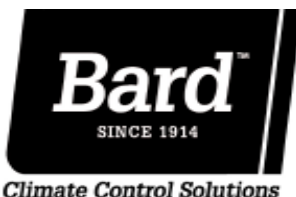

INSTALLATION INSTRUCTIONS

ELECTRIC HEAT PACKAGES

Models:

EHW4TA-A05	EHW6TA-B18	EHWA05-A10B	EHWH04-A10B
EHW4TA-B18	EHW05A-B15B	EHWA05-A15B	EHWH04-A15B
EHW4TA-C09	EHW05A-B18B	EHWA05-A20B	EHWH04-A20B
EHW4TA-C15	EHW05A-C09	EHWA05-B09B	EHWH04-B18
EHW4TA-F14	EHW05A-C15	EHWA05-B15B	EHWH05-B06B
EHW4TH-A10	EHW05H-B18B	EHWA05-B18B	EHWH05-B09B
EHW4TH-B18	EHW60A-B09B	EHWA05A-C09	EHWH05-B15B
EHW4TH-C06	EHW70A-B09B	EHWA05A-C15	EHWH05A-C09
EHW4TH-C09	EHW70A-B18B	EHWA05A-F14	EHWH05A-C15
EHW4TH-C15	EHW72A-A10B	EHWA60-A05B	EHWH42-A05B
EHW5TA-A05	EHW72A-A15B	EHWA60-B09	EHWH42-A10B
EHW5TA-B18	EHW72A-A20B	EHWH04-A04B	EHWH42-A15B
EHW5TH-A10	EHWA05-A05B	EHWH04-A05B	EHWH42-C06

For Use with SH, WA and WH Series
Wall-Mounted Air Conditioners and Heat Pumps
(See Tables 1A – 1I for Model Usage Matrix)



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Manual: 2100-254I
Supersedes: 2100-254H
Date: 9-17-15

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GENERAL INFORMATION

DESCRIPTION OF EQUIPMENT

The EHWA and EHWH series electric heater packages are field-installable heater packages suitable for use with Bard wall mount air conditioners and heat pumps. The packages consist of the electric heat strip, the heater control base (which includes the heat contactors and circuit breaker or pull disconnects), installation instructions and wiring diagrams. See Table 2 on page 8 for nominal electrical data and BTU output. **Before installation, check unit serial plate to ensure the heater package model to be installed is listed as a heater package that is suitable for use with the Bard wall mount hi boy unit** (see Figure 6 on page 17).

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.

WARNING

Only use factory-provided heaters in approved combinations of heater models to unit models as shown in tables 1A–1I. Failure to use approved combinations as shown or modification to heaters could result in fire causing damage, bodily injury or death.

UNPACKING 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
R-22 Heater Usage by Model Matrix

230/208V 1 Phase	WA423-A	WA424DA	WA484-A	WA484DA	WA484HA	WA6023A	WA602-A	WA602HA	WA603DA	WA7023A	WA702-A	WA702HA	WH421-A	WH421DA	WH483-A	WH483DA	WH483LA	WH602-2	WH602DA	WH602LA	
EHWA05-A05B	X	X	X	X			X														
EHWA05-A10B	X	X	X	X		X	X		X	X	X						X				X
EHWA05-A15B	X		X				X				X										
EHWA05-A20B	X		X				X				X										
EHWA60-A05B											X										
EHWH04-A04B															X						
EHWH04-A05B																		X	X		
EHWH04-A10B					X			X				X						X	X		
EHWH04-A15B																		X			
EHWH04-A20B															X			X			
EHWH42-A05B													X	X	X	X					
EHWH42-A10B													X	X	X	X					
EHWH42-A15B													X		X						

TABLE 1D
R-410A Heater Usage by Model Matrix

230/208V 1 Phase	W42A#-A	W42A#DA	W48A#-A	W48A#DA	W60A#-A	W60A#DA	W60A#3A	W70A#-A	W42H#-A	W42H#DA	W48H#-A	W48H#DA	W60H#-A	W60H#DA	W5RV#-R
EHWA05-A05B	X	X	X	X		X									
EHWA05-A10B	X	X	X	X	X	X	X	X							
EHWA05-A15B	X		X		X			X							
EHWA05-A20B	X		X		X			X							
EHWA05HA20															X
EHWH04-A04B									X		X				
EHWH04-A05B													X	X	
EHWH04-A10B													X	X	X
EHWH04-A15B													X		
EHWH04-A20B										X			X		
EHWH42-A05B									X	X	X	X			
EHWH42-A10B									X	X	X	X			
EHWH42-A15B									X		X				
EHWH42-A05B					X			X							

– Indicates numeric revision level (e.g., 1, 2, 3, ...)

