Evair® Dehumidifier

RQ Series

Installation, Operation, and Maintenance Manual

Read and save these instructions

driSteem

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ATTENTION INSTALLER

Original Instructions
Read this manual before installing.
Leave manual with product owner.

DriSteem Technical Support
800-328-4447

Website:

Documents can be viewed, printed or ordered from our website, www.dristeem.com.

DriCalc sizing and selection software:

DriCalc® is our humidification system sizing and selection software, which can be accessed from dristeem.com.

REGISTRATIONS

The Evair Dehumidifier units conform to unified standard UL 60100-2-40, CSA C22, 2#60100-2-40. US Patents: D570,988 / 8,069,681 / 9,052,132.

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Warnings & Cautions

Read the installation, operation and maintenance instructions carefully before installing and operating this device. Proper adherence to these instructions is essential to obtain maximum benefit from your DriSteem dehumidifier.

READ AND SAVE THESE INSTRUCTIONS

- The device is designed to be installed INDOORS IN A SPACE THAT IS PROTECTED FROM RAIN AND FLOODING.
- Install the unit with space to access the back or side panels for maintenance and service. DO NOT INSTALL UNIT WITH THE SERVICE PANELS INACCESSIBLE.
- Avoid directing the discharge air at people, or over the water in pool areas.
- If used near a pool, spa, or water: be certain there is NO chance the unit could fall into the water or be splashed and that it is plugged into an outlet that is a GROUND FAULT INTERRUPT protected circuit.
- DO NOT use the device as a bench or table.
- DO NOT place the device directly on structural members. Provide vibration isolation in order to minimize operational vibration and/or noise.
- A drain pan MUST be placed under the unit if installed above a living area or above an area where water leakage could cause damage.
- Never operate a unit with a damaged power cord. If the power cord is damaged it must be replaced by the manufacturer, its service agent, or similarly qualified person in order to avoid a hazard.
- Make all electrical connections in accordance with the current edition of the NEC ANSI/NFPA 70 and any national and local codes or ordinances that may apply.
- Maintain a minimum 3 ft. (1 m.) clearance to avoid obstructing the air return and supply.
- 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. Children should be supervised to ensure that they do not play with the appliance.
- Not intended for use at altitudes over 6500 ft (2000M).

⚠ WARNING

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance, or an operating electric heater.

Do not pierce or burn. Be aware that refrigerants may not contain an odor.

REFRIGERANT
SAFETY GROUP
A2L

Specifications

Table 6-1:
Evair Dehumidifier Product Specification@ 80°F / 60% RH

	Model RQ-4	Model RQ-6	Model RQ-9	Model RQ-14	Model RQ-21	Model RQ-31
Water Removal (Pints/Day) Efficiency (Pints/kWh) [1]	100 Pints/Day 7.5 Pints/kWh	155 Pints/Day 8.5 Pints/kWh	225 Pints/Day 7.6 Pints/kWh	345 Pints/Day 8.0 Pints/kWh	500 Pints/Day 9.2 Pints/kWh	730 Pints/Day 8.3 Pints/kWh
Supply voltage	110-120 Volt 1 Phase - 60 Hz	110-120V 1 Phase - 60 Hz	208V-230V 1 Phase - 60 Hz	208V-230V - 1 Phase - 60 Hz	208-230 VAC 1 Phase - 60 Hz	480 VAC 3 Phase - 60 Hz
CFM	280 @ 0.0" WG	500 CFM @ 0.0" WG (tested with duct collars on)	630 CFM @ 0.0" WG (tested with duct collars on)	900 CFM @ 0.6" WG (tested with duct collars on)	1150 @ 0.0" WG	1,650 @ 0.0" WG
Power	540 Watts	750 Watts	1230 Watts	1700 Watts	2250 Watts	3,665 Watts
Current Draw	5.0A	6.9A @ 110V	5.5A @ 230V 6.1A @ 208V	7.6A @ 230V 8.4A @ 208V	9.9A @ 230V 10.9A @ 208V	4.9A
Rated Current Draw (104°F | 36%)	9.1A	8.0A	7.5A	11.3A @ 208V	15.3A @ 208V	7.1A
Minimum Circuit Ampacity (MCA)*	15A				20A	15A
Maximum Overcurrent Protection (MOP)**	15A			25A	20A	15A
Energy Factor (L/kWh)	3.5 L/kWh	4 L/kWh	3.6 L/kWh	3.8 L/kWh	4.4 L/kWh	3.9 L/kWh
Operating temperature	56°F Min – 95°F Max					
Air Filter (MERV-13) size	12" x 14" x 1"	18" x 18" x 2"		22" x 20" x 2"	18" x 20" x 2" (Quantity 2)	
Power Cord	10', 115 VAC, Ground	14/3, SJTW, 120V-15A, 9' NEMA 5-15P	6' 14/3 SJTW, 15A NEMA 6-15P	207/230V: 14/3, SJTW (6') NEMA 6-15P	207/230V: 12/3, SJTW, 20A (6') NEMA 6-20P	No cord; hardwire only Electrical knockout size: 3/4" (1.094" opening)
Drain Connection	3/4" Threaded NPT					
Refrigerant Type: Refrigerant Amount:	R454B 1 lb 2 oz	R454B 3 lb 4 oz		R454B 3 lb 8 oz	R454B 3 lb 14 oz	R454B 6 lb 8 oz
Clearances (minimum clearance on all sides)	24" (36" intake side)					

[1] Rated capacity and energy factor test done and current draw measured in accordance with AHAM DH-1 2008 at 80°F (26.7°C), 60% RH inlet air at 0.0 external static pressure.

*MCA = Minimum Circuit Ampacity
This number provides a qualified electrician with the information needed to determine the minimum wire size used in the circuit that feeds a single dehumidifier.

**MOP = Maximum Overcurrent Protection
This number provides a qualified electrician with the value of the maximum size circuit breaker that may be used to protect the circuit that feeds a dehumidifier.

Dimensions and weights

Table 7-1:
Evair dehumidifier dimensions by model number

Dimensions	Model RQ-4		Model RQ-6		Model RQ-9		Model RQ-14		Model RQ-21		Model RQ-31	
	Unit	Shipping	Unit	Shipping	Unit	Shipping	Unit	Shipping	Unit	Shipping	Unit	Shipping
Width (inches)	24	26.5	23.6	25	23.6	25	32.9	36	44.7	47	44.7	47
Height (inches)	14.5	18.5	20.9	21	20.9	21	24.6	30	29	33	29	33
Length (inches)	16	18.75	26.8	29	26.8	29	23.7	28	27.4	28	27.4	28
Weight (lbs)	60	65	130	152	130	152	215	255	275	335	300	360

Table 7-2:
RQ Series Accessory Specifications

	Model RQ-4	Model RQ-6	Model RQ-9	Model RQ-14	Model RQ-21	Model RQ-31
Duct Kit	Optional					
Feet	Attached				Not available	
Hanging Kit	Optional	Included (see pages 19 and 20)				
Air Discharge	End					
Onboard Controller	Front	End				
BACnet Humidistat (Room) Controller	Optional					
BACnet Humidistat (Duct) Controller	Optional					
Non-BACnet Humidistat (Room) Controller	Optional					
Non-BACnet Humidistat (Duct) Controller	Optional					

Location

The Evair Dehumidifier can be installed in a variety of locations to meet the owner's needs as listed below. In all cases keep the following cautions in mind:

- The unit is designed to operate while level. Failure to level the unit may result in leakage or improper drainage.
- Allow sufficient clearance for filter removal and to prevent airflow obstruction.
- Ducts connected to the dehumidifier shall not contain a POTENTIAL IGNITION SOURCE.
- Supply and return air shall be directly ducted to the space. Open areas such as false ceilings shall not be used as a return air duct.
- In order to efficiently control humidity levels, the area in which the dehumidifier is to be operated must be free of water intrusion or excessive fresh (outside) air infiltration. Before installing the Evair Dehumidifier, water intrusion and air infiltration problems should be addressed or noted in calculations.
- It is designed to be installed INDOORS IN A SPACE THAT IS PROTECTED FROM RAIN AND FLOODING.

INTENDED APPLICATION FOR THE EVAIR DEHUMIDIFIER

The Evair Dehumidifier is designed to operate in temperatures between 56° and 95°F.

UNVENTILATED AREAS

- Unventilated Areas where the DriSteem's Evair dehumidifier is installed or stored need to be so constructed that should any refrigerant leak, it will not stagnate so as to create a fire or explosion hazard.
- DriSteem's Evair dehumidifier shall not be stored or ducted into one or multiple rooms with continuously operating open flames (for example an operating gas appliance) or other POTENTIAL IGNITION SOURCES (for example an operating electric heater, hot surfaces). A flame-producing device may be installed in the same space if the device is provided with an effective flame arrest.
- If the Evair Dehumidifier is ducted to one or more rooms, Auxiliary devices which may be a POTENTIAL IGNITION SOURCE shall not be installed in the duct work. Examples of such POTENTIAL IGNITION SOURCES are hot surfaces with a temperature exceeding 500°C and electric switching devices.
- The Evair dehumidifier shall be stored so as to prevent mechanical damage from occurring.

Location

LOCATION

- Locate the dehumidifier near a suitable drain (8' drain hose included). Allow for proper drainage and routing of needed drain pipes.
- Locate the dehumidifier in an area where the cord's length easily reaches a electrical outlet with specified circuit capacity (see Table 6-1).
- Allow sufficient clearance to handle the unit's overall dimensions as well as any optional return and supply ductwork to the unit.
- Electrical service access will require the removal of the top "L" shaped panel. Allow sufficient clearance around the unit.
- The Evair Dehumidifier may be suspended with steel hanger, straps, or a suitable alternative from structural members, unit must be supported from underneath. Don't hang from sides or ends.
- The unit should be suspended with a hang kit from the floor joists if there is any possibility of flooding. A flooded unit is not covered by warranty. Feet will be installed as a securing measure after the hang kit is put on the dehumidifier. DO NOT hang the Evair dehumidifier from its' cabinet.
- Models RQ-4, RQ-6, RQ-9, and RQ-14: The minimum floor area of the room shall be 28m^2 (square meters).
- Models RQ-21 and RQ-31: To establish minimum room area at different altitude, multiply 63.4m^2 by Altitude Adjustment Factor. See Table 9-1.
  - Model RQ-21: The minimum floor area of the room shall be 28m^2 (square meters) at sea level.
  - Model RQ-31: The minimum floor area of the room shall be 63.4m^2 (square meters) at sea level.
- Place the dehumidifier on supports that raise the base of the unit 6" above the secondary drain pan so a P-trap can be installed.
- If installing on ground, use included plugs to cover hanging locations on top of the machine.
- If hanging machine in air, use included plugs to cover holes in base pan for leveling feet.

Table 9-1:
Model RQ-21 and RQ-31 minimum floor area

H_{alt}m	0	200	400	600	800	1000
H_{alt}ft	0	656	1312	1969	2625	3281
Factor	1	1	1	1	1.02	1.05
H_{alt}m	1000	1200	1400	1600	1800	2000
H_{alt}ft	3281	3937	4593	5249	5906	6562
Factor	1.05	1.07	1.1	1.12	1.15	1.18

Ducting

Return and supply duct collars are optional accessories for the Evair Dehumidifier and not included with the unit.

DUCTING CONSIDERATIONS

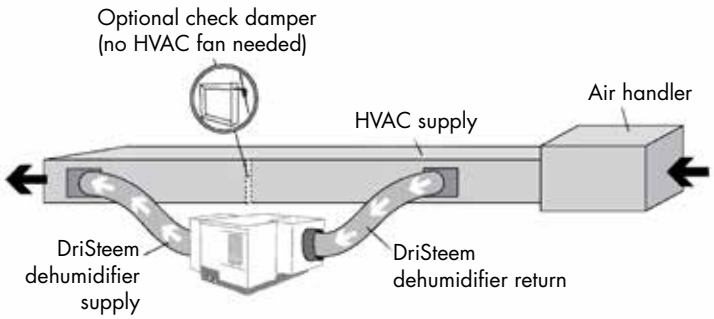
- All flexible ducting connected to the Evair Dehumidifier should be UL listed.
- A short piece of flexible ducting on all Evair Dehumidifier duct connections is recommended to reduce noise and vibration transmitted to rigid ductwork in the structure.
- Model RQ-4: Use a minimum 10" diameter round or equivalent rectangular duct for total duct lengths of up to 25'.
- Model RQ-6, RQ-9, RQ-14: Use a minimum 14" diameter round or equivalent rectangular duct for total duct lengths of up to 25'.
- Model RQ-21 and RQ-31: Use a minimum 15" diameter round or equivalent rectangular duct for total duct lengths of up to 25'.
- Grills or diffusers on the duct ends must not excessively restrict airflow.
- A length of 8" or more of insulated flex duct or any other vibration isolating material on the outlet of the Evair dehumidifier will reduce air noise from the blower.
- When ducting two or three areas, use 8" or larger diameter branch ducting. When ducting to four or more areas, use 6" or larger diameter branch ducting. Provisions must be made to provide airflow supply locations to the central return location. Proper air distribution is important to ensure even humidity control and heat distribution throughout the structure.

⚠ CAUTION

Do not connect with a static pressure greater than or equal to +1.0 WG. Contact technical support at (877) 328-4447 for additional details.

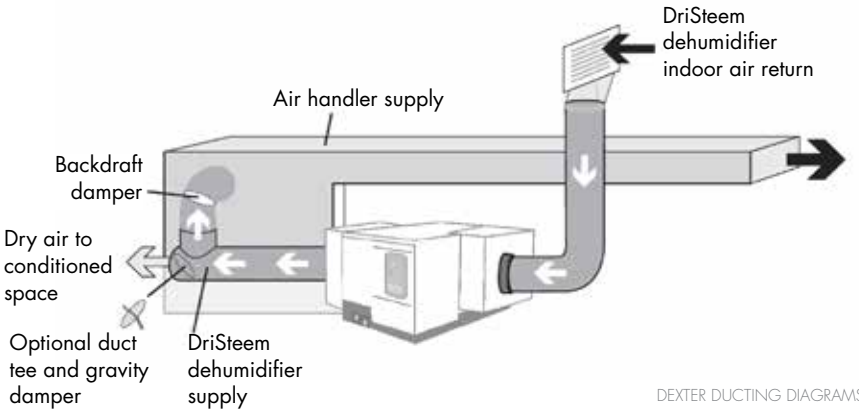
Ducting to HVAC options for Models RQ-4, RQ-6 and RQ-9

FIGURE 11-1: HVAC SUPPLY TO SUPPLY



DEXTER DUCTING DIAGRAMS01

FIGURE 11-2: DEDICATED RETURN TO SUPPLY



DEXTER DUCTING DIAGRAMS-02

⚠ CAUTION

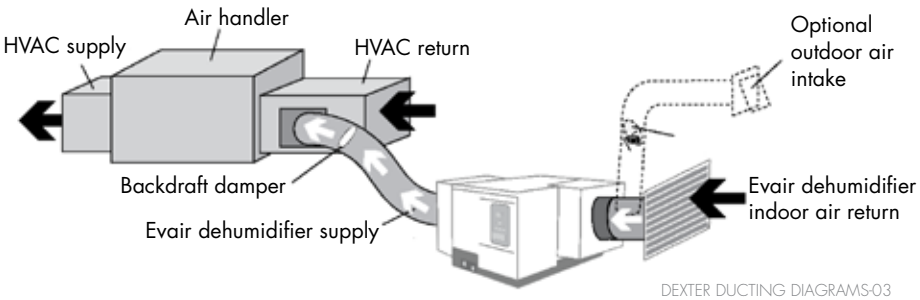
To avoid the dehumidifier cycling in and out of DEFROST, it is recommended that the leaving air temperature of the A/C coil is not below 55°F. Also, this install is not recommended for climates where the heating system will run during the spring and fall times of year, as this could diminish the water removal capability of the dehumidifier. If the Check Damper is not used, it is important to have the HVAC system fan ON when the dehumidifier is ON to prevent backflow of air.

⚠ WARNING

Due to pressure resistance it is not recommended to use the optional outdoor air intake when installing the dehumidifier supply to supply.

Ducting to HVAC options for Models RQ-4, RQ-6 and RQ-9

FIGURE 12-1: DEDICATED EVAIR DEHUMIDIFIER RETURN TO HVAC RETURN



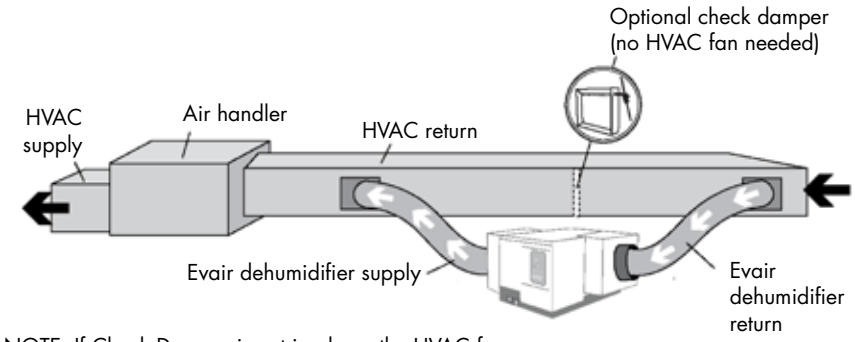
DEXTER DUCTING DIAGRAMS-03

⚠ CAUTION

Return to Return installs are to be considered last resort options and are not recommended. The dehumidifier will heat the AC cooling coils which diminishes the amount of water the AC system will remove when operating. If this installation is chosen, the dehumidifier must activate the HVAC blower and AC calls need to lock out the dehumidifier from running. Please check your local codes prior to installing.

- Create a separate return for the Evair Dehumidifier in a central area of the building.
- Installing the supply air from the Evair Dehumidifier to the return of the HVAC system requires the HVAC fan to run when the Evair Dehumidifier is operating.

FIGURE 12-2: HVAC RETURN TO HVAC RETURN

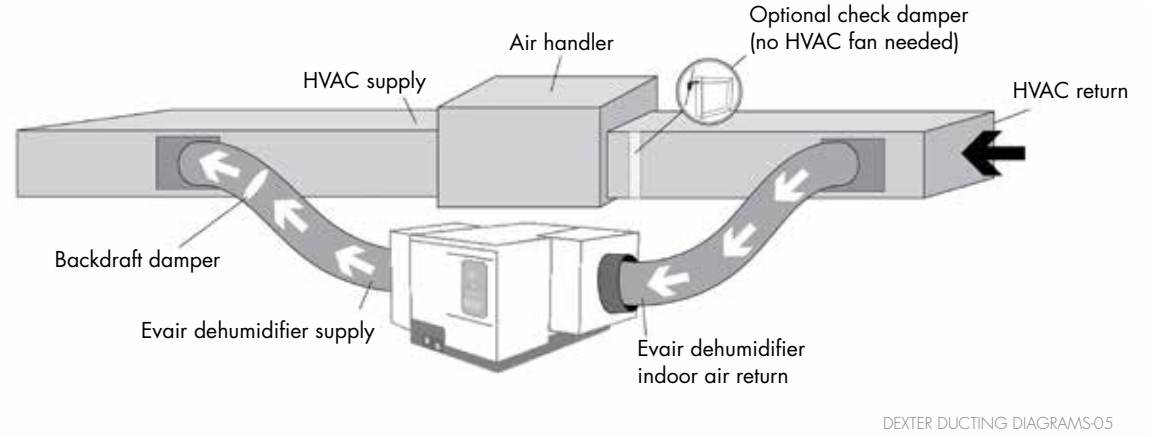


NOTE: If Check Damper is not in place, the HVAC fan must ON when the dehumidifier is in operation.

DEXTER DUCTING DIAGRAMS-04

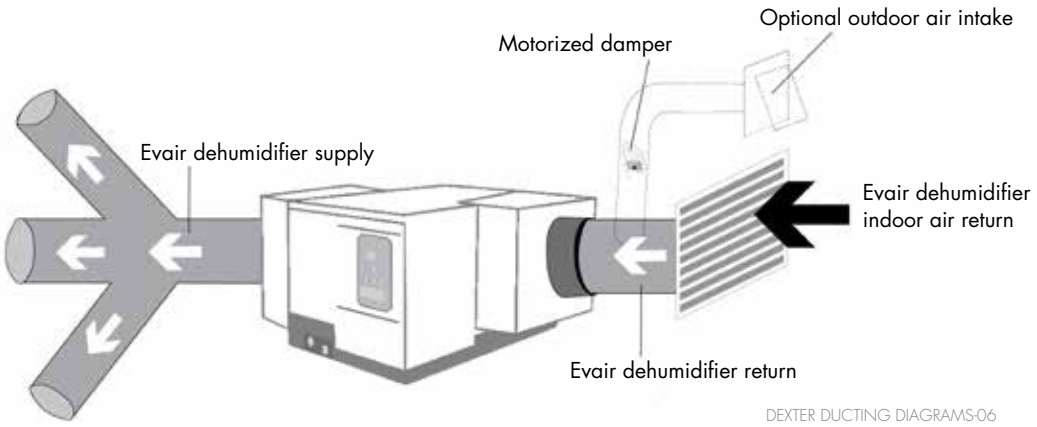
Ducting to HVAC options for Models RQ-4, RQ-6 and RQ-9

FIGURE 13-1: HVAC RETURN TO HVAC SUPPLY



- Check Damper should be in place between the Return and Supply connections of the dehumidifier.
- If the Check Damper is not in place, the HVAC fan must be ON when the dehumidifier is in operation.
- Anything greater than 0.4" of static requires HI fan setting. Anything greater than 0.7" of static requires HI override (99). Anything greater than 0.9" is not recommended.

