REZNOR®

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Supersedes: EUHC-IOM (09-25) 2000231-0

COMPACT ELECTRIC UNIT HEATER INSTALLATION, OPERATION, AND MAINTENANCE

MODEL EUHC



⚠ DANGER ⚠

- **Read all instructions before using the unit.**
- **Failure to follow safety warnings exactly could result in serious injury, death, or property damage.**
- **Improper installation, adjustment, alteration, service, or maintenance can cause serious injury, death, or property damage.**
- **Installation and service must be performed by a qualified technician.**
- **Be sure to read and understand the installation, operation, and service instructions in this manual.**
- **This unit has hot parts inside. Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **This unit is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.**
- **Do not operate any unit after it malfunctions. Disconnect power at the service panel and have the unit inspected by a reputable electrician before reusing.**
- **Do not use outdoors.**
- **Do not insert or allow foreign objects to enter any unit opening as this may cause electrical shock, fire, or damage to the unit.**
- **To prevent a possible fire, do not block air intakes or exhaust in any way whatsoever.**
- **Use this unit only as recommended by the manufacturer. Any other use may cause electrical shock, fire, or damage to the unit.**
- **This heater may include a red alarm light to warn that parts of the heater are getting excessively hot. If the light is on, immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. DO NOT OPERATE THE HEATER WITH THE ALARM ILLUMINATING.**

IMPORTANT INSTRUCTIONS SAVE THESE INSTRUCTIONS

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GENERAL INFORMATION

- This unit has been tested for capacity and efficiency so as to provide many years of safe and dependable comfort providing it is properly installed and maintained. With regular maintenance, this unit will operate satisfactorily year after year. Abuse, improper use, and/or improper maintenance can shorten the life of the unit and create unsafe hazards.
- To achieve optimum performance and minimize equipment failure, it is recommended that periodic maintenance be performed on this unit. The ability to properly perform maintenance on this equipment requires certain tools and mechanical skills.

Important Safety Information

Please read all information in this manual thoroughly and become familiar with the capabilities and use of your appliance before attempting to operate or maintain this unit. Pay attention to all dangers, warnings, cautions, and notes highlighted in this manual. Safety markings should not be ignored and are used frequently throughout to designate a degree or level of seriousness.

DANGER: A danger statement describes a potentially hazardous situation that if not avoided, will result in severe personal injury or death and/or property damage.

WARNING: A warning statement describes a potentially hazardous situation that if not avoided, can result in severe personal injury and/or property damage.

CAUTION: A caution statement describes a potentially hazardous situation that if not avoided, can result in minor or moderate personal injury and/or property damage.

NOTE: A note provides important information that should not be ignored.

⚠ DANGER ⚠

Read these instructions carefully before installation and operation of the unit. Failure to adhere to the instructions could result in fire, electric shock, serious personal injury, death, or property damage. Review frequently for continuing safe operation and instruction of future users, if necessary.

⚠ WARNING ⚠

- **Installation should be done by a qualified agency in accordance with these instructions. The qualified service agency installing this unit is responsible for the installation.**
- **This appliance is not intended for use by persons 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.**

⚠ CAUTION ⚠

- **The thermostat should not be considered an infallible device in cases where maintaining a temperature is considered critical. In these particular cases, it is imperative to add a monitoring system to avoid the consequences of a thermostat failure.**
- **This unit is not approved for use in corrosive atmospheres, wet or very humid locations such as marine green house, or chemical storage areas.**
- **To prevent damage to the unit or to its internal components, it is recommended that two wrenches be used when loosening or tightening nuts. Do not over tighten!**

Warranty

Refer to the limited warranty form in the literature bag provided with the unit. The warranty is void if:

- Wiring is not in accordance with the diagram furnished with the unit.
- The unit is installed without proper clearance to combustible materials.
- The air delivery system is modified.

Certification

This unit is listed by Intertek to UL 2021 and CSA C22.2 #46 for use in the US and Canada. Models EUHC-R3 and EUHC-R5 are approved for residential use.

Installation Codes

This unit must be installed in accordance with local building codes. Local authorities having jurisdiction should be consulted before installation is made to verify local codes and installation procedure requirements.

Clearances

⚠ DANGER ⚠

Keep combustible materials like furniture, pillows, bedding, papers, clothes, and curtains at least 36 inches (915 mm) away from the front of the unit.

The unit must be located so that the clearances listed in **Table 1** are provided for with regards to inspection and service and for proper spacing from combustible construction. Clearance to combustibles is defined as the minimum distance from the unit to a surface or object for which it is necessary to ensure that a surface temperature of 117°F (65°C) above the surrounding ambient temperature is not exceeded.

Table 1. Clearances to Combustibles

Unit Surface	Unit Size (kW)		
	3, 5	7, 10	15, 20
	Minimum Clearance (Inches (mm))		
Top (opposite controls side)	2 (51)		6 (153)
Back (non-disharge side)	7 (178)		8 (204)
Front (discharge side)	36 (915)		
Side (left and right)	4 (102)	6 (153)	9 (229)
Bottom (controls side)*	0 (0)		3 (77)

*Suspend the unit so that the bottom is a minimum of 6 feet (1.8 meters) above the floor.

Weights

Table 2. Weights

Cabinet Size	Unit Size (kW)	Unit Weight	Shipping Weight
		Pounds (kg)	
1	3, 5	28 (13)	37 (17)
2	7, 10	40 (19)	53 (25)
3	15, 20	58 (27)	71 (33)

Dimensions

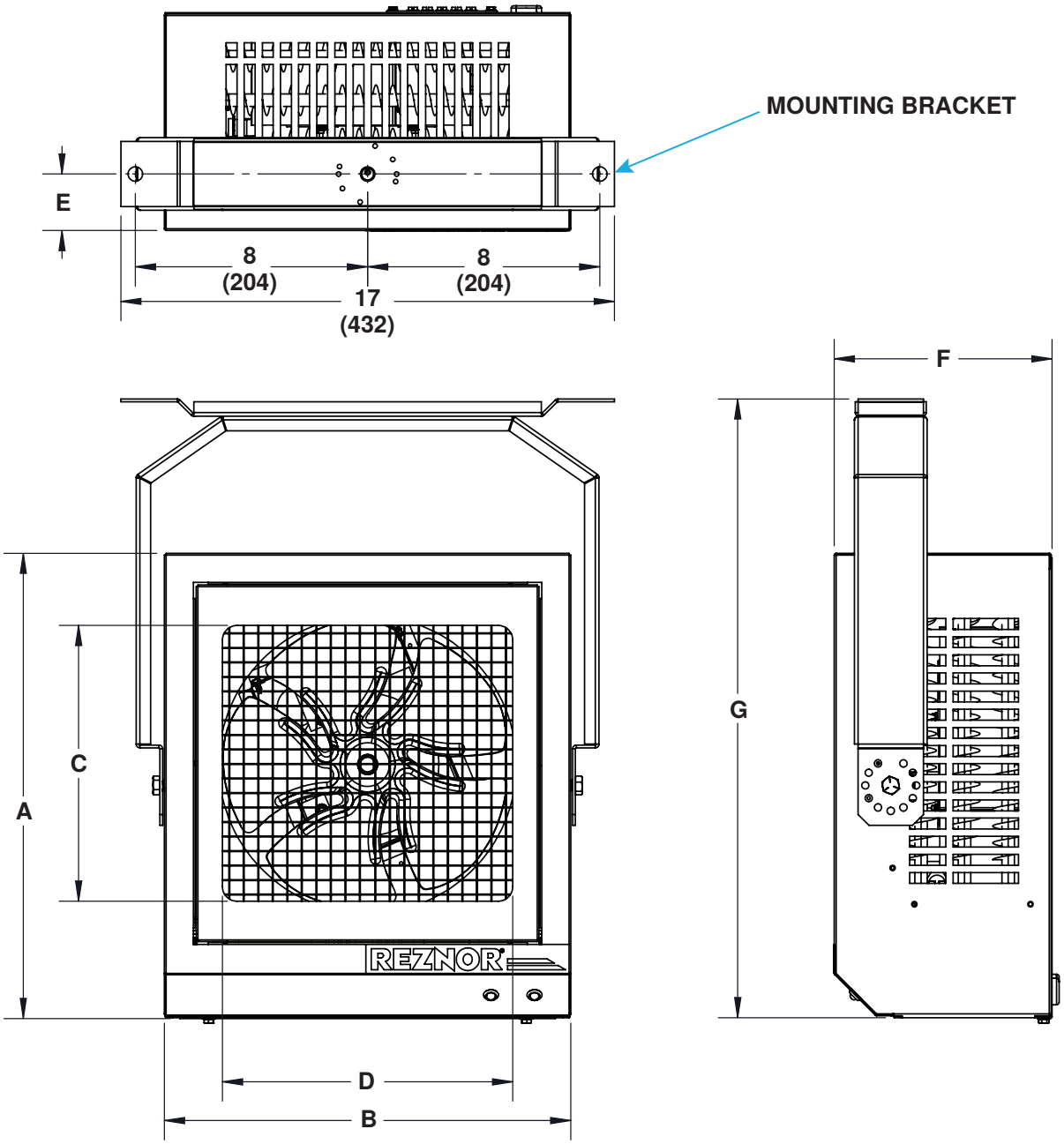


Figure 1. Dimensions (Refer to Table 3)

Table 3. Dimensions

Cabinet Size	Unit Size (kW)	Dimension (See Figure 1)						
		A	B	C	D	E	F	G
		Inches (mm)						
1	3, 5	16-1/32 (408)	14 (356)	9-1/2 (242)	10 (254)	1-15/16 (50)	7 1/2 (191)	21-5/16 (542)
2	7, 10	21-3/4 (553)	19 (483)	15-1/4 (388)	15 (381)			27-1/16 (688)
3	15, 20	21-25/32 (554)	19-3/32 (485)			3-7/16 (88)	12-3/4 (324)	29-1/16 (739)

Mounting Height

⚠ WARNING ⚠

If touched, the internal surfaces that are accessible from outside the unit will cause burns. Suspend the unit a minimum of 6 feet (1.8 meters) above the floor.

