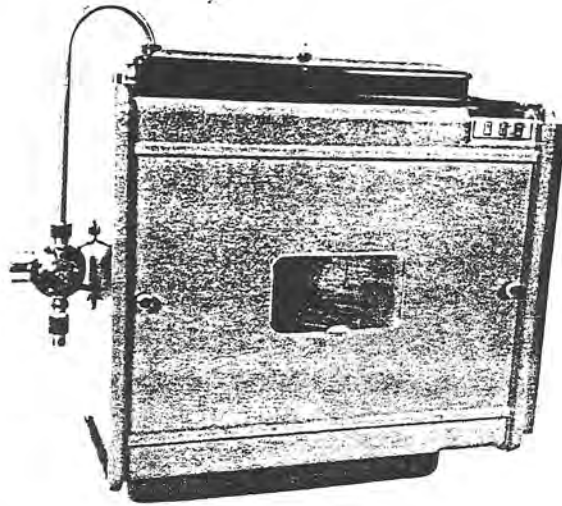


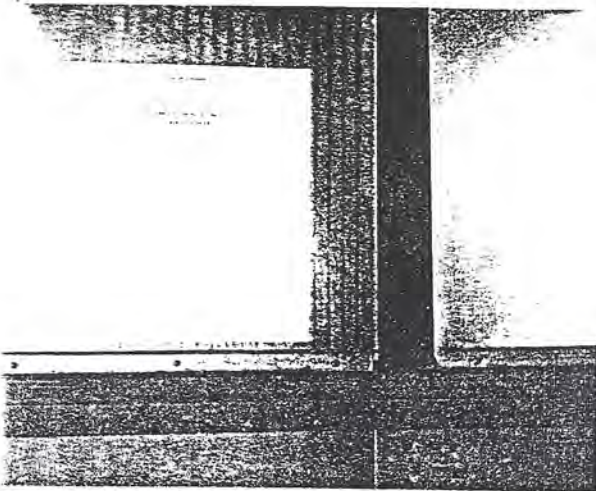
INSTALLATION INSTRUCTIONS

GENERAL 709 POWER HUMIDIFIER

FOR INSTALLATION ON
VERTICAL SURFACE OF ANY
FORCED AIR FURNACE



The following illustrations show the humidifier installed with the 3-1/4" X 10" outlet to the right. The humidifier may also be mounted with the outlet to the left by inverting the unit and reversing the positions of the water trough and drain pan. The humidifier may be mounted on the warm or cold air plenum with equal efficiency. See back of installation sheet for typical installations.

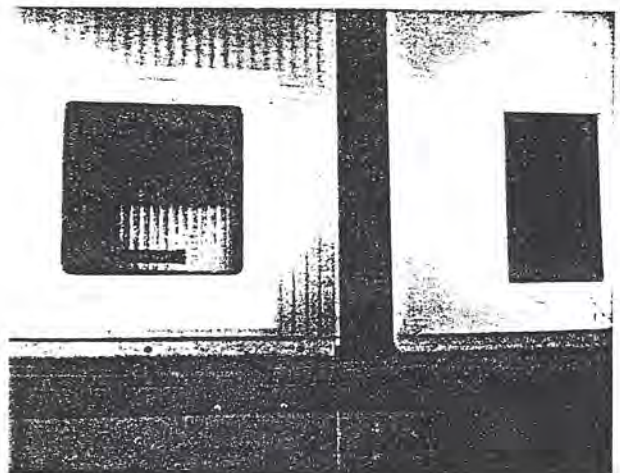


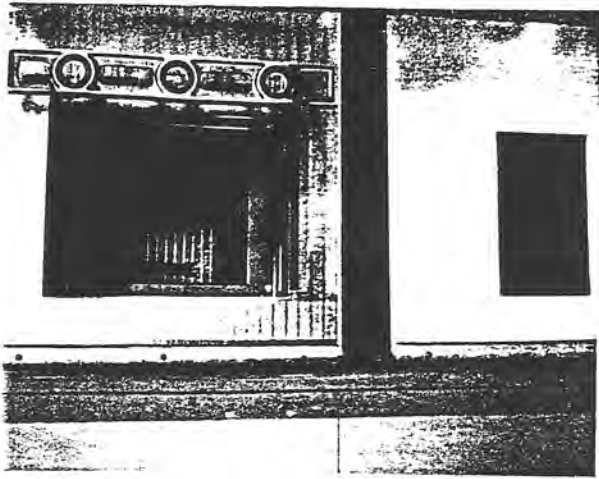
1

Select location on vertical surface of warm or cold air plenum for mounting humidifier. Stick mounting template in place making sure the template is horizontal.