FIGURE 13-2: NO EXISTING DUCTWORK INSTALLATION



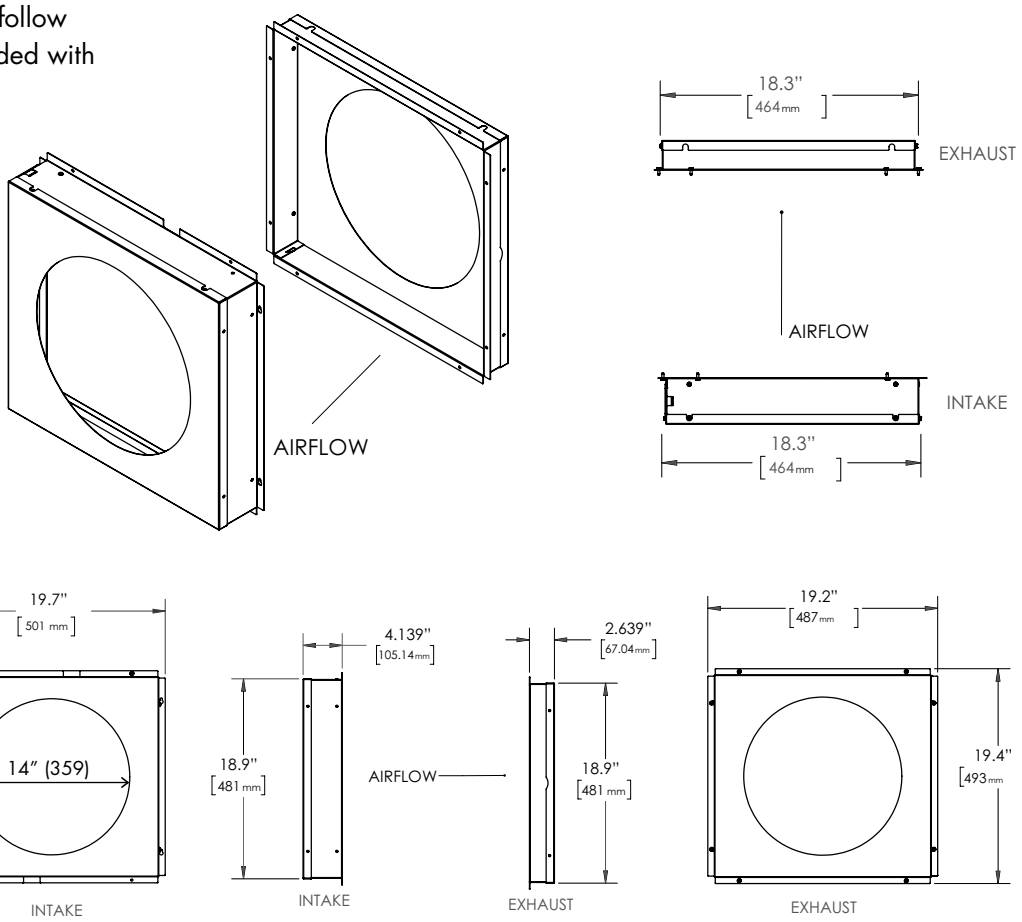
When installing the Evair Dehumidifier in a structure that does not have a forced-air HVAC system, a single return for the dehumidifier should be installed in a central location. The supply air should be ducted back into the space you want to dry. Proper air distribution is important for optimal performance of the dehumidifier. Install a 6" insulated duct from outside, teeing into the 8" return duct Model RQ-4 Dehumidifier (14" for the Model RQ-6) to provide outdoor air ventilation (optional).

- Model RQ-4: 8" diameter duct is recommended for branches to larger areas.
- Model RQ-6: 14" diameter duct is recommended for branches to larger areas.

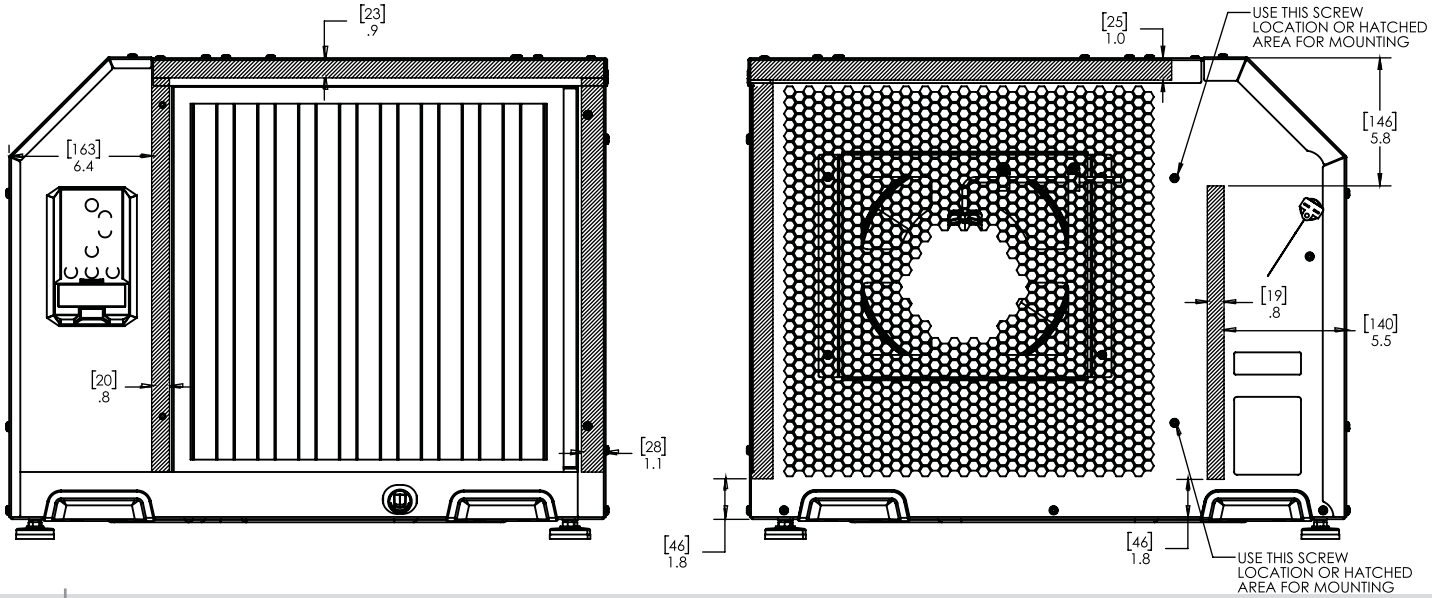
Model RQ-6 and RQ-9 supply and return duct kit

FIGURE 14-1: MODEL RQ-6 AND RQ-9 DUCT KIT (PART #: 601542)

If factory duct kit accessory was purchased, follow instructions included with duct kit.



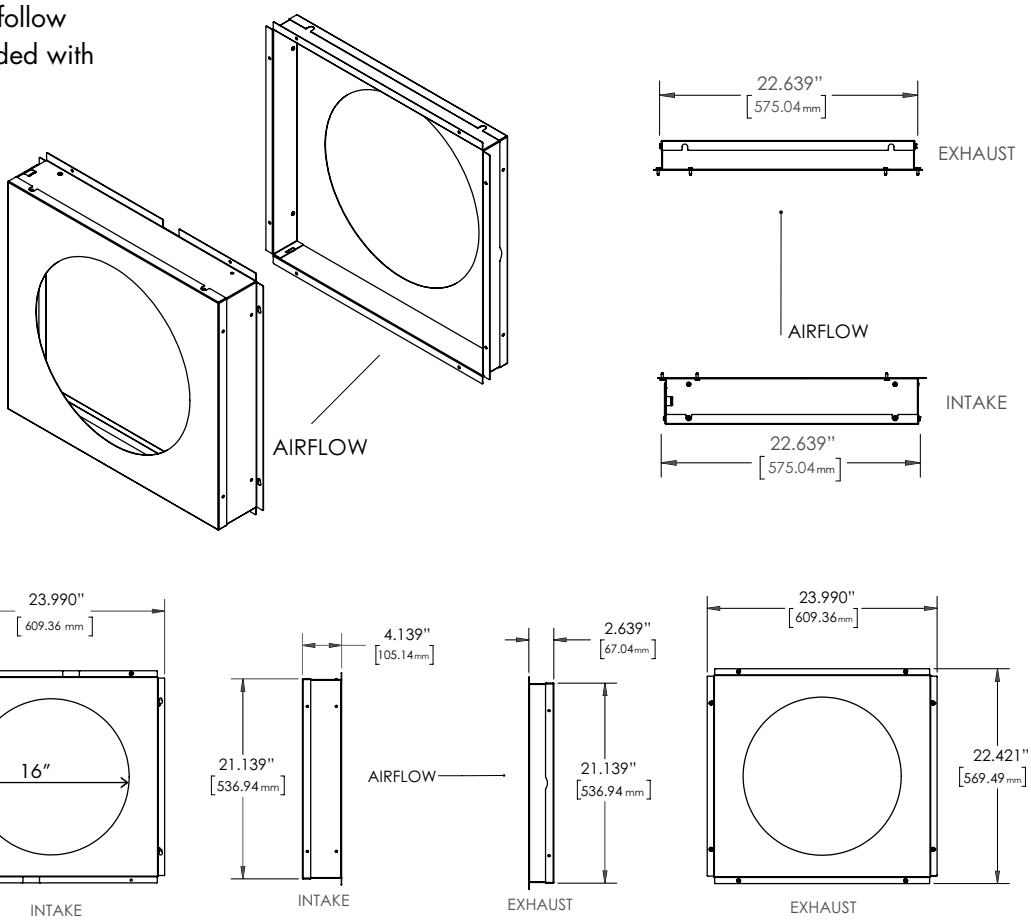
If owner chooses to have a licensed HVAC contractor fabricate a duct kit, please follow the drawing below for safe zones for self tapping screws.



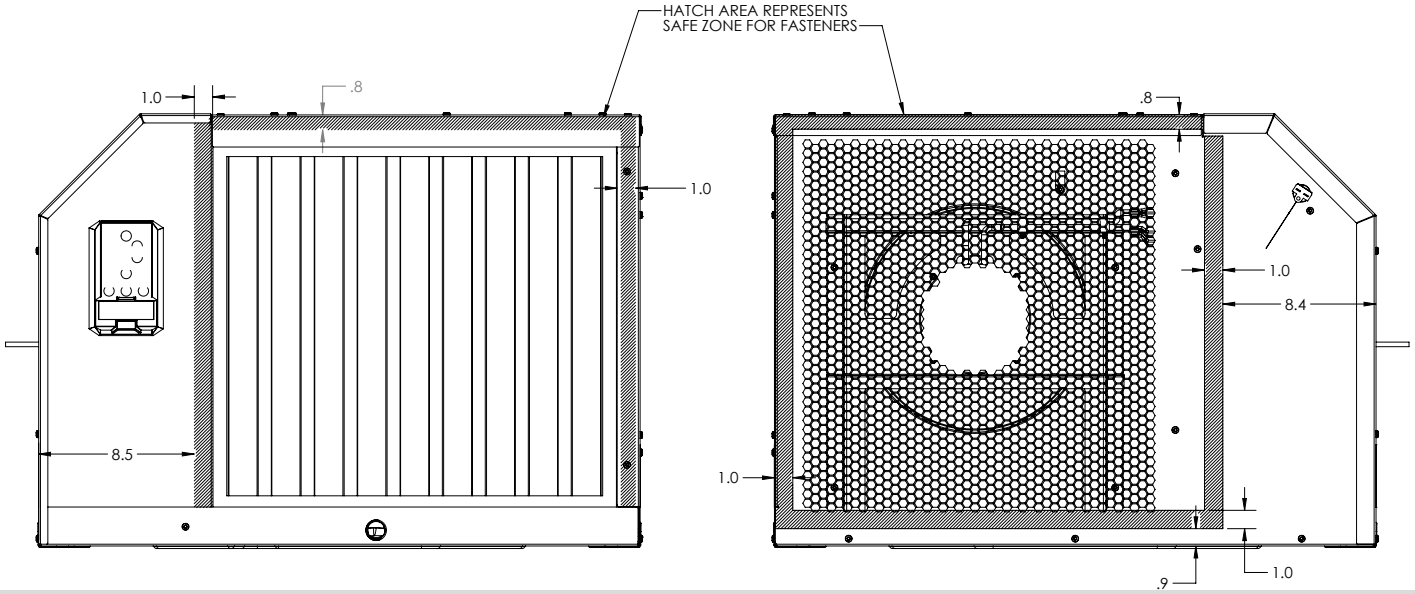
Model RQ-14 supply and return duct kit

FIGURE 15-1: MODEL RQ-14 DUCT KIT (PART #: 601543)

If factory duct kit accessory was purchased, follow instructions included with duct kit.



If owner chooses to have a licensed HVAC contractor fabricate a duct kit, please follow the drawing below for safe zones for self tapping screws.



Model RQ-21 and RQ-31 supply and return duct kit

- Ducting either the intake or exhaust use a minimum of two 15" diameter round ducts minimum.
- Grills or diffusers on the duct ends must not excessively restrict airflow.
- Effective dehumidification may require ducting to be branched to isolated or stagnant flow areas. Be sure to use appropriate size duct branches to maintain proper feed throughout the ducting system.
- System control should be placed remotely from the dehumidifier in a central location.
- Intake and exhaust ducting should have a minimum of 4 feet from the unit before any turns and a maximum of 25 feet for total run.

Optional duct kits are available from the factory: Exhaust Kit #601545 and Intake Kit #601544. See figures below for plenum dimensions and duct diameters. Alternatively, licensed contractors can fabricate duct plenums and reference figures below for safe fastener mounting points.

⚠ CAUTION

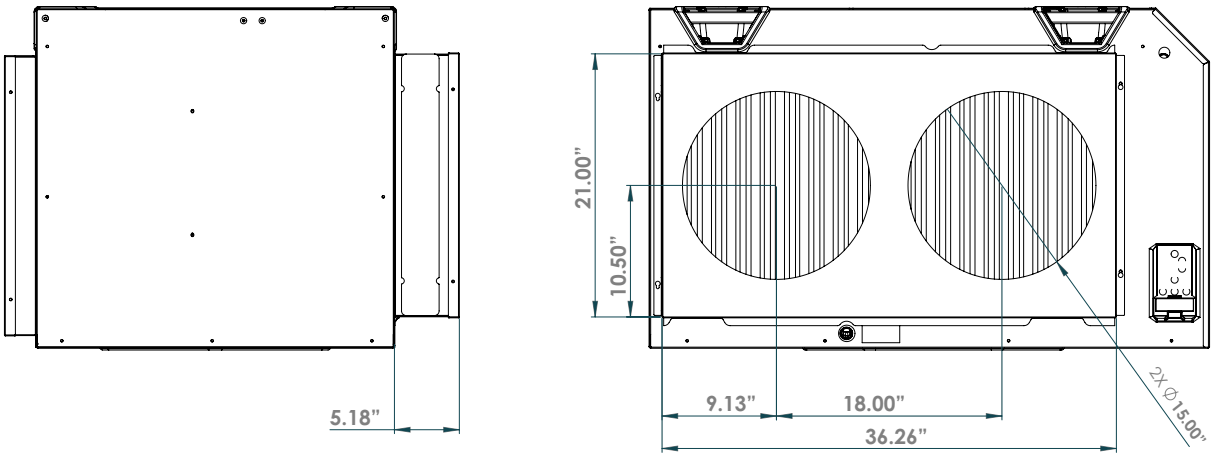
Model RQ-21 is intended for use in statics under .25"WG (Model RQ-31 under .5"WG).

⚠ CAUTION

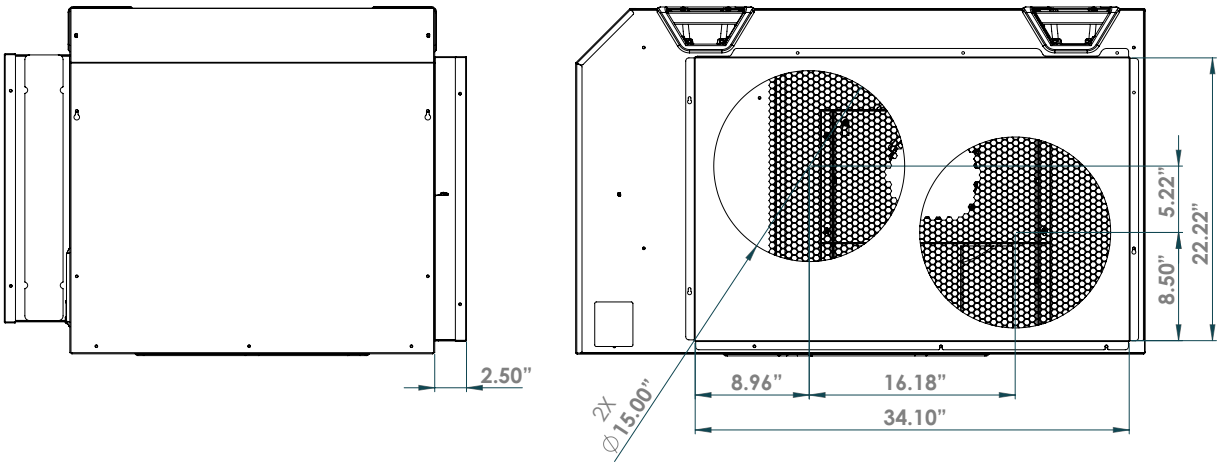
Do not connect with a static pressure greater than +.25"wg for the Model RQ-21 (Model RQ-31 greater than +.5"WG). Contact technical support for additional details.

