AprilAire®

Humidifier

OWNER'S MANUAL

Models 300, 400, 400M, 500, 500M, 600, 600M, 700, & 700M







Product Info & Digital Manual

READ AND SAVE THESE INSTRUCTIONS

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⚠ WARNING

- **ELECTRIC SHOCK HAZARD**: 120 volts may cause serious injury from electric shock. Disconnect electrical power and water before servicing. Leave power and water disconnected until service is completed.
- **RISK OF SCALDING.** Water temperature over 125°F (52°C) can cause severe burns and scald instantly. Shut off the hot water supply before disconnecting or tapping into any hot water supply line.

⚠ CAUTION

SUDDEN OPERATION MAY CAUSE PERSONAL INJURY OR PROPERTY DAMAGE. Turn the humidifier control to **OFF** or lowest setting before servicing.

INTRODUCTION

When humidity is properly controlled within a home, it provides effective virus protection. Air that's too dry can lead to conditions that allow airborne viruses to thrive and proliferate. By adding humidity to dry air, the amount of time a virus can survive in the air drops drastically. By maintaining balanced humidity between 40% and 60%, year round, you can reduce the airborne incidence of health concerns like bacteria, viruses, and dust mites.

While balanced humidity exists between 40% and 60%, it's important to remember that outdoor temperature and other home factors will impact what relative humidity level is attainable and recommended for your house. Talk with your AprilAire Healthy Air Professional to learn more.

Your humidifier will require periodic maintenance to assure continued peak performance. See page 14 to obtain service parts and/or replacement Water Panels®.

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.

REGISTER YOUR HUMIDIFIER

Register your product at **aprilaire.com/warranty** or by using the QR code, to receive important updates and notifications, and to streamline the process in the unlikely event you file a claim.

Register Your Humidifier

Purchase only genuine AprilAire Water Panels to maintain peak performance. For more information, visit our website at **aprilaire.com**.



PRINCIPLE OF OPERATION

Your new AprilAire Humidifier uses evaporation to add moisture back to warm, dry air in the home. Evaporative humidifiers do not heat the water themselves, but instead use the HVAC system's heat (excluding Model 300), drawn through a water panel, to turn the water into vapor.

The Model 300 must use hot supply water, up to 140°F (60°C), as a heat source for evaporation to occur, independent from an HVAC system. Hot supply water is recommended for all AprilAire Evaporative Humidifiers to maximize their effectiveness.

Except for Model 300, the AprilAire Humidifier is designed to operate in conjunction with the heating, ventilating, air conditioning (HVAC) system fan. When the humidifier control calls for humidity and the HVAC system fan is operating, water flows to the distribution tray located inside the humidifier. The water is uniformly distributed across the tray where it flows down through a system of outlets over the Water Panel. Dry, hot air is moved through the moisture-laden Water Panel where natural evaporation takes place. The now-humidified air carries moisture in vapor form and circulates throughout the home.

With bypass Models 400, 500, and 600 Series, HVAC system air is moved from the supply duct through the humidifier into the return duct. 700 Series models and the Model 300 have a built-in fan which draws air through the Water Panel.

The correct water flow is maintained by an orifice provided with each humidifier. When the humidifier is operating (excluding 400 Series), there will be a small, steady stream of water to the 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 open or closed.

The minerals and solid residue not trapped by the replaceable Water Panel are flushed down the drain in the Models 300, 500, 500M, 600, 600M, 700, and 700M. This is the most effective and least expensive method to dispose of trouble-causing minerals. The drain also eliminates the problems caused by stagnant water.

Trouble-free performance and minimum maintenance are assured by the design features of the AprilAire Humidifier. All humidifier 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 Water Panel, designed especially for uniform, high evaporation, and the scale control insert (which encases the Water Panel), effectively traps mineral deposits which are often the cause of damage to working parts in ordinary humidifiers. **The Water Panel is the heart of the humidifier and must be in good condition to assure high capacity trouble-free performance. It should be changed at least annually with the exception of Models 400 and 400M which should be changed at least twice per heating season.**

The distribution tray incorporates a synthetic fabric liner that is designed to deliver water uniformly over the entire top surface of the Water Panel, provided the humidifier is mounted level. 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 block the openings, they should be removed as described in the **PERIODIC PREVENTATIVE MAINTENANCE** section of this manual.

Your Digital Humidifier Control works in conjunction with your HVAC system to control the operation of the humidifier. The control senses indoor RH and outdoor temperature and automatically adjusts the operation time of the humidifier to provide the optimum humidity level in the home.

The Automatic Control can be set to turn on the HVAC blower when humidity is required. Plumbing the humidifier to hot water is required for this mode of operation.

