



Model A200V1, A300V1, A300V3 Dehumidifier

Installation and Operating Instructions



SAFETY INSTRUCTIONS

WARNING

1. High voltage may cause serious injury from electric shock. Disconnect electrical power before starting installation or servicing. Leave power disconnected until installation/service is completed.
2. Sharp edges may cause serious injury from cuts. Use care when cutting plenum openings and handling duct work.
3. Dropping may cause personal injury or equipment damage. Handle with care and follow installation instructions.

CAUTION

1. Read all instructions before beginning installation.
2. Improper installation may cause property damage or injury. Installation, service, and maintenance must be performed by a qualified service technician.
3. Do not use in pool applications. Pool chemicals can damage the dehumidifier.
4. Wait 24 hours before running the unit if it was not shipped or stored in the upright position

READ AND SAVE THESE INSTRUCTIONS

TABLE OF CONTENTS

SAFETY INSTRUCTIONS	1	POWER WIRING	6
SPECIFICATIONS	2	Wiring Instructions	7
SET UP DEHUMIDIFIER FOR INSTALLATION	3	MODEL A76 CONTROL	8
Location Considerations	3	Alternate External Controls	8
Installation	4	OPERATION	9
Ducting & Filter Installation	4	MAINTENANCE	9
HANGING	5	TROUBLESHOOTING	10
DRAIN INSTALLATION	5	SERVICE PARTS	11
		LIMITED WARRANTY	12

SPECIFICATIONS

TABLE 1 – SPECIFICATIONS	Model A200V1	Model A300V1	Model A300V3
Capacity (AHAM DH-1-2008 80°F, 60% RH)	210 pints per day	300 pints per day	300 pints per day
Airflow @ 0"w.c.	400 CFM	500 CFM	500 CFM
Unit Weight	140 lbs	140 lbs	145 lbs
Voltage	240 VAC	240 VAC	277 VAC
Nominal Operating Current @ 80°F / 60% RH*	6.6 Amps	12.0 Amps	9.5 Amps
Filter	MERV 11	MERV 11	MERV 11

*Do not use for circuit wire sizing or overcurrent protection sizing; see **POWER WIRING** section on page 6 for this information.

SET UP DEHUMIDIFIER FOR INSTALLATION

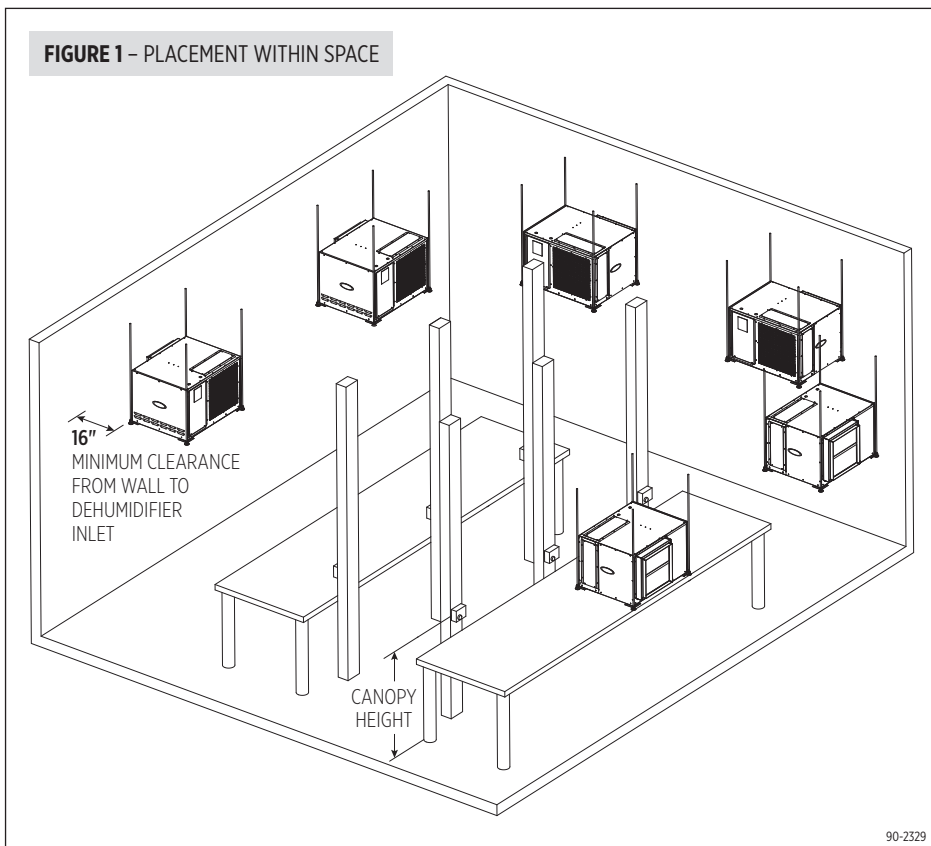
LOCATION CONSIDERATIONS

The dehumidifiers should be spaced evenly throughout the area to be dehumidified with the following recommendations:

1. Avoid placement where the discharge of one dehumidifier is pointing toward the inlet of another. See **FIGURE 1**.
2. Account for handling dehumidifier condensate by considering drain or sump pump locations. See **FIGURE 2**.
3. Leave appropriate room on the electrical service side to remove panel for field connections. See **FIGURE 3**.