FIGURE 16-1: MODEL RQ-21 AND RQ-31 DUCT LOCATION

Intake Duct Location



Supply Duct Location

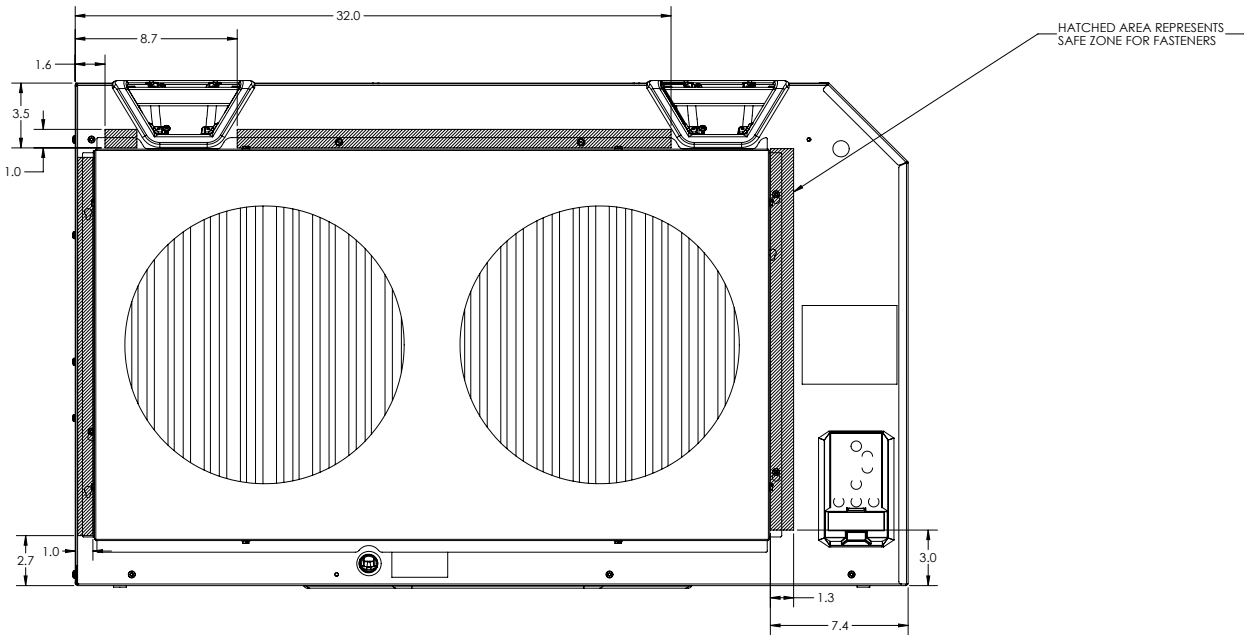


Model RQ-21 and RQ-31 supply and return duct kit

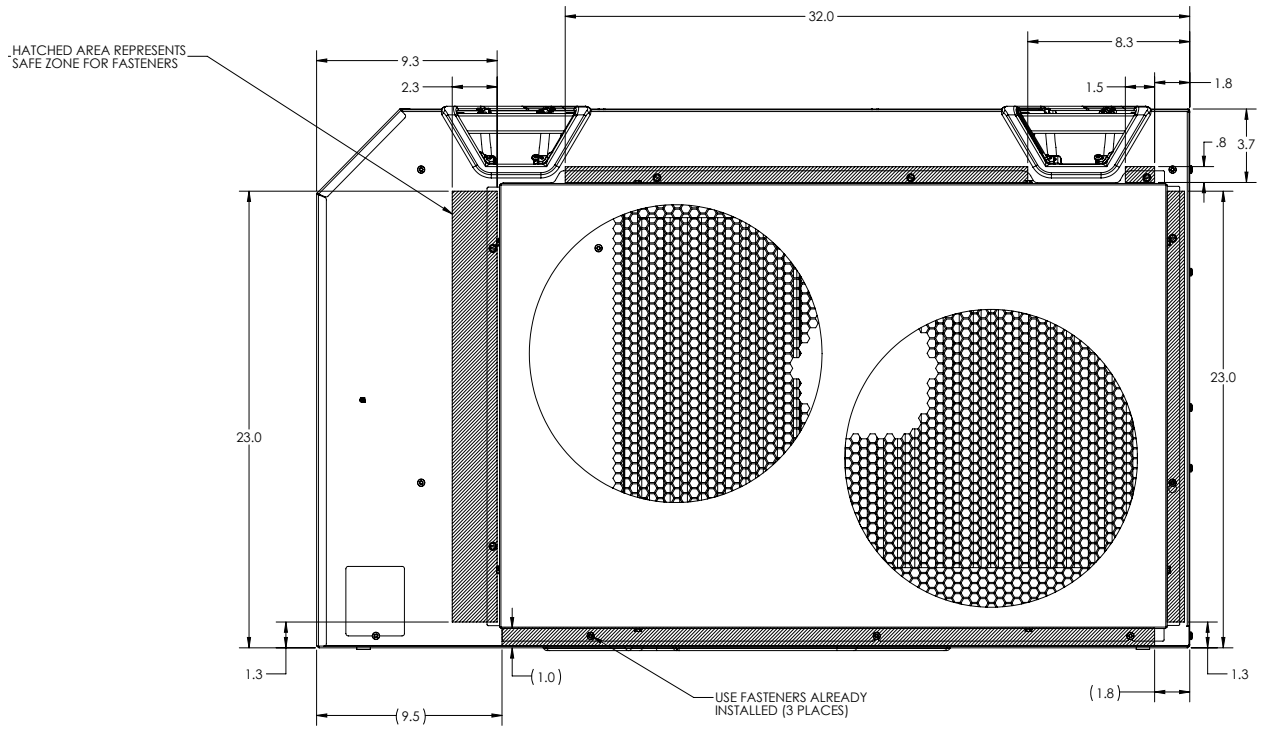
If owner chooses to have a licensed HVAC contractor fabricate a duct kit, please follow the drawing below for safe zones for self tapping screws.

FIGURE 17-1: MODEL RQ-21 AND RQ-31 DUCT LOCATION

Intake Side

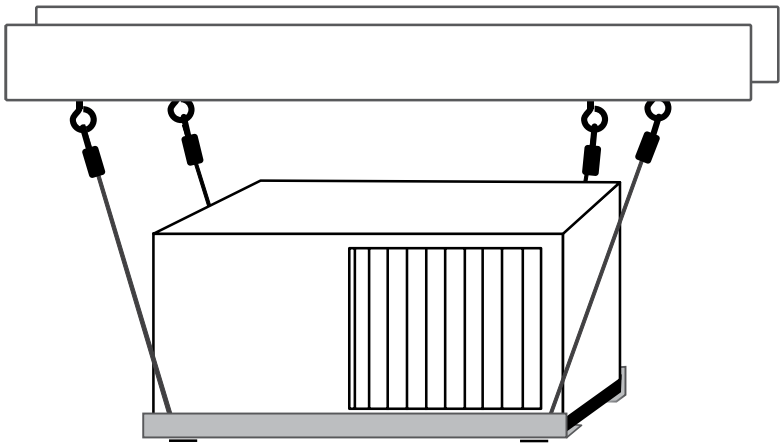


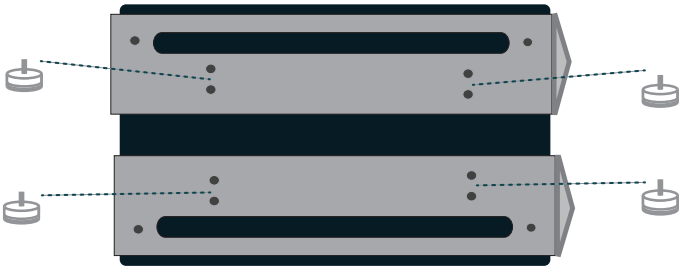
Exhaust Side



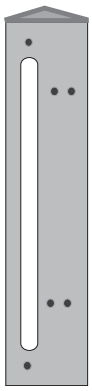
Hanging the dehumidifier (Model RQ-4)

FIGURE 18-1: HANGING THE MODEL RQ-4 DEHUMIDIFIER





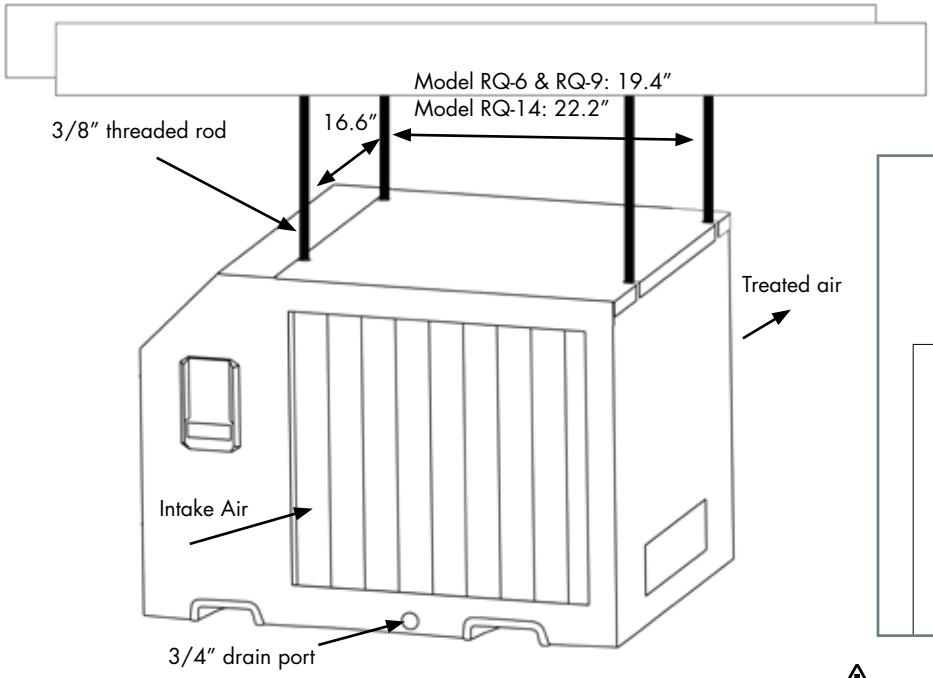
Bottom view of dehumidifier and two brackets (not included). See Replacement Parts on page 52. NOTE: LEVELING FEET HOLD BRACKETS IN PLACE

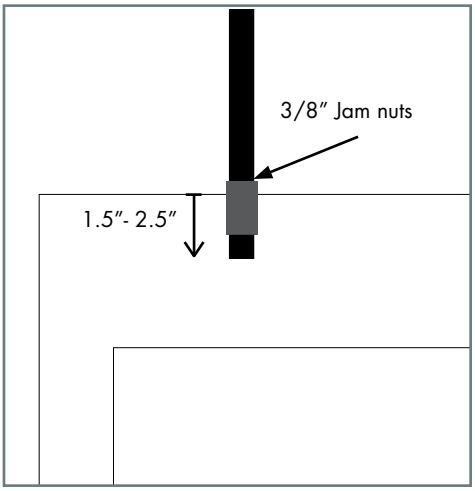


Hang Bracket

Hanging the dehumidifier (Model RQ-6, RQ-9, and RQ-14)

FIGURE 19-1: HANGING THE MODEL RQ-6, RQ-9 AND RQ-14 DEHUMIDIFIER



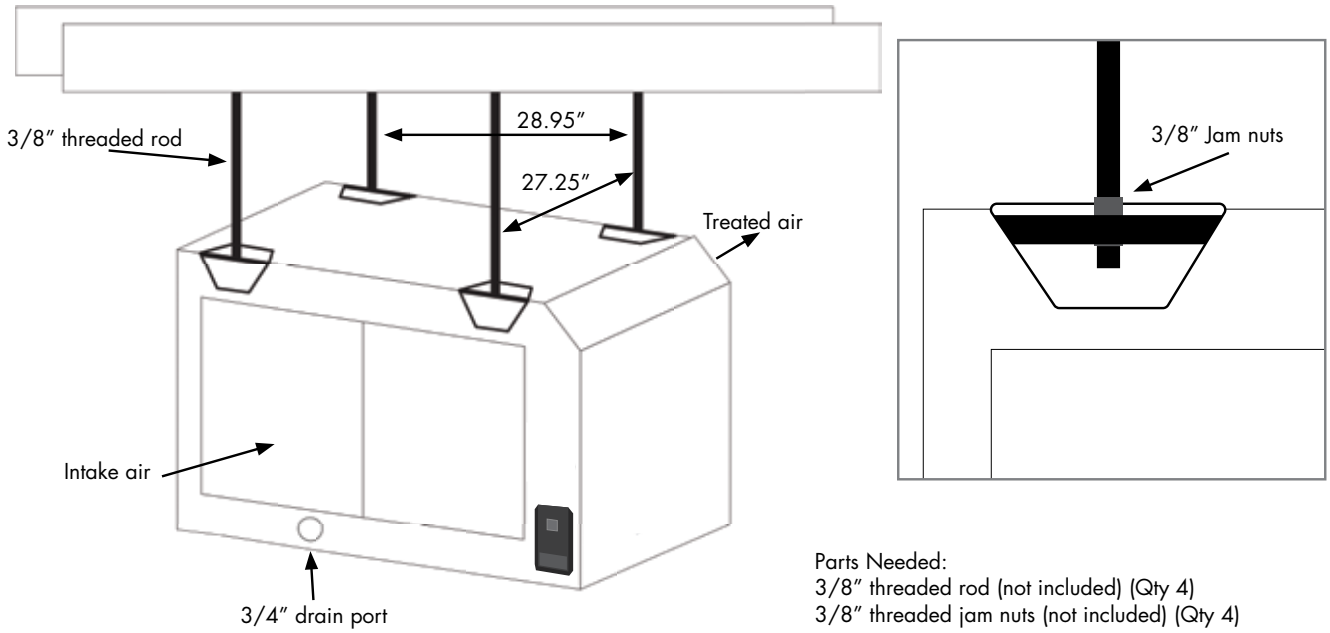


Parts Needed:
3/8" threaded rod (not included) (Qty 4)
3/8" threaded jam nuts (not included) (Qty 4)

⚠ Threaded rods should be engaged no less than 1.5" into machine, and no greater than 2.5". Damage to the machine may occur if installed too far.

Hanging the dehumidifier (Models RQ-21 and RQ-31)

FIGURE 20-1: HANGING THE MODEL RQ-21 AND RQ-31 DEHUMIDIFIER



Parts Needed:
3/8″ threaded rod (not included) (Qty 4)
3/8″ threaded jam nuts (not included) (Qty 4)

⚠ WARNING

Check the supporting structure to be used to verify that it has sufficient load carrying capacity to support the weight of the unit. Suspend the unit only from the threaded nut retainers. Do NOT suspend from the cabinet.

⚠ CAUTION

Recommended maximum hanger rod is 6 feet (1.8m).

⚠ WARNING

Hanging installation must meet all state and local codes.

⚠ WARNING

Installation should be done by a qualified agency in accordance with these instructions. The qualified service agency installing this high efficiency refrigeration system is responsible for the installation.

Electrical requirements

Install the remote humidistat in a central area of the structure where it will sense the relative humidity of the structure accurately. Do not install the humidistat where it may not accurately sense the relative humidity such as near HVAC supply registers, near exterior doors, or near a pool or spa. The installer must supply the wiring between the Evair dehumidifier and the humidistat. Be sure to safely route the control wiring to prevent damage during installation. Be careful not to cross the wires when connecting the Evair dehumidifier and the remote humidistat.

⚠ CAUTION

Always disconnect the Evair Dehumidifier from a power source when working with the high voltage control wires.

The remote controls of the Evair dehumidifier are powered by a low voltage circuit (24 VAC) and must NEVER contact or be connected to a high voltage circuit. The control terminals and remote control are labeled and numbered to prevent confusion. Be sure to consult the electrical schematic in this manual or inside the access panel of the dehumidifier before making the control connections. The amp draw under normal operating conditions is listed in Table 6-1.

⚠ WARNING

ELECTRICAL SHOCK HAZARD
Electrical power must be present to perform some tests. These tests should be performed by a qualified service person.

LOW VOLTAGE CONNECTIONS (MODELS RQ-4, RQ-6, RQ-9, RQ-14, AND RQ-21)

The controls of the dehumidifier are powered by a low voltage circuit (24VAC) and must NEVER contact or be connected to a high voltage circuit. The control terminals are labeled to prevent confusion.

⚠ WARNING

The On/Off switch affects only the 24VAC circuit. Main power stays live even when this switch is off.

HIGH VOLTAGE CONNECTIONS (MODEL RQ-31)

The Model RQ-31 dehumidifier must be wired directly to the electrical service. The current draw under normal operating conditions is listed in Table 6-1.

Information required for proper electrical service installation and overcurrent protection may be found on the dehumidifier nameplate. The unit power switch is a disconnect switch. Route power and ground wires through the electrical knockout hole. Electrical input power wiring must comply with all national, state, and local electrical codes. Make electrical connections according to the wiring diagram provided in this manual and inside the access panel of the Dehumidifier. A ground fault interrupter protected circuit is recommended.

⚠ WARNING

Damaged power cords can only be replaced with one by the unit manufacturer.

Model RQ-4 wiring diagram

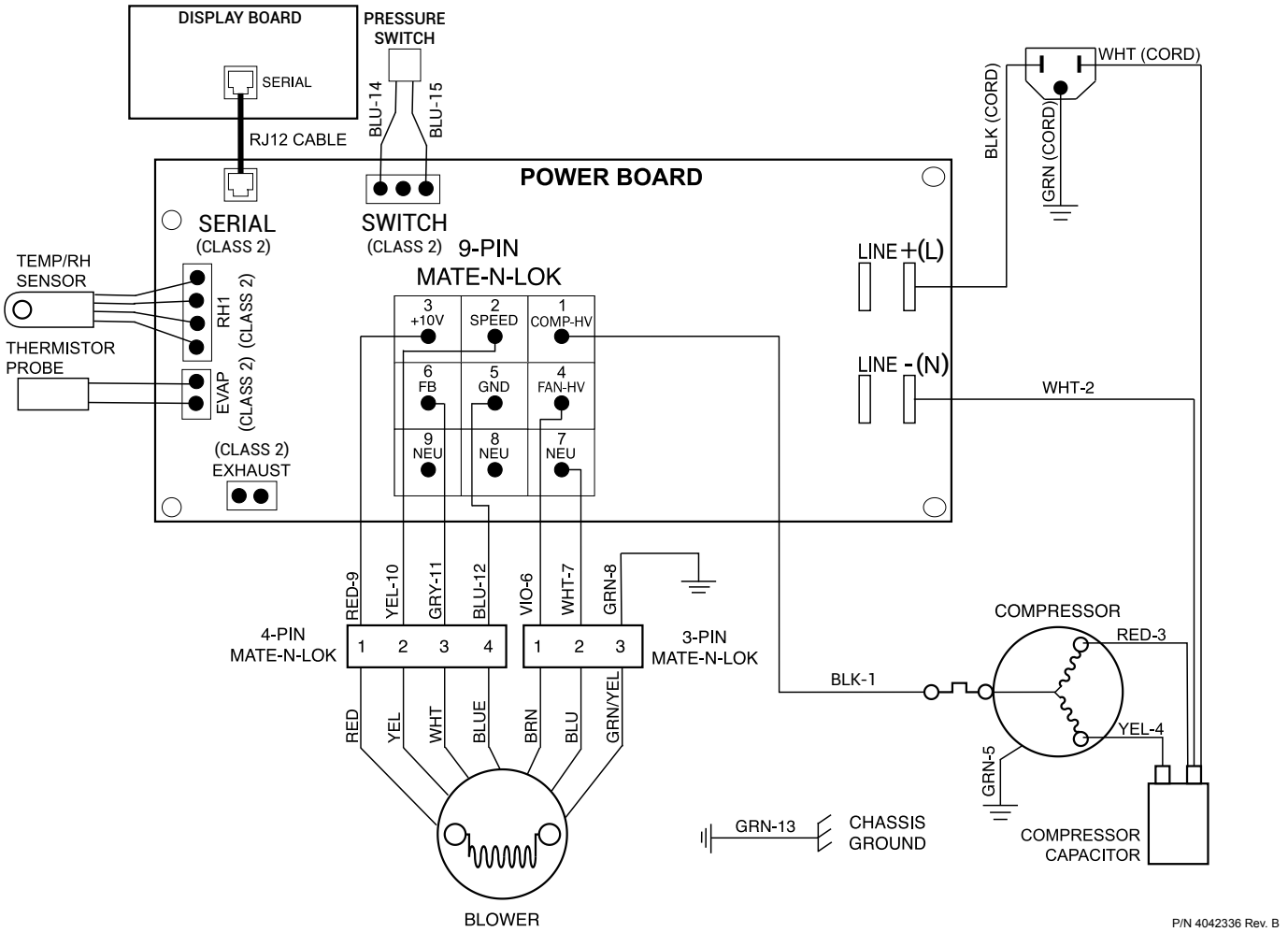
The Model RQ-4 dehumidifier plugs into a common grounded 115VAC outlet. The dehumidifier draws 5.0 Amps at 80 F and 60% RH. Locate the dehumidifier in an area where the cord's length (9') easily reaches a 115 VAC electrical outlet with a minimum of 15 Amp circuit capacity. If used in an area that may become wet, a GFCI protected circuit is recommended. The unit should not be used in areas prone to flooding. Consult local electrical codes for any further information.

An optional remote humidistat is available for use with the Evair dehumidifier and is to be located remotely from the dehumidifier.

