



Terms To Know:

- **RH (RELATIVE HUMIDITY)**
Relative humidity is the percentage of moisture in the air. 50 - 60 percent is what most people find to be comfortable.
- **LBS./HR.**
Pounds per hour is the measurement used to explain how much moisture a dehumidifier is capable of removing. A pound of water is equal to a pint of water. Typical dehumidifiers have pounds/pints per hour removal rated at 80F and 60% RH.
- **CFM (CUBIC FEET PER MINUTE)**
Cubic feet per minute is the measurement of how much air the dehumidifier is going to pull in and put back out. The higher the CFM rating the larger the space the dehumidifier can handle.
- **CONDENSATE PUMP**
A condensate pump is a pump that is used to get rid of the excess water a dehumidifier produces. In some cases gravity isn't enough to get the water out of the space and a pump is needed for a long distance or up and over obstacles.
- **DISCHARGE TEMPERATURE**
The temperature of the air coming out of the dehumidifier.
- **AIR CHANGES PER HOUR**
Air changes per hour is a term used to describe how many times all the air in the room runs through the dehumidifier in 60 minutes of operation.

TYPES OF DEHUMIDIFIERS

- **MECHANICAL**
A mechanical dehumidifier is the most common type of dehumidifier. It uses a compressor and cold refrigeration coils to remove moisture from the air. Warm moist air flows over the cold coils, the moisture condenses (like a cold glass on a warm summer day), and the air is blown back into the space drier than it started. The moisture then drips into a bucket that needs to be emptied into a drain line using gravity or into a line that has a pump to automatically move the moisture out of the space. This type of dehumidifier increases the discharge temperature of the air by about 2 F so if you use it you want to make sure you have enough cooling in place to compensate.

DEHUMIDIFIER BUYING GUIDE

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- **Desiccant** - A Desiccant Dehumidifier is not commonly used in residential applications but is common in some types of commercial and industrial applications. Desiccant dehumidifiers use a silica gel wheel to remove the moisture from the air. The moisture is adsorbed (adheres) by the silica gel and is then reactivated by blowing dry hot air over the wheel in order to make room for more moisture to be removed. These units are primarily used in applications where extremely low humidity levels are required (below 45% RH). These units also have an extremely high discharge temperature of about 140 F and are usually combined with post cooling in spaces that have temperature constraints.
- **Portable** - Portable isn't actually a type of dehumidifier but a sub class of both types mentioned above. Both mechanical and desiccant come in portable versions. These units are great for applications where you need something relatively quickly and you don't want the additional time and cost of having an installation done. Portable mechanical dehumidifiers are easier to install than desiccant dehumidifiers.

THINGS TO CONSIDER BEFORE BUYING A DEHUMIDIFIER

Do You Want a Portable or a Permanent Dehumidifier?

- Some people like the ease of installation of a portable dehumidifier because in most cases it is just a matter of plugging the unit in to a standard outlet. Although there are some applications that would require a more permanent installation like an indoor pool or Jacuzzi. Your best bet is to consult a professional like Air Marketing Group and have them recommend a unit for you needs.

Is Your Room Big Enough to Handle the Dehumidifier?

- The biggest misconception when someone selects a dehumidifier is the only thing that matters is the amount of moisture it removes, this is untrue. A large part of whether a dehumidifier is successful at doing its job is how much air it moves in relation to the size of the space. You aim for about 5 air changes per hour in order to optimize the performance of the units (see the example calculation below.)
- CFM of the unit - 500
Size of the Space - 28 x 19 x 10'
 $500 \times 60 / (28 \times 19 \times 10) = 5.639$
- The above calculation shows that a dehumidifier with 500 cfm in a room that is 28 x 19 x 10 will provide 5.639 air changes per hour. This is just about perfect, not too high so it isn't going to be loud and winy, and not too low to make sure the air is properly dehumidified.