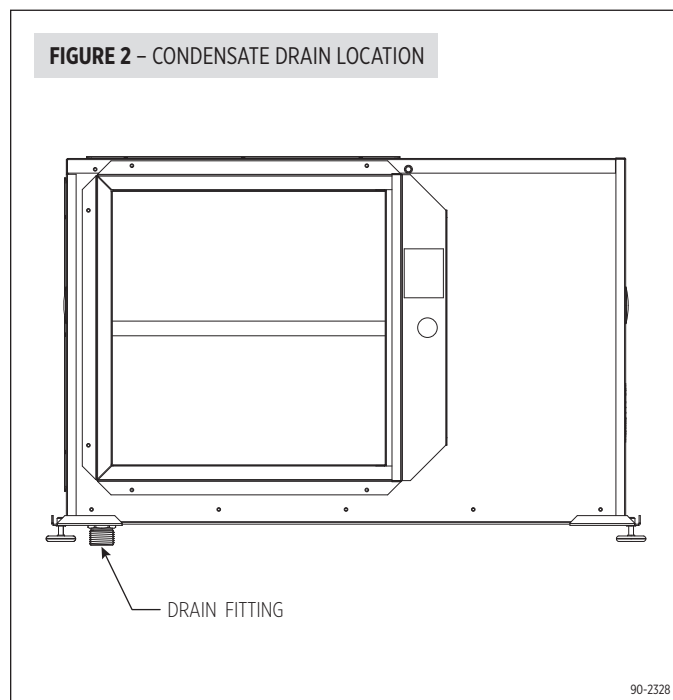
The recommended orientation is to install the dehumidifiers around the perimeter of the room with the dehumidifier inlet pointing toward the wall and the outlet pointed to distribute the dry air over the canopy. This installation maximizes allowable plant space and works with the existing room fans to distribute air over the canopy.

FIGURE 1 – PLACEMENT WITHIN SPACE



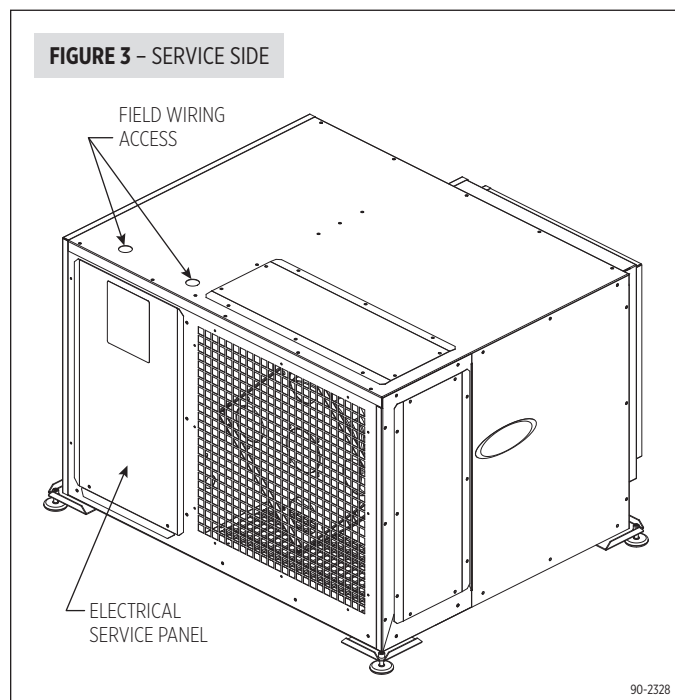
90-2329

FIGURE 2 – CONDENSATE DRAIN LOCATION



90-2328

FIGURE 3 – SERVICE SIDE



90-2328

INSTALLATION

IMPORTANT: Remove plywood shipping base before proceeding to the next installation steps.

The preferred method of installation is hanging – see **HANGING** section on page 5.

The alternate method is floor level placement. Replace the eye bolts with the included 1/4"-20, 1.0" thread length rubber cushioned leg levels.

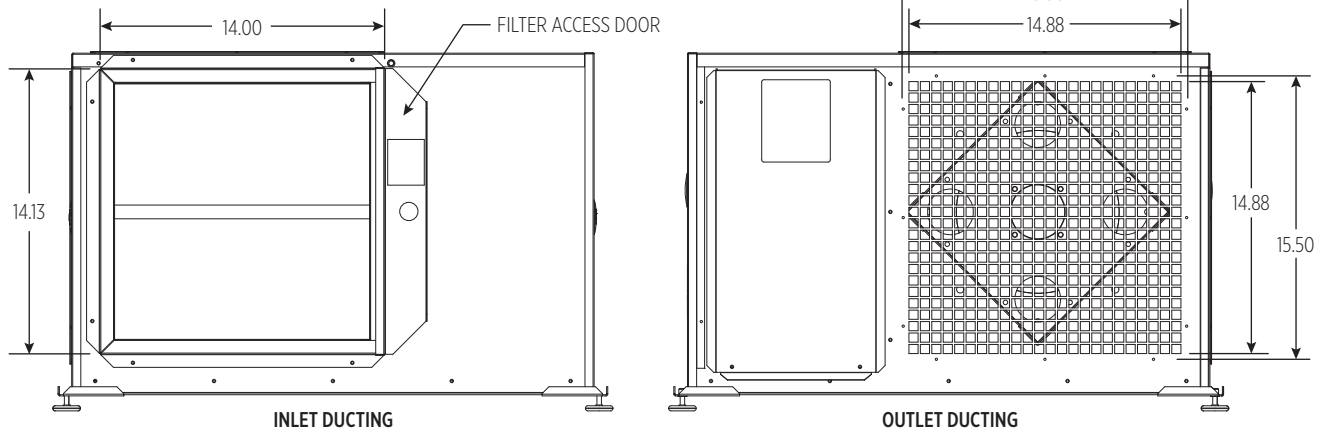
In each installation the unit must be level for proper draining.

