
INSTALLATION INSTRUCTIONS

Electric Heat Packages

Models:

EHW3HC-A04	EHW3HCDB09	EHW4HC-B18	EHW6HC-A15
EHW3HC-A05	EHW3HCDB15	EHW4HC-C05	EHW6HC-A20
EHW3HC-A10	EHW3HCDC05	EHW4HC-C09	EHW6HC-B09
EHW3HC-A15	EHW3HCDC09	EHW4HC-C15	EHW6HC-B18
EHW3HC-B05	EHW3HCDC15	EHW4HCDA05	EHW6HC-C09
EHW3HC-B09	EHW4HC-A04	EHW4HCDA15	EHW6HCDA05
EHW3HC-B15	EHW4HC-A05	EHW4HCDB05	EHW6HCDA10
EHW3HC-C05	EHW4HC-A15	EHW4HCDB15	EHW6HCDB09
EHW3HC-C15	EHW4HC-A20	EHW4HCDC15	EHW6HCDC09
EHW3HCDA10	EHW4HC-B09	EHW6HC-A05	EHW6HCDC15
EHW3HCDA15	EHW4HC-B15	EHW6HC-A10	

For Use with W**HC Series
Wall-Mounted Heat Pumps



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

Manual: 2100-733B
Supersedes: 2100-733A
Date: 1-21-20

CONTENTS

General Information	3
Description of Equipment	3
Important.....	3
Shipping Damage	3
Unpacking Electric Heat Package.....	3
Wiring Main Power.....	5

Figures

Figure 1	Electrical Connections.....	6
Figure 2	Electric Heater Access Panel and Control Panel Cover Locations.....	8
Figure 3	Rod Support and Screw Mounting Positions	10
Figure 4	A through D	11
Figure 4	E and F	12
Figure 5	Installing Heater Base and Connecting Wiring	13
Figure 6	Serial Plate Label	14

Installation	7
Installation of Heater Package	7

Tables

Table 1	Electrical Data and BTU Output.....	4
Table 2	References to Figures 3 and 4 by Model Number	9

GENERAL INFORMATION

Description

The 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 Table 1 on page 4 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 15).

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 1
Electrical Data and BTU Output

Heater Package Model	Volts	Phase	Nominal KW	Nominal BTU
EHW3HC-A04	240/208	1	4/3	13,650/10,240
EHW3HC-A05	240/208	1	5/3.75	17,065/12800
EHW3HC-A10	240/208	1	10/7.5	34130/25600
EHW3HC-A15	240/208	1	15/11.25	51200/38400
EHW3HC-B05	240/208	3	5/3.75	17,065/12,799
EHW3HC-B09	240/208	3	9/6.75	30,600/23,030
EHW3HC-B15	240/208	3	15/11.25	51,200/38,400
EHW3HC-C05	480	3	5	17,065
EHW3HC-C15	480	3	15	47,000
EHW3HCDA10	240/208	1	10/7.5	34,130/25,600
EHW3HCDA15	240/208	1	15/11.25	51,200/38,400
EHW3HCDB09	240/208	3	9/6.75	30,600/23,030
EHW3HCDB15	240/208	3	15/11.25	51,200/38,400
EHW3HCDC05	480	3	5	17,065
EHW3HCDC09	480	3	9	30,700
EHW3HCDC15	480	3	15	47,000
EHW4HC-A04	240/208	1	4/3	13,650/10,240
EHW4HC-A05	240/208	1	5/3.75	17,065/12800
EHW4HC-A15	240/208	1	15/11.25	51,200/38,400
EHW4HC-A20	240/208	1	20/15	68,260/51,200
EHW4HC-B09	240/208	3	9/6.75	30,600/23,030
EHW4HC-B15	240/208	3	15/11.25	51,200/38,400
EHW4HC-B18	240/208	3	18/13.5	61,430/46,100
EHW4HC-C05	480	3	5	17,065
EHW4HC-C09	480	3	9	30,700
EHW4HC-C15	480	3	15	47,000
EHW4HCDA05	240/208	1	5/3.75	17,065/12,800
EHW4HCDA15	240/208	1	15/11.25	51,200/38,400
EHW4HCDB05	240/208	3	5/3.75	17,065/12,799
EHW4HCDB15	240/208	3	15/11.25	51,200/38,400
EHW4HCDC15	480	3	15/11.25	51,200/38,400
EHW6HC-A05	240/208	1	5/3.75	17,065/12800
EHW6HC-A10	240/208	1	10/7.5	34130/25600
EHW6HC-A15	240/208	1	15/11.25	51,200/38,400
EHW6HC-A20	240/208	1	20/15	68,260/51,200
EHW6HC-B09	240/208	3	9/6.75	30,600/23,030
EHW6HC-B18	240/208	3	18/13.5	61,430/46,100
EHW6HC-C09	480	3	9	30,700
EHW6HCDA05	240/208	1	5/3.75	17,065/12800
EHW6HCDA10	240/208	1	10/7.5	34130/25600
EHW6HCDB09	240/208	3	9/6.75	30,600/23,030
EHW6HCDC09	480	3	9	30,700
EHW6HCDC15	480	3	15	47,000

