

SAFETY INSTRUCTIONS

WARNING

1. 120 Volts may cause serious injury from electric shock. Disconnect electrical power before starting installation or servicing. Leave power disconnected until installation/service is completed.
2. Dropping may cause personal injury or equipment damage. Handle with care and follow installation instructions.
3. Sharp edges may cause serious injury from cuts. Use care when cutting plenum openings and handling duct work.

CAUTION

1. Read all instructions before beginning installation.
2. Improper installation may cause property damage or injury. Read instructions before installation, service or maintenance.
3. Do not use in pool applications. Pool chemicals can damage the dehumidifier.
4. Do not use solvents or cleaners on or near the circuit board. Chemicals can damage circuit board components.
5. Wait 24 hours before running the unit if it was not shipped or stored in the upright position
6. Do not use dehumidification to prevent window condensation in the winter. To address window condensation, use ventilation to lower indoor humidity in the winter.
7. This appliance 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 appliance by a person responsible for their safety.
8. Children should be supervised to ensure that they do not play with the appliance.
9. If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent.

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READ AND SAVE THESE INSTRUCTIONS

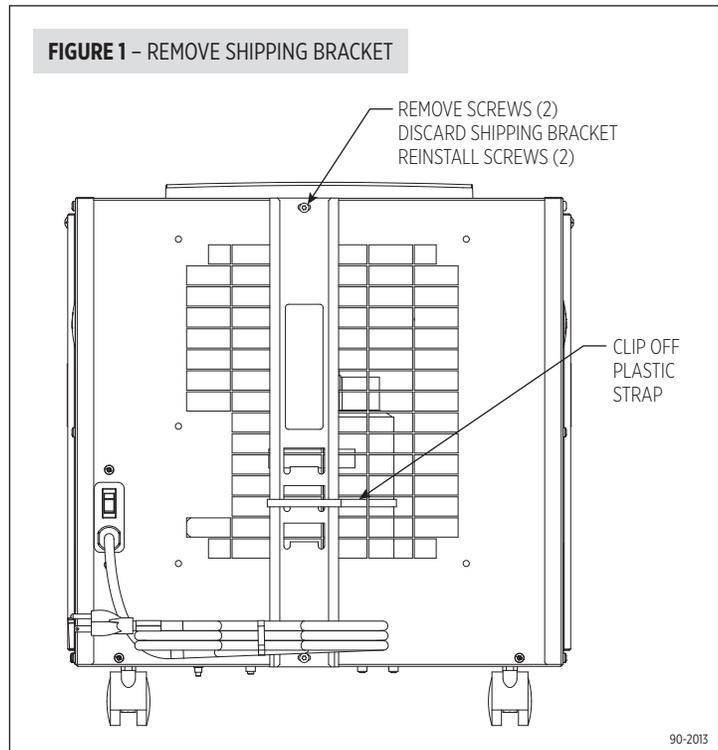
SPECIFICATIONS

| | MODEL E130C | |
|---|--|----------------------|
| Unit Weight | 98 lbs. | |
| Shipping Weight | 115 lbs. | |
| Capacity 80°F, 60% RH Conditions | 130 pints per day @ 310 CFM | |
| Power 115 VAC, Single Phase, 60Hz | 8.3A 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 8, washable | |
| Airflow | EXTERNAL STATIC PRESSURE ("w.c.) | AIRFLOW (CFM) |
| | 0.0 | 310 |
| | 0.2 | 270 |
| | 0.4 | 225 |
| | 0.6 | 175 |

0.7" w.c. is maximum design external static pressure.