TABLE 1E
R-410A Heater Usage by Model Matrix

230/208V 1 Phase	W42A*-A	W42A*DA	W48A*-A	W48A*DA	W60A*-A	W60A*DA	W60A*3A	W72A*-A	W42H*-A	W42H*DA	W48H*-A	W48H*DA	W60H*-A	W60H*DA
EHW4TA-A05	X	X	X	X		X								
EHWA05-A10B	X	X	X	X	X	X	X	X						
EHWA05-A15B	X		X		X			X						
EHWA05-A20B	X		X		X			X						
EHWA05HA20														
EHWH04-A04B									X		X			
EHWH04-A05B													X	X
EHW5TH-A10													X	X
EHWH04-A15B													X	
EHWH04-A20B											X		X	
EHWH42-A05B									X	X	X	X		
EHW4TH-A10									X	X	X	X		
EHWH42-A15B									X		X			
EHW5TA-A05					X			X						
EHW72A-A10B								X						
EHW72A-A15B								X						
EHW72A-A20B								X						

* – Indicates alphabetic revision level (e.g., A, B, C, ...)

TABLE 1F
R-410A Heater Usage by Model Matrix

240/220V 230/208V 3 Phase	W42A#-B	W42A#DB	W42A#-E	W48A#-B	W48A#DB	W48A#-E	W60A#-B	W60A#DB	W60A#-E	W70A#-B	W42H#-B	W42H#DB	W48H#-B	W48H#DB	W60H#-B	W60H#DB	W5RV#-S	W6RV#-S
EHW05A-B18B							X	X										
EHW05H-B18B													X		X			
EHW60A-B09B							X	X										
EHW70A-B09B										X								
EHW70AHB09B																		X
EHW70A-B18B										X							X	
EHW70AHB18B																		X
EHWA05-B09B	X	X	X	X	X	X			X									
EHWA05-B15B	X			X			X	X	X	X								
EHWA05-B18B	X	X		X	X													
EHWH05-B06B											X	X	X	X				
EHWH05-B09B											X	X	X	X	X	X	X	
EHWH05-B15B											X		X		X			
EHW05A-B15B			X			X												

– Indicates numeric revision level (e.g., 1, 2, 3, ...)

TABLE 1G
R-410A Heater Usage by Model Matrix

240/220V 230/208V 3 Phase	W42A*-B	W42A*DB	W42A*-E	W48A*-B	W48A*DB	W48A*-E	W60A*-B	W60A*DB	W60A*-E	W72A*-B	W42H*-B	W42H*DB	W48H*-B	W48H*DB	W60H*-B	W60H*DB
EHW5TA-B18							X	X								
EHW4TH-B18													X		X	
EHW60A-B09B							X	X								
EHW70A-B09B										X						
EHW6TA-B18										X						
EHWA05-B09B	X	X	X	X	X	X			X							
EHWA05-B15B	X			X			X	X	X	X						
EHW4TA-B18	X	X		X	X											
EHWH05-B06B											X	X	X	X		
EHWH05-B09B											X	X	X	X	X	X
EHWH05-B15B											X		X		X	
EHW05A-B15B			X			X										

* – Indicates alphabetic revision level (e.g., A, B, C, ...)

TABLE 1H
R-410A Heater Usage by Model Matrix

414V 460V 3 Phase	W42A#-C	W42A#DC	W42A#-F	W48A#-C	W48A#DC	W48A#-F	W60A#-C	W60A#DC	W60A#-F	W70A#-C	W70A#-P	W42H#-C	W42H#DC	W48H#-C	W48H#DC	W60H#-C	W60H#DC	W5RV#-T	W6RV#-T
EHWA05A-C09	X	X	X	X	X	X	X	X	X	X	X								
EHWA05A-C15	X			X			X			X									
EHWA05A-F14			X			X			X		X								
EHWH05A-C09												X	X	X	X	X	X		
EHWH05A-C15												X		X		X			
EHWH42-C06												X	X		X				
EHW05A-C09																		X	X
EHW05A-C15																		X	X

– Indicates numeric revision level (e.g., 1, 2, 3, ...)

TABLE 1I
R-410A Heater Usage by Model Matrix

414V 460V 3 Phase	W42A#-C	W42A#DC	W42A#-F	W48A#-C	W48A#DC	W48A#-F	W60A#-C	W60A#DC	W60A#-F	W72A#-C	W72A#-F	W42H#-C	W42H#DC	W48H#-C	W48H#DC	W60H#-C	W60H#DC
EHW4TA-C09	X	X	X	X	X	X	X	X	X	X	X						
EHW4TA-C15	X			X			X			X							
EHW4TA-F14			X			X			X		X						
EHW4TH-C09												X	X	X	X	X	X
EHW4TH-C15												X		X		X	
EHW4TH-C06												X	X		X		

* – Indicates alphabetic revision level (e.g., A, B, C, ...)