Cut out center section of template. On a basement model furnace, extend center line from template on warm air plenum to cold air plenum or vice versa. Select location on cold air plenum closest to humidifier for mounting elbow (not furnished). Use 3-1/4" X 10" elbow or top take-off fitting with 1-1/2" to 2" throat. Mark and cut rectangular opening in cold air plenum to fit elbow.

2



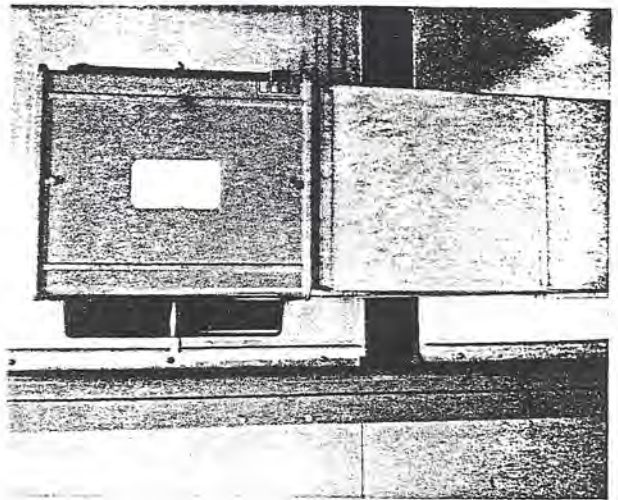


3

Center punch the 4 mounting holes on the template and drill with a 1/8" drill. Mount humidifier frame with (4) screws. Adjust frame to level position and tighten screws. Insert evaporator pad into housing from either the top or bottom. Attach distributor trough and drain pan with nuts provided. Slide assembled housing onto frame and move (2) thumb screws outward to engage slots in frame. Finger tighten the (2) thumb screws.

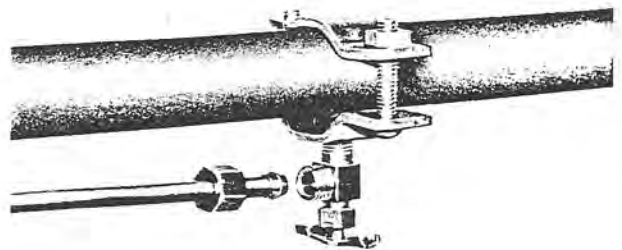
Determine length of 3-1/4" X 10" wall stack (not furnished) to fit between rectangular elbow and humidifier and cut to length. Fit pipe over rectangular opening on humidifier frame and into elbow. Insert elbow into opening in cold air plenum. If necessary, fittings may be secured to plenum and humidifier flange with screws provided.

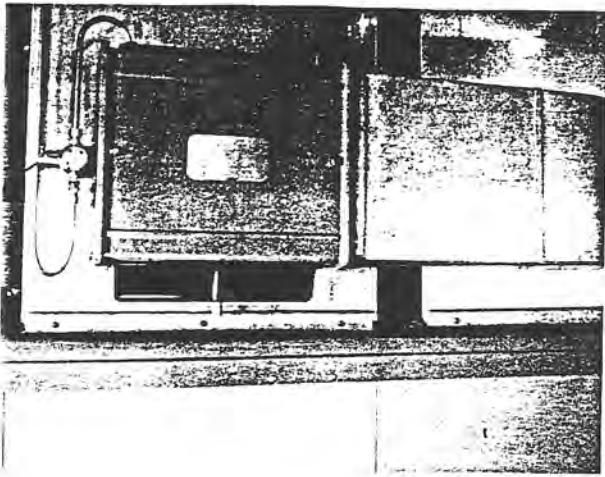
4



Shut off water supply. Drill a 1/4" hole in nearest cold UNSOFTENED water pipe. Screw the valve THROUGH the saddle clamp. Place washer over pilot tube on valve. Install saddle valve with pilot tube entering pipe. Tighten assembly in place using top of saddle clamp and the two nuts and bolts furnished. Connect 1/4" copper tubing (not furnished) to saddle valve using compression nut and sleeve.

