



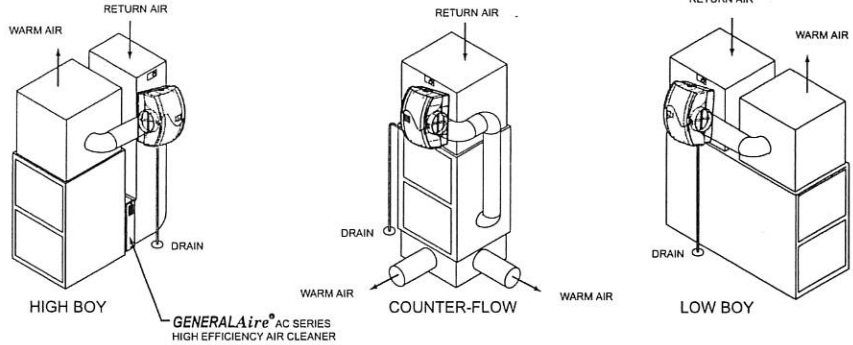
**INSTALLER: PLEASE FILL OUT AND MAIL GUARANTEE CARD AFTER INSTALLATION IS COMPLETE. LEAVE INSTALLATION INSTRUCTIONS WITH HOME OWNER**

**PRECAUTION:** The installer should be an experienced service technician. Disconnect electrical power before beginning installation. Do not install where temperatures fall below 32 degrees F or where plenum temperatures exceed 200 degrees F. When wiring into a multi-speed blower circuit see Step 7D.

**INSTALLATION:** The humidifier may be mounted with the 6" outlet to the right or left by inverting the cabinet and reversing the positions of the distributor trough and drain pan. The humidifier may be mounted on the warm or return air plenum with equal efficiency. See Typical Installations.

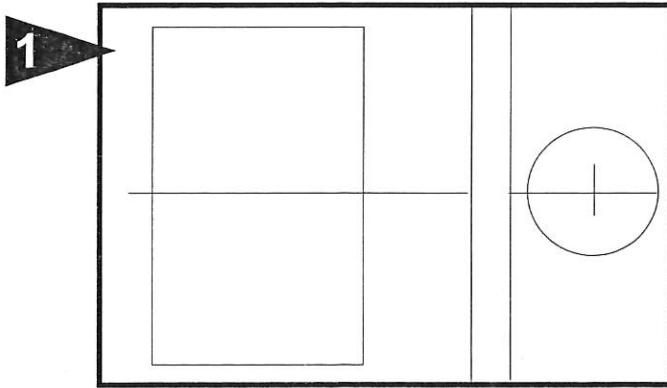
**ADDITIONAL MATERIALS THAT MAY BE NECESSARY:**

1. 1/4" diameter plastic supply tubing or 1/4" copper supply tubing for hot water applications
2. 6" diameter galvanized by-pass pipe
3. electrical wire and wire nuts
4. air pressure switch (G.F. Model #12500 suggested)