DUCTING & FILTER INSTALLATION

The preferred methods of installation are hanging, followed by floor level placement with straight through airflow. There are alternate discharge openings on the top, bottom, and side of the unit. See **FIGURE 5**. If ducting the inlet, all duct connections should be installed in accordance with local and national standards. For the highest fan efficiency, any duct bends and transitions should be made to minimize airflow losses. For the A200V1, at least one discharge opening must remain uncovered and for the A300V1 or A300V3, at least two discharge openings must remain uncovered, one of which must be the large opening on the panel opposite the inlet panel. More discharge openings uncovered will provide the highest capacity and efficiency. Covers are included with the dehumidifier to close off discharge openings that are not to be used.

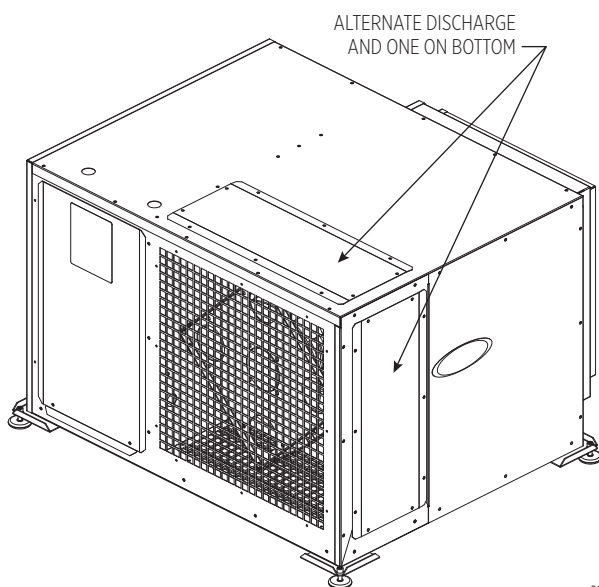
Before installing the unit, remove the shipping platform from the unit and install the inlet duct with filter using the 6 provided screws. Install the filter access door using the knob to secure. See **FIGURE 6**.

FIGURE 4 – DUCT CONNECTION SIZES (INCHES)



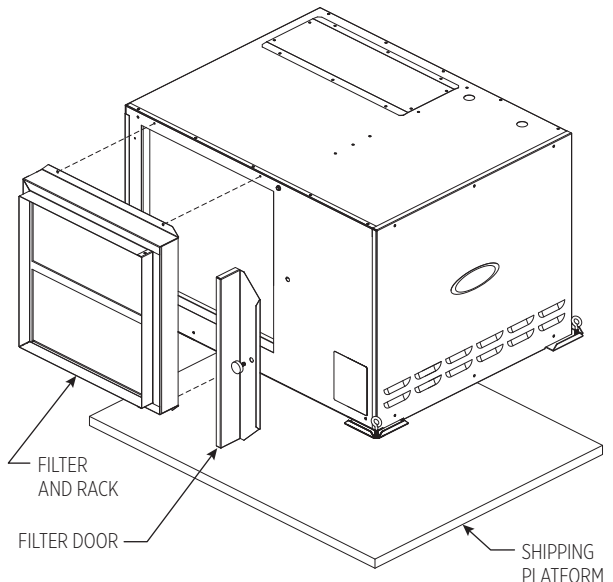
90-2328

FIGURE 5 – ALTERNATE DISCHARGE LOCATIONS



90-2328

FIGURE 6 – PREPARE UNIT FOR INSTALLATION



90-2328

HANGING

The recommended method for hanging the dehumidifier is to use the eye bolts and hardware included in the parts bag. See **FIGURE 7**. Assemble the four eye bolts to the mounting foot brackets as shown in **FIGURE 8**, and suspend using cable, chain, strapping or other support methods. **NOTE: The chain, cable or strapping must have a 200 lb. working load minimum, and each eye bolt must be used to suspend the dehumidifier.**

The dehumidifier can be suspended using 1/4"-20 threaded rod as shown in **FIGURE 9**. **IMPORTANT: Place the provided nuts and washers in the same location as shown in Figure 8 when suspending with threaded rod.**

The dehumidifier must be level for proper draining. Adjust the length of the chain, cable, threaded rod, etc., to level in all directions.

