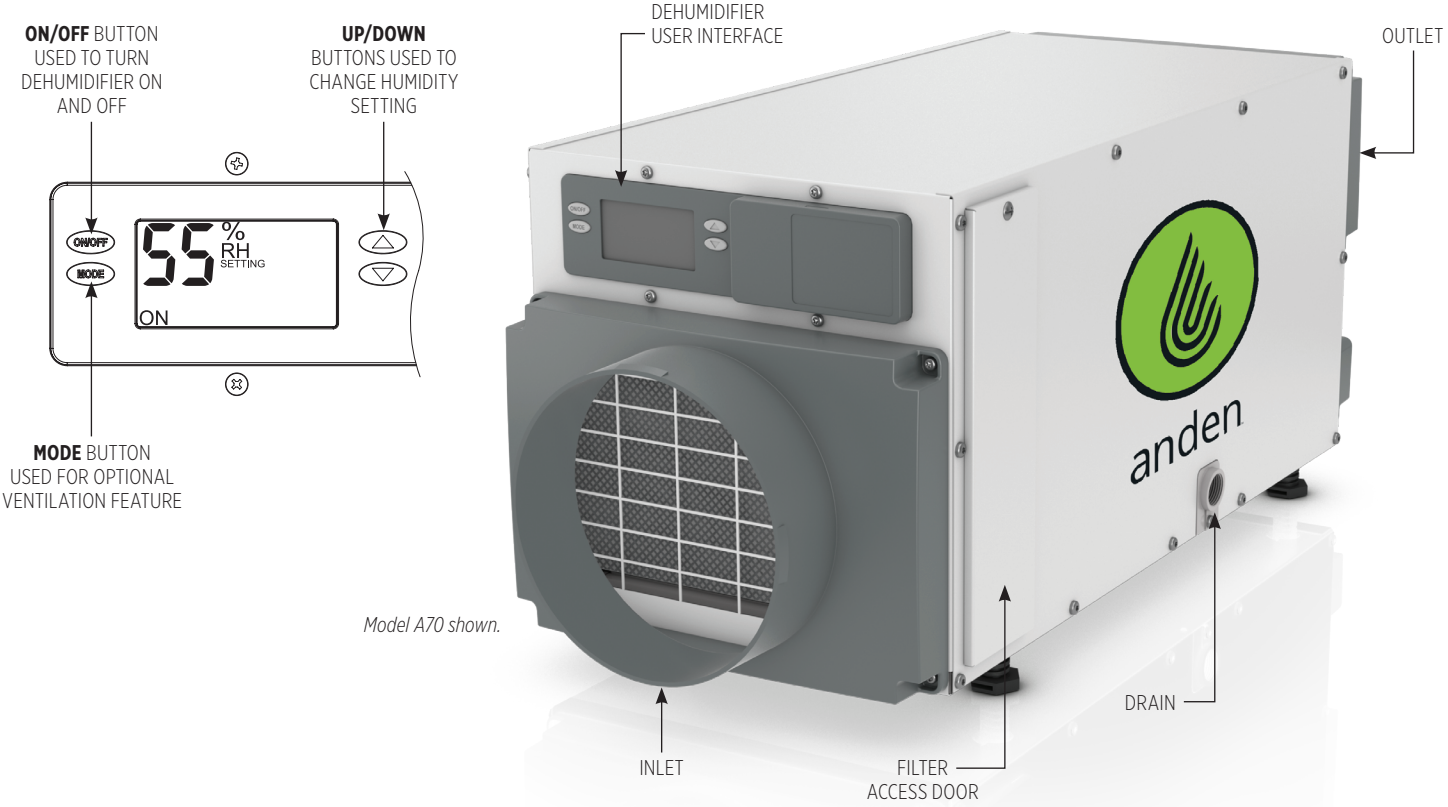
Model A70 Dehumidifier

Installation and Operating Instructions



Model A70 shown.

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PRODUCT INFO & DIGITAL MANUAL

READ AND SAVE THESE INSTRUCTIONS

SAFETY INSTRUCTIONS

⚠ WARNING

ATTENTION INSTALLER:

- Read this manual before installing. Improper installation or maintenance may cause property damage or injury. It is recommended that installation, service, and maintenance be performed by a trained service technician. This product must be installed in compliance with all local, state, and federal codes.
- All safety precautions must be followed.
- Dispose of properly in accordance with federal or local regulations.

ELECTRIC SHOCK HAZARD:

- **120 volts may cause serious injury from electric shock.** Disconnect electrical power to the dehumidifier before starting installation or servicing. Leave power disconnected until installation/service is completed.
- **To reduce the risk of electrical shock,** this equipment has a grounding-type (three prong) plug. This plug will fit only into a grounding-type power outlet. If the plug does not fit into the outlet, contact qualified personnel to install the proper outlet. Do not alter this plug in any way.
- **To reduce the risk of electrical shock,** position the product so that the power cord can be plugged into an electrical outlet without the use of an extension cord.

RISK OF FIRE OR EXPLOSION:

- Flammable refrigerant used. Do not puncture refrigerant tubing.
- Store in well ventilated room without continuously operating flames or other potential ignition sources.
- Auxiliary devices which may be ignition sources shall not be installed in duct work.

⚠ CAUTION

- **SHARP EDGES MAY CAUSE INJURY FROM CUTS.** Use care when cutting plenum openings and handling ductwork. Always wear glasses/goggles and gloves when installing the unit.
- **TWO-PERSON LIFT REQUIRED.** Dropping may cause personal injury or equipment damage. Handle with care and follow installation instructions.
- This unit is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the unit by a person responsible for their safety.
- Be sure to supervise children to ensure that they do not play with the unit.
- Be sure to replace a damaged supply cord. It must be replaced by a special cord or assembly available from the manufacturer or its service agent.
- Never operate electrical equipment in standing water.
- Do not stick your fingers or other objects through the safety grills.
- Do not sit or stand on the unit, or use the unit as a table or shelf.
- The unit is designed to be installed indoors only.
- Always place in well ventilated area to prevent the accumulation of refrigerant in the case of a refrigerant system leak or failure.

NOTICE

EQUIPMENT DAMAGE MAY OCCUR IF INSTALLATION INSTRUCTIONS ARE NOT FOLLOWED.

- Do not use in pool applications. Pool chemicals can damage the dehumidifier.
- Do not use solvents or cleaners on or near the display and circuit board. Chemicals can damage components.
- Wait 24 hours before running the unit if it was not shipped or stored in the upright position.
- Do not use dehumidification to prevent window condensation in the winter. To address window condensation, use ventilation to lower indoor humidity in the winter.

ELECTRICAL INTERFERENCE CAN CAUSE OUTDOOR TEMPERATURE SENSOR INACCURACY.

- Do not run Outdoor Temperature Sensor alongside wires carrying high voltage (120 VAC or higher).
- Do not run Outdoor Temperature Sensor wire lengths greater than 300 feet.

SPECIFICATIONS

	Model A70	
Unit Weight	56 lbs.	
Capacity 80°F, 60% RH Conditions	70 pints per day @ 200 CFM	
Efficiency	2.1 L/kW-hr @ 80°F, 60% RH	
Current Draw 115 VAC, Single Phase, 60 Hz	5.4 A operating current	
Dehumidifier Inlet Air Conditions	**Dehumidification:** 50°F–104°F, 40°F dew point minimum **Ventilation:** 40°F–140°F, 0% RH–99% RH (non-condensing)	
Filter	MERV 11, pleated, disposable	
Airflow	**External Static Pressure ("w.c.)**	**Airflow (CFM)**
	0.0	200
	0.2	170
	0.4	140

NOTE: Rated capacity and current draw measured at 80°F/60% RH inlet conditions at 0.0 external static pressure.