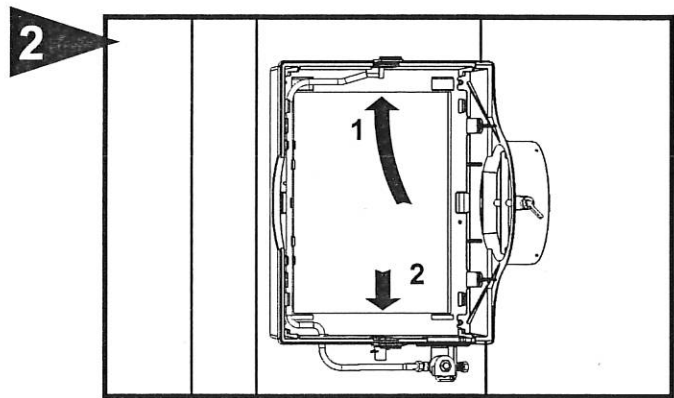


## 900 SERIES FLOW-THROUGH BYPASS HUMIDIFIER

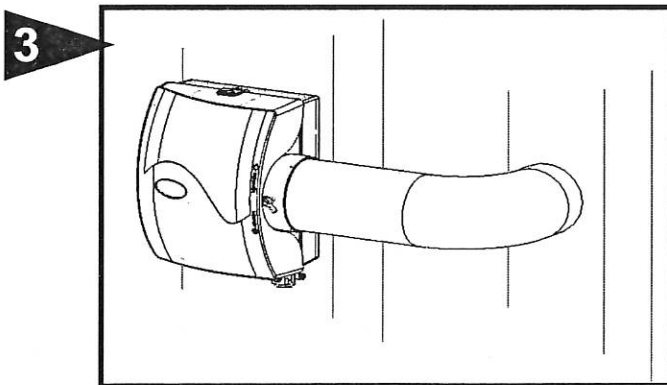
**FOR INSTALLATION ON A VERTICAL  
PLENUM SURFACE OF ANY  
FORCED AIR FURNACE**



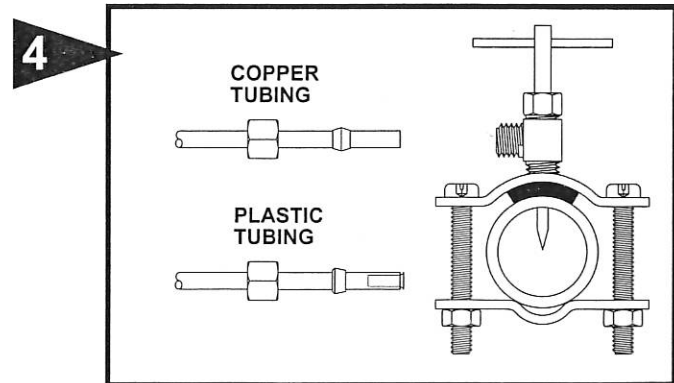
Select location on vertical surface of warm or return air plenum for mounting humidifier. Tape mounting template in place making sure the template is level. Do not install humidifier or 6" bypass pipe where the blanked off ends of a cooling coil will restrict air flow to the humidifier. Extend horizontal centerline from template to the adjacent plenum. Scribe 6" circle 10" to 15" from side of humidifier, on cabinet centerline, using connecting collar as guide.



Cut out center section of template and 6" hole. Humidifier is self retaining. Slide top side in first, then slide chassis down. Level chassis and install center screws. If by-pass pipe installs to opposite side of chassis, bend clip on chassis, remove side discharge, and reinstall discharge to opposite side of chassis. Install remaining four corner screws.



Connect by-pass pipe to collar and humidifier cabinet. Using holes at top and bottom of side panel discharge, pierce 2 self tapping screws through by-pass pipe.



Mount the self tapping saddle valve on either a cold or a hot water pipe. A side or top mount is best to avoid clogging from pipe sediment. Connect 1/4" O.D. tubing to the saddle valve. Copper tubing requires a brass compression nut and brass sleeve. Plastic tubing requires a brass insert inside the tubing, a plastic sleeve on the outside with a brass compression nut.

**NOTE: DO NOT USE PLASTIC TUBING ON HOT WATER OR IN CONTACT WITH ANY HOT PLENUM SURFACE OR DUCT. INSTALLATION OF THIS SADDLE VALVE MUST MEET OR EXCEED LOCAL CODES AND ORDINANCES.**

## SADDLE VALVE INSTALLATION INSTRUCTIONS

### Copper Pipe

1. Retract piercing pin into valve body by turning handle counterclockwise.
2. Screw valve body into upper bracket and tighten.
3. Place rubber gasket over piercing pin.
4. Assemble saddle valve over copper pipe using enclosed screws,

nuts and lower bracket.

5. Tighten screws evenly and firmly. Brackets should be parallel.
6. Complete compression connection to saddle valve outlet.
7. Turn handle clockwise to pierce tubing and close saddle valve.
8. Turn handle counterclockwise to open saddle valve, leave open for several seconds to flush dirt from pipe and tubing.

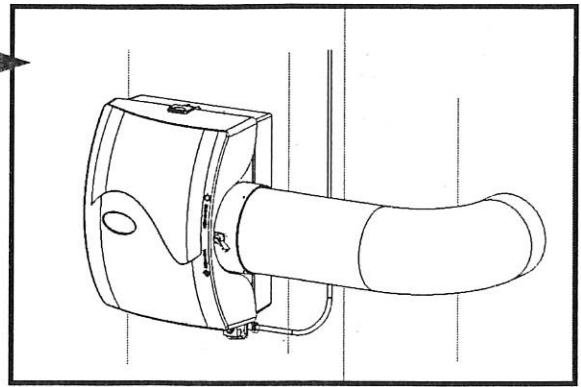
### Steel, Brass or Hard Plastic Pipe

1. Shut off water supply and drain pipe.
2. Turn handle clockwise to expose piercing pin and close saddle valve.
3. Place rubber gasket over piercing pin.
4. Drill 1/8" hole in pipe using a hand crank drill to avoid shock hazard.
5. Assemble saddle valve over steel, brass or hard plastic pipe using enclosed screws, nuts and lower bracket.
6. Tighten screws evenly and firmly. Brackets should be parallel.
7. Complete compression connection to saddle valve outlet.
8. Turn handle counterclockwise to open saddle valve, leave open for several seconds to flush dirt from pipe and tubing.

### Threaded Pipe Fittings

1. Turn handle clockwise to expose piercing pin and close saddle valve.
2. Seal valve body threads using pipe tape or sealant.
3. Install valve into 1/8" NPT fitting.
4. Complete compression connection to saddle valve outlet.
5. Turn handle counterclockwise to open saddle valve, leave open for several seconds to flush dirt from pipe and tubing.

