by 2 to 4 degrees during the cooling season with no reduction in comfort. Increasing the room temperature by even two degrees can cut your cooling costs 4 to 6%.

### Will I Feel Less Comfortable When I Increase the Thermostat Setting?

Probably not. Many people claim they don't even notice a difference in comfort.

### Can I Use My Ceiling Fans Instead of My Air Conditioning?

No, because ceiling fans do not lower humidity. Ceiling fans are best used in conjunction with air conditioning. Using them alone is advisable only when the relative humidity is less than 50%.

### Should I Leave Ceiling Fans Running All the Time?

No, because the fan cools people, not rooms. Ceiling fans are less costly than air conditioning, but they still use electricity. Running one fan 24 hours a day can add up quickly. Run a fan only when someone is in the room.

### What Features Should I Look For?

- **Correct sizing**-choose a ceiling fan that fits the room. Follow guidelines in Table 1:
- **Motors**-to ensure long life and quiet operation, purchase fans with motor housings constructed with heavier materials such as die-cast metal. These models tend to have less vibration and provide better stability for down rods. Also look

for models with heavy-duty windings, precision-engineered ball bearings, and shock-absorbent internal components.

**Table 1. Room size and suggested fan diameter**

Room Dimensions	Suggested Fan Size
Up to 75 ft <sup>2</sup>	29–36"
76–144 ft <sup>2</sup>	36–42"
144–225 ft <sup>2</sup>	44"
225–400 ft <sup>2</sup>	50–54"

- **Performance grade fans**-designed for continuous quiet operation-use larger, more powerful motors, and are generally the most expensive models. Medium grade models are designed to run 12 hours or less per day; and economy models, to run 8 hours or less per day, in rooms with 8-foot ceilings.
- **Motors** come either with sealed and lubricated ball bearings-requiring little or no maintenance—or with bearings that operate in an oil bath, which will occasionally require adding oil.  
  
Three-speed motors are recommended for maximum comfort. Most fans, and all ENERGY STAR® models, can reverse direction via a switch on the housing, so that they can move warm air (which rises up to the ceiling) down into the room during the winter.
- **Blades**-should be sealed or finished to prevent moisture-caused damage such as warping, peeling, or tarnishing, especially if the fan will be used in a high-humidity situation.
- **Sound**-try the fan out in the store, using all settings, to determine if the sound is too noisy for you. If it is, try a different brand or a model with blades made of a different material.

- **Look for ENERGY STAR® labeled ceiling fans**—on average; these fans are 20% more efficient than standard ceiling fans.

### **Do Combination Fan/Lights Save Energy?**

Fan/light units labeled with the ENERGY STAR® logo are about 50% more efficient than standard fan/light units—which can save you \$15–\$20 a year on utility bills (plus any heating/cooling savings gained by using the fan properly—see above).

Lights can also be purchased separately as an add-on to a ceiling fan. Most fans accept add-on

light kits, though a number of them are only compatible within brands. Check the package for compatibility information.

### **Can I Use a Fan in Damp Areas?**

If you're installing a fan in a bathroom or other humid location, make sure it is UL-listed with a "damp" rating; and if mounting a fan where it will come into direct contact with water (such as a porch or patio), be sure it has a UL "wet" rating. These fans have features such as sealed or moisture-resistant motors, rust-resistant housings, stainless steel hardware, and all-weather blades.

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Developed as part of the NASULGC/DOE Building Science Community of Practice. The factsheet editors are: Robert "Bobby" Grisso, Extension Engineer, Biological Systems Engineering; Martha A. Walker, Ph.D, Community Viability Specialist, Central District; and John Ignosh, Area Specialist, Biological Systems Engineering.

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