PREPARING THE UNIT FOR INSTALLATION

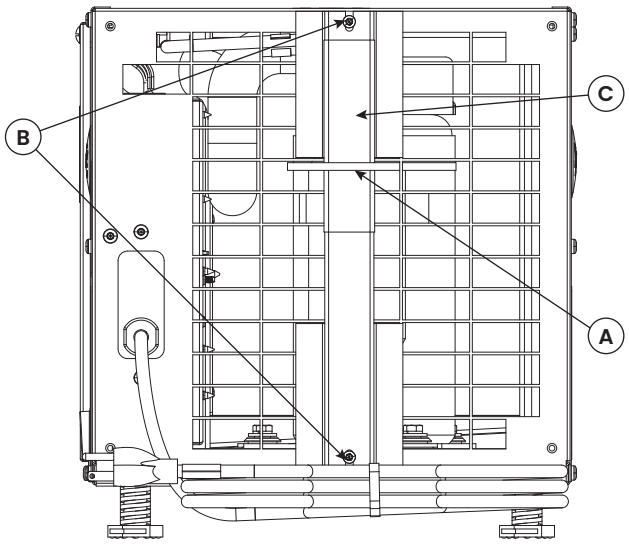
IMPORTANT: Cut the strap securing the compressor shipping support bracket and remove the strap and shipping bracket (see **FIGURE 1**).

1. Clip off and remove the plastic straps securing the compressor to the shipping bracket.
2. Remove the two screws securing the shipping bracket to the housing. Remove and discard the shipping bracket, and reinstall the two screws in the dehumidifier.

PACKAGING CONTENT

- Dehumidifier
- 8" Inlet/Outlet Collars
- Installation and Operating Manual
- Parts Bag
  - #10 x 1/2 Screws (9)
  - Threaded Barbed Fitting for Drain Connections
  - Torx Bit
- 10 Foot, 3/4" Drain Tube

FIGURE 1: PREPARING THE UNIT FOR INSTALLATION



A. PLASTIC STRAP
B. SCREWS
C. SHIPPING BRACKET

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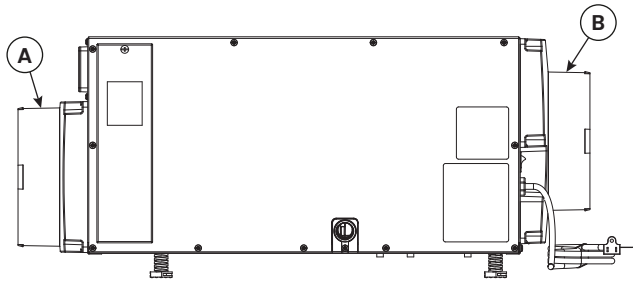
INSTALLING THE DUCT COLLARS

- Use the screws in the parts bag to attach the duct collars to the inlet and outlet of the dehumidifier (see **FIGURE 2**).
- Make sure there are no bends in the ductwork coming off the outlet **for a minimum of 4″**. This will help ensure proper airflow through the unit.

FIGURE 2: INSTALL DUCT COLLARS



A. INLET DUCT COLLAR
B. OUTLET DUCT COLLAR

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REPOSITIONING THE USER INTERFACE FOR THE APPLICATION

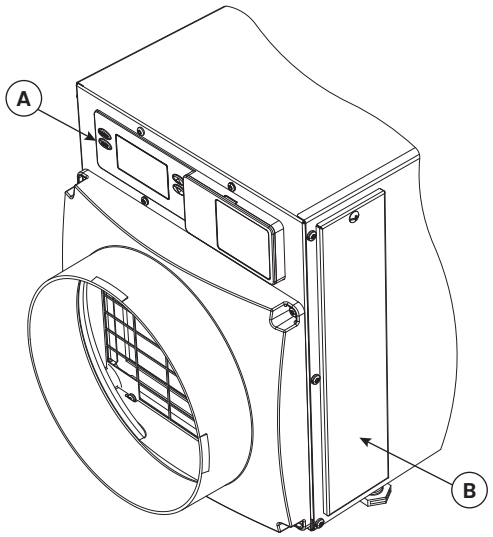
Locate the onboard user interface (see **FIGURE 3**). It may be rotated 180 degrees in either orientation (see **FIGURE 4**).

ROTATING THE CONTROL

1. Remove the filter access door and filter.
2. Detach the onboard user interface by removing the four (4) screws around the user interface.

   NOTE: Use one hand to support the bottom of the onboard user interface when removing.
3. Keep the user interface in the unit and rotate the orientation 180 degrees.
4. Re-secure the user interface with the same four screws.

FIGURE 3: USER INTERFACE LOCATION



A. USER INTERFACE
B. FILTER ACCESS DOOR

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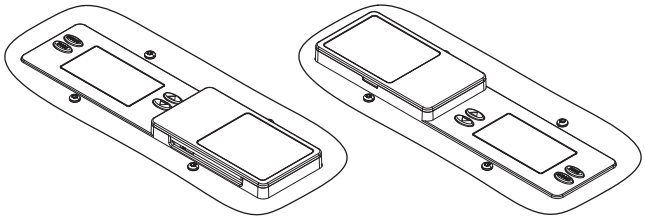
FIGURE 4: USER INTERFACE ROTATED 180 DEGREES



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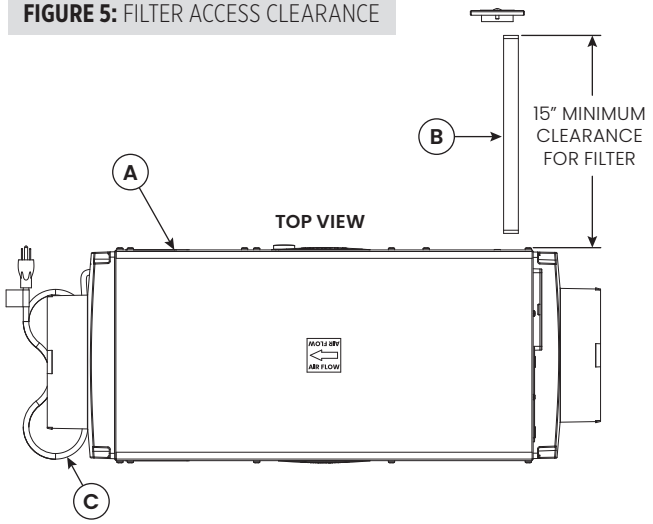
INSTALLING THE DEHUMIDIFIER

DEHUMIDIFIER LOCATION

- Electrical service access and drain cleaning will require the removal of the electrical service side panel (see **FIGURE 5**). Allow sufficient space for service on this side of the unit.
- Allow sufficient clearance for filter removal and to prevent airflow obstruction.
- When suspending the unit, a condensate pan with float switch is recommended to prevent any leaks that may occur due to unforeseen drain line obstructions.