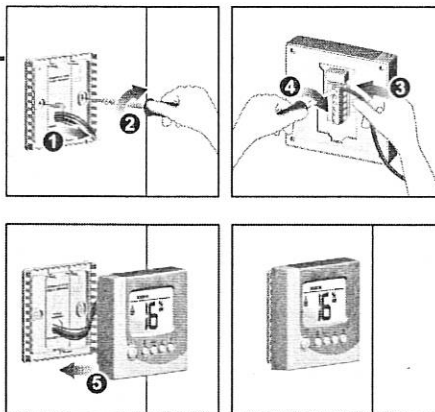
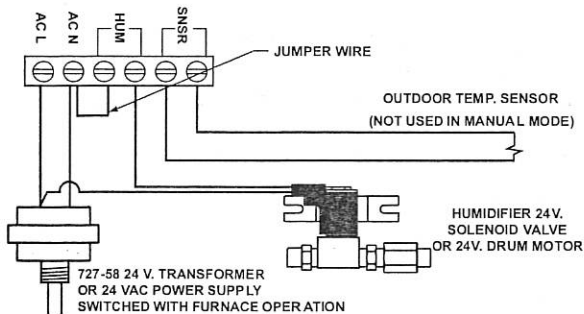
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Connect 1/4" water supply tube to brass filter at inlet of solenoid. DO NOT USE PLASTIC TUBING IN CONTACT WITH ANY HOT PLENUM SURFACE OR DUCT. IF USING PLASTIC TUBING, USE TUBE SUPPORT P189.

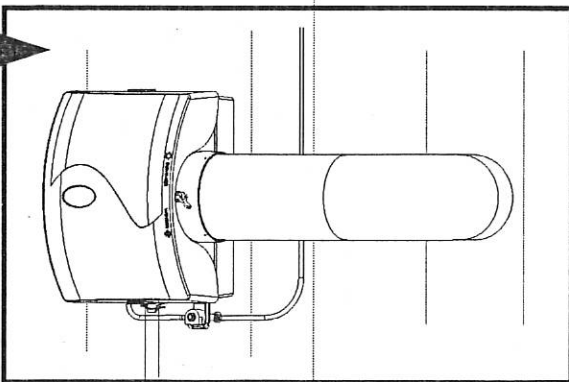
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## E2 HUMIDISTAT



1. Follow the installation instructions supplied with the humidistat.
2. To remove the humidistat from the base, squeeze the louvered base at the top and bottom.
3. Before wall mounting, please remove the gasket.
4. Before return air duct mounting, please remove the breakout piece.

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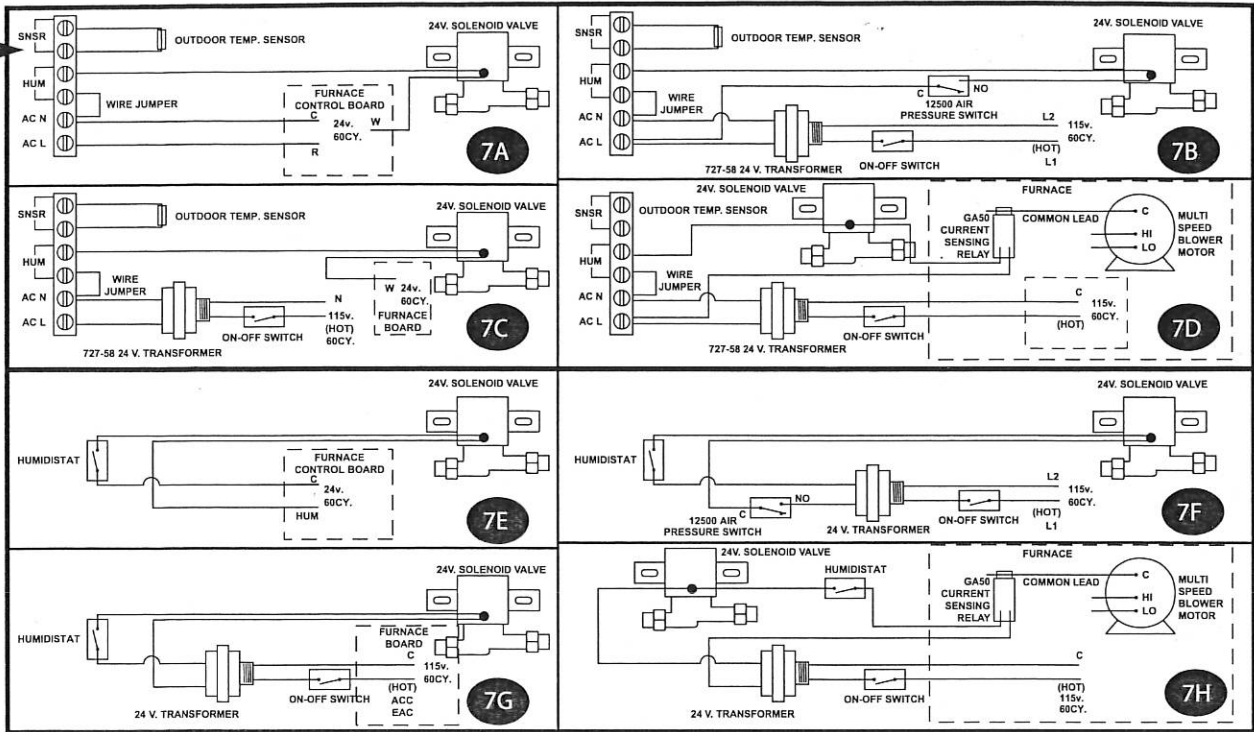
Connect drain hose to 1/2" spout on humidifier cabinet using hose clamp. Run 1/2" hose to suitable drain such as floor drain, sewer or laundry sink. Be sure hose has continuous slope and is not kinked at any point.