5





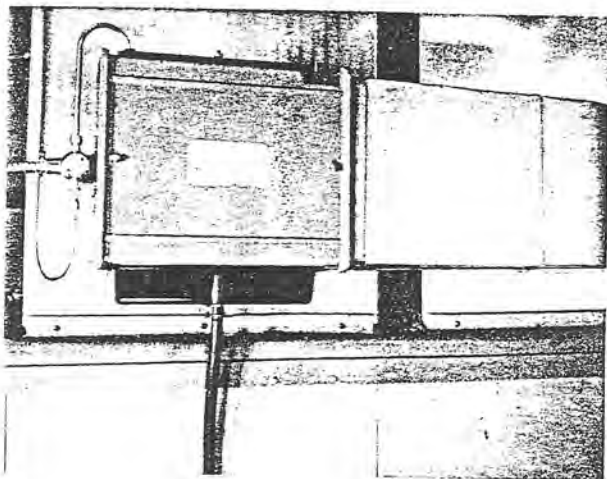
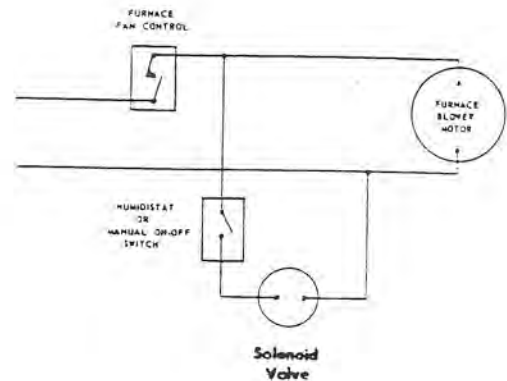
6

Attach solenoid valve with 2 screws to side of humidifier with distributor tube up. Inlet and outlet ports on valve may be reversed by loosening hex nut on end of solenoid and rotating valve 1/2 turn. Assemble distributor tube so that it is directed into the opening in the distributor trough cover. Make sure cover is located properly on top of the trough before tightening thumb nut. Wrench tighten compression nut and hex nut. Turn on main water supply. Open saddle valve for several seconds to flush dirt from pipe and tubing. Close saddle valve. Connect 1/4" water supply tube to brass filter at "inlet" of solenoid using compression nut and sleeve.

Connect the wires from the solenoid valve in parallel with the furnace blower circuit. All wiring should be in accordance with local electrical codes.

When the humidifier is installed in a system that provides summer cooling, or where the furnace blower is operated in the summer, provide an on-off switch in the power line to the humidifier. Instruct the user to switch the humidifier off in the summer.

7



8

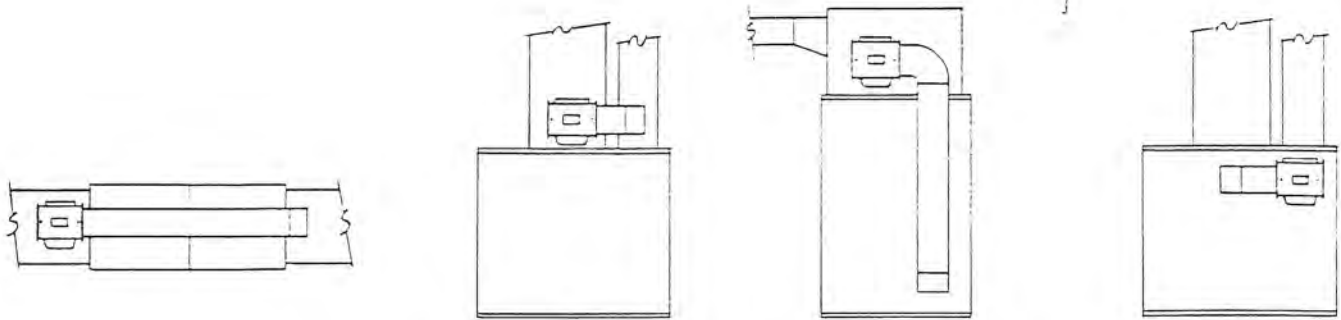
Connect drain hose to 1/2" fitting on drain pan with clamp provided. Run hose to suitable drain such as floor drain, sewer or laundry sink. Be sure drain hose is not kinked at any point.

9

Turn on water supply and check operation of unit. With the furnace blower off, the solenoid valve should be closed. Start the furnace blower with the manual switch on the fan control or by turning the furnace on. The solenoid valve should open when the blower circuit is energized. Check flow of water through distributor trough and evaporator pad. The nameplate on the front of the unit may be removed for inspection purposes. The standard 990-16 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 slightly larger orifice 990-16-75 is available to provide the same flow at the lower pressure.