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:

EHW3HC-A10

EHW3HC-A15

EHW3HCDA10

EHW3HCDA15

EHW4HC-A05

EHW4HC-A15

EHW4HC-A20

EHW4HCDA05

EHW4HCDA15

EHW6HC-A10

EHW6HC-A15

EHW6HCDA05

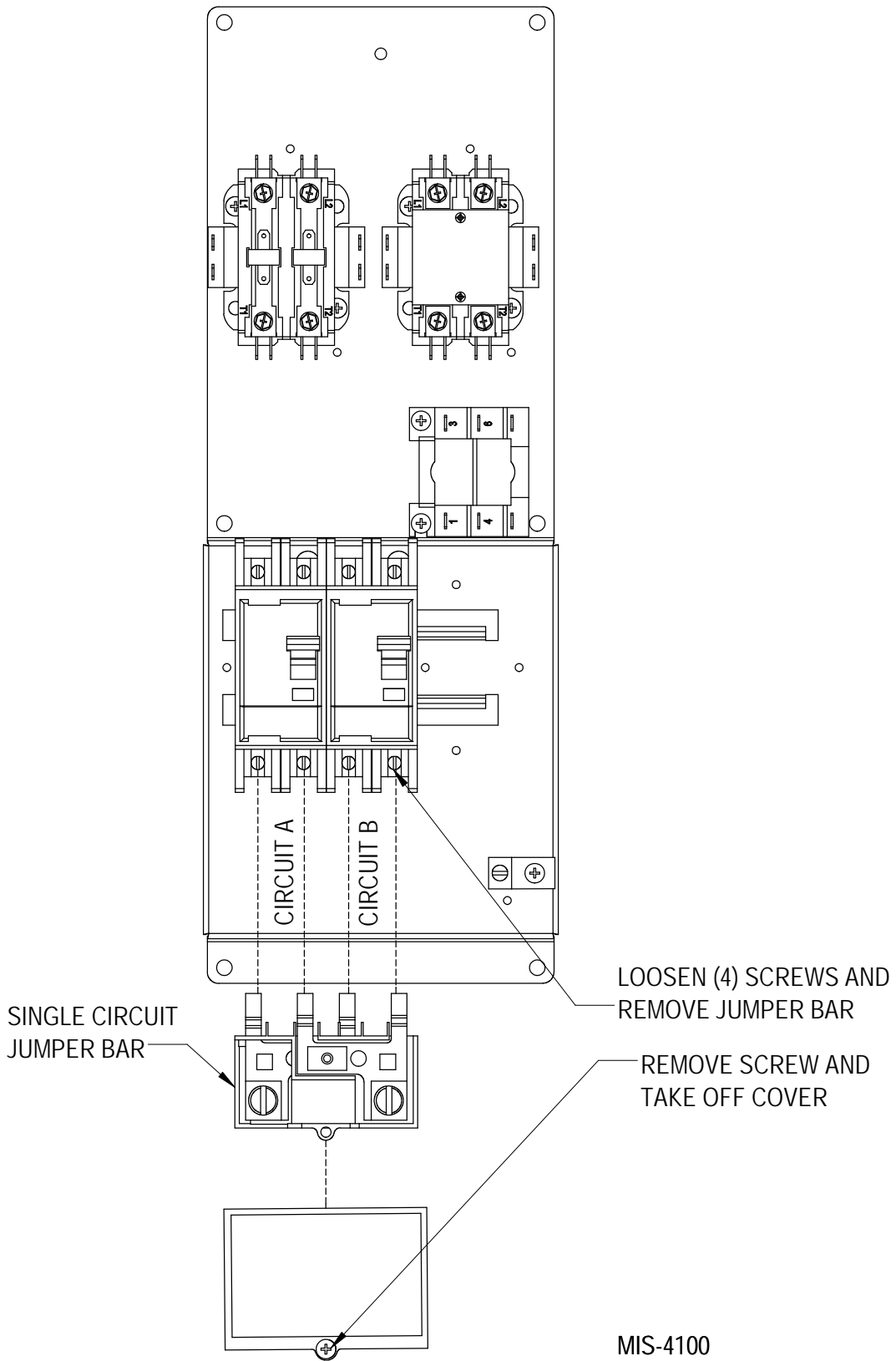
EHW6HCDA10

EHW6HCDA20

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 6). 