INSTALLATION INSTRUCTIONS

Electric Heat Packages

Models:

EHCH036A-A05
EHCH036A-A10
EHCH036A-A15
EHCH036A-B05
EHCH036A-B09
EHCH036B-B09
EHCH036A-B15
EHCH036A-C05
EHCH036A-C09
EHCH036A-C15
EHVH036A-R05
EHVH036A-R10
EHVH036A-S05
EHVH036A-S09
EHVH036A-S15
EHVH036ADS09

EHCH042A-A05
EHCH042A-A10
EHCH042A-B05
EHCH042A-B09
EHCH042A-B15
EHWH042A-A05
EHWH042A-A10
EHWH042B-A10
EHWH042A-A15
EHWH042B-A15
EHWH042A-B05

EHCH048A-A05
EHCH048A-A10
EHCH048A-A15
EHCH048A-B05
EHCH048A-B09
EHCH048A-B15
EHCH048A-C05
EHCH048A-C09
EHCH048A-C15
EHWH048A-A04
EHWH048A-A05
EHWH048A-A10
EHWH048A-A15

EHCH060A-A05
EHCH060A-A10
EHCH060A-A15
EHCH060B-A05
EHCH060B-A10
EHCH060B-A15
EHCH060A-A20
EHCH060A-B05
EHCH060A-B09
EHCH060A-B15
EHCH060A-C05
EHCH060A-C09
EHCH060A-C15
EHVH060A-S05
EHVH060ADR05
EHVH060ADR10
EHVH060ADR15
EHWH060A-A10
EHWH060A-A15
EHWH060A-B15
EHWH060A-Q15

For Use with Large Cabinet Wall-Mounted Heat Pumps

Bard™ SINCE 1914
Climate Control Solutions

Bard Manufacturing Company, Inc.
Bryan, Ohio 43506
www.bardhvac.com

Manual: 2100-781C
Supersedes: 2100-781B
Date: 7-15-24

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Description

The EHCH/EHVH/EHWH series electric heater packages are field-installable heater packages suitable for use with Bard wall mount heat pumps. The packages consist of the electric heat strip, the heater control base (which includes the heat contactors and circuit breaker or toggle or rotary disconnects), installation instructions and wiring diagrams. See Tables 1A and 1B on pages 4 and 5 for nominal electrical data and BTU output. **Before installation, check unit serial plate to ensure the heater package model to be installed is a listed heater package that is suitable for use with the Bard wall mount unit** (see Figure 6 on page 16).

Important

The equipment covered in this manual is to be installed by trained, experienced service and installation technicians.

Shipping Damage

Upon receipt of equipment, the carton should be checked for external signs of shipping damage. If damage is found, the receiving party must contact the last carrier immediately, preferably in writing, requesting inspection by the carrier's agent.

Unpacking the Electric Heat Package

Remove the heat package from the shipping carton. The heat package must consist of the following:

1. Basic heater.
2. Electric heat control base and wiring.
3. Installation instructions.
4. Two wiring diagrams, one to be applied to unit.
5. Adhesive label to re-mark serial plate to indicate new model number. This is attached to the front of these instructions.

TABLE 1A
Electrical Data and BTU Output – EHCH Series

Heater Package Model	Volts	Phase	Nominal KW	Nominal BTU
EHCH036A-A05	230/208	1	4.6/3.8	15,700/12,800
EHCH036A-A10	230/208	1	9.2/7.5	31,400/25,600
EHCH036A-A15	230/208	1	13.8/11.3	47,100/38,400
EHCH036A-B05	230/208	3	4.6/3.8	15,700/12,800
EHCH036A-B09	230/208	3	8.3/6.8	28,300/23,000
EHCH036B-B09	230/208	3	8.3/6.8	28,300/23,000
EHCH036A-B15	230/208	3	13.8/11.3	47,100/38,400
EHCH036A-C05	460	3	4.6	15,700
EHCH036A-C09	460	3	8.3	28,300
EHCH036A-C15	460	3	13.8	47,100
EHCH042A-A05	230/208	1	4.6/3.8	15,700/12,800
EHCH042A-A10	230/208	1	9.2/7.5	31,400/25,600
EHCH042A-B05	230/208	3	4.6/3.8	15,700/12,800
EHCH042A-B09	230/208	3	8.3/6.8	28,300/23,000
EHCH042A-B15	230/208	3	13.8/11.3	47,100/38,400
EHCH048A-A05	230/208	1	4.6/3.8	15,700/12,800
EHCH048A-A10	230/208	1	9.2/7.5	31,400/25,600
EHCH048A-A15	230/208	1	13.8/11.3	47,100/38,400
EHCH048A-B05	230/208	3	4.6/3.8	15,700/12,800
EHCH048A-B09	230/208	3	8.3/6.8	28,300/23,000
EHCH048A-B15	230/208	3	13.8/11.3	47,100/38,400
EHCH048A-C05	460	3	4.6	15,700
EHCH048A-C09	460	3	8.3	28,300
EHCH048A-C15	460	3	13.8	47,100
EHCH060A-A05	230/208	1	4.6/3.8	15,700/12,800
EHCH060A-A10	230/208	1	9.2/7.5	31,400/25,600
EHCH060A-A15	230/208	1	13.8/11.3	47,100/38,400
EHCH060B-A05	230/208	1	4.6/3.8	15,700/12,800
EHCH060B-A10	230/208	1	9.2/7.5	31,400/25,600
EHCH060B-A15	230/208	1	13.8/11.3	47,100/38,400
EHCH060A-A20	230/208	1	18.4/15.0	62,800/51,200
EHCH060A-B05	230/208	3	4.6/3.8	15,700/12,800
EHCH060A-B09	230/208	3	8.3/6.8	28,300/23,000
EHCH060A-B15	230/208	3	13.8/11.3	47,100/38,400
EHCH060A-C05	460	3	4.6	15,700
EHCH060A-C09	460	3	8.3	28,300
EHCH060A-C15	460	3	13.8	47,100