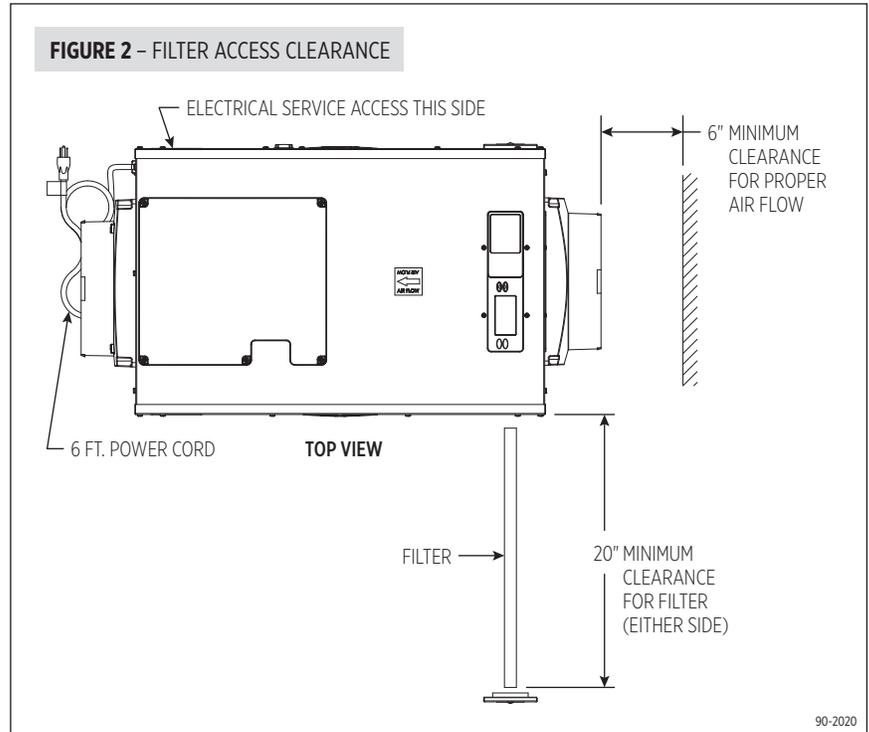
REMOVE SHIPPING BRACKET

▲ IMPORTANT: Cut the strap securing the compressor shipping support bracket and remove the strap, shipping bracket screws, and bracket. See **FIGURE 1**.



LOCATION CONSIDERATIONS

- Allow sufficient clearance for filter removal and to prevent airflow obstruction
- Electrical service access will require the removal of the side panel shown. Allow sufficient space for service on this side of the unit.



DRAIN INSTALLATION

The drain outlet on the dehumidifier can be hard piped using a 3/4" PVC Slip x 3/4" MNPT fitting and 3/4" nominal drain tubing or the provided 3/4" MNPT x 3/4" hose barb fitting and 3/4" clear PVC tubing can be used to drain the dehumidifier. Always maintain a constant downward slope from the dehumidifier to the drain and do not allow soft tubing to curl up which may result in air lock. **Note:** PTFE thread seal tape is recommended for the threaded connection and **hand tighten only**. If hard pipe is used, PVC primer and cement is recommended for the slip fit connection.

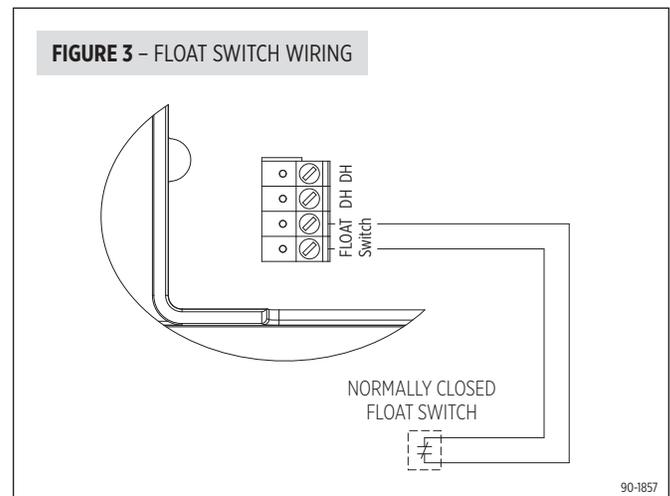
A level surface is required to ensure proper drainage from the dehumidifier.

Always install the dehumidifier in a condensate pan when locating in or above a finished space. Adhere to local codes regarding draining of the condensate pan.

CONDENSATE PUMP AND FLOAT SWITCH

If a condensate pump is needed, install it in the condensate pan if installed.

Install a condensate overflow safety switch (i.e. float switch) in the condensate pan, remove the factory installed jumper wire between the Float Switch terminals on the control and wire the float switch to the dehumidifier as shown in **FIGURE 3**. Overflow safety switches on condensate pumps can be wired to the Float Switch terminals in a similar fashion.