⚠ WARNING

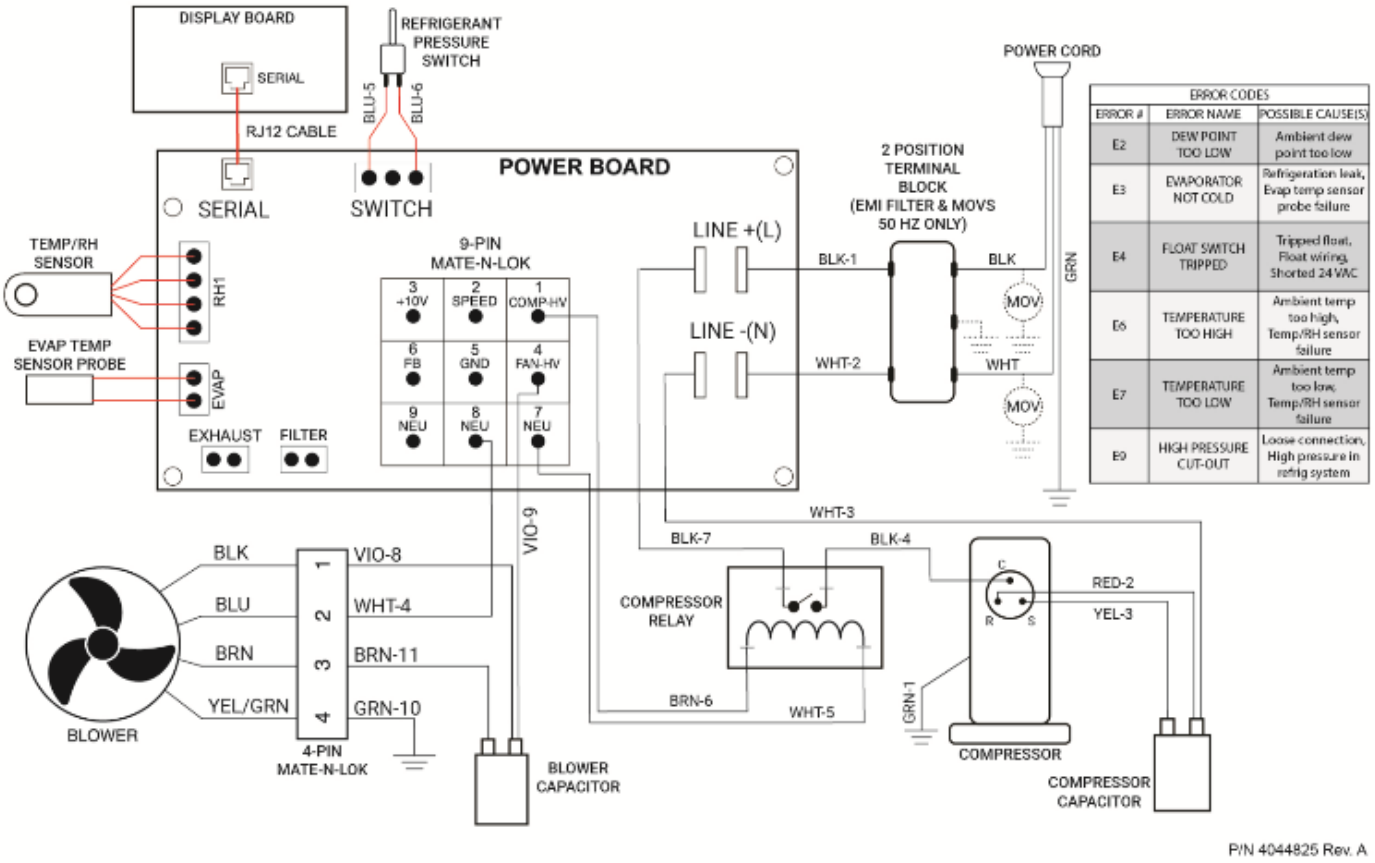
ELECTRICAL SHOCK HAZARD
Electrical power must be present to perform some tests. These tests should be performed by a qualified service person.

FIGURE 22-1: MODEL RQ-4 WIRING SCHEMATIC



Model RQ-6 and RQ-9 wiring diagram

FIGURE 23-1: MODEL RQ-6 AND RQ-9 WIRING SCHEMATIC



ERROR CODES		
ERROR #	ERROR NAME	POSSIBLE CAUSE(S)
E2	DEW POINT TOO LOW	Ambient dew point too low
E3	EVAPORATOR NOT COLD	Refrigeration leak, Evap temp sensor probe failure
E4	FLOAT SWITCH TRIPPED	Tripped float, Float wiring, Shorted 24 VAC
E6	TEMPERATURE TOO HIGH	Ambient temp too high, Temp/RH sensor failure
E7	TEMPERATURE TOO LOW	Ambient temp too low, Temp/RH sensor failure
E9	HIGH PRESSURE CUT-OUT	Loose connection, High pressure in refrig system

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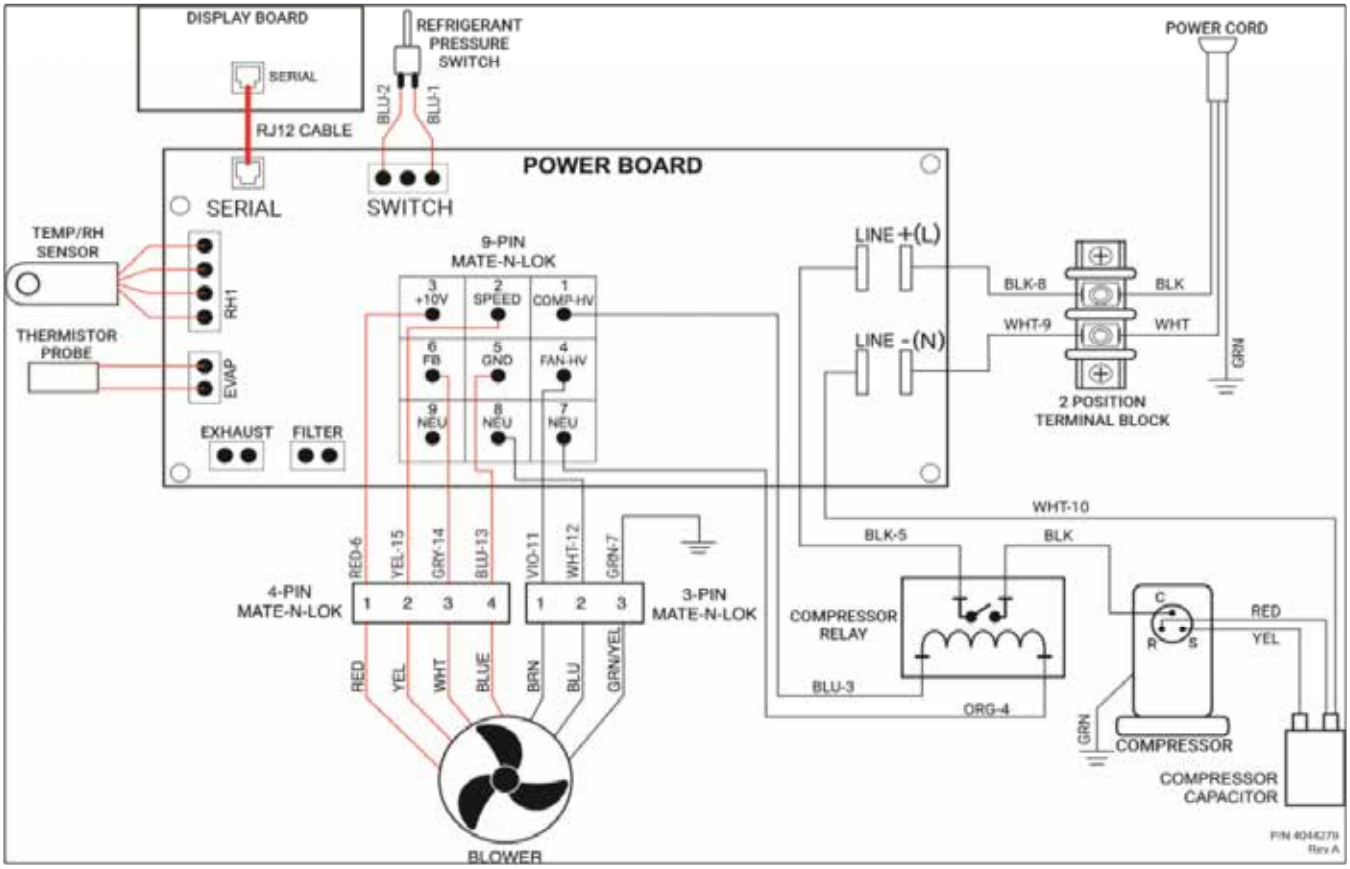
WARNING

ELECTRICAL SHOCK HAZARD
Electrical power must be present to perform some tests. These tests should be performed by a qualified service person.

Model RQ-14 wiring diagram

FIGURE 24-1: MODEL RQ-14 WIRING SCHEMATIC

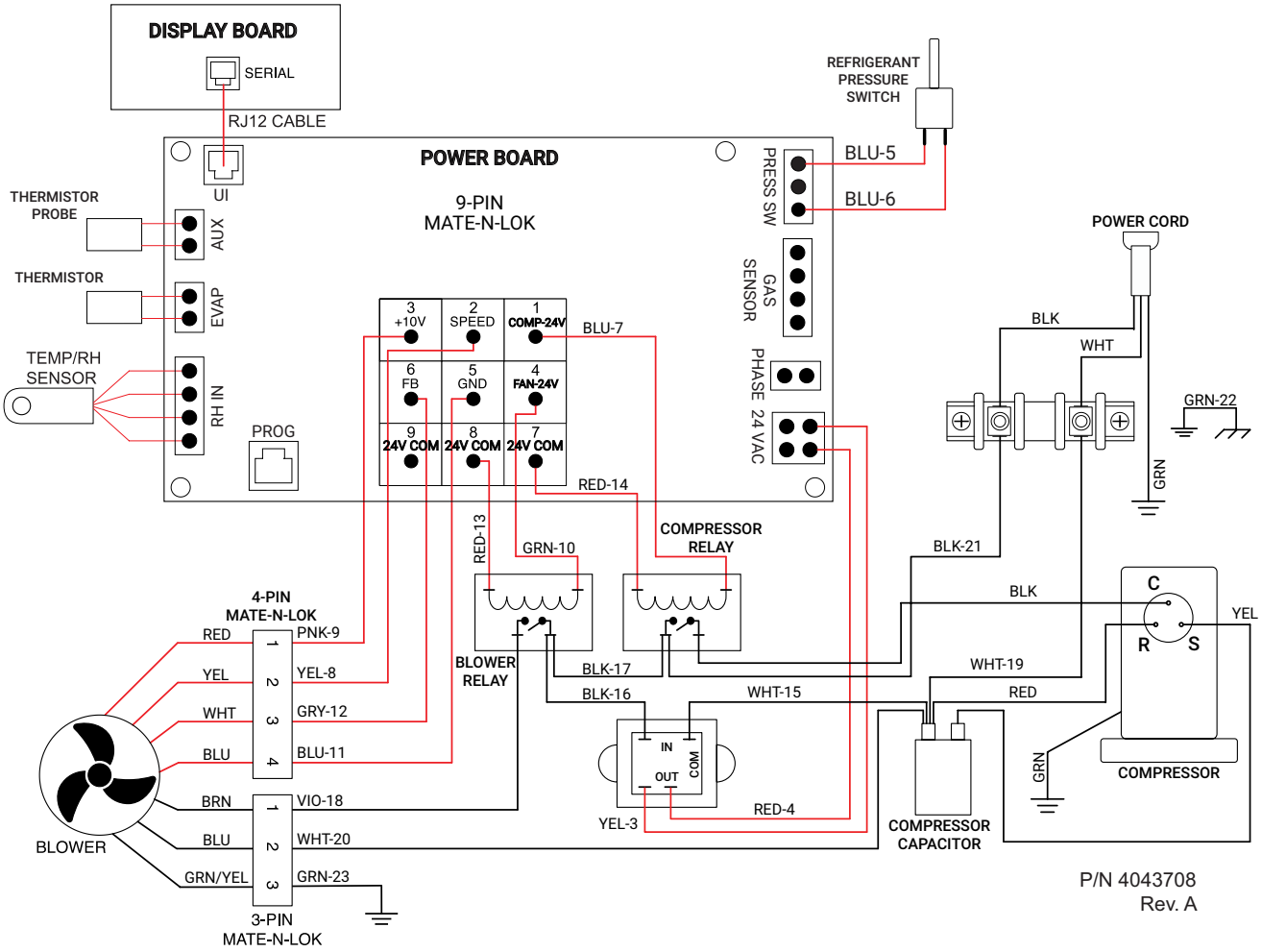


⚠ WARNING

ELECTRICAL SHOCK HAZARD
Electrical power must be present to perform some tests. These tests should be performed by a qualified service person.

Model RQ-21 wiring diagram

FIGURE 25-1: MODEL RQ-21 WIRING SCHEMATIC



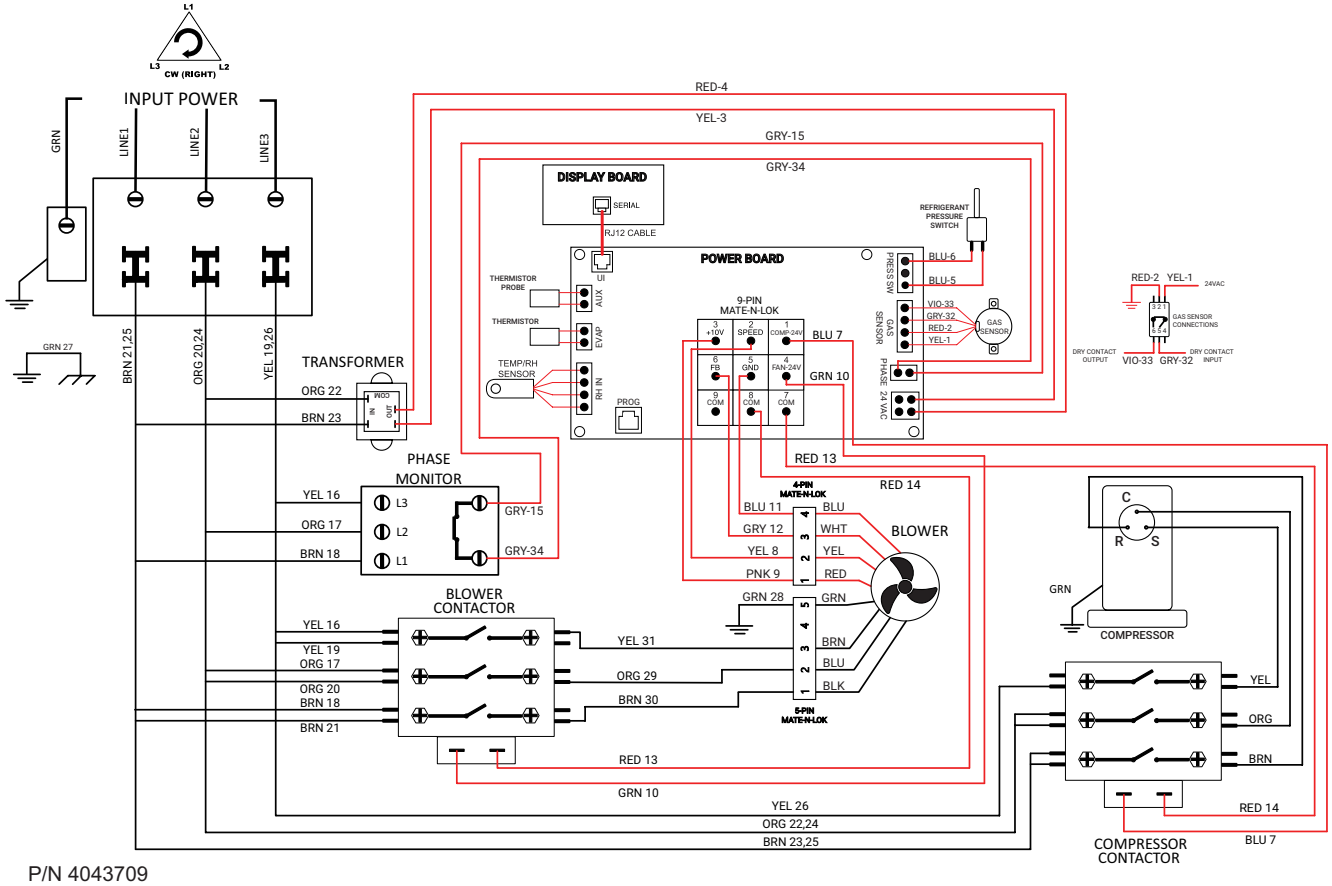
WARNING

ELECTRICAL SHOCK HAZARD

Electrical power must be present to perform some tests. These tests should be performed by a qualified service person.

Model RQ-31 wiring diagram

FIGURE 26-1: MODEL RQ-31 WIRING SCHEMATIC



P/N 4043709
Rev. A

WARNING

ELECTRICAL SHOCK HAZARD

Electrical power must be present to perform some tests. These tests should be performed by a qualified service person.

Hard-wiring instructions (Models RQ-6, RQ-9, RQ-14, and RQ-21)

TOOLS REQUIRED:

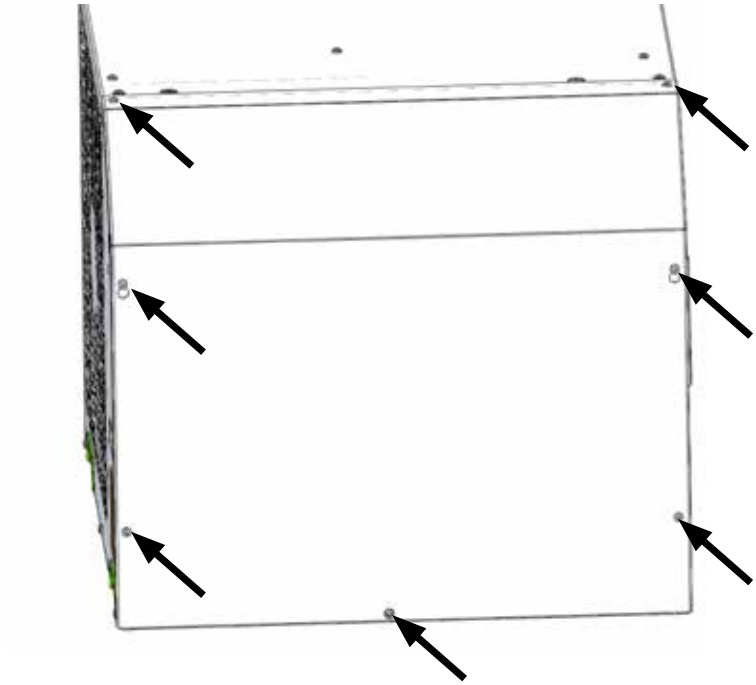
- T25 Torx Driver
- 11/32" Driver

INSTRUCTIONS

Following all local and national electrical codes and standards, route electrical service to the location that the dehumidifier will be installed. A field-installed disconnect is required when hard-wiring the Model RQ-6, RQ-9, RQ-14, and RQ21 dehumidifier.

1. Remove 7 screws on access panel using T25 Torx driver, remove panel. (See Figure 27-1).

FIGURE 27-1: ACCESS PANEL



2. Disconnect POWER CORD wire from terminal. (See Figure 28-1).
3. Use 11/32" driver to remove nut from ground stud and disconnect POWER CORD wire from ground stud.
4. Remove the 2 screws holding the cord retention bracket using T25 Torx driver and remove retention bracket (see Figure 28-2).
5. Remove power cord and bushing.
6. Route incoming power service wires through 7/8" hole and secure using clamps intended for the conduit or cable.

⚠ WARNING

Servicing the Evair Dehumidifier, with its high pressure refrigerant system and high voltage circuitry presents a health hazard which could result in death, serious bodily injury, and/or property damage. Only qualified service people should service this unit.

Hard-wiring instructions (Models RQ-6, RQ-9, RQ-14, and RQ-21)

FIGURE 28-1: DISCONNECT POWER CORD

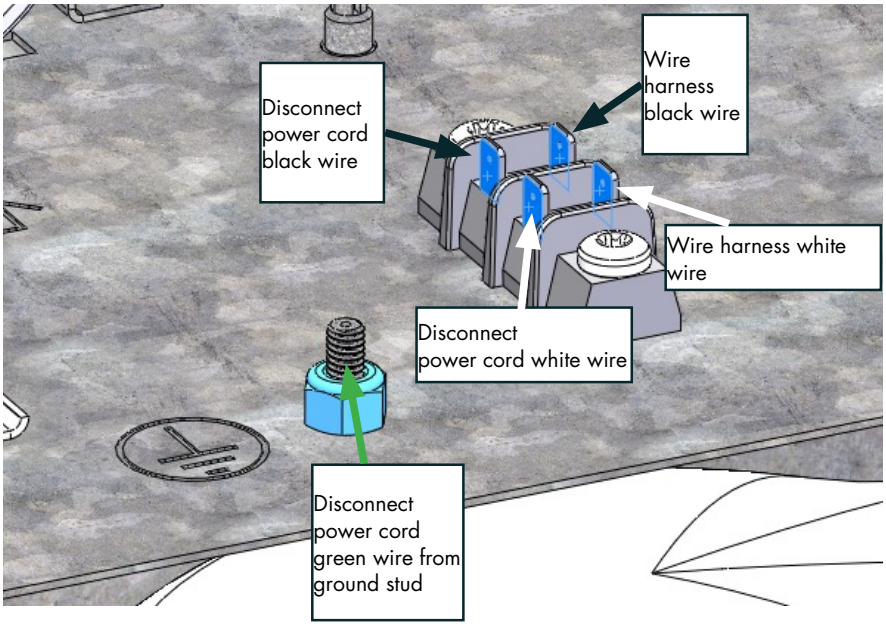
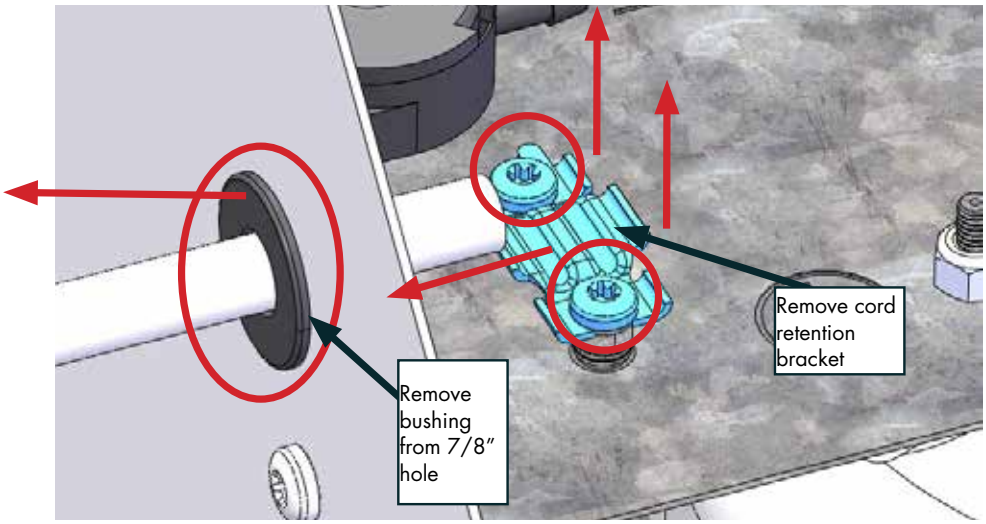


FIGURE 28-2: REMOVE POWER CORD



Hard-wiring instructions (Models RQ-6, RQ-9, RQ-14, and RQ-21)

Hardwire kit with jumper wires can be found in the pack part kit.

