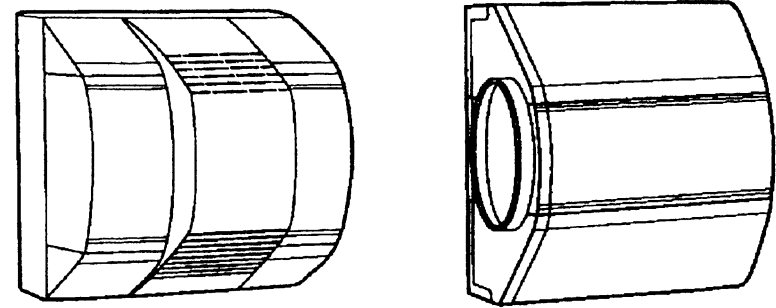


**READ AND SAVE THESE  
INSTRUCTIONS**



# **OWNER'S MANUAL**

***FOR BYPASS AND FAN POWERED HUMIDIFIERS***

**Includes Safety, Operating and Maintenance Instructions**

© 2002 CAC/BDP  
P.O. Box 70, Indianapolis, IN 46206

# Bypass and Fan Powered Humidifiers

## Table of Contents

	Page
Introduction .....	1
Principle of Operation.....	1
Operating Instructions .....	3
Effect of Water Characteristics .....	3
Annual Maintenance .....	4
Annual Summer Shutdown .....	4
Periodic Preventative Maintenance .....	4

## Maintenance Instructions

Small and Large Bypass Humidifiers.....	5
Fan Powered Humidifiers .....	6

**WARNING! 120 VOLTS may cause injury from electrical shock. Disconnect power and shut off water supply before servicing.**

**CAUTION! Sudden operation may cause personal injury or property damage. Turn humidistat to "OFF" before servicing.**

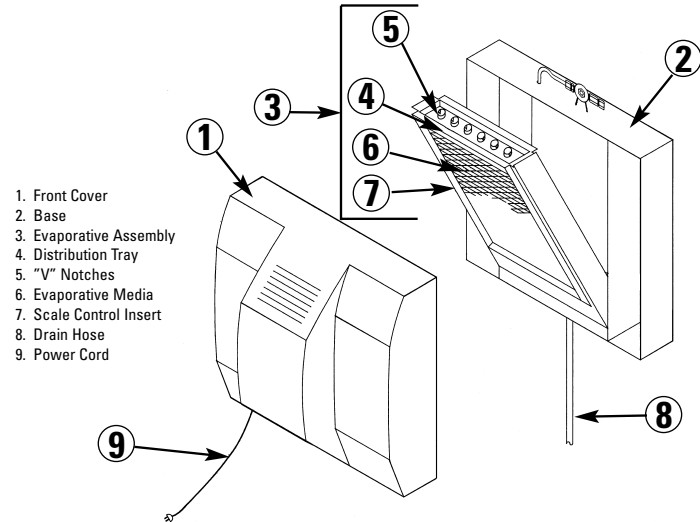
## Introduction

Thank you for your recent humidifier purchase. We sincerely appreciate your business and are pleased to add your name to our growing list of customers. Now, please take a few minutes and read this booklet. This will familiarize you with the benefits you will receive from the equipment you just purchased and help you understand the routine maintenance that will be required.

## I. Principle of Operation

You have purchased a humidifier that operates on the evaporative principle. It will provide the proper relative humidity (see operating instructions) all during the heating season. It is very possible that you have questions concerning what your new humidifier can do for you, and what you should do to receive maximum

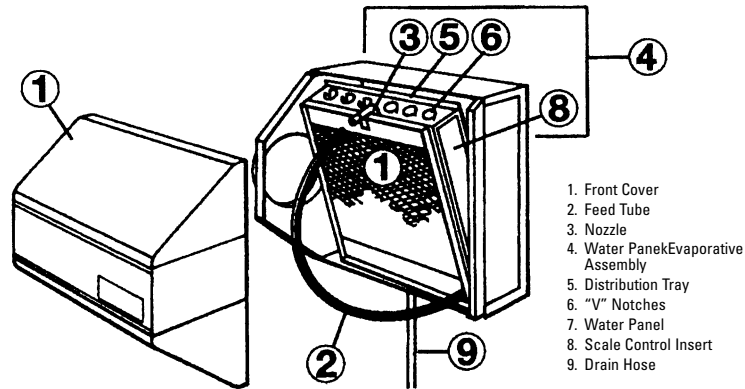
## MAINTENANCE INSTRUCTIONS FOR FAN POWERED HUMIDIFIER



**WARNING! 120 VOLTS may cause serious injury from electrical shock. Disconnect power and shut off water supply before servicing.**