FIGURE 5: FILTER ACCESS CLEARANCE



A. ELECTRICAL SERVICE AND DRAIN ACCESS THIS SIDE
B. FILTER
C. 8 FOOT POWER CORD

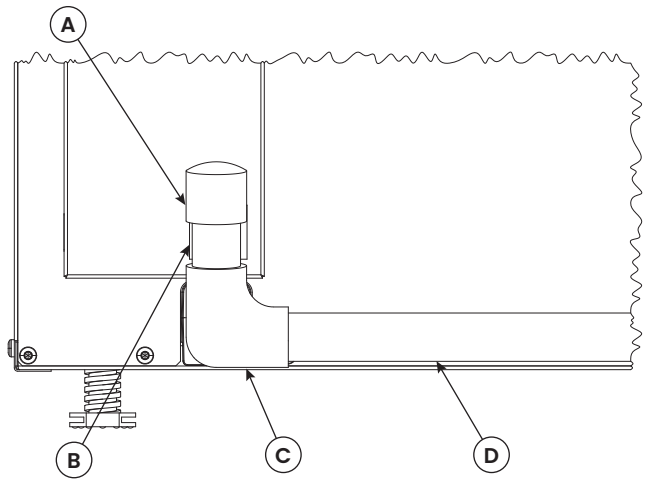
90-2304

INSTALLING THE DRAIN

USING HARD PIPE

- Install a 3/4" PVC slip x 3/4" MNPT PVC fitting to the dehumidifier and use 3/4" nominal PVC Schedule 40 pipe to run the condensate line to the nearest floor drain or to an outside location that slopes away from the building.
- **Always maintain a constant downward slope in drain piping. Ensure that drain tubing does not interfere with removal of the side panel or filter door.**
- **Do not use metal fittings and only hand-tighten threaded fittings.** PTFE thread seal tape is recommended for threaded connections.
- Install a tee or three-way elbow at the dehumidifier outlet with a small, capped vertical tube (do not cement cap in place) to allow for cleaner to be poured into the drain line (see **FIGURE 6**).
- PVC primer and cement is recommended for slip-fit connections (do not cement threaded connections).

FIGURE 6: CAPPED DRAIN ACCESS FOR CLEANING



A. CAP
B. SMALL SECTION OF DRAIN TUBE
C. 3/4" 3-WAY ELBOW OR TEE AND ELBOW
D. CONDENSATE DRAIN LINE

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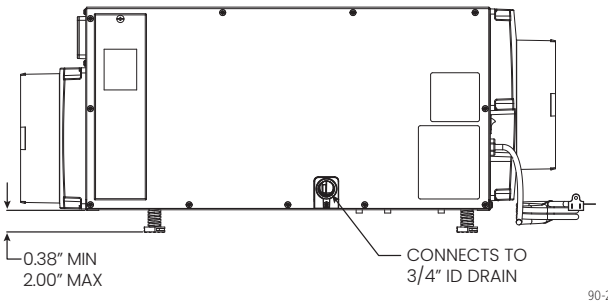
USING FLEXIBLE TUBING

- Install the provided 3/4" NPT x 3/4" hose barb fitting and use 3/4" I.D. flexible drain tubing. **Hand-tighten the fitting to the dehumidifier.** PTFE thread seal tape is recommended for threaded connections.
- **Always maintain a constant downward slope from the dehumidifier to the nearest floor drain or condensate pump, and do not allow soft tubing to curl up, which may result in air lock.**

LEVELING AND RAISING THE DEHUMIDIFIER

The feet can be adjusted to level the unit and accommodate drain fittings and condensate pans as required (see **FIGURE 7**). The unit must be level from front to back and side to side to ensure proper drainage from the dehumidifier.

FIGURE 7: LEVELING THE UNIT



CONDENSATE PAN, CONDENSATE PUMP AND FLOAT SWITCH

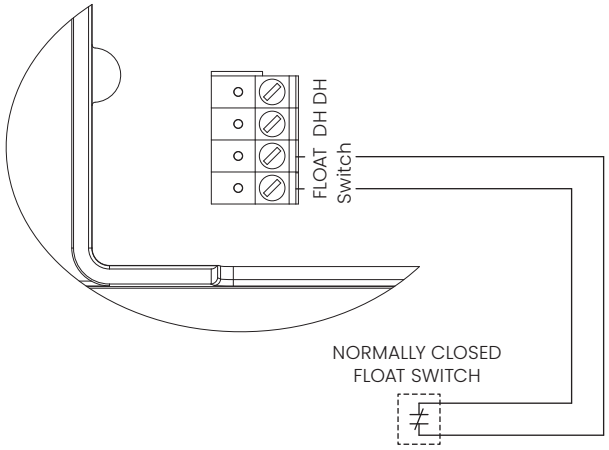
A condensate pan is recommended when suspending the dehumidifier over the canopy. Adhere to local codes regarding draining of the condensate pan. If a condensate pump is needed, install it in the condensate pan as well. The Anden A4856 Condensate Pump is capable of lifting water up to 22 feet.

WIRING

WIRING TO A FLOAT SWITCH

The dehumidifier leaves the factory with a jumper wire installed in the float switch terminals. Remove the jumper and wire the float switch terminals to the float switch or condensate pump overflow switch as shown in **FIGURE 8**. Overflow safety switches on condensate pumps can be wired to the Float Switch terminals in a similar fashion.

FIGURE 8: FLOAT SWITCH WIRING



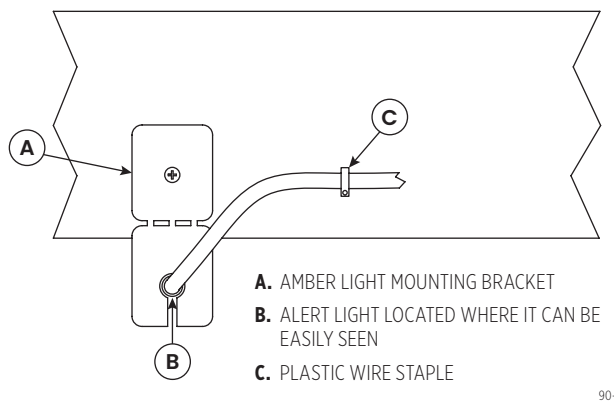
OPTIONAL: ALERT LIGHT

ALERT LIGHT MOUNTING

NOTE: An optional amber alert light can be installed (Part #71000087) to display unit operational status. It does not need to be installed for the unit to function.

1. Locate the alert light mounting bracket where it will be readily visible
2. Run the ALERT LIGHT to the mounting bracket and clip it in the bracket (see **FIGURE 9**). Use the provided plastic wire staples to secure the wire in place.

