Aprilaire®

Whole-Home Humidifiers

Cure indoor dryness and get the *very best* whole-home comfort.

Every home needs a humidifier.

The air inside your home is drier than you think.

Heating your home dries out the air. The resulting dry air absorbs moisture from you and everything inside your home. Even newer, tighter built homes will succumb to the negative effects of air that is too dry.

IRRITATION AND DISCOMFORT:

When you heat your home, indoor humidity levels fall below the optimum range. This causes you to experience the discomforts of too dry itchy skin, annoying static shocks and being "too cold" at normal temperatures.

UNHEALTHY AIR:

Viruses thrive in low humidity conditions and can actually increase the likelihood of getting colds, flu and other upper respiratory ailments. The American Society of Otolaryngology advises the importance of preventing an overly dry environment because it significantly increases susceptibility to infection.

HOME DAMAGE:

When heated air isn't properly humidified, it causes walls and ceilings to crack and wood floors and trim to separate. Expensive musical instruments can go out of tune and electronic equipment can fall victim to static electric charges, requiring expensive repair or replacement.

HIGHER ENERGY COSTS:

Dry air robs the moisture from your skin, making you feel colder, which means you turn up the heat. Dry air also shrinks the framing around doors and windows, resulting in gaps that let in cold air from the outside, making your home less energy efficient.

Your home could be as dry as the Sahara Desert!

Relative Humidity (RH) indicates the amount of water vapor, in percent, actually in the air compared to the maximum amount that the air could hold under the same conditions. The warmer the air, the more moisture it can hold.

Air in the home heated to 70˚ F can hold about eight grains of moisture per cubic foot. That is 100% RH. If there are only two grains per cubic foot in the home, this is 1/4 of the air capacity or 25% RH.

So, what happens to the air when it's heated? Your furnace will bring in outdoor air to be heated. During the winter months it's very common to find outdoor RH at 70% and air temperature at +10˚ F. When this air is heated to 70˚ F, the indoor RH drops to 6%, this is similar dryness to desert conditions. The only solution is to add water vapor to the air – humidification.

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Enjoy the benefits of whole-home humidification

Humidification, the process of adding moisture to the air, is one of the most important aspects of total indoor comfort, yet it's one of the least understood. One reason is that humidity is an intangible. It can't be seen, touched, or smelled. It has no color, no sound. However, its presence, when controlled properly, offers many proven benefits.

PROVIDE TOTAL *comfort*

Heating your indoor air dries out your skin. This not only makes you feel itchy but can also make you feel chilly.

This cold effect is not the only discomfort caused by too dry air. Annoying static electricity is another indication of low humidity levels. Proper relative humidity (RH) will reduce this discomfort.

Aprilaire whole-home humidifiers provide maximum comfort throughout your entire home—every hour, every day, all season long, without the mess and inconvenience of portables.

HELP PROTECT YOUR FAMILY'S *health*

Air that is too dry can make you more susceptible to catching cold or flu viruses. How? Dry air dries out your nasal membranes and makes the lining of your nose more susceptible to bleeding and infections. Also, low levels of humidity have been linked to the speedier progression and transmission of viruses in the air*.

Proper humidity is a key factor to staying healthy in winter. By keeping your sinuses and airways moist, you reduce the potential for bacteria and viruses to enter your body. Aprilaire humidifiers are proven most effective at providing optimum levels of humidity.

Preserve YOUR HOME AND FURNISHINGS

The addition or reduction of moisture drastically affects the qualities, dimensions, and weights of many materials.

For example, wood, leather, paper, and cloth all contain water. Paper, plastic, cloth, fibers, glue, skin and practically everything else in the home shrink as they lose water, and swell as they take on water. If the water loss is rapid, warping and cracking can take place. As the RH changes, the condition and dimensions of the materials change, as constantly as the weather. This is why humidity must be added and controlled.

Furniture construction is affected as glue dries out, joints separate, and cracks appear. Plaster and drywall dries out, pianos, organs, and other musical instruments lose their tone. Pieces of art, books, and documents dry out and can break or crack.

Your home and its furnishings make up what is likely your largest investment. By providing constant humidity control, Aprilaire humidifiers help to keep them in good condition, maintaining their value and extending their life.