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Turn damper knob to winter (open) position. Turn on water supply and check operation of humidifier. Set humidistat to a demand setting. With the furnace off, the solenoid valve should be closed. Start the furnace, the solenoid valve should open when the blower or burner circuit is energized. Check flow of water through distributor trough and evaporator pad. The standard 900-22 orifice will supply approximately 3.5 GPH of water at a line water pressure of 60 psi. For low water pressures (20-40 psi) a larger orifice 900-23 is available to provide the same flow. Leave humidistat set at the recommended setting.

# REVISION TO INSTRUCTIONS

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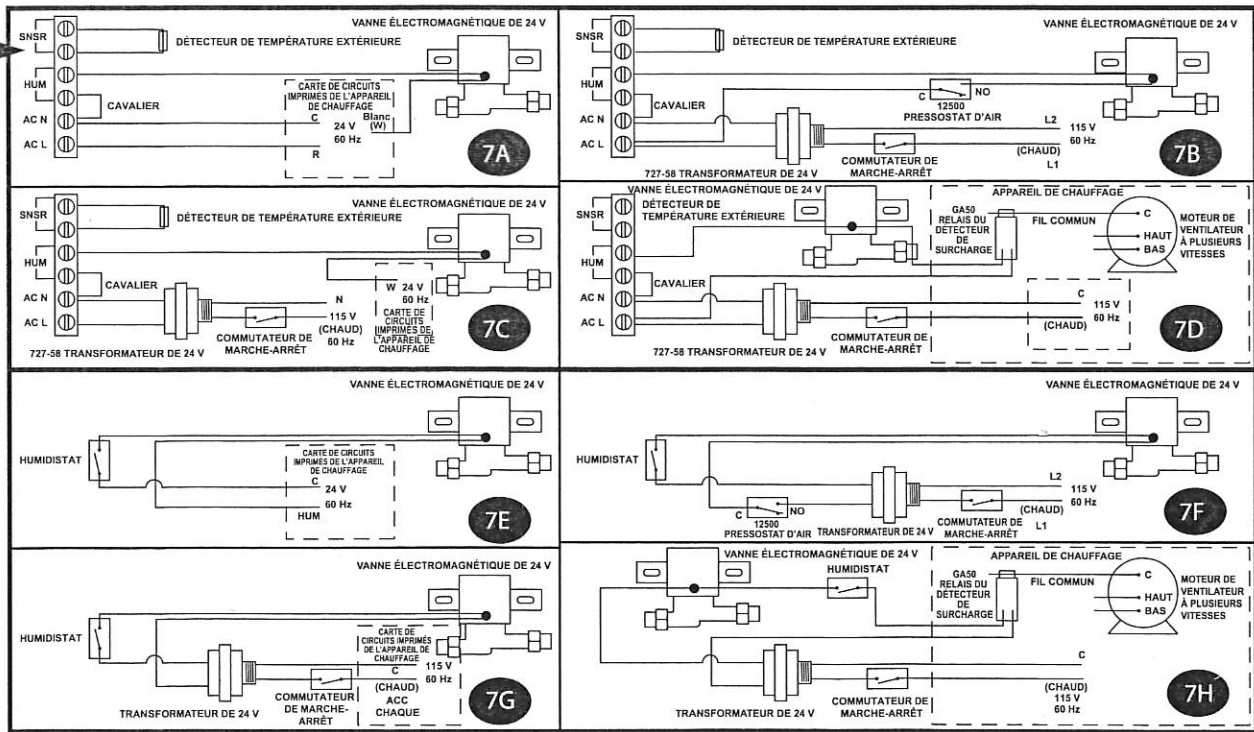
## 7A-7D Electronic Humidistat

- 7A - To furnace control board 24 volts
- 7B - To constant power using 24V transformer and pressure switch
- 7C - To furnace control board 115 volts with 24V transformer
- 7D - To constant power using 24V relay and current sensing relay

## 7E-7H Manual Humidistat

- 7E - To furnace control board 24 volts
- 7F - To constant power using 24V transformer and pressure switch
- 7G - To furnace control board 115 volts with 24V transformer
- 7H - To constant power using 24V relay and current sensing relay