TABLE 1B
Electrical Data and BTU Output – EHVH/EHWH Series

Heater Package Model	Volts	Phase	Nominal KW	Nominal BTU
EHVH036A-R05	230/208	1	4.6/3.8	15,700/12,800
EHVH036A-R10	230/208	1	9.2/7.5	31,400/25,600
EHVH036A-S05	230/208	3	4.6/3.8	15,700/12,800
EHVH036A-S09	230/208	3	8.3/6.8	28,300/23,000
EHVH036A-S15	230/208	3	13.8/11.3	47,100/38,400
EHVH036ADS09	230/208	3	8.3/6.8	28,300/23,000
EHVH060A-S05	230/208	3	4.6/3.8	15,700/12,800
EHVH060ADR05	230/208	1	4.6/3.8	15,700/12,800
EHVH060ADR10	230/208	1	9.2/7.5	31,400/25,600
EHVH060ADR15	230/208	1	13.8/11.3	47,100/38,400
EHWH042A-A05	230/208	1	4.6/3.8	15,700/12,800
EHWH042A-A10	230/208	1	9.2/7.5	31,400/25,600
EHWH042A-A15	230/208	1	13.8/11.3	47,100/38,400
EHWH042B-A10	230/208	1	9.2/7.5	31,400/25,600
EHWH042B-A15	230/208	1	13.8/11.3	47,100/38,400
EHWH042A-B05	230/208	3	4.6/3.8	15,700/12,800
EHWH048A-A04	230/208	1	3.7/3.0	12,600/10,200
EHWH048A-A05	230/208	1	4.6/3.8	15,700/12,800
EHWH048A-A10	230/208	1	9.2/7.5	31,400/25,600
EHWH048A-A15	230/208	1	13.8/11.3	47,100/38,400
EHWH060A-A10	230/208	1	9.2/7.5	31,400/25,600
EHWH060A-A15	230/208	1	13.8/11.3	47,100/38,400
EHWH060A-B15	230/208	3	13.8/11.3	47,100/38,400
EHWH060A-Q15	575	3	15.1	51,200

Wiring Main Power

1. On all installations, size unit power supply wiring for the minimum circuit ampacity requirement for the unit and heater package combination listed on the unit serial plate.

   For existing installations, addition or upgrading of a heater package may require that larger supply wires be run to the unit. Resize all power supply wires for the minimum circuit ampacity rating listed on the unit serial plate that is applicable for the combination of unit and heater package.

⚠ WARNING

Install properly sized power supply leads for the unit/heater combination minimum circuit ampacity as listed on the unit serial plate. Hazard of fire. Failure to install properly sized conductors could result in fire causing damage, bodily injury or death.