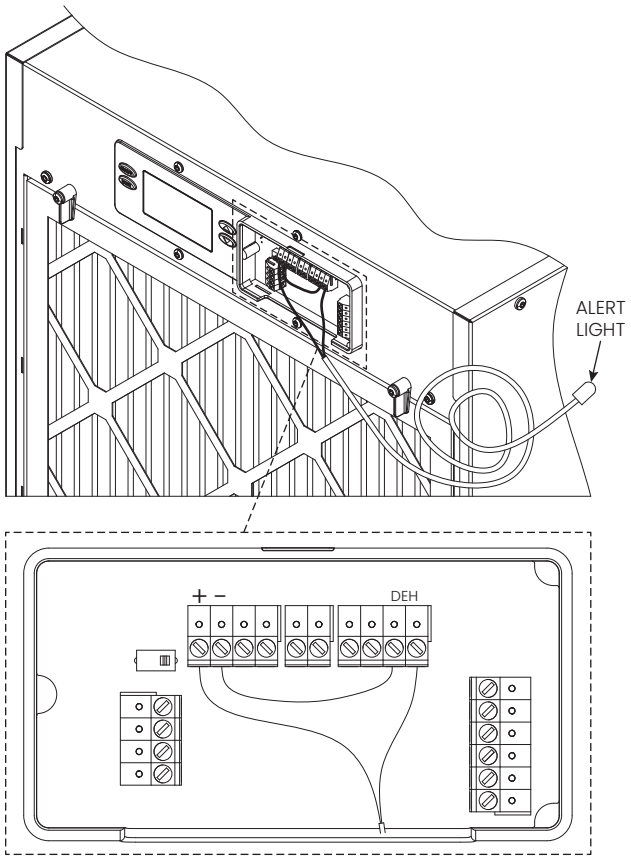
FIGURE 9: ALERT LIGHT MOUNTING



ALERT LIGHT WIRING

1. Remove the wire access cover.
2. Remove **+ – A B** and **VENT DEH** terminal blocks.
3. Plug the 4-terminal block connected to the alert light in to the **+ – A B** terminals. NOTE: If a Model 77 is also using the **+ – A B** terminals, it will need to be wired into the new Alert Light terminal block.
4. Plug the 2-terminal block connected to the alert light in to the **DEH** terminals.
5. Replace the wire access cover.

FIGURE 10: ALERT LIGHT WIRING



MODEL A77 CONTROL

The Model A77 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 A77 be mounted at/near canopy height. Shield the Model A77 from direct exposure to HPS or LPS lighting.

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

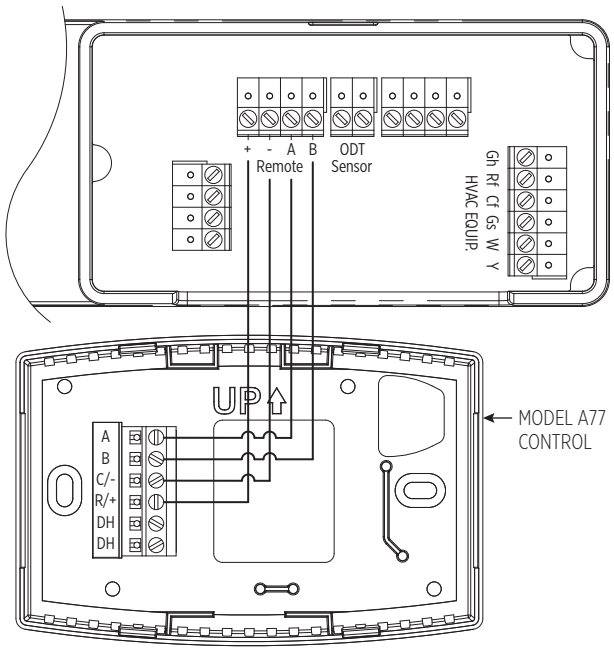
Humidity can be controlled using the internal dehumidifier control, a Model A77 control, or a different external control like a thermostat.

Installing an external control eliminates the need to run the dehumidifier blower for sampling, as the control is constantly measuring the humidity close to the canopy. When the humidity level rises above the setting, the dehumidifier is turned on.

TO INSTALL AND USE THE MODEL A77 CONTROL, COMPLETE ALL STEPS:

1. Unplug the dehumidifier or turn off power to the circuit at the breaker or fuse.
2. Run thermostat cable (use 18-22 AWG wire) from the Model A77 to the control of the dehumidifier.
3. Trim about 1/4" of insulation from the end of the wires on each end. Insert the wire into the terminals as shown in **FIGURE 11**.
4. Restore dehumidifier power.

FIGURE 11: MODEL A77 REMOTE CONTROL WIRING



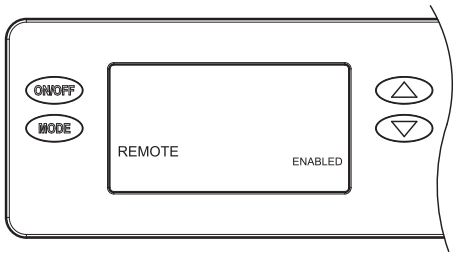
TO SET THE DEHUMIDIFIER TO USE THE MODEL A77 CONTROL, COMPLETE ALL STEPS:

1. With power to the dehumidifier, use the ON/OFF button to set the dehumidifier to the OFF position.

   NOTE: If the display backlight is not on, the first button press (any button) will only turn the backlight on. Press the button a second time to achieve the desired function.

2. Hold the MODE button on the on-board control for 3 seconds to enter the **Installer Set-up Menu**.

3. The display should now read **REMOTE** on the left and **DISABLED** on the right. Use the ▲ or ▼ button to set this to **ENABLED**.



4. Once the display reads **REMOTE ENABLED**, press the MODE button to cycle through the other settings until the display blinks **DONE** for 3 seconds.

5. Use the ON/OFF button to turn the dehumidifier ON. The display on your unit should read **REMOTE**.

6. Locate the Model A77 that you just set up. On the Model A77, press the ON button and use the ▲ or ▼ button to set your preferred %RH setpoint. When setting up in **REMOTE** mode for the first time, your dehumidifier will wait 3 minutes before starting to dehumidify, regardless of ambient conditions.

ALTERNATIVE EXTERNAL CONTROL

Alternatively, use any other humidity control system as long as it has a dry contact, normally open output dedicated to controlling the dehumidifier. Reference the installation literature provided with the alternative control for wiring, set-up, and operating details.

TO INSTALL AND USE AN ALTERNATIVE EXTERNAL CONTROL, COMPLETE ALL STEPS:

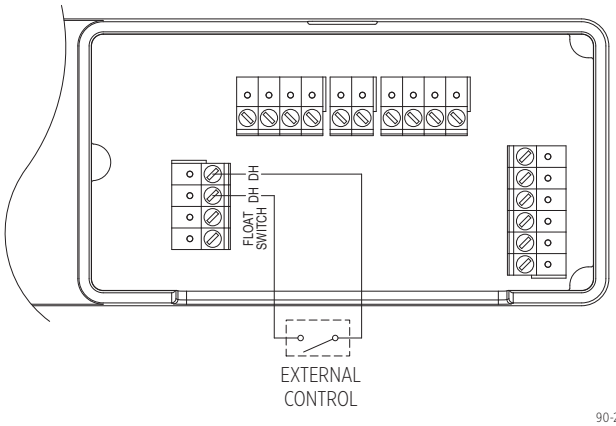
1. Unplug the dehumidifier or turn off power to the circuit at the breaker or fuse.

2. Run thermostat cable (use 18-22 AWG wire) from the alternative external control to the control of the dehumidifier.

3. Trim about 1/4" of insulation from the end of the wires on each end. Insert the wire into the terminals as shown in **FIGURE 12**.

4. Restore dehumidifier power.

FIGURE 12: ALTERNATIVE EXTERNAL CONTROL WIRING



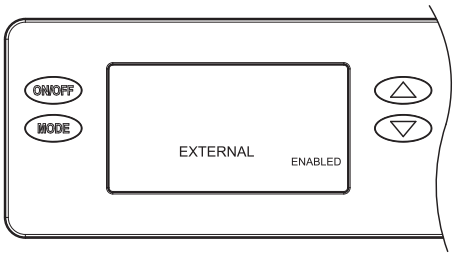
TO SET THE DEHUMIDIFIER TO USE THE ALTERNATIVE CONTROL, COMPLETE ALL STEPS:

1. With power to the dehumidifier, use the ON/OFF button to set the dehumidifier to the OFF position.

   NOTE: If the display backlight is not on, the first button press (any button) will only turn the backlight on. Press the button a second time to achieve the desired function.

