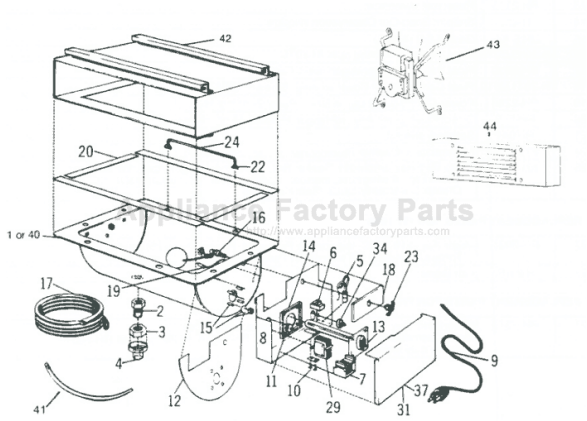
HUMIDAIRE MA315 Owner's Manual



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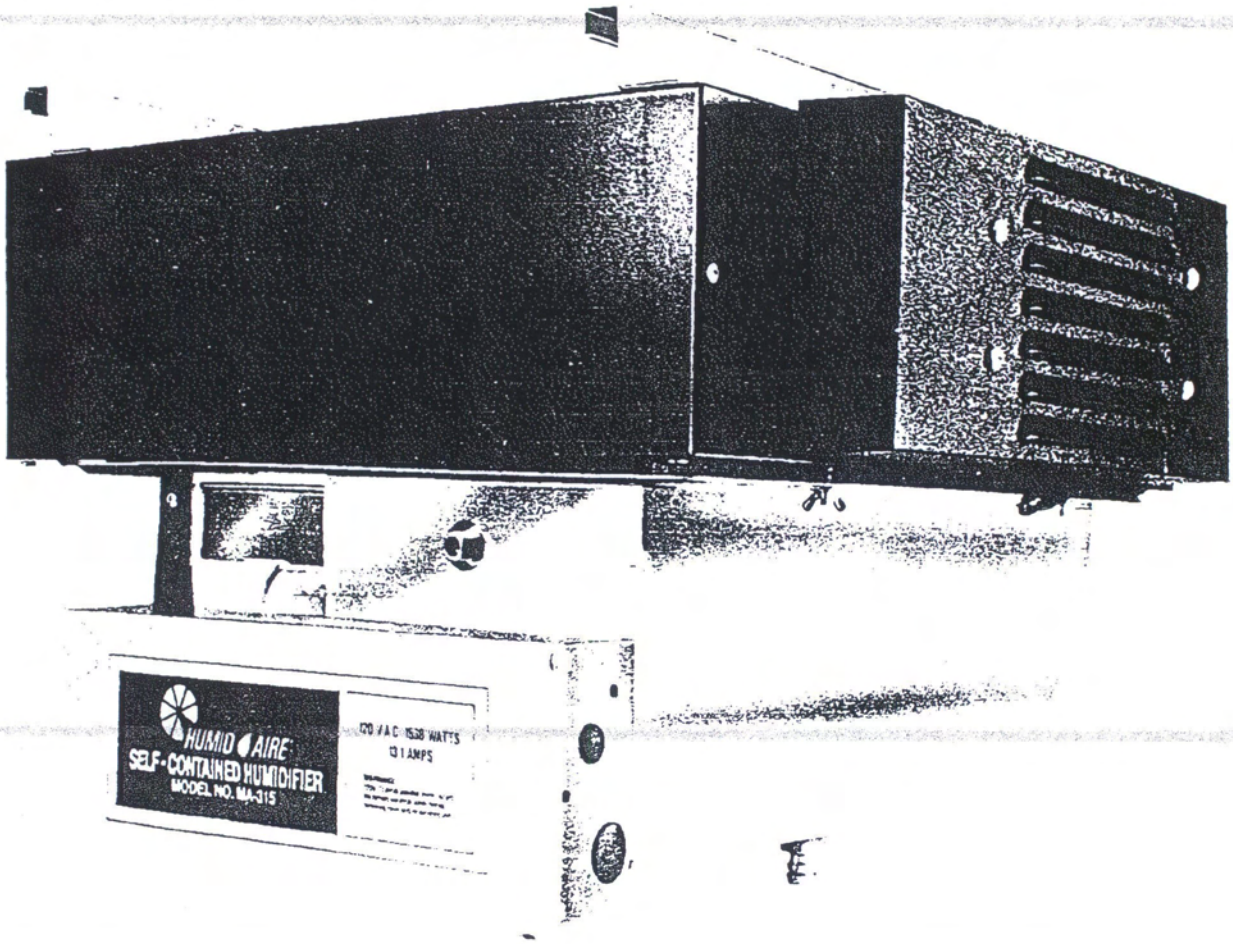
ADAMS MANUFACTURING CO.