1. Connect BLACK and WHITE jumper wires to terminal block as shown (see Figure 29-1).
2. Place GREEN jumper wire ring terminal on ground stud and use 11/32" driver to secure nut to stud.
3. Attach incoming service LINE 1 wire to BLACK jumper wire with the provided wirenut (see Figure 29-2).
4. Attach incoming service LINE 2 wire to WHITE jumper wire with the provided wirenut.
5. Attach incoming service GROUND wire to GREEN jumper wire with the provided wirenut.
6. Replace access panel using T25 Torx driver to secure 7 screws. See Figure 27-1.

FIGURE 29-1: JUMPER WIRE KIT

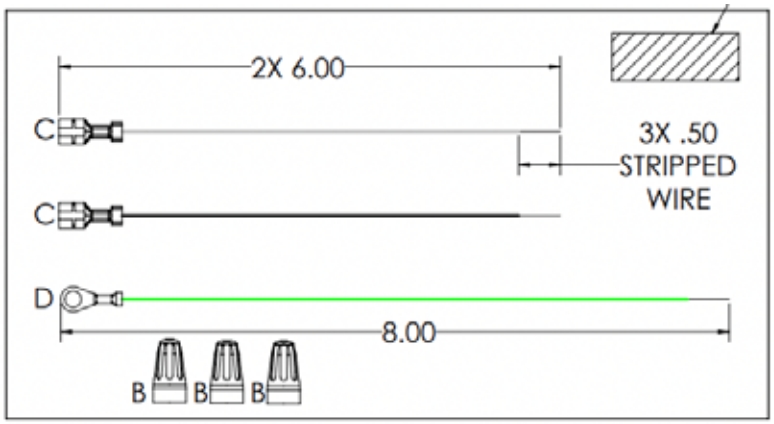
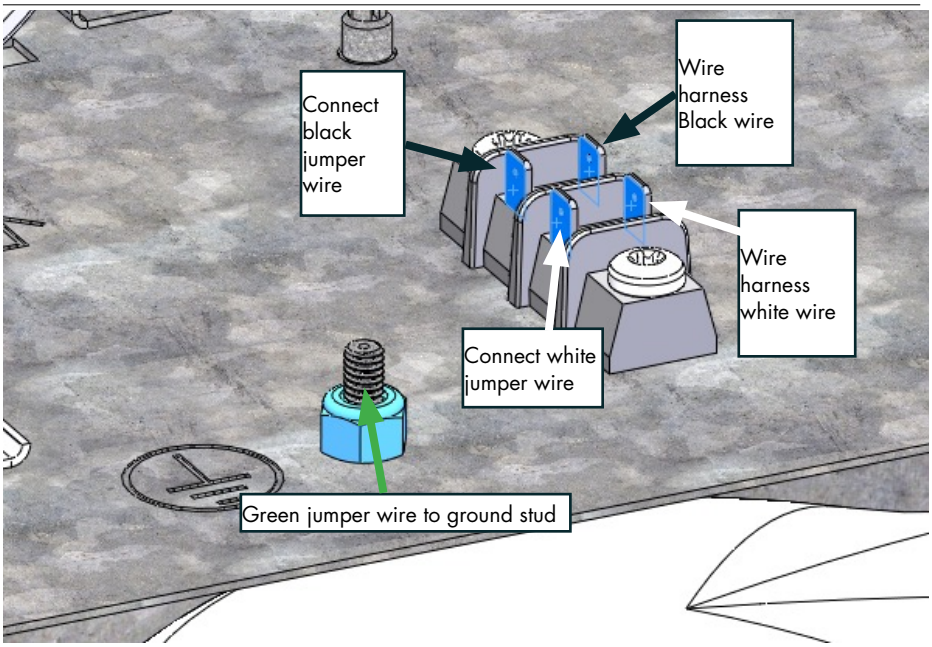


FIGURE 29-2: CONNECTING WIRES



Alert light

ALERT LIGHT WIRING

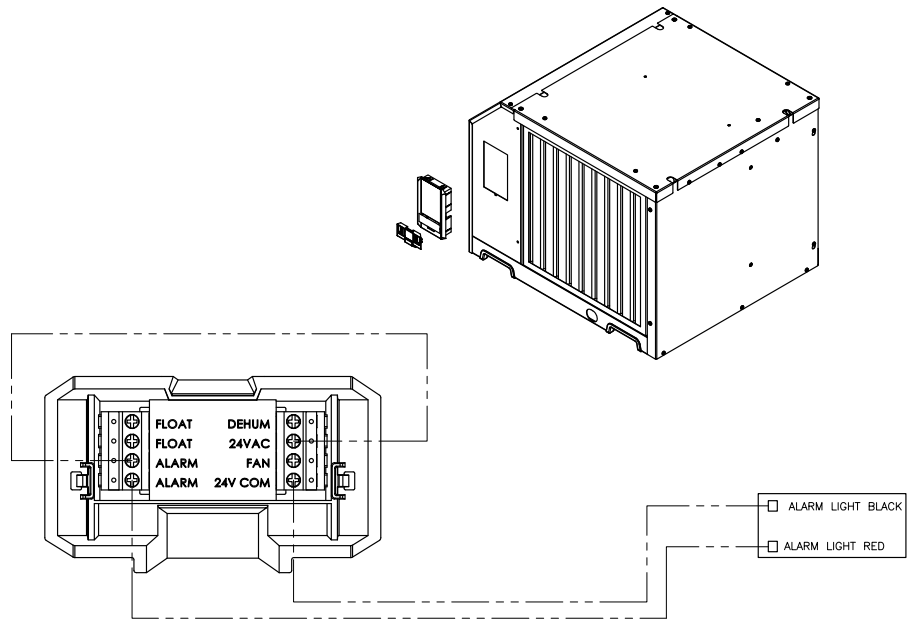
1. Remove the wire access cover.
2. Connect Alarm Pin 1 to 24VAC with a wire jumper.
3. Connect the Alarm Light RED wire to the Alarm Pin 2.
4. Connect the Alarm Light BLACK wire to the common GND pin.
5. Replace the wire access cover.

Note: The Alarm terminals switch when the unit has a malfunction and are factory set to “normally closed”, but can be changed to “normally open”.

⚠ CAUTION

Do not touch the alert light; it may be hot.

FIGURE 30-1: ALERT LIGHT WIRING



OM-8366

Piping requirements

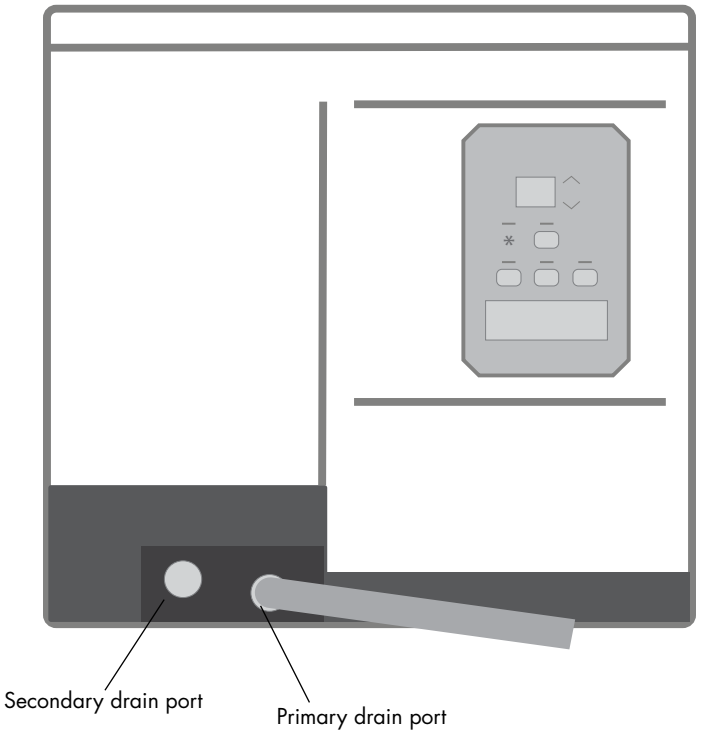
CONDENSATE WATER REMOVAL (MODEL RQ-4)

NOTE: This unit is positively pressured and using a p-trap is not recommended.

OUTPUT TO DRAIN OR BUCKET

1. If the provided drain hose does not reach your drain, rigid PVC tubing is readily available from your local hardware store. Be sure the extension is at a downward slope to the drain.
2. An optional condensate pump kit may be installed if lift is required to remove condensate. To order, contact your local dealer or visit our website at www.dristeem.com.

FIGURE 31-1: END VIEW OF THE EVAIR DEHUMIDIFIER MODEL RQ-4



Piping requirements

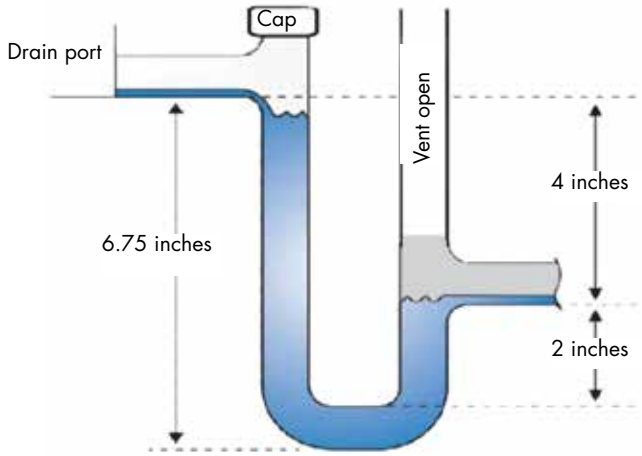
CONDENSATE WATER REMOVAL (MODELS RQ-6, RQ-9, RQ-14, RQ-21 AND RQ-31)

Condensate drains by gravity via the drain port. Use 3/4" male NPT PVC pipe. An optional condensate pump kit may be installed if a lift is required to dispose of the condensate.

⚠ CAUTION

For proper drainage, the unit must be mounted so the drain outlet is at least 6.75" above the floor drain, and must be fully supported under the base.

FIGURE 32-1: DRAIN TRAP CONFIGURATION



VENT

- Place vent after the trap.
- Vent should be open.
- Height of vent should be higher than drain outlet.

CAP

- A clean out can be placed before trap but must be sealed with a cap.

DRAIN LINE

- Drain line should go in a downward slope to the drain.
- 1/4" drop per foot.

Control options

The Evair Dehumidifier can be controlled by its onboard humidistat or with an external control using its low voltage terminal block.

FIGURE 33-1: ONBOARD HUMIDISTAT

ONBOARD HUMIDISTAT

(See Figure 33-1 and Table 34-1)

- **Off Mode:** Fan, Compressor, Display and all LEDs are off
- **To Turn Unit On:** Press the power button
- **On Mode:** Display is on and shows the set point (Initial set point: 55% RH)
- **To Change Set Point:**
  - Press the up or down arrow once, the 2-digit display will begin to blink.
  - Adjust to desired RH. Each push of the button will change the SP 1% RH.
  - After 6 seconds without a button being pushed the number showing will become the new SP.

EXTERNAL HUMIDISTATS

See DriSteem Humidistat IOM.

- TRI2 HUMIDISTAT DEHUM BACNET ROOM ON/OFF
- TRI2 HUMIDISTAT DEHUM BACNET DUCT ON/OFF
- TCI-W11-U-H-W24 HUMIDISTAT DEHUM ROOM
- TCI-W11-U-W26 HUMIDISTAT DEHUM DUCT

RQ SERIES TERMINAL BLOCK CONTROL OPERATION

FIGURE 33-2: TERMINAL BLOCK

Table 33-1:
RQ series terminal block control operations

Terminal Block	Description
DEHUM	Dehumidification (Fan and Compressor) Control Input
24VAC	Transformer High Side Output to External Control
FAN	Fan Control Input
24V COM	24VAC Power Transformer Neutral Side Output to External Control
FLOAT	External Low Voltage Float Switch or Water Sensor Input (Use Normally Closed Switch)
FLOAT	
ALARM	Normally Closed Relay Output - Indicates when dehumidifier is in an alarm state
ALARM	
NOTE: Alarm terminals are used to interface with a remote alarm or building automation system. The terminals switch when the unit has a malfunction and are factory set to "normally closed" but can be changed to "normally open".	

Control options: Onboard humidistat

Table 34-1: Onboard humidistat indicators	
	• The light over the snowflake will light up when defrost is occurring (ice is detected on coils). • The fan will be on, and the compressor will be off during defrost.
	• Filter reset button will light up after the fan has been running for 2,000 hours. • After changing the filter, press and hold the filter reset button to reset the 2,000-hour timer. Light flashes while button is held.
	• Press the Dark Mode button to activate Dark Mode. • Once Dark Mode is activated, lights will remain on for 20 seconds before the unit's humidistat will go dark. Dark Mode light will flash for 3 seconds before unit goes dark. • Unit will temporarily leave dark mode when any button is pushed and will go dark 20 seconds after the last button is pushed. • To turn off Dark Mode, press the Dark Mode button and ensure light above Dark Mode button is off. • This mode is for applications where the user would like the unit to operate without emitting any light.

	**Pressing the Fan button changes the fan mode:**
	• Changes the fan mode from Auto: only run fan with dehumidifying (Au) to Always On: fan runs continuously to circulate air (On)
	Changing Max Fan Speed
	The unit is factory set to the most efficient operating speed. When the unit is ducted, increase the fan speed to ensure no loss in performance. This is done by pressing and holding both arrow keys for > 3 seconds. This will enter the service menu and display "Er" (Errors).
	• Use the arrow down arrow key to navigate to the "SF" (Set Fan) menu. Press the FILTER RESET button to set the fan speed. The current speed will be flashing. Use the up and down arrow to adjust the fan speed. When desired fan speed is displayed press FILTER RESET to save the setting, the display will stop flashing. Then press the FAN button twice to exit the menu.
	  • Default: 55
	  • Ducted up to 0.4" static resistance: 70
	  • Max: 99

	• When the Terminal Control button is pressed, the display will show "tc". • The Terminal Control button is used to activate the "DEHUM" input on the terminal block. • This must be activated when an external control is used to control RH. When Terminal Control is active, the internal RH sensor is disabled.

Maintenance

STANDARD AIR FILTER

The Evair Dehumidifier ships with a standard MERV 13 efficient pleated fabric filter. This filter should be checked at a minimum every six months. Operating the unit with a dirty filter will reduce dehumidifier capacity and efficiency and may cause the compressor to cycle off and on unnecessarily on the defrost control.

To access the air filter, remove the filter access panel from the end of the Evair Dehumidifier. The filter should be readily visible and can be removed by pulling it straight out of the Evair Dehumidifier.

We recommend changing the filter at least every 6 months. For agriculture we recommend changing the filter with every grow cycle.

⚠ WARNING

Do not operate the unit without the filter or with a less effective filter. The heat exchange coils inside the unit could become clogged and require disassembly to clean. Filter non-compliance invalidates the product warranty.

IMPELLER FAN OILING

The impeller fan motor is factory lubricated for many years or normal operation, and no further oiling is required.

⚠ WARNING

Servicing the Evair Dehumidifier with its high pressure refrigerant system and high voltage circuitry presents a health hazard which could result in death, serious bodily injury, and/or property damage. Only qualified service people should service this unit.

WARRANTY

A warranty certificate has been enclosed with this unit; read it before any repair is initiated. If a warranty repair is required, call the factory first at 1-800-328-4447 for warranty claim authorization and technical assistance.

TECHNICAL DESCRIPTION

The Evair Dehumidifier uses a refrigeration system similar to an air conditioner's to remove heat and moisture from incoming air, and add heat to the air that is discharged.

Hot, high-pressure refrigerant gas is routed from the compressor to the condenser coil. The refrigerant is cooled and condensed by giving up its heat to the air that is about to be discharged from the unit. The refrigerant liquid then passes through a filter/drier and expansion device which causes the refrigerant pressure and temperature to drop. It next enters the evaporator coil where it absorbs heat from the incoming air and evaporates. The evaporator operates in a flooded condition, which means that all the evaporator tubes contain liquid refrigerant during normal operation. A flooded evaporator should maintain nearly constant pressure and temperature across the entire coil, from inlet to outlet.

The compressor collects the cool refrigerant gas and compresses it to a high pressure and temperature to repeat the process.

Service

SERVICE PERSONNEL

Only qualified HVAC or electrical contractors are allowed to conduct maintenance, service and/or repair operations on Evair Dehumidifiers. Examples include but are not limited to breaking into the refrigerating circuit, opening of sealed components, and/or opening of ventilated enclosures.

Prior to beginning work on the Evair Dehumidifiers, safety checks are necessary to ensure that the risk of ignition is minimized.

- For repair to the REFRIGERATING SYSTEM, a qualified contractor should first establish a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed
- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.
- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.
- If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.
- No person carrying out work in relation to a REFRIGERATING SYSTEM which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. “No Smoking” signs shall be displayed.
- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. 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 FOLLOWING CHECKS SHALL BE APPLIED TO INSTALLATIONS USING FLAMMABLE REFRIGERANTS:

- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times DriSteem’s maintenance and service guidelines shall be followed. If in doubt, consult DriSteem’s technical department for assistance.
- The actual REFRIGERANT CHARGE is in accordance with the room size within which the refrigerant containing parts are installed;

Service

- The ventilation machinery and outlets are operating adequately and are not obstructed;
- Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
- Dehumidifiers are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

CHECKS TO ELECTRICAL DEVICES

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

- Initial safety checks shall include:
  - that 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 while charging, recovering or purging the system;
  - that there is continuity of earth bonding.

REPAIRS TO SEALED COMPONENTS

- During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.
- Ensure that the equipment is mounted securely.
- Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres
- Replacement parts shall be in accordance with DriSteem specifications.

Service

REPAIRS TO INTRINSICALLY SAFE COMPONENTS

- 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 are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.
- Replace components only with parts specified by DriSteem. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.
- NOTE The use of silicon sealant can inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.
- 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 take into account the effects of aging or continual vibration from sources such as compressors or fans.

DETECTION OF FLAMMABLE REFRIGERANTS

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.

- The following leak detection methods are deemed acceptable for all refrigerant systems.
    - Electronic leak detectors may be used to detect refrigerant leaks but, in the case of FLAMMABLE REFRIGERANTS, the sensitivity may not be adequate, or may need re-calibration. (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 25% LFL of the refrigerant and shall be calibrated to 454B.
    - 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 pipe.
    - NOTE: Examples of leak detection fluids are:
        - bubble method
        - fluorescent method agents.
        - If a leak is suspected, all open flames shall be removed/ extinguished.

Service

If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Removal of refrigerant shall be according to Clause DD.9 of 60335-2-40.

REFRIGERANT REMOVAL AND EVACUATION

When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used. However, for FLAMMABLE REFRIGERANTS it is important that best practice is followed since flammability is a consideration. The following procedure shall be adhered to:

- remove refrigerant;
- purge the circuit with inert gas (optional for A2L);
- evacuate (optional for A2L);
- purge with inert gas (optional for A2L);
- open the circuit by cutting or brazing.
- The REFRIGERANT CHARGE shall be recovered into the correct recovery cylinders. Compressed air or oxygen shall not be used for purging refrigerant systems.
- Ensure that the outlet for the vacuum pump is not close to any POTENTIAL IGNITION SOURCES and that ventilation is available.

CHARGING PROCEDURES

In addition to conventional charging procedures, the following requirements shall be followed:

- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
- Cylinders shall be kept in an appropriate position according to the instructions.
- Ensure that the REFRIGERATING SYSTEM is grounded prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care shall be taken not to overfill the REFRIGERATING SYSTEM.
- Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its details. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task commences.