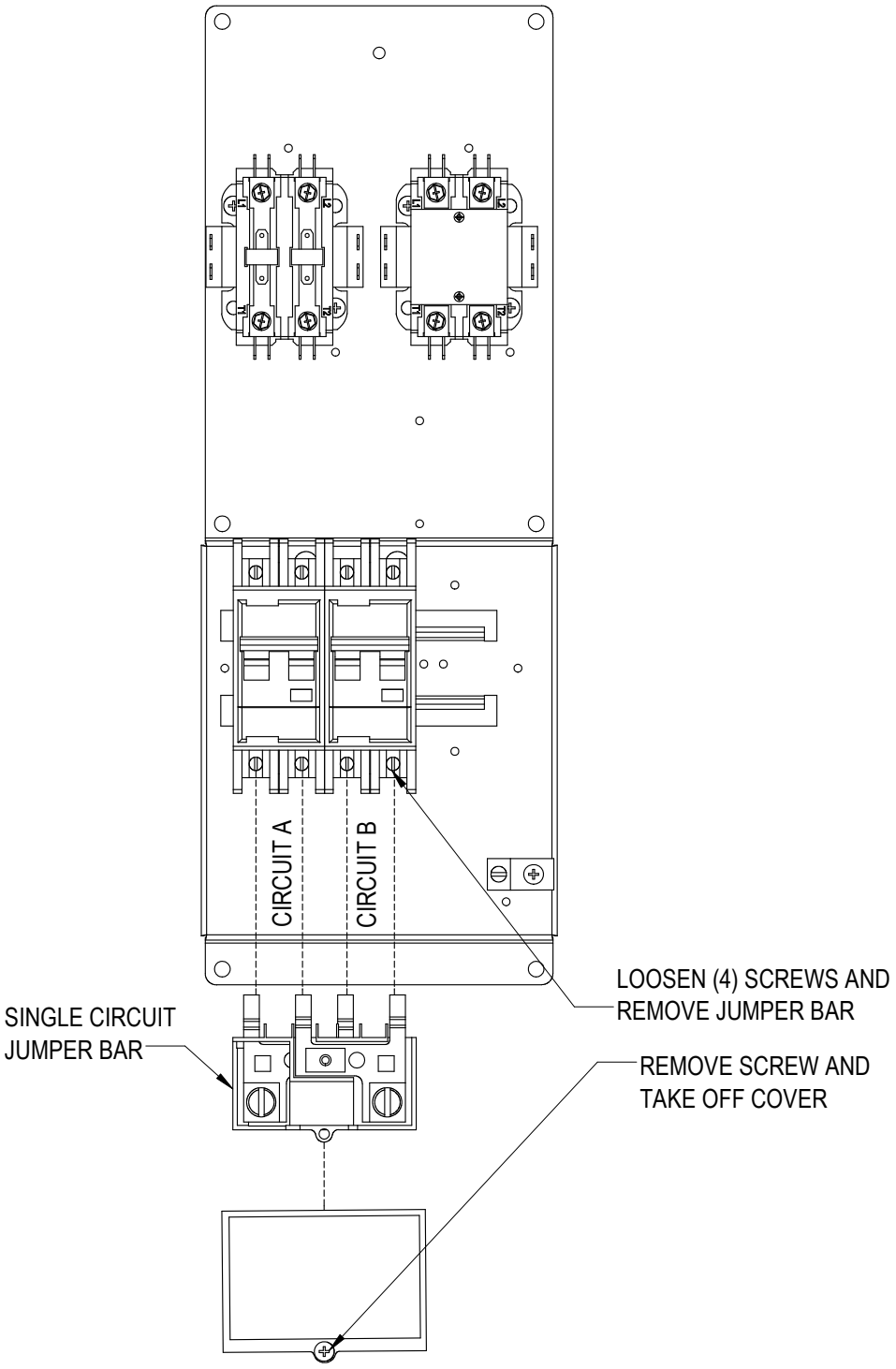
2. **All heater packages covered by this manual are factory wired for single supply circuit.** The following heater packages are field convertible to a dual supply circuit if required or desired:

EHCH036A-A10	EHVH036A-R10
EHCH036A-A15	EHVH060ADR05
EHCH042A-A10	EHVH060ADR10
EHCH042A-A15	EHVH060ADR15
EHCH048A-A10	EHWH042A-A10
EHCH048A-A15	EHWH042A-A15
EHCH060A-A05	EHWH042B-A10
EHCH060A-A10	EHWH042B-A15
EHCH060A-A15	EHWH048A-A05
EHCH060B-A05	EHWH048A-A10
EHCH060B-A10	EHWH048A-A15
EHCH060A-A15	EHWH060A-A10
EHCH060A-A20	EHWH060A-A15

   To convert the above heater package to dual circuit configuration before installation, loosen four (4) screws holding jumper bar in place and remove jumper bar (see Figure 1 on page 7). Circuits A + B are now identified on the heater package.

   Wire should be sized to the minimum circuit ampacity as specified on the serial plates of units that accept this heater package for circuits A + B.

FIGURE 1
Electrical Connections



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Installation of Heater Package

1. Disconnect all power to unit before installation.

⚠ WARNING

Disconnect all power to unit before installing heater package. Hazard of electrical shock. Failure to disconnect power could result in injury or death.

2. Before installation, check unit serial plate to ensure that the heater package model to be installed is listed as a heater package suitable for use with the unit.

   Under no circumstance shall a heater package be installed in a unit if the model number of the heater package does not appear on the unit serial plate.

⚠ WARNING

Install only heater packages listed on unit serial plate. Hazard of fire or electrical shock. Failure to install listed heater package could result in fire, injury or death.

3. Remove upper front door, electric heater access panel and control panel cover, both inner and outer (see Figure 2 on page 9).
4. All heaters are installed with the thermal cutoffs positioned to the top of the unit. Install heat strip(s) through heater access opening. Position heat strip support rod in heater support hole 1, 2 or 3 as indicated in Tables 2A and 2B on pages 10 and 11 and Figure 3 on page 12. Secure in place with two (2) sheet metal screws in mounting holes.

   On heater packages with two heat strips, install 9KW or 10KW heater first in position closest to the outlet air frame (see Figures 4E and 4F on page 14).
5. Install heater control base into heating control area above control panel as shown in Figure 5 on page 15. Secure with four (4) sheet metal screws provided.
6. Plug male 4-pin connector into mating connector mounted in control panel (see Figure 5).
7. Connect red compressor supply lead to L1 of terminal block. Connect black compressor supply lead to L2 of terminal block. If three phase, connect yellow supply lead to L3 of terminal block. See Figure 5 and wiring diagram.
8. Route wires from heater control base up through raceway in top right corner of control panel to the heaters (see Figure 5).
9. Wire heater package per wiring diagram supplied with the heater package. All wires are stamped with wire numbers that correspond with terminal numbers on the wiring diagram and stamped numbers on the heat strip. Limit switch wires are terminated with insulated quick connect terminals. See Figure 5.
10. Attach adhesive wiring diagram directly above unit wiring diagram on inner control panel cover.
11. Recheck all wiring. Break out appropriate circuit breaker tabs on inner control panel cover to allow trip lever to protrude. Replace control panel and heater access panels.
12. Resupply power to the unit and check for proper operation.
13. Re-mark serial plate with self-adhesive label attached to the front of this manual (see Figure 6 on page 16).