The digital readout on the control displays the RH level inside the cold air return duct. RH is a measure of the amount of moisture in the air as a percentage of what the air can hold. Warm air can hold more moisture than cold air can.

The control has lights which indicate humidifier operation, when the Water Panel needs to be replaced and when service is required. See **OPERATING INSTRUCTIONS** for more information.

There are many humidifiers on the market. They all add moisture with varying degrees of efficiency. None, however, offer the features, design, and performance incorporated into your new AprilAire Humidifier.

OPERATING INSTRUCTIONS – MODELS 400, 500, 600 & 700

The Automatic Digital Humidifier Control (ADHC) offers two modes of operation, Automatic or Manual. An explanation of both modes follows. (See **FIGURE A** on page 7 for Automatic mode. See **FIGURE B** on page 8 for Manual mode.)

When in the Automatic mode, this system offers the following benefits:

- **You will always receive the optimal amount of humidity so that your home and its furnishings are always protected from the damaging effects of excess condensation or low humidity during the heating season.** The control automatically adjusts your home's RH based on the outdoor temperature, increasing the time maximum comfort is maintained.
- **Simple operation with few adjustments.** The control eliminates the need to manually adjust the control when outdoor temperature changes.

AUTOMATIC DIGITAL HUMIDIFIER CONTROL INDICATOR LIGHTS

Service Required: The red light indicates that the humidifier is not operating normally and that service is required.

Change Water Panel: The yellow light indicates that it is time to change the Water Panel in the humidifier. Refer to the **ANNUAL MAINTENANCE** section for instructions on changing the Water Panel or call your HVAC contractor for service.

Humidifier On: The green light indicates that the humidifier is actively adding healthy humidity to your home.

BLOWER ACTIVATION

The BLOWER ACTIVATION switch is set to the **ON** position to allow the humidifier control to activate the HVAC system fan for maximum humidification. For this setting the Models 500, 600 and 700 must be connected to hot water.

This function will operate in two ways:

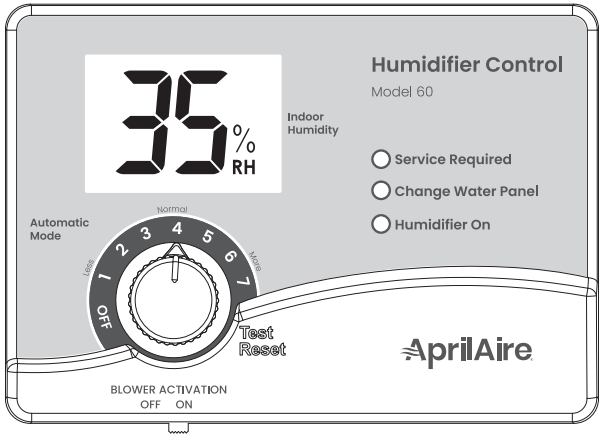
1. If the HVAC system has been idle for one hour, the humidifier control will activate the HVAC system fan to sample the air for 3 minutes. If the RH is lower than the set point, the humidifier control will activate the humidifier and keep the fan running.
2. If the RH set point has not been reached by the end of a call for heat, the control will continue to operate the humidifier and the HVAC system fan.

Once blower activation mode is initiated, the humidifier and HVAC system fan will continue to operate for 2 hours or until the humidification set point is reached.

When the BLOWER ACTIVATION switch is in the **OFF** position, the humidifier control will only operate the humidifier if the HVAC system fan or heat is on AND if the RH is lower than the set point.

AUTOMATIC MODE

FIGURE A: ADHC (AUTOMATIC MODE)



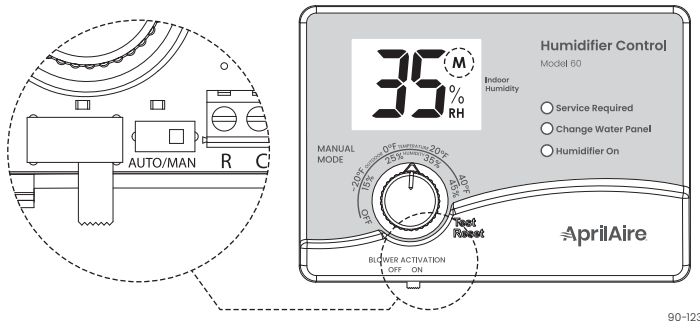
Your AprilAire Digital Humidifier Control is installed in the cold air return duct. **During the first heating season,** your humidifier control needs to be set initially to match your home's condition. Please follow these steps when adjusting your control (refer to **FIGURE A**).

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 **TABLE 3: Operation Guide**.
2. During the coldest portion of the first heating season, minor adjustments may be necessary. This is dependent upon your home's construction. Refer to **TABLE 3: Operation Guide**.