2. Hold the MODE button on the user interface for 3 seconds to enter the **Installer Set-up Menu**.

3. Press MODE again and the display should change to **EXTERNAL** in the center, and **DISABLED** on the right. Use the ▲ or ▼ button to set this to **ENABLED**.



4. Once the display reads **EXTERNAL ENABLED**, press the MODE button to cycle through the other settings until the display blinks **DONE** for 3 seconds.

5. Use the ON/OFF button to turn the dehumidifier ON. The display on your unit should read **EXTERNAL**. Even if there is a demand for dehumidification according to your external control, the dehumidifier will wait 3 minutes before turning on for the **first time only**.

DAISY CHAIN INSTALLATION INSTRUCTIONS

Anden dehumidifiers can be wired in a daisy chain application, allowing one Model A77 or alternate dry contact dehumidistat to control any number of dehumidifiers wired together. Reference the dehumidifier Installation and Operation Manual for detailed set-up and operation.

MODEL A77 AS DRIVING CONTROL

When a Model A77 is used to control the first dehumidifier, Unit #1 must be set to REMOTE in the set-up menu. All downstream units must be set up to EXTERNAL in each set-up menu. Wire as shown in **FIGURE 13**.

SEQUENCE OF OPERATION

Each unit in the daisy chain responds to the first unit being controlled by the A77. When the humidity level rises above the humidity setting, all units will dehumidify until the humidity measured by the A77 falls below the setting.

IMPORTANT: If the A77 or first dehumidifier experiences a fault or loses power, all downstream dehumidifiers will also stop function. If any dehumidifier in the daisy chain other than Unit #1 experiences a fault, that unit will stop operation as determined by the fault but all other units will continue operating. If any dehumidifier loses power, all downstream units will stop function.

ALTERNATE EXTERNAL DRY CONTACT CONTROL AS DRIVING CONTROL

When a dry contact control is used to control the first dehumidifier, Unit #1 must be set to EXTERNAL in the set-up menu. All downstream units must be set up to EXTERNAL in each set-up menu. Wire as shown in **FIGURE 14**.

SEQUENCE OF OPERATION

Each unit in the daisy chain responds to the first unit being controlled by the external control. When the humidity level rises above the humidity setting, all units will dehumidify until the humidity measured by the external control falls below the setting.

IMPORTANT: If the external control experiences a fault, all downstream dehumidifiers will also stop function. If any dehumidifier experiences a fault, that unit will stop operation as determined by the fault but all other units will continue operating. If any unit loses power, all downstream units will stop function.

FIGURE 13: DAISY CHAIN WIRING WITH A77 CONTROL

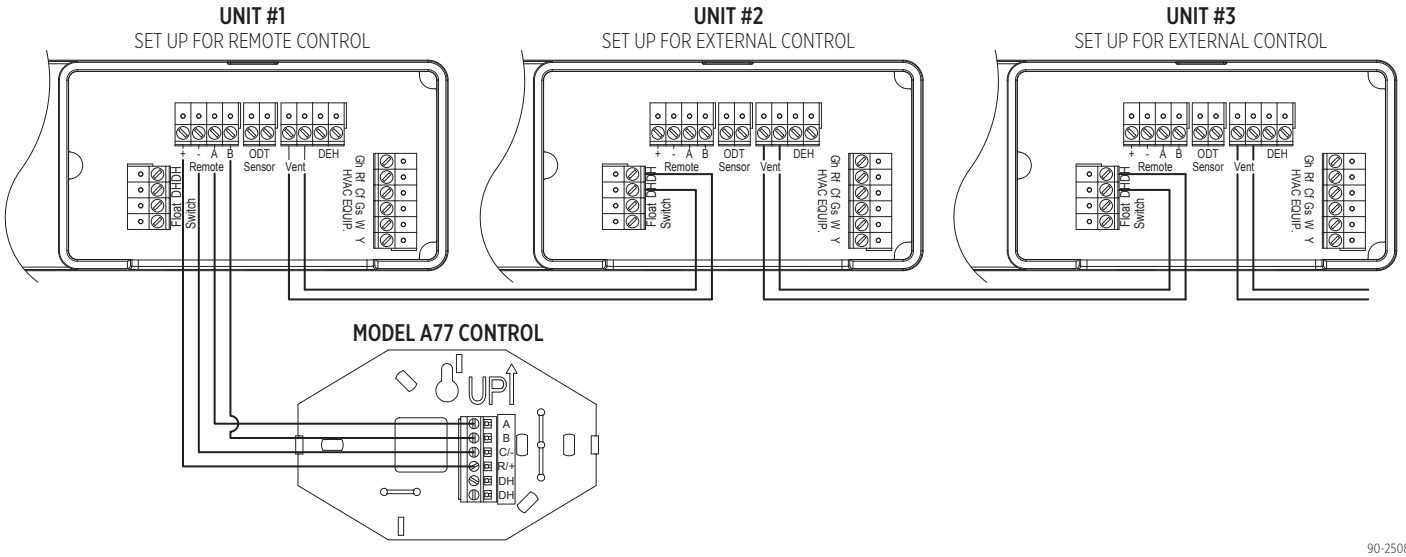


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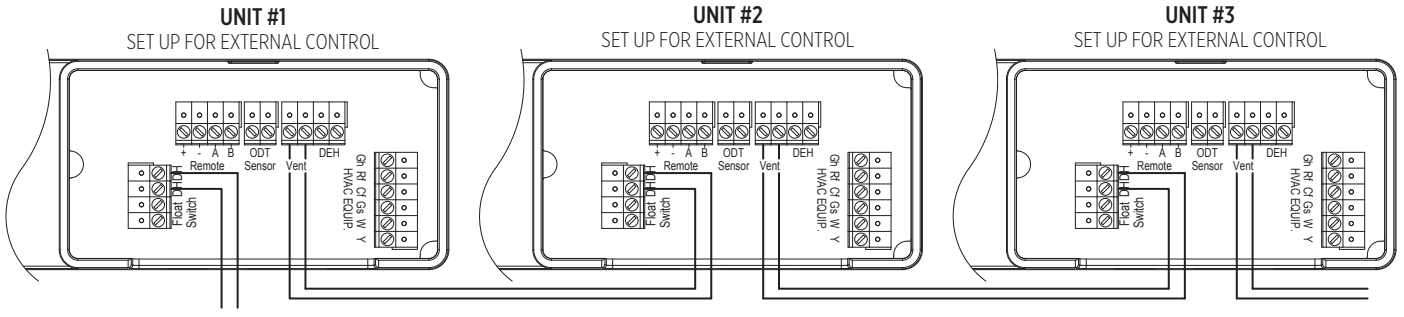
FIGURE 14: DAISY CHAIN WIRING WITH ALTERNATE EXTERNAL CONTROL



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SYSTEM SET-UP & CHECKOUT

Skip set up and proceed to **INSTALLER TEST MODE** on page 11 unless:

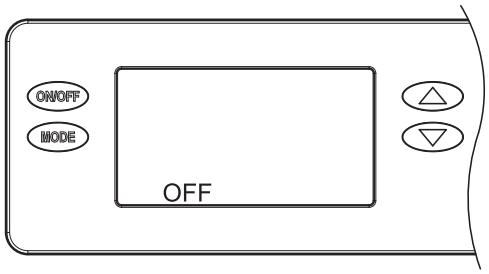
- A Model A77 or other external control is to be installed
- changing the air sampling rate

1. Check all wiring.

2. Make sure the wire access cover has been snapped back onto the user interface.

3. Plug the unit in to provide power.

4. The user interface screen should display **OFF**. If not **OFF**, press the ON/OFF button to turn the unit off.



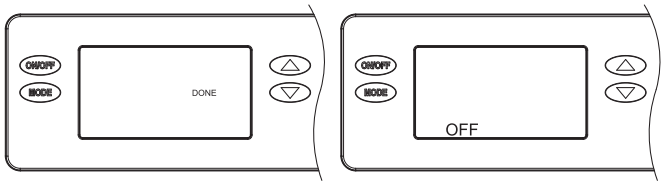
NOTE: If the display backlight is not on, the first button press (any button) will only turn on the backlight. Press the button a second time to achieve function.