7



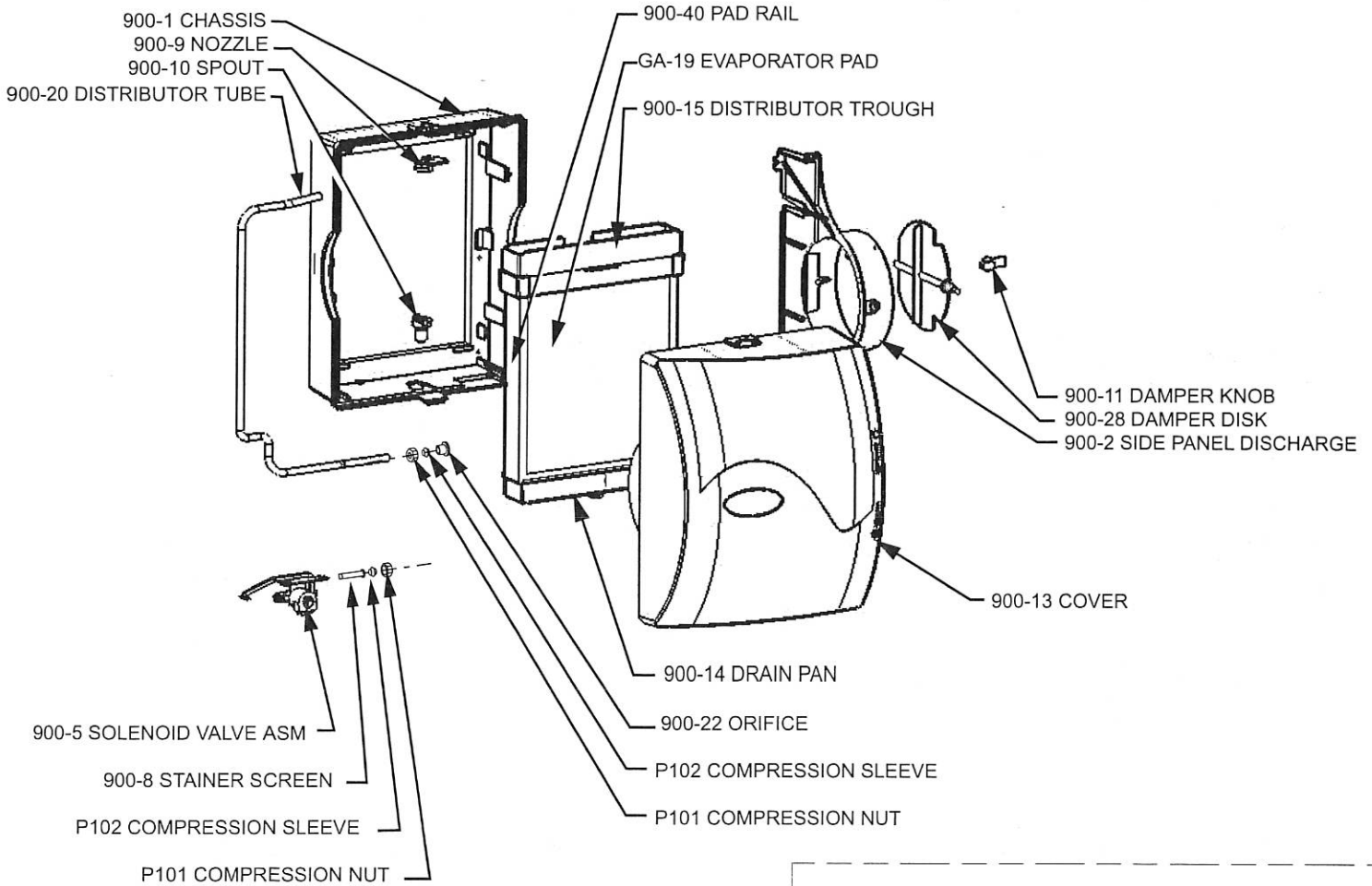
## 7A à 7D Humidistat électronique

- 7A – Vers la carte de circuits imprimés de l'appareil de chauffage de 24 volts
- 7B – Vers la source d'alimentation constante utilisant un transformateur de 24 V et un manostat
- 7C – Vers la carte de circuits imprimés de l'appareil de chauffage de 115 volts avec un transformateur de 24 V
- 7D – Vers la source d'alimentation constante utilisant un relais et un relais du détecteur de surcharge de 24 V

## 7E à 7H Humidistat manuel

- 7E – Vers la carte de circuits imprimés de l'appareil de chauffage de 24 volts
- 7F – Vers la source d'alimentation constante utilisant un transformateur de 24 V et un manostat
- 7G – Vers la carte de circuits imprimés de l'appareil de chauffage de 115 volts avec un transformateur de 24 V
- 7H – Vers la source d'alimentation constante utilisant un relais et un relais du détecteur de surcharge de 24 V