1. Note humidistat setting and turn humidistat to the "OFF" position.
2. Disconnect electrical power and turn off water supply.
3. Unlatch humidifier cover assembly (1) from base assembly (2) at the bottom of the cover, lift, and set aside.
4. Pull out the evaporative assembly (3) by grasping at the top and tipping out.
5. Remove the black distribution tray (4) from the evaporative assembly by unsnapping the white plastic ends of the Scale Control Insert (7), from the tabs at the end of the tray. Lightly scrape any calcium deposits out of the "V" notches (5), but **do not scrape the granular coating from the bottom of the tray**. This textured surface helps ensure even waterflow for maximum performance. If the granular coating has been removed, place several drops of liquid dish soap on the distribution tray and clean thoroughly. This will only need to be done once.
6. Slide the evaporative media (6) out from the white plastic Scale Control Insert (7). Clean the insert frame by twisting and flexing it to loosen the calcium deposits or use a putty knife. Replace the evaporative media (Part No. P110-3545) back into the Scale Control Insert with the colored spot up and snap the black distribution tray (4) back into place.
7. Reinstall the evaporative assembly (3) into the base assembly (2). Push the evaporative assembly (3) in at the top between the retaining ribs that hold the assembly in place in a vertical position.
8. Remove the drain hose (8) from the bottom of the unit. Bend and flex it to loosen the internal calcium deposits. Then flush it with water under pressure and slip it back onto the drain fitting.
9. Reinstall cover assembly (1) by hooking at the top of base assembly (2) and latching at the bottom.
10. Reconnect electrical power (9) and turn on water supply.
11. Reset the humidistat and check unit operation.

## MAINTENANCE INSTRUCTIONS FOR SMALL AND LARGE BYPASS HUMIDIFIERS



**CAUTION! Sudden operation may cause personal injury or property damage.  
Turn humidistat to "OFF" before servicing.**

1. Note humidistat setting and turn humidistat to the "OFF" position.
2. At the side of the unit opposite the airflow duct, pull front cover (1) off holding with both hands and set aside.
3. Carefully pull the plastic feed tube (2) out of the nozzle (3) at the top of the Water Panel evaporative assembly (4). Pull this assembly out by grasping at top and tipping out.
4. Slide the evaporative media (4) out from the white plastic Scale Control Insert (5). Clean the insert frame by twisting and flexing it to loosen the calcium deposits, or use a putty knife. Replace the evaporative media (Part No. P110-1045 for Small Bypass Humidifier and Part No. P110-3545 for Large Bypass Humidifier) and slide the pad back into the scale control insert frame with color mark up. Snap the black distribution tray (2) back into place.
5. Reinstall the Water Panel evaporative assembly into the unit by fitting its drain tube into the round receptacle at the base of the unit. Push the assembly in at the top against the beveled tabs that will hold it in place. Push the end of the feed tube back firmly into the nozzle and replace the front cover.
6. Remove the drain hose (6) from the bottom of the unit and bend and flex it to loosen the internal calcium deposits. Then flush it with water under pressure and slip it back onto the black drain fitting.
7. Reset the humidistat and check unit operation.

benefits from it. This booklet is intended to answer these questions.

The humidifier operates in conjunction with the furnace blower motor. When the humidistat calls for humidity and the blower motor is operating, water flows to the distribution pan located at the top of the unit. The water is uniformly distributed across the width of the pan and through a scientifically designed system of outlets. It flows by gravity over the evaporative media. Dry, hot air is moved through the moisture-laden evaporative media where evaporation takes place. The now-humidified air carries moisture in vapor form throughout the home.

**The correct water flow is determined by an orifice in each unit. When the unit is operating, there will be a small, steady stream of water to drain, which flushes away most of the trouble-causing minerals.** Do not use the saddle valve to regulate the water flow. It is designed to be completely opened or closed.

The minerals and solid residue not trapped by the replaceable evaporative media are flushed down the drain. The drain also eliminates the problems caused by stagnant water. This is the most effective and least expensive method to dispose of trouble-causing minerals.

Trouble-free performance and minimum maintenance are assured by the design features of the humidifier. All unit housing parts that come in contact with water are non-metal and will never rust or corrode. Neither heat nor water will affect them under normal operating conditions.