HUMID AIRE® DIVISION

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS MA-315



CONGRATULATIONS!
YOU HAVE JUST PURCHASED THE MOST REVOLUTIONARY POWER HUMIDIFIER AVAILABLE ON THE MARKET TODAY. THE REVOLUTIONARY DESIGN AND TECHNOLOGY BRING EFFECTIVE HUMIDIFICATION TO ANY HOME EVEN WITHOUT CENTRAL HEATING SYSTEMS.

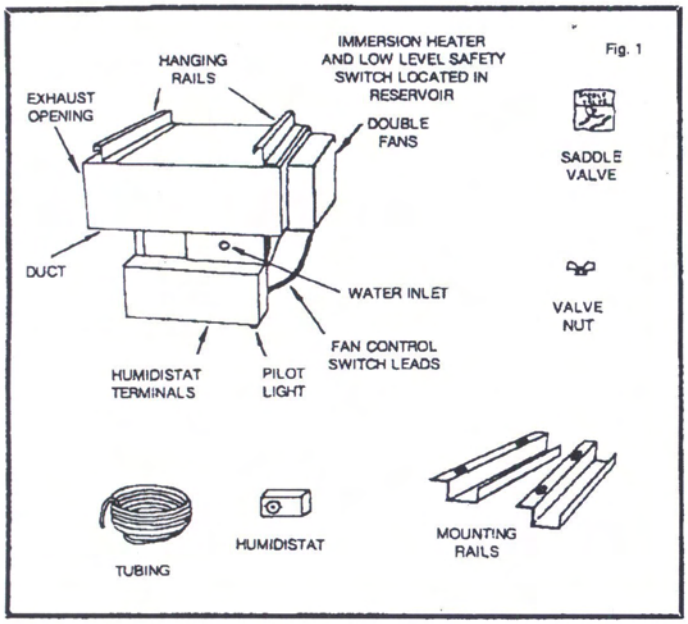
HUMIDIFIER INSTALLATION

Instructions and Service Guide

PARTS CHECK LIST

- Humidifier unit complete w/humidifier, fans, and housing
- 10' water tubing and fittings
- Self-piercing saddle valve
- Two slide-type mounting rails w/mounting hardware
- Overflow tubing and fitting
- Humidistat
- Template

This picture illustrates the MA-315 features and their locations:



TOOLS NEEDED

- Power drill
- Screw driver
- 1/2" open end wrench

BASIC STEPS FOR INSTALLATION

1. Select mounting location
2. Install mounting rails
3. Hang unit
4. Construct ductwork and venting if necessary
5. Connect water supply
6. Connect drain hose
7. Install and connect humidistat
8. Plug in power cord
9. Enjoy your properly humidified home.

DETAILED INSTALLATION INSTRUCTIONS

1. LOCATION — The MA-315 is designed for use in homes or apartments heated hydronically, electrically, or by forced air systems where the furnace size or location does not permit the i stallation of standard humidifiers.•

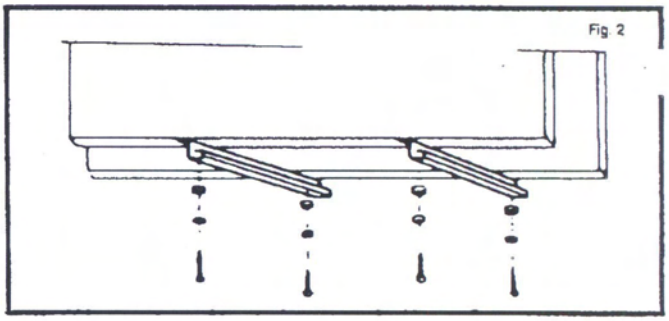
The unit may be mounted in the basement, a closet, crawl space, heated attic, or other convenient area provided that a minimum temperature of 65°F is maintained at the humidifier.