1. Become familiar with the equipment and its operation.
2. Isolate system electrically.
3. Before attempting the procedure, ensure that:
   - mechanical handling equipment is available, if required, for handling refrigerant cylinders;
   - all personal protective equipment is available and being used correctly;
   - the recovery process is supervised at all times by a competent person;
   - recovery equipment and cylinders conform to the appropriate standards.
4. Pump down refrigerant system, if possible.
5. If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
6. Make sure that cylinder is situated on the scales before recovery takes place.
7. Start the recovery machine and operate in accordance with instructions.
8. Do not overfill cylinders (no more than 80 % volume liquid charge).
9. Do not exceed the maximum working pressure of the cylinder, even temporarily.
10. When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
11. Recovered refrigerant shall not be charged into another REFRIGERATING SYSTEM unless it has been cleaned and checked.

Decommissioning

LABELING DECOMMISSION MACHINES

Equipment shall be labeled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. For appliances containing FLAMMABLE REFRIGERANTS, ensure that there are labels on the equipment stating the equipment contains FLAMMABLE REFRIGERANT.

REFRIGERANT RECOVERY

When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labeled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, FLAMMABLE REFRIGERANTS. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that FLAMMABLE REFRIGERANT does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

Error codes

A warranty certificate has been enclosed with this unit; read it before any repair is initiated. If a warranty repair is required, call the factory first at 1-800-328-4447 for warranty claim authorization and technical assistance.

Table 42-1:
Evair dehumidifier error codes

Code	Name	Possible Cause(s)	Troubleshooting	Service needed
Error code "E1"	RH Sensor Error	1. Broken sensor 2. Unplugged sensor	• Dehumidifier fan will circulate air for 1 minute. • Dehumidifier compressor will activate for 15 minutes. • This process will repeat every 15 minutes.	No Displays E1, but keeps running.
Error code "E2"	Low dewpoint; 24v short	1. Dewpoint below 40°F 2. Off calibration Humidity/Temp sensor	• Dehumidifier will circulate air for 50 seconds every 15 minutes. • Dehumidifier will not operate until incoming air dew point reads above 40°F	No
Error code "E3"	Low Refrigerant	1. Refrigeration leak 2. Evaporator coil temp too high during extended operation	• Dehumidifier will go into lock-out mode for 1 hour and then attempt to activate compressor.	Yes
Error code "E4"	Float Switch Tripped	1. Tripped float switch 2. 24V is shorted to Common 3. Terminal block unplugged from unit	• The compressor and fan in the dehumidifier will remain off until the connection is fixed or the water event that activated the switch is resolved.	Yes
Error code "E5"	Coil temperature sensor	1. Broken sensor 2. Loose connection	• Dehumidifier will go into lock-out mode for 1 hour and then activate compressor for 15 minutes • After the compressor runs for 15 minutes, the unit will go into defrost mode for 30 minutes.	No
Error code "E6"	Temperature too High	1. Sensor reading incoming air temp is over 120°F 2. Broken sensor	• Dehumidifier will circulate air for 15 minutes every hour. • Dehumidifier will not operate until incoming air temp sensor reads below 120°F	No
Error code "E7"	Temperature too Low	1. Sensor reading incoming air temp is under 40°F 2. Broken sensor	• Dehumidifier will circulate air for 50 seconds every 15 minutes. • Dehumidifier will not operate until incoming air temp reads above 40°F.	No
Error code "E8"	Comm error	1. There is a cable connection issue 2. Defective power board	• The power board will continue to run unit using the last settings but changes to operation cannot be made until communication is restored.	Yes, if operational changes are required.
Error code "E9"	High Pressure cut-out	1. High pressure sensor has tripped due to excess pressure in the refrigeration system 2. Incoming air temp is too high	• Power board will be in system protection mode.	Yes, if the error persists when operating below 90°F incoming air
Model RQ-31 Only				
Error code "E10"	Not in use			
Error code "E11"	Refrigerant leak sensor	1. Refrigerant leak 2. Bad sensor	• Check refrigerant charge, If low look for a leak. • Look for other combustible gasses in the area. Propane, Natural Gas, Refrigerant. • Bad or unplugged sensor	Yes
Error code "E12"	Phase monitor	1. Power wires in wrong location 2. Voltage issue on one or more power wire	• Switch locations of any 2 of the 3 power wires. • Check for proper voltage on all 3 power wires	Yes

Troubleshooting guide

MODEL RQ-4, RQ-6, RQ-9, RQ-14 UNIT TEST

Unit Test to determine problem:

1. Detach any exterior control wiring by removing terminal block but jump both FLOAT terminals together.
2. Reinstall terminal block into the control.
3. Plug unit in to known good power outlet.
4. Power unit on by pressing power button on top of control.
5. Make sure the Terminal Control light is NOT illuminated. Press button to change.
6. Press down arrow to set the unit below 20% until "On" is displayed. This will force the unit on.
7. Listen for the fan to turn on almost immediately.
8. Wait 1 to 2 minutes for the compressor to turn on.
9. If these tests work, the problem is most likely in the control or field wiring.

MODEL RQ-21 AND RQ-31 UNIT TEST

1. Detach field control wiring connections from unit.
2. Connect the 24V and FAN together; only the impeller fan should run. Disconnect the wires.
3. Connect the 24V and DEHU together; fan should run, Compressor should come on after a short delay.
4. Run the unit for 1 hour in an environment that is greater than a 50°F dew point. The unit should produce water from the drain port.
5. If these tests pass, the unit is working properly. You should check the control and field wiring for problems if the unit is not activating. Check for air restrictions, low temperature, low humidity and refrigerant charge if the unit is not producing water.

DriSteem Technical Support

Have the following information ready when calling Technical Support. See phone number inside front cover of this manual.

Humidifier model number
Humidifier serial number
Firmware version
_____
When issue began
_____ _____ _____
Issue description
_____ _____ _____

Troubleshooting guide

Table 44-1:
Troubleshooting

Problem	Action
Neither fan nor compressor running. Dehumidification is being called for. No fan call.	• Unit unplugged or no power to outlet. • Humidity control set too high. • Loose connection in internal or control wiring. • Bad control or power board. • Defective control transformer.
Compressor is not running. Dehumidification is being called for. No fan call.	• Defective compressor run capacitor. • Loose connection in compressor circuit. • High pressure switch open or unplugged. • Defective compressor. • Compressor relay defective or unplugged. • Defrost thermostat open. • Temp & RH sensor reading above 120°F or below 40°F, or sensor is bad or unplugged.
Compressor cycles on and off. Dehumidification is being called for. No fan call.	• Low ambient temperature and/or humidity causing unit to cycle through defrost mode. • Evaporator temp sensor bad or unplugged. • Defective compressor. • High pressure switch or defrost thermostat defective. • Dirty air filter(s) or air flow restricted. • Bad control or power board.
Fan is not running. Dehumidification or fan is being called for.	• Loose connection in fan circuit. • Obstruction prevents fan impeller rotation. • Defective fan. • Bad control, power board, or fan relay.
Low dehumidification capacity (evaporator is frosted continuously). Dehumidification is being called for.	• Evaporator temp sensor bad or unplugged. • Low refrigerant charge. • Dirty air filter(s) or air flow restricted. • Excessively restrictive ducting connected to unit.
Unit removes some water, but not as much as expected.	• Air temperature and/or humidity have dropped. • Humidity meter and or thermometer used are out of calibration. • Unit has entered defrost cycle. • Air filter dirty. • Low refrigerant charge. • Air leak (eg. loose cover or ducting leaks). • Defective compressor. • Restrictive ducting. • Unit is in (Lo)w fan mode. • Evaporator temp sensor bad or unplugged. • Temp and RH sensor off calibration. Reading lower than actual. • Optional condensate pump safety switch open (Model RQ-21 and RQ-31)
Filter Change Light illuminated (too frequently):	• Change filter if dirty. • Hold filter change button to reset filter life hours. • Ducting configuration causing poor airflow. Disable filter change light by selecting a different fan speed.

Troubleshooting guide

REFRIGERANT CHARGING

If the refrigerant charge is lost due to service or a leak, a new charge must be accurately weighed in. If any of the old charge is left in the system, it must be recovered before weighing in the new charge. Refer to the unit nameplate for the correct charge weight and refrigerant type.

IMPELLER FAN REPLACEMENT

The motorized impeller fan is a unitary assembly consisting of the motor and impeller fan. If defective, the complete assembly must be replaced.

1. Unplug the power cord.
2. Remove the access panel, and top panel.
3. Disconnect the impeller fan leads on side of the electric box.
4. Remove fan/bracket assembly by removing two screws from the bracket and inlet ring assembly.
5. Remove the defective impeller fan from the bracket and replace with it with the new impeller fan.

COMPRESSOR/CAPACITOR REPLACEMENT

This compressor is equipped with a run capacitor, but no start capacitor or start relay.

CHECKING COMPRESSOR MOTOR CIRCUITS

Perform the following tests if the impeller fan runs but the compressor does not with a call for dehumidification.

1. Remove the cabinet side to gain access to the electrical components.
2. Plug in the unit and turn the humidity control to ON. Check for volts from compressor black wires on compressor relay to white wire on compressor capacitor using an AC voltmeter.
   - If correct voltage is present, go to next step.
   - If no voltage, there may be a loose connection in the compressor circuit. Test each component for continuity.
3. Unplug the unit and then disconnect the connector from the side of the compressor. Using an ohmmeter, check continuity between the points listed below.
4. Compressor terminals C and S: No continuity indicates an open start winding. The compressor must be replaced.
   - Model RQ-4: Normal start winding resistance is 1 to 2 ohms.
   - Model RQ-6: Normal start winding resistance is 3 to 7 ohms.

Troubleshooting

5. Compressor terminals C and R: No continuity indicates an open run winding. The compressor must be replaced.
   - Model RQ-4: Normal run winding resistance is 1 to 2 ohms.
   - Model RQ-6: Normal run winding resistance is .5 to 2 ohms.
6. Model RQ-4 only: Compressor terminals S and R: No continuity indicates an open winding. The compressor must be replaced. Normal winding resistance is 2 to 4 ohms.
7. Any compressor terminal and compressor case: Continuity indicates a grounded motor. The compressor must be replaced.
8. Disconnect the wires from the run capacitor. The capacitor is shorted and must be replaced if continuity exists between any terminal and ground.
9. Using capacitor or MFD setting on meter test between both capacitor terminals. Compare reading to capacitor spec on capacitor.
10. If the above test pass but the compressor does not work, the compressor has an internal mechanical defect and must be replaced.

REPLACING A BURNT COMPRESSOR

The refrigerant and oil mixture in a compressor is chemically very stable under normal operating conditions. However, when an electrical short occurs in the compressor motor, the resulting high temperature arc causes a portion of the refrigerant oil mixture to break down into carbonaceous sludge, a very corrosive acid, and water. These contaminants must be carefully removed otherwise even small residues will attack replacement compressor motors and cause failures.

The following procedure is effective only if the system is monitored after replacing the compressor to insure that the clean up was complete.

1. This procedure assumes that the previously listed compressor motor circuit tests revealed a shorted or open winding.
2. Remove and properly dispose of the system charge. DO NOT vent the refrigerant or allow it to contact your eyes or skin.
3. Remove the burned out compressor. Use rubber gloves if there is any possibility of contacting the oil or sludge.
4. To facilitate subsequent steps, determine the type of burn out that occurred. If the discharge line shows no evidence of sludge and the suction line is also clean or perhaps has some light carbon deposits, the burn out occurred while the compressor was not rotating. Contaminants are therefore largely confined to the compressor housing. A single installation of liquid and suction line filter/driers will probably clean up the system.

Troubleshooting

If sludge is evident in the discharge line, it will likely be found in the suction line. This indicates the compressor burned out while running. Sludge and acid have been pumped throughout the system. Several changes of the liquid and suction filter/driers will probably be necessary to cleanse the system.

5. Correct the system fault that caused the burn out. Consult the factory for advice.
6. Install the replacement compressor with a new capacitor and an oversized liquid line filter.

   In a running burn out, install an oversized suction line filter/drier between the accumulator and compressor. Thoroughly flush the accumulator with refrigerant to remove all trapped sludge and to prevent the oil hole from becoming plugged. A standing burn out does not require a suction line filter/drier.
7. Evacuate the system with a good vacuum pump and accurate vacuum gauge. Leave the pump on the system for at least an hour.
8. Operate the system for a short period of time, monitoring the suction pressure to determine that the suction filter is not becoming plugged. Replace the suction filter/drier if pressure drop occurs. If a severe running burn out has occurred, several filter/driers may have to be replaced to remove all of the acid and moisture.

NOTE: NEVER use the compressor to evacuate the system or any part of it.

REPLACING A COMPRESSOR, NON BURN OUT

Remove the refrigerant from the system. Replace the compressor and liquid line filter/drier. Charge the system to 50 PSIG and check for leaks. Remove the charge and weigh in the refrigerant quantity listed on the nameplate. Operate the system to verify performance.

REMOTE CONTROLS

The Evair dehumidifier can be controlled by a remote humidistat. You may or may not have the connection depending on the model of the remote humidistat you purchased. If the Evair dehumidifier fails to operate as desired, always check the settings of the controls to ensure that they are correct. Check that the controls are receiving 24VAC from the Evair dehumidifier. Check the connections between the Evair dehumidifier, the humidistat, and the field control wiring.

Troubleshooting

HUMIDITY CONTROL

The humidity control is an adjustable switch that closes when the relative humidity of the air in which it is located rises to the set point. It opens when the RH drops 4 to 6% below the set point. If the Evair dehumidifier does not run, try turning the humidity control Down using arrow on control pad. If it then runs, the humidity control is out of calibration or the RH is below setpoint.

DEFROST MODE

The Evair dehumidifier is equipped with an automatic defrost mechanism. If the Evair dehumidifier operates in conditions that develop frost on the evaporator, it will sense the frost build-up and automatically defrost the evaporator. The Evair dehumidifier may not appear to be operating correctly during the defrost sequence, but once the defrost sequence is completed, the Evair dehumidifier will resume dehumidifying.

The evaporator temperature sensor is installed into the center of the evaporator coil. It will automatically shut the compressor off and turn on the snowflake defrost light if the temperature drops due to excessive frost formation on the evaporator coil. The impeller fan will continue to run, causing air to flow through the evaporator coil and melt the ice. When the ice has melted, the evaporator temperature will rise, and the control will restart the compressor and turn off the snowflake defrost light.

Troubleshooting

TOOLS REQUIRED:

- T25 Torx Driver
- 11/32" Driver

Following all local and national electrical codes and standards, route electrical service to the location that the dehumidifier will be installed.

POWER CORD REPLACEMENT (MODELS RQ-6 - RQ-21)

See Figures 28-1 and 28-2.

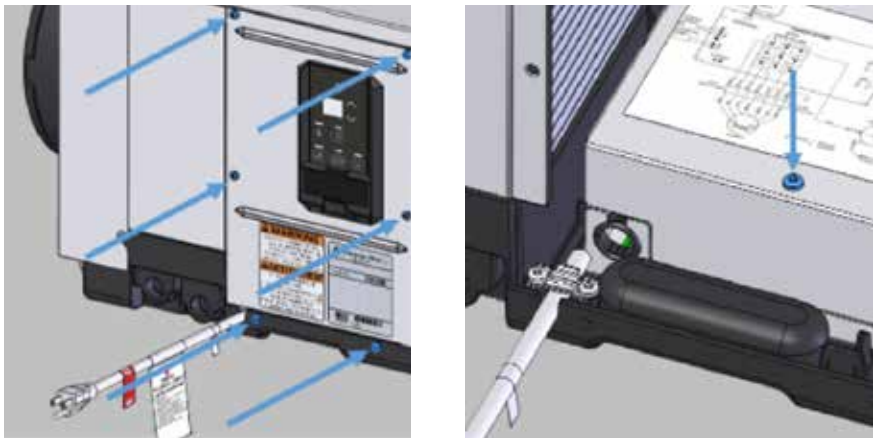
MODEL RQ-4 POWER CORD REPLACEMENT

1. Disconnect power cord from power source.
2. Use T25 Torx driver to remove 6 screws on access panel and remove panel. Modular cable will be connected to User Interface Assembly. Cable must be carefully unplugged during removal of access panel.

⚠ WARNING

Servicing the Evair Dehumidifier, with its high pressure refrigerant system and high voltage circuitry presents a health hazard which could result in death, serious bodily injury, and/or property damage. Only qualified service people should service this unit.

FIGURE 49-1: MODEL RQ-4 POWER CORD REPLACEMENT

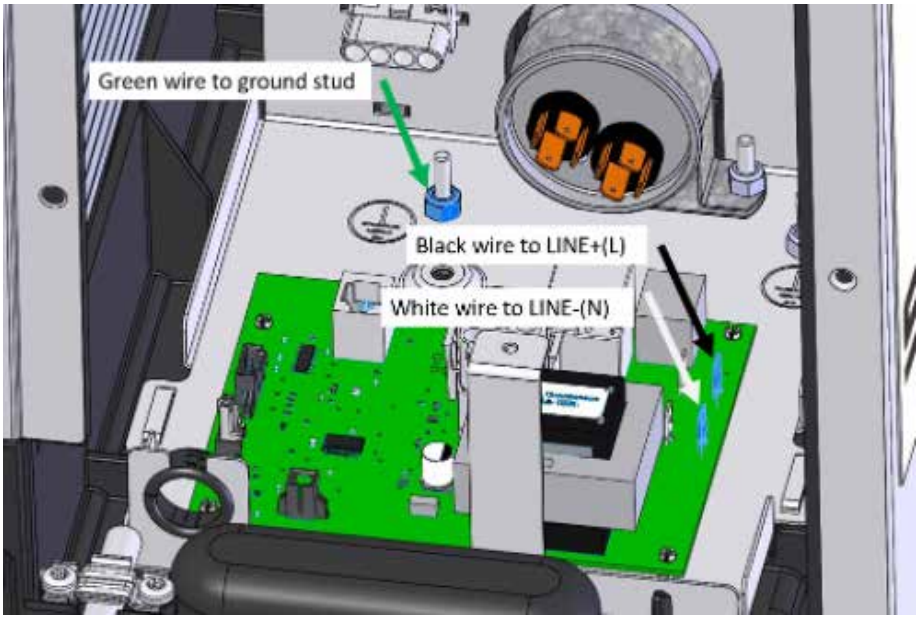


Troubleshooting

3. Use T25 Torx driver to remove screw from electrical box cover and remove cover.
4. Disconnect BLACK wire from LINE+(L) terminal

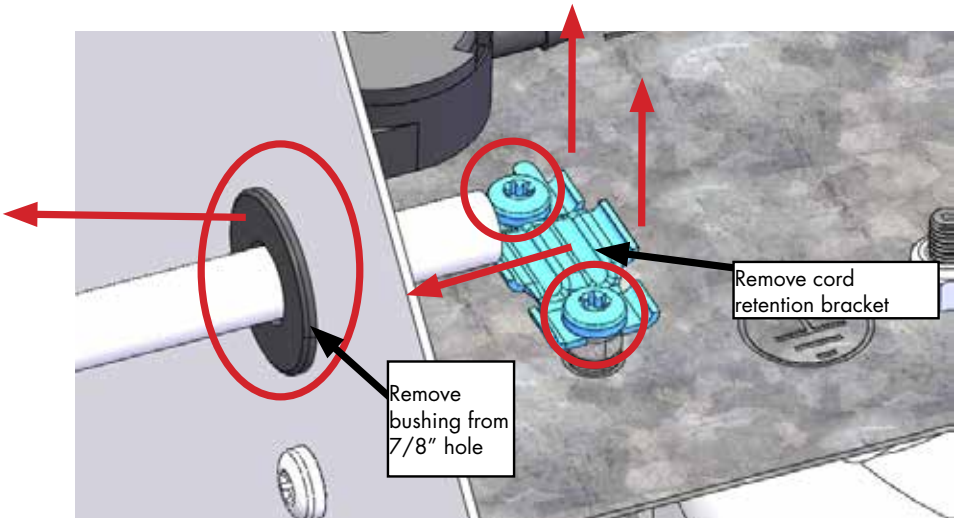
   Disconnect WHITE wire from LINE-(N) terminal

FIGURE 50-1: POWER CORD REPLACEMENT



5. Use 11/32″ driver to remove nut from ground stud and disconnect GREEN wire from ground stud.
6. Remove the 2 screws holding the cord retention bracket using T25 Torx driver and remove retention bracket.

