

dehumidifiers and humidifiers



taking responsibility

As an individual, your efficient use of energy brings benefits such as lower bills, improved comfort levels in your home and a reduced personal impact on the environment.

Acting together, our individual choices add up—for the benefit of our community, our environment and our energy future. That's the power of working together.

As your community energy company, we are committed to sharing our experience and energy expertise. You can always contact us for:

- Answers to your energy questions.
- Energy efficiency information and advice.
- Help in evaluating energy-saving options.
- Assistance in finding energy-efficient products.

Demystifying your decisions

This booklet offers advice to consider when shopping for dehumidifiers and humidifiers. While MGE does not recommend one brand over another, we do strive to help you make a better decision—and encourage you to visit mge.com or call us at 252-7117 for more information.

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Before buying a dehumidifier

Dehumidifiers are commonly used to reduce summertime humidity in basements. Try these low-cost ideas to reduce humidity first. It's often less expensive to prevent excess humidity than to remove it with a dehumidifier.

- Check gutter and downspout drainage.
- Slope soil away from the foundation.



- Vent kitchen and bathroom exhaust fans to the outside.
- Vent clothes dryer outdoors or dry clothes outdoors.
- Cover sump pump pits.
- Increase air circulation in damp areas.
- Check for a blocked chimney.

In the winter it is probably cheaper to bring in dry outside air than to operate a dehumidifier. Call our Home Energy Line at 252-7117 for tips about how to solve winter moisture problems with ventilation.



How much does it cost to run?

Typical dehumidifiers cost about 6¢ to 10¢ per hour of operation. Monthly costs from \$15 to \$35 are common but can exceed \$50 per month if the dehumidifier runs a lot.

Look for the ENERGY STAR® label

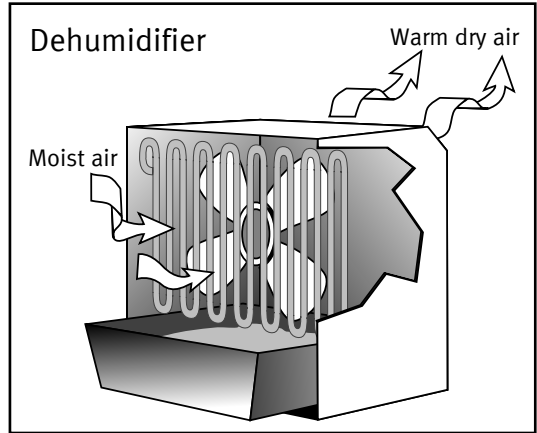


ENERGY STAR certified dehumidifiers save electricity by removing humidity more efficiently. In general, dehumidifiers with a larger capacity (more pints per day) are more efficient. Dehumidifier efficiency is rated by the Energy Factor (liters of water removed per kilowatt-hour of electricity used - L/kWh). If choosing between two ENERGY STAR models, look for the higher Energy Factor, which is listed at www.energystar.gov. Check with Focus On Energy at 1-800-762-7077 for possible cash-back rewards on these models.

Tips for using a dehumidifier

- Set the humidistat so the appliance does not run continuously. For basements, 50% relative humidity is recommended in summer. MGE recommends using digital humidity gauges rather than dial-type gauges to check the humidity.
- Help reduce peak electric use. Put your dehumidifier on the night shift! Put a timer on your dehumidifier to turn it on at 9 p.m. and off at 10 a.m.
- Close all windows and doors to the area.
- Locate the unit in the area with the highest humidity but don't create a safety hazard by placing it in water. Dehumidifiers are not the solution to standing water (or running water) in basements.

- Position the dehumidifier away from the wall or furniture so air can circulate through the unit.
- Hook up a hose to drain the dehumidifier if emptying the tank is a chore.
- Frost can form on the coils and reduce dehumidification when the room temperature drops below 65°F. Frost can also form when the dew point is low. If frost forms, turn off the machine until the frost melts.
- Keep the dehumidifier clean. Wipe or vacuum dust and dirt from the coils and fan.
- If you have a choice of fan speeds, higher speeds are more efficient while lower speeds are quieter.



Moist air is pulled in and the moisture condenses on coils. The dry air is blown into the room.

Before buying a humidifier

Do you really need a humidifier?

Many homes have excess humidity during the winter. Too high a humidity can lead to condensation on windows, mold growth, dust mite problems and wood rot. Windows are usually the coldest surface in a room, so condensation forms there first.

What's the right humidity level?