SETTING THE DESIRED HUMIDITY LEVEL

1. Plug in dehumidifier and turn on/off switch ON. See **FIGURE 4**.
2. Press the ON/OFF button to turn the dehumidifier control ON. The display will show the current setting, and the dehumidifier blower will turn on to start sampling the air.
3. The ▲ and ▼ buttons allow the humidity level to be set from 40% to 80% relative humidity. Use the ON/OFF button to turn the dehumidifier ON or OFF.
Set the control at 55%RH when first installed. Allow the dehumidifier to run until it reaches the setting before deciding if you want to change the setting. See **FIGURE 5**.
 - If you prefer the air to be more dry, decrease the humidity setting.
 - If you prefer the air to be less dry, increase the humidity setting.
4. 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. See **FIGURE 6**.
 - b. If the measured humidity is below the setting, the blowers turn off and the display returns to showing the RH setting.
5. The dehumidifier will sample again every 60 minutes, or at any time if the humidity setting is lowered.

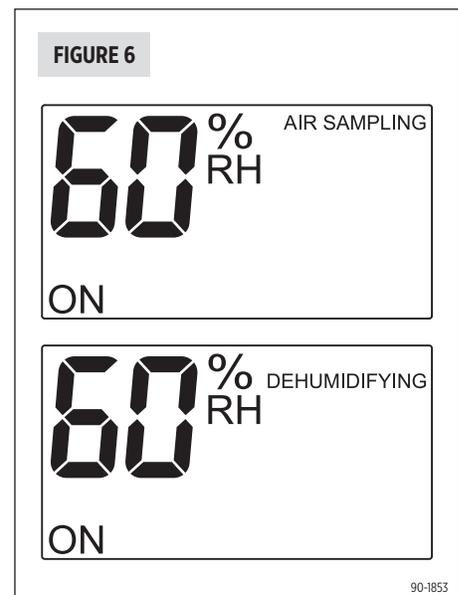
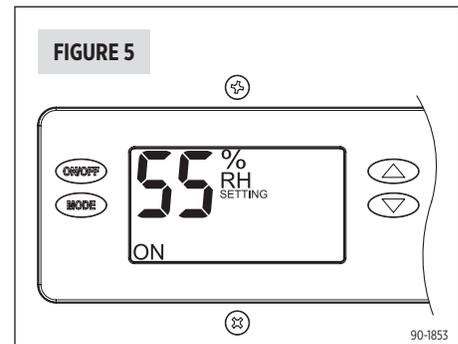
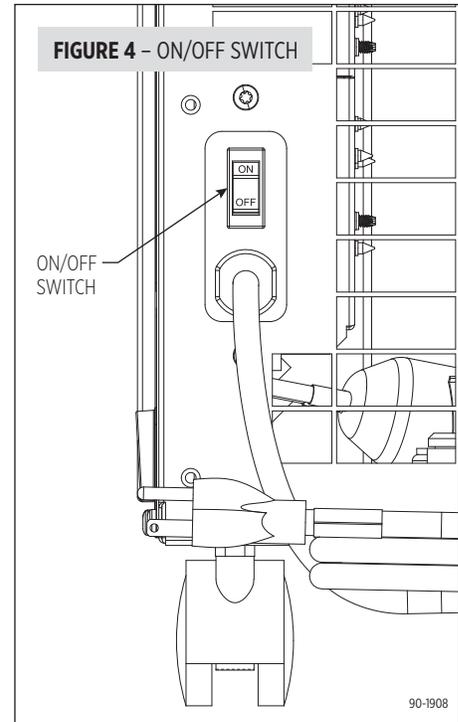
Your comfort is the best measure of how to adjust your setting. When first installed, your dehumidifier has to remove all the moisture that is initially in your home. The home acts like a sponge so the moisture in the materials of your home is at the same level as the air. After drying the air, the materials of the home will release moisture back into the air until they are again at the same level. As a result, it is not uncommon for the dehumidifier to operate for an extended period when first installed.

Your dehumidifier is equipped with two features that protect against unwanted energy consumption. Defrost is a normal operating mode that helps to prevent significant ice formation on the refrigeration system coil. The dehumidifier display will show “DEFROSTING” when operating in this mode. This mode can occur when there is not enough air moving through the dehumidifier or if the temperature and/or humidity of the incoming air is too low. The second protection feature is the E8 code. E8 on the dehumidifier display indicates that the air entering the dehumidifier is below 50°F or above 104°F, or the dew point of the incoming air is below 40°F. There would be a significant reduction in dehumidifier efficiency if the dehumidifier operated outside of these conditions. Low dew point conditions can be seen in some basements or crawl spaces and usually occur in the Winter and Spring months. The dehumidifier continues to monitor the incoming air and when the conditions are within the operating range, E8 will be removed from the display and dehumidification will begin as needed.