The evaporative media, designed especially for uniform, high evaporation, and the Scale Control Insert also efficiently trap mineral deposits which are often the cause of damage to working parts in ordinary humidifiers. No "white dust" can be distributed throughout the living quarters. The evaporative media must be in good condition to assure high capacity trouble-free performance. It should be changed annually.

The granular coating in the bottom of the distribution tray is designed to provide equal distribution of water to each of the openings assuring an even flow of water over the evaporative media. Do not clean the mineral scale off the bottom of the water distribution tray at the end of the humidification season. The scale provides an excellent track for the water to follow. This is actually what we try to simulate with the synthetic coating in the bottom of the tray. If the coating is removed, it is not necessary to purchase a new distribution tray. You can accomplish the same uniform performance by applying a small amount of liquid dish soap over the entire lower surface of the water distribution tray. This will allow the water to flow evenly through each of the openings.

## II. Operating Instructions

Your new humidifier is controlled by a manual humidistat, HumidiTrac™ or Thermidistat™, installed either in the living area or in the cold air return. It is important to anticipate a drop in temperature and reduce the setting accordingly to avoid excessive condensation. For example, with an outside temperature of 20° the correct setting will be 35% relative humidity. If the temperature is expected to fall to 0° that evening, then reduce the setting to 25% several hours prior to the temperature change.

**OUTDOOR-INDOOR RELATIVE HUMIDITY TABLE**

Outside Temperature	Recommended R.H.
+40°	45%
+30°	40%
+20°	35%
+10°	30%
0°	25%
-10°	20%
-20°	15%

Observance of the recommended relative humidity level on your humidistat (see table) is an important safeguard. Condensation of water on inside windows in the form of fogging or frost is usually an indication of excessive relative humidity. The same condensation can take place in other areas in

your home with the possibility of resulting damage.

Be sure to keep fireplace dampers closed when not in use. They provide an excellent escape route for heat, as well as humidity.

The humidistat can be used to determine the relative humidity in your home during the winter. Turn the dial to the lower setting then reverse the dial direction slowly until a “click” is heard. At this point, read the relative humidity on the dial. This will be very close to the actual relative humidity in your home.

To check the humidifier operation, set the humidistat above the click point, make sure that the water saddle valve is open and that there is electricity to the unit. The furnace blower motor must be operating for the humidifier to function. After the humidifier has operated for several minutes and water is entering the unit and coming out at the drain, reduce the humidistat setting below the click point and the unit should automatically shut off. Now, set the humidistat dial to the recommended inside relative humidity, depending on the outside temperature. Follow the suggested settings prior to a drop in the outside temperature.

## III. Effect of Water Characteristics

Your humidifier will operate effectively using either hard or mechanically softened water.

Any type of water (hard, soft, hot, or cold) is acceptable for use with the drain-type humidifiers. Hot supply water, 140° maximum, is recommended for all heat pump applications. The use of hot supply water will also increase the amount of humidity generated in other applications. The heat in the water increases evaporation and the water going to the drain is cold to the touch.

## IV. Annual Maintenance

**For best performance, we recommend that you replace the evaporative media in your humidifier annually.**

- Call the installer of your humidifier. This information is often found on your equipment.

## V. Annual Summer Shutdown

**FOR THE SUMMER HUMIDIFIER SHUTDOWN, SIMPLY TURN THE HUMIDISTAT CONTROL TO THE “OFF” SETTING AND CLOSE THE DAMPER IN THE BYPASS HUMIDIFIER.**

## VI. Periodic Preventative Maintenance

**NOTE:** Periodic inspection and preventative maintenance of your total heating system is important for efficient and safe operation. Your dealer will include humidifier service during a maintenance inspection.

Your humidifier is equipped with an in-line water strainer and orifice as shown below. These parts should be inspected and cleaned periodically to assure continued proper unit performance.

### Inspection and Service Instructions

1. Disconnect electrical supply to furnace, install lock-out tag and shut off water supply.
2. Disconnect the water line at the inlet fitting.
3. Remove the in-line strainer from inside the inlet fitting by using a small nail or wire.
4. Flush the in-line strainer to clean it. If it is necessary to replace the strainer contact your dealer for a replacement.
5. Disconnect the water line at the outlet fitting.
6. Remove the orifice from the copper or plastic tube and make sure this small opening is unplugged.
7. Replace the orifice and reconnect the outlet water line (double wrench to prevent leaking and valve breakage).
8. Replace the in-line strainer and reconnect the inlet water line (double wrench to prevent leaking and valve breakage).
9. Turn on water supply and reconnect electrical power to the furnace.

