

READ AND SAVE THESE INSTRUCTIONS

HUMIDIFIERS

USE AND CARE MANUAL

**For Models *HUMD200ABM00B
*HUMD300ABA00B
*HUMD500APA00B**

Includes Safety & Operating Instructions
and Warranty Information

* May be "A" or "T"

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⚠ WARNING ELECTRICAL SHOCK HAZARD.

Disconnect Electrical Power and Shut Off Water Supply Before Servicing. Failure to follow this warning may cause property damage, personal injury or death.

⚠ CAUTION PERSONAL INJURY HAZARD.

Turn Humidifier Control to "OFF" or lowest setting before servicing. Sudden operation may cause personal injury or property damage.

INTRODUCTION

Thank you for your recent purchase of our humidifier. The addition of this product to your heating and cooling system will increase your level of comfort by adding just the right amount of moisture to your indoor environment. During the heating season, your humidifier will not only make you feel more comfortable, but it will help protect your home and your furnishings as well.

Your new humidifier is easy to use and easy to live with. Simple maintenance is required on a periodic basis to keep it in peak operating condition. This Use and Care manual will outline these steps for you, as well as other basic operating procedures so you can enjoy the full benefits of your new humidifier.

How Your Humidifier Operates:

During the winter, your comfort relies on two things: the perfect temperature and the perfect amount of moisture. Your new humidifier will provide your home with the recommended indoor relative humidity to ensure your comfort all winter long.

Replacement Humidifier Pads are available from your installing dealer.

I. PRINCIPLE OF OPERATION

Your new humidifier has been installed to operate in conjunction with your furnace. When the Humidifier Control calls for humidity and the furnace blower is operating, water flows to the distribution tray located at the top of the humidifier. The water is evenly distributed across the width of the tray and over the Humidifier Pad. Dry, hot air is moved through this moisture laden Humidifier Pad where it is evaporated into a vapor. This humidified air is circulated throughout your home. Humidified air helps to reduce static electricity, prevents wood furniture from drying out, helps prevent nasal passages from becoming too dry and makes your home more comfortable.

Important Notes About Your Humidifier:

When the humidifier is operating, there will be a small, steady stream of water to drain. Do not use the saddle valve to regulate the water flow. The saddle valve is designed to be either completely open or completely closed.

Although your humidifier incorporates a self-flushing action, the Humidifier Pad will develop mineral build-up over time. **To assure high capacity, trouble-free performance the Humidifier Pad should be replaced annually.**

For water distribution trays with a synthetic fabric liner: The synthetic fabric liner provides an even water flow over the Humidifier Pad. It is normal for some mineral deposits to form in the distribution tray as it dries out between humidification cycles. These deposits can actually help distribute water in the tray, but if they form enough to block the openings, they should be removed as described in the "Periodic Preventative Maintenance" section of this manual.

For water distribution trays with a granular coating: The coating on the bottom of the distribution tray provides an even flow of water over the Humidifier Pad. **Do not clean the mineral scale off the bottom of the distribution tray at the end of the humidification season.** The scale actually provides an excellent track for the water to follow.

II. OPERATING INSTRUCTIONS

Models *HUMD300ABA00B and *HUMD500APA00B with Automatic Humidifier Control: (for Manual Humidifier Control – see page 5)

Your Automatic Humidifier Control is installed in the cold air return. During the first heating season, your Automatic Humidifier Control needs to be set initially to match your home's condition. Please follow these steps when adjusting your Control (refer to Figure A).

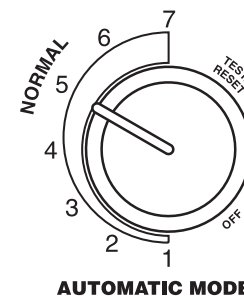
1. Turn the dial setting knob to "5," which is within the normal range. During the next 24-48 hours it may be necessary to adjust the dial for more or less humidity, depending on your personal comfort and home's requirements. Refer to the "Operation Guide" (Table 1).
2. During the coldest portion of the first heating season, minor adjustments may be necessary. This is dependent upon your individual home construction, refer to the "Operation Guide" (Table 1).

TABLE 1 – Operation Guide

Condition	Solution
Condensation on windows	Reduce the setting on the control dial by 1 increment.
Lack of humidity	Increase the setting on the control dial by 1 increment.
Humidifier does not operate	Turn dial to "Test." Make certain furnace and blower are operating. If humidifier still doesn't operate, consult your air conditioning and heating dealer.
Humidifier won't shut off	Turn dial to "Off." If humidifier continues to operate, consult your air conditioning and heating dealer.
Test mode	System operation is checked by setting the knob to "Test." Make certain furnace and blower are operating. Humidifier will operate for one minute.