In general, a unit should be located 6–14 feet (1.8–4.3 meters) above the floor. At those points where infiltration of cold air is excessive, such as at entrance doors and shipping doors, it is desirable to locate the unit so that it will discharge directly toward the source of cold air from a distance of 15–20 feet (4.6–6.1 meters).

Heater Throw and Cover

Figure 2 shows throw and cover patterns and **Table 4** lists throw and cover distances for heaters suspended at varying mounting heights and angles with either side discharge or down discharge. In the graphic and table below:

H = the distance from the bottom of the heater to the floor
X = the distance from the heater to the start of floor coverage
Y = the distance from the heater to the end of floor coverage
Z = the distance at which air velocity drops below 50 feet (15.2 meters) per minute
D = the diameter of floor coverage

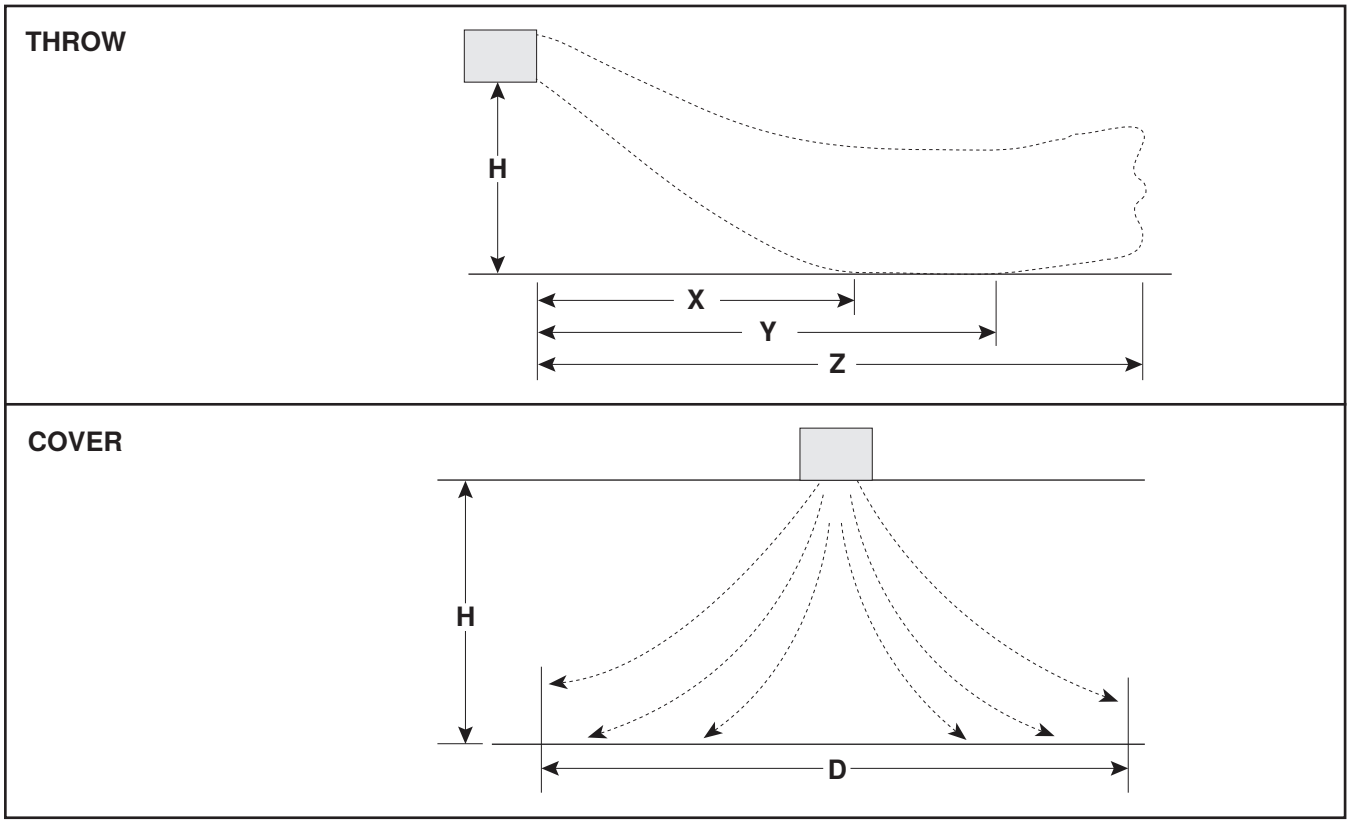


Figure 2. Heater Throw and Cover Patterns (Refer to Table 4)

Table 4. Heater Throw and Cover Distances								
H* (Feet (Meters))	Mounting Angle (Degrees)	Dimension*	Unit Size (kW)					
			3	5	7	10	15	20
			Feet (Meters)					
6 (1.8)	45	X	6 (1.8)	5 (1.5)	5 (1.5)	5 (1.5)	5 (1.5)	5 (1.5)
		Y	16 (4.9)	16 (4.9)	22 (6.7)	18 (5.5)	23 (7.0)	25 (7.6)
		Z	24 (7.3)	25 (7.6)	33 (10.1)	33 (10.1)	40 (12.2)	38 (11.6)
7 (2.1)	45	X	9 (2.7)	7 (2.1)	6 (1.8)	7 (2.1)	6 (1.8)	6 (1.8)
		Y	11 (3.4)	18 (5.5)	22 (6.7)	20 (6.1)	23 (7.0)	24 (7.3)
		Z	23 (7.0)	26 (7.9)	33 (10.1)	34 (10.4)	40 (12.2)	38 (11.6)
8 (2.4)	45	X	—	9 (2.7)	7 (2.1)	10 (3.0)	7 (2.1)	6 (1.8)
		Y		16 (4.9)	22 (6.7)	22 (6.7)	23 (7.0)	23 (7.0)
		Z		25 (7.6)	34 (10.4)	35 (1.5)	42 (12.8)	39 (11.9)
	90	D	8 (2.4)	12 (3.7)	12 (3.7)	12 (3.7)	18 (5.5)	20 (6.1)
10 (3.0)	60	X	—	6 (1.8)	4 (1.2)	6 (1.8)	4 (1.2)	4 (1.2)
		Y		14 (4.3)	20 (6.1)	18 (5.5)	22 (6.7)	22 (6.7)
		Z		23 (7.0)	26 (7.9)	27 (8.2)	36 (11.0)	36 (11.0)
	90	D	8 (2.4)	10 (3.0)	13 (4.0)	14 (4.3)	16 (4.9)	18 (5.5)
12 (3.7)	60	X	—	8 (2.4)	6 (1.8)	10 (3.0)	6 (1.8)	5 (1.5)
		Y		12 (3.7)	18 (5.5)	14 (4.3)	22 (6.7)	22 (6.7)
		Z		22 (6.7)	28 (8.5)	25 (7.6)	38 (11.6)	37 (11.2)
	90	D		6 (1.8)	8 (2.4)	8 (2.4)	14 (4.3)	16 (4.9)
14 (4.3)	60	X	—		10 (3.0)	10 (3.0)	7 (2.1)	6 (1.8)
		Y			14 (4.3)	14 (4.3)	23 (7.0)	22 (6.7)
		Z			26 (7.9)	25 (7.6)	38 (11.6)	35 (10.7)
	90	D			6 (1.8)	6 (1.8)	12 (3.7)	14 (4.3)
16 (4.9)	60	X	—				10 (3.0)	10 (3.0)
		Y					22 (6.7)	23 (7.0)
		Z					40 (12.2)	31 (9.4)
	90	D					10 (3.0)	12 (3.7)
18 (5.5)	60	X	—				12 (3.7)	12 (3.7)
		Y					20 (6.1)	21 (6.4)
		Z					38 (11.6)	30 (9.1)
	90	D					8 (2.4)	10 (3.0)

*See **Figure 2**.

Unit Location

⚠ CAUTION ⚠

Do not locate the unit where it may be exposed to water spray, rain, or dripping water.