FIGURE 2
Electric Heater Access Panel and Control Panel Cover Locations

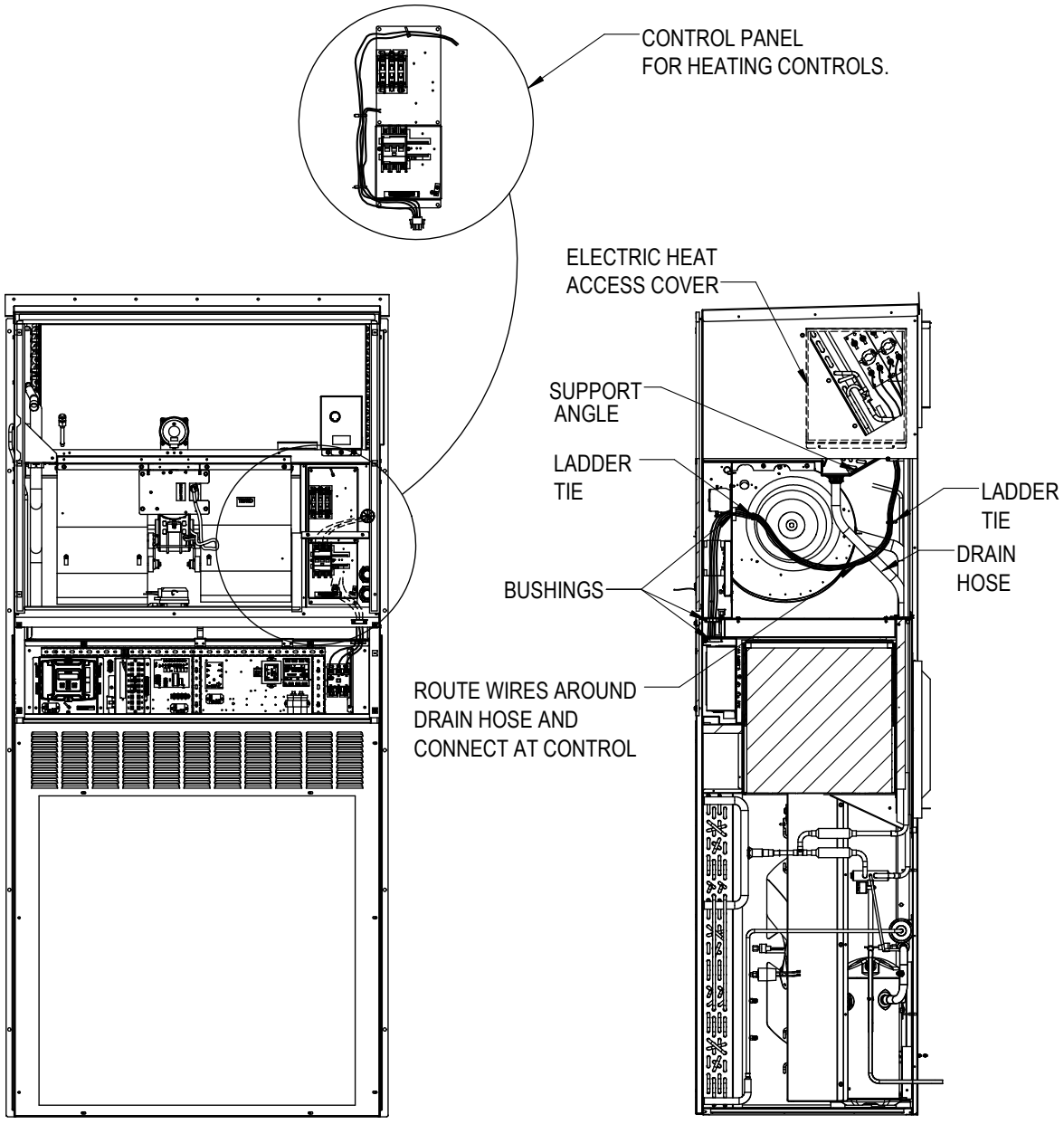

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TABLE 2A
References to Figures 3 and 4 by Model Number – EHCH Series