The RH 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 to **OFF** when performing annual maintenance of your AprilAire Humidifier.

MANUAL MODE

FIGURE B: ADHC (MANUAL MODE)



When installed in the Manual mode (see **FIGURE B** – internal switch in **MAN** position and **M** in the display), 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 correct setting will be 35% RH. If the temperature is expected to fall to 0°F, then reduce the setting to 25% several hours prior to the temperature change.

See **TABLE 1** for the recommended settings. These settings, which are based on years of research, represent a compromise between RH levels that would be most desirable for comfort and humidity levels that are suitable for protection of your home and to avoid condensation on your windows.

For example, a wintertime indoor RH of 50% may be considered ideal for comfort, but unfortunately, it probably would result in condensation, which can cause damage to your home. Observing the recommended RH levels on your humidifier control is an important safeguard. Condensation of water on the inside surface of windows in the form of fogging or frost is usually an indication of too much humidity. This same condensation can occur in other areas in your home, possibly resulting in damage.

TABLE 1: OUTDOOR TEMPERATURE/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%

CHANGE WATER PANEL INDICATOR

The control keeps track of humidifier operation time. The yellow **Change Water Panel** light flashes after a preset amount of running time has elapsed. This running time is preset by the installer based on the humidifier model and water hardness.

Refer to the **ANNUAL MAINTENANCE** section for instructions on changing the Water Panel or call your HVAC contractor for service.

TEST/RESET

The **Test/Reset** feature allows the humidifier operation to be checked even if there is no call for humidity.

1. The HVAC system fan must be running for the humidifier to function. Make a heat or fan call at your thermostat.
2. Set the knob to **Test/Reset**. Make sure the water saddle valve is open and that there is electricity to the humidifier.
3. The humidifier will only operate for 1 minute in test mode.
4. Reduce the humidifier control setting to the recommended inside RH, depending on the outside temperature. **DO NOT LEAVE IN TEST MODE AS HUMIDIFIER WILL NOT OPERATE AFTER 1 MINUTE HAS ELAPSED.**

ADDITIONAL INFORMATION

Your humidifier is a precision system that will accurately maintain the RH in your home. For every 2°F change in outdoor temperature, the Digital Humidifier Control will automatically adjust the indoor RH by 1%.

The Automatic Digital Humidifier Control will accurately control the humidity in your home to a maximum of 45% RH.

The RH values in **TABLE 2** are targets based on outdoor temperature and the Automatic Digital Humidifier Control setting. The actual RH may vary due to conditions in the home (cooking, showering, etc.).

TABLE 2: % RELATIVE HUMIDITY GUIDE

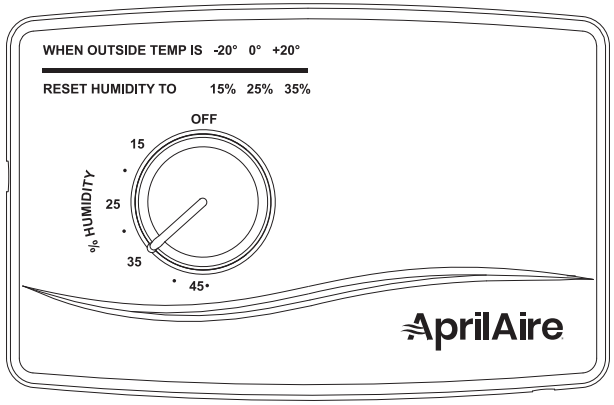
		Outdoor Temperature (°F)						
		-10°F	0°F	10°F	20°F	30°F	40°F	
Dial Setting	1	10%	10%	10%	**15%**	20%	25%	Relative Humidity (%)
	2	10%	10%	15%	**20%**	25%	30%	
	3	10%	15%	20%	**25%**	30%	35%	
	4	15%	20%	25%	**30%**	35%	40%	
	5	**20%**	**25%**	**30%**	**35%**	40%	45%	
	6	25%	30%	35%	40%	45%	45%	
	7	30%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

TABLE 3: 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. If the humidifier control is already at the maximum setting of **7**, set the BLOWER ACTIVATION switch to **ON**. The humidifier must be plumbed to hot water when using the **Blower Activation** feature.
Humidifier does not operate. (Solenoid does not "click" when control is moved to **Test/Reset** position.)	Turn dial to **Test/Reset**. Make certain HVAC system fan is operating. If unit still does not operate, consult your HVAC contractor or contact Technical Support.
Humidifier won't shut off.	Turn dial to **OFF**. If unit continues to operate, consult your HVAC contractor or contact Technical Support.
Test mode.	System operation is checked by setting the knob to **Test/Reset**. Make certain HVAC system fan is operating. Humidifier will operate for one minute. If the control knob is left in the **Test/Reset** position, after 1 minute the display will flash the software revision level, e.g., r3. **NOTE:** Placing the knob in **Test/Reset** resets the Water Panel change timer.
Red **Service Required** light flashes (**FIGURE A**).	Note the error code on the display (E1, E2, E3 or E4) and consult your HVAC contractor or contact Technical Support.
Yellow **Change Water Panel** light flashes (**FIGURE A**).	Refer to **ANNUAL MAINTENANCE** on page 14 for instructions on changing the Water Panel, or call your HVAC contractor for service. After the Water Panel is replaced, turn the control knob to the **Test/Reset** position until the green **Humidifier On** light flashes, to reset the Water Panel change timer.