During winter, relative humidity between 25% and 40% is recommended. In colder weather, humidity toward the lower end of this range is better for reducing condensation and mold growth. Cold outdoor temperatures often require indoor humidity lower than 40% to prevent condensation on windows. MGE recommends using digital humidity gauges rather than dial-type gauges to check the humidity.

If your nose and throat feel dry, consider using a portable humidifier while sleeping. It's a compromise between what's good for your home and what's comfortable for you. Other considerations:



- Be sure not to humidify too much. Excessive condensation from a humidifier can cause wood rot, mold growth and peeling paint. It can also make insulation less effective.

- If you plan to replace an older furnace that's not power-vented, delay purchasing a humidifier. New furnaces do not constantly exhaust air to the outdoors like older furnaces do, so the humidity in your home may increase after buying a new furnace. You can always buy a humidifier later if you still need one.

Types of humidifiers

- Furnace-mounted central humidifiers are installed in the ducts of a forced-air furnace. When the furnace is on, the humidifier spreads moisture throughout the house.

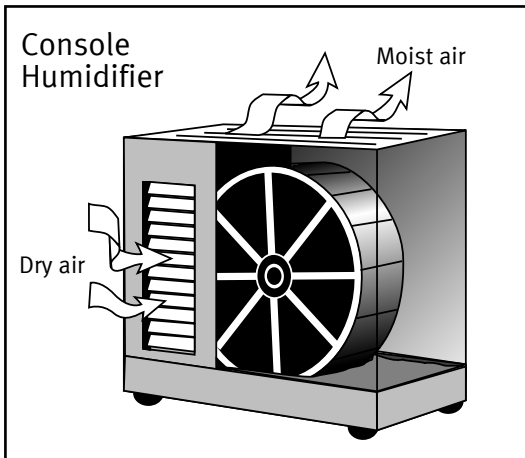
- Console humidifiers look like a piece of furniture. A fan draws in dry air then blows out moistened air.



- Portable humidifiers come in several types:
 - Ultrasonic humidifiers* use high-frequency vibrations to humidify the air.
 - Impeller humidifiers* are the least expensive to buy and operate but are the least effective in humidification.
 - Steam vaporizers* require more electricity.
 - Warm-mist humidifiers* mix cool air with steam to reduce scalding risks but use the most electricity.

Features to look for

- Adjustable humidistat to maintain desired humidity.
- Automatic shutoff to turn off humidifier when out of water.
- Adjustable fan speed if quieter operation is important.



The dry air is pulled in and it picks up moisture. The moist air is blown into the room.

- Ease of cleaning. Humidifiers can harbor germs and mold if not cleaned.
- Anti “white dust” filters for ultrasonic or impeller humidifiers.
- Anti-bacterial features.
- Anti-scalding safety latches (steam vaporizers and warm-mist humidifiers only).

Tips for using a humidifier

- Follow the manufacturer's directions to keep humidifiers clean. Humidifiers can become breeding grounds for microorganisms that cause diseases such as "humidifier fever." Mineral deposits may clog the belts, pads or nozzles, reducing the humidification.
- Turn down the humidistat or turn off the humidifier when excessive condensation appears on windows.
- Leave at least a six-inch clearance around the humidifier so air circulates.
- Place away from outside walls to avoid condensation.



Keep humidifiers clean to avoid problems with mold and bacteria.

Look for this symbol when you shop



ENERGY STAR labeled products use less energy than other products. They reduce your energy costs and help to protect the environment.

We're an ENERGY STAR partner. Learn more about qualifying products at www.energystar.gov or call MGE at 252-7117.

Resources and references

Dehumidifier links

mge.com/dehumidifierlinks

- Canadian publication on choosing a dehumidifier
- ENERGY STAR dehumidifiers
- How a dehumidifier works, troubleshooting and answers to common questions
- Focus on Energy

Humidifier links

mge.com/humidifierlinks

- U.S. Environmental Protection Agency

listening. learning.

MGE takes responsibility to provide information and education to serve our customers and stakeholders. We educate customers today to help inform their decision making. We educate tomorrow's stakeholders so they can help plan our energy future.

Look for an ENERGY STAR® rated dehumidifier when you shop. If everyone in our area used ENERGY STAR rated dehumidifiers, we could save almost 8 million pounds of coal a year.

Working together we can make a difference.

Contact us for information about:


- Heating/Air-conditioning.
- Insulating/Weatherizing.
- Lighting.
- Windows/Doors.
- Appliances.
- Water heating.

Get more home energy information at:

- mge.com/home.
- Home Energy Line 608-252-7117.
- 800-245-1125.

Questions about billing? Call:

- 608-252-7222.
- 800-245-1125.

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