

### ATTENTION INSTALLER

Read this installation template before installing humidifier. Warranty is void unless humidifier is installed by qualified heating and air conditioning contractor due to possible misapplication of product. This product must be installed in compliance with all local, state, and federal codes. Proper humidification and humidity control require that the home be constructed with local codes and good building practices.

### ⚠ WARNING

**ELECTRICAL SHOCK HAZARD.** Disconnect power to the furnace before installing humidifier.

### ⚠ CAUTION

**SHARP EDGES.** Use care when cutting and handling ductwork.

**HOT WATER CAN SCALD.** Shut off hot water supply before tapping into hot water supply.

### NOTICE

#### FREEZING TEMPERATURES CAN BURST WATER PIPES.

- Do not install humidifier where freezing may occur.

#### CONDENSATION DAMAGE OR MOLD CAN OCCUR.

- Locate return duct mounted humidifier control at least 6" upstream of humidifier, bypass duct connection, or fresh air intake for accurate humidity sensing.
- Locate wall mount humidifier control in areas unaffected by drafts or heat sources for accurate humidity sensing.
- Reduce the setting on the humidifier control if condensation forms on windows or in unheated spaces.

#### EQUIPMENT DAMAGE MAY OCCUR.

- Do not install humidifier or bypass connection on the furnace jacket.
- Do not connect the transformer to the blower motor wiring.
- Do not install the humidifier or bypass connection on a plenum face at the blanked end of the cooling coil.
- If water pressure exceeds 125 psi, reduce water pressure with devices allowed by local codes.
- Do not use water with temperature greater than 140°F.
- Do not install humidifier on systems with differential pressure greater than 0.4 w.g. between the supply and return plenums.
- When installing the humidifier control on the return duct of a downflow furnace, ensure the blower continues to run after a heat call is satisfied.

### SPECIFICATIONS

#### Humidifier Dimensions:

Width (including solenoid valve): 15-5/8"  
Height (including drain spud): 13"  
Depth: 10-1/4"

**Bypass Duct Opening:** 6" diameter

**Plenum Opening:** 9-1/2"W x 9-1/2"H

**Water Feed Rate:** 3 gph

**Electrical Data:** 24 VAC, 60 Hz, 0.5 Amp

**Water Panel®:** Model 10

### FURNISHED ITEMS

- Humidifier with built-in bypass damper
- 24 VAC transformer
- Automatic Digital Humidifier Control and Outdoor Temperature Sensor (Model 500 only)
- Manual Humidifier Control (Model 500M only)
- Humidifier Control Installation Instructions
- Saddle valve
- Humidifier Installation Template

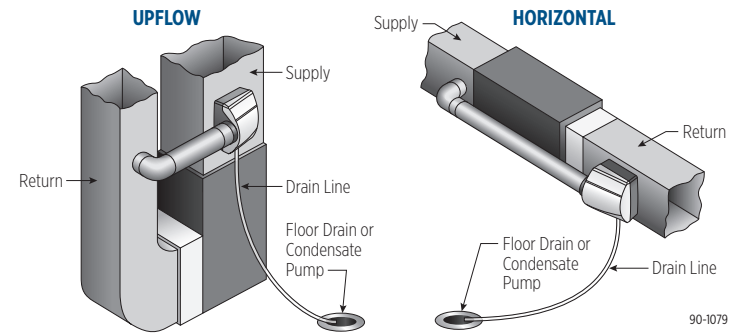
### ITEMS NOT FURNISHED

- Mounting screws (sheet metal screws)
- Water supply line (1/4" O.D. copper)
- Drain line (1/2" I.D. hose)
- Low voltage wire
- Bypass ductwork
- Model 50 current sensing relay (if required)