ENERGY SAVINGS TIPS

Energy Savings Tip #1: Adjust the humidity setting to be as high as is comfortable to reduce dehumidifier run time. If it feels clammy or “smells musty”, lower the humidity setting. To save energy, turn the dehumidifier to OFF when you open your windows, just as you would with air conditioning.

Energy Savings Tip #2: If vacating your home for an extended period in the summer, set the RH at 55% and set your thermostat as high as you are comfortable setting it to in the cooling mode. Consult with appropriate professionals regarding the highest temperature that is safe for your pets or possessions. This will keep the humidity at a controlled level while minimizing the amount of cooling energy used.



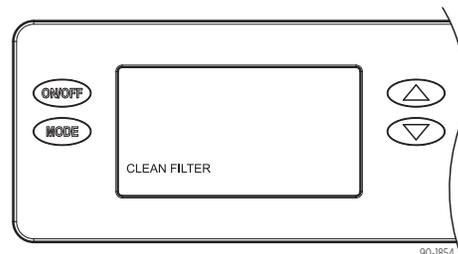
MAINTENANCE

CLEAN OR REPLACE THE AIR FILTER

After initial installation the air filter should be checked and cleaned every 6 months. The CLEAN FILTER service reminder will display on the on-board control screen every 6 months. To clear the service message, press the ▲ and ▼ buttons simultaneously for 3 seconds.

Filter Cleaning Procedure

1. Turn the ON/OFF switch OFF.
2. Remove the filter access door from either side of the dehumidifier.
3. Slide the filter out of the dehumidifier.
4. Flush the filter with warm water and a mild detergent solution.
5. Shake off the excess water from the filter.
6. Replace the filter, making sure the filter is secured in both the top and bottom filter rails.
7. Replace the filter access door.
8. Turn the ON/OFF switch ON.
9. Press the ▲ and ▼ buttons simultaneously for 3 seconds to clear the service message.



CHECK THE DRAIN

The drain should be checked annually to ensure there are no blockages or air lock in the drain system. If the unit is not draining properly, have it checked by a qualified service professional.

⚠ 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.

DUCT COLLAR INSTALLATION

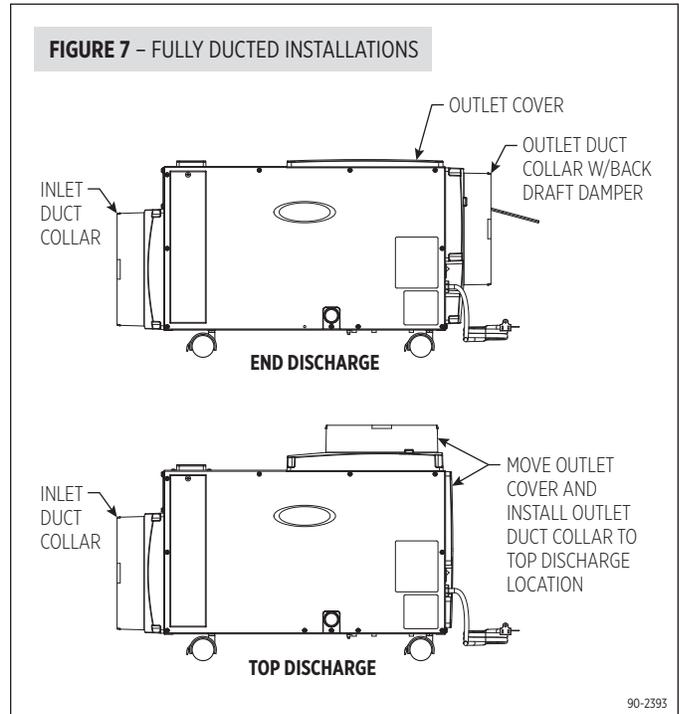
HORIZONTAL DISCHARGE:

- Use the screws in the parts bag to attach the duct collars to the inlet and outlet of the dehumidifier. The outlet collar has a backflow damper.
- The outlet duct collar may be attached to the top or end of the unit. Move the outlet cover to the location not being used. See **FIGURE 7**.
- Make sure there are no bends in the ductwork coming off the outlet for a minimum of 4". This will ensure that the ductwork will not interfere with the backflow damper function.

VERTICAL DISCHARGE:

Use the screws provided in the parts bag to attach the duct collars:

- When the dehumidifier requires a ducted vertical discharge, remove the top access panel and remount on the outlet of the unit. Install the outlet duct collar with backflow damper on top of the unit. See **FIGURE 7**.