# PARTS LIST FOR HUMIDIFIER



**GENERALAire**  
 RESIDENTIAL AIR TREATMENT PRODUCTS

**FILL OUT AND MAIL THIS  
 WARRANTY CARD AND  
 LITERATURE REQUEST FORM**

- AIR CLEANERS AND AIR PURIFIERS
- HUMIDIFIERS
- DIGITAL HUMIDITY GAGE
- AIR FILTER GAGE
- FUEL OIL FILTERS AND ACCESSORIES

# LIMITED WARRANTY

This humidifier, if properly registered by the return of the warranty registration card to the manufacturer, is warranted to the consumer against defects in materials and workmanship for a period of ten years from the date of installation. Evaporator pads, water strainers or metering orifices are not covered by this limited warranty or any other warranties. Any other defective parts will be repaired without charge except for removal, reinstallation and transportation costs. To obtain repair service under this limited warranty, the consumer must send the defective part or the complete humidifier to the manufacturer.

THERE ARE NO EXPRESS WARRANTIES COVERING THIS HUMIDIFIER OTHER THAN AS SET FORTH ABOVE, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO TWO YEARS. THE MANUFACTURER ASSUMES NO LIABILITY IN CONNECTION WITH THE INSTALLATION OR USE OF THIS PRODUCT, EXCEPT AS STATED IN THIS LIMITED WARRANTY. THE MANUFACTURER WILL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow either limitations on implied warranties, or exclusions from incidental or consequential damages, so the above exclusion and limitation may not apply to you.

Any questions pertaining to this limited warranty should be addressed to the manufacturer. (U.S.A.: The manufacturer has elected not to make available the informal dispute settlement mechanism which is specified in the Magnuson-Moss Warranty Act.)

**GENERAL FILTERS, INC. 43800 GRAND RIVER AVE. NOVI, MICHIGAN 48375-1115 WWW.GENERALAIRE.COM**  
**CANADIAN GENERAL FILTERS, LTD. 39 CROCKFORD BLVD. SCARBOROUGH, ONTARIO M1R3B7 WWW.CGFPRODUCTS.COM**

# CARE AND MAINTENANCE

Your humidifier is engineered to give helpful and trouble-free humidification. For maximum efficiency the following cleaning procedures should be carried out at the end of each heating season:

1. Turn off water supply and electrical power to humidifier.
2. Remove water distributor tube, distributor trough, evaporator pad and drain pan. Clean excessive mineral deposits from the distributor trough, drain pan, pad rails, and humidifier cabinet. A solution of 1/2 vinegar & 1/2 water will help loosen mineral deposits.
3. If the evaporator pad has excessive mineral deposits, replace with a new "GA-19" evaporator pad. Install trough and drain pan. Replace cover.
4. In heavy mineral areas or if the solenoid valve fails to function disconnect the 1/4" water supply line from the solenoid valve. Carefully pull the strainer screen (P.N. 900-6) from the valve body (P.N. 900-5). Clean the mineral deposits from all parts. If the orifice is clogged, it may be opened by inserting a small pin. Reinsert the filter into the orifice fitting and screw the brass strainer body into the solenoid valve.
5. Reconnect the 1/4" water line to the solenoid valve if necessary. Turn on the water supply and check all points for leakage. The operation of the unit may be checked by starting the furnace. The humidifier operates only when the furnace blower is running or the burner circuit is energized. The humidifier is now ready for operation.
6. During the summer, turn off water supply and electrical power to humidifier. Close air damper.

| AT OUTSIDE TEMPERATURE | RECOMMENDED SETTING |
|------------------------|---------------------|
| -20°F -29°C            | 15%                 |
| -10°F -23°C            | 20%                 |
| 0°F -18°C              | 25%                 |
| +10°F -29°C            | 30%                 |
| +20°F -7°C             | 35%                 |
| +30°F -1°C             | 40%                 |

# HOW THE HUMIDIFIER WORKS

The operating principle of the humidifier is based on the most efficient and economical means of evaporating water to the air. The humidifier uses only six watts of electrical power during operation, less than the smallest household light bulb. The heat necessary for evaporating water is produced by the furnace.

The water supply to the humidifier is controlled by the electric solenoid valve. The humidistat connected in series with the solenoid provides low voltage control of the humidifier. The humidistat is designed for wall mounting in the living area or surface mounting on the return air duct. ELECTRICAL RATING: 24 VAC / 60 Hz.

DO NOT SET RELATIVE HUMIDITY TOO HIGH DURING COLD WEATHER. EXCESSIVE HUMIDITY MAY CAUSE CONDENSATION ON WINDOWS OR IN WALLS. REFER TO RECOMMENDED SETTINGS AS DESCRIBED IN THE HUMIDISTAT OWNERS MANUAL.

Water flows through a strainer, is metered through an orifice to provide the proper amount of water, and is supplied to the evaporator pad by the distributor trough. Approximately 200 CFM of air is by-passed from the warm air plenum through the humidifier and returned to the cold air plenum. Moisture is evaporated to the air passing through the evaporator pad.