TABLE 2
Electrical Data and BTU Output

Heater Package Model	Volts	Phase	Nominal KW	Nominal BTU
EHWA05-A05B	240/208	1	5/3.75	17,065/12,800
EHW4TA-A05	240/208	1	5/3.75	17,065/12,800
EHWA05-A10B	240/208	1	10/7.5	34,130/25,600
EHW72A-A10B	240/208	1	10/7.5	34,130/25,600
EHWA05-A15B	240/208	1	15/11.25	51,200/38,400
EHW72A-A15B	240/208	1	15/11.25	51,200/38,400
EHWA05-A20B	240/208	1	20/15	68,260/51,200
EHW72A-A20B	240/208	1	20/15	68,260/51,200
EHWA05-B09B	240/208	3	9/6.75	30,600/23,030
EHW60A-B09B	240/208	3	9/6.75	30,600/23,030
EHW70A-B09B	240/208	3	9/6.75	30,600/23,030
EHW70A-B18B	240/208	3	18/13.5	30,600/23,030
EHW6TA-B18	240/208	3	18/13.5	30,600/23,030
EHWA05-B15B	240/208	3	15/11.25	51,200/38,400
EHW05A-B15B	240/208	3	15/11.25	51,200/38,400
EHWA05-B18B	240/208	3	18/13.5	61,430/46,100
EHW4TA-B18	240/208	3	18/13.5	61,430/46,100
EHW05A-B18B	240/208	3	18/13.5	61,430/46,100
EHW5TA-B18	240/208	3	18/13.5	61,430/46,100
EHW05H-B18B	240/208	3	18/13.5	61,430/46,100
EHW4TH-B18	240/208	3	18/13.5	61,430/46,100
EHWA05A-C09	480	3	9	30,700
EHW4TA-C09	480	3	9	30,700
EHWA05A-C15	480	3	15	47,000
EHW4TA-C15	480	3	15	47,000
EHWA60-A05B	240/208	1	5/3.75	17,065/12,800
EHW5TA-A05	240/208	1	5/3.75	17,065/12,800
EHWA60-B09	240/208	3	9/6.75	30,600/23,030
EHWH42-A05B	240/208	1	5/3.75	17,065/12,800
EHWH42-A10B	240/208	1	10/7.5	34,130/25,600
EHW4TH-A10	240/208	1	10/7.5	34,130/25,600
EHWH42-A15B	240/208	1	15/11.25	51,200/38,400
EHWH42-C06	480	3	6	20,475
EHW4TH-C06	480	3	6	20,475
EHWH04-A04B	240/208	1	4/3	13,650/10,240
EHWH04-A05B	240/208	1	5/3.75	17,065/12,800
EHWH04-A10B	240/208	1	10/7.5	34,130/25,600
EHW5TH-A10	240/208	1	10/7.5	34,130/25,600
EHWH04-A15B	240/208	1	15/11.25	51,200/38,400
EHWH04-A20B	240/208	1	20/15	68,260/51,200
EHWH04-B18	240/208	3	18/13.5	61,430/46,100
EHWH05-B09B	240/208	3	9/6.75	30,600/23,030
EHWH05-B15B	240/208	3	15/11.25	51,200/38,400
EHWH05A-C09	480	3	9	30,700
EHW4TH-C09	480	3	9	30,700
EHWH05A-C15	480	3	15	47,000
EHW4TH-C15	480	3	15	47,000
EHWH05-B06B	240/208	3	6/4.5	20,475/15,356
EHW05A-C09	480	3	9	30,700
EHW05A-C15	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.

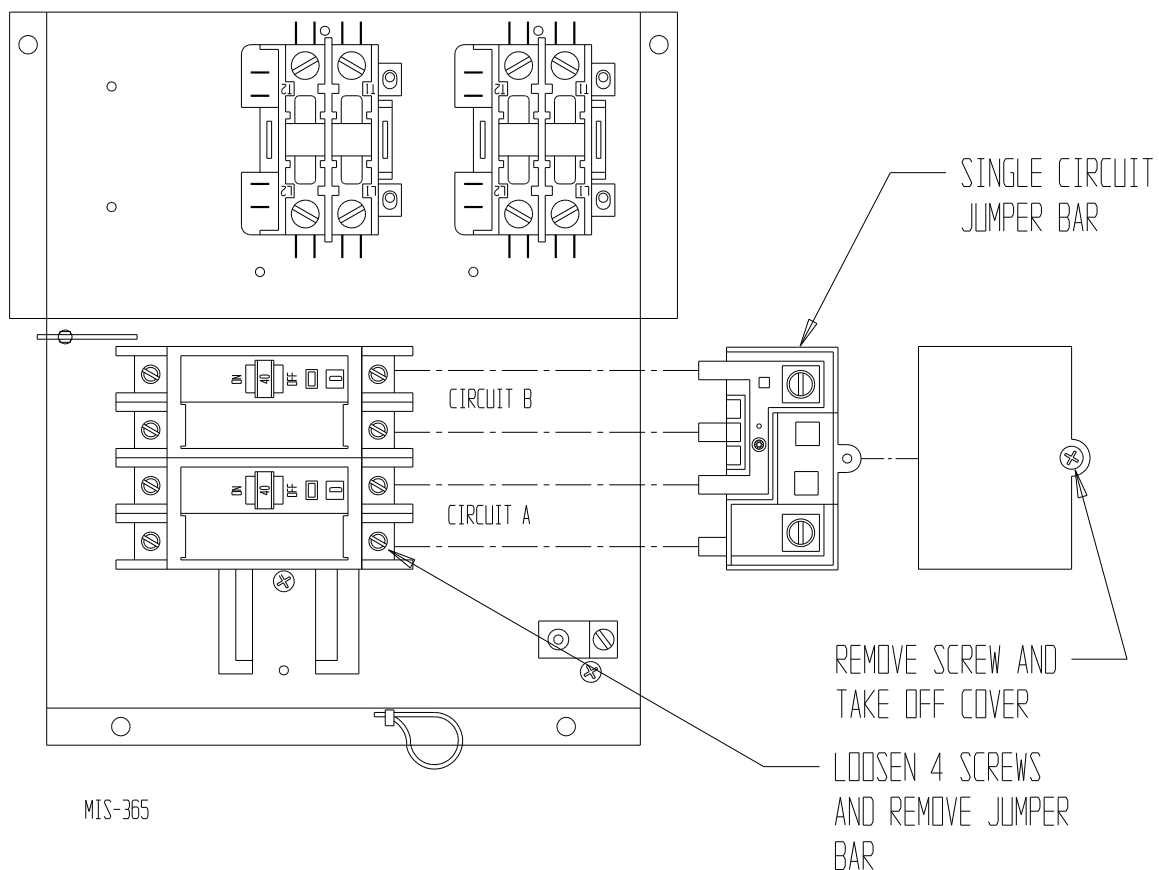
2. All heater packages covered by this manual are factory wired for a single supply circuit. The following heater packages are field convertible to a dual supply circuit if required or desired.