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



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

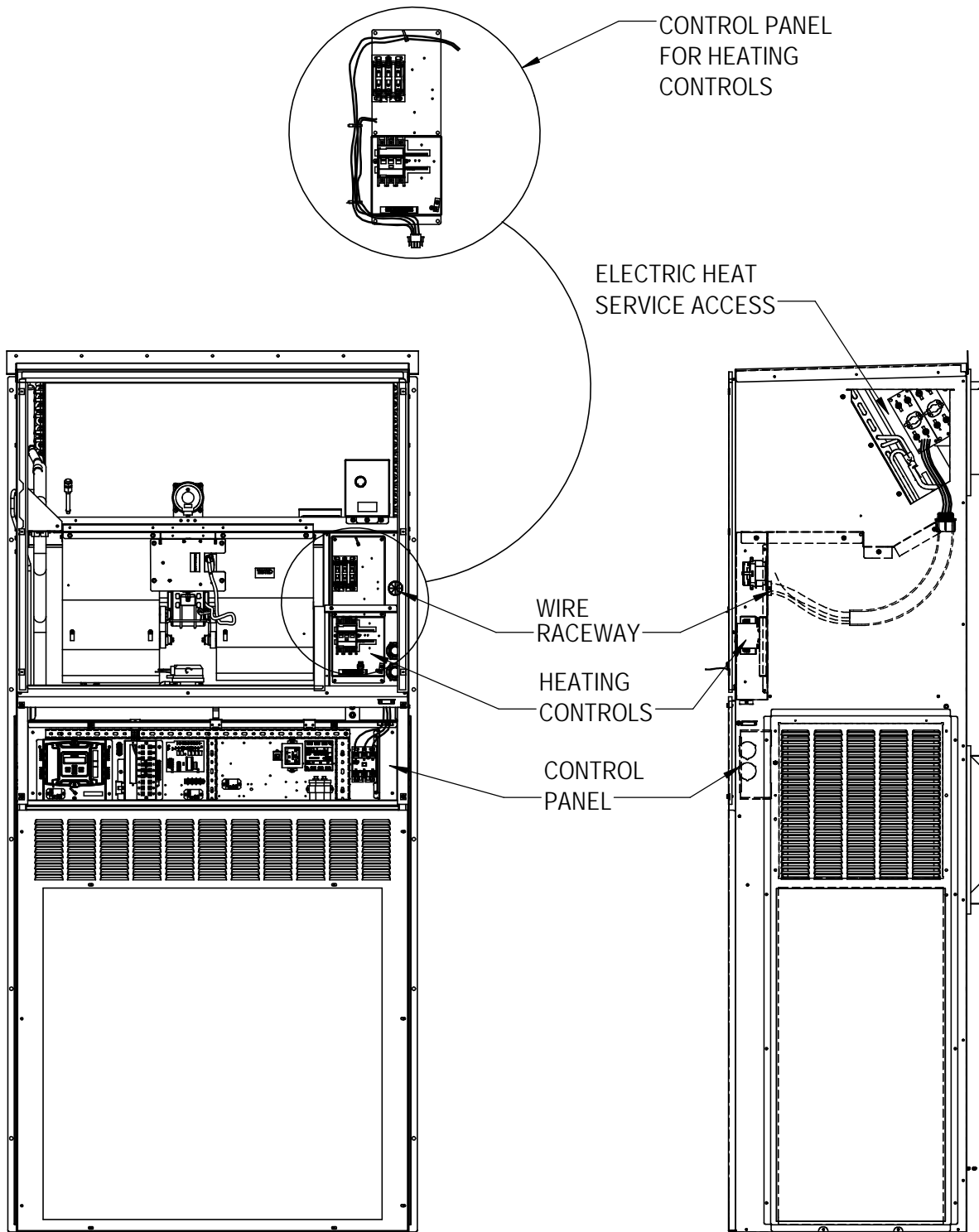
Install only heater packages listed on unit serial plate. Hazard of fire or electrical shock. Failure to install listed heater package could result in fire, injury or death.