Minerals are not blown into the air stream as occurs in atomizing humidifiers; they are left on the evaporator pad where a high percentage is carried off with the waste water.

When the humidifier is installed and operating, no adjustments are necessary other than setting the control knob on the humidistat to the desired level of humidification. Leave knob on the humidifier in "HI" or "WINTER" position.

To turn the humidifier off, close water supply valve, switch electrical power off and turn humidistat off. If furnace is used for summer cooling or ventilating set air damper on "LOW" or "SUMMER".

LE PROPRIÉTAIRE DOIT REMPLIR LA CARTE  
 D'ENREGISTREMENT ET LA POSTER AU :  
 OWNER REGISTER ONLINE AT WWW.GENERALAIRE.COM OR  
 FILL IN REGISTRATION GENERAL FILTERS, INC.  
 AND MAIL TO:  
 43800 GRAND RIVER AVE  
 NOVI, MI 48375-1115

## WARRANTY REGISTRATION

Enregistrement de la garantie

MODEL 900  
 MODÈLE 900

OWNER'S NAME

Nom du propriétaire:

STREET ADDRESS

Adresse:

CITY

STATE

POSTAL CODE

Ville:

Province:

Code postal:

DEALER'S NAME

Nom du marchand:

STREET ADDRESS

Adresse:

CITY

STATE

POSTAL CODE

Ville:

Province:

Code postal:

DATE OF INSTALLATION

SERIAL NUMBER

DATE DE INSTALLATION

NUMÉRO DE SÉRIE

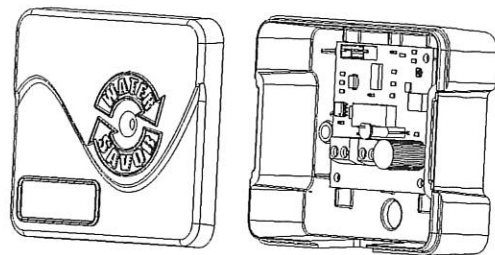
# Water Savor™ Controller Installation Instructions



## I. SAFETY

**WARNING!** Improper electrical wiring can result in fire, failure, or loss of humidity control. Disconnect electrical power before installing or servicing. Failure to disconnect electrical power may result in injury or death. All local building and electrical codes must be followed.

**Congratulations!** You have decided to save money and the environment by installing the Water Savor™ Controller. The Water Savor™ Controller is an electronic device that controls the amount of water used by a flow-through by-pass humidifier; part of which would normally be wasted down the drain.



The Water Savor™ Controller must be installed by a licensed technician. Failure to properly install or operate the Water Savor™ may result in property damage, personal injury or humidity levels that are less than desired. Read instructions carefully to safely achieve maximum humidity and water savings.

Safety questions regarding the Water Savor™ Controller may be directed to General Filters, Inc. Toll Free: CANADIAN CUSTOMERS: (888) 216-9184; USA CUSTOMERS: (866) 476-5101.

## II. APPLICATION:

When there is a call for humidity, the Water Savor™ Controller cycles 24vac of power to the humidifiers solenoid valve. Settings can be adjusted 1-6 (See Figure 3) to ensure that the humidifier will work at full capacity while also saving the maximum amount of water as possible.

## III. INSTALLATION INSTRUCTIONS:

### PRECAUTIONS:

Disconnect electrical power before beginning installation. After installation is complete and before leaving, check to ensure the humidifier is functioning as intended.

### MOUNTING:

1. Chose a location for the Water Savor™. To prevent water damage, mount to the side or above the humidifier (See Figure 1). *Never install below the humidifier.* Some solenoid valve wires are long enough to connect directly to the Water Savor™. If not, additional wire may be required.
2. Mount the Water Savor™ on the duct using the (2) #8 X 3/4 PHILLIPS HEX screws provided.

Figure 1

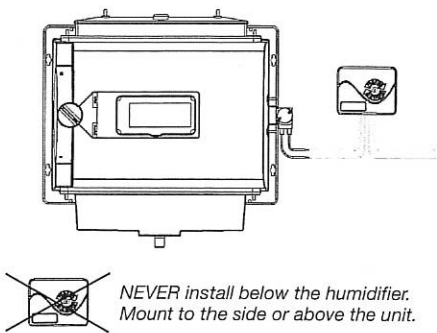
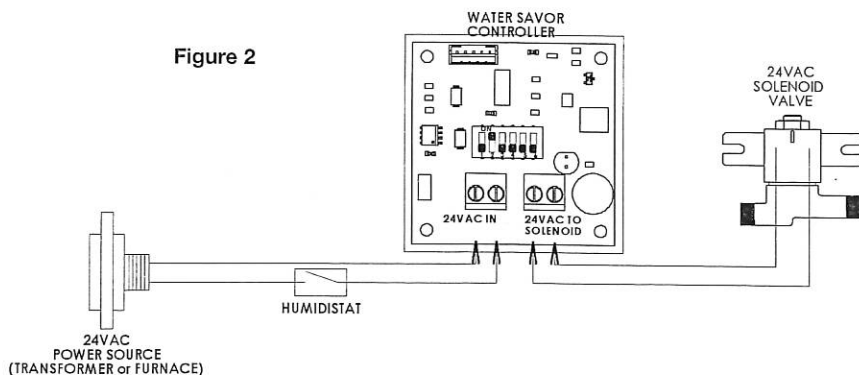