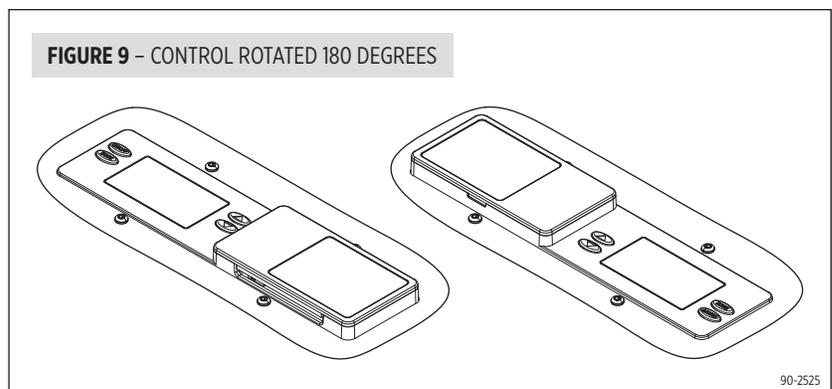
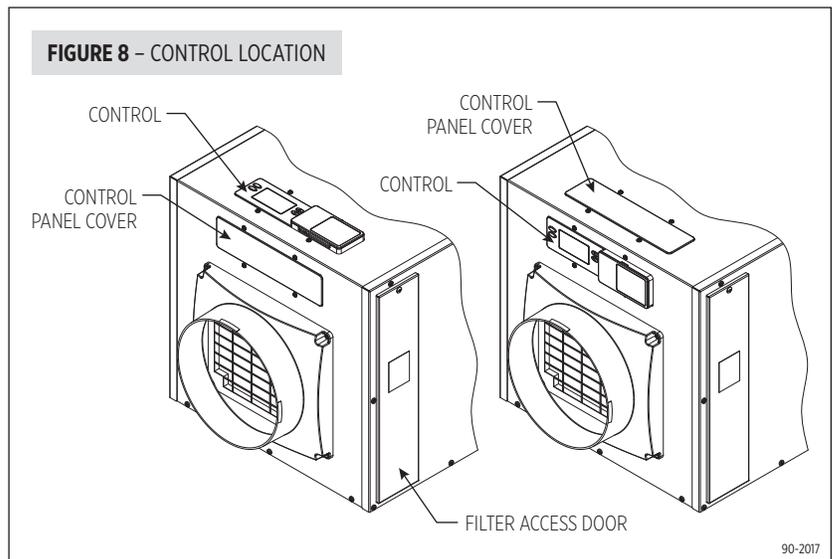


CONTROL LOCATION

The on-board control can be located on the top of the dehumidifier or can be relocated to the front of the dehumidifier if the control cannot be seen/accessed in the top orientation. It may also be rotated 180 degrees in either orientation as shown in **FIGURE 9**.

TO MOVE THE CONTROL:

1. Remove the front control panel cover.
2. Remove the filter access door and filter.
3. Detach the on-board control by removing the four (4) screws around the control. **Note:** Use one hand to support the bottom of the on-board control when removing.
4. Keep the control in the unit and relocate to the front access hole.
5. Secure the control with the same four screws used to attach the control to the top of the unit.
6. Secure the control panel cover to the top of the unit.