Heater Package Model Number	Figure 3 Rod Support and Screw Mounting Position	Figure 4 Heater Terminal Identification Drawing
EHCH036A-A05	1	4A
EHCH036A-A10	1	4C
EHCH036A-A15	1 + 3	4D
EHCH036A-B05	1	4B
EHCH036A-B09	1	4B
EHCH036B-B09	1	4B
EHCH036A-B15	1 + 3	4E
EHCH036A-C05	1	4B
EHCH036A-C09	1	4B
EHCH036A-C15	1 + 3	4E
EHCH042A-A05	1	4A
EHCH042A-A10	1	4C
EHCH042A-B05	1	4B
EHCH042A-B09	1	4B
EHCH042A-B15	1 + 3	4E
EHCH048A-A05	1	4A
EHCH048A-A10	1	4C
EHCH048A-A15	1 + 3	4D
EHCH048A-B05	1	4B
EHCH048A-B09	1	4B
EHCH048A-B15	1 + 3	4E
EHCH048A-C05	1	4B
EHCH048A-C09	1	4B
EHCH048A-C15	1 + 3	4E
EHCH060A-A05	1	4A
EHCH060A-A10	1	4C
EHCH060A-A15	1 + 3	4D
EHCH060B-A05	1	4A
EHCH060B-A10	1	4C
EHCH060B-A15	1 + 3	4D
EHCH060A-A20	1 + 3	4F
EHCH060A-B05	1	4B
EHCH060A-B09	1	4B
EHCH060A-B15	1 + 3	4E
EHCH060A-C05	1	4B
EHCH060A-C09	1	4B
EHCH060A-C15	1 + 3	4E

TABLE 2B
References to Figures 3 and 4 by Model Number – EHVH/EHWH Series

Heater Package Model Number	Figure 3 Rod Support and Screw Mounting Position	Figure 4 Heater Terminal Identification Drawing
EHVH036A-R05	1	4A
EHVH036A-R10	1	4C
EHVH036A-S05	1	4B
EHVH036A-S09	1	4B
EHVH036A-S15	1 + 3	4E
EHVH036ADS09	1	4B
EHVH060A-S05	1	4B
EHVH060ADR05	1	4A
EHVH060ADR10	1	4C
EHVH060ADR15	1 + 3	4D
EHWH042A-A05	1	4A
EHWH042A-A10	1	4C
EHWH042A-A15	1 + 3	4D
EHWH042B-A10	1	4C
EHWH042B-A15	1 + 3	4D
EHWH042A-B05	1	4B
EHWH048A-A04	1	4A
EHWH048A-A05	1	4A
EHWH048A-A10	1	4C
EHWH048A-A15	1 + 3	4D
EHWH060A-A10	1	4C
EHWH060A-A15	1 + 3	4D
EHWH060A-B15	1 + 3	4E
EHWH060A-Q15	1 + 3	4E