OPERATING INSTRUCTIONS – MODELS 400M, 500M, 600M & 700M

FIGURE C: MANUAL HUMIDIFIER CONTROL



Your AprilAire Humidifier is controlled by a Manual Humidifier Control (see **FIGURE C**). The Manual Humidifier Control is installed either in the cold air return duct or on an interior wall of the home. With the Manual Humidifier Control, it is important to anticipate a drop in outdoor temperature and reduce the RH set point accordingly to avoid excessive condensation, just as with the Digital Humidifier Control installed in Manual mode (see page 8).

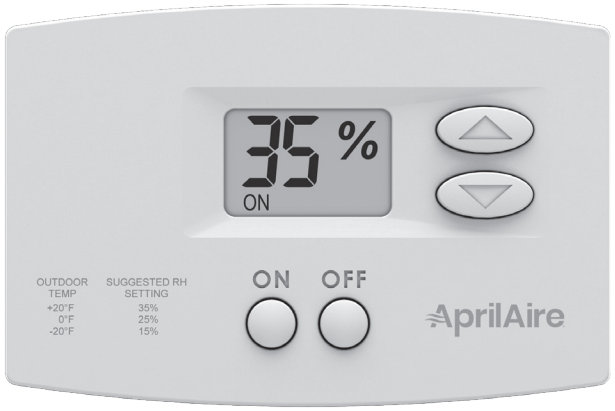
To determine the indoor RH, slowly turn the knob clockwise and counterclockwise and listen for 2 clicks. The indoor RH is within the range of the 2 clicks.

CHECK THE HUMIDIFIER OPERATION – MANUAL HUMIDIFIER CONTROL

1. The HVAC system fan must be running for the humidifier to function. Make a heat or fan call at your thermostat.
2. Set the knob to the highest RH set point, make sure that the water saddle valve is open and that there is electricity to the humidifier.
3. Return control knob to the desired RH set point.

OPERATING INSTRUCTIONS – MODEL 300

FIGURE D: MANUAL DIGITAL HUMIDIFIER CONTROL



Your AprilAire Humidifier is controlled by a Manual Digital Humidifier Control (see **FIGURE D**). The Manual Digital Humidifier Control is installed on an interior wall of the home. Just as with the Manual Humidifier Control, it is important to anticipate a drop in outdoor temperature and reduce the RH set point accordingly to avoid excessive condensation (see page 8).

The Manual Digital Humidifier Control will continuously display indoor RH%.

CHECK HUMIDIFIER OPERATION – MANUAL DIGITAL HUMIDIFIER CONTROL

Press the ON button. **ON** will appear on the display, but it does not necessarily mean the humidifier is running. Several conditions must be met:

1. The control and humidifier must be powered.
2. The RH level in the conditioned space must be below the set point. Raise the set point if necessary.

Once functionality has been established, set the control to the desired relative humidity.

ADDITIONAL INFORMATION FOR ALL MODELS

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

On occasion, indoor moisture producing activities such as clothes drying, cooking, showers, etc., may raise the RH level higher than it should be, even though the AprilAire Humidifier is not operating. Telltale indications 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.

EFFECT OF WATER CHARACTERISTICS

Your humidifier is designed to operate using hot, cold, hard, or mechanically softened water. Hot supply water, up to 140°F (60°C), is required for the Model 300 or when using other AprilAire Evaporative Humidifiers in a heat pump application. It is recommended for all models and applications to ensure maximum performance.

Water 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 deposits. In either case, the service life of a Water Panel will be the same. The Water Panel should be changed at least once a year with the exception of Models 400 and 400M which should be changed at least twice per heating season. In the drain-equipped models, most of the mineral solids are flushed down the drain.

⚠ WARNING

RISK OF SCALDING. Water temperature over 125°F (52°C) can cause severe burns and scald instantly. Shut off the hot water supply before disconnecting or tapping into any hot water supply line.

ANNUAL MAINTENANCE

For best performance, we recommend that you replace the Water Panel in your AprilAire Humidifier at least annually with the exception of Models 400 and 400M which should be changed at least twice per heating season.