5. Hold the MODE button on the user interface for 3 seconds to enter the **Installer Set-up Menu**.

6. Navigate through the following screens to set up the dehumidifier for the installed application.

Use the ▲ or ▼ button to select items and use MODE to switch to the next set-up option. To exit installer set-up, all options must be scrolled through using the MODE button.

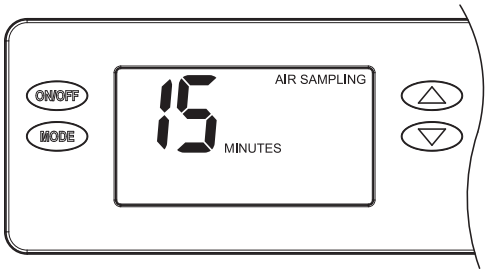
7. After the installer set-up options have been completed, **DONE** will blink for 3 seconds and the control will return to the **OFF** screen.



8. Not all system set-up options will be covered in these instructions. The default settings are recommended for those options in most applications.

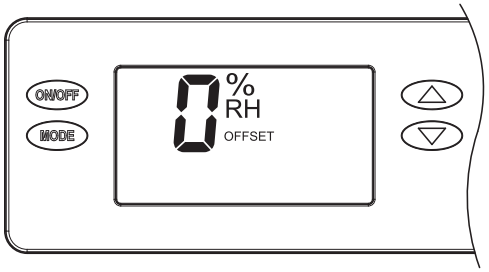
AIR SAMPLING

Use the ▲ or ▼ button to adjust how frequently the dehumidifier samples the air to determine whether or not to dehumidify. Fewer minutes means the dehumidifier will sample more frequently to minimize humidity swings, but increases cost to operate due to more frequent fan operation. Press MODE when done to move to the next screen.



RH OFFSET

An offset can be applied to the on-board humidity reading to avoid discrepancies with other humidity-measuring devices in the room. Use the ▲ or ▼ button to select an offset from **-5%** to **5%**. Press MODE to exit the installer set-up screens.

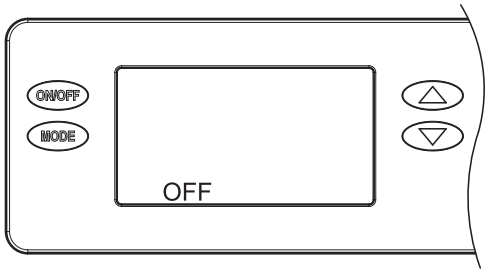


INSTALLER TEST MODE

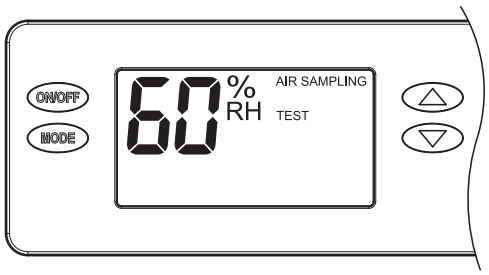
If everything is properly wired, the dehumidifier and all of the wired components will turn on and off during Installer Test Mode to demonstrate that all are properly operating. Installer Test Mode lasts for four (4) minutes. If the ON/OFF button is pressed during test mode, the dehumidifier will exit Installer Test Mode and return to the **OFF** screen.

DEHUMIDIFICATION ONLY

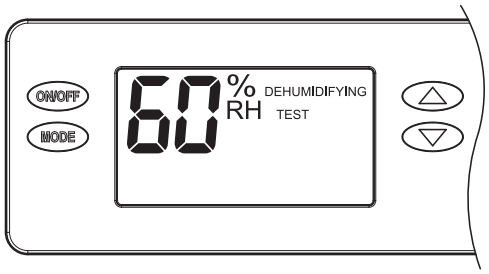
If the dehumidifier is not already **OFF**, press the ON/OFF button to turn it off.



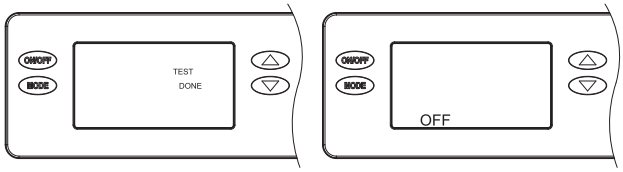
Press and hold the ON/OFF button and MODE buttons for 3 seconds. The measured humidity, **AIR SAMPLING** and **TEST** will show on the display.



After three (3) minutes the dehumidifier compressor will turn on and **DEHUMIDIFYING** will replace **AIR SAMPLING** on the user interface screen.



After one minute of compressor operation, all outputs will turn off and **DONE** will blink for 3 seconds and then return to the **OFF** screen.



STARTING UP THE UNIT AND SEQUENCE OF OPERATION

Ensure unit is plugged in and power is supplied to the dehumidifier.

USING THE DEHUMIDIFIER CONTROL

1. Press the ON/OFF button to turn the dehumidifier control ON. The display will show the current humidity setting, and the dehumidifier blower will turn on to start sampling the air.

   The setting will be replaced by the measured humidity and **AIR SAMPLING** will show on the display.

2. Use the ▲ or ▼ button to adjust the humidity setting as desired.
3. After three (3) minutes of sampling, the measured humidity will be compared to the setting:

   a. If the humidity is above the setting, the dehumidifier compressor turns on and **AIR SAMPLING** will be replaced by **DEHUMIDIFYING**. The compressor remains on until the measured humidity falls 3% RH below the setting.

   b. If the measured humidity is below the setting, the blowers turn off and the display returns to showing the RH setting.

4. The dehumidifier will sample again after the number of minutes selected during the **AIR SAMPLING** portion of the **SYSTEM SET-UP** (see page 10), or any time the humidity setting is lowered.

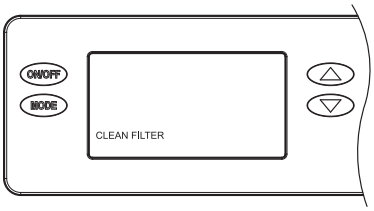
USING THE MODEL A77 CONTROL

1. Press the ON/OFF button to turn the dehumidifier control ON. **REMOTE** will show on the display to indicate that an external control is wired to the dehumidifier.
2. At the Model A77, press the ON button; the Model A77 will display the measured RH.
3. Use the ▲ or ▼ button on the Model A77 to adjust the humidity setting as desired.
4. If the RH measured by the Model A77 rises above the setting, the dehumidifier will turn on. **DEHUMIDIFYING** will appear on the dehumidifier control display to show that the Model A77 is calling for dehumidification. The dehumidifier will turn off when the RH measured by the Model A77 drops 3% RH below the setting.