3. Remove upper front door, electric heater access panel and control panel cover, both inner and outer (see Figure 2 on page 8).
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 Table 2 on page 9 and Figure 3 on page 10. 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 or 4F on page 12).
5. Install heater control base into heating control area above control panel as shown in Figure 5 on page 13. Secure with four (4) sheet metal screws provided.
6. Plug male 6-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 14).

FIGURE 2
Electric Heater Access Panel and Control Panel Cover Locations

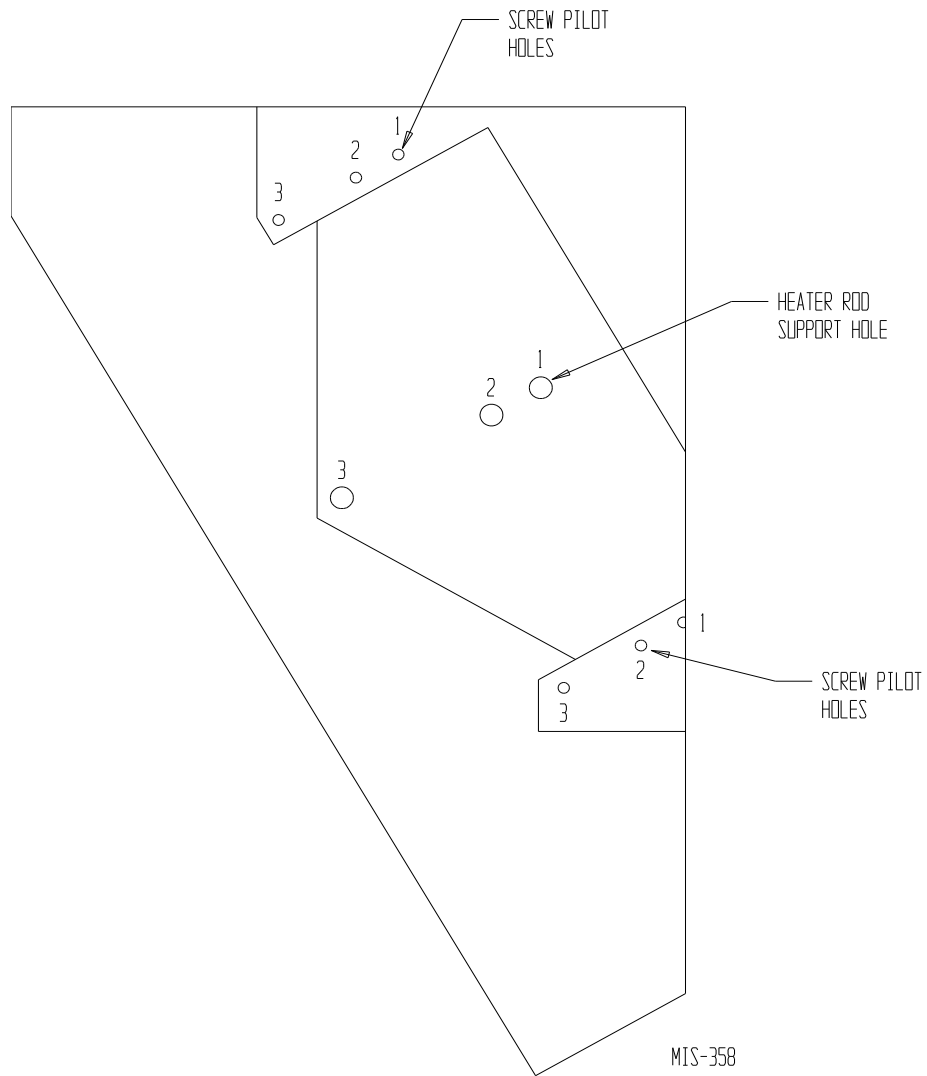


MIS-4099

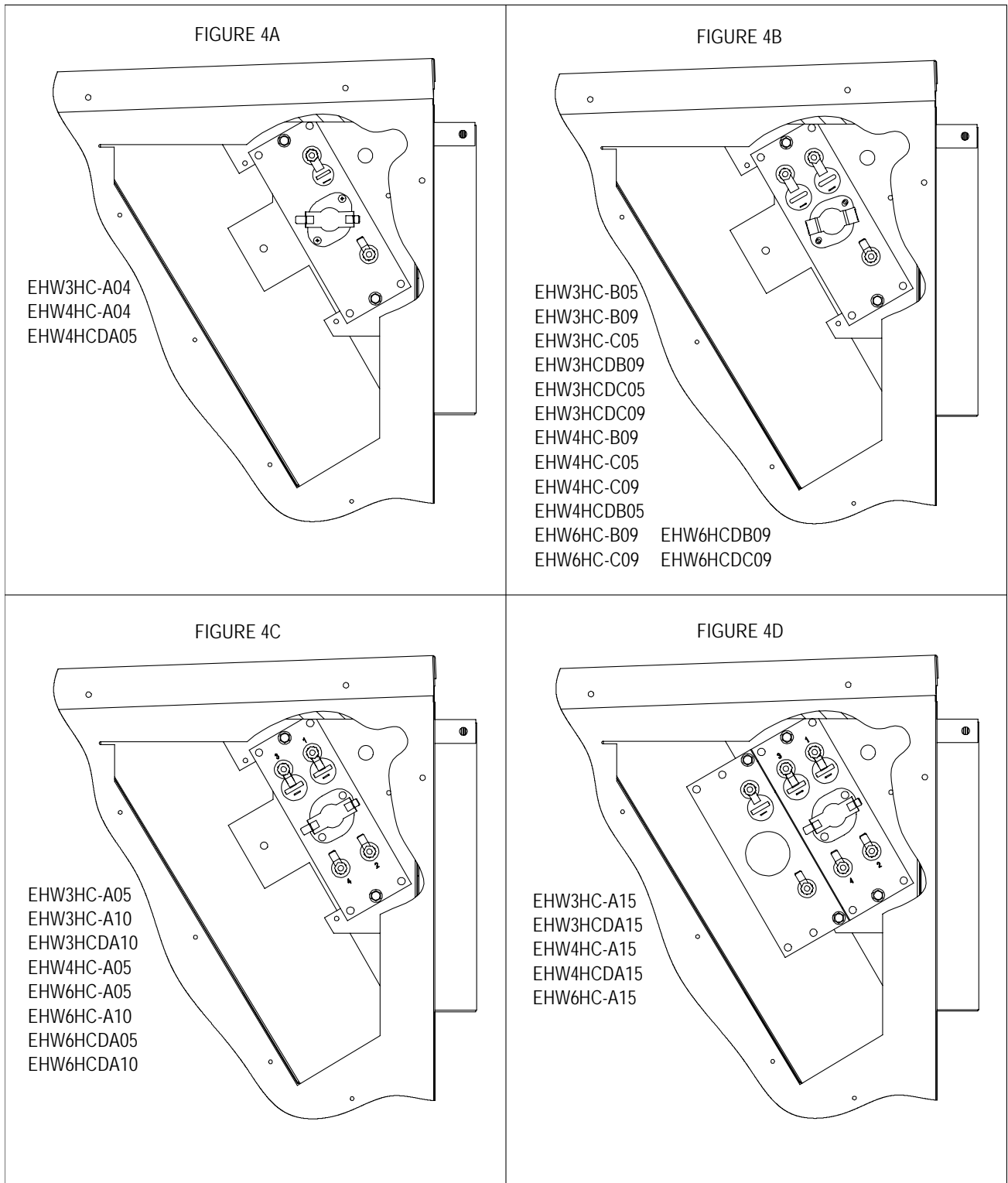
TABLE 2
References to Figures 3 and 4 by Model Number