EHW04-A05B	EHW72A-A10B
EHW04-A10B	EHW72A-A15B
EHW04-A15B	EHW72A-A20B
EHW04-A20B	EHW05-A15
EWH42-A05B	EHW05-A20B
EWH42-A10B	
EWH42-A15B	

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

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

FIGURE 1
Electrical Connections



INSTALLATION

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 circumstances 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.

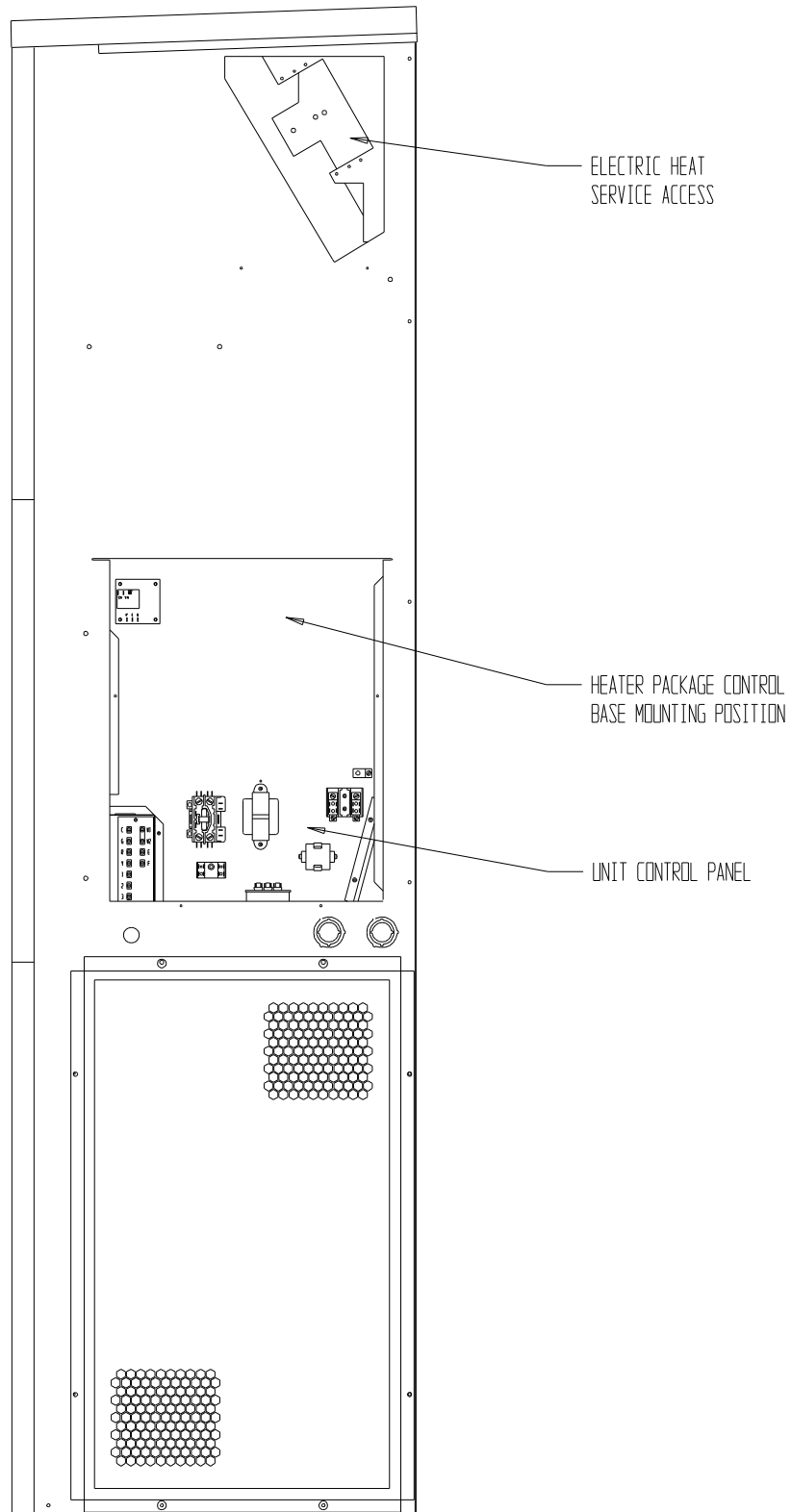
WARNING

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 electric heater access panel and control panel cover, both inner and outer (see Figure 2).
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 3 (page 12) and Figure 3 (page 13). 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 15).

5. Install heater control base into top of control panel as shown in Figure 5 on page 16. 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 3 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 this 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 4.
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 17).