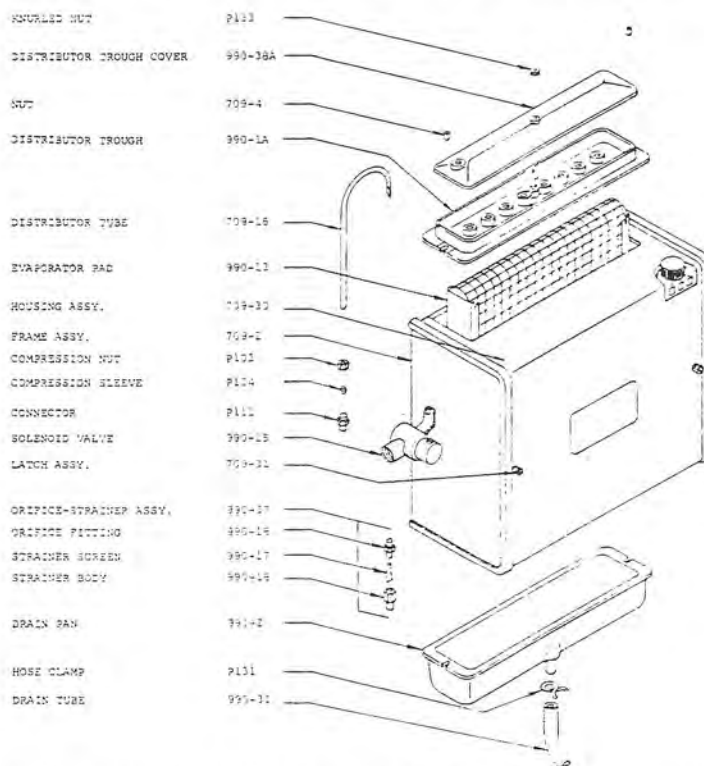
INSTALLER: PLEASE LEAVE HOMEOWNER'S GUARANTEE CARD AND MAINTENANCE INSTRUCTIONS ON SADDLE VALVE.

TYPICAL INSTALLATIONS



The humidifier may be installed on up-flow, down-flow or horizontal flow furnaces, on either the warm or cold air plenums with equal efficiency. Several typical installations are shown above; others will become readily apparent.

PARTS LIST FOR POWER HUMIDIFIER



WHEN ORDERING PARTS REFER TO THE ABOVE LIST OF PART NAMES AND PART NUMBERS

GENERAL FILTERS, INC.

43800 GRAND RIVER AVE.

NOVI, MICHIGAN 48050

CANADIAN GENERAL FILTERS, LTD.

39 CROCKFORD BLVD.

SCARBOROUGH, ONTARIO, CANADA
(TORONTO)

CARE AND MAINTENANCE OF YOUR HUMIDIFIER

Your Power 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. Disconnect the ¼" water supply line from the solenoid valve.
3. Remove the small brass filter assembly from the solenoid valve.
4. Disassemble the filter and carefully pull the screen from the orifice fitting. Clean the mineral deposits from all parts. If the orifice is clogged, it may be opened by inserting a small needle. Reassemble the filter and screw assembly into solenoid valve.
5. Remove water distributor tube, drain tube and loosen 2 latches on the front of the humidifier. Pull housing straight out from the furnace. Remove distributor trough cover, trough and drain pan. Remove evaporator pad from top or bottom. Clean excessive mineral deposits from distributor trough, drain pan and pad channels.
6. If the evaporator pad has excessive mineral deposits, replace with a new "990-13" evaporator pad. Install trough and pan. Do not over-tighten the nuts on the phenolic pan and trough. Replace trough cover and slide housing onto frame. Replace distributor tube and drain tube.
7. Connect the ¼" water supply tube to the filter assembly and tighten. Turn on the water supply and check all points for leakage. The operation of the unit may be checked by starting the furnace blower with the manual switch on the fan control or by starting the furnace. The humidifier operates only when the furnace blower is running. The humidifier is now ready for operation.

Form No. 709-38 Rev. 10-76

PLACE
STAMP
HERE

GENERAL FILTERS, INC.
NOVI, MICHIGAN 48050

NOTE: Installer hang this card on saddle valve.

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 eight 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 connected in parallel with the furnace blower circuit. A humidistat connected in series with the solenoid will provide constant humidity control. Water flows through a monel wire 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 unit or the humidistat to the desired level of humidification. If a humidistat is used, leave knob on the humidifier in "HI" position and adjust humidistat in accordance with these settings. Higher settings may cause condensation on windows and other cold surfaces. If the air shutter is used for control, the setting may be determined by trial and will depend on the humidification requirements of the building.

Leave humidifier on lowest humidity setting when home is left unoccupied for extended periods.

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

AT OUTSIDE TEMPERATURE	RECOMMENDED SETTING
-20° F	15%
-10° F	20%
0° F	25%
+10° F	30%
+20° F	35%
Above 20° F	40%

LIMITED WARRANTY

This humidifier, if properly registered by the return of the attached warranty registration card to the manufacturer, is warranted to the consumer against defects in materials and workmanship for a period of one year from date of installation. Evaporator pads, sleeves or plates 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 ONE YEAR. 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. The manufacturer has elected not to make available the informal dispute settlement mechanism which is specified in the Magnuson-Moss Warranty Act.

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43800 GRAND RIVER AVE.
NOVI, MICHIGAN 48050