The relative humidity in your home will now be accurately controlled to meet your needs and should not need further adjustment during future heating seasons. Make note of the dial setting in the event you temporarily move the knob when performing annual maintenance of the Humidifier.

FIGURE A



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Your Automatic Humidifier, is a high precision system that will accurately maintain the relative humidity in your home. For every 1°F change in outdoor temperature, the Control will automatically adjust the indoor relative humidity (RH) by 1/2%. If you would like to determine the RH in your home, follow these steps:

1. Determine the outdoor temperature.
2. Activate the furnace blower by setting your thermostat fan switch to the "On" position, or setting your thermostat to a higher temperature.
3. Turn the Humidifier Control dial setting to the "Off" position. Then, slowly turn the dial clockwise until you hear the solenoid valve "click on." Next, slowly turn the dial counter clockwise until you hear the solenoid valve "click off." At this point, make note of the dial setting.
4. Locate your dial setting on Table 2. Follow the dial setting to the right until it intersects with the current outdoor temperature. This is the relative humidity in your home under existing conditions.
5. Return the thermostat and the Humidifier Control to their original settings.

TABLE 2 – % Relative Humidity Guide

		Outdoor Temperature (°F)					
		-10	0	10	20	30	40
Dial Setting	1	10	10	10	15	20	25
	2	10	10	15	20	25	30
	3	10	15	20	25	30	35
	4	15	20	25	30	35	40
	5	20	25	30	35	40	45
	6	25	30	35	40	45	45
	7	30	35	40	45	45	45

As an example, if the outdoor temperature is 20°F, and, following step 3, the humidifier turns off at "5" on the dial range, then the RH in your home is 35%.

The Automatic Humidifier will accurately control the humidity in your home to a maximum of 45% RH and a minimum of 10% RH. The values of outdoor temperature and dial settings may fall in between or outside of the listed values in Table 2. In these cases, you can only approximate your home's actual indoor RH.

To check the humidifier's operation, note the Control setting and set the Automatic Humidifier Control to the test mode when the furnace blower motor is operating. Water will flow into the humidifier for 1 minute and then it will turn off. This insures the humidifier is operating properly. Do not leave the Control in the test mode as it will not operate. Reset the Control to it's original setting.

Model *HUMD200ABM00B with Manual Humidifier Control or Model *HUMD300ABA00B and *HUMD500APA00B with Automatic Humidifier Control in Manual Mode:

(for Automatic Humidifier Control – see page 3)

The Manual Humidifier Control is installed either in the living area (typically near the thermostat) or in the cold air return. The Automatic Humidifier Control (in the Manual Mode) is installed in the cold air return. It is important to anticipate a drop in outdoor temperature and reduce the setting accordingly to avoid excessive condensation. For example, with an outdoor temperature of 20°F the recommended setting will be 35% relative humidity. If the temperature is expected to fall to 0°F that evening, then merely reduce the setting to 25% several hours prior to the temperature change.

The recommended settings on the Humidifier Control are based on years of research (see Table 3) and experience as to what is best for the average home. These settings represent a compromise between RH levels that would be most desirable for comfort reasons and humidity levels that are suitable for protection of your home. For example, a wintertime indoor RH of 50% may be considered ideal by some, but unfortunately, it probably would result in damage to your home. Observance of the recommended RH levels on your Humidifier Control, therefore, is an important safeguard. Condensation of water on inside windows in the form of fogging or frost is usually an indication of too high relative humidities. This same condensation can take place in other areas in your home with the possibility of damage resulting.

TABLE 3 – Outdoor-Indoor Relative Humidity

Outside Temperature	Recommended RH
+40°F	45%
+30°F	40%
+20°F	35%
+10°F	30%
0°F	25%
-10°F	20%
-20°F	15%

The Humidifier Control is a precision instrument that can be used to determine the RH accurately 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 RH on the dial. This will be very close to the actual RH in your home.

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

Additional Information

Be sure to keep fireplace dampers closed when not in use. They provide an excellent escape route for heat, as well as humidity. Humidity is lost at an even faster rate than heat because water vapor tends to seek its own level and your humidifier would not be able to replace it even when running at full capacity.