For best results, the unit should be located with certain rules in mind:

- Units should always be arranged to blow toward or along exposed wall surfaces, if possible. Where two or more units are installed in the same room, a general scheme of air circulation should be maintained for best results.
- Suspended heaters are most effective when located as close to the working zone as possible, and this fact should be kept in mind when determining the mounting heights to be used. However, care should be exercised to avoid directing the discharged air directly on the room occupants.
- Partitions, columns, counters, or other obstructions should be taken into consideration when locating the unit so that a minimum quantity of airflow will be deflected by such obstacles.
- When units are located in the center of the space to be heated, the air should be discharged toward the exposed walls. In large areas, units should be located to discharge air along exposed walls with extra units provided to discharge air in toward the center of the area.

INSTALLATION

Unpacking and Inspection

The unit was test-operated and inspected at the factory prior to crating and was in operating condition. If, upon removing it from its crate, the unit has been found to have incurred any damage in shipment, document the damage with the transporting agency and contact an authorized Factory Distributor. If you are an authorized Distributor, follow the FOB freight policy procedures.

Pre-Installation Checklist

- ❑ Check the rating plate for the electrical characteristics of the unit to ensure that they are compatible with the electric supply at the installation site.
- ❑ Read this manual and become familiar with the installation requirements.
- ❑ If you do not have knowledge of local requirements, check with the local agencies who might have requirements concerning this installation.
- ❑ Before beginning, make preparations for necessary supplies, tools, and manpower.
- ❑ Check to see if there are any field-installed options (refer to **Table 5**) that need to be assembled/installed prior to unit installation. Ensure that all options ordered are at the installation site. Instructions are in this manual or in the shipped-separate option package.
- ❑ The mounting bracket assembly is shipped with the unit. Ensure that the required field-supplied hardware is available (refer to **Unit Suspension** section).

Table 5. Field-Installed Options	
Option	**Description**
CL1	Single-stage low-voltage thermostat
CL31, CL32	Multiple unit control: option CL31 includes components for one control unit and one additional unit—option CL32 includes components for each additional non-control unit
CL83	Two-stage programmable thermostat
CL84	Two-stage smart thermostat
CL90	BACnet-capable thermostat
CM1	Locking cover for CL1 thermostat
CM1B	Locking cover for CL83 and CL84 thermostats
CN3F	Remote OCCUPIED/UNOCCUPIED switch in 2 × 4 box
CP3, CP17, CP21, CP23, CP41, CP43	Remote disconnect switch
IT18	Unit-mounted CL1 thermostat with mounting kit
JB3	Unit wiring kit, includes CL83 thermostat with 25-foot wire and disconnect switch with wiring harness

Unit Suspension

⚠ WARNING ⚠

Before suspending the unit, check the supporting structure to be used to verify that it has sufficient load-carrying capacity to support the weight of the unit (refer to Weights section). DO NOT add additional weight to a suspended unit.

⚠ CAUTION ⚠

When the unit is lifted for suspension, support the bottom of the unit with plywood or other appropriately placed material. If the bottom is not supported, damage could occur.

The mounting bracket assembly (see **Figure 3**) provided with the unit is designed so that the unit can be suspended at a desired downward and lateral angle. The hanger, which alllows downward angle adjustment, connects to the unit sides. A swivel bracket with 16-inch centered mounting holes, which allows lateral angle adjustment, can be connected to the top of the hanger. Secure the swivel bracket to the wall or ceiling using field-supplied hardware or suspend the unit using field-supplied 3/8-16 threaded rod and hardware connected either to the hanger or swivel bracket. Adjust the bracket assembly so that heat discharges in the desired direction.

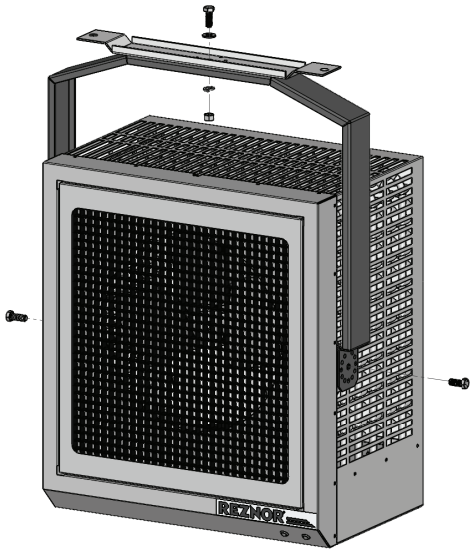


Figure 3. Mounting Bracket Assembly

Electrical Connections

⚠ CAUTION ⚠

- **Ensure that Ground Fault Overcurrent Protection (GFOC) and the Short Circuit Current Rating (SCCR) are adequate and provided for at the installation location.**
- **Ensure that all wiring is in accordance with the wiring diagram (refer to APPENDIX: WIRING DIAGRAMS) provided with the unit.**
- **All electrical wiring and connections, including electrical grounding MUST BE made in accordance with the *National Electric Code* (ANSI/NFPA No. 70, latest edition) or, in Canada, the *Canadian Electric Code* (Part 1, CSA C.22.1, latest edition). In addition, the installer should be aware of any local ordinances that might apply.**
- **All external wiring MUST BE within approved conduit and have a minimum temperature rise rating of 140°F (60°C). Conduit must be run so as not to interfere with the access panel.**

Supply Wiring Connection

NOTE: A dedicated line voltage supply with a disconnect switch should be run directly from the main electrical panel to the unit.

1. Check rating plate for supply voltage and current requirements.

NOTE: IMPORTANT (BEFORE CONNECTING THE SUPPLY WIRING): Determine if units with option AK15 or AK44 require field-modification of the transformer or contactor wiring.

2. If required, modify transformer or contactor wiring as follows:
   a. All unit sizes with voltage option AK44 are factory-wired for 240V supply. Field-modification to unit wiring is required for 208V applications. Refer to wiring diagram to change white transformer wire from 240 terminal to 208 terminal.
   b. Unit sizes 3–10 with voltage options AK15 and AK44 are factory-wired for 208V/240V 1-phase supply. Field-modification to unit wiring is required for 3-phase applications. Refer to wiring diagram to change black contactor wires as follows:
      (1) Loosen terminal screws T1, T2, and T3 on 3-pole contactor (see **Figure 4**) terminals.

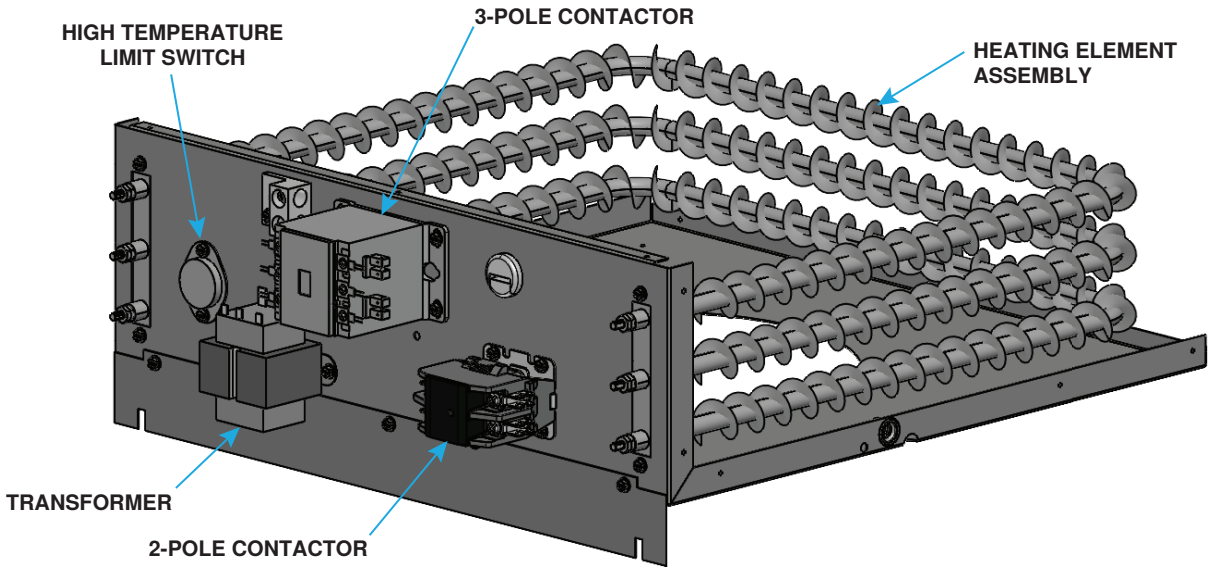


Figure 4. Typical Electrical Compartment

(2) Disconnect black wires from T1 and T2 terminals and connect them to T3 terminal.

(3) Tighten all terminal screws.