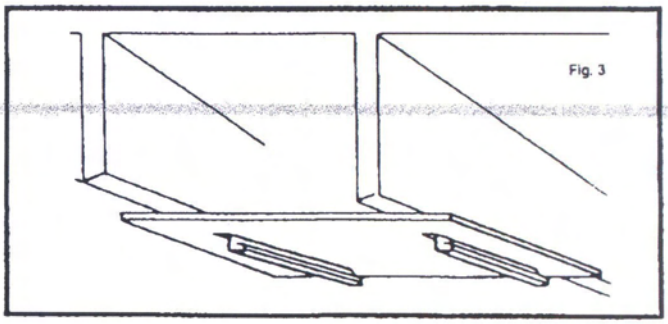
2. SUGGESTED MOUNTING INSTALLATION — (See "AIR DISTRIBUTION" for ducting).

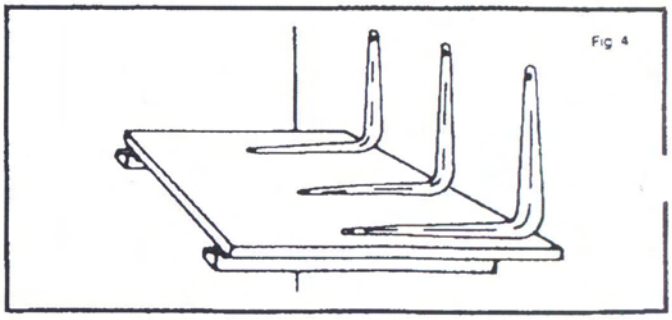
A. BASEMENT OR CRAWL SPACE LOCATION — For air flow parallel to the ceiling joists, the mounting rails can be installed directly to the joists (see fig. 2). For air flow perpendicular to the ceiling joists, the mounting rails should be attached to a 20" x 20" x 3/4" piece of plywood which in turn is fastened to the joists (see fig. 3). In either case, insert wood screws through the washers and then the grommets (which are installed in the rails), and screw them into the joists or plywood as required. Use template for rail mounting location.

B. CLOSET OR PANTRY — Fasten mounting rails to ceiling using #10 toggle bolts 2" long (not supplied) available at hardware stores. Be sure rails are level. Use template for rail mounting location.

C. WALL OR HEATED ATTIC LOCATION — Fasten mounting rails to 20" x 20" x 3/4" plywood as in "A" above. Then fasten 12" shelf brackets (not supplied) to the plywood with 1" wood screws. The plywood and shelf brackets can then be securely fastened to wall studs (see fig. 4). Be sure rails are level. Use template for rail mounting location.

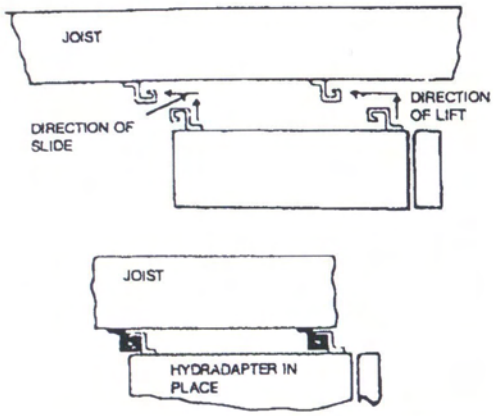






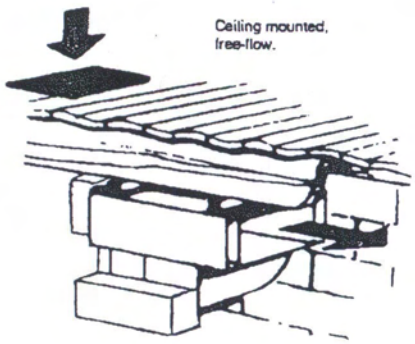
3. HANGING OF HUMIDIFIER — After mounting rails are installed, the humidifier may be lifted into position (see fig. 5).

