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# HUMIDAIRE FH400B Owner's Manual

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*All Humidifiers  
Are Not  
Created Equal.*





## Why you need humidity

Outside air infiltrates your home to replace the thousands of cubic feet of air consumed by your furnace, water heater and fireplace. When this air is heated, it dries out your home. You need to replace this moisture with a humidifier.

As an example, if outside air at 20° with 60% relative humidity infiltrates your home and is heated to 72°, the relative humidity drops to only 8%. You need 25-45% for comfort and well being, but outside air infiltrates your home and robs you of the necessary humidity.

Proper humidity makes you feel more comfortable, protects your home and furnishings from drying and cracking, and reduces annoying static electricity that shocks you when you touch anything metal. Because you are comfortable with a lower thermostat setting, you can save from 10% to 20% on your fuel bill, too.

## How do they work

Humid-Aire humidifiers are the answer to all the dry air problems in your home. When the relative humidity drops below the set point, the humidifier will automatically begin to supply water to the water pad or media. As the dry air passes through the water media or pad, air is humidified and carried throughout your home as water vapor. As a result, lower heating costs are achieved. In addition this stops wood shrinkage, static electricity and other problems which normally occur without humidity.

All Humid-Aire humidifiers produce humidity in a safe and pure water vapor form. No mist or droplets are present which can carry impurities. All minerals and impurities left from the evaporation process are flushed down the drain with ease.



MODEL	FH 182H	FH214H	FH212H	FH200H	FH400(A,B,C)
Type	Bypass flow-through	Self-powered flow-through	Power rotating pad by-pass	Power rotating pad by-pass	Power rotating disc
Mounting Location	Plenum or return supply	Warm air plenum	Plenum or return supply	Plenum or return supply	Under duct supply side
Capacity Gal/Day	19.4	21.4	21.2	20.0	13,24, or 32
Approx. capacity in sq. ft.	2800	3200	3200	3200	1800,3600 or 4500
Voltage	120 or 24	120	24	24	120
Reservoir or Housing	Fiberglass	Fiberglass	Stainless Steel	Plastic	Lexan
Media	Coated Aluminum pad	Coated Aluminum pad	Foam pad	Foam pad	Bronze Disc
Unit HxWxD	14-1/2"x15-1/4"x8-1/4"	14-1/2"x15-1/4"x10-3/4"	10-1/2"x11-5/8"x11-1/2"	10"x13-1/2"x11-1/2"	8-1/2"x13"x20-3/4"
Plenum Opening HxW	10-1/4"x9-1/8"	10-1/4"x13-3/4"	6-1/4"x7-1/2"	6-1/8"x7-1/2"	11"x12-3/4"
Features	<ul style="list-style-type: none"> <li>• By-pass damper</li> <li>• Built-in leveling bubble</li> <li>• Saddle valve</li> <li>• 6" starting collar</li> <li>• Wall/Duct Mounted humidistat</li> <li>• 15 ft. drain tubing</li> <li>• Right or left hand air inlet</li> <li>• Completely factory assembled</li> </ul>	<ul style="list-style-type: none"> <li>• Integral fan and motor</li> <li>• Power Cord</li> <li>• Built-in Transformer &amp; Relay</li> <li>• Wall/Duct Mounted humidistat</li> <li>• 15 ft. drain tubing</li> <li>• Built-in Leveling bubble</li> </ul>	<ul style="list-style-type: none"> <li>• Flexible by-pass duct</li> <li>• 24V transformer</li> <li>• 24V motor</li> <li>• Adjustable float</li> <li>• Saddle valve</li> <li>• Water supply tubing</li> <li>• Wall/duct mount humidistat</li> <li>• Right or left hand air inlet</li> </ul>	<ul style="list-style-type: none"> <li>• Flexible by-pass duct</li> <li>• 24V transformer</li> <li>• 24V motor</li> <li>• Adjustable float</li> <li>• Saddle valve</li> <li>• Water supply tubing</li> <li>• Wall/duct mount humidistat</li> <li>• Right or left hand air inlet</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy duty gear motor</li> <li>• Separate float compartment</li> <li>• External water level</li> <li>• Air Deflector</li> <li>• Saddle valve</li> <li>• Tilt-in/tilt out mounting</li> <li>• Optional Sentinel Auto Flush</li> <li>• Adjustable float</li> </ul>

## What is relative humidity

Relative humidity is the percentage of moisture in the air compared to its maximum capability to hold moisture under the same conditions.

The average recommended indoor relative humidity should be around 35% and up to 45% in warmer climates. The Sahara Desert has an average of 25% relative humidity. However, the average heated home has between 13 and 16%.