3. Route supply wiring through entrance shown in **Figure 5** and connect to 3-pole contactor shown in **Figure 4**.

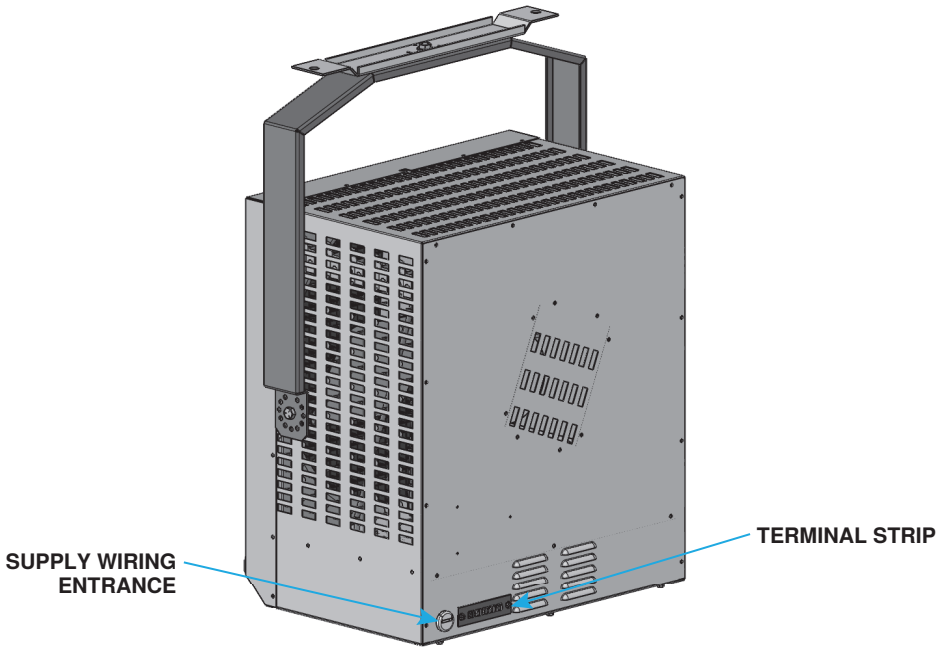


Figure 5. Supply Wiring Entrance and Control Connection Terminal Strip

Control Connections

The terminal strip for 24V control connections is located on the outside of the cabinet at the back of the unit, as shown in **Figure 5**. The strip has five terminals: C, R, G, W1, and W2. The thermostat connections are the C (optional), R, G, and W1. If the installation features a heater and a model H destratification fan controlled by a single two-stage thermostat, ensure that the wiring is in accordance with the wiring diagram shown in **Figure 6**.

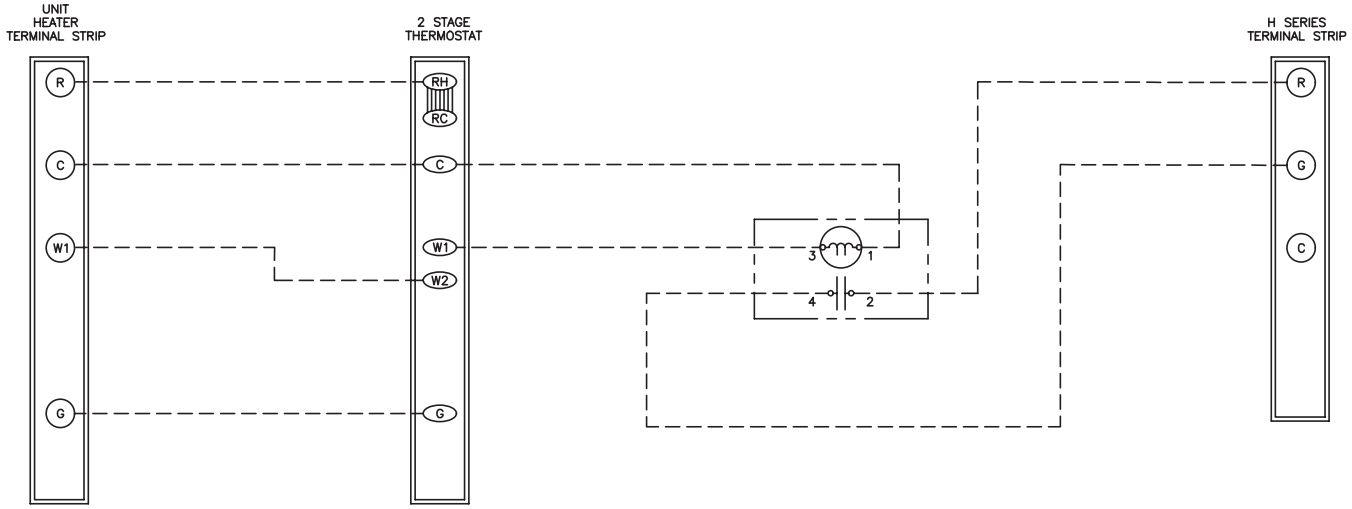


Figure 6. Heater and Destratification Fan Wiring Diagram

CONTROLS

Standard Controls

Fan Motor

The fan motor is equipped with automatic-reset thermal overload protection. If the motor does not run, the cause may be due to improper voltage. Ensure that the correct voltage is available at the motor.

FAN ON Limit Switch

⚠ WARNING ⚠

The automatic-reset FAN ON limit switch cools the heating elements after the heating demand is satisfied. Never bypass this switch as hazardous conditions could result.

All units are equipped with a normally-open automatic-reset FAN ON limit switch located inside the fan compartment. The switch is factory-set and is non-adjustable. After the heat demand is satisfied and the heating elements have been de-energized and the temperature setpoint is reached, the switch closes to keep the fan energized to cool the heating elements until the temperature drops below the setpoint and the switch opens to de-energize the fan.

High Temperature Limit Switch

⚠ WARNING ⚠

The automatic-reset high temperature limit switch will continue to shut down the unit until the cause is corrected. Never bypass this switch as hazardous conditions could result.

All units are equipped with a normally-closed temperature-activated, automatic-reset high temperature limit switch (see **Figure 4**). The switch is factory-set and is non-adjustable. If the setpoint is reached, the switch interrupts the electric supply to the heating elements. This safety device provides protection in the case of fan motor failure or lack of airflow due to a restriction at the inlet or outlet.

Optional Controls

Thermostat

The unit may be controlled by a thermostat—either an optional thermostat (refer to **Table 5**) or a field-supplied 24V thermostat that must be field-installed in accordance with the thermostat manufacturer's instructions. Pay particular attention to the requirements regarding the location of the thermostat. In accordance with the wiring diagram provided with the unit, connect the thermostat at the 24V control wiring terminal strip on the back of the unit (refer to **Control Connections** section).

Multiple Unit Control (Options CL31 and CL32)

If the unit was ordered with a multiple unit control option, one thermostat can be used to control up to five units. This option includes a relay assembly that attaches to each additional unit. Option CL31 provides for control of two units. If control of additional units is desired (up to five total), option CL32, which is the relay assembly only, must be added to each additional unit. The option packages are shipped separately and include complete instructions on installation and wiring.

Disconnect Switch (Options CP3, CP17, CP21, CP23, CP41, and CP43)

A disconnect switch is available as optional equipment (refer to **Table 5**) or it may be field-supplied. Install the switch in accordance with the *National Electric Code* (ANSI/NFPA 70) or, in Canada, the *Canadian Electric Code* (Part 1, CSA C.22.1) and ensure that conduit and the switch housing are clear of all service doors.

OPERATION

⚠ DANGER ⚠

Models EUHC-R3 and EUHC-R5, which are approved for residential use, have a red HI-TEMP indicator light instead of a green HEAT ON indicator light. DO NOT OPERATE THE HEATER WHEN THE HI-TEMP INDICATOR LIGHT IS ILLUMINATED.

Pre-Startup Checklist

Check the following ***before*** startup:

- ❑ Check suspension—unit must be secure and level.
- ❑ Check to ensure that clearances from combustibles are in accordance with **Table 1**.
- ❑ Check electrical wiring—ensure that all wire gauges are as recommended—service disconnect switch should be used—verify that fusing or circuit breakers are adequate for load use.
- ❑ Check polarity—verify that line voltage exists between all power wires and earth ground.
- ❑ Place literature bag that contains limited warranty form, this manual, and any control or optional information in accessible location near unit.

Startup

Start up the unit as follows:

1. Set thermostat to desired setting.
2. Turn ON electric power to unit—green POWER ON status indicator light on front of unit is illuminated.
   a. Heating elements are energized—on all models except EUHC-R3 and EUHC-R5, green HEAT ON status indicator light on front of unit is illuminated.
   b. Fan is energized.
   c. Heating elements remain energized until thermostat is satisfied.
   d. Fan remains energized to cool heating elements until temperature drops below FAN ON limit switch temperature setpoint.

MAINTENANCE

⚠ WARNING ⚠

- **Ensure that the disconnect switch is OFF before servicing the unit.**
- **Wait until the housing and heating elements cool before performing maintenance.**
- **Eye protection is recommended when cleaning unit.**

⚠ CAUTION ⚠

- **If any of the original wire supplied with the unit must be replaced, the wiring material must have a temperature rating of at least 220°F (105°C).**
- **Ensure that all wiring is in accordance with the wiring diagram provided with the unit.**

NOTE: To ensure long life and satisfactory performance, a unit that is operated under normal conditions should be inspected and cleaned at the start of each heating season. If the unit is operating in an area where an unusual amount of dust or soot or other impurities are present in the air, more frequent maintenance is recommended.

MAINTENANCE—CONTINUED

The unit is designed to operate with a minimum of maintenance. However, to ensure long life and satisfactory performance, routine service is recommended. When servicing, follow standard safety procedures and the specific instructions and warnings in this manual.