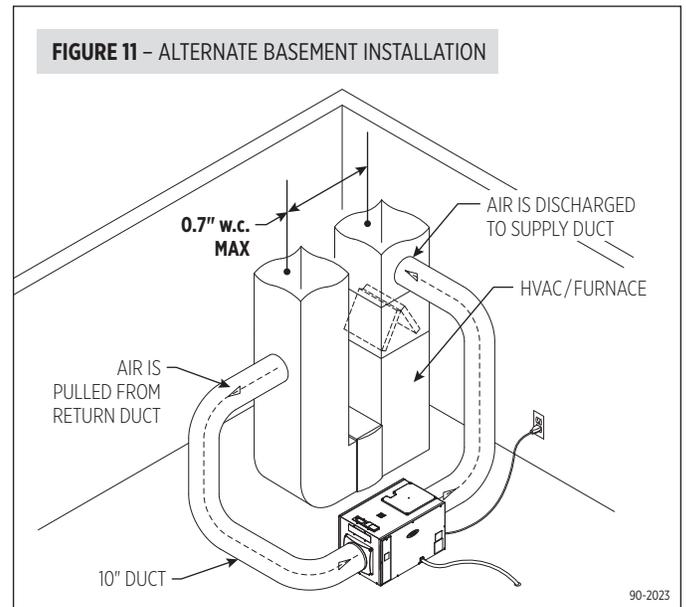
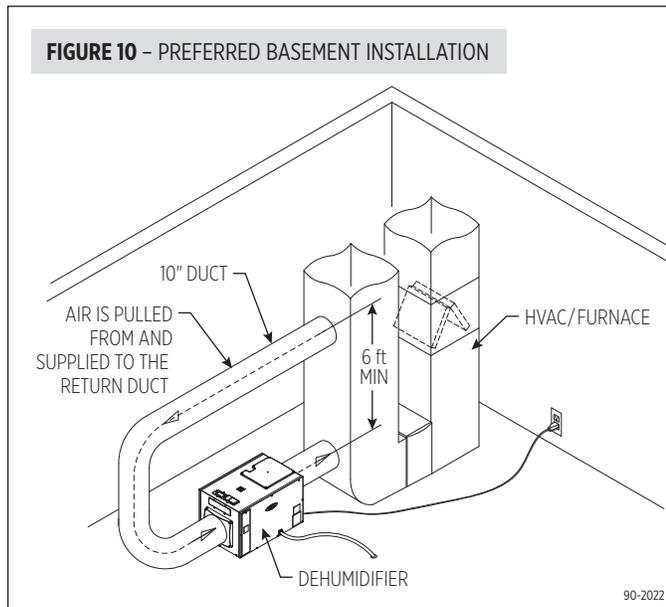
DUCTING

DUCTING IN BASEMENT

The dehumidifier can be ducted to pull air from and return dehumidified air to the HVAC return duct. This installation will ensure warm, dehumidified air is thoroughly mixed with the HVAC system air before being discharged into the living space. Alternatively, the dehumidifier can be ducted to discharge to the supply duct, but the external static pressure of the HVAC system must not exceed 0.7 "w.c.

REQUIRED COMPONENT:

- 10" Ductwork



DUCTING NOTES:

- Use insulated duct when the discharge is ducted to the supply side of the HVAC system.
- Use a minimum of 12" of flex duct at the dehumidifier inlet and outlet to prevent vibration noise transmission.
- When ducting return to return (preferred), the dehumidifier must be wired to turn on the HVAC fan when operating.
- When ducting return to supply, allow adequate space before the first branch duct to ensure the warm dehumidified air is thoroughly mixed with the HVAC system air.

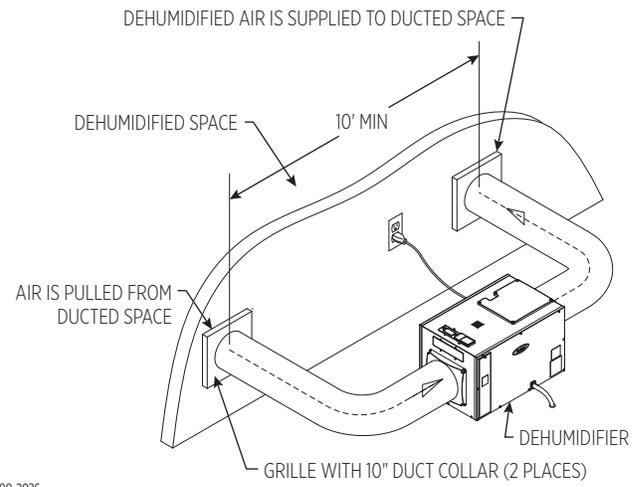
DUCTING TO WHOLE HOME WITHOUT AN AIR HANDLER

In this installation the dehumidifier is not ducted to the HVAC system.

REQUIRED COMPONENTS:

- 10" Ductwork
- Grilles with 10" Duct Collars

FIGURE 12 – STAND ALONE DUCTED



TROUBLESHOOTING

Technical Support is available Monday through Friday, 7:00 a.m. to 5:00 p.m. CST, at (800) 334-6011. 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 control screen.