MAINTENANCE

REPLACING THE FILTER

After initial installation the air filter should be checked or replaced every 3 months. The **CLEAN FILTER** service reminder will display on the user interface screen every 3 months. **To clear the service message, press the ▲ and ▼ buttons simultaneously for 3 seconds.**



FILTER REPLACEMENT

1. Press the ON/OFF button on the user interface to turn the unit **OFF**.
2. Loosen the retaining screw on the filter access door until it releases and then remove the filter door (see **FIGURE 3**).
3. Slide the pleated filter out of the dehumidifier and discard.
4. Install the replacement filter. Make sure the filter is secured in the top and bottom filter rails.
5. Replace the filter access door and tighten the retaining screw.
6. At the user interface, select the ON/OFF button and switch to **ON** mode.
7. Press the ▲ and ▼ buttons simultaneously for 3 seconds to clear the service message.

CLEANING THE DRAIN

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

⚠ CAUTION

Do not use spray solvents or cleaners on or near the inlet side of the dehumidifier. If desired, apply cleaner to a cloth and use to clean the cabinet.

SERVICE INSTRUCTIONS

SYMBOLS

		
Symbol ISO 7010-W021 (2011-05)	Symbol ISO 7000-1659 (2004-01)	Symbol ISO 7000-1659 (2004-01)
Warning: flammable materials	Service indicator: read technical manual	Operator's manual: operating instructions

SAFETY INSTRUCTIONS

⚠ WARNING

- **Sealed Refrigeration System is not field serviceable!**
- This appliance contains a mildly flammable A2L refrigerant.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored (when not in use) in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or operating electric heater).
- Do not pierce or burn sealed system.
- Be aware that refrigerants may not contain odor.

⚠ CAUTION

When connected via air ducts to one or more rooms the appliance shall be directly ducted to the space. Open areas such as false ceilings shall not be used as a return air duct.

SERVICE

Approved auxiliary devices: Only approved auxiliary devices approved by the appliance manufacturer shall be installed in the ductwork.

- Fresh Air Ventilator, Stock # 8190FF

The following checks shall be applied to installations using FLAMMABLE REFRIGERANTS:

- The ventilation machinery and outlets are operating adequately and are not obstructed.
- Marking on the equipment shall be visible and legible. Markings and signs that are illegible shall be corrected.
- When opening the ventilated enclosure for repair of electrical components, be sure to check for refrigerant leaks with a certified flammable refrigerant leak detector.

Repair Initial safety checks shall include:

- Servicing the electrical system on the unit should be carried out by a qualified and licensed electrician.
- Disconnect power from the unit (unplug) before attempting service or repair.
- The capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking; that no live electrical components and wiring are exposed in case of a leak.
- There is continuity of earth bonding.
- Sealed electrical components shall be replaced, not repaired.
- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.
- Intrinsically safe components must be replaced if tripped.
- Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.
- Prior to beginning work on systems containing FLAMMABLE REFRIGERANTS, safety checks are necessary to ensure that the risk of ignition is minimized.
- Ensure that the area is in the open or that it is adequately ventilated before removal of the dehumidifier panels for servicing or conducting any hot work in the vicinity of the unit. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.
- The refrigeration system is considered factory sealed and puncturing the refrigerant tubing in any way is prohibited.
- Repairing the refrigeration system shall not be performed in the field and must be done at the manufacturing facility by trained personnel.
- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges, or any other adverse environmental effects. The check shall also consider the effects of aging or continual vibration from sources such as compressors or fans.
- If a leak is suspected, all naked flames shall be removed/extinguished.

The following leak detection methods are deemed acceptable for all refrigerant systems:

- Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.
- Electronic leak detectors may be used to detect refrigerant leaks but must be calibrated correctly for Flammable Refrigerants. (Detection equipment shall be calibrated in a refrigerant-free area.)
- Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used.
- Leak detection equipment shall be set at a percentage of the Lower Flammability Limit (LFL) of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.
- Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipework. Examples of leak detection fluids are:
  - bubble method,
  - fluorescent method agents.
- **NOTE:** The use of silicon sealant can inhibit the effectiveness of some types of leak detection equipment.

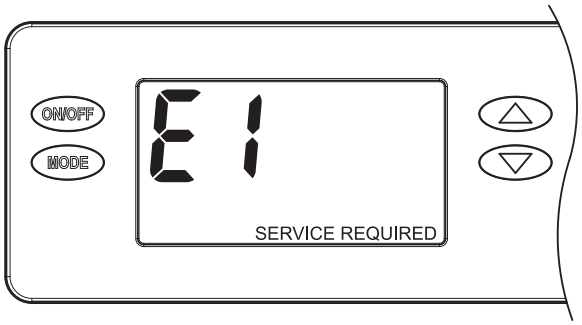
FOR ADDITIONAL ASSISTANCE: Technical Support is available Monday through Friday (see TROUBLESHOOTING).

TROUBLESHOOTING

NOTICE

Troubleshooting and repairs shall be performed by a qualified HVAC service technician, and all safety procedures shall be followed.

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



DIAGNOSTIC CODES

When an error occurs, the Diagnostic Code along with **SERVICE REQUIRED** will be displayed on the user interface screen. If a 71000087 Alert Light is used, the light will turn on when an error occurs.

TABLE 1: DIAGNOSTIC CODES

Diagnostic Code	Failure Mode	Action	Reset
E1	Internal Humidity or Temperature Sensor Open or Shorted	**1.** Cycle power to clear error code by disconnecting from power source for at least 10 seconds before restoring power. **2.** If error code reoccurs replace User Interface, Part #71000062.	Cycle Power
E2	High Refrigeration Pressure	**1.** Verify that the fan works, the backflow damper swings freely, and there is no blocked or restricted ductwork. **2.** If the fault persists, call Technical Support.	Cycle Power
E3	Model A77 Remote Control Communication Loss	**1.** Check connections between Model A77 and dehumidifier user interface. Terminals should be fully inserted and secured in the user interface and Model A77 control terminals. **2.** If connections are correct and secure, turn off the dehumidifier and remove the Model A77. Use a short section of 4-wire cable to reconnect the Model A77 to the user interface. Turn the dehumidifier back on and increase the dryness level setting on the Model A77. If the dehumidifier turns on, a problem exists with the wiring between the dehumidifier and control. **3.** If the dehumidifier does not turn on, call Technical Support.	Self-Correcting
E4	Insufficient Capacity	**1.** Check the frost sensor connection at the power board. Terminal should be fully seated on the power board pins. **2.** Remove the side access panel and verify that the sensor is secured to the suction line. **3.** If the sensor is connected and secured to the refrigeration line, proceed to the next step. **4.** Reset the fault by cycling power to the dehumidifier. **5.** Turn the humidity setting down (below room humidity level) to make a dehumidification call. **6.** Allow the fan and compressor to run for approximately 10-15 minutes and then enter diagnostic test mode by simultaneously pressing the ▲ and MODE buttons for 3 seconds. The LCD will display the temperature measured by the internal sensor while also displaying **AIR SAMPLING** and **ON**, the humidity measured by the internal sensor while also displaying **%RH** and **ON**, and the frost sensor temperature while also displaying **ON**. Scroll through these values and by using the ▲ or ▼ button. **7.** Record values and call Technical Support.	Cycle Power
E5	High Temperature Thermistor Failure	**1.** Check the high temperature sensor connection (if equipped) at the power board. Terminal should be fully seated on the power board pins. **2.** Remove the side access panel and verify the sensor is not damaged and connected to the refrigeration line coming from the compressor. **3.** If the sensor is connected and secured to the refrigeration line, it may need to be replaced with Part #71000035 – contact Technical Support to confirm.	Cycle Power
E6	Low Temperature Thermistor Failure	**1.** Check the low temperature sensor connection at the power board. **2.** Remove the side access panel and verify the sensor is not damaged and connected to the suction line. **3.** If the sensor is connected and secured to the refrigeration line, it may need to be replaced with Part #71000034 – contact Technical Support to confirm.	Self-Correcting
E7	Float Switch Open	**1.** Empty the condensate pan. **2.** Check the float switch connection at the user interface. **3.** If not using a float switch, verify jumper is between float switch terminals on the dehumidifier user interface. **4.** If the problem persists, replace the float switch.	Self-Correcting
E8	Inlet Air Temperature Out of 50°F – 104°F range or dew point below 40°F	**1.** Verify all ductwork is properly sealed. **2.** Check for air leakage that might affect the temperature or RH of the incoming air. **3.** If the air temperature is in range and the dew point is above 40°F, contact Technical Support.	Self-Correcting

