

Humidifier & Dehumidifier Guide – Choosing The Best Residential Humidifier Or Dehumidifier For Your Home

By Jackie LoBuglio (JD Supply HVAC / Humidifier / Dehumidifier Outlet)

‘Whole House’ Residential Humidifiers & Dehumidifiers are a cost-effective way to improve our lifestyle by ensuring correct humidity levels within our homes, year round. Read this article to help you decide which Humidifier or Dehumidifier type you should choose.

1. Humidifier & De-Humidifier Technology For Residential Humidity Control

Throughout the year, You can increase comfort in your home by using a humidifier / dehumidifier to maintain proper levels of humidity. There are several modern humidifier / dehumidifier options available, so read this guide to help You choose Your best option.

2. Humidity Measurement

You’ll frequently find the term **Relative Humidity** used, along with temperature, in weather forecasts. **Relative Humidity (RH)** refers to the ratio of the amount of moisture in the air to the maximum amount of moisture that the air can hold at a give temperature and pressure. It is expressed in percent (%) of saturation, and the lower the RH, the less moisture there is contained in the air at the stated temperature.

According to ASHRAE (American Society of Heating, Refrigeration & Air-Conditioning Engineers) a good range of Relative Humidity for most homes lies between 30% and 60% RH. A wider range, from a low 25% to a high of 80%, can be acceptable for thermal comfort (your comfort level). It would depend on the type of clothing worn, and your level of physical activity.

You can measure humidity levels with a relative humidity sensor, usually referred to as a Hygrometer or Psychrometer. A hygrometer or psychrometer is a device that measures the amount of humidity in a particular area. You can purchase a residential hygrometer by following this link: [Residential Wobble Hygrometer](#).

3. Humidity Control

There are many lifestyle benefits associated with correct humidity control.

Adding the correct amount of moisture to air that is too dry:

- Reduces static electricity.
- Helps soothe dry and itchy skin, throats, and coughs.
- Moistens the respiratory system, allowing for easier breathing and more comfortable sleep.
- Keeps mucus membranes moist, which is very helpful for asthma sufferers.
- Hydrates woodwork, furniture, and houseplants.
- Helps reduce your energy bills.

Removing excess moisture from air that is too wet:

- Prevents condensation problems and associated dampness and mold issues
- Makes your home more comfortable on hot “sticky” days.
- Helps reduce your energy bills.

4. Humidifiers, & De-Humidifiers

Humidifiers are used to add water content into to your household air (increasing relative humidity) and Dehumidifiers are used to decrease the moisture content in your household air (decreasing relative humidity).

4.1. Humidifier Types

Insufficient humidity in your household air can also make for an uncomfortable indoor environment. Air in your home that is too dry can also give rise to breathing difficulty, and can damage wood products like flooring, pianos, picture frames, and cabinetry. Again, there are 2 potential solutions to this problem:

4.1.1. A Portable Humidifier can be bought for local service in a specific room. However, in our experience, portable humidifier units tend to be ineffective and an inefficient way to treat this problem, so we cannot recommend them as a long-term solution.

4.1.2. A 'Whole House' Humidifier can be installed in your home's central HVAC system, where it will automatically, effectively, and efficiently work to provide the right amount of moisture in all rooms throughout your home, for increased comfort and energy savings.

Whole-House Humidifiers mount directly to your furnace, and work with your heating and cooling system to distribute moisture throughout your entire home. Accordingly, their installation involves working with ductwork to provide humidification into the HVAC airflow. You will need to cut sheet metal on the furnace to mount the humidifier and/or cut ductwork on the supply or return ducts. Installation also requires wiring of electrical power to the humidifier and it's control unit (*Humidistat*).

There are 4 basic types of 'Whole House' Humidifiers available:

- Fan Powered Type 'Flow-Through' Humidifiers
- Bypass Type 'Flow-Through' Humidifiers.
- **Rotating Drum Type 'Flow-Through' Humidifiers**
- Steam Type Humidifiers

Flow-Through Humidifiers are the most popular configuration of residential Whole House Humidifiers.

A Fan Powered Flow-Through Humidifier has a built-in fan to draw airflow into the humidifier and across a wet pad where it picks up moisture. The humidifier mounts right onto your furnace, and no bypass ductwork is required - making installation easier than for bypass flow-through humidifiers. An example of this humidifier type is the Honeywell Model HE365A Whole House Powered Flow-Through Humidifier.