The **Change Water Panel** indicator light (Digital Control only) will blink when it is time to change your Water Panel. See individual model instructions for additional maintenance.

To purchase a new Genuine AprilAire Water Panel or other service parts:

- Call the installer of your AprilAire Humidifier. This information is often found on your equipment.
- Call your HVAC contractor.
- Use our **Find a Pro** tool at **aprilaire.com**.
- If none of the above is successful and you still need information, contact Technical Support at 800.334.6011.

UNIT	WATER PANEL PART NUMBER
300	35
400	45
500	10
600	35
700	35

If your humidifier is equipped with an Automatic Digital Humidifier Control with a **Change Water Panel** indicator, follow the steps below after replacing the Water Panel.

1. Make a heat call at your thermostat to turn on the HVAC system fan.
2. Turn the control knob past **7** to the **Test/Reset** position. It will click into place, and the **Humidifier On** light will start to blink.
3. Turn the control knob back to its original RH setpoint.

ANNUAL SUMMER SHUTDOWN

For Models 400, 400M, 500, 500M, 600 and 600M close the bypass damper, which is a part of the humidifier, by turning the damper handle from **WINTER** to **SUMMER**.

Humidifier Control:

- Automatic Digital Humidifier Control in Automatic mode (see **FIGURE A**): No adjustment is necessary.
- Automatic Digital Humidifier Control in Manual mode (see **FIGURE B**): Set the knob to the **OFF** position.
- Manual Humidifier Control (see **FIGURE C**): Set the knob to the **OFF** position.
- Manual Digital Humidifier Control (see **FIGURE D**): Lower the RH set point to **OFF**.

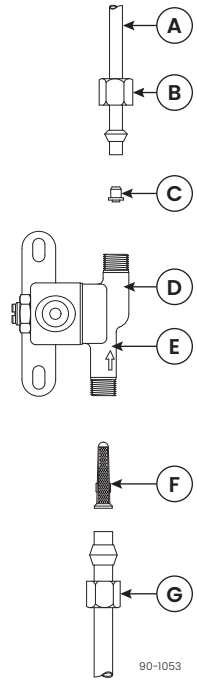
PERIODIC PREVENTATIVE MAINTENANCE

NOTE: Periodic inspection and preventative maintenance of your total heating system is important for efficient and safe operation. Your HVAC contractor can service your humidifier when they service your HVAC system.

All models have a distribution tray above the Water Panel, which should be inspected annually and cleaned of excess mineral deposits.

WATER LINE INSPECTION AND SERVICE INSTRUCTIONS

1. Disconnect electrical power to the HVAC system 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, Part No. 4004.
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 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 water feed tube and make sure the small opening is unplugged.
9. Replace the orifice with Part No. 4231 (yellow) or 4232 (blue), by model, if missing or damaged, and reconnect the water feed tube. **Double wrench to prevent leaking**.
10. Remove the drain line from the bottom of the humidifier. If necessary, flex it to loosen any mineral deposits or blockages.
11. 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 flow properly, replace it.
12. Inspect the drain line to make sure it has a constant downward slope and is not flattened or blocked.
13. Turn on water supply and reconnect electrical power to the HVAC system.



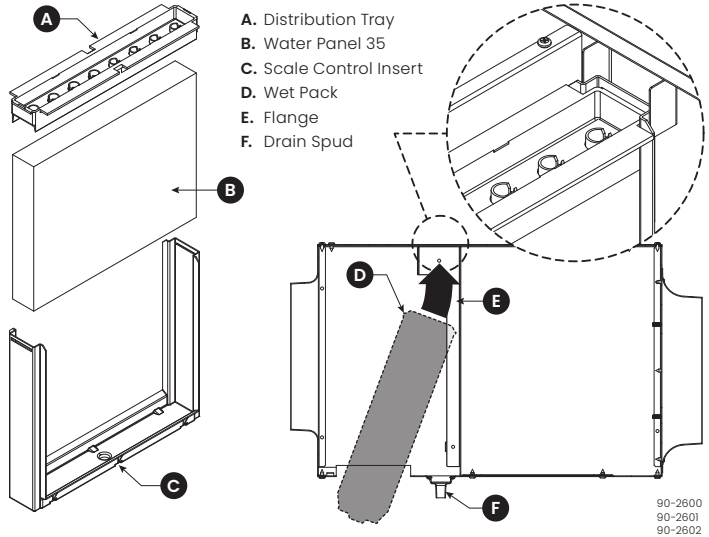
A. WATER FEED TUBE
B. OUTLET COMPRESSION NUT
C. ORIFICE
D. SOLENOID VALVE
E. INLET
F. INLINE STRAINER
G. INLET COMPRESSION NUT

REQUIRED MAINTENANCE INSTRUCTIONS

APRILAIRE HUMIDIFIER MODEL 300

⚠ WARNING

ELECTRIC SHOCK HAZARD: 120 volts may cause serious injury from electric shock. Disconnect electrical power and water before servicing. Leave power and water disconnected until service is completed.