FIGURE 7 – HANGING UNIT WITH CHAIN AND EYE BOLTS

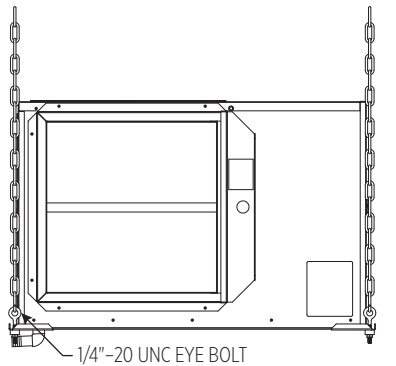


FIGURE 8 – HARDWARE FOR SUSPENDING DEHUMIDIFIER

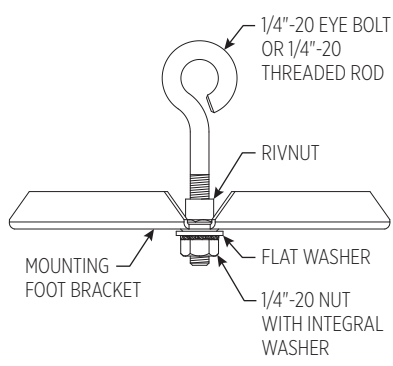
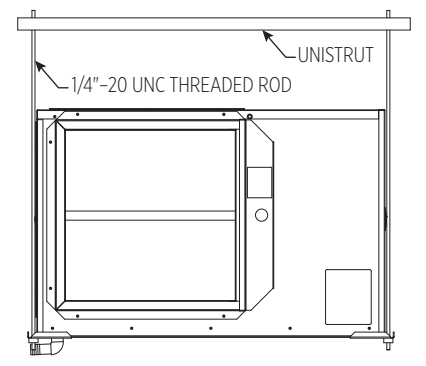


FIGURE 9 – HANGING UNIT WITH THREADED ROD



DRAIN INSTALLATION

The blower draws air through the dehumidifier putting the cabinet under negative pressure. As a result a P-trap is required for proper draining. The drain outlet on the dehumidifier can be hard piped using a 3/4" PVC Slip x 1" MNPT right angle fitting and 3/4" nominal drain tubing. If flexible, clear PVC tubing is preferred, the provided drain fitting with a right angle bend to a 3/4" hose barb fitting can be installed. **NOTE: PTFE thread seal tape is recommended for threaded connections and hand tighten only.** If hard pipe is used, PVC primer and cement is recommended for the slip fit connections. After installing the drain, pour enough water (about 2 pints) into the dehumidifier to prime the traps. Remove the air filter from the dehumidifier to access the drain pan.

FIGURE 10 – PVC DRAIN TUBING

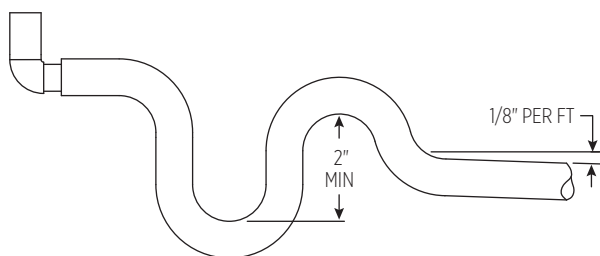
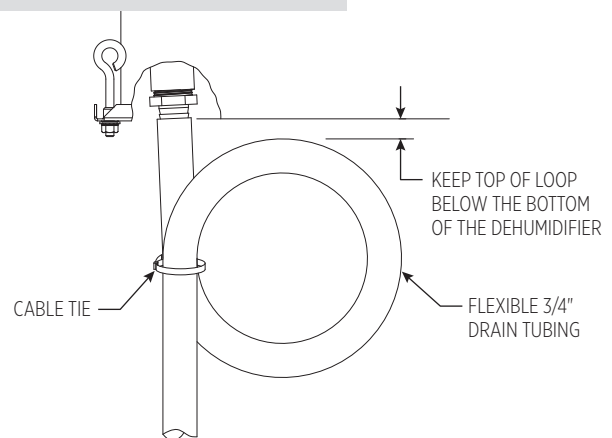
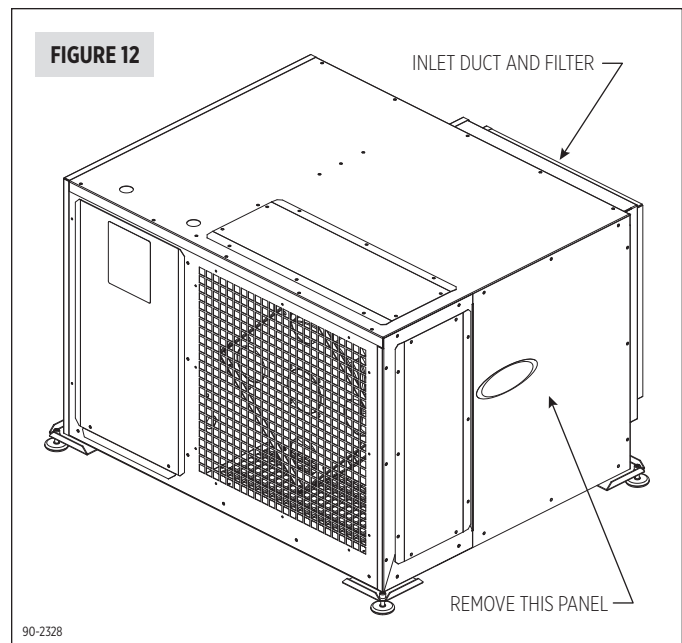


FIGURE 11 – FLEXIBLE DRAIN TUBING



If using the alternate drain fitting, follow the steps below to remove the existing drain and install the alternate.