FIGURE 2
Installation of Heater Package

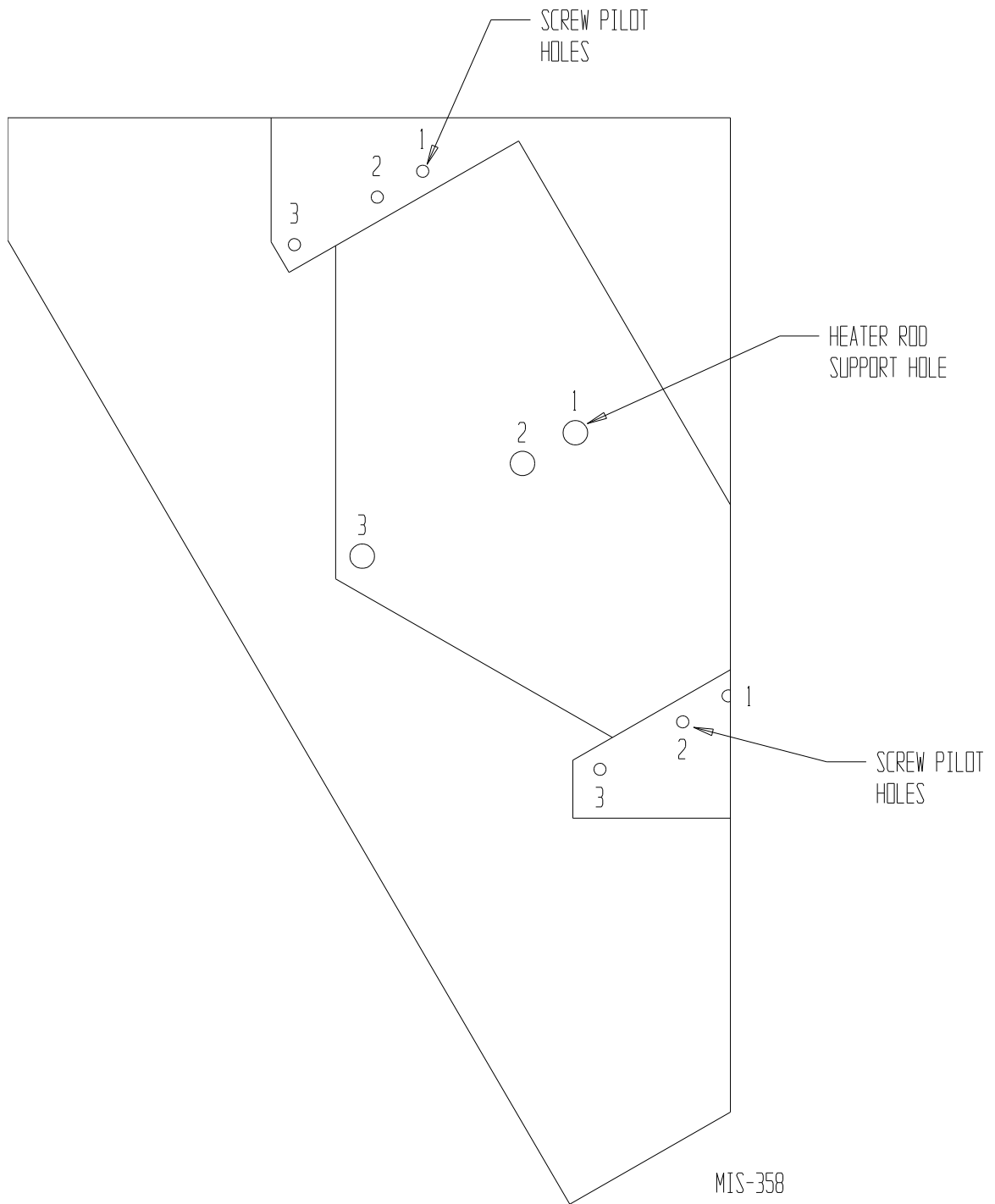


MIS-419

TABLE 3
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
1.	EHWA05-A05B, EHW4TA-A05	1	4A
2.	EHWA05-A10B, EHW72A-A10B	1	4B
3.	EHWA05-A15B, EHW72A-A15B	1 + 3	4D
4.	EHWA05-A20B, EHW72A-A20B	1 + 3	4F
5.	EHWA05-B09B	1	4C
6.	EHWA05-B15B	1 + 3	4E
7.	EHWA05-B18B, EHW4TA-B18	1 + 3	4E
8.	EHWA05-C09, EHW4TA-C09	1	4C
9.	EHWA05A-C15, EHW4TA-C15	1 + 3	4E
10.	EHWH42-A05B	1	4A
11.	EHWA42-A10B, EHW4TH-A10	1	4B
12.	EHWH42-A15B	1 + 3	4D
13.	EHWA60-A05B, EHW5TA-A05	1	4A
14.	EHWA60-B09	1	4C
15.	EHWH04-A04B	1	4A
16.	EHWH04-A05B	1	4A
17.	EHWH04-A10B, EHW5TH-A10	1	4B
18.	EHWH04-A15B	1 + 3	4D
19.	EHWH04-A20B	1 + 3	4F
20.	EHWH04-B09B	1	4C
21.	EHWH05-B15B	1 + 3	4E
22.	EHWH04-B18	1 + 3	4E
23.	EHWH05A-C09, EHW4TH-C09	1	4C
24.	EHWH05A-C15, EHW4TH-C15	1 + 3	4E
25.	EHWH42-C06, EHW4TH-C06	1	4C
26.	EHWH05-B06B	1	4C
27.	EHW05A-B18B, EHW5TA-B18	1 + 3	4E
28.	EHW05H-B18B, EHW4TH-B18	1 + 3	4E
29.	EHW60A-B09B	1	4C
30.	EHW70A-B09B	1	4C
31.	EHW70A-B18B, EHW6TA-B18	1 + 3	4E
32.	EHW05A-B15B	1 + 3	4E
33.	EHW05A-C09	1	4C
34.	EHW05A-C15	1 + 3	4E