A. Distribution Tray
B. Water Panel 35
C. Scale Control Insert
D. Wet Pack
E. Flange
F. Drain Spud

1. Turn Manual Digital Humidifier Control off.
2. Disconnect electrical power and turn off water supply.
3. Unscrew knobs to Wet Pack assembly access panel.
4. Lift the Wet Pack assembly (D) then swing out and slide forward out of the humidifier housing.
5. To remove the distribution tray (A) from Water Panel (B), push down on tray and pull out scale control insert (C). Clean the "V" openings of the tray. 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 Water Panel (B) out from the scale control insert (C) and dispose of the Water Panel. Clean the scale control insert of mineral deposits. Replace with a genuine AprilAire Water Panel 35. Slide the Water Panel back into the scale control insert and snap the distribution tray (A) back into the scale control insert.
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. Remove the drain line from the drain spud (F) at the bottom of the humidifier and 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 the drain line back onto the drain spud. Make sure the drain line has a constant downward slope and is not flattened or blocked.
9. Reinstall Wet Pack assembly (D) as shown in figure. Insert into the humidifier housing to align with guiding flanges (E) and ensure fit with drain spud (F).
10. Reconnect electrical power and turn on water supply.
11. Turn on Manual Digital Humidifier Control and check system operation.
12. Set Manual Digital Humidifier Control to its original setting.

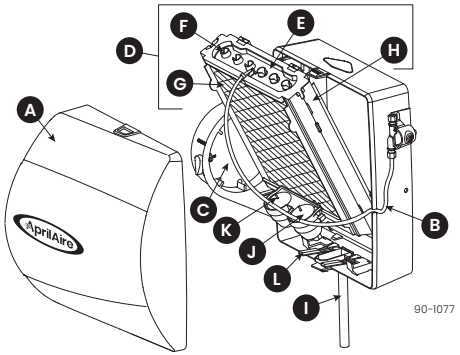
REQUIRED MAINTENANCE INSTRUCTIONS

APRILAIRE HUMIDIFIER MODELS 400 & 400M

⚠ CAUTION

SUDDEN OPERATION MAY CAUSE PERSONAL INJURY OR PROPERTY DAMAGE. Turn the humidifier control to **OFF** or lowest setting before servicing.

A. Front Cover
B. Feed Tube
C. Bypass Damper
D. Water Panel Evaporative Assembly
E. Distribution Tray
F. "V" Notches
G. Water Panel 45
H. Scale Control Insert/Float Chamber
I. Overflow Drain Line
J. Float Cover
K. Float
L. Water Level Sensor Assembly



1. Note humidifier control set point and turn dial to the **OFF** position.
2. Turn off water supply. Turn the bypass damper (C) to the **SUMMER** position.
3. Press the tabs in the latches on the top and bottom of front cover (A) and pull cover off base with both hands.
4. Carefully pull the plastic feed tube (B) out of the distribution tray (E) at the top of the Water Panel evaporative assembly (D). Tip the Water Panel evaporative assembly forward and lift it out of the humidifier. **Do not** tip the Water Panel evaporative assembly more than needed to clear the housing to avoid over-bending the water level sensor assembly (L).
5. Unsnap the distribution tray (E) from the scale control insert (H). 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 used Water Panel (G) out of the scale control insert/float chamber and dispose of the Water Panel.
7. Remove the float cover (J) and inspect the floats (K) and float chamber for mineral build-up. Remove deposits as needed from floats, float chamber and scale control insert. Wash the parts with a disinfecting cleaner. Reassemble the floats and float cover. Make sure stems of both floats extend through openings in float cover and that floats move freely up and down.
8. Inspect the plastic feed tube (B) by gently flexing it and looking for cracks or signs of wear. Replace tube if it is cracked, brittle, or has been damaged.
9. Slide a new genuine AprilAire Water Panel 45 (G) into the scale control insert/float chamber (H). Snap the distribution tray (E) back on the scale control insert (H).
10. Reinstall the Water Panel evaporative assembly (D) into the humidifier. Take care not to over-bend the water level sensor assembly. Push the top of the Water Panel evaporative assembly firmly back until it snaps into place.
11. Push the end of the feed tube back firmly into the distribution tray. Replace the front cover.
12. Under normal operation the overflow drain line (I) will never have water in it. However, inspect it for mineral deposits and replace if necessary. Make sure the drain line has a constant downward slope and is not flattened or blocked.
13. Turn on the water supply. Return bypass damper to appropriate position.
14. Check system operation:

    Manual Humidifier Control (Model 400M): With the HVAC system fan operating, turn up humidifier control and check system operation.