1. Remove the side panel adjacent to the inlet duct. See **FIGURE 12**.
2. Remove the nut and O-ring from the existing drain and pull out existing drain.
3. Remove the nut from the alternate 90° drain fitting with hose barb connection and insert the new fitting into the drain. **NOTE:** Use plumber's putty between the drain and water side of the drain pan.
4. Install the nut and hand-tighten.
5. Pour a small amount of water in the drain to verify the seal between the drain fitting and drain pan.



POWER WIRING

⚠ WARNING

ELECTRICAL SHOCK HAZARD: High voltage may cause serious injury or death from electrical shock. Disconnect and tag electrical service before starting installation or field-service. Leave electrical service disconnected until installation or field-service is complete.

ELECTRICAL SHOCK HAZARD: An interrupted or broken ground may cause property damage, serious injury or death should an electrical fault occur. The cabinet must be grounded in accordance with NEC ANSI/NFPA 70-2011 or local codes. In Canada, refer to Canadian Electrical Code CSA C22.1.

FIRE HAZARD: Use of improper wire may cause serious injury, property damage or death due to fire. Do not use aluminum wire for electrical service to the dehumidifier. Use only copper wire.

⚠ CAUTION

Use of an undersized circuit breaker may cause property damage and/or the need for mold remediation service. See Specifications for wire and circuit breaker sizing.

The dehumidifier must be hard wired, and an electrical disconnect switch must be installed to comply with appropriate codes or ordinances.

United States Installations: Make all electrical connections in accordance with the current edition of the NEC ANSI/NFPA 70 and any local codes or ordinances that may apply.

Canada Installations: Make all electrical connections in accordance with the current edition of the Canadian Electrical Code CSA C22.1 and any local codes or ordinances that may apply.

TABLE 2 – ELECTRICAL SPECIFICATIONS FOR HARD WIRING	Model A200V1	Model A200V1	Model A200V1
Voltage	230-240 VAC, 60 Hz, 1 phase	230-240 VAC, 60 Hz, 1 phase	265-277 VAC, 60 Hz, 1 phase
Minimum Circuit Capacity	13 A	18 A	15 A
Maximum Fuse or Circuit Breaker Amps	20 A	30 A	25 A
Minimum Wire Size AWG	14 AWG	12 AWG	14 AWG

WIRING INSTRUCTIONS

1. Disconnect electrical service at the main fuse or circuit breaker box.
2. Install an electrical disconnect to the line service, located per local and national standard.
3. Remove the electrical service panel from the dehumidifier. See **FIGURE 13**.
4. Route the service cable through one of the holes in the top of the dehumidifier. USE ONLY COPPER SUPPLY WIRES.
5. Secure the cable/conduit to the dehumidifier using fittings/connectors approved for the type of cable/conduit used.
6. Connect the ground wire of the service cable to the ground lug in the electrical service box. See **FIGURE 14**.
7. Connect the line voltage wires of the service cable to the L1 and L2 terminals. See **FIGURE 14**.
8. Reattach the electrical service panel.
9. Restore electrical service at the main fuse or circuit breaker box.

FIGURE 13 – ELECTRICAL CABINET (SERVICE PANEL REMOVED)

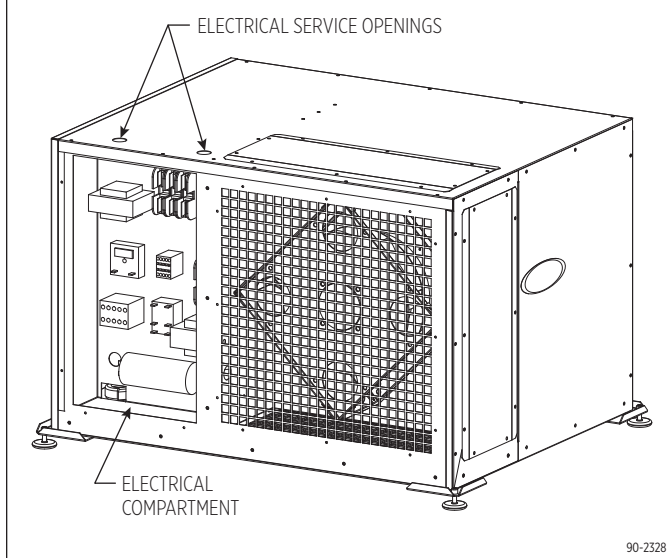
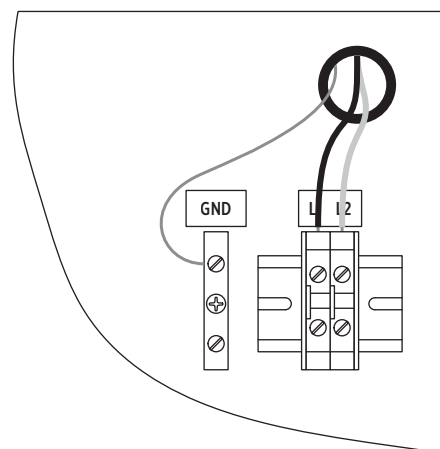


FIGURE 14 – POWER WIRING



2-POSITION POWER TERMINAL BLOCK AND GROUND LUG LOCATED IN DEHUMIDIFIER ELECTRICAL PANEL. INSERT WIRE INTO OPENING AND SECURE USING THE TERMINAL SCREWS.