SAVE MONEY ON *energy* BILLS

Studies suggest approximately 74% of a home's infiltration occurs at the home's envelope (perimeter walls, windows, and doors). A published study indicates the framing around doors, windows, etc., will have less shrinkage when the proper inside RH is maintained. Therefore, proper inside RH may reduce infiltration of outside air, because the cracks between the framing and the supporting structure will be reduced. With minimum shrinkage, there is less crackage, reducing infiltration, thus increasing energy conservation.

An Aprilaire whole-home humidifier also allows you to feel warmer at lower thermostat settings. The U.S. Environmental Protection Agency reports that you can save up to 4% on your heating bill for every degree you lower your thermostat.

*1. Department of Microbiology, Mount Sinai School of Medicine article, Infulenza Virus Transmission Is Dependent on Relative Humidity and Temperature; 2007; New York, New York, United States of America http://www.plospathogens.org/article/info:doi/10.1371/journal.ppat.0030151

2. Oregon State University College of Oceanic and Atmospheric Sciences www.pnas.org/cgi/doi/10.1073/pnas.0806852106

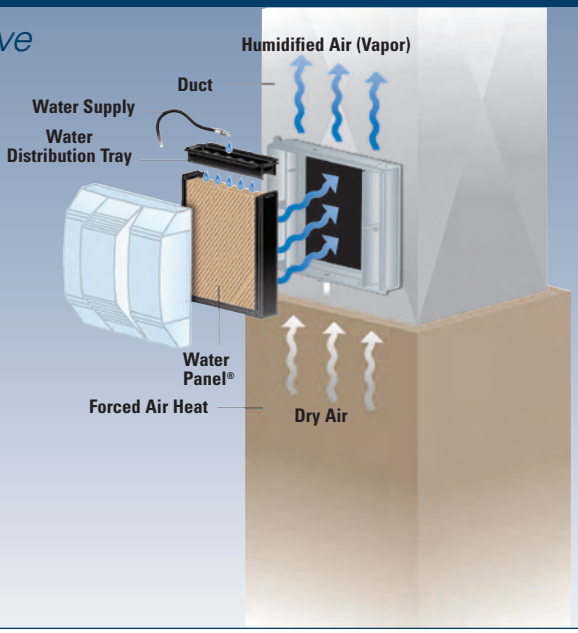
The Aprilaire Advantage

Reliability | Whole-home Capacity | Automatic Control | Simple Maintenance | 5-Year Warranty

Aprilaire offers a full line of evaporative and steam humidifiers. Both technologies are effective at delivering the right levels of humidity throughout your entire home; however, it's important that the right product is selected to ensure your satisfaction.

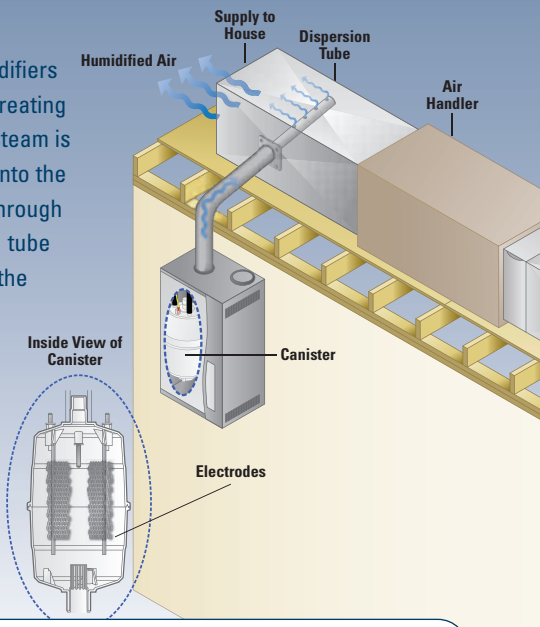
Evaporative

Evaporative humidifiers use forced-air heat to provide pure vapor humidity; preventing minerals from entering the air stream.



Steam

Steam humidifiers boil water creating steam, the steam is introduced into the air stream through a dispersion tube mounted in the duct.