### INSTALLATION OPTIONS (LEFT HAND DISCHARGE SHOWN)

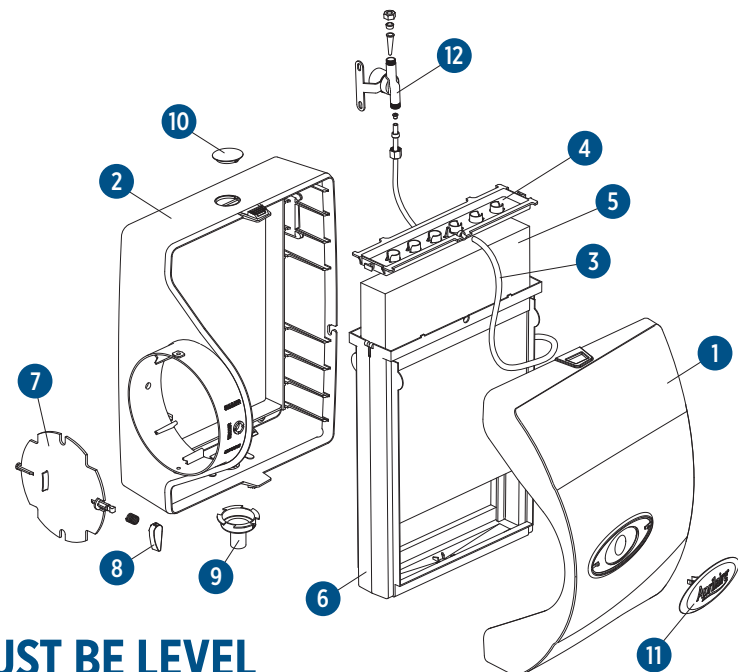
Aprilaire® Model 500 and 500M can be installed on either the supply plenum or cold air return of a forced air handling system with right hand or left hand bypass duct connections. The humidifier dimensions and serviceability must be considered when selecting the best location for the humidifier.

Hot water is recommended (140°F max) to provide maximum evaporative capacity. It is also recommended when the Blower Activation Feature is used with an Automatic Digital Humidifier Control, or on a heat pump system. The humidifier functions with cold, hot, softened, or unsoftened water.



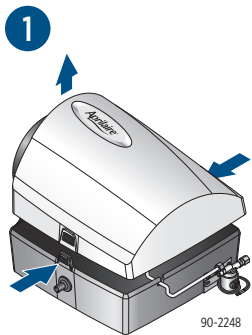
### PARTS LIST

- Front Cover
- Base
- Feed Tube
- Water Distribution Tray
- Water Panel®
- Scale Control Insert
- Integral Damper
- Damper Handle
- Drain Spud
- Hole Plug
- Nameplate
- Solenoid Valve

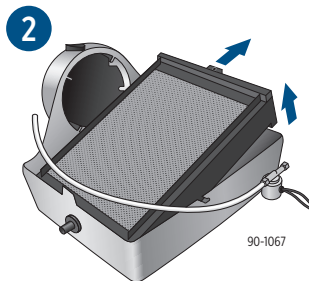


**TEMPLATE MUST BE LEVEL**

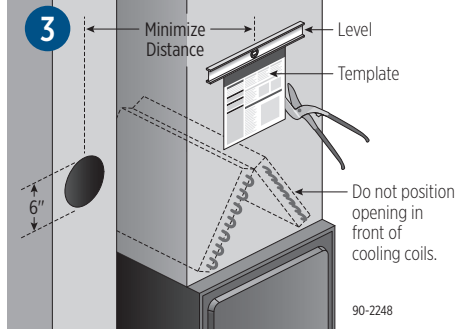
## INSTALLATION INSTRUCTIONS



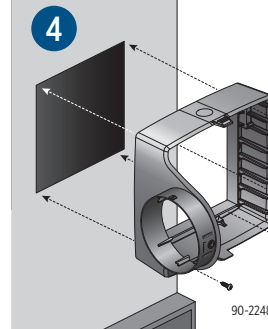
Press tabs to remove cover.



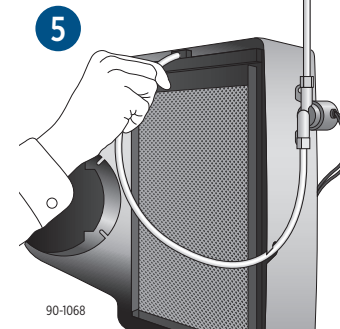
Pull feed tube out of distribution tray, and remove Water Panel® evaporative assembly.



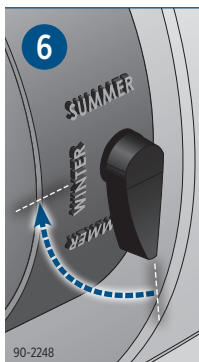
Cut opening using this template.



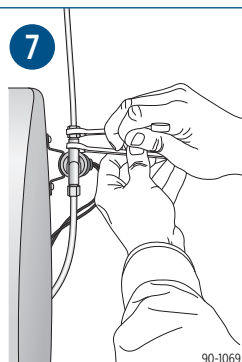
Secure base with screws.