In winter turning up the thermostat to increase the warm air flow does not work. It is this dry warm air acting like a sponge that soaks up all the moisture from everything it touches. This lack of moisture will not only leave people feeling cold, but can cause the following additional problems if the humidity level has not been achieved:

## What effects does dry air cause

1. Upper respiratory conditions in which you can have itchy skin, dry throat coughs and cracked nasal membranes, and other physical annoyances.
2. Wooden doors, window frames and furniture joints can shrink, warp or even come apart. Hard wood floor seams can separate. Dry air can even damage wooden musical instruments.
3. Static electricity caused by dry air is a problem. As you move around on carpeting, there is a voltage build-up in your body which can shock another person, and even interfere with your electronic devices.
4. Wall paper may start peeling at the edges.



**FH 1000-L(10,20,24)**

**FH (10,16,20)**

**MA115PH**

**MA115H**

**MA315H**

	Type	Power rotating disc	Power rotating disc	Steam	Steam	Steam, self contained
Mounting Location	Under duct supply side	Under duct supply side	Plenum	Under duct	Near area to be humidified	
Capacity Gal/Day	10,20,24	10,16,20	14.4	14.4	14.4	
Approx. capacity in sq. ft.	1500, 3000 or 3600	1500, 2400 or 3000	2500	2500	2500	
Voltage	120	120 or 24	120, 208, or 230	120, 208, or 230	120	
Reservoir or Housing	Lexan	Lexan	Stainless Steel	Stainless Steel	Stainless Steel	
Media	Bronze Discs	Bronze Discs	Heating element	Heating element	Heating element	
Unit HxWxD	8-1/2"x13"x17-1/4"	8-1/2"x13"x17-1/4"	9-1/2"x11-3/8"x12-1/2"	6-1/2"x12-3/4"x19-1/2"	13"x14"x17-3/4"	
Plenum Opening HxW	11"x11"	11"x11"	6-1/2"x7-1/2"	15-1/2"x11"	4-7/8"x17-3/4" Air duct outlet	
Features	<ul style="list-style-type: none"> <li>• Clear-handly hose</li> <li>• Heavy duty gear motor</li> <li>• External water level</li> <li>• Direct flush drain assy.</li> <li>• Saddle valve</li> <li>• Tilt in/tilt out mounting</li> <li>• Power cord</li> <li>• Adjustable float</li> </ul>	<ul style="list-style-type: none"> <li>• Clear-handly hose</li> <li>• Perm. lubricated motor</li> <li>• Separate float compartment</li> <li>• Saddle valve</li> <li>• Direct flush drain assy.</li> <li>• Power cord</li> <li>• Adjustable float</li> </ul>	<ul style="list-style-type: none"> <li>• Wall/Duct Mounted humidistat</li> <li>• Saddle valve</li> <li>• Float with mercury switch</li> <li>• Optional Sentinel Auto Flush</li> <li>• Water supply tubing</li> <li>• Automatically turns on furnace blower when humidity is needed and off when set humidity level is reached</li> <li>• Power cord</li> </ul>	<ul style="list-style-type: none"> <li>• Wall/Duct Mounted humidistat</li> <li>• Saddle valve</li> <li>• Float with mercury switch</li> <li>• Optional Sentinel Auto Flush</li> <li>• Water supply tubing</li> <li>• Automatically turns on furnace blower when humidity is needed and off when set humidity level is reached</li> <li>• Power cord</li> </ul>	<ul style="list-style-type: none"> <li>• For homes or apartments without forced air heating system</li> <li>• Wall mounted humidistat</li> <li>• Saddle valve</li> <li>• Float with mercury switch</li> <li>• Water supply tubing</li> <li>• 2 balanced fans @ 290 CFM</li> <li>• Power cord</li> </ul>	

# *Adams Cleanaire electronic air cleaners will complete your home comfort system.*

## *Why you need Cleanaire®*

The Adams Cleanaire cuts heating and cooling costs. By lowering the amount of indoor air exhausted and the amount of outside air brought in which must be cleaned, heated, cooled, humidified or dehumidified, Adams Cleanaire saves you money.

With more insulation and with tighter seals around doors and windows, the modern home has less natural ventilation. That's why so many homeowners open doors and windows to "air out" their homes. Adams Cleanaire "airs out" your home without opening doors and windows.

It saves even more energy, because it doesn't restrict airflow the way mechanical filters do as they load.

Allergy sufferers will notice that the small particles are removed that can irritate your eyes, nose, throat, lungs and even your skin. Removes 99% of the bacteria-laden pollen and mold spores. Removes 95% of the airborne dust and dirt that gets into your home. Removes cooking and tobacco smoke.



## *How they work.*

The principle is called "Electrostatic Precipitation", but it's not that complicated. The air in your home is continually circulated through your forced air system to be heated or cooled. Carrying millions of airborne dirt and pollen particles, the air circulating through the ductwork must pass through the "CLEANAIRE CELL" of the Adams Electronic Air Cleaner.

- 1 Most of the large particles are caught on the pre-filter screen.
- 2 The smaller particles proceed through the screen to the first section of the "CLEANAIRE CELL" where they receive an intensive positive electrical charge.
- 3 Continuing through the "CLEANAIRE CELL" to the collecting section, the now charged particles are attracted and held, like a magnet, by a series of oppositely charged electrical plates...and are held against these until they are washed off.

# ADAMS

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