FIGURE 3
Screw Mounting Holes

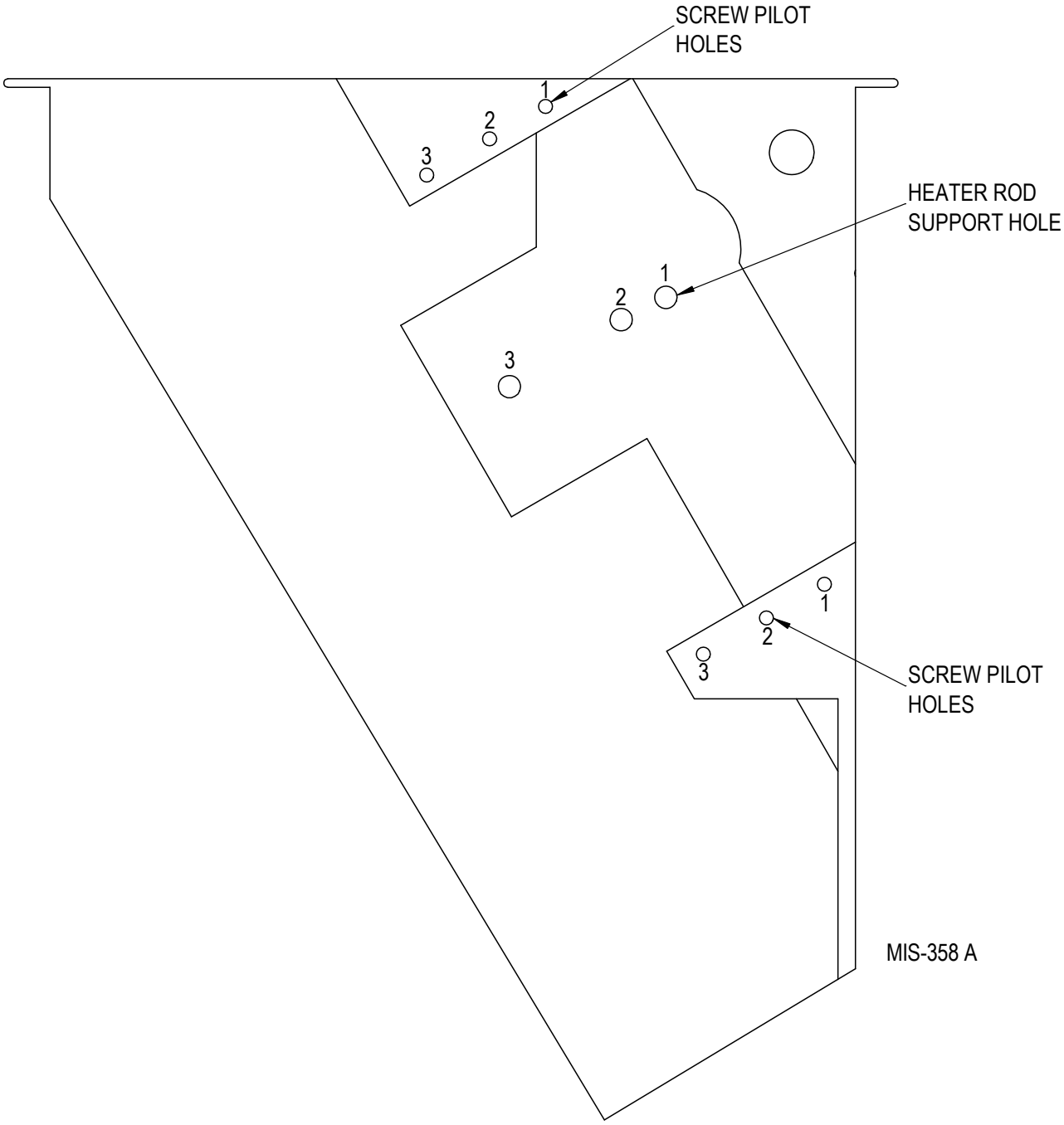

FIGURE 4
A Through D

FIGURE 4A

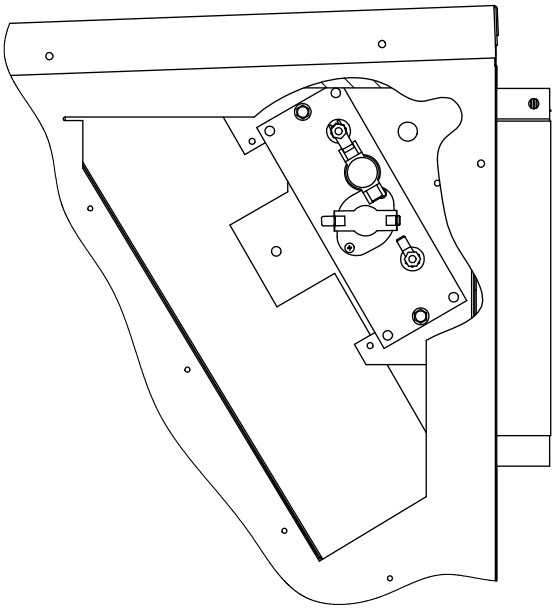

FIGURE 4B

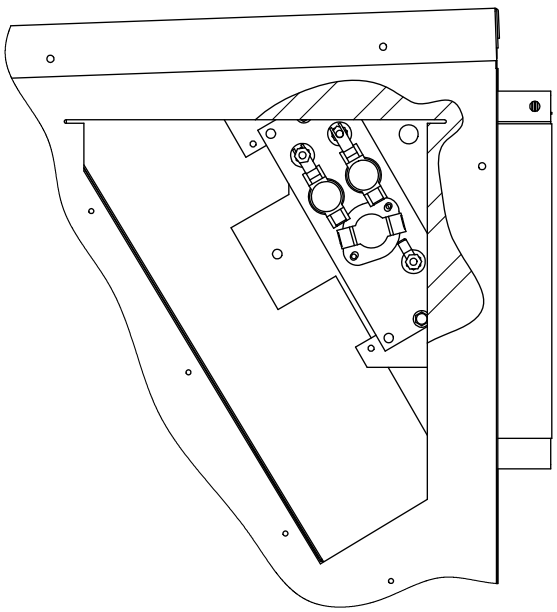

FIGURE 4C

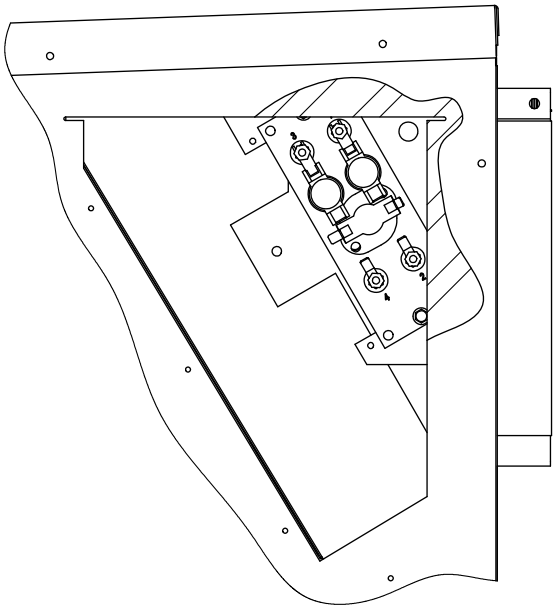

FIGURE 4D

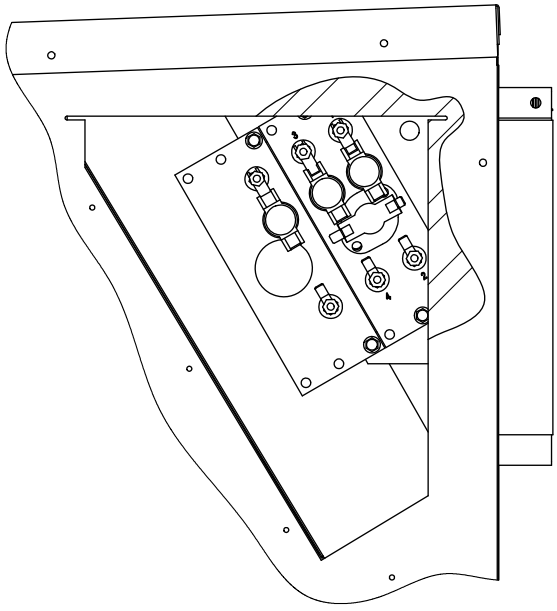