Heater Package Model Number	Figure 3 Rod Support and Screw Mounting Position	Figure 4 Heater Terminal Identification Drawing
EHW3HC-A04	1	4A
EHW3HC-A05	1	4B
EHW3HC-A10	1	4B
EHW3HC-A15	1 + 3	4D
EHW3HC-B05	1	4C
EHW3HC-B09	1	4C
EHW3HC-B15	1 + 3	4E
EHW3HC-C05	1	4C
EHW3HC-C15	1 + 3	4E
EHW3HCDA10	1	4B
EHW3HCDA15	1 + 3	4D
EHW3HCDB09	1	4C
EHW3HCDB15	1 + 3	4E
EHW3HCDC05	1	4C
EHW3HCDC09	1	4C
EHW3HCDC15	1 + 3	4E
EHW4HC-A04	1	4A
EHW4HC-A05	1	4B
EHW4HC-A15	1 + 3	4D
EHW4HC-A20	1 + 3	AF
EHW4HC-B09	1	4C
EHW4HC-B15	1 + 3	AE
EHW4HC-B18	1 + 3	AE
EHW4HC-C05	1	4C
EHW4HC-C09	1	4C
EHW4HC-C15	1 + 3	AE
EHW4HCDA05	1	4A
EHW4HCDA15	1 + 3	AD
EHW4HCDB05	1	4C
EHW4HCDB15	1 + 3	AE
EHW4HCDC15	1 + 3	AE
EHW6HC-A05	1	4B
EHW6HC-A10	1	4B
EHW6HC-A15	1 + 3	AD
EHW6HC-A20	1 + 3	AF
EHW6HC-B09	1	4C
EHW6HC-B18	1 + 3	AE
EHW6HC-C09	1	4C
EHW6HCDA05	1	4B
EHW6HCDA10	1	4B
EHW6HCDB09	1	4C
EHW6HCDC09	1	4C
EHW6HCDC15	1 + 3	AE