MODEL A76 CONTROL

NOTE: Use 18–22 AWG wire for control wiring.

A Model A76 Control must be wired to the dehumidifier for external control:

1. Turn off power to the dehumidifier at the fuse or breaker until wiring is completed.
2. Run a 3-wire thermostat cable (use 18–22 AWG wire) from the Model A76 to the electrical panel of the dehumidifier.
3. Trim about 1/4" of insulation from the end of the wires on each end. Insert a small blade screwdriver into the square opening next to the desired terminal in the dehumidifier to open the clamping spring of the terminal. Insert the wire and remove the screwdriver to catch the wire. At the Model A76 secure the wires into the terminals and tighten the cage screws. See **FIGURE 15**.
4. Use extra wire to make a small jumper to wire between the R/+ terminal and one of the DH terminals of the Model A76 Control.

The Model A76 will measure the relative humidity and turn the dehumidifier on and off to control the humidity level to the desired setting. The humidity setting can be adjusted from the control while the display allows easy access and monitoring of the humidity level in the space. It is recommended that the Model A76 be mounted at/near canopy height.

Press the ON button on the Model A76 to turn on the control. The UP/DOWN arrow buttons are used to set the desired humidity setting. At all other times, the Model A76 will display the measured humidity level. Reference the Model A76 Installation Instructions and Owner's Manual for set-up.

ALTERNATE EXTERNAL CONTROLS

A Model 8840 thermostat can be used to control the HVAC equipment, and for dehumidifier control in place of the Model A76. The Model 8840 thermostat has Wi-Fi capability. Additionally, up to four remote sensors can be mounted near the canopy and connected to a single thermostat. The four humidity measurements can be averaged and the thermostat will turn on the dehumidifier based on the averaged value.

Reference the 8840 Installation Instructions and Owner's Manual for set-up and operating details.

FIGURE 15 – MODEL A76 WIRING

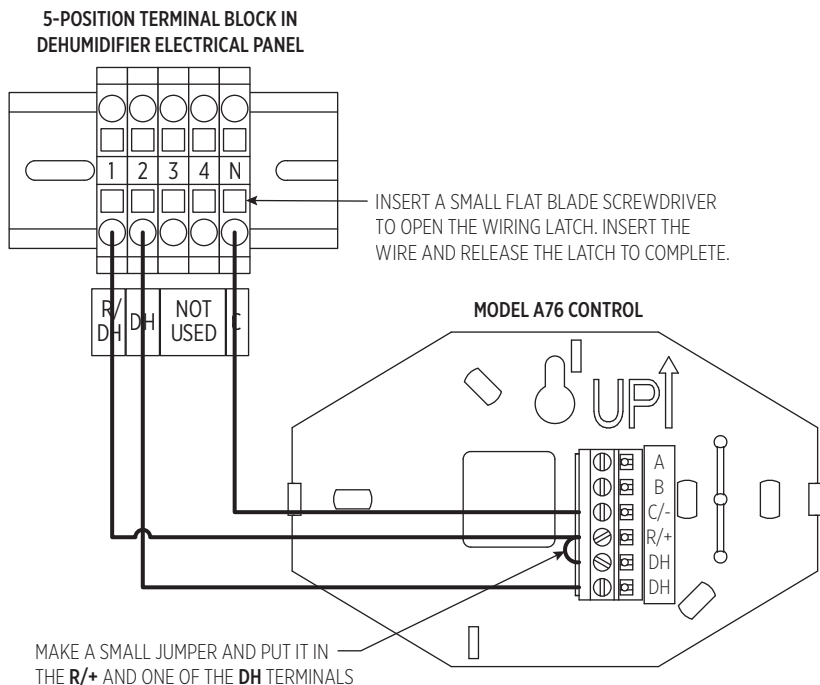
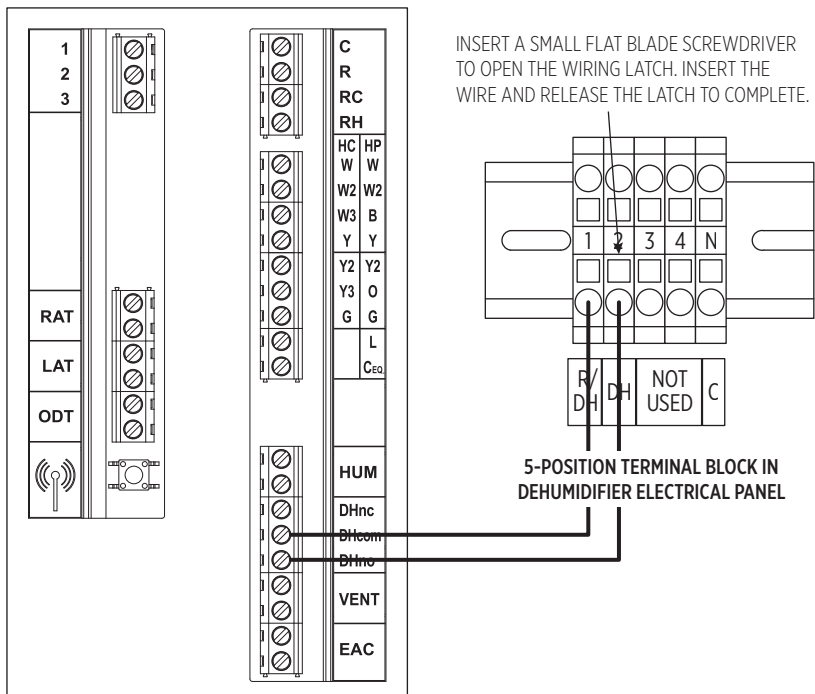