Service Checklist

The following section is designed to aid a qualified service person in maintaining and servicing this equipment. At a minimum, perform the following annually:

- ❑ Clean all dirt, lint, and grease from fan blade, fan guard, and motor.
- ❑ Replace any parts that do not appear sound.
- ❑ Check for any damaged wiring and replace as necessary.

Maintenance Procedures

⚠ CAUTION ⚠

- **When any service is completed, ensure that the unit is reassembled correctly so that no unsafe conditions are created.**
- **If replacement parts are required, use only factory-authorized parts.**

Electrical Component Replacement

Use a voltmeter to verify that there is 24V output from the transformer. If the transformer is not functioning, it must be replaced. If it is determined that an electrical component needs replacing, use only the factory-authorized replacement part that is designed for the unit.

Heating Element Assembly Maintenance

Inspect heating element assembly (see **Figure 4**) for signs of damage or excessive wear. If necessary, replace the assembly as follows:

1. Turn OFF electric power to unit.
2. Remove and save screws that secure access panel and remove panel.
3. Remove and save screws that secure back panel and remove panel.
4. Mark and disconnect existing heating element wires.

⚠ WARNING ⚠

Heating elements have sharp edges—wear gloves when handling.

5. Remove and save screws that secure existing heating element assembly to control/fan panel and remove heating element assembly.
6. Position replacement heating element assembly in place and secure replacement heating element assembly to control/fan panel using existing screws.
7. Reconnect heating element wires in accordance with wiring diagram provided with unit.
8. Re-install access panel and back panel using existing screws.
9. Turn ON electric power to unit and check for proper operation.

Fan and Motor Assembly Maintenance

Inspect and clean the motor, fan guard, and blades. Remove any dirt and grease. Take care when cleaning the fan blades so as not to cause misalignment or imbalance. Check to ensure that there are no signs of damage or excessive wear to the fan and motor assembly and that the fan blade hub is secure to the shaft. If necessary, replace the assembly as follows:

1. Turn OFF electric power to unit.
2. Remove and save screws that secure access panel and remove panel.
3. Remove and save screws that secure back panel and remove panel.
4. Disconnect fan motor wires and ground screw.
5. Remove and save two screws that secure fan and motor assembly support to control/fan panel and remove support with fan and motor assembly.
6. Disassemble, replace, and reassemble fan and motor assembly components as necessary.
7. Ensure that fan is in proper position on shaft (see **Figure 7**) and setscrew is tightened in accordance with torque listed in **Table 6**.

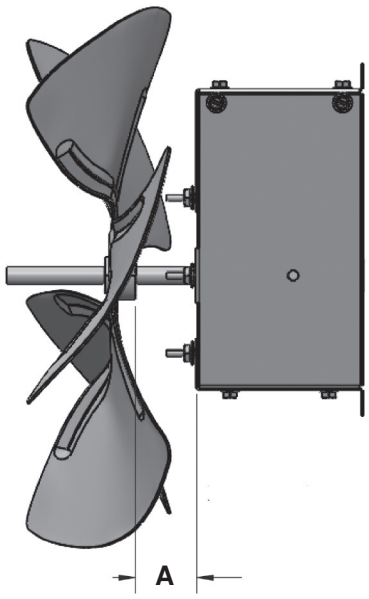


Figure 7. Fan and Motor Spacing (Refer to Table 6)

Table 6. Fan Blade-to-Motor Spacing

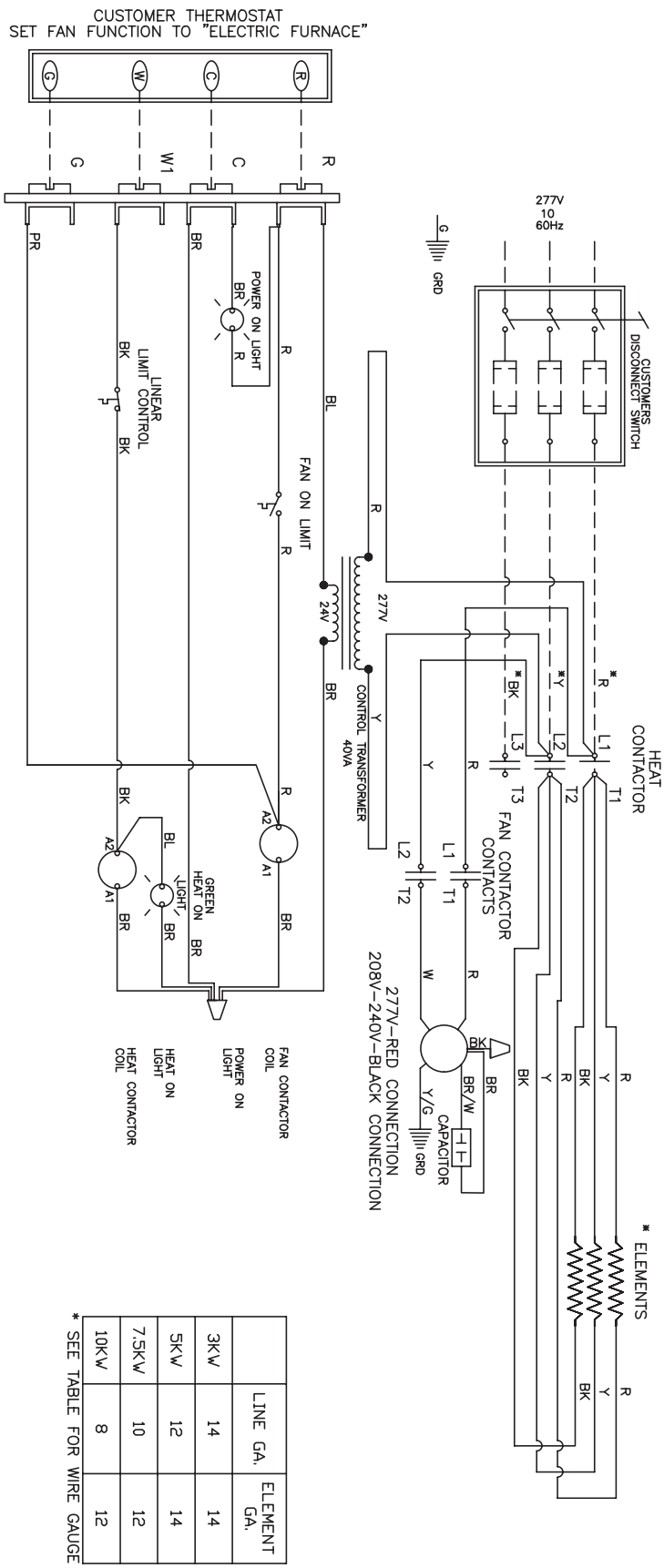
Unit Size (kW)	Dimension A* (Inches (mm))	Setscrew Torque (Inch-Pounds ±10)
3, 5, 20	1-7/8 (47.6)	130
7, 10	3/8 (9.5)	
15	1-5/8 (41.3)	
*See **Figure 7**.		

8. Position fan and motor assembly in place and secure fan and motor assembly support to control/fan panel using existing two screws.
9. Rotate fan blade to check for adequate clearance—adjust as necessary.
10. Reconnect fan motor wires and ground screw in accordance with wiring diagram.
11. Re-install access panel and back panel using existing screws.
12. Turn ON electric power to unit and check for proper operation.

TROUBLESHOOTING

Table 7. Troubleshooting		
Symptom	**Probable Cause**	**Remedy**
A. Unit will not start	1. No power to unit	Turn ON power and check supply fuses or circuit breaker
	2. No 24V power to thermostat	Turn up thermostat
		Check control transformer output
		Replace transformer as necessary
	3. No power to fan motor	Tighten connections at motor terminals
	4. Improper thermostat location or adjustment	Refer to thermostat manufacturer's instructions
	5. Defective fan motor	Replace fan motor
B. No heat (fan operating)	1. Poor airflow	Remove obstruction/clean motor, fan, and fan grid
	2. Improper thermostat location or adjustment	Refer to thermostat manufacturer's instructions
	3. Defective electrical component (limit switch or contactor)	Replace electrical component(s) as necessary
	4. Defective heating element	Replace heating element
C. Fan motor will not run	1. Circuit open	Check wiring and connections
	2. Defective electrical component (limit switch or contactor)	Replace electrical component(s) as necessary
	3. Defective fan motor	Replace fan motor
D. Fan motor cuts out on overload	1. Poor airflow	Remove obstruction/clean motor, fan, and fan grid
	2. Low or high voltage supply	Correct electric supply
	3. Defective fan motor	Replace fan motor

