

HOME ENERGY GUIDE

DEHUMIDIFIERS

Considerable cooling effects can be achieved with the use of a dehumidifier in certain situations. Often found in basements (because of the cooler temperatures and higher humidity levels), dehumidifiers have a bucket or pan that can be periodically emptied. Most have an automatic shut-off when the container is full. Many units also allow for the attachment of a hose that can be run to a floor drain.

One downside of a dehumidifier is that it pumps out heat as a result of the dehumidification process. Generally this is minimal, and the dryer air offsets the additional heat gain.

Relative humidity and humidistats

Relative humidity (RH) is the amount of water vapor actually present in the air compared to the greatest amount of water vapor the air can hold at that temperature. The optimum RH level for a building is generally considered to be between 30% and 50%. Anything above this range may promote bacteria growth. (In Minnesota's climate, during the heating season, humidity levels should be in the range of 30% to 40% RH to prevent window condensation.)

Many dehumidifiers include a built-in humidistat, a device that allows you to set the desired RH level that you would like for the room. Once the room reaches the desired RH level, the dehumidifier will cycle on and off automatically to maintain the level.

Efficiency: energy factor

The energy efficiency of dehumidifiers is measured by the energy factor (EF). In general, a higher energy factor means a more efficient dehumidifier. ENERGY STAR® models have an EF of at least 2.0 for units that remove less than 75 pints/day and 2.8 for units that remove from 75-185 pints/day.

Why is humidity bad?

High humidity in a home will cause the occupants to feel much warmer, due to simple laws of physics. The higher the humidity in the air, the harder it is for sweat on our bodies to evaporate, which is how we cool ourselves in warm conditions. Even a cooler environment, with high humidity, will feel clammy and uncomfortable—think of a cool, damp basement.

Additionally, high humidity coupled with warm temperatures contributes to the growth of mold and mildew, especially on cooler surfaces such as tile or foundation walls.

Controlling humidity through proper sizing and use of air conditioning equipment, along with use of dehumidifiers, can reduce the impact of humidity on occupants and their homes.

Dehumidifier