FIGURE 3
Rod Support and Screw Mounting Positions



**FIGURE 4
A Through D**

FIGURE 4A

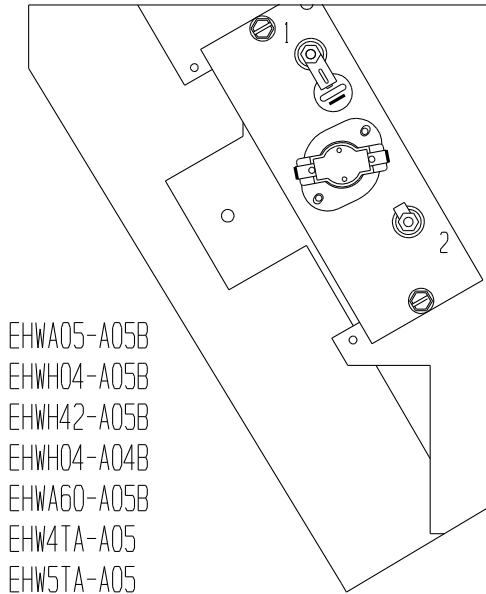


FIGURE 4C

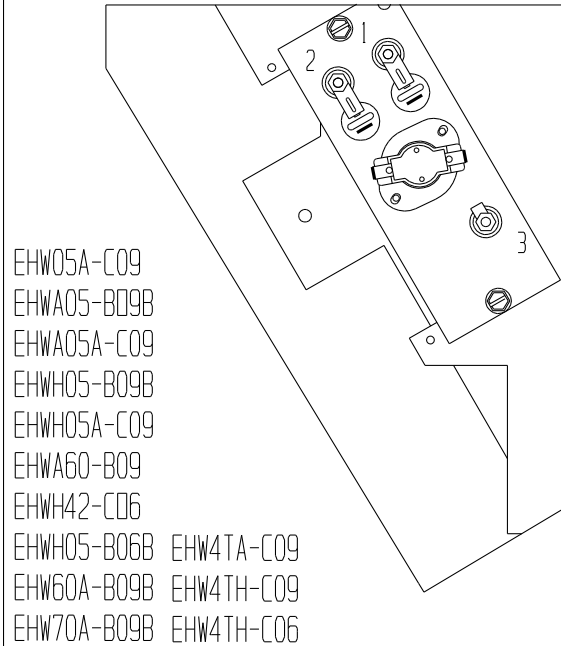


FIGURE 4B

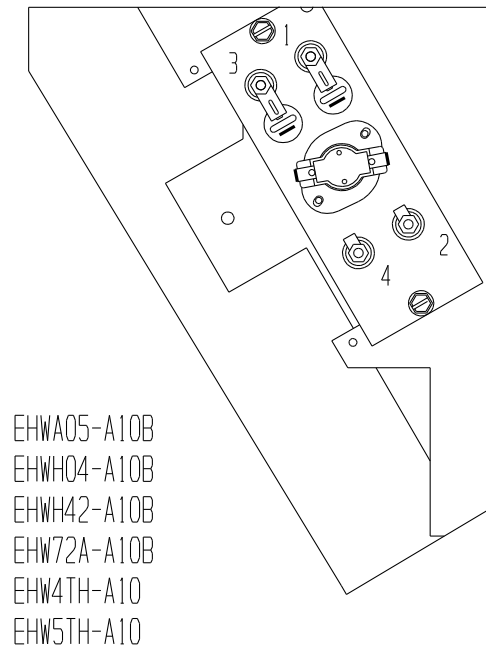
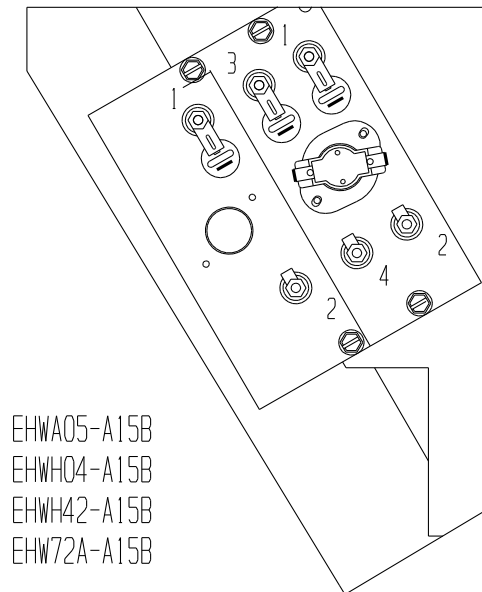