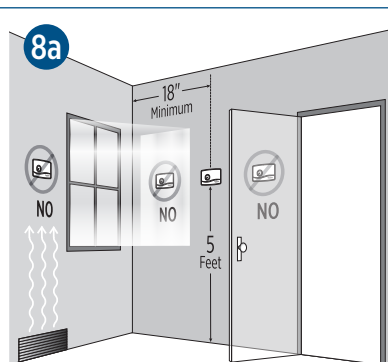
Insert feed tube into distribution tray.



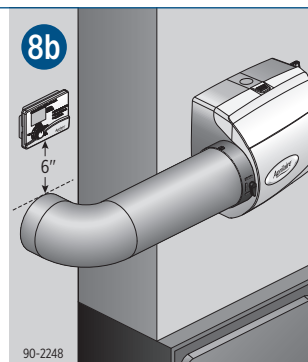
Turn damper handle to **WINTER** when in use.



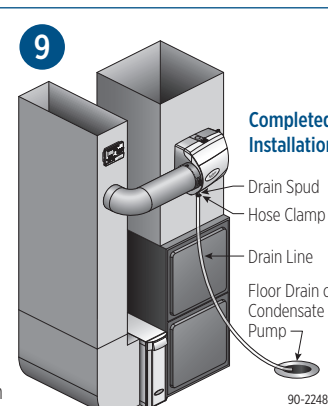
Tighten water line by double wrenching.



Location of manual humidifier control in living space.



Locate manual or digital humidifier control on the return 6" above the humidifier or bypass duct.

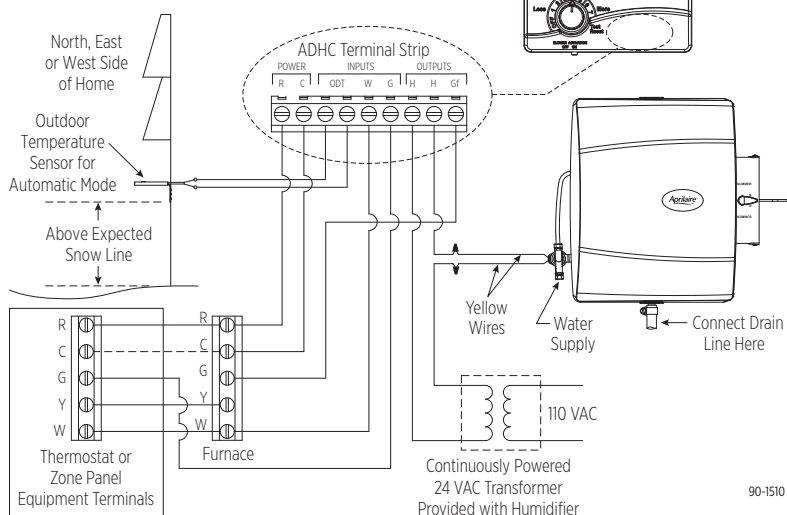


### Drain Line:

- Ensure downward slope and no kinks.
- Do not over-tighten hose clamp onto drain spud.
- Do not use solvent adhesive on drain spud.

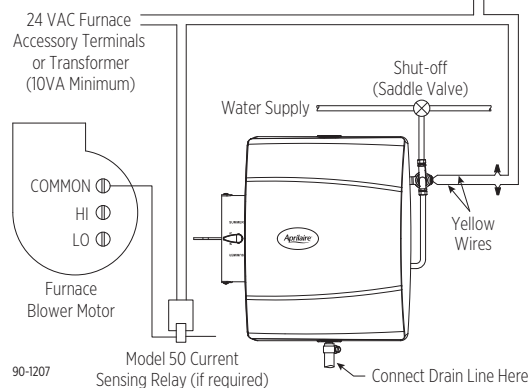
## MODEL 500 DIGITAL HUMIDIFIER CONTROL WIRING

**NOTE:** Control will display software revision level i.e. r1, when the one minute test cycle has completed. Refer to the control installation manual for system checkout instructions.



## MODEL 500M MANUAL CONTROL WIRING

**IMPORTANT:** Use 120 VAC power source other than furnace motor circuit. However, the transformer can be powered off the hot 120 VAC line before it enters the furnace. **Do not wire transformer into furnace blower circuit.**



**IMPORTANT:** When Model 50 current sensing relay is used, wire Model 50 current sensing relay into 24 VAC humidifier control circuit only! **Do not install in transformer primary circuit.**

## INSTALLATION CHECKLIST

- Saddle valve is fully open.
- All plumbing connections are watertight.
- Humidifier functions properly.
- Bypass damper is in proper position.
- Owner's manual has been given to homeowner.

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# TEMPLATE MUST BE LEVEL