



Maintaining the Home

Evaporative Coolers

Maintaining the Home: Evaporative Coolers

An evaporative cooler (also called a swamp cooler) is a different type of air conditioner that works well in hot, dry climates.

Many residents in the Southwest use evaporative coolers in their homes. Evaporative coolers basically consist of a large fan and water-wetted pads. Fresh outside air is cooled by about 20 degrees as it is drawn through the wet pads and blown into the house.

These units cool outdoor air by evaporation and blow it inside the building, causing a cooling effect much like the process when evaporating perspiration cools your body on a hot (but not overly humid) day. When operating an evaporative cooler, windows are opened part way to allow warm indoor air to escape as it is replaced by cooled air.

Evaporative coolers cost about half as much to install as refrigerated air conditioners and use about one-quarter as much energy. However, they require more frequent maintenance than refrigerated air conditioners and they are suitable only for areas with low humidity, such as the Southwest.

Before using an evaporative cooler:

- Check the damper to be sure it is in operating condition.
- Be sure the metal plate is out of the cooler vent and in the furnace pipe.
- Scrape away rust and repaint if necessary.

- Be sure the float is operating properly and the water level is correct.
- Check the water distribution system – pads should be thoroughly wet when operating – no dry spots.
- Check the belt tension.

At the end of the cooling season remember to:

- Drain the water from the cooler and supply pipes.
- Clean out salt and mineral deposits.
- Cover the cooler to prolong life and stop wind noises.
- Close the barometric damper or place a sheet of metal in the vent when not in use. (Be sure the metal sheet is pulled away from the furnace pipe.)

Always read the operating and maintenance instruction manuals when installing an evaporative cooler. Inspect and clean the cooler every two months. At the beginning, end and middle of each cooling season replace the cooler pads, which become coated with mineral deposits. This may have to be done more frequently depending on air and water conditions. Use chemical additives to reduce odor and corrosion in the cooler. If you experience difficulties with an evaporative cooler contact a licensed plumber for professional help.

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This material was adapted from publications produced by the U.S. Department of Energy. DOE publications can be found on the Web at <http://www.eere.energy.gov/>.

*This resource is one in a series on **Maintaining the Home** which include:*

Interior Maintenance

Preventive Home Maintenance Checkup
Make a Basic Toolkit for Simple Home Repairs
Selection and Use of Home Cleaning Products
Discovering the Secrets of Successful Storage

Heating

Furnace Care
Fireplace and Chimney Care

Cooling

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Air Conditioner
Ceiling Fans

Plumbing

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How to Unclog a Toilet
Repairing Dripping Faucets

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How to Replace a Fuse

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Choosing a Water Heater

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Dryer Care and Dryer Cleaning
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Exterior Walls, Windows, and Doors

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Carbon Monoxide Alarms
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Easy Tips to Save Money and the Planet
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Energy-Efficient Heating and Cooling
Indoor Water Conservation Tips
Outdoor Water Conservation Tips

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Dealing with Mold
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Hazardous Household Substances: Alternatives That Are Relatively Free of Toxic Effects
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Southwest Insects

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Hand Dexterity, Strength and Range of Motion
Cognitive Difficulties
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