On occasion, indoor moisture producing activities such as clothes drying, cooking, showers, etc., may raise the relative humidity level higher than it should be, even though the Humidifier is not operating. Telltale indications, again, are condensation or frost on cold surfaces such as windows, doors, walls, etc. If such condensation persists for several hours, your home should be ventilated to dissipate the potentially damaging excess moisture.

III . EFFECT OF WATER CHARACTERISTICS

Your humidifier will operate effectively using either hot, cold, hard or mechanically softened water. Whether to use available tap water, even though it may be quite hard, or chemically softened water, is a common concern to homeowners when installing a humidifier. Because of the humidifier's design, most of these solids are effectively controlled by flushing them down the drain.

Water used in homes contains varying amounts of minerals. The residue remaining as a result of hard water evaporation is primarily calcium and magnesium components and is usually quite hard, scaly, and dense.

Residue from softened water tends to be soft and fluffy and has a greater volume than hard water residue. The service life of a Humidifier Pad may be extended by using hard water, but in either case, the Humidifier Pad should be changed once a year. This is why proper maintenance is important and necessary. Service hot water 140°F maximum, is recommended with flow through, drain type units for increasing capacity.

IV. ANNUAL MAINTENANCE

For best performance, we recommend that you replace the Humidifier Pad in your Humidifier annually.

To obtain a replacement:

- Call your heating and air conditioning dealer.
- Look in the Yellow Pages under Heating & Air Conditioning Contractors.
- If none of the above are successful and you still need information, please feel free to write us or send an email to our website.

V. ANNUAL SUMMER SHUTDOWN

For Models *HUMD200ABM00B, *HUMD300ABA00B
close the bypass damper .

AUTOMATIC HUMIDIFIER CONTROL:

Humidifiers controlled by the Automatic Humidifier Control require no control adjustment. Shut off the water supply to the humidifier by closing the saddle valve.

MANUAL HUMIDIFIER CONTROL:

For humidifiers controlled by a Manual Humidifier Control, simply turn the Control to the "Off" position. Shut off the water supply to the humidifier by closing the saddle valve.

VI. PERIODIC PREVENTATIVE MAINTENANCE

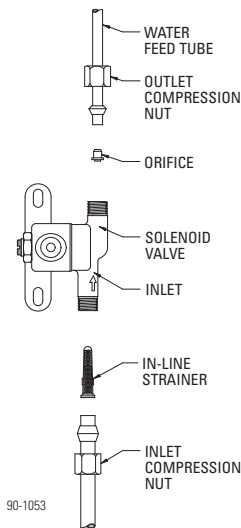
▲ WARNING Disconnect Electrical Power and Shut Off Water Supply Before Servicing. Failure to follow this warning may cause property damage, personal injury or death.

▲ CAUTION Turn Humidifier Control to "OFF" or lowest setting before servicing. Sudden operation may cause personal injury or property damage.

NOTE: Periodic inspection and preventive maintenance of your total heating system is important for efficient and safe operation. Your heating dealer should perform humidifier service at the same time.

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

WATER LINE INSPECTION AND SERVICE INSTRUCTIONS



90-1053

1. Disconnect electrical power to the furnace and shut off water supply.
2. Disconnect the water line at the inlet compression nut.
3. Remove the in-line strainer from inside the inlet side of the valve by using a small nail or wire.
4. Flush the in-line strainer clean or replace with a new strainer, Service Part No. SRA00859.
5. Reconnect the inlet water line. **Double Wrench to Prevent Leaking.**
6. Disconnect the water feed tube at the outlet compression nut.
7. Inspect the water feed tube (plastic only) by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle, or has been damaged.
8. Remove the orifice from the copper or plastic water feed tube and make sure this small opening is unplugged.

9. Replace the orifice and reconnect the water feed tube. **Double Wrench to Prevent Leaking.**

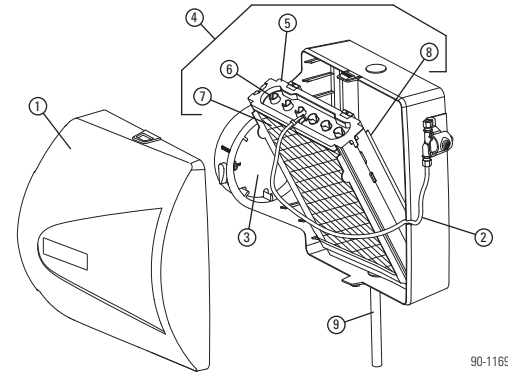
10. Remove the drain line from the bottom of the humidifier. If applicable, flex it to loosen any mineral deposits or blockages. Flush the drain line with water under pressure to clear it of any debris, and slip it back onto the drain fitting. If drain line does not clean properly, replace it. Inspect the drain line to make sure it has a constant downward slope and is not flattened or blocked.

