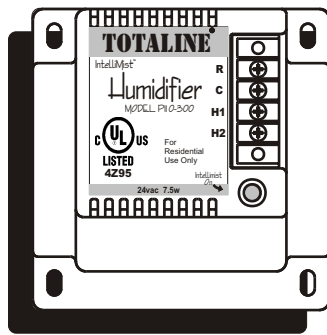


# INTELLIMIST™



# HUMIDIFIER



- INTELLIMIST™ MicroFine Spray
- MICROPULSE™ Technology  
Assures Maximum Efficiency
- Scale Reducing Filter Included
- Up to 24 Gallons Per Day of  
Additional Humidity
- For Use With 1 - 7 Ton HVAC  
Systems
- Designed For Use Only With:
  - P110-0009 Humidistat
  - P474-3000 Humidistat
  - P374-1600 INTELLISTAT™

**USE ONLY WITH CENTRAL AIR CONDITIONING SYSTEMS.  
THE HUMIDIFIER MUST BE MOUNTED OVER THE  
EVAPORATOR COIL OR EVAPORATOR COIL DRAIN PAN.  
IF THERE IS NOT A DRAIN PAN, ONE MUST BE INSTALLED.**

## TOTALINE®

PATENTS PENDING

Replacement Components Division © Carrier Corporation 3/01



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**CAUTION**



This Humidifier **MUST** be used with **TOTALINE**  
P110-0009, P474-3000 Humidistats or P374-1600 INTELLISTAT™.

Follow *Installation Instructions* for Humidifier carefully.  
UNIT MUST NOT BE INSTALLED WHERE FREEZING TEMPERATURES  
MAY OCCUR. DO NOT INSTALL ON FURNACE JACKET, OR WHERE  
UNIT AND ITS COMPONENTS MAY COME INTO CONTACT WITH HOT SURFACES.

**PACKAGE CONTENTS**

P110-300 INTELLIMIST™ Humidifier Assy.  
#0862 Tube Assy.  
#0759 INTELLIMIST™ In-Line Water Filter  
#0800 Water Filter Mounting Bracket  
#0152 Mounting Kit

**AVAILABLE INTELLIMIST™ ACCESSORIES**

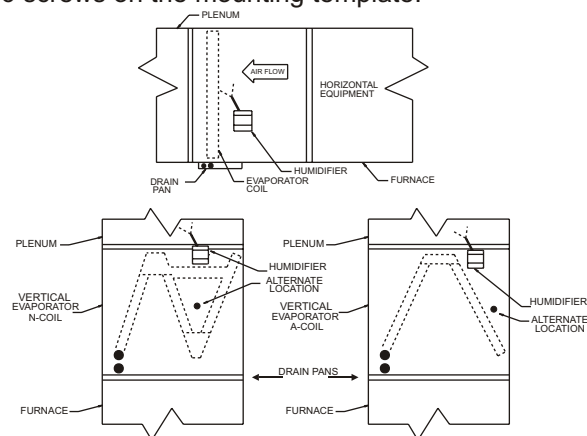
P110-0009 Humidistat  
P474-3000 Humidistat  
P374-1600 INTELLISTAT™  
(Combination Thermostat / Humidistat)  
P110-0008 Replacement Filter / Nozzle

**USE ONLY WITH CENTRAL AIR CONDITIONING SYSTEMS.  
THE HUMIDIFIER MUST BE MOUNTED OVER THE  
EVAPORATOR COIL OR EVAPORATOR COIL DRAIN PAN.  
IF THERE IS NOT A DRAIN PAN, ONE MUST BE INSTALLED.**



## 1 SELECT MOUNTING LOCATION

1. The humidifier should be installed on the supply plenum, preferably near the coil. Mounting near the evaporative coil, if applicable, will allow any excess moisture to exit the system via the condensation drain pan.
2. On vertical equipment allow clearance of the humidifier and related components such as the water filter and plastic water line, from the exhaust vent.
3. On vertical equipment, if the nozzle is spraying away from the coil, there should be a minimum of three feet from the nozzle to the top of the plenum. **If this is not available, then point the nozzle of the humidifier directly into the evaporative coil.**
4. Always install downstream of an electronic air cleaner. Drill or 'knock out' a 1" hole & 4 mounting holes for the #6 screws on the mounting template.