FIGURE 16 – MODEL 8840 WIRING

CONTROL MODULE OF MODEL 8840 THERMOSTAT



OPERATION

1. Check all wiring from the electrical service line to the dehumidifier.
2. Check all wiring between the dehumidifier and the Model A76 Control.

TURN ON & SET MODEL A76 CONTROL

1. When power is supplied to the dehumidifier, the control will display the measured humidity and initially be in OFF Mode.
2. Press the ON button on the Model A76 Control.
3. The default humidity setting is 60%RH. Use the UP/DOWN arrow buttons to adjust the humidity setting. The first button press will display the current setting and **SET** on the LCD display. Each subsequent push of the buttons will change the setting by 1%RH.
4. When desired humidity setting has been set, the control will return to Normal Mode, displaying the measured humidity 5 seconds after the last button press/release.

SEQUENCE OF OPERATION

When the measured humidity is greater than the setting, the control will activate the dehumidifier output, the dehumidifier will begin dehumidifying, and **ON** will blink on the Model A76 LCD display. When the measured humidity falls 3% below the setting, the control will deactivate the dehumidifier output, the dehumidifier will stop dehumidifying and the LCD will display a solid **ON**.

CONTROL LIMITS

If the control measures a dew point below 40°F OR a temperature above 99°F, the control will deactivate the dehumidifier output, if actively dehumidifying, the dehumidifier will stop dehumidifying and **ON** and * will blink on the LCD screen. The control will resume normal operation when the measured dew point is greater than 45°F or the measured temperature is below 94°F, depending on what control limit was exceeded.

Reference the Model A76 Installation Instructions for additional information.

ALTERNATE CONTROLS

If using an alternate control, reference the Installation and Operating Instructions supplied with the control.

MAINTENANCE

FILTER

After initial installation, the air filter should be replaced every 6 months. Remove the filter access panel to remove and replace the filter.

DRAIN

The drain should be checked periodically to ensure there are no blockages or air lock in the drain system.

CONTROL

The surface of the Model A76 Control can be cleaned with a damp cloth or non-abrasive general cleaner. **Do not spray any liquid directly on the control.** Spray water or cleaner onto a soft cloth and gently wipe the surface of the control.