Ask Your Indoor Air Quality Professional to Recommend the Right Choice for *Your* Home.

	Application	Recommendation	
		Evaporative	Steam
Home Size	Up to 4,200 ft² tight home	✔	
	Up to 6,200 ft² tight home		✔
Other Variables	Space to mount on duct	✔	
	No freezing concerns	✔	
	Lowest cost to install	✔	
	Easiest to maintain	✔	✔
	Lowest cost to operate	✔	
	Low heating system run-time	✔	✔
	Heat pump installation	✔	✔
	Possibility of freezing		✔
	Cannot mount on duct		✔

Get green with greater comfort from Aprilaire

Whether you're updating your home to be more healthy, energy-efficient and sustainable or you're building a new green-certified home, Aprilaire offers a complete line of innovative products designed to improve the quality of indoor air. Whole-house humidifiers help prevent premature aging of your home's structure, provide optimum comfort and can protect respiratory systems against viruses and bacteria. Humidity control helps qualify your home for the Green-Built Certification Program of the National Association of Home Builders.

Digital Control

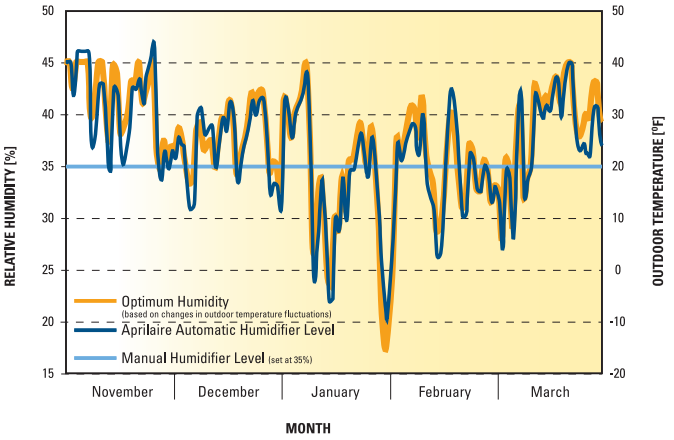
Digital Control provides accurate information and automatically delivers proper humidity levels continually; regardless of temperature or conditions.

1. Know your relative humidity.
2. Know when your system is running.
3. Know when to replace the water panel.
4. Know immediately when service is needed.
5. Turn on the HVAC blower for humidification

What you should look for in a humidifier

1 CONTINUOUS AUTOMATIC CONTROL – 24/7

The optimum levels of relative humidity in your home fluctuate with the changes in outdoor temperature. An Aprilaire automatic humidifier continually monitors and responds to both outdoor temperatures and indoor relative humidity, delivering optimum levels of humidity throughout your home. You never have to monitor your settings or wait until you feel uncomfortable. The automatic set-it-and-forget-it control keeps your home's humidity level exactly where you want it.



APRILAIRE WHOLE-HOME HUMIDIFIER

2 WHOLE-HOME CAPACITY

An installed Aprilaire whole-home humidifier adds the right amount of soothing moisture to your entire home. To achieve the same effect with a portable unit, you would need to place one in every room of your house.

PORTABLE UNITS

3 MINIMAL MAINTENANCE, TOTAL CONVENIENCE

To maintain the performance of a portable unit, you must continually monitor the tank levels and clean and fill them regularly. A whole-home system is installed out of your living space as part of your heating system, providing quiet operation without the messy tank. For your convenience, simple, easy maintenance is designed into every Aprilaire humidifier.

4 RELIABILITY

A good humidifier operates so that working parts are not affected by the build-up of mineral deposits. Aprilaire humidifiers are designed so the working parts are replaced every humidifier season, eliminating the requirement to clean and scrub vital components, increasing performance and reliability.

There's no need to experience the discomfort, health problems or damage to your home and furnishings caused by air that is too dry. Install an Aprilaire whole-home humidifier with Automatic Digital Control and you'll never worry about proper humidity levels in your home again.

The bottom line....
whole home + automatic digital control = peace of mind.