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FIGURE 4
E and F

FIGURE 4E

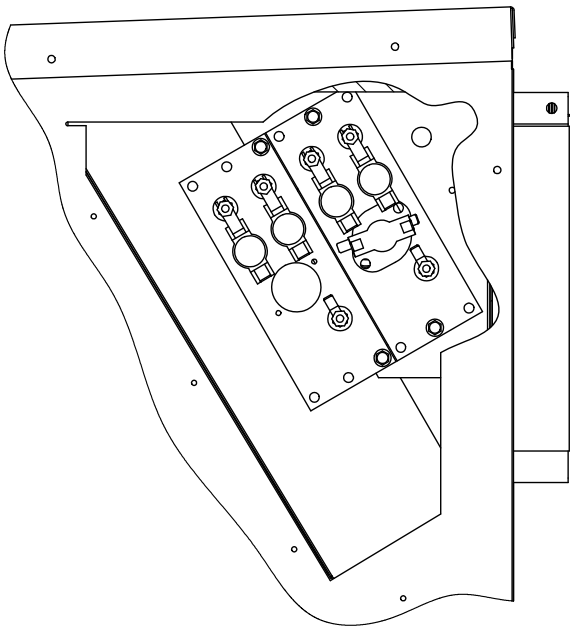

FIGURE 4F

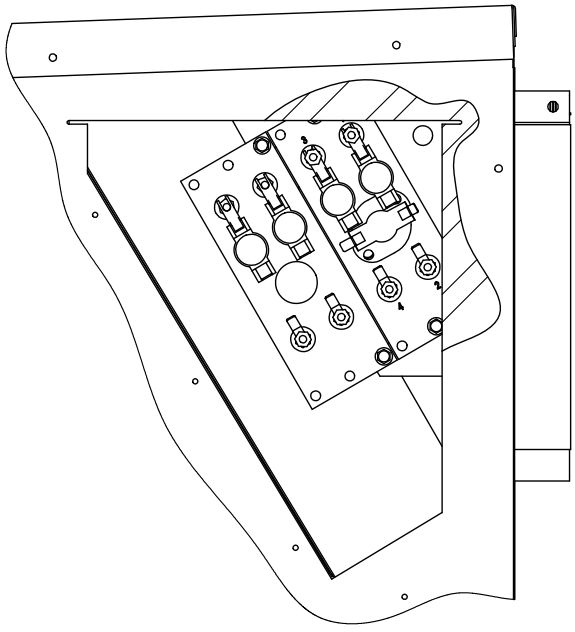

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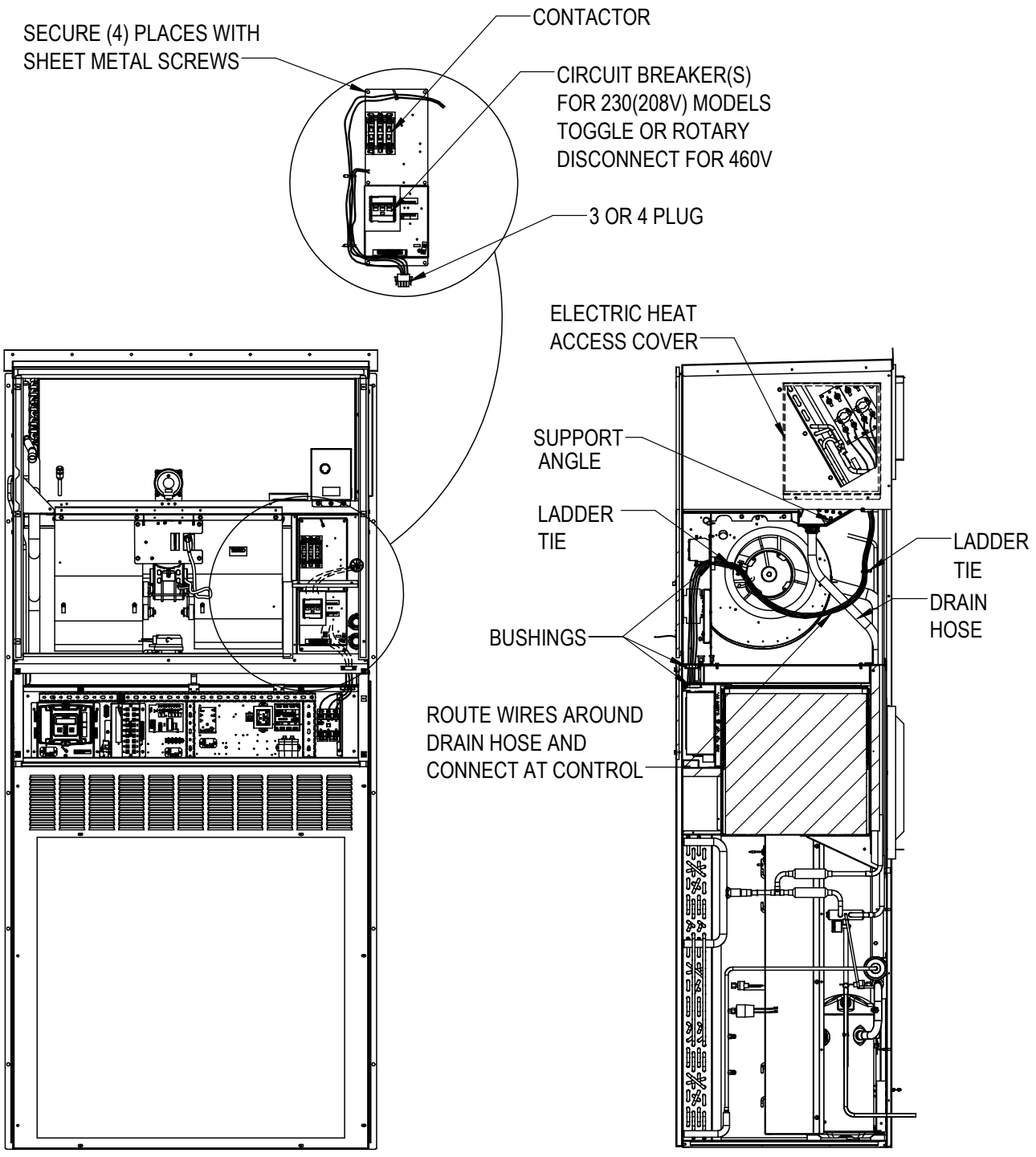
FIGURE 5
Installing Heater Base
and Connecting Wiring