11. Turn on water supply and reconnect electrical power to the furnace.

MAINTENANCE INSTRUCTIONS for HUMIDIFIER MODELS *HUMD200ABM00B, *HUMD300ABA00B

▲ CAUTION Turn Humidifier Control to "OFF" or lowest setting before servicing. Sudden operation may cause personal injury or property damage.

1. Front Cover
2. Feed Tube
3. Integral Bypass Damper
4. Evaporative Assembly
5. Distribution Tray
6. "V" Notches
7. Humidifier Pad
8. Scale Control Insert
9. Drain Line



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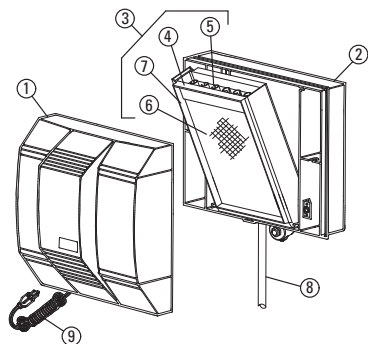
1. Note Humidifier Control setting and turn dial to the "OFF" position.
2. Turn off water supply. Turn the integral bypass damper (3) to the SUMMER position.
3. Press the tabs in the latches on the top and bottom of front cover (1) and pull cover off base with both hands. Set aside.
4. Carefully pull the plastic feed tube (2) out of the distribution tray (5) at the top of the evaporative assembly (4). Pull this assembly out by grasping at top and tipping out.
5. Unsnap the distribution tray (5) from the scale control insert (8). Lightly scrape out or brush off any mineral deposits, being careful not to stretch or loosen the synthetic fabric liner. Soaking the tray in vinegar or a lime-removing agent is helpful when trying to remove stubborn mineral deposits.
6. Slide the Humidifier Pad (7) out from the scale control insert (8). Clean the scale control insert of mineral deposits. Replace the Humidifier Pad annually with a BAYPAD01A1010A Humidifier Pad for Model *HUMD200ABM00B and BAYPAD02A1310A Humidifier Pad for Model *HUMD300ABA00B. Slide the Humidifier Pad back into the scale control insert with the colored spot up and snap the distribution tray (5) back into place.
7. Inspect the plastic feed tube (2) by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle, or has been damaged.
8. Reinstall the evaporative assembly (4) into the humidifier by fitting its drain into the round receptacle at the base of the humidifier. Push the assembly in at the top until it snaps into place. Push the end of the feed tube (2) back firmly into the distribution tray and replace the front cover (1).
9. Remove the drain line (9) from the bottom of the humidifier. If applicable, flex it to loosen any mineral deposits or blockage. Then flush it with water under pressure. If it does not properly clear, replace it. Slip drain line back onto the drain fitting. Make sure the drain line has a constant downward slope and is not flattened or blocked.
10. Turn on the water supply. Return integral bypass damper (3) to appropriate position.
11. Check system operation:
Manual Humidifier Control (*HUMD200ABM00B): With the furnace blower operating and the furnace calling for heat, turn up Control and check system operation.
Automatic Humidifier Control (*HUMD300ABA00B): (Automatic or Manual mode) Check system operation and reset Change Humidifier Pad indicator by setting the knob to "Test/Reset". With furnace blower operating and furnace calling for heat, humidifier will operate for one minute. DO NOT LEAVE IN TEST MODE AS HUMIDIFIER WILL NOT OPERATE.
12. Set Humidifier Control to its original position.

MAINTENANCE INSTRUCTIONS for HUMIDIFIER MODEL *HUMD500APA00B

▲ WARNING Disconnect Electrical Power and Shut Off Water Supply Before Servicing. Failure to follow this warning may cause property damage, personal injury or death.

▲ CAUTION Turn Humidifier Control to "OFF" or lowest setting before servicing. Sudden operation may cause personal injury or property damage.