FIGURE 3
Screw Mounting Holes



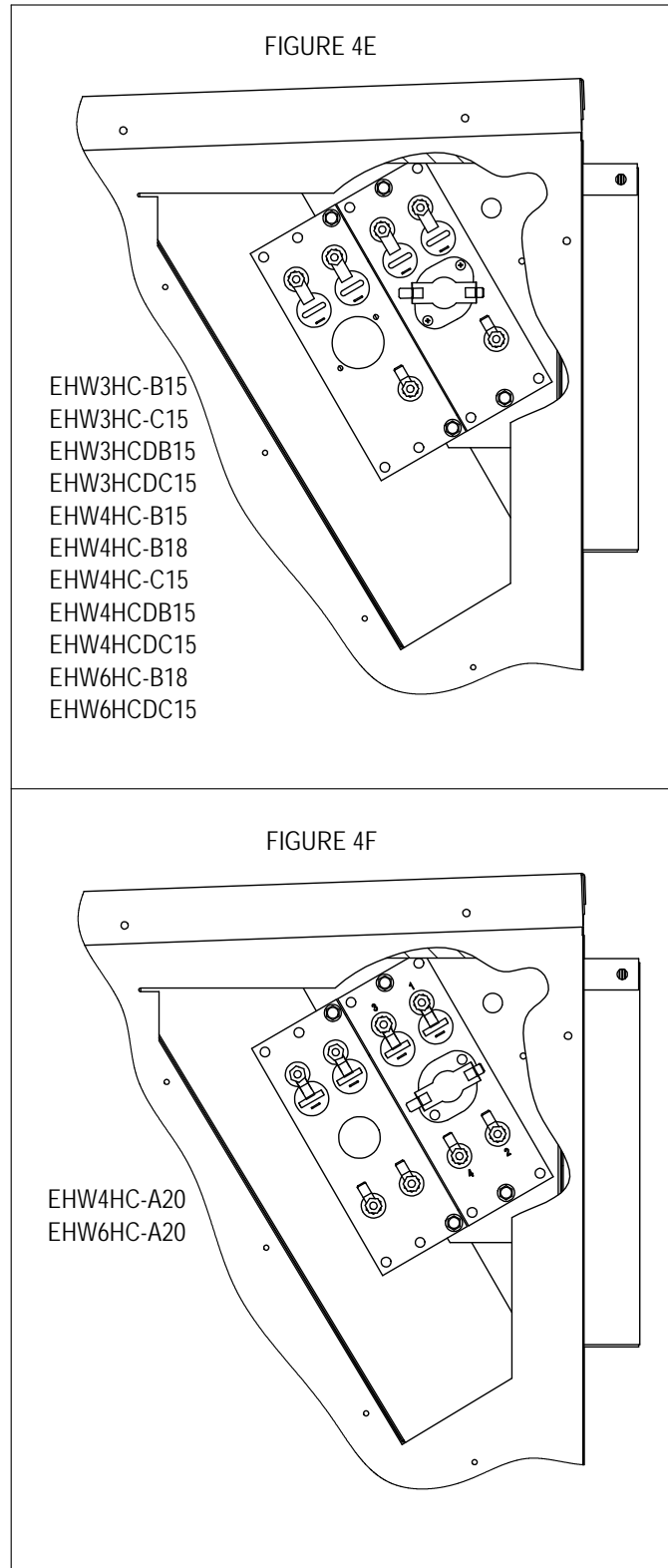
**FIGURE 4
A Through D**



NOTE: THERMAL CUTOFFS TO BE AT TOP OF AIR FRAME WHEN INSTALLING.