Fig. 5



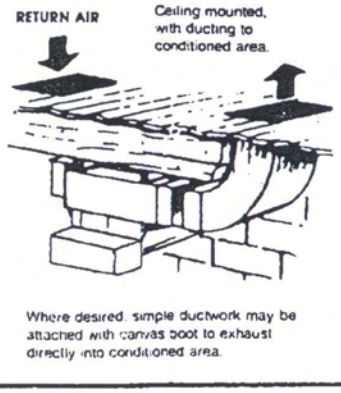
4. AIR DISTRIBUTION SYSTEM — For basement installations only, the unit may be allowed to exhaust directly into the basement area (see fig. 6). If this is done, however, the door between the basement and first floor should be either left open or well ventilated, to allow for distribution of humidity by the increased vapor pressure in the basement

Fig. 6



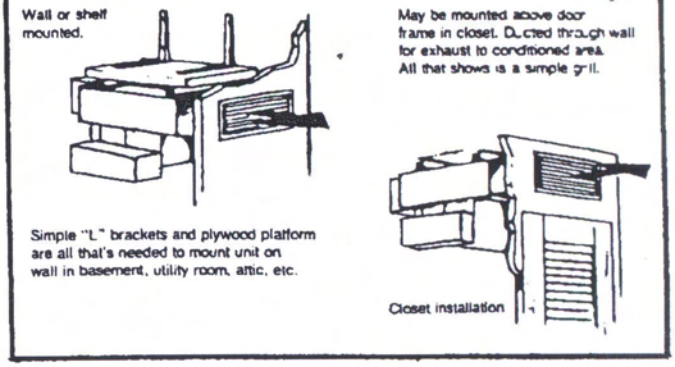
If the unit is installed in a basement, crawl space, or attic, a right angle duct may be fastened to the humidifier exhaust opening to force moist air into the living area (see fig. 7). The humidifier housing is designed to accept a 17-5/8" x 5" duct. It is recommended that the duct be attached to the housing with a flexible connection.

Fig. 7



If the humidifier is installed in a closet or closed pantry, a hole 17-5/8" x 5" may be cut through the wall or door, and a section of duct added to direct the moist air into the living space (see fig. 8).

Fig. 8



In all the above installations, any standard 17-5/8" x 5" adjustable or fixed louver grill may be attached to the duct for a finished appearance (duct and grill not supplied).

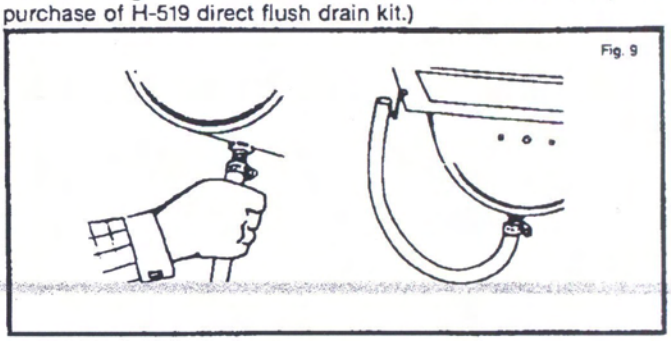
NOTE: The grill must not significantly restrict the air flow. For this reason, the installer must be certain that there is at least 35 sq. in. of unrestricted vent opening through the exhaust grill.

5. WATER SUPPLY CONNECTION — Follow the instructions printed on the plastic bag to install the saddle valve to the nearest convenient cold water pipe. Mounting the valve to the hot water pipe is acceptable, but not necessary. Now, using the compression nuts and ferrules, supplied, connect the plastic tubing from the saddle valve to the water inlet on the humidifier.

CAUTION: If water pressure is greater than 75 psi — which may be the case in some commercial and high-rise buildings — a pressure reducing valve (M-3275) is available and must be used between the water supply line and the plastic tubing.

6. CONNECT DRAIN HOSE - Push end of drain hose (without hole) onto barbed drain fitting at bottom of reservoir. Align hole in drain hose with hook. Rotate if necessary. Slide on hose clamp and righten (see (Fig. 9). To drain unit, simply unhook the drain hose from the hanger and direct the drain water into a bucket. (Requires purchase of H-519 direct flush drain kit.)

Fig. 9



7. OVERFLOW OPENING — In the event of a float failure which results in an overflow condition, an overflow opening has been provided in the end of the reservoir across from the window. The installer should connect tubing of at least 5/16" diameter to direct the water from the overflow opening to a drain. (Items provided in parts bag.)

8. HUMIDISTAT — The humidistat supplied should be "wall" mounted by following the instructions included with it. At least 22 ga. thermostat wire, 2 conductor (not supplied), should be used to connect the humidistat to the low voltage screw terminals on the MA-315 labeled "HUMIDISTAT TERMINALS".