APPENDIX: WIRING DIAGRAMS

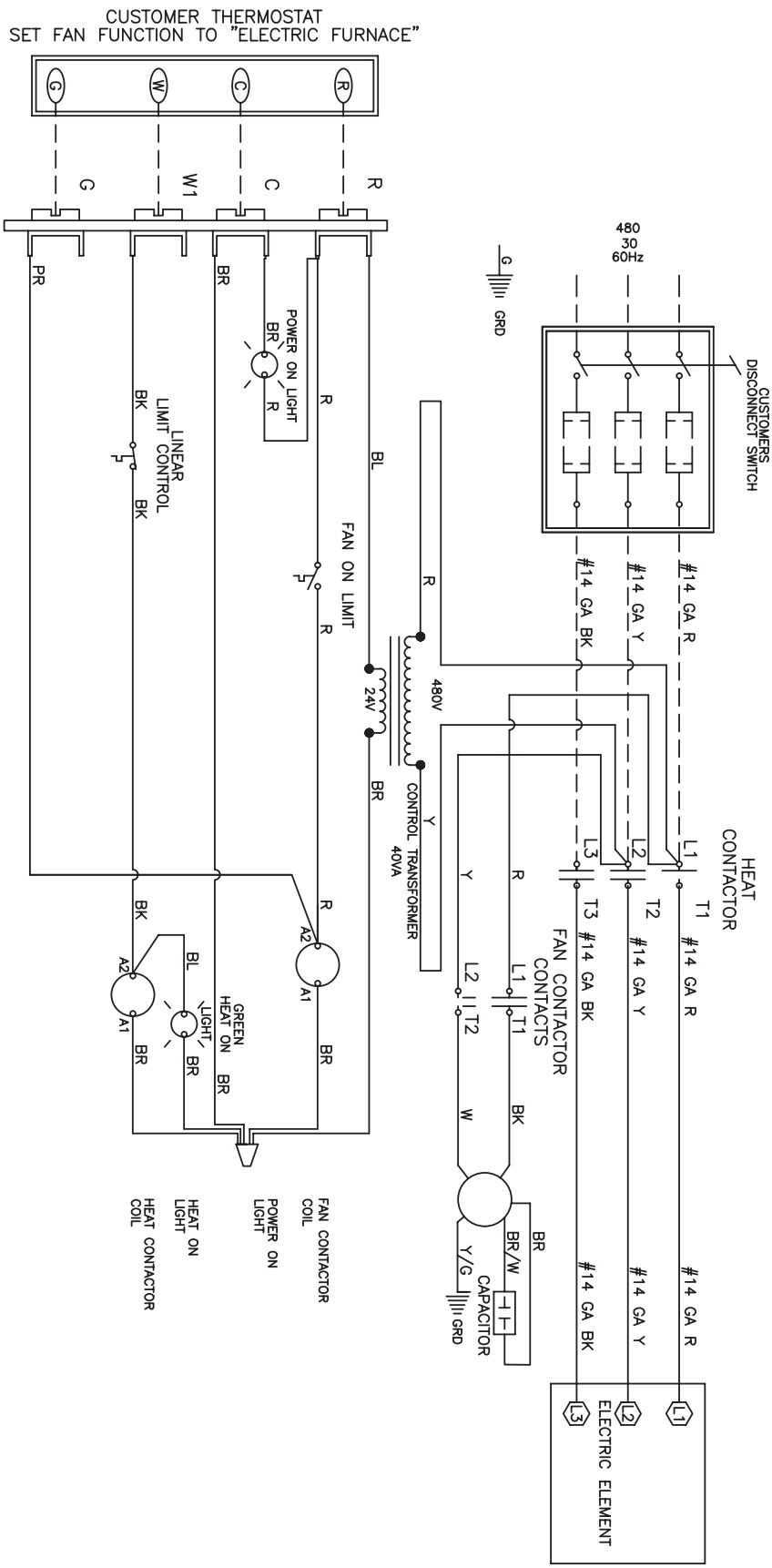


	LINE GA.	ELEMENT GA.
3KW	14	14
5KW	12	14
7.5KW	10	12
10KW	8	12

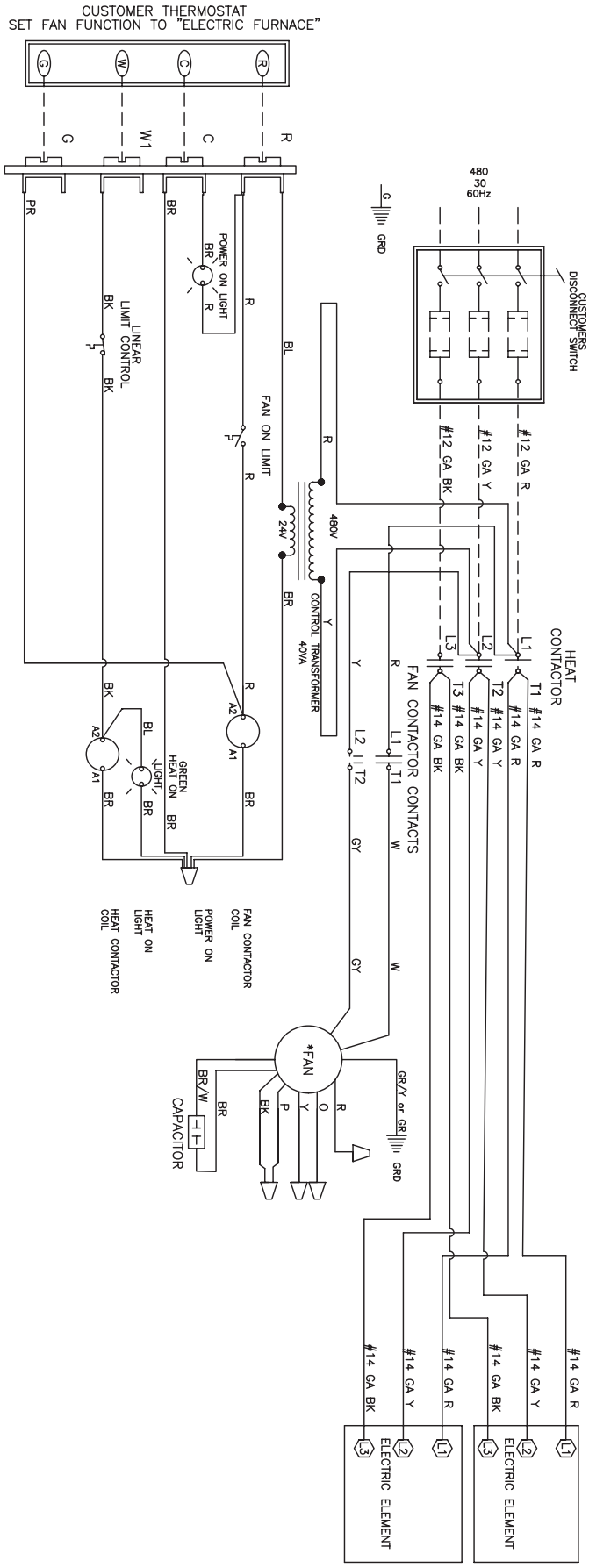
* SEE TABLE FOR WIRE GAUGE

AK4 Wiring Diagram

APPENDIX: WIRING DIAGRAMS—CONTINUED

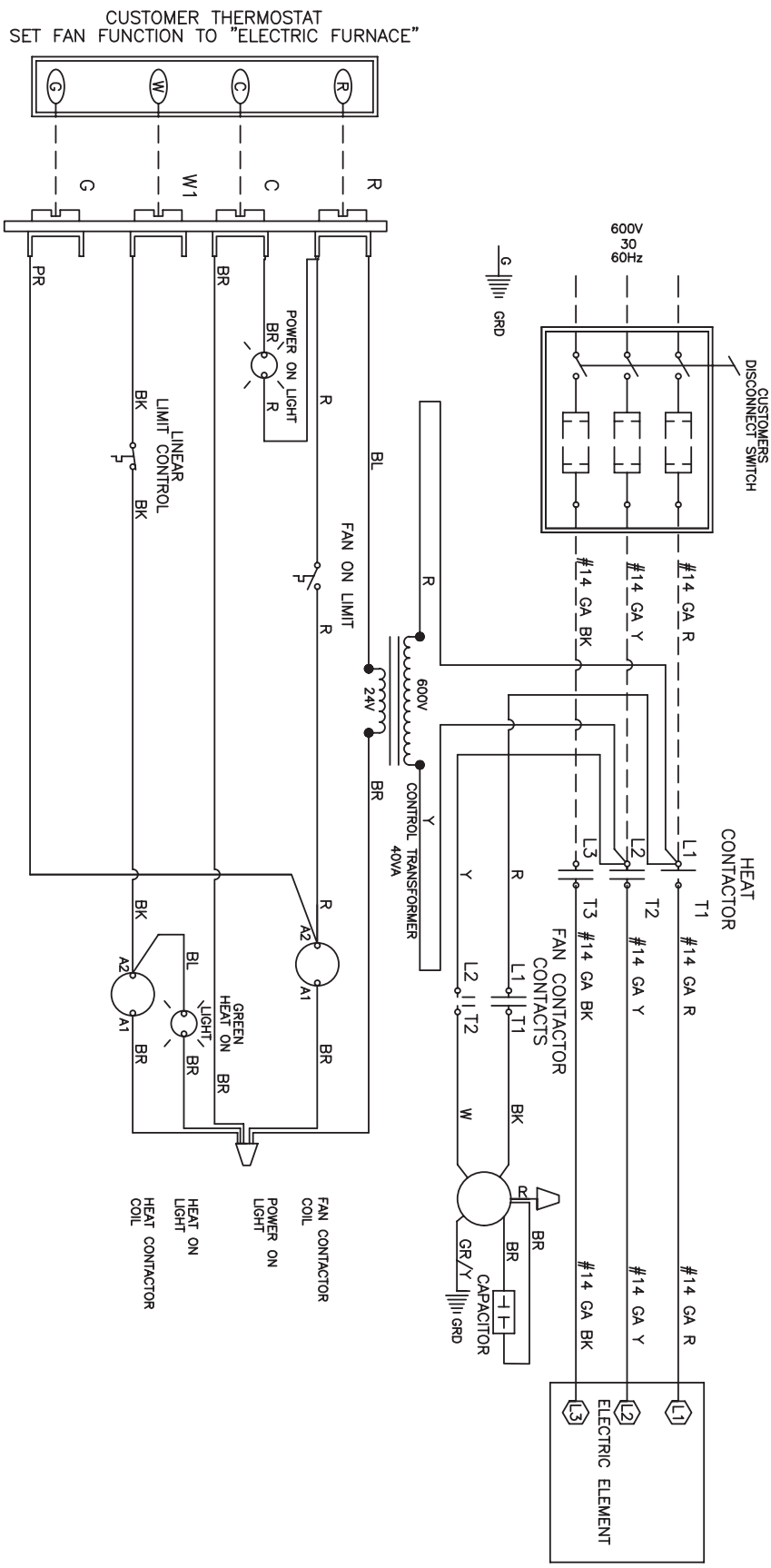


AK7E (3kW, 5kW, 7kW, 10kW) Wiring Diagram

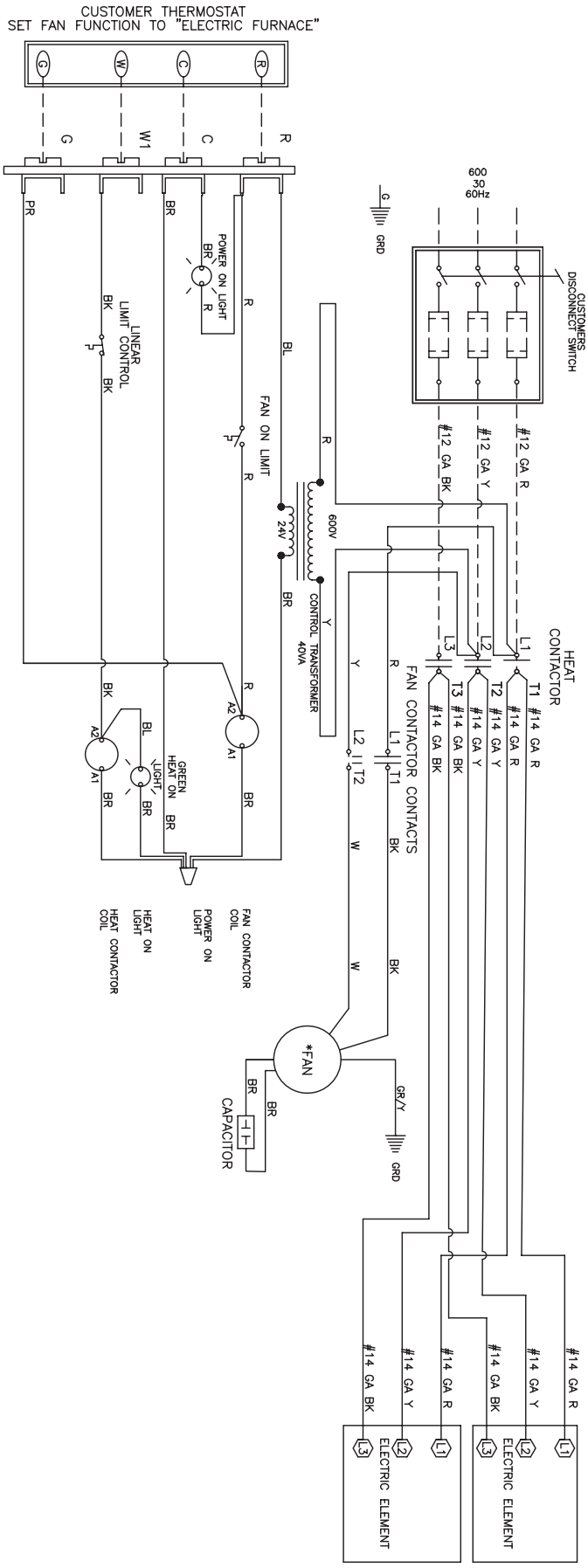


AK7E (15kW, 20kW) Wiring Diagram

APPENDIX: WIRING DIAGRAMS—CONTINUED

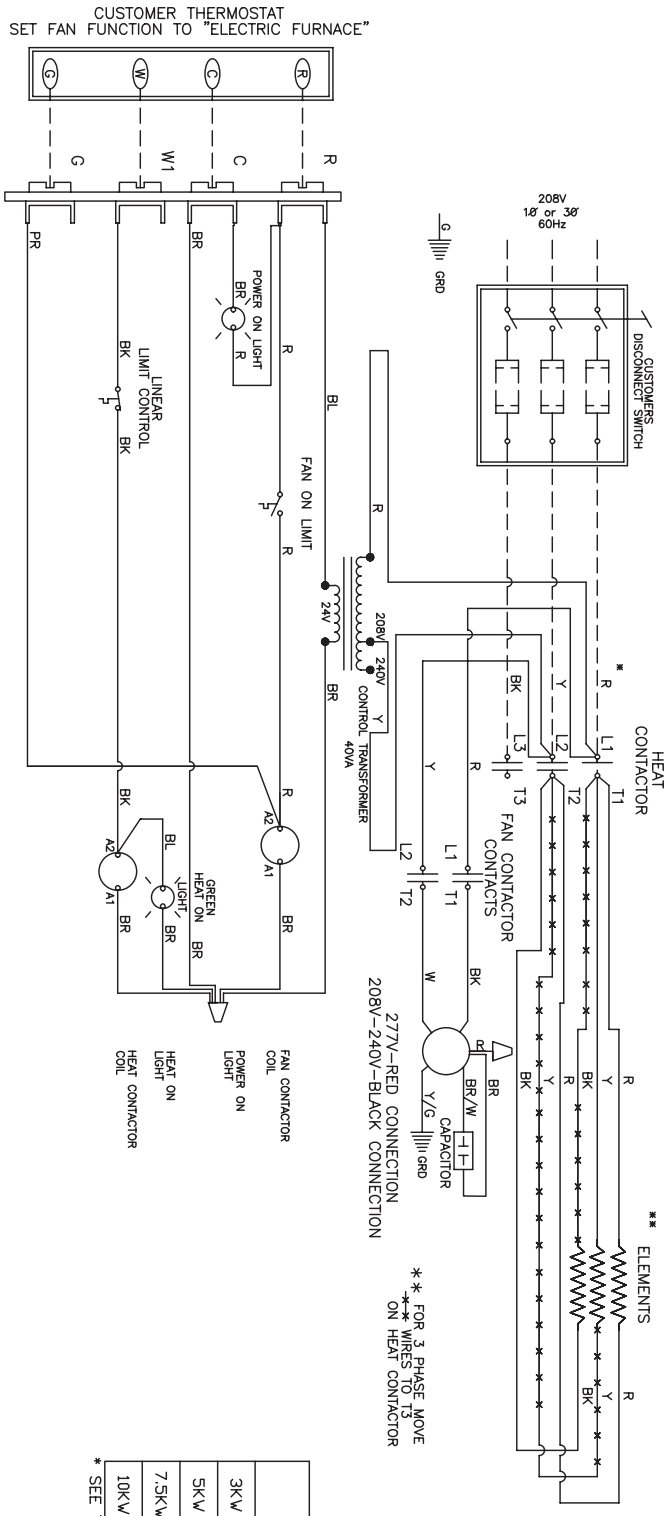


AK8E (3kW, 5kW, 7kW, 10kW) Wiring Diagram



AK8E (15kW, 20kW) Wiring Diagram