    Automatic Digital Humidifier Control (Model 400): (Automatic or Manual mode) Check system operation and reset **Change Water Panel** indicator by setting the knob to **Test/Reset**. With HVAC system fan operating and thermostat calling for heat, humidifier will operate for one minute. DO NOT LEAVE IN TEST MODE AS HUMIDIFIER WILL NOT OPERATE.
15. Set humidifier control dial to its original set point.

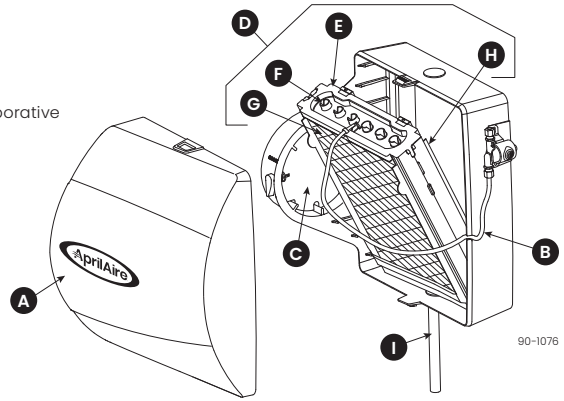
REQUIRED MAINTENANCE INSTRUCTIONS

APRILAIRE HUMIDIFIER MODELS 500, 500M, 600 & 600M

⚠ CAUTION

SUDDEN OPERATION MAY CAUSE PERSONAL INJURY OR PROPERTY DAMAGE.
Turn the humidifier control to **OFF** or lowest setting before servicing.

A. Front Cover
B. Feed Tube
C. Bypass Damper
D. Water Panel Evaporative Assembly
E. Distribution Tray
F. "V" Notches
G. Water Panel
H. Scale Control Insert
I. Drain Line



1. Note humidifier control set point and turn dial to the **OFF** position.
2. Turn off water supply. Turn the bypass damper (C) to the **SUMMER** position.
3. Press the tabs in the latches on the top and bottom of front cover (A) and pull cover off base with both hands. Set aside.
4. Carefully pull the plastic feed tube (B) out of the distribution tray (E) at the top of the Water Panel evaporative assembly (D). Pull this assembly out by grasping at top and tipping out.
5. Unsnap the distribution tray (E) from the scale control insert (H). 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 Water Panel (G) out from the scale control insert (H) and dispose of the Water Panel. Clean the scale control insert of mineral deposits. Replace the Water Panel (Water Panel 35 for Models 600 & 600M and Water Panel 10 for Models 500 & 500M) with a new genuine AprilAire Water Panel. Slide the Water Panel back into the scale control insert with the colored spot up and snap the distribution tray (E) back into place.
7. Inspect the plastic feed tube (B) 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 Water Panel evaporative assembly (D) 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 back firmly into the distribution tray and replace the front cover.
9. Remove the drain line (I) 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 bypass damper to appropriate position.
11. Check system operation:

    Manual Humidifier Control (Models 500M & 600M): With the HVAC system fan operating, turn up humidifier control and check system operation.

    Digital Humidifier Control (Models 500 & 600): (Automatic or Manual mode) Check system operation and reset **Change Water Panel** indicator by setting the knob to **Test/Reset**. With HVAC system fan operating and thermostat calling for heat, humidifier will operate for one minute. DO NOT LEAVE IN TEST MODE AS HUMIDIFIER WILL NOT OPERATE.
12. Set humidifier control dial to its original set point.

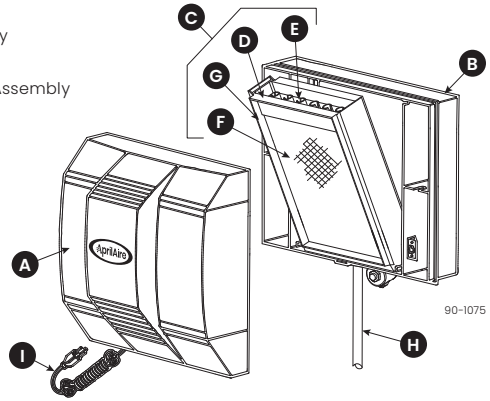
REQUIRED MAINTENANCE INSTRUCTIONS

APRILAIRE HUMIDIFIER MODELS 700 & 700M

⚠ WARNING

ELECTRIC SHOCK HAZARD: 120 volts may cause serious injury from electric shock. Disconnect electrical power and water before servicing. Leave power and water disconnected until service is completed.