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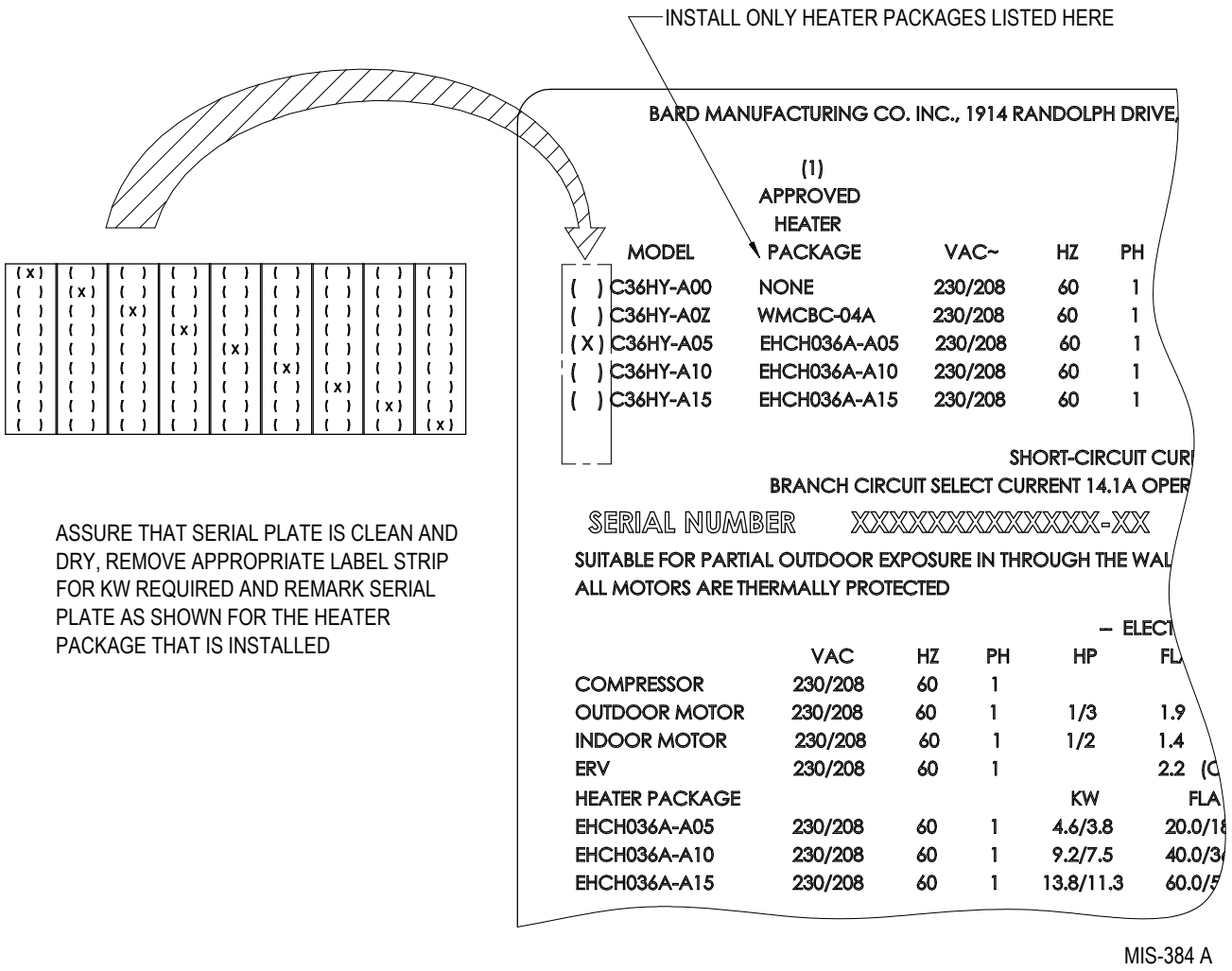
FIGURE 6
Serial Plate Showing
Approved Heater Packages