A **Bypass Flow-Through Humidifier** connect to a bypass off the supply or return air flow in order to create pressure that draws the airflow into the humidifier and through a moisturized pad. The result is an even distribution of humidity in the air throughout your home. Examples of this type of humidifier unit are Honeywell Model HE265A and HE225A Whole House Bypass Flow-Through Humidifiers. These flow-through units are very effective, however they are not the most efficient (typically using about 3.9 gallons of water per hour)



Drum Type Flow-Through Humidifiers are 100% water efficient, typically using only 0.6 gallons of water per hour. Further benefits of a Drum type humidifier are:

- Operation independent of the heating cycle
- Ideal for heat pump applications
- No replacement pads or filters are needed
- Non absorbing discs minimize bacterial risk
- Very low energy consumption



Steam Humidifiers evaporate water and inject the resulting steam into the air. Their main advantage is that they are able to operate independently from your furnace - so that you do not need to turn the furnace on to add some moisture into your air. Steam Humidifiers are a great solution for larger homes in dry climates with mild winters. Models such as the Honeywell HE420A1009 offer humidification independent of furnace operation, allowing for more consistent humidity comfort levels.



Water Efficient Humidifiers For Cleaner Air & Healthier Environments

Some manufacturers are gearing their humidifier product lines toward environmentally friendly or "Green" products that show lower water useage than most conventional humidifiers.

The new **Water Saver™ Humidifier, from Best Air Pro**, has been designed to use up to 70% less water than standard drain type bypass humidifiers, which can waste between 5-8 gallons per hour down the drain.



The **Green Model 3200 Flow-Through By-Pass Humidifier** has an output capacity of 0.82 gallons per hour. This unique design is easy to install and has a snap lock cover for quick maintenance. The Model 3200 is constructed of durable fiberglass, which resists rust, corrosion and warping. Combined with patented **White Water Pads**, the Model 3200 substantially reduces overall water and power consumption.



The **Green Model 2500 Flow-Through Humidifier** has an output capacity of 0.75 gallons per hour. With a patented air diverter, which eliminates the need for a bypass, the revolutionary design significantly reduces water consumption while delivering the perfect amount of moisture into your home.

JD Supply Humidifier Catalog:

Model	DESCRIPTION	Gallons Per Day / 140°F	Max SqFt
Green Humidifiers			
GH2500	The Green GH2500 Humidifier has no moving parts, loss of airflow, or bypass. With 1 plenum opening, it uses a diverter, and can be used with any forced air furnace. It mounts on the air supply side.	17	4,260
GH3200	The Green GH3200 Humidifier has a unique fiberglass construction and can be mounted on either the hot or cold air plenum.	19.5	4,620
Autoflo Flow-Through Furnace Humidifiers			
250	The Autoflo 250 Humidifier is a High Capacity, flow-through, bypass furnace humidifier. It can be used with any forced air furnace, and mounts on either warm air plenum or cold air return.	16	3,790
SC-15 SCOOP	The Autoflo SC-15 SCOOP Humidifier has 1 plenum opening, eliminating need for bypass. It uses a diverter, can be used with any forced air furnace, and mounts on supply air side.	16.5	4,025
800BP	The Autoflo 800BP Drum type bypass furnace Humidifier is designed to use only 17.7 GPD, and combines high efficiency with ease of maintenance.	17.5	4,025
200P	The Autoflo 200P Drum type bypass furnace Humidifier uses a patented Convoir cone, which increases airflow through and around water media. It works with any forced air furnace.	14	3,310
97	The Autoflo 97 Drum type bypass furnace humidifier offers capacity for larger homes, and works with any forced air furnace.	19	4,500
Honeywell Drum Type Flow-Through Humidifiers			
HE120A1002	The Honeywell HE120A1002 Drum type Humidifier is ideal for drainless applications. This unit has a small footprint, is lightweight, and has snap-lock fittings and reversible components for ease of installation.	17	2,000
LOBB Rotating Drum Type Humidifier			
WA-1700	The LOBB WA-1700 Drum type bypass humidifier features Fiberglass construction, for corrosion resistance. It can be mounted on either the hot air plenum or cold air return.	14	3,310