A. Humidifier Cover Assembly
B. Base Assembly
C. Water Panel Evaporative Assembly
D. Distribution Tray
E. "V" Notches
F. Water Panel 35
G. Scale Control Insert
H. Drain Line
I. Power Cord



1. Note humidifier control set point and turn dial to the **OFF** position.
2. Disconnect electrical power and turn off water supply.
3. Unlatch humidifier front cover assembly (A) from base assembly (B) at the bottom of the cover, lift, and set aside.
4. Pull out the Water Panel evaporative assembly (C) by grasping at the top and tipping out.
5. Unsnap the distribution tray (D) from the scale control insert (G). 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 Water Panel (F) out from the scale control insert (G) and dispose of the Water Panel. Clean the scale control insert of mineral deposits. Replace with a genuine AprilAire Water Panel 35. Slide the Water Panel back into the scale control insert with the colored spot up and snap the distribution tray (D) 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 Water Panel evaporative assembly (C) 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 (H) 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 (A) by hooking at the top of the base assembly (B) and latching at the bottom.
11. Reconnect electrical power (I) and turn on the water supply.
12. Check system operation:

    Manual Humidifier Control (Model 700M): With the HVAC system fan operating, turn up humidifier control and check system operation.

    Digital Humidifier Control (Model 700): (Automatic or Manual mode) Check system operation and reset **Change Water Panel** indicator by setting the knob to **Test/Reset**. With HVAC system fan operating and thermostat calling for heat, humidifier will operate for one minute. DO NOT LEAVE IN TEST MODE AS HUMIDIFIER WILL NOT OPERATE.
13. Set humidifier control dial to its original set point.

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

LIMITED WARRANTY

Terms of Coverage

Your AprilAire® Humidifier is expressly warranted to be free from defects in materials or workmanship for five (5) years from date of purchase.

What Is Covered

The exclusive obligation of AprilAire under this Limited Warranty shall be, at the sole discretion of AprilAire, to supply, without charge, a replacement for any component or product which is found to be defective. A defective part will be replaced pursuant to this Limited Warranty with a genuine AprilAire part. A defective product will be replaced pursuant to this Limited Warranty with a new AprilAire product of equal or similar features and functionality if the original product has been discontinued or is no longer available.

Not Covered by the Limited Warranty

- Consumable or maintenance products, such as, but not limited to: Air Filters, Evaporative Humidifier Water Panels, Steam Canisters, or Steam Humidifier Electrode Wires.
- Labor charges, shipping costs, removal fees, service fees, or reinstallation costs.
- Damage caused by misuse, abuse, or improper installation due to failing to install the product in accordance with the instructions provided.
- Damage to HVAC equipment caused by improper installation(s) or misapplication installation(s).
- Modifications, changes, repurposing, or alterations to the AprilAire product.
- Extended warranties or satisfaction guarantees offered by third parties.
- Cosmetic damage or normal wear and tear, including, but not limited to: scratches, peeling finish, or dents that do not impede the mechanical functionality of the product.
- Damage caused by acts of nature, including but not limited to: fire, collision, flood, wind, power surge, lighting strike, or mold.
- Damage caused during transit.
- Damage caused during installation due to failure to follow local, state, or federal laws, statutes, codes, or ordinances.
- Defects in materials furnished by the installer.

Limit of Liability

IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFOREMENTIONED EXPRESS WARRANTY PERIOD. APRILAIRE LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFOREMENTIONED IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECT(S) RESULT(S) FROM FAILURE TO INSTALL THE PRODUCT ACCORDING TO THE APRILAIRE INSTALLATION INSTRUCTIONS. IF THE LIMITED WARRANTY IS VOID DUE TO MISAPPLICATION OR IMPROPER INSTALLATION, ALL DISCLAIMERS OF IMPLIED WARRANTIES SHALL BE EFFECTIVE UPON INSTALLATION.

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

Register Your AprilAire® Product

Thank you for choosing AprilAire. Register your product at **aprilaire.com/warranty** to receive important updates and notifications, and to streamline the process in the unlikely event you file a claim.

Your warranty registration information will not be sold or shared outside of this company.

Make a Warranty Claim

For questions regarding the Limited Warranty or to initiate a claim, contact AprilAire Customer Service at 1.800.334.6011 Monday through Friday, 7:00 a.m. – 5:00 p.m. Central Time.

At the sole discretion of AprilAire, you may be required to: return the product not later than thirty (30) days after the warranty period to the place of purchase or (if directed) to AprilAire, contact a professional contractor to provide warranty service, submit a product for testing related to a warranty claim, and/or send pictures of the original product with the serial number (if applicable) to AprilAire Technical Support for inspection as a condition to reviewing a claim and/or receiving a replacement product under this Limited Warranty.

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AprilAire reserves the right to change specifications without notice.