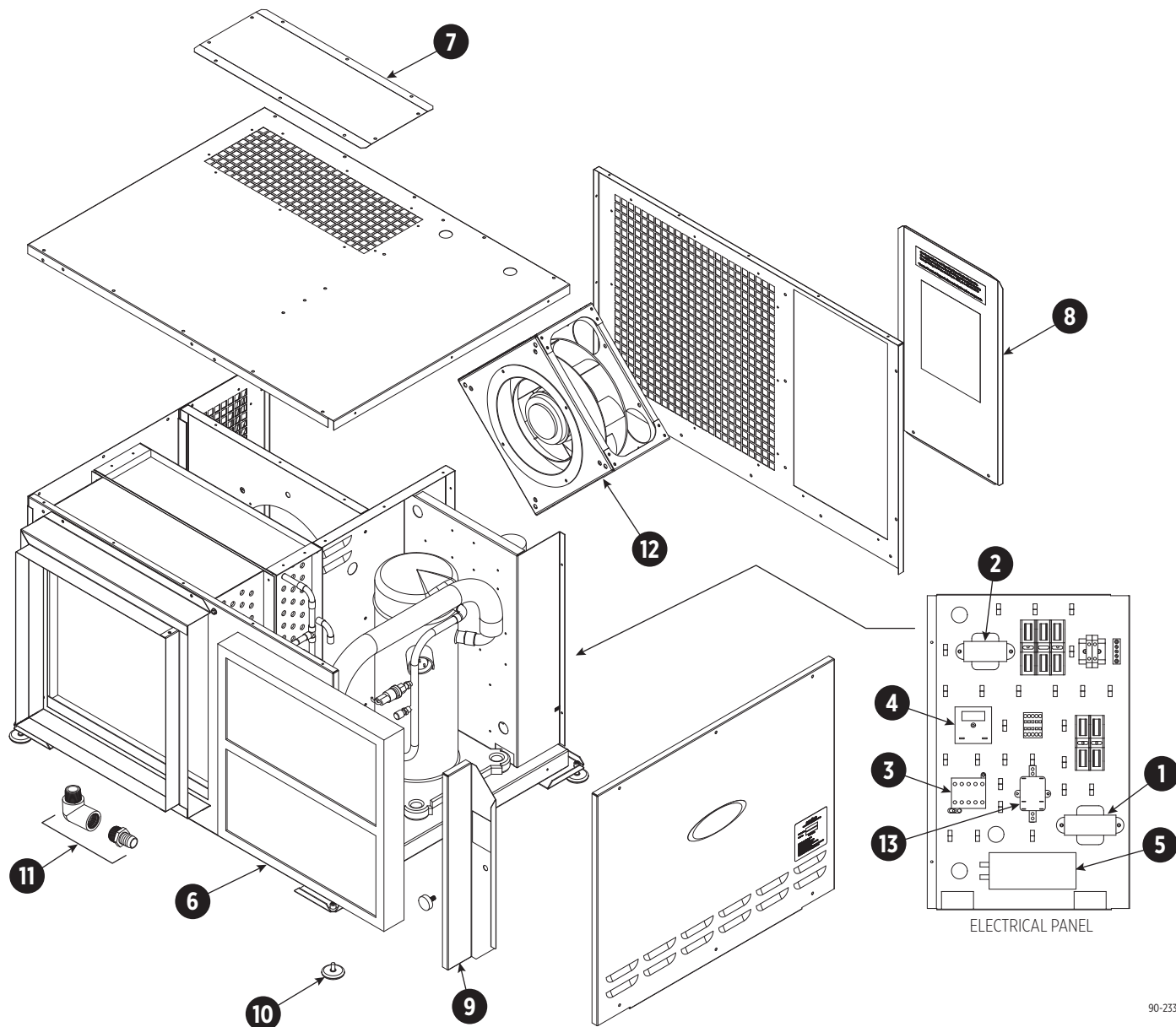
TROUBLESHOOTING

Technical Support is available Monday through Friday, 7:00 a.m. to 5:00 p.m. CST, at (800) 972-3710. Use the guide below to identify and correct system faults. Contact Technical Support before replacing the unit or any components and for additional troubleshooting.

TABLE 3 – TROUBLESHOOTING GUIDE

Symptom	Possible Reason	Troubleshooting Procedure
Dehumidifier does not turn on/run.	No power to unit.	• Check the wiring to the dehumidifier. • If using a Model A76, check that the control is turned ON. • Check that the circuit breaker has not tripped.
Dehumidifier blower is running but with little or no airflow.	Pressure drop across dehumidifier is higher than 0.6" w.c.	• Check dehumidifier air filter, replace if heavily loaded. • Check that nothing is obstructing air flow into, or out of the dehumidifier.
Dehumidifier is not draining properly.	Drain line blocked or unit not level.	• Verify that the unit is level. • Check that the p-trap is installed correctly and primed. • Check the drain line for blockages and for a continuous downward slope.
Dehumidifier is producing hot air.	Normal function.	• Air is reheated across the condenser coil, resulting in a temperature rise between inlet and outlet.

SERVICE PARTS



90-2333

No.	Part Description	Part No.
1	Transformer, 350VA	5712
2	Transformer, 50VA	5713
3	Contactor, Compressor	5714
4	Time Delay Relay	5715
5	Capacitor, Run	5716
6	Filter, Merv 11	5717
7	Outlet Patch	5718
8	Electrical Access Panel	5719
9	Filter Access Panel	5720
10	Leveling Feet	5721
11	90 Degree Elbow Fitting with 3/4" Hose Barb Fitting	5722

No.	Part Description	Part No.
12	Fan Assembly	5723
13	Fan Relay	5727
Not Shown		
	Model A76 Control	76
	Eye Bolts	5728
	1A Fuse	5729
	3A Fuse	5730
	High Pressure Switch	5731
	Low Pressure Switch	5732
	Crankcase Heater	5733

LIMITED WARRANTY

Your Research Products Corporation Anden™ Dehumidifier is expressly warranted for five (5) years from date of installation to be free from defects in materials or workmanship.

Research Products Corporation's exclusive obligation under this warranty shall be to supply, without charge, a replacement for any component which is found to be defective within such five (5) year period and which is returned not later than thirty (30) days after said five (5) year period by you to either your original supplier or to Research Products Corporation, Madison, Wisconsin 53701, together with the model number and installation date of the dehumidifier.

THIS WARRANTY SHALL NOT OBLIGATE RESEARCH PRODUCTS CORPORATION FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY YOUR INSTALLER AS CONTRASTED TO DEFECTS IN THE DEHUMIDIFIER ITSELF.

IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID FIVE YEAR PERIOD. RESEARCH PRODUCTS CORPORATION'S LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFORESAID IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECT(S) RESULT FROM FAILURE TO HAVE THIS UNIT INSTALLED BY A QUALIFIED HEATING AND AIR CONDITIONING CONTRACTOR. IF THE LIMITED WARRANTY IS VOID DUE TO FAILURE TO USE A QUALIFIED CONTRACTOR, 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 exclusion or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

WARRANTY REGISTRATION

Visit us online at anden.com to register your Anden product. If you do not have online access, please mail a postcard with your name, address, phone number, email address, product purchased, model number, date of purchase, and dealer name and address to: Research Products Corporation, P.O. Box 1467, Madison, WI 53701.

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

anden.com

P.O. Box 1467

Madison, WI 53701-1467

800.972.3710 F: 608.257.4357

Printed in USA

©2018 Anden – A Quality brand from Research Products Corporation

61001584 B2207841B 1.18