**2**

## ASSEMBLE THE HUMIDIFIER

Slide the mounting nut over the tube assembly.  
(fig. 1)

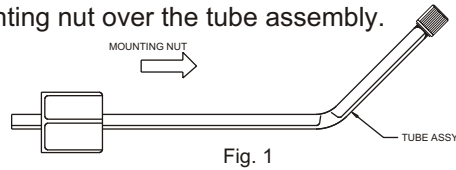


Fig. 1

Insert the tube assembly into the humidifier valve. Secure by turning the nut clockwise until finger tight, then additional 1/4 turn.  
(fig. 2)

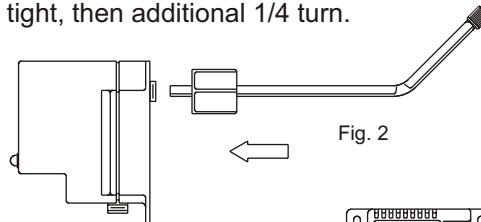


Fig. 2

**3**

## INSTALL THE HUMIDIFIER

**Be sure to use a cold water connection.**

Mount the humidifier to the sheet metal using the four #6 mounting screws supplied. (Page 3)

The in-line water filter should be mounted below or to one side of the humidifier assembly in a vertical position as shown. (Fig. 3)

Be sure the flow arrow on the filter is pointing to the humidifier.

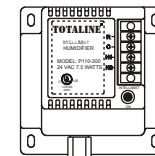
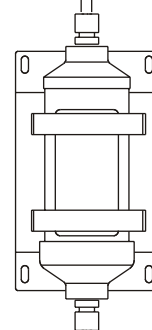


Fig. 3



**4****WATER CONNECTION**

Run 1/4" tubing from the water supply to the in-line filter. The saddle valve and tubing is supplied for this purpose.

**SADDLE VALVE INSTALL**

The self piercing feature of the saddle valve is for copper pipe only. All other materials of pipe, drill a 1/8" hole in the pipe. Turn the handle clockwise to expose the piercing pin beyond the seal approximately 3/16". Place the body of the valve over the hole in the pipe so the pin fits in the hole. Tighten the bottom clamp evenly. Turn handle clockwise and close the valve.

**CAUTION****SAFETY NOTE**

**USE COPPER TUBING WHERE INSTALLATIONS  
MAY CAUSE DAMAGE IF A WATER LEAK OCCURS.**

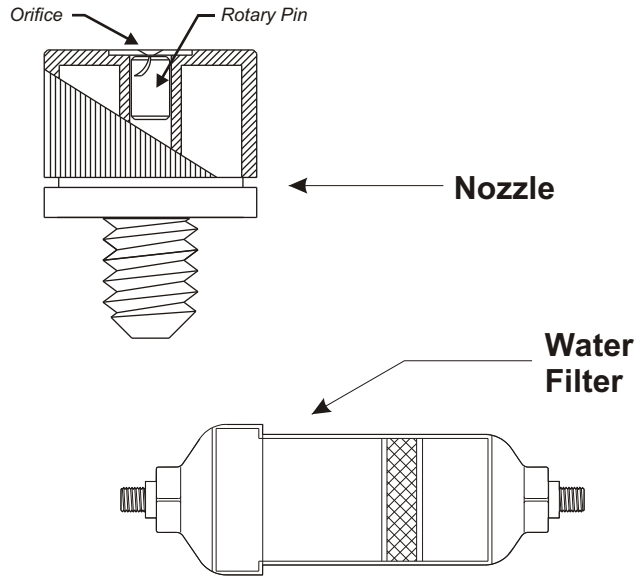
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WATER HARDNESS

If water hardness is 15 grains/gal or under the filter & nozzle (P/N P110-0008) should be replaced once a year.

If the water hardness is higher than 15, the filter & nozzle should be replaced every 3 months during the heating season.



If the humidifier is run with the fan in the non-heating season, then the filter/nozzle should be replaced every 6 months. Water hardness test kits are available at local home improvement centers.