MIS-4144

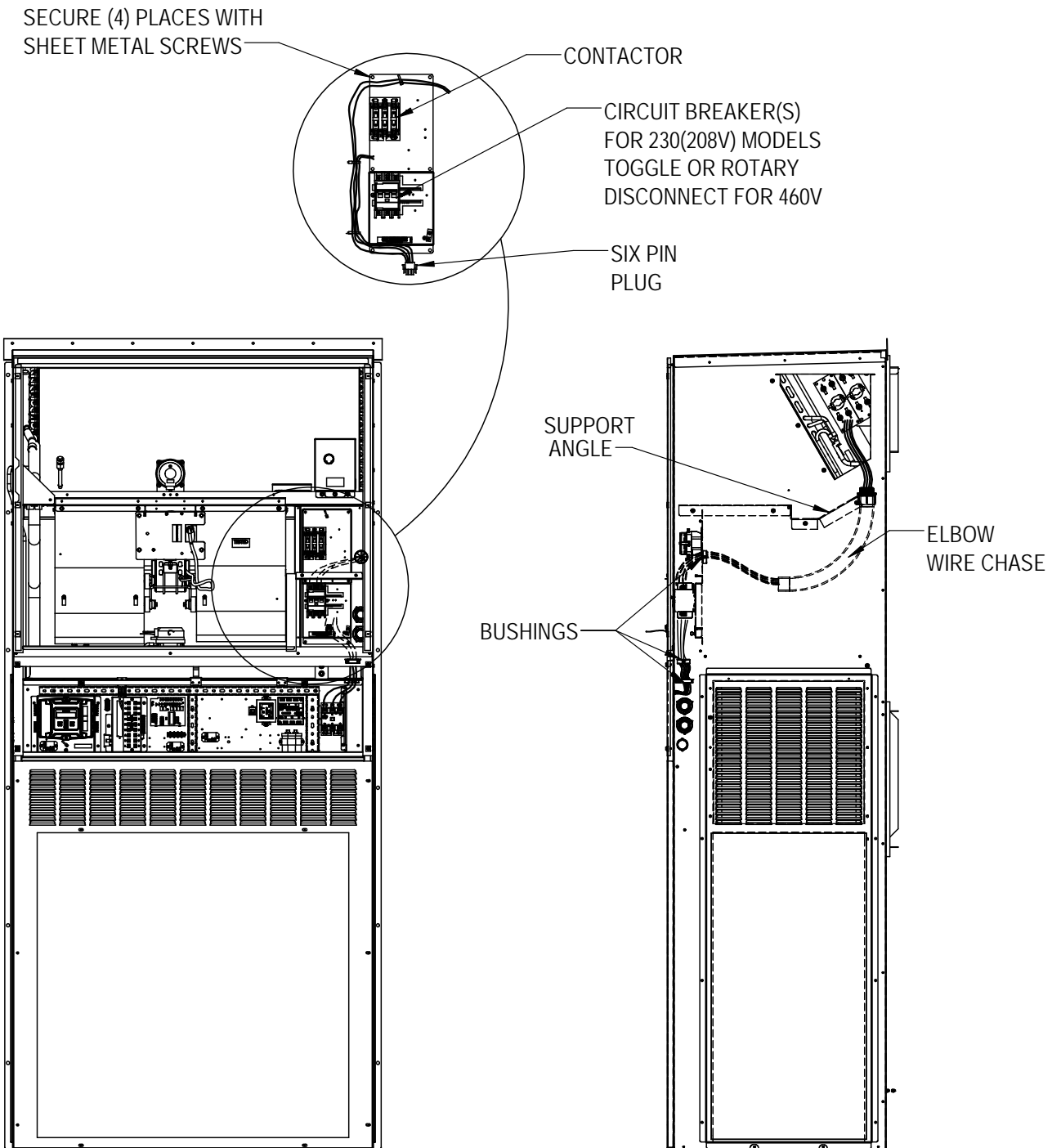
**FIGURE 4
E and F**



NOTE: THERMAL CUTOFFS TO BE AT
TOP OF AIR FRAME WHEN INSTALLING.

MIS-4145

FIGURE 5
Installing Heater Base
and Connecting Wiring



MIS-4098

FIGURE 6
Serial Plate Showing
Approved Heater Packages

INSTALL ONLY HEATER PACKAGES LISTED HERE.

BARD MANUFACTURING COMPANY, 1914 RANDOLPH DRIVE

MODEL	APPROVED HEATER PACKAGE	VAC	HZ
() WA361-A0012345	NONE	230/208	60
() WA361-A0512345	EHWA03-A05	230/208	60
() WA361-A0812345	EHWA03-A08	230/208	60
() WA361-A1012345	EHWA03-A10	230/208	60
() WA361-A1512345	EHWA03-A15	230/208	60

BRANCH CIRCUIT SELECT CURRENT 17 OPERATION

SERIAL NUMBER 125H920711193-01 UL FILE NO.

SUITABLE FOR OUTDOOR USE

COMPRESSION MOTOR	VAC	HZ	PH	HP
OUTDOOR MOTOR	230/208	60	1	1/3
INDOOR MOTOR	230/208	60	1	1/3

-- ELECTRICAL

HEATER PACKAGE	VAC	HZ	KW
EHWA03-A05	240/208	60	5/3.75
EHWA03-A08	240/208	60	8/6
EHWA03-A10	240/208	60	10/7.5
EHWA03-A15	240/208	60	15/11.25

-- FACTORY

FACTORY CHARGED R22: 68 OZ. DESI

-- CLEAR

MTC-384

(X)	()	()	()	()	()	()
()	(X)	()	()	()	()	()
()	()	(X)	()	()	()	()
()	()	()	(X)	()	()	()
()	()	()	()	()	()	(X)

ASSURE THAT SERIAL PLATE IS CLEAN AND DRY. REMOVE APPROPRIATE LABEL STRIP FOR KW REQUIRED AND REMARK SERIAL PLATE AS SHOWN FOR THE HEATER PACKAGE THAT IS INSTALLED