

# INSTALLATION INSTRUCTIONS

## MAYHTR, (M, W) EHK, CHE2 & 7800-5 Series Electric Heater Kits

### For Model M4AH, WATPM, BVA, MVA, HD2, HDG, D13/D14 & Equivalent Air Handlers

\*\* Read the entire instruction manual before starting the installation.\*\*

#### WARNINGS & SAFETY CONSIDERATIONS

These instructions are intended as a general guide only, for use by qualified personnel and do not supersede any national or local codes in any way. Installation must conform with the local building codes and with the latest editions of the National Electrical Code.

Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. For assistance or additional information, consult a qualified installer or service agency.

Installation and servicing of this equipment can be hazardous due to mechanical and electrical components. Only trained and qualified personnel should install, repair, or service this equipment. Installation and service performed by unqualified persons can result in property damage, personal injury, or death.

When working on this equipment, observe precautions in the literature, on tags, and on labels attached or shipped with the unit and other safety precautions that may apply.

If this unit is to be installed in a mobile or manufactured home application, the ductwork must be sized to achieve static pressures within the manufacturer's guidelines. All other installation guidelines must be followed. Failure to do so may result in equipment damage, personal injury, and improper performance of the unit.

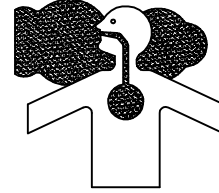
The installation of this appliance must conform to the requirements of the National Fire Protection Association; the National Electrical Code, ANSI/NFPA No. 70 (latest edition) in the United States; the Canadian Electrical Code Part 1, CSA 22.1 (latest edition) in Canada; and any state or provincial laws or local ordinances. Local authorities having jurisdiction should be consulted before installation is made. Such applicable regulations or requirements take precedence over the general instructions in this manual.

Sharp metal edges can cause injury. When installing this unit, use care to avoid sharp edges. Wear proper personal protective equipment at all times. Have a fire extinguisher available. Read these instructions thoroughly and follow all warnings and cautions included in literature and attached to the unit.

**REMINDER:** If these instructions and/or codes are not followed or if the equipment is not properly installed, possible injury or death could occur during installation or operation.



**DANGER  
PELIGRO**



Carbon Monoxide Poisoning Hazard

When installing in a garage, the elements must be at least 18" above the floor. If this appliance is installed in an enclosed area such as a garage or utility room with any carbon monoxide (CO) producing appliance (i.e. Automobile, Furnace, Water-Heater et.), ensure the area is properly ventilated. A means of strain relief and conductor protection must be provided at the supply wire entrance.

Before proceeding with heater installation, inspect thoroughly for shipping damage. Notify shipper immediately if any damage is found. Clean all dirt, dust and moisture from heater package. Check for proper clearances of live parts, between phases and to ground. Make sure that all required barriers are in place. Check conductors run in multiple to insure that they are properly wired. Refer to unit installation instructions for complete unit installation details.



**WARNING**

#### ELECTRICAL SHOCK HAZARD

Before performing installation, service or maintenance operations on this system, turn off all main power to system. There may be more than one disconnect switch. Turn off accessory heater power switch if applicable. Lockout and tag switch with a suitable warning label.

#### NOTE: USE COPPER CONDUCTORS ONLY

#### ATTENTION INSTALLING PERSONNEL

Prior to installation, thoroughly familiarize yourself with the Instruction Manual. Pay close attention to all safety warnings. Remember, it is YOUR responsibility to install the product