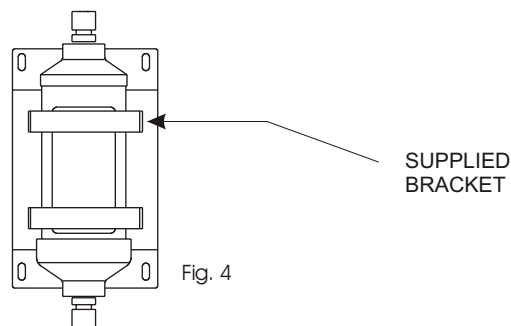


## WATER FILTER

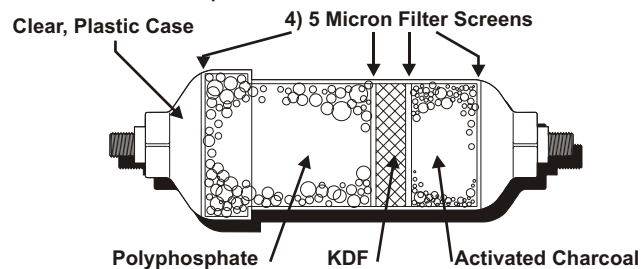
The water filter should be mounted using the supplied bracket. (Figure 4)

Up to 3 gallons of water should be run through the filter from the supply until the water appears clear, not gray or cloudy, before connection to the humidifier. This may be done using a short piece of tubing on the output of the filter.

Connect to the humidifier and check for leaks.



The water filter supplied with the humidifier is specifically formulated for optimal operation. The filter design inhibits bacteria, odor, and calcium buildup. The filter should only be replaced with Totaline part # P110-0008.



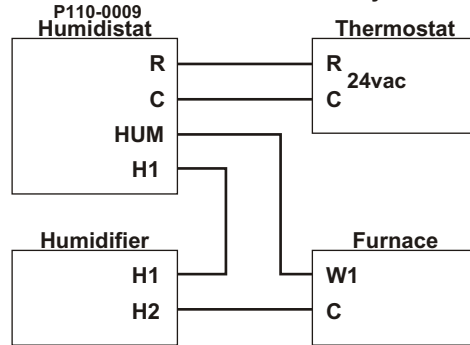
In the rare instance white powder is noticed on the interior of the house, this is an indication the filter needs to be replaced.



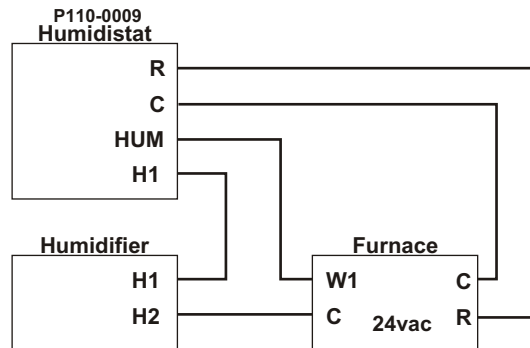


**5 WIRING DIAGRAMS**

When R & C are used from a nearby thermostat:



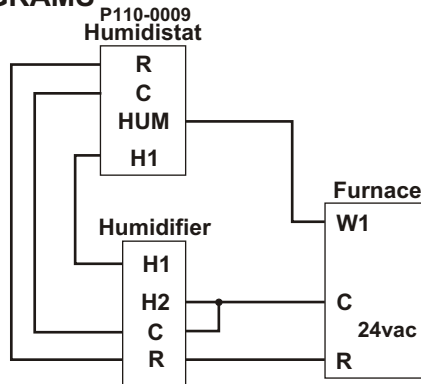
If only 1 wire is available from the furnace to the humidistat, W1 may be obtained from the thermostat.



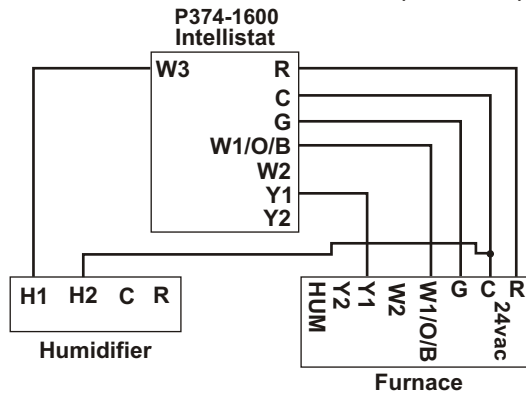


**5 WIRING DIAGRAMS**

The C & R terminals on the IntelliMist Humidifier are not connected internally. They are provided for an easy 'tie-off point' when using 1 multi-conductor cable from the Humidifier to the humidistat. In this case H2 would need a jumper to C.