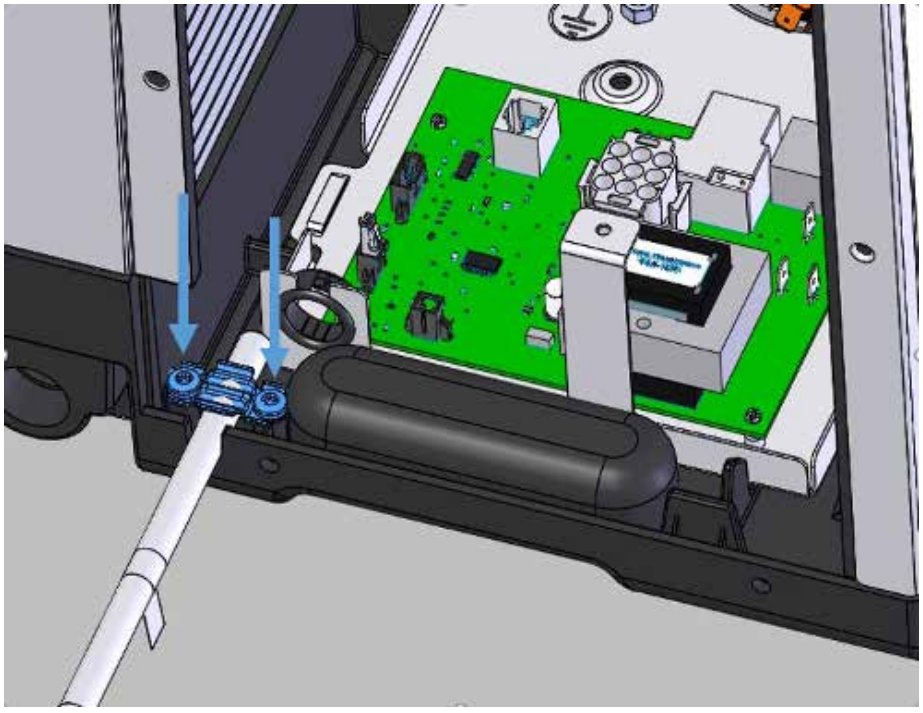
FIGURE 50-2: POWER CORD REPLACEMENT



Troubleshooting

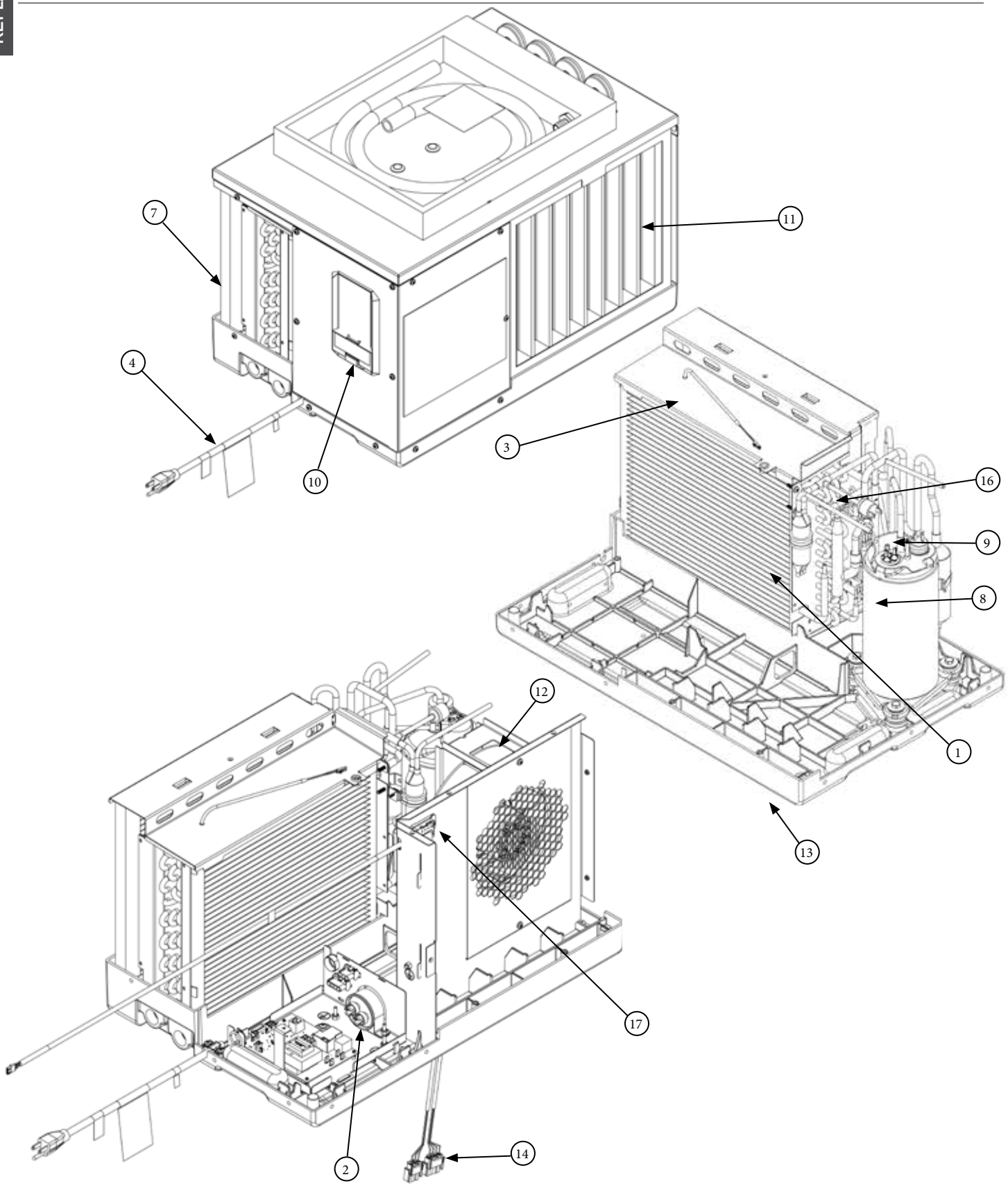
7. Remove old power cord and insert new cord in its place. Install cord retention bracket and cord retention screws using T25 Torx driver.
8. Place green wire ring terminal on ground stud and use 11/32″ driver to secure nut to stud.
   - Connect WHITE wire from LINE-(N) terminal.
   - Connect BLACK wire from LINE+(L) terminal.
9. Replace electrical box cover and use T25 Torx driver to secure screw.
10. Connect modular cable to User Interface Assembly.
11. Place panel on unit and use T25 Torx driver to secure 6 screws on access panel.

FIGURE 51-1: POWER CORD REPLACEMENT



Model RQ-4 replacement parts

FIGURE 52-1: MODEL RQ-4 REPLACEMENT PARTS



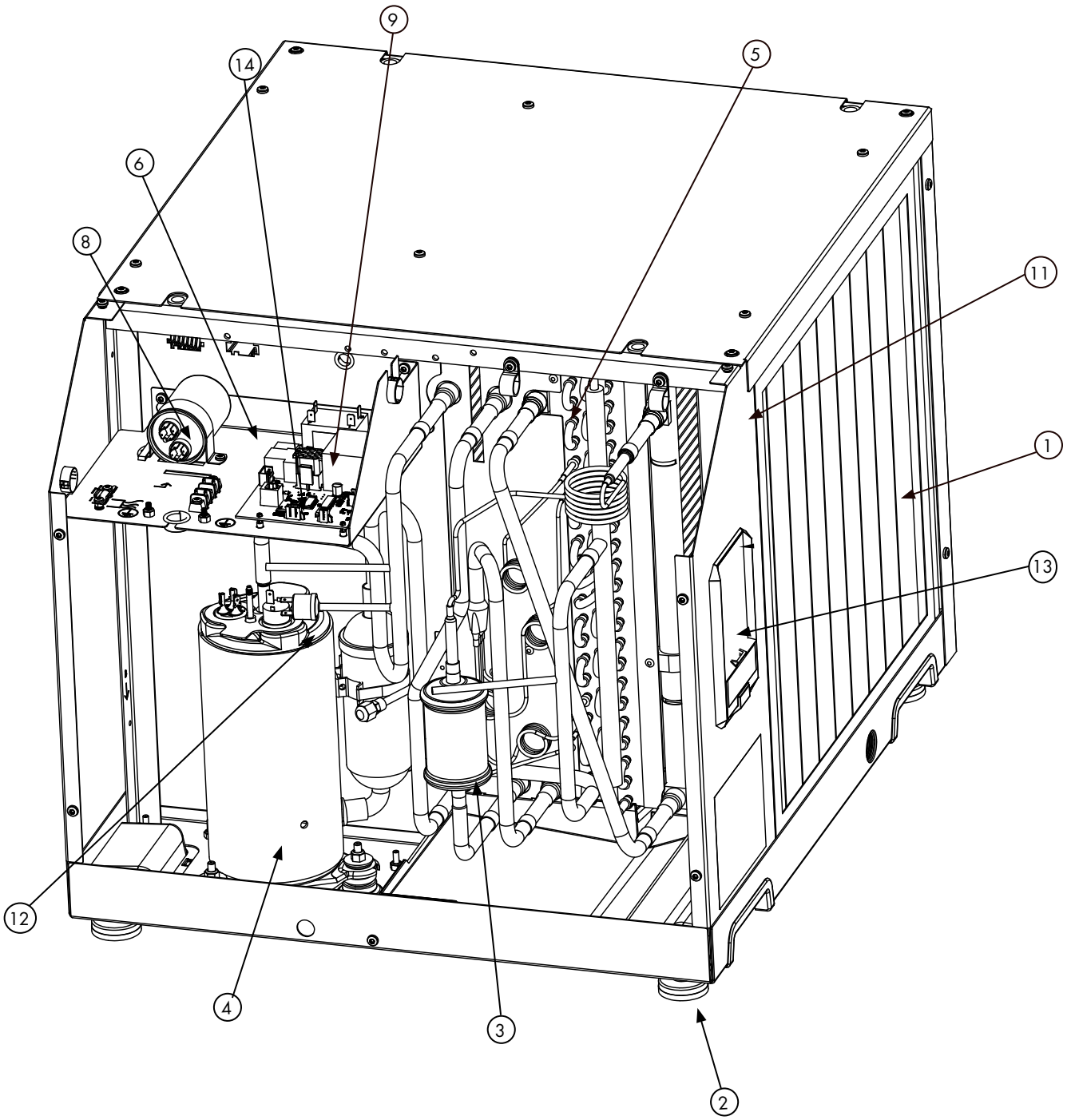
Model RQ-4 replacement parts

Table 53-1:
Evair Dehumidifier Model RQ-4 Replacement Parts

Item	Description	Quantity	Part Number
1	DRIER, RQ-4	1	601585
2	CAPACITOR, COMPRESSOR, RQ-4	1	601586
3	PROBE, EVAP TEMP, RQ-4	1	601587
4	CORD, RQ-4	1	601588
6	CABLE, COMM, RQ-4	1	601589
7	CONDENSER, RQ-4	1	601590
8	COMPRESSOR, RQ-4	1	601591
9	SWITCH, OVERLOAD, RQ-4	1	601592
10	DISPLAY ASSEMBLY, RQ SERIES	1	601593
11	FILTER, MERV-13, RQ-4	1	601537
12	IMPELLER ASSY, RQ-4	1	601594
13	BASE/DRAIN PAN, RQ-4	1	601595
14	WIRE HARNESS, RQ-4	1	601596
15	POWER/CONTROL ASSEMBLY, RQ-4	1	601597
16	SWITCH, HIGH PRESSURE, RQ SERIES	1	601598
17	SENSOR, TEMP AND RH, RQ SERIES	1	601599
	DUCT KIT, SUPPLY/RETURN, RQ-4	1	601541
	HANGING KIT, RQ-4	1	601546
	BRACKET, CONDENSATE PUMP, KIT	1	601443
	CONDENSATE PUMP KIT	1	601288
	ALERT LIGHT	1	601176
	HUMIDISTAT DEHUM ROOM KIT	1	601583-002
	HUMIDISTAT DEHUM DUCT KIT	1	601584-002
	HUMIDISTAT DEHUM BACNET ROOM KIT	1	601180
	HUMIDISTAT DEHUM BACNET DUCT KIT	1	601182

Model RQ-6 replacement parts

FIGURE 54-1: MODEL RQ-6 REPLACEMENT PARTS



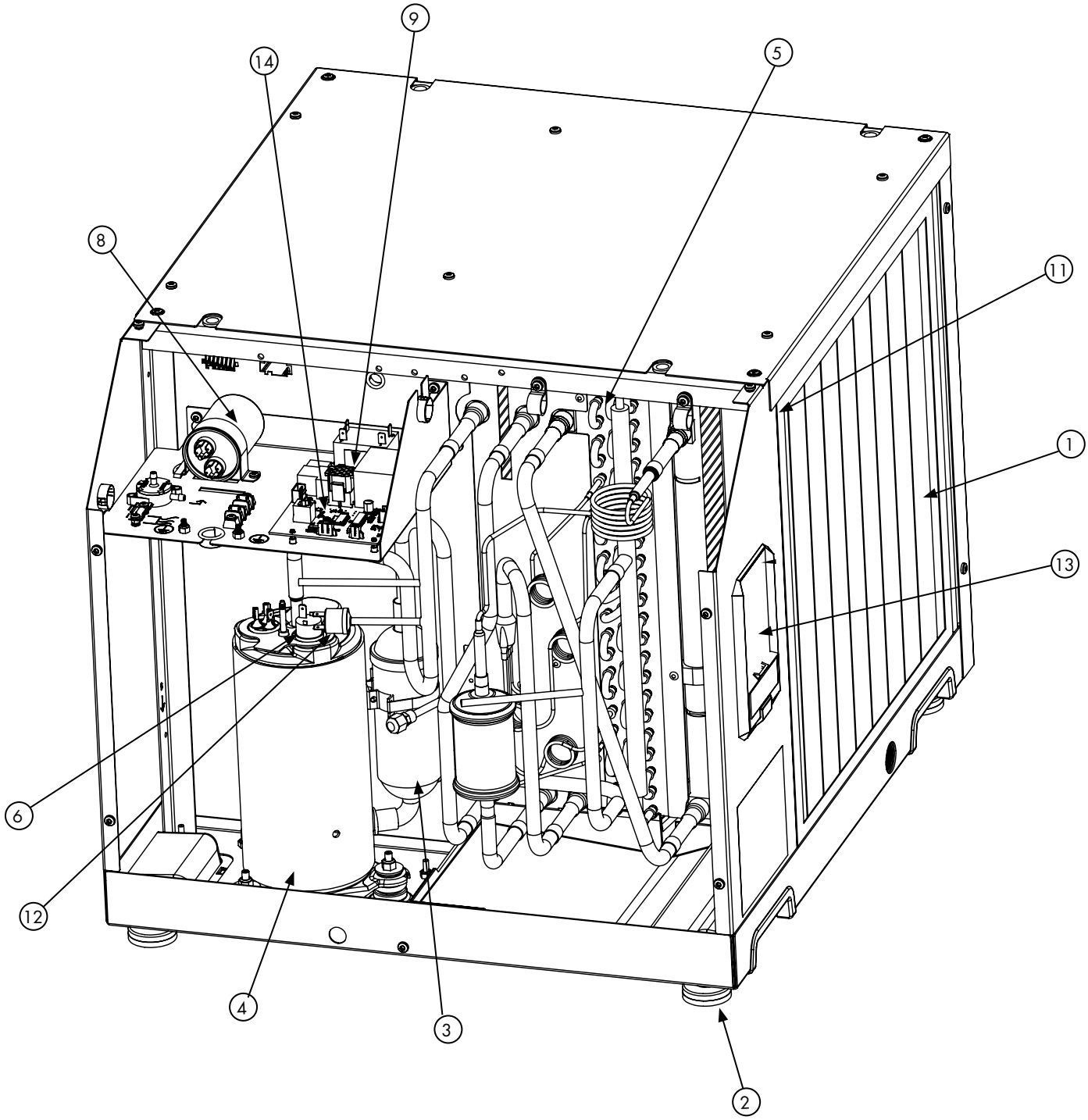
Model RQ-6 replacement parts

Table 55-1:
Evair Dehumidifier Model RQ-6 Replacement Parts

Item	Description	Quantity	Part No.
1	FILTER, MERV-13, RQ-6, -9	1	601538
2	LEVELING FOOT, QTY 4, RQ-6, -9	4	601600
3	FILTER,DRIER, RQ-6, -9, -14, -21, -31	1	601601
4	COMPRESSOR, RQ-6	1	601602
5	COIL, CASSETTE ASSY, RQ-6	1	601603
6	CAPACITOR, FAN, 16 MFD, RQ-6	1	601604
7	IMPELLER ASSY, RQ-6	1	601605
8	CAPACITOR, 50 MFD, RQ-6	1	601606
9	RELAY, COMPRESSOR, RQ-6	1	601607
10	PROBE, THERMISTOR, RQ-6	1	601608
11	SENSOR, TEMP AND RH, RQ SERIES	1	601598
12	SWITCH, HIGH PRESSURE, RQ SERIES	1	601599
13	DISPLAY ASSEMBLY, RQ SERIES	1	601593
14	CONTROL BOARD, RQ-6	1	601609
	DUCT KIT, SUPPLY/RETURN, RQ-6, -9	1	601542
	BRACKET, CONDENSATE PUMP, KIT	1	601443
	CONDENSATE PUMP KIT	1	601288
	ALERT LIGHT	1	601176
	HUMIDISTAT DEHUM ROOM KIT	1	601583-002
	HUMIDISTAT DEHUM DUCT KIT	1	601584-002
	HUMIDISTAT DEHUM BACNET ROOM KIT	1	601180
	HUMIDISTAT DEHUM BACNET DUCT KIT	1	601182

Model RQ-9 replacement parts

FIGURE 56-1: MODEL RQ-9 REPLACEMENT PARTS



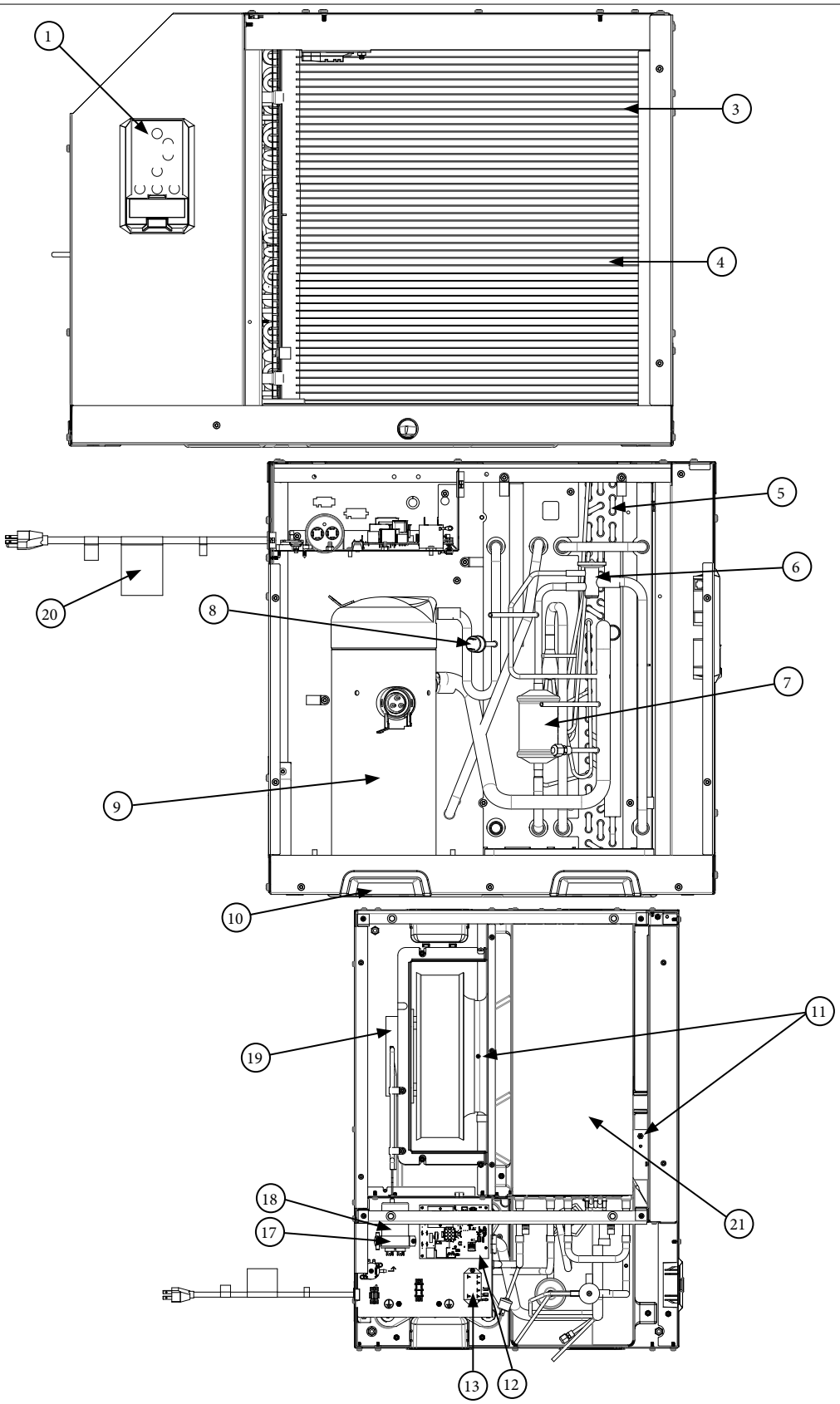
Model RQ-9 replacement parts

Table 57-1:
Evair Dehumidifier Model RQ-9 Replacement Parts

Item	Description	Quantity	Part No.
1	FILTER, MERV-13, RQ-6, -9	1	601538
2	LEVELING FOOT, RQ-6, -9	4	601600
3	FILTER,DRIER, RQ-6, -9, -14, -21, -31	1	601601
4	COMPRESSOR, RQ-9	1	601611
5	COIL, CASSETTE ASSY, RQ-9	1	601612
6	COMPRESSOR OVERLOAD, RQ-9	1	601613
7	IMPELLER ASSY, RQ-9	1	601614
8	CAPACITOR, RUN, 45 MFD, RQ-9	1	601615
9	RELAY, SPST 220V, 25A, RQ-9, -14	1	601616
10	PROBE, THERMISTOR, RQ-9	1	601617
11	SENSOR, TEMP AND RH, RQ SERIES	1	601598
12	SWITCH, HIGH PRESSURE, RQ SERIES	1	601599
13	DISPLAY ASSEMBLY, RQ SERIES	1	601593
14	CONTROL BOARD, RQ-9, -14	1	601618
	DUCT KIT, SUPPLY/RETURN, RQ-6, -9	1	601542
	BRACKET, CONDENSATE PUMP, KIT	1	601443
	CONDENSATE PUMP KIT	1	601288
	ALERT LIGHT	1	601176
	HUMIDISTAT DEHUM ROOM KIT	1	601583-002
	HUMIDISTAT DEHUM DUCT KIT	1	601584-002
	HUMIDISTAT DEHUM BACNET ROOM KIT	1	601180
	HUMIDISTAT DEHUM BACNET DUCT KIT	1	601182