Figure 2



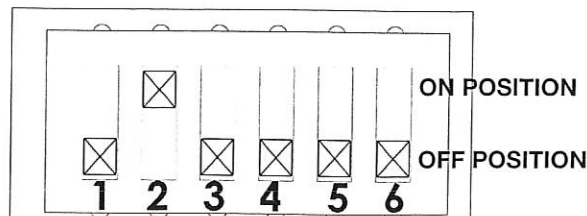
### WIRING INSTRUCTIONS:

3. Connect the two humidifier solenoid wires to the screw terminals labeled "24VAC TO SOLENOID" (See Figure 2).
4. Connect the 24VAC power source wires (1 from humidistat & 1 from transformer) to the screw terminals labeled "24VAC IN" (See Figure 2).

### RECOMMENDED WATER SAVOR™ DIP SWITCH SETTING:

5. Refer to the Recommended Dip Switch Settings Chart (Table A; next page) to find the Water Savor™ setting that matches the applicable humidifier model.
6. Use a small flat head screw driver to adjust the Water Savor™ to the applicable setting (See Figure 3). 1-6 settings (1 = maximum water savings; 6 = minimum water savings).
7. Only one setting should be ON at a time. (See Figure 3).

Figure 3

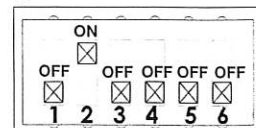


SEE NEXT PAGE FOR CUSTOMIZED SETTINGS (and maximum water savings).

**CUSTOMIZED WATER SAVOR™ SETTINGS (to ensure maximum water savings):**

1. Start by using the recommended setting for your humidifier. If your humidifier is not on Table A below, start at setting #6 (minimum savings).
2. Maintain the recommended setting for 3 days. This allows time for humidity to migrate and stabilize throughout the home.
3. After 3 days at the recommended setting, record humidity levels by using a humidity gage, or simply determine how the humidity feels in the home. If humidity has not dropped, move on to step 4 to save even more water.
4. Switch the setting on the dip switch to one number less than the current setting. For example; if your current setting is at #3, turn #3 setting to OFF and turn setting #2 ON (see Figure 4, to right).
5. Maintain the new setting for 3 days, again to allow humidity time to absorb and migrate throughout the home.
6. After 3 days at the new setting, again record what the humidity is in your home by using a humidity gage or judging how the humidity feels in the home.
7. If the humidity dropped, change back to the previous setting. This would indicate your humidifier's optimum water saving capabilities.
8. If the humidity did not drop, repeat steps 3 & 4, until you find the optimum setting.

Figure 4



**RECOMMENDED DIP SWITCH SETTINGS**

Table A

| Model              | Hot Water Setting | Cold Water Setting |
|--------------------|-------------------|--------------------|
| <b>GENERALAIRE</b> |                   |                    |
| SL16               | 5                 | 3                  |
| 1042LH / 1042WSC   | 5                 | 3                  |
| 1099LHS            | 5                 | 4                  |
| 570 / 570WSC       | 5                 | 3                  |
| 900                | 5                 | 3                  |

**For Technical Support**

**USA CUSTOMERS**  
 General Filters, Inc.  
 43800 Grand River Ave.  
 Novi, MI 48375  
 www.GeneralAire.com  
 Toll Free (866) 476-5101

**CANADIAN CUSTOMERS**  
 Canadian General Filters, Ltd.  
 400 Midwest Rd.  
 Toronto, ON M1P3A9 Canada  
 www.CGFPProducts.com  
 Toll Free (888) 216-9184

You may register online at [www.GeneralAire.com](http://www.GeneralAire.com) or mail form below.  
*Cut along dotted line to mail. Form must be filled out completely.*



**PRODUCT INFORMATION:**

Serial Number: \_\_\_\_\_  
 Model: \_\_\_\_\_  
 Install Date: Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

**HOME OWNER INFORMATION**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address 2: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_

**WARRANTY REGISTRATION**

Contractor Information:  
 Contractor Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address 2: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Contractor Phone: \_\_\_\_\_  
 Contractor Email: \_\_\_\_\_



Mail Form To:

**CANADIAN CUSTOMERS**  
 Canadian General Filters, Ltd.  
 Attn: Warranty Dept.  
 400 Midwest Rd.  
 Toronto, ON M1P3A9 Canada

**USA CUSTOMERS:**  
 General Filters, Inc  
 Attn: Warranty Dept.  
 43800 Grand River Ave.  
 Novi, MI 48375