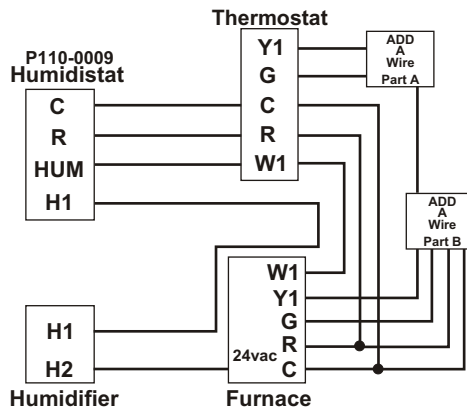
When connected to the IntelliStat (P374-1600):





**5 WIRING DIAGRAMS**

When only 5 wires are available to the thermostat and humidistat, a P474-0410 Add-A-Wire may be used as shown.



**6 START UP**

- Open all supply water valves to permit water flow to the humidifier.
- Check for leaks.
- Set humidistat to highest demand, 99%.
- When the humidifier mist is on, the Red LED indicator, on the top of the housing, will be on.
- When connected to the INTELLIMIST™ control, the Red LED will be observed to go on and off with the MICROPULSE™ technology control.
- Reset the humidistat to the recommended setting, ~35%.



## IntelliMist Humidifier Troubleshooting Guide

### 1. Humidity Reading Will Not Increase

When humidity levels are in the teens it may take several weeks to notice an increase in humidity in your home. This is due to the fact that virtually all of the moisture has evaporated from the wood, drywall, carpets, draperies, and furniture. Until this moisture is replaced, materials will absorb moisture from the air, causing very little humidity rise in the rooms.

### 2. In-line Filter Installation

When installing the in-line water filter, it is important that enough water be flushed through the filter. Up to three gallons of water (or until the water flow is clear) should be run through the filter to prevent micro fine particles from clogging the sprayer nozzle.

### 3. Humidifier Water Connections

The plastic fittings supplied with the humidifier should be finger tightened, plus 1/4 turn with pliers. Over tightening with pliers or a wrench will cause the fittings to crack and split, thus leaking water. The plastic fittings are OK to use on copper pipe. The brass compression fittings should be tightened with a wrench, and then re-checked for leaks. The brass nut should slide on the tube first, followed by the compression sleeve, and the brass tube end inserted last. Then the tube should be inserted into the humidifier valve base and tightened with pliers or a wrench.



#### **4. Too much moisture in the duct**

The IntelliMist Humidifier must be used with either the Totaline Humidistat (P110-0009) or Intellistat (P374-1600). Any other controller will cause a continuous (non-pulsed) spray. Check setup step 1 (Humidistat) or step 9 (Intellistat) to make sure pulse is turned on - if pulse is set to off, the humidifier sprays constantly, producing too much water. Make sure the controller is set to the correct tonnage to match the air handler, setup step 3 (Humidistat) or step 10 (Intellistat). Humidistat: make sure HUM wire from humidistat is connected to the W or W1 terminal on the furnace, but NOT to the G or fan terminal. Interlocking the humidistat with the fan will cause the humidifier to run during fan-only or cooling, which will result in excess water in the duct. To run the humidifier in fan-only, use the Intellistat. For more information, see Factors that Affect Humidity Control.

#### **5. Can't raise humidity enough**

Make sure the controller is set to the correct tonnage to match the air handler, setup step 3 (humidistat) or step 10 (Intellistat). With the Intellistat it is possible to bring on the fan and humidifier any time the humidity is below the setpoint. To enable this feature turn on setup step 11, which will help to increase humidity in the space. Humidity can also be increased by running the fan continuously (Fan On button) or by using the programmable fan feature of the Intellistat to bring the fan on at selected intervals. Check the position of humidifier spray nozzle to make sure good evaporation is occurring - on short plenums if the spray is hitting the end of the plenum, it is better to turn the spray toward the coil.



## **6. Humidifier won't spray**

Check the red LED on humidifier, which must be viewed straight on. When the light is on the humidifier is attempting to spray. If there is no spray, check the nozzle for blockage - if blocked remove and rinse or replace the nozzle. If the light never comes on, the humidifier is not receiving a signal to spray, or has no power. Check the controller to make sure there is a humidity demand - on the humidistat three raindrops will appear when it is calling for the humidifier to spray, on the intellistat a small vertical bar will appear in the lower left corner of the screen. If the symbol appears, check the wiring or, if using the humidistat, see below.