Model RQ-14 replacement parts

FIGURE 58-1: MODEL RQ-14 REPLACEMENT PARTS



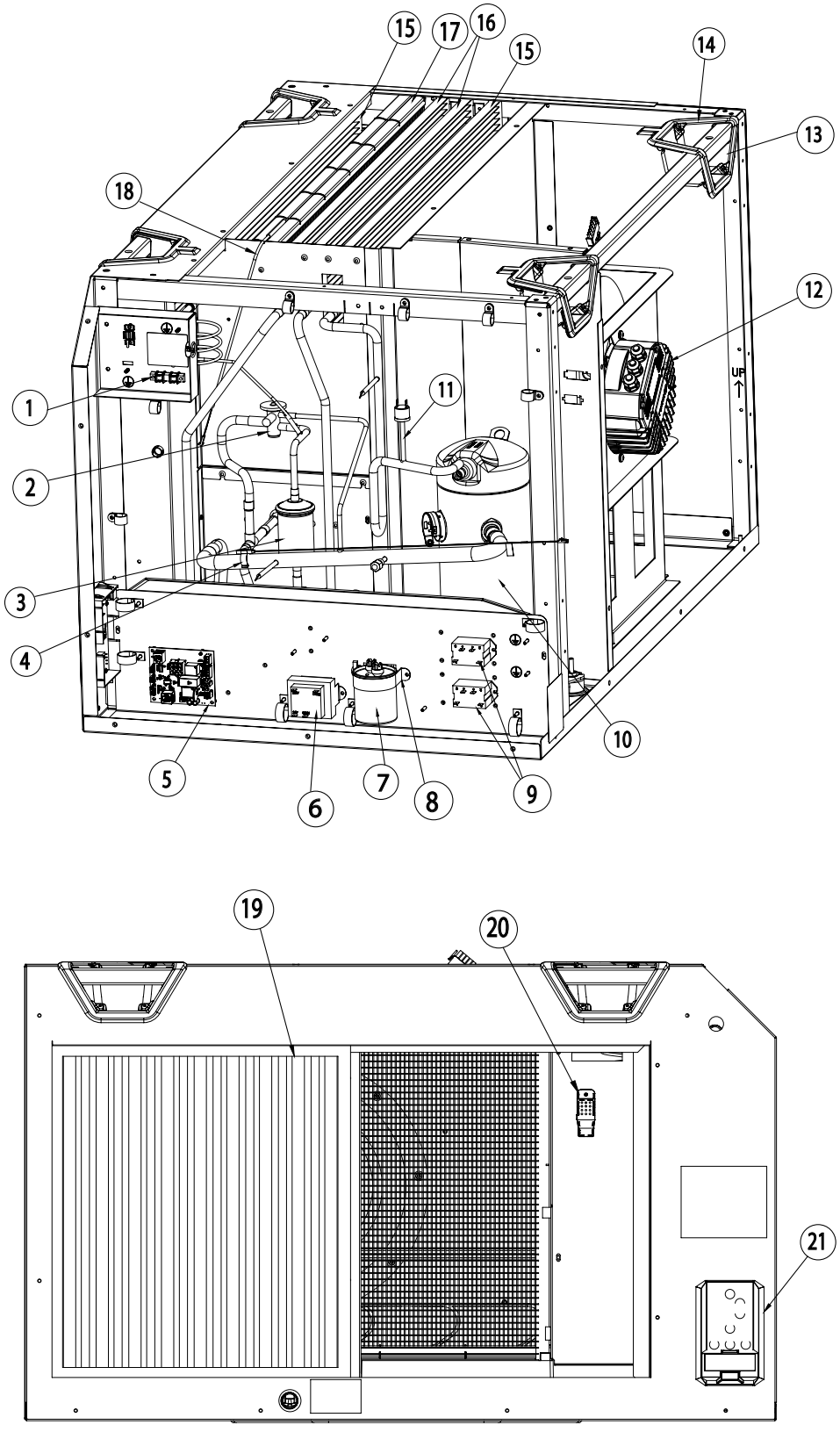
Model RQ-14 replacement parts

Table 59-1:
Evair Dehumidifier Model RQ-14 Replacement Parts

Item	Description	Quantity	Part No.
1	DISPLAY ASSEMBLY, RQ SERIES	1	601593
3	SENSOR, TEMP AND RH, RQ SERIES	1	601598
4	FILTER, MERV-13, RQ-14	1	601539
5	COIL ASSEMBLY, RQ-14	1	601619
6	TXV, RQ-14	1	601620
7	FILTER,DRIER, RQ-6, -9, -14, -21, -31	1	601601
8	SWITCH, HIGH PRESSURE, RQ SERIES	1	601599
9	COMPRESSOR, RQ-14	1	601621
10	HANDLE, POCKET, RQ-14	1	601622
11	PRESSURE TAP, RQ-14	1	601623
12	CONTROL BOARD, RQ-9, -14	1	601618
13	RELAY, SPST 220V, 25A, RQ-9, -14	1	601616
17	CLAMP, CAPACITOR, RQ-14	1	601624
18	CAPACITOR, RQ-14	1	601625
19	IMPELLER ASSY, RQ-14	1	601626
20	CORD, RQ-14	1	601627
21	SENSOR, EVAPORATOR, RQ-14	1	601628
	DUCT KIT, SUPPLY/RETURN, RQ-14	1	601543
	BRACKET, CONDENSATE PUMP, KIT	1	601443
	CONDENSATE PUMP KIT	1	601288
	ALERT LIGHT	1	601176
	HUMIDISTAT DEHUM ROOM KIT	1	601583-002
	HUMIDISTAT DEHUM DUCT KIT	1	601584-002
	HUMIDISTAT DEHUM BACNET ROOM KIT	1	601180
	HUMIDISTAT DEHUM BACNET DUCT KIT	1	601182

Model RQ-21 replacement parts

FIGURE 60-1: MODEL RQ-21 REPLACEMENT PARTS



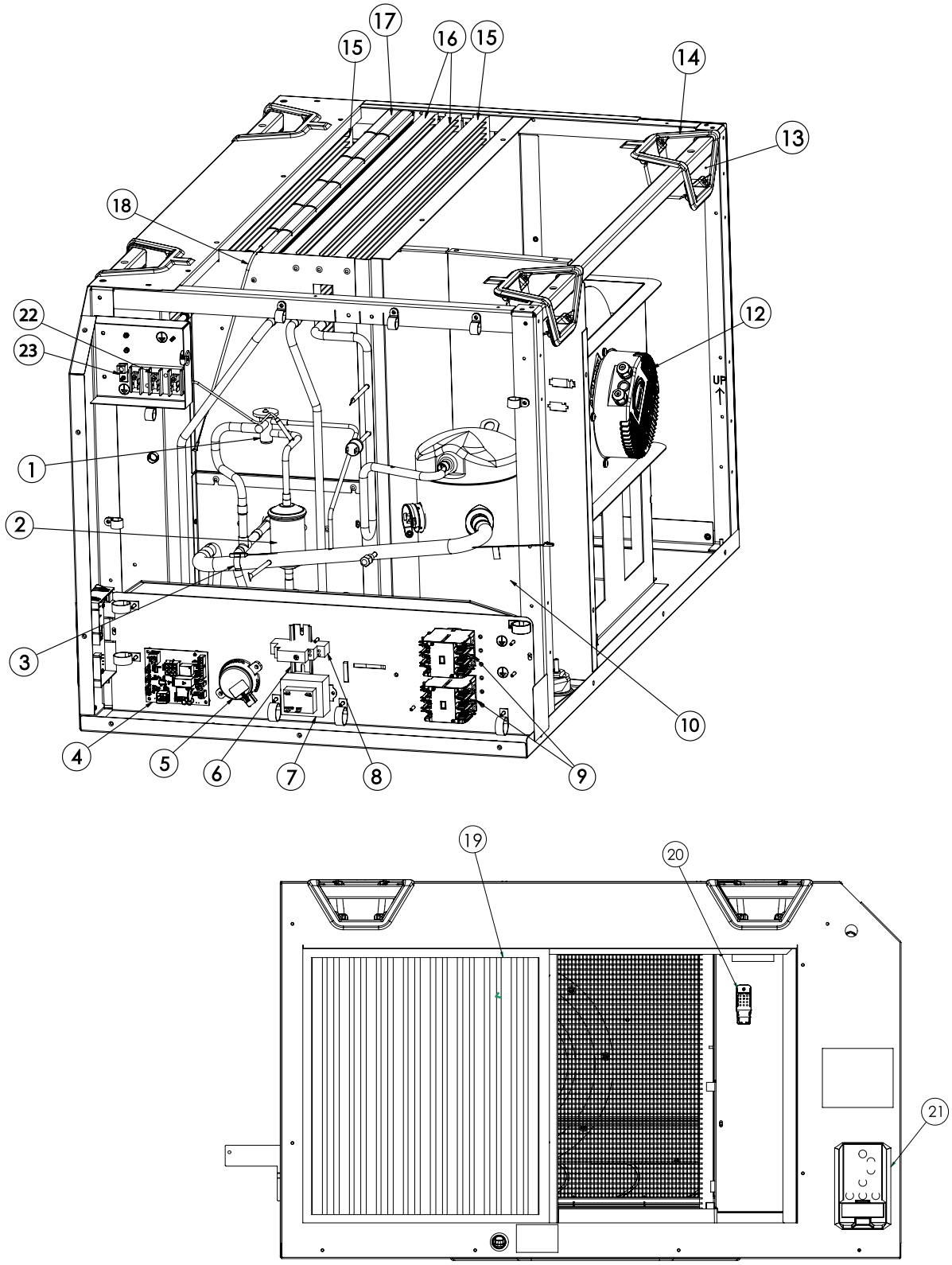
Model RQ-21 replacement parts

Table 61-1:
Evair Dehumidifier Model RQ-21 Replacement Parts

Item	Description	Quantity	Part No.
1	BLOCK, TERMINAL, RQ-21, -31	1	601629
2	TXV, 5.9 KW, RQ-21	1	601630
3	FILTER,DRIER, RQ-6, -9, -14, -21, -31	1	601601
4	THERMISTOR, CLIP-ON, 20", RQ-21, -31	1	601631
5	PWR,CNTL ASSY, RQ-21	1	601632
6	TRANSFORMER, 50/60HZ, 40VA, 220V, RQ-21	1	601633
7	CAPACITOR, 40MFD, RQ-21	1	601634
8	CLAMP, CAPACITOR, 2.5" U-SHAPE, RQ-21	1	601635
9	RELAY, SPST, 24V, 30A, RQ-21	1	601636
10	CPRSR,COPE,29CC,SCR,454B,230V, RQ-21	1	601637
11	SWITCH, HIGH PRESSURE, RQ SERIES	1	601599
12	IMPELLER ASSY, EC355, 230V, RQ-21	1	601638
13	HANDLE, POCKET, QTY 4, RQ-21, -31	1	601639
14	BEZEL, HANDLE, QTY 4, RQ-21, -31	1	601640
15	COIL, MICROCHANNEL,16MM, RQ-21	1	601641
16	COIL,MICROCHANNEL,16MM,70/30,RQ-21	1	601642
17	COIL, MCHE,2X17MM,1100DIST,RQ-21	1	601643
18	PROBE, THERMISTOR, 30", RQ-21, -31	1	601644
19	FILTER, MERV-13, RQ-21, -31	1	601540
20	SENSOR, TEMP AND RH, RQ SERIES	1	601598
21	DISPLAY ASSEMBLY, RQ SERIES	1	601593
	WIRE HARNESS, RQ-21	1	601645
	WIRE HARNESS, CPRSR, RQ-21	1	601646
	CORD, 12/3, SJTW, 250V-20A, 6-20P, RQ-21	1	601647
	CABLE ASSY, RJ12, 12", RQ-21, -31	1	601648
	DRAIN TRAP KIT, RQ-21, -31	1	601547
	KIT, INTAKE DUCT, RQ-21, -31	1	601544
	KIT, EXHAUST DUCT, RQ-21, -31	1	601545
	BRACKET, CONDENSATE PUMP, KIT	1	601443
	CONDENSATE PUMP KIT	1	601288
	ALERT LIGHT	1	601176
	HUMIDISTAT DEHUM ROOM KIT	1	601583-002
	HUMIDISTAT DEHUM DUCT KIT	1	601584-002
	HUMIDISTAT DEHUM BACNET ROOM KIT	1	601180
	HUMIDISTAT DEHUM BACNET DUCT KIT	1	601182

Model RQ-31 replacement parts

FIGURE 62-1: MODEL RQ-31 REPLACEMENT PARTS



Model RQ-31 replacement parts

Table 63-1:
Evair Dehumidifier Model RQ-31 Replacement Parts

Item	Description	Quantity	Part No.
1	TXV, 12KW, RQ-31	1	Consult Factory
2	FILTER,DRIER, RQ-6, -9, -14, -21, -31	1	Consult Factory
3	THERMISTOR, CLIP-ON, 20", RQ-21, -31	1	Consult Factory
4	PWR/CNTL ASSY, RQ-31	1	Consult Factory
5	SENSOR, A2L, 454B, RQ-31	1	Consult Factory
6	BRKT, DIN RAIL, RQ-31	1	Consult Factory
7	TRANSFORMER,480V,60HZ,40VA,RQ-31	1	Consult Factory
8	RELAY, PHASE MONITOR, RQ-31	1	Consult Factory
9	CONTACTOR, 3-POLE, 24VAC, 25A, RQ-31	1	Consult Factory
10	CPRSR,COPE,44CC,SCR,454B,480V,RQ-31	1	Consult Factory
11	SWITCH, HIGH PRESSURE, RQ SERIES	1	Consult Factory
12	IMPELLER ASSY,355MM, 480V, RQ-31	1	Consult Factory
13	HANDLE, POCKET, QTY 4, RQ-21, -31	4	Consult Factory
14	BEZEL, HANDLE, QTY 4, RQ-21, -31	4	Consult Factory
15	COIL,MICROCHANNEL,20MM,QTY 2,RQ-31	2	Consult Factory
16	COIL,MCHE,2X17MM,1100DIST,RQ-31	1	Consult Factory
17	COIL,MICROCHANNEL,20MM,70/30,QTY 2,RQ-31	2	Consult Factory
18	PROBE, THERMISTOR, 30", RQ-21, -31	1	Consult Factory
19	FILTER, MERV-13, RQ-21, -31	2	601540
20	SENSOR, TEMP AND RH, RQ SERIES	1	Consult Factory
21	DISPLAY ASSEMBLY, RQ SERIES	1	Consult Factory
22	BLOCK, TERMINAL, 3 POSITION, RQ-31	1	601661
23	LUG, GROUND, 2-14 AWG, RQ-31	1	601662
	WIRE HARNESS, RQ-31	1	601663
	WIRE HARNESS, CPRSR, RQ-31	1	601664
	CABLE ASSY, RJ12, 12", RQ-21, -31	1	601610
	KIT, INTAKE DUCT, RQ-21, -31	1	601544
	KIT, EXHAUST DUCT, RQ-21, -31	1	601545
	DRAIN TRAP KIT, RQ-21, -31	1	601547
	BRACKET, CONDENSATE PUMP, KIT	1	601443
	CONDENSATE PUMP KIT	1	601288
	ALERT LIGHT	1	601176
	HUMIDISTAT DEHUM ROOM KIT	1	601583-002
	HUMIDISTAT DEHUM DUCT KIT	1	601584-002
	HUMIDISTAT DEHUM BACNET ROOM KIT	1	601180
	HUMIDISTAT DEHUM BACNET DUCT KIT	1	601182

Expect quality from the industry leader

Since 1965, DriSteem has led the industry with innovative methods for humidifying and cooling air with precise control. Our focus on ease of ownership is evident in the design of the Evair dehumidifier. DriSteem also leads the industry with a Two-year Limited Warranty and optional extended warranty.

For more information

www.dristeem.com
sales@dristeem.com

For the most recent product information visit our Web site: www.dristeem.com

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Continuous product improvement is a policy of DriSteem Corporation; therefore, product features and specifications are subject to change without notice.

Form No. EVAIR-RQ-IOM-EN-REVA-2026-0526
Part No. 890000-842 REV A

FOR INTERNAL USE ONLY

DRISTEEM

Two-year Limited Warranty

DriSteem Corporation ("DriSteem") warrants to the original user that its products will be free from defects in materials and workmanship for a period of two (2) years after installation or twenty-seven (27) months from the date DriSteem ships such product, whichever date is the earlier.

If any DriSteem product is found to be defective in material or workmanship during the applicable warranty period, DriSteem's entire liability, and the purchaser's sole and exclusive remedy, shall be the repair or replacement of the defective product, or the refund of the purchase price, at DriSteem's election. DriSteem shall not be liable for any costs or expenses, whether direct or indirect, associated with the installation, removal or reinstallation of any defective product. The Limited Warranty does not include consumables, including but not limited to: cylinders, filters, membranes, nozzles, and piezoelectric transducer replacement.

DriSteem's Limited Warranty shall not be effective or actionable unless there is compliance with all installation and operating instructions furnished by DriSteem, or if the products have been modified or altered without the written consent of DriSteem, or if such products have been subject to accident, misuse, mishandling, tampering, negligence or improper maintenance. Any warranty claim must be submitted to DriSteem in writing within the stated warranty period. Defective parts may be required to be returned to DriSteem.

DriSteem's Limited Warranty is made in lieu of, and DriSteem disclaims all other warranties, whether express or implied, including but not limited to any IMPLIED WARRANTY OF MERCHANTABILITY, ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, any implied warranty arising out of a course of dealing or of performance, custom or usage of trade.

DRI-STEEM SHALL NOT, UNDER ANY CIRCUMSTANCES BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, REVENUE OR BUSINESS) OR DAMAGE OR INJURY TO PERSONS OR PROPERTY IN ANY WAY RELATED TO THE MANUFACTURE OR THE USE OF ITS PRODUCTS. The exclusion applies regardless of whether such damages are sought based on breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory, even if DriSteem has notice of the possibility of such damages.

By purchasing DriSteem's products, the purchaser agrees to the terms and conditions of this Limited Warranty.

Extended warranty

The original user may extend the term of the DriSteem Limited Warranty for a limited number of months past the initial applicable warranty period and term provided in the first paragraph of this Limited Warranty. All the terms and conditions of the Limited Warranty during the initial applicable warranty period and term shall apply during any extended term. An extended warranty term of an additional twelve (12) months, twenty four (24) months, or thirty-six (36) months[1] of coverage may be purchased. The extended warranty term may be purchased until eighteen (18) months after the product is shipped, after which time no extended warranties are available.

Any extension of the Limited Warranty under this program must be in writing, signed by DriSteem, and paid for in full by the purchaser.

[1] 36 month extended warranty automatically included for all DriSteem Dehumidifiers.

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