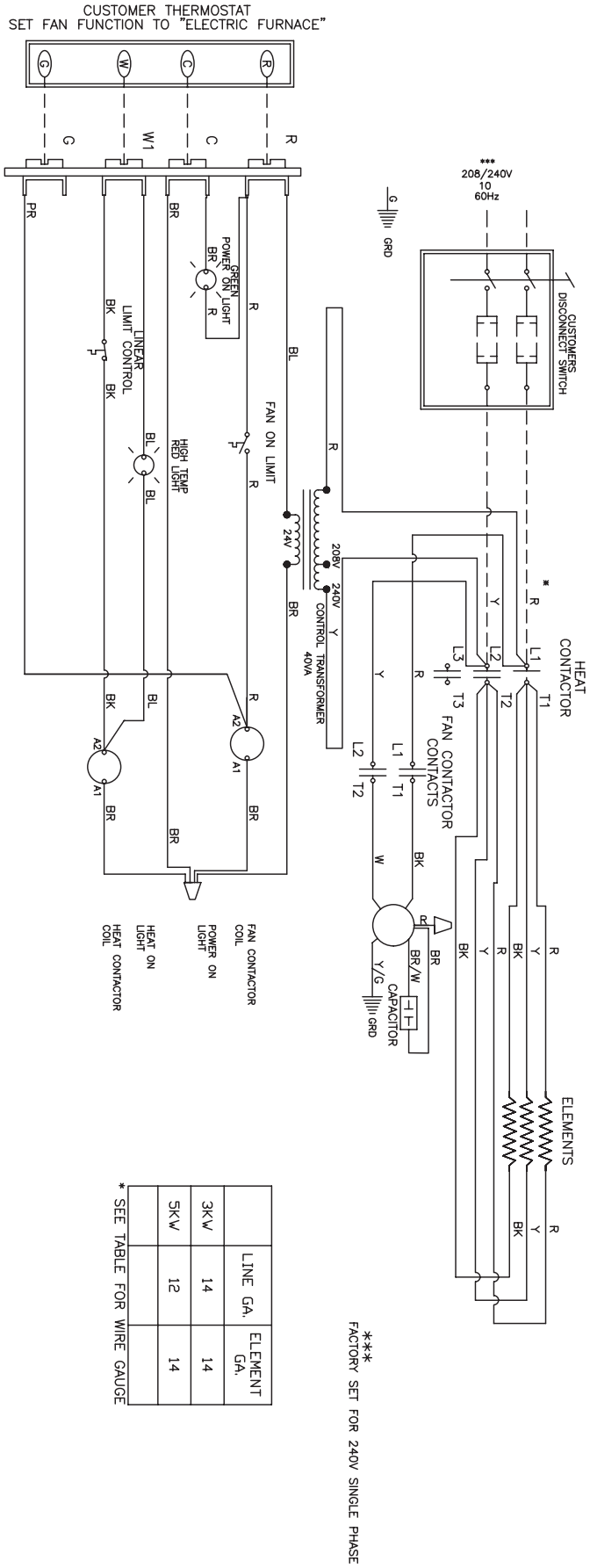
APPENDIX: WIRING DIAGRAMS—CONTINUED



* SEE TABLE FOR WIRE GAUGE

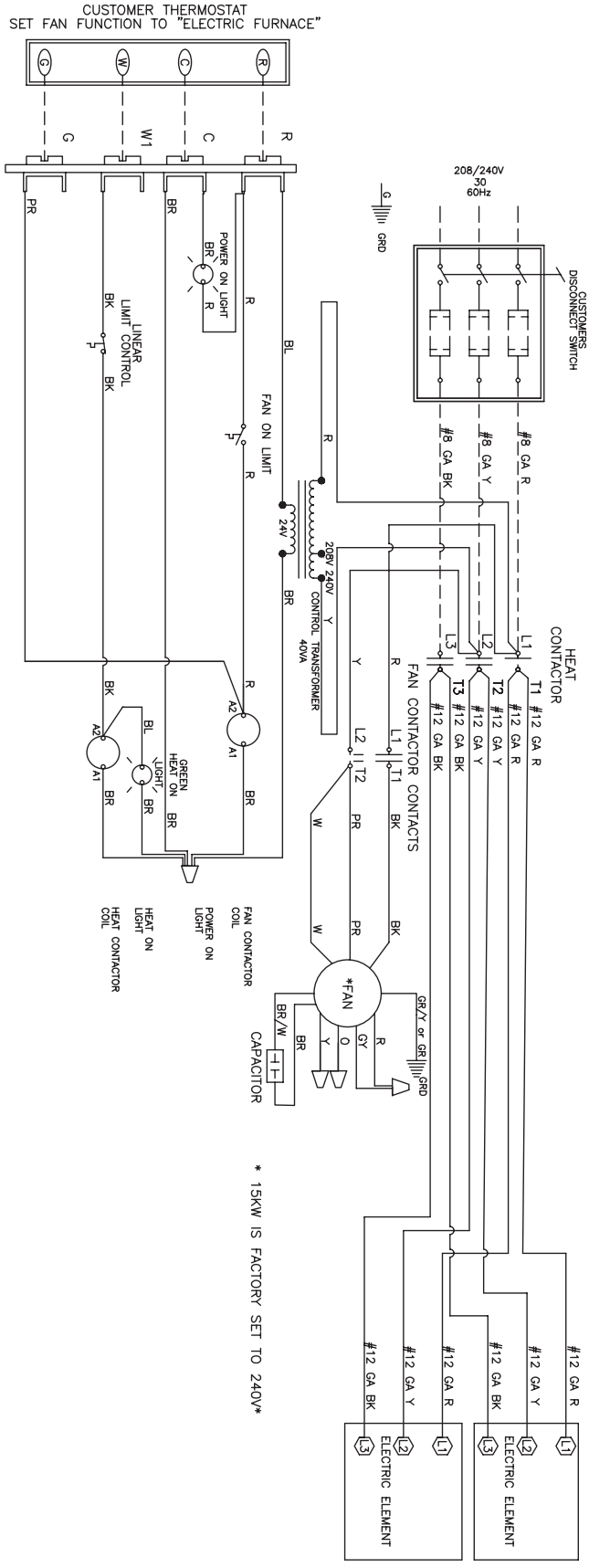
	LINE GA.	ELEMENT GA.
3KW	14	14
5KW	12	14
7.5KW	10	12
10KW	8	12

AK15 Wiring Diagram

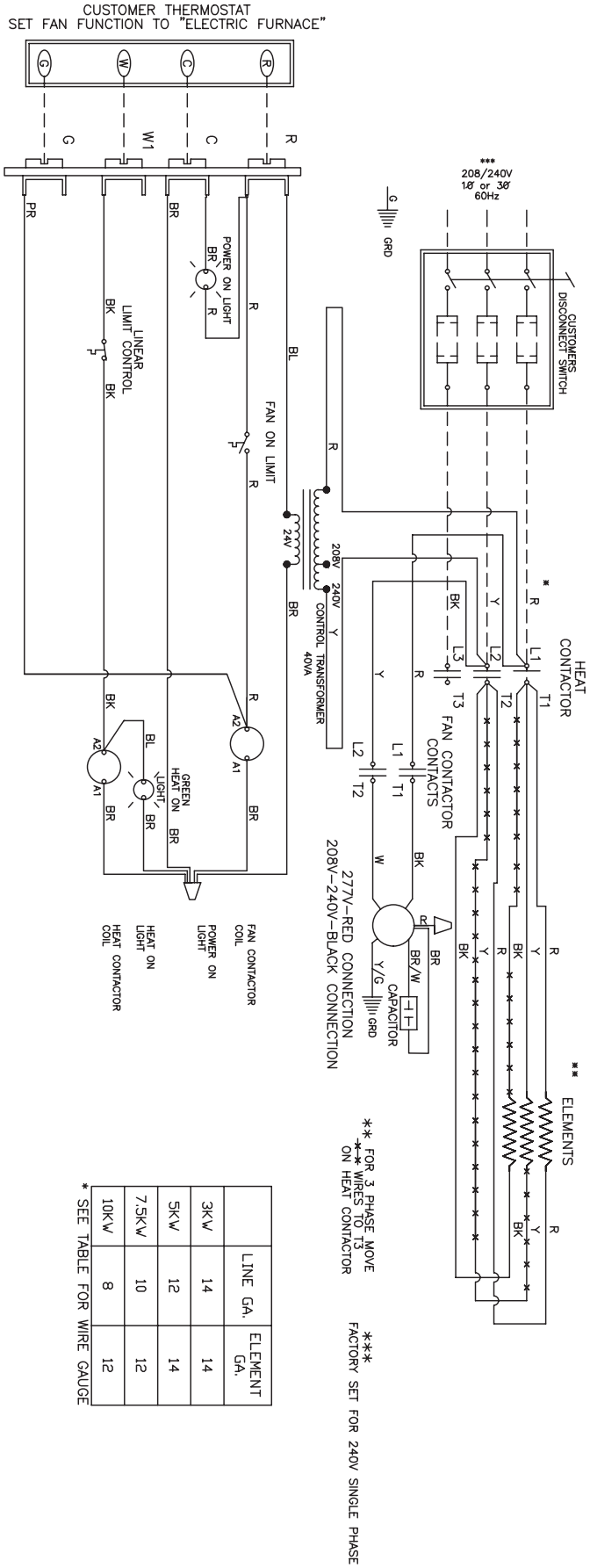


AK19 Wiring Diagram (Models EUHC-R3 and EUHC-R5)

APPENDIX: WIRING DIAGRAMS—CONTINUED



AK20 Wiring Diagram



	LINE GA.	ELEMENT GA.
3KW	14	14
5KW	12	14
7.5KW	10	12
10KW	8	12

* SEE TABLE FOR WIRE GAUGE

AK44 Wiring Diagram

NOTES

NOTES

INSTALLATION RECORD (TO BE COMPLETED BY INSTALLER)

For service or repair, contact the installer. For additional assistance, contact the distributor. For more information, contact your local Reznor representative.

Model	Serial No.	Date of Installation	Notes
	Installer	**Distributor**	
Name			
Company			
Address			
Phone No.			

For more information on Reznor HVAC products:

- **Contact your local Reznor representative at 1-800-695-1901**
- **Refer to the technical specifications, manuals, and consumer materials found at www.reznorhvac.com**

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