## **7. Raindrops appear on the humidistat but the humidifier won't spray.**

There may be a compatibility problem with the furnace. Add a pilot relay with the coil connected to W and C on the furnace and the contacts to HUM and R on the humidistat. This will isolate the humidistat from the 24 VAC and solve the problem. Humidistats manufactured after 5/00 have built in isolation.

## **8. What are the R and C terminals for on the Humidifier?**

These terminals are merely tie-off points provided for convenience. It is not necessary to connect them to anything.



## **9. Increasing Humidity in the Home: Factors that Affect Humidity**

For homes that are in very dry climates with humidity levels in the teens, it may take several days or up to a week to notice increases in humidity in the spaces. This is due to the fact that virtually all the moisture has evaporated from the wood, drywall, carpets, draperies, and furniture. Until this moisture is replaced materials will absorb moisture from the air, causing little or very little relative humidity rise in the rooms. As with any whole-house humidifier, the Humidifier can only increase the moisture in the house when the fan is running. Therefore, in climates where little heating is required and the heating/fan system is therefore run very few hours per day, the fan must be run in the non-heating modes to increase the humidity in the rooms.

### **This can be accomplished in one of three ways.**

1. The Intellistat in setup step 11 can be set to ON, then the Intellistat will run the fan and humidifier any time the humidity is below the setpoint.
2. The fan in setup step 13 through 15 of the Intellistat can be programmed to run so many minutes per hour during certain hours of the day. The Humidifier will run any time the fan runs and the humidity is below the setpoint.
3. The fan can be run continuously with the fan ON button. The Humidifier will then run constantly on a call for humidity with the Intellistat.



## 10. Factors That Affect Humidity: Additional Notes

Even though the IntelliMist Humidifier puts out more humidity than any other whole-house humidifier, up to 24 gallons per day, it may not be possible to increase the humidity to a high level especially if the outside humidity is fairly low. For instance, with an outdoor air temperature of 40 degrees and 20% relative humidity, when the air is heated up to 72 degrees, the resulting humidity in the house is 8%. The amount of humidity that can be added to the air is limited by the airflow in the ductwork and the temperature of the air. Hot air, which you have when the furnace is running, can hold 6 times as much moisture as the air can hold when only the fan is running. It is much easier to increase the humidity in the house with the furnace running versus when only the fan is running. Both applications are limited by the amount of moisture that can be put into the air going through the ductwork without the moisture actually condensing in the ductwork.





## OUTPUT CHECK

To check that all the terminals are in proper working order at the factory Carrier has created a test screen located in the calibration mode of the Humidistat.

1. Push the 'on/off' button and the 'down' arrow until all icons on the LCD screen are visible.
2. Now push the 'on/off' button once more.
3. The screen you are currently seeing is our test mode to ensure proper wiring between the Humidistat and the Humidifier. Push the 'flow' button to energize the Intellimist Humidifier. Water droplets on the bottom left hand corner of the screen will appear and the red LED will energize. Push the 'flow' button once more to deenergize the Intellimist Humidifier.
4. The screen you are now seeing is our test mode to ensure proper wiring between the Humidistat and the Furnace board, if your furnace is currently energized the Humidistat will display an H in the upper right hand corner of your screen. If the furnace is not energized a dash will appear in the upper right hand corner of your screen.
5. Push the 'on/off' button to exit the test screen and enter into the normal operating screen.

## Warranty

**One-Year Warranty** - This CARRIER CORPORATION (herein referred to as "COMPANY") product is warranted to be free from defects in material and workmanship. If it appears within one year from the date of original installation, whether or not actual use begins on that date, that the product does not meet this warranty a new or remanufactured part at the COMPANY'S sole option, to replace any defective part will be provided without charge for the part itself; PROVIDED the defective part is returned to our distribution through a qualified servicing dealer.

**THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS** incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

**LIMITATIONS OF WARRANTIES** – ALL IMPLIED WARRANTIES INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER.

ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

### THE COMPANY WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owners manual including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lighting, accidents, corrosive environments or other condition beyond the control of the Manufacturer.
5. Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
6. Manufacturer products installed outside the continental U. S. A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs from any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.