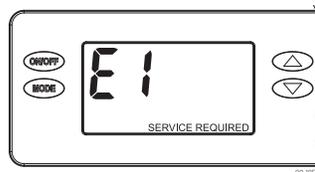


TABLE 1 – DIAGNOSTIC CODES

| Diagnostic Code | Failure Mode | Action | Reset |
|-----------------|---|--|-----------------|
| E1 | Internal Humidity or Temperature Sensor Open or Shorted | <ol style="list-style-type: none"> 1. Cycle power to clear error code. 2. If error code reoccurs replace User Interface, Part No. 5445. | Cycle Power |
| E2 | High Refrigeration Pressure | <ol style="list-style-type: none"> 1. Verify that the fan works, and that there is nothing restricting air flow. 2. If the fault persists, call Technical Support. | Cycle Power |
| E3 | Model 76 Remote Control Communication Loss | <ol style="list-style-type: none"> 1. Check connections between Model 76 and dehumidifier control board. Terminals should be fully inserted and secured in the control board and Model 76 control terminals. 2. If connections are correct and secure, turn off the dehumidifier and remove the Model 76. Use a short section of 4-wire cable to reconnect the Model 76 to the control board. Turn the dehumidifier back on and increase the dryness level setting on the Model 76. If the dehumidifier turns on, the problem is with the wiring between the dehumidifier and control. 3. If the dehumidifier does not turn on, call Technical Support. | Self-Correcting |
| E4 | Insufficient Capacity | <ol style="list-style-type: none"> 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/home 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 ▲ and ▼ buttons. 7. Record values and call Technical Support. | Cycle Power |
| E5 | High Temperature Thermistor Failure | <ol style="list-style-type: none"> 1. Check the high temperature sensor connection 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 No. 5456 — contact Technical Support to confirm. | Cycle Power |
| E6 | Low Temperature Thermistor Failure | <ol style="list-style-type: none"> 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 No. 5455 — contact Technical Support to confirm. | Cycle Power |