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Aprilaire Humidifier Specifications

	A. Unit Size *(inches)* B. Plenum Opening *(inches)*	*Capacity* *gpd = gallons per day*	Electrical Data
Model 700*/700M** Powered Unit – Built-in fan that pulls heated air directly from the furnace.	A. 15-29/32W x 18H x 10-11/32D B. 14-3/4W x 14-5/16H	18 gpd	120V-60Hz 0.8 AMP
Model 600*/600M** Bypass Unit – Uses the furnace blower to move air through a Water Panel.®	A. 15-3/8W x 15-3/4H x 10-1/4D 6" dia. round opening B. 10W x 12-3/4H	17 gpd	24V-60Hz 0.5 AMP
Model 400*/400M** Bypass Unit – Uses 100% of water and evaporative technology that eliminates the need for a drain. ***Conserves water*** Aprilaire®	A. 15-3/8W x 15-3/4H x 10-1/4D 6" dia. round opening B. 10W x 12-3/4H	17 gpd	24V-60Hz 0.5 AMP
	^NOTE: *Heat pumps – Model 400 can be installed in heat pump applications. However, due to the fact that heat pumps deliver lower temperature air to the home than gas furnaces, evaporation will be approximately 60 % of rated capacity. (With other Aprilaire models hot water can be used instead of cold to maximize evaporation. However, due to the nature of the wicking water panel in the Model 400 hot water provides no extra benefit.) As such, your dealer will need to take the size and age of your home into consideration to ensure the Model 400 will provide satisfactory comfort and protection through adequate humidification.*		
Model 500*/500M** Bypass Unit – Designed for smaller homes.	A. 15-5/8W x 13H x 10-1/4D 6" dia. round opening B. 9-1/2W x 9-1/2H	12 gpd	24V-60Hz 0.5 AMP
Model 800 Steam Humidifier – For applications when evaporative units are less practical (attics, crawl spaces, closets, milder winter climates, non-forced air heating source).	A. 10-1/8W x 20-7/8H x 7-1/8D B. N/A	11.5 gpd 20.5 gpd 23.3 gpd	120V-60Hz 11.5 AMP 208V-60Hz 11.5 AMP 204V-60Hz 11.5 AMP

**** = Automatic Digital Control (shown)***

*****M = Manual Control*** *For those rare occurrences where an automatic control is not practical, Aprilaire digital control can be installed in manual mode, while still delivering the accuracy and information you need for optimum performance.*

Warranty *– All Aprilaire models are warranted for five (5) years from date of installation for parts.*

Heat Pumps *– Plumbing the humidifier to hot water is recommended on all heat pump installations or if it is installed to operate independently of a call for heat.* ***(See ^NOTE for Model 400)***

Bypass humidifiers *can be installed on the supply or return plenum.*

- *Water feed rate for the Model 700, 350, and 360 is 6 gph; the Models 500 and 600 is 3 gph; Model 400 is .7 gph: Model 800 is .6 gph when connected to 120V, 1.1 gph when connected to 208V and 1.18 gph when connected to 240V. (gph = gallons per hour)*
- *Evaporative capacities assume blower active 100% of the time, and plenum temperatures at 120˚F and cold water.*

Humidifier Sizing Chart (8' ceilings)

Structure tightness	500 ft²	1000 ft²	1500 ft²	2000 ft²	2500 ft²	3000 ft²	4000 ft²	5000 ft²
	Humidity needed (GPD per AHRI)* Guideline F							
Tight	0.1	4.3	6.4	8.5	10.6	12.7	17	21.2
Average	1.3	8.6	12.8	17	21.3	25.4	34	42.6
Loose	2.6	12.7	19.1	25.5	31.8	38.1	51	63.6

**AHRI = Air Conditioning, Heating, and Refrigeration Institute GPD = Gallons Per Day Guideline F*

- *A family of 4 will add 2 gallons of humidity per day through everyday activities like breathing, cooking, bathing and washing.*

Aprilaire offers a full line of comfort accessories that improve indoor air quality throughout your home.
Humidifiers, Dehumidifiers, Air Cleaners, Zoned Comfort Control™, Thermostats and Ventilation.
For the ultimate in quality, performance, reliability and sustainability:
Ask for Aprilaire, Fresh Ideas for Indoor Air.

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