1. Humidifier Cover Assembly
2. Base Assembly
3. Evaporative Assembly
4. Distribution Tray
5. "V" Notches
6. Humidifier Pad
7. Scale Control Insert
8. Drain Line
9. Power Cord



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1. Note Humidifier Control setting and turn dial to the "OFF" position.
2. Disconnect electrical power and turn off water supply.
3. Unlatch humidifier front 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. Unsnap the distribution tray (4) from the scale control insert (7). Follow the instructions below depending upon the type of distribution tray in your humidifier:
For trays with a synthetic fabric liner: Lightly scrape out or brush off any mineral deposits, being careful not to stretch or loosen the synthetic fabric liner. Soaking the tray in vinegar or a lime-removing agent is helpful when trying to remove stubborn mineral deposits.
For trays with granular coating: Do not scrape off the granular coating, but lightly scrape out any mineral deposits and clean the "V" notches (5). This textured surface helps ensure even water flow for maximum performance. If the granular coating has been removed, replace distribution tray.
6. Slide the Humidifier Pad (6) out from the scale control insert (7). Clean the scale control insert of mineral deposits. Replace Humidifier Pad annually with a BAYPAD02A1310A Humidifier Pad. Slide the Humidifier Pad back into the scale control insert with the colored spot up and snap the distribution tray (4) back into place.
7. Inspect the plastic feed tube by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle, or has been damaged.
8. Reinstall the evaporative assembly (3) into the humidifier by fitting its drain into the round receptacle at the base of the humidifier. Push the assembly in at the top between the retaining ribs that hold the assembly in place in a vertical position.
9. Remove the drain line (8) from the bottom of the humidifier. If applicable, flex it to loosen any mineral deposits or blockage. Then flush it with water under pressure. If it does not clear, replace it. Slip drain line back onto the drain fitting. Make sure the drain line has a constant downward slope and is not flattened or blocked.
10. Reinstall front cover assembly (1) by hooking at the top of the base assembly (2) and latching at the bottom.
11. Reconnect electrical power (9) and turn on the water supply.
12. Check system operation:
Automatic Humidifier Control: (Automatic or Manual mode) Check system operation and reset Change Humidifier Pad indicator by setting the knob to "Test/Reset". With furnace blower operating and furnace calling for heat, humidifier will operate for one minute. **DO NOT LEAVE IN TEST MODE AS HUMIDIFIER WILL NOT OPERATE.**
13. Set Humidifier Control to its original position.

NOTE: The motor is permanently lubricated and does not need to be oiled.

LIMITED WARRANTY HUMIDIFIER

*HUMD200A, *HUMD300A, *HUMD500A

(First letter may be preceded by an "A" or "T") (Parts Only)

Models Less Than 20 Tons for Residential Use*

This limited warranty is extended by the manufacturer to the original purchaser and to any succeeding owner of the real property to which the humidifier is originally affixed and applies to products purchased and retained for use within the U.S.A. and Canada.

The limited warranty period begins when installation is complete and the unit start-up procedure has been properly completed, verified by installer's invoice or similar document. If installation completion and start-up date cannot be verified by installer's invoice or similar document, limited warranty coverage begins six (6) months after the date of manufacture based on the humidifier serial number.

If any part of your humidifier (with the exception of the Water Panel Evaporator) fails because of a manufacturing defect within five (5) years from the date the limited warranty period begins, Warrantor will furnish without charge the required replacement part. Any local transportation, related service labor, mechanical filters, and diagnosis calls, are not included.

This limited warranty does not apply if the humidifier was purchased direct (i.e. from internet websites or auctions) on an uninstalled basis. Additionally, this limited warranty will not apply unless the humidifier is: (1) installed by a licensed or qualified HVAC technician, (2) applied and installed in accordance with the manufacturer's recommendations in its Installer's Guide, and (3) in compliance with all industry standards, national, state, and local codes.

This limited warranty does not cover your humidifier if it is damaged while in your possession; including, but not limited to (1) damage caused by unreasonable use of the humidifier, (2) damage from failure to properly maintain the humidifier as set forth in the Use and Care manual, (3) damage that is not considered a manufacturing defect, such as acts of God, malfunctions or failures resulting from fire, water, storms, lightning, earthquake, theft, riot, misuse, abuse, increased utility usage costs, or (4) performance problems due to improper selection / equipment match-up, installation, or application.

THE LIMITED WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESSED OR IMPLIED, IN LAW OF IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR USE, AND IN NO EVENT SHALL WARRANTOR BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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

Parts will be provided by our factory organization through an authorized service organization in your area listed in the yellow pages. If you wish further help or information concerning this limited warranty, contact:

Residential Systems
6200 Troup Highway
Tyler, TX 75707
Attention: Consumer Relations

Or visit our website: www.trane.com/residential

TW-1030-3308

*This limited warranty is for residential usage of this equipment and not applicable when this equipment is used for a commercial application. A commercial use is any application where the end purchaser uses the product for other than personal, family or household purposes.

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