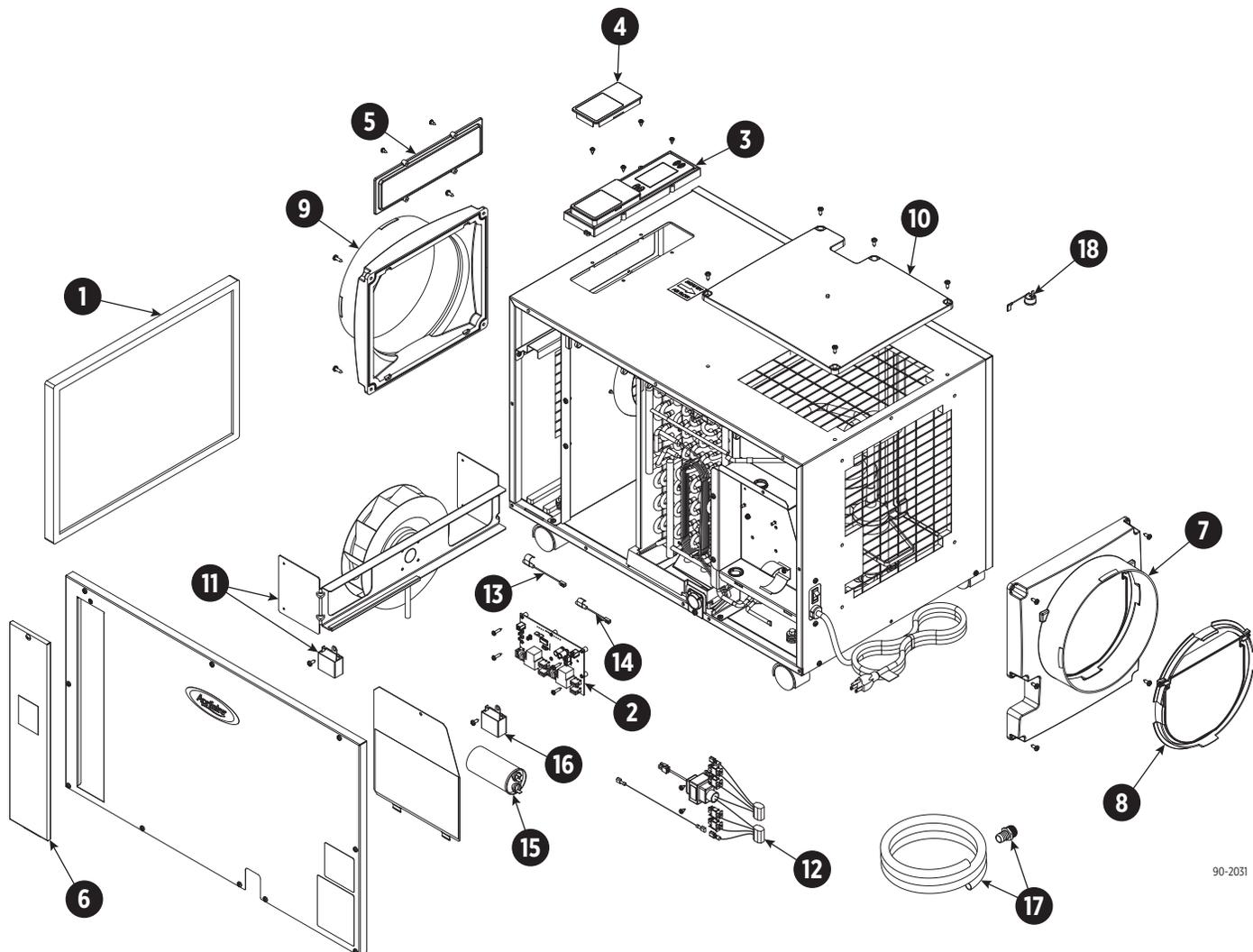
TABLE 1 – DIAGNOSTIC CODES

| Diagnostic Code | Failure Mode | Action | Reset |
|-----------------|--|---|-----------------|
| E7 | Float Switch Open | <ol style="list-style-type: none"> 1. Empty the condensate pan. 2. Check the float switch connection at the control board. 3. If not using a float switch, verify jumper is between float switch terminals on dehumidifier control board. 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 | <ol style="list-style-type: none"> 1. If temperature is out of range, no action, normal operation. 2. If air temperature is between 50°F – 104°F with a dewpoint 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. | <ul style="list-style-type: none"> • Check that the dehumidifier is plugged in. • Check that the power switch is turned ON. • 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 0.7" w.c. | <ul style="list-style-type: none"> • Check dehumidifier air filter and wash or replace. • Check for blocked duct work and clear. • Verify that the outlet collar with backflow damper is installed on the outlet side 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. | <ul style="list-style-type: none"> • If float switch installed, check connections at control board and empty condensate pan. • If no float switch installed check that the jumper is installed at the float switch terminals on the control board. |
| | Coil frosting. | <ul style="list-style-type: none"> • Lack of or reduced airflow. Check dehumidifier air filter and wash or replace. • Check that there is nothing blocking the inlet or outlet of the dehumidifier. • 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. | <ul style="list-style-type: none"> • Verify all ductwork is properly sealed. • No action. The compressor will not run if inlet conditions are out of range. |
| Dehumidifier is not draining properly. | Drain line blocked or unit not level. | <ul style="list-style-type: none"> • Verify that the unit is level. • Check the drain line blockages and for a continuous downward slope. |
| Dehumidifier is producing hot air. | Normal function. | <ul style="list-style-type: none"> • Air is reheated across the condenser coil, resulting in a temperature rise between inlet and outlet. |
| The HVAC fan turns on unexpectedly. | Dehumidifier is sampling. | <ul style="list-style-type: none"> • The dehumidifier will turn on the HVAC fan during air sampling or as needed to meet the ventilation time. |

SERVICE PARTS



90-2031

| No. | Part Description | Part No. |
|-----|------------------------------|----------|
| 1 | Filter, 14" x 19" x 1" EZK | 5569 |
| 2 | Internal Control Board, Deh | 5444 |
| 3 | User Interface Assembly, Deh | 5445 |
| 4 | Wiring Access Door, AA Deh | 5446 |
| 5 | Hole Cover, UI Ctrl, Deh | 5447 |
| 6 | Door, Filter Access, AA Deh | 5571 |
| 7 | Outlet Duct Panel, Deh | 5449 |
| 8 | Backflow Damper, 10", Deh | 5450 |
| 9 | Inlet Duct Panel, AA Deh | 5451 |

| No. | Part Description | Part No. |
|-----|--------------------------------------|----------|
| 10 | Cover, Outlet, AA Deh | 5452 |
| 11 | Fan, 130pt Deh, with 10MFD Capacitor | 5572 |
| 12 | Wire Harness, Power, Deh | 5454 |
| 13 | Sensor, Low Temperature, Deh | 5455 |
| 14 | Sensor, High Temperature, Deh | 5456 |
| 15 | Compressor Capacitor, 70MFD, 250VAC | 5941 |
| 16 | Capacitor, 10MFD, 250VAC | 5573 |
| 17 | Drain Tube + Fitting | 5692 |
| 18 | Compressor Overload Switch | 5574 |

LIMITED WARRANTY

Your Research Products Corporation Aprilaire® 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.

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

WARRANTY REGISTRATION

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