Model	DESCRIPTION	Gallons Per Day / 140°F	Max SqFt
Honeywell Steam Powered Humidifier			
HE420A1009	The Honeywell HE420A1009 Steam Powered Humidifier is ideal for use in dry climates with mild winters. It humidifies independent of furnace operation, for more consistent humidity comfort levels.	13	3,000
Honeywell Fan Powered Flow Through Humidifiers			
HE365A1006	The Honeywell HE365A1006 Whole House Fan Powered Humidifier is the best choice for variable speed and multi-stage systems. It has a UV Stabilizer with Carbon Black to protect from damaging UV exposure, and has a PerfectFLO tray for even moisture distribution.	18	3,000
HE365B1004	The Honeywell HE365B1004 Whole House Fan Powered Humidifier is the best choice for variable speed and multi-stage systems. This model has Dewpoint Based Humidity Auto Control. It also has a UV Stabilizer with Carbon Black to protect from damaging UV exposure, and has a PerfectFLO tray for even moisture distribution.	18	4,200
Honeywell Bypass Type Flow Through Humidifiers			
HE265A1007	The Honeywell HE265A1007 Humidifier can be installed on the return or supply duct, has an integrated seasonal damper. It has a UV Stabilizer with Carbon Black to protect from damaging UV exposure, and has a PerfectFLO tray for even moisture distribution.	17	2,800
HE265A1005	The Honeywell HE265A1005 Humidifier has Dewpoint Based Humidity Auto Control. It can be installed on the return or supply duct, has an integrated seasonal damper, and has a UV Stabilizer with Carbon Black to protect from damaging UV exposure. It also has a PerfectFLO tray for even moisture distribution.	17	2,800
HE225A1006	The Honeywell HE225A1006 Humidifier can be installed on the return or supply duct, has an integrated seasonal damper, a UV Stabilizer with Carbon Black to protect from damaging UV exposure, and has a PerfectFLO tray for even moisture distribution.	12	2,000
HE225A1004	The Honeywell HE225A1004 Humidifier has Dewpoint Based Humidity Auto Control. It can be installed on the return or supply duct, has an integrated seasonal damper, has a UV Stabilizer with Carbon Black to protect from damaging UV exposure, and has a PerfectFLO tray for even moisture distribution.	12	2,000

4.2. Dehumidifier Types

In any season, excess humidity in your home can make for an uncomfortable indoor environment. Air that holds too much moisture can cause your home to feel sticky or damp, as well as creating condensation on windows, cold water pipes, and other cold surfaces inside your home. This in turn can lead to proliferation of mold problems that may cause your household air to smell musty.

Many people experience mold issues in their relatively cold basements when the climate changes in Spring. This can be unpleasant, and can make breathing more difficult, especially for those suffering from allergy induced Asthma and other breathing related illnesses or conditions.

Other rooms where steam may be generated, such as kitchens or bathrooms, may be subjected to condensation when the climate changes in Fall. As the external temperature decreases, condensation may be found on relatively cold surfaces such as windows or window frames.

Dampness, stickiness, and odors are just a few of the many symptoms associated with air that carries too much moisture. There are 2 types of Dehumidifier available to deal with moist air issues:

4.2.1. A Portable Dehumidifier can be installed in problematic areas, like basements or damp rooms, in order to achieve de-humidification of the local air. If you choose a portable unit it is important that it be sized correctly for the room that it is to be used in. In our experience portable units only work in areas where ingress of air from the rest of the home can be limited. Otherwise, you will end up with a small portable d-humidifier unit that is required to dry the air from your entire home. Therefore, in most cases, portable units are not a practical solution.

4.2.2. A 'Whole House' Dehumidifier can be installed centrally in your HVAC system to efficiently prevent moisture issues arising anywhere in your home that the HVAC system services. Again, the unit must be correctly sized in order to operate effectively. An example of this type of unit is Honeywell's DH90 Whole House Dehumidifier.



5. Humidifier & Dehumidifier Summary

Optimum Humidifier / Dehumidifier Selection requires a thorough knowledge of your particular application and the full range of humidity control products that are available today. **JD Supply** can provide You with NAFA Certified Air Filtration Specialists available to answer Your questions and help you make Your optimum choice. We can also offer You an extensive library of resources, experience with selecting, installing and certifying Humidity Control systems, and access to a multitude of Humidity Control products to suit Your specific needs.

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