TABLE 2: TROUBLESHOOTING GUIDE

Symptom	Possible Reason	Troubleshooting Procedure
Dehumidifier does not turn on/run.	No power to unit.	• Check that the dehumidifier is plugged in and power is supplied to the outlet. • Check that power is supplied to the outlet. • Check that the user interface 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 too high.	• Check dehumidifier air filter and replace if necessary. • Check for blocked duct work and clear. • Verify that the outlet collar with backflow damper is installed on the outside of the dehumidifier. • Check if backflow damper is blocked or stuck and remove obstruction.
Dehumidifier blower is running but compressor is not.	Float switch open (E7 appears on display).	• If float switch is installed, check connections at user interface and empty condensate pan. • If no float switch installed, check that the jumper is installed at the float switch terminals on the user interface.
	Coil frosting – defrost.	• Lack of or reduced airflow. Check dehumidifier air filter and replace if necessary. • Check for blocked duct work. • Inlet air conditions below 60°F. Increase the humidity setting.
	Inlet air temperature is outside of the 50°F – 104°F range or the dew point is below 40°F and there is a demand for dehumidification.	• Verify all ductwork is properly sealed. Dehumidification will restart by itself when the incoming air temperature is within range and the dew point is above 40°F. **E8** appears on the display when inlet air conditions prevent operation.
Dehumidifier is not draining properly.	Drain line blocked or unit not level.	• Verify that the unit is level. • Check the drain line 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, this is normal.

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.

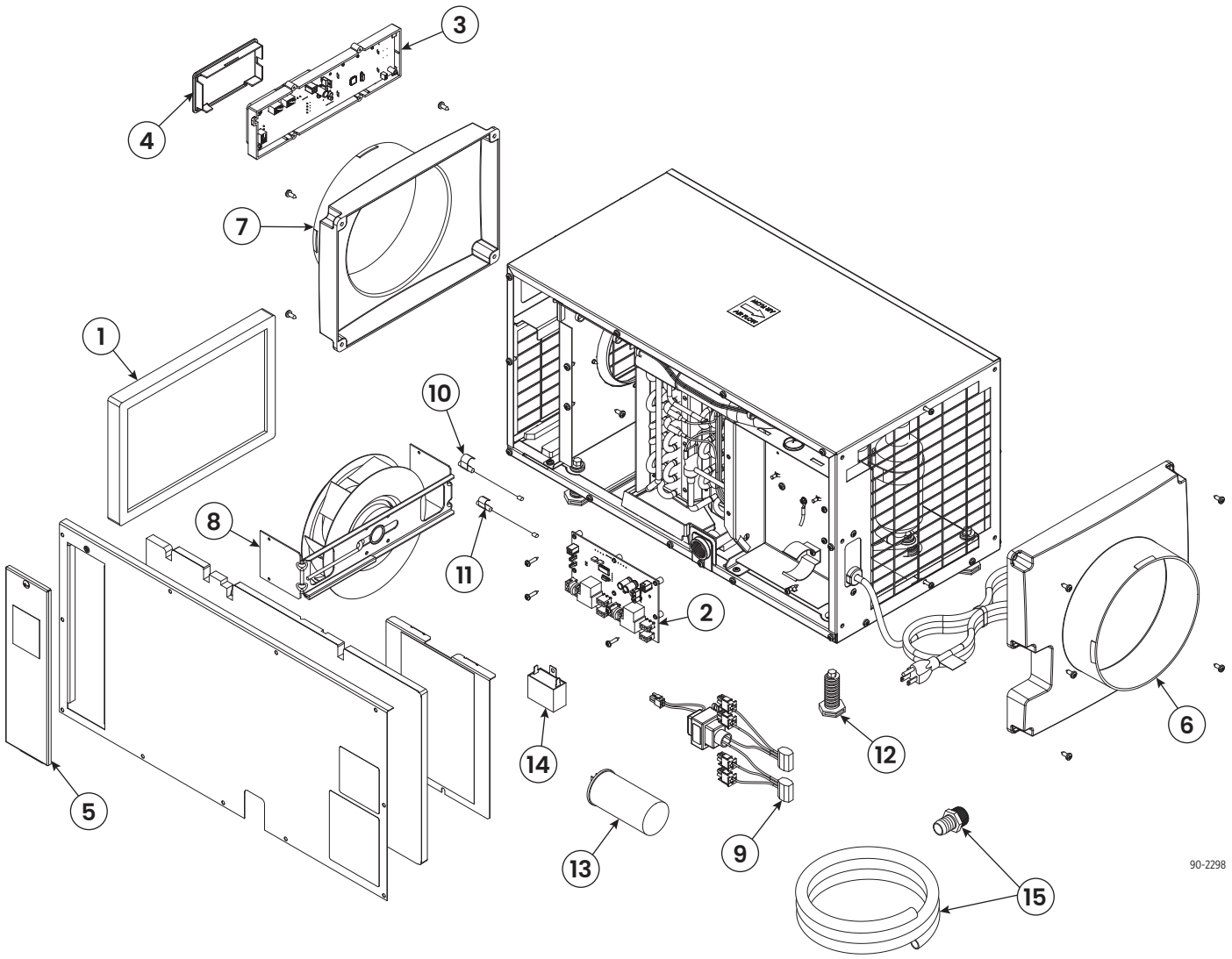
This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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.

A70 SERVICE PARTS



No.	Part Description	Part No.
1	Filter, 8" x 11.75" x 1"	5772
2	Internal Control Board	71000026
3	User Interface Assembly	71000062
4	Wiring Access Door	71000027
5	Door, Filter Access	71000056
6	Outlet Duct Panel	71000058
7	Inlet Duct Panel	71000059
8	Fan with 6MFD Capacitor	71000054
9	Wire Harness, Power	71000101

No.	Part Description	Part No.
10	Sensor, Low Temperature	71000034
11	Sensor, High Temperature (if equipped)	71000035
12	Leveling Foot	71000036
13	Capacitor, 45MFD, 370 VAC	71000037
14	Capacitor, 6MFD, 250 VAC	71000046
15	Drain Tube + Fitting	71000052
Not Shown		
Condensate Pump with Tubing		A4856
Alert Light		71000087

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