



**CHANGE FOR THE
BETTER WITH
ENERGY STAR**

DEHUMIDIFYING FACT SHEET

Warm and moisture-laden air can be a source of discomfort and concern for homeowners. Mildew on stored luggage, books, clothing, or furniture; a musty, moldy odor; rust on workshop tools and metal accessories; sticky drawers and doors; “sweating” on cold water pipes; wetness on insulation are some of the problems associated with too much moisture in the air.

For most households, moisture and mold problems occur in the basement and more so in the summer than the winter. By the way, mildew spores are a common cause of allergies.

This fact sheet can help you assess your need to dehumidify and provide tips on efficient use of dehumidifiers.

Assessing the situation

First, determine the level of dampness.

- Moderately damp**—space feels damp and smells musty only in warm, humid weather;
- Very damp**—always feels damp and smells musty, walls and floor show damp spots;
- Wet**—feels and smells wet. Seepage occurs, mold and mildew growing on surfaces.

A large percentage of basement leaks and moisture problems can be solved by providing adequate drainage around the basement wall perimeter. Saturated soil around the basement wall can contribute large amounts of water vapor in the living space. If water leaks or seeps through basement walls, you should repair the walls or improve the drainage around the house and/or install a sump pump.

The soil should slope away from the house, and down spouts can be added to gutters to direct water at least six feet away from the house. Dehumidifiers are not an effective solution to a basement seepage problem.

What size dehumidifier should you buy?

Dehumidifier capacity is measured using the number of pints of water it can remove in 24 hours. The size you’ll need depends on the size of the area to be conditioned and the amount of moisture present in the air. The most common sizes are 25-, 30-, and 40-pint models. The Association of Home Appliances recommends a 25-pint model for most situations up to 1,000 square feet and a 40-pint model for areas up to 1,500 square feet.

An inexpensive humidity gauge can be purchased at most local hardware stores allowing you to accurately monitor indoor relative humidity. In the summer, humidity generally runs between 60 percent and 80 percent. An indoor relative humidity of 40 percent to 50 percent is recommended.

On all units, a dial near the top turns the dehumidifier on and off and adjusts the humidistat, a device that senses humidity, similar to a thermostat that senses temperature. With the dial turned all the way up, the machine will run continuously. It is recommended to run the dehumidifier at the continuous setting only during the initial startup to drop indoor humidity to an acceptable level. Once the desired level is achieved it is recommended to set the dial as low as possible.

Cost of operation

The following chart shows seasonal cost of operation based on Minnesota Power’s rate of 7.2 cents per kilowatt-hour.

COST OF OPERATION PER SEASON				
Dehumidifier Size	600 hrs	1,000 hrs	1,400 hrs	1,800 hrs
25-pint/5 amps 600 Watts	\$25.92	\$43.20	\$60.48	\$77.76
30-pint/6 amps 720 Watts	\$31.10	\$51.84	\$72.58	\$93.31
40-pint/7.5 amps 900 Watts	\$38.88	\$64.80	\$90.72	\$116.64


Energy saving tips:

- Dehumidifiers are only effective at reducing humidity when the humidity is above 50 percent, which it usually is in the summer. (Basement humidity runs between 60 percent and 80 percent in the summer.) If your dehumidifier is operating where the temperature is less than 65 degrees F, check it occasionally to see if frost is forming on the evaporator coils. If frost has formed, turn the unit off until the frost melts and until the room is warmer. Some units have an automatic control to prevent frost build-up under low temperature or humidity conditions.
- Using a dehumidifier in the winter months to remove condensation and frost from windows is not effective.
- Clean dehumidifier coils annually. Air passing through the dehumidifier coils may carry quantities of dust, lint, and fungus spores. It works best to clean coils when matter is soft and wet and can be removed with a soft brush. If you must wet the coils, use a spray bottle with water. Do not permit water to enter the electrical components. Do not spray the coil with a hose.
- Allow adequate circulation around the dehumidifier. Air needs to freely circulate around and through the dehumidifier for optimum operation.
- Some models need an annual touch of oil on the bearings of the fan motor.
- Keep all windows and doors closed during operation. A common misconception is to open windows and doors to ventilate damp areas. When warm, humid outdoor air is introduced into a cooler basement or crawl space; the cooler air cannot hold as much moisture, resulting in condensation on walls, floors and pipes, making the dehumidifier work harder. The only time to open windows is when the outside humidity and temperature is low.
- Wrap cold water pipes with pipe insulation to eliminate sweating.
- Dirt floors in crawl spaces or basements should be covered with plastic.
- Check your owner's guide for additional and specific recommendations.

Purchase an ENERGY STAR labeled dehumidifier:

- A 40-pint ENERGY STAR qualified dehumidifier can save consumers roughly \$20 per year. This can add up to \$200 or more over the 10-year life of the unit. That's enough to pay for the dehumidifier!
- Earning the ENERGY STAR means a product meets strict energy efficiency guidelines set by the US Environmental Protection Agency and the Department of Energy.
- ENERGY STAR qualified models have more efficient refrigeration coils, compressors, and fans than conventional models, which means they use less energy to remove moisture.
- An ENERGY STAR qualified model removes the same amount of moisture as a similar sized standard unit but uses less energy—at least 10 percent less, and in some cases up to 23 percent less.
- Minnesota Power offers a rebate on ENERGY STAR products. Check for special rebate offers at local retailers.

Visit our website at www.mnpower.com/energystar or call 800-677-8423 for more information about **ENERGY STAR** programs and rebates.



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ENERGY STAR is a label that identifies energy efficient products, such as clothes washers, which meet guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy. By choosing products that have earned the ENERGY STAR label, you can reduce energy use with no sacrifice in product features or quality.