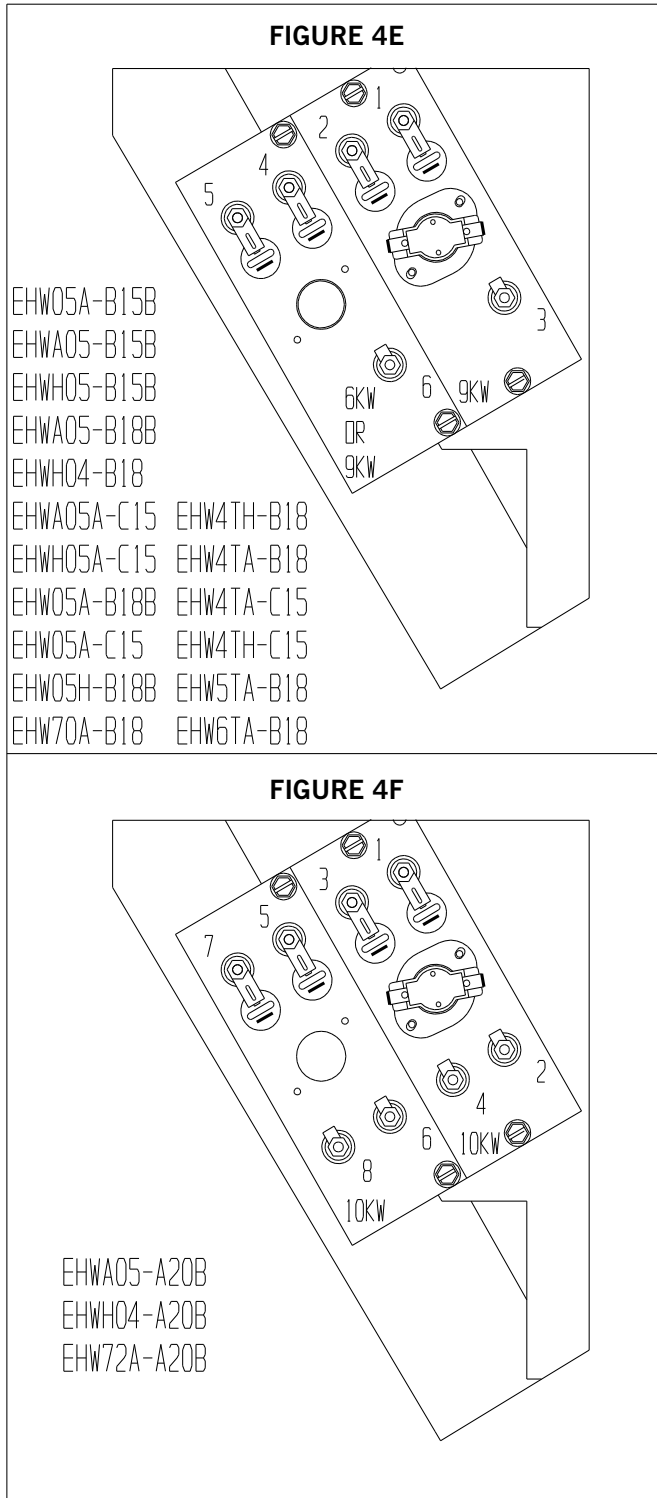
FIGURE 4D



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

MIS-420 D

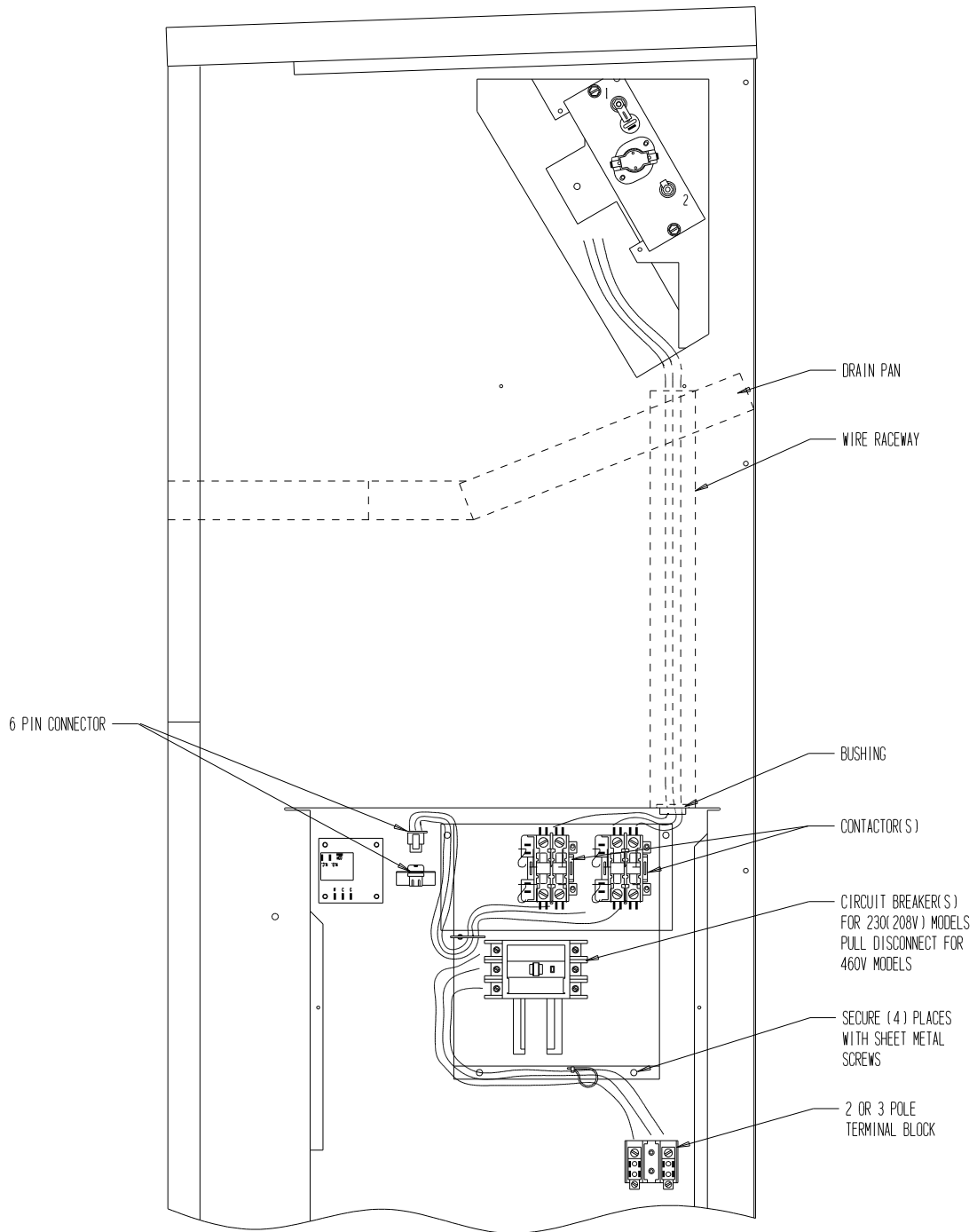
**FIGURE 4
E and F**



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

MIS-421 E

FIGURE 5
Installing Heater Base and Connecting Wiring



MIS-422

**FIGURE 6
Serial Plate Label**

INSTALL ONLY HEATER PACKAGES LISTED HERE.

BARD MANUFACTURING COMPANY, 1914 RANDOLPH DRIVE

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

MODEL
 () JWA361-A0012345
 () JWA361-A0512345
 (X) JWA361-A0812345
 () JWA361-A1012345
 () JWA361-A1512345

(1)
 APPROVED
 HEATER
 PACKAGE
 NONE
 EHWA03-A05
 EHWA03-A08
 EHWA03-A10
 EHWA03-A15

VAC
 230/208
 230/208
 230/208
 230/208
 230/208

HZ
 60
 60
 60
 60
 60

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

BRANCH CIRCUIT SELECT CURRENT 17 OPERATION
 SERIAL NUMBER 125H920711193-01 UL FILE NO.

SUITABLE FOR OUTDOOR USE

COMPRESSOR	VAC	HZ	PH	ELECTRICAL
OUTDOOR MOTOR	230/208	60	1	HP
INDOOR MOTOR	230/208	60	1	1/5
	230/208	60	1	1/3
HEATER PACKAGE				KW
EHWA03-A05	240/208	60	1	5/3.75
EHWA03-A08	240/208	60	1	8/6
EHWA03-A10	240/208	60	1	10/7.5
EHWA03-A15	240/208	60	1	15/11.25

FACTORY CHARGED R22: -- FACTORY
 68 OZ. DESI
 -- CLEAR

M5-384