9. With the reservoir full of water and all electrical connections completed, the unit may be plugged into any 120 volt, 15 amp. outlet, and allowed to humidify your home.

OPERATION AND MAINTENANCE

When your humidistat calls for humidity, the MA-315 will switch "ON" and begin heating the water. The red pilot light indicates that the heater is "ON". When the water temperature rises above 105°F, the blower will automatically be turned "ON" to distribute the water vapor. After the humidstat has been satisfied, the unit will switch "OFF", but the blower will continue running until the water temperature drops below 90°F. This completes the humidification cycle.

Under normal conditions, your humidifier will maintain relative humidity between 25 and 45% when properly sized and installed. 30 to 40% is considered ideal at room temperature. However, the humidifier, being a machine, has no way of knowing whether it is safe to maintain a 30 to 40% relative humidity, for if any surface in the house is cooled below the dew point temperature (such as poorly insulated windows), condensation will take place. Improper house construction, metal casement windows, and improperly fitted storm windows all contribute to this condensation problem, and may require the adjustment of the humidistat to reduce the humidity level in your home.

Maintenance of your MA-315 is simple. Once-a-year is sufficient in soft water areas . . . more often in hard water areas.

Removal of mineral deposits is the only necessary chore. Perform the following steps:

MINERAL REMOVAL

1. Unplug power cord and allow minimum of 30 minutes for unit to cool.
2. Turn "OFF" water supply valve.
3. Disconnect plastic tubing from water inlet on unit.
4. Unhook drain hose and direct water into bucket.
5. Disconnect two humidistat leads.
6. Unplug fan leads.
7. Remove 2 wing nuts and lower unit from housing.

You will find a coating of minerals on the inside surface of the reservoir which should be peeled from the surface, preferably with a small plastic scraper. Be careful not to scratch through the protective finish of the reservoir.

Gently scrape off any deposits from the float bulb and stem.

Rinse out reservoir and reinstall.

Proper cleaning and maintenance will reduce the need to replace components.

CAUTION: ALWAYS MAKE CERTAIN THE RESERVOIR HAS WATER BEFORE PLUGGING IN THE POWER CORD. IF THE HEATER IS ALLOWED TO OPERATE WITHOUT WATER, ITS LIFE WILL BE DRASTICALLY REDUCED.

HEATER REPLACEMENT

This unit is equipped with a very reliable heater element which should give years of service. If, in the event that the heater does fail, relatively inexpensive replacements are available from your dealer (part no. M-3202). Replacement instructions are as follows:

1. Unplug unit from power supply and allow a minimum of 30 minutes for unit to cool.
2. Turn "OFF" water supply by closing saddle valve.
3. Drain unit by unhooking drain hose and directing drain water into a bucket.
4. Unscrew 4 screws and remove lower cover of control box.
5. Disconnect red and black wires from heater by removing 2 screws on its end.
6. Using a 7/16" wrench, remove the 4 nuts and washers which hold heater flange in position.
7. Pull heater out of reservoir.
8. Examine rubber gasket for cracks and bend it slightly to test flexibility. If gasket is flexible and not cracked, it can be cleaned and reused.
9. Replace the cleaned or new gasket such that it fits over the stud retaining nuts and makes good contact with the reservoir.
10. Insert new heater through gasket and into reservoir and replace washers and nuts. Nuts should be tightened evenly until gasket compresses slightly. Do not overtighten nuts, as this may bend reservoir.
11. Reconnect the wires previously connected to heater.
12. Hang drain hose from hook, turn "ON" water supply and check for leaks.
13. To complete the job, replace cover and plug unit into power supply.

UNDER HUMIDIFICATION

If the humidifier is not maintaining a reading somewhere in the range of 25 to 45% R.H. during average winter weather, look for the following causes:

A. The water valve has not been turned "ON" or the water line is clogged. This would cause the low water level safety switch to turn the humidifier "OFF."

B. A fireplace flue has been left open. This not only increases heating costs, but also brings in more fresh air than the humidifier can handle.

C. The unit was improperly sized.

D. Bedroom windows are opened at night. This has the same effect as a fireplace flue being open and contrary to popular belief, actually tends to dry the house out more.

E. The heater is inoperative.

F. Insufficient venting which restricts air circulation through the humidifier prevents distribution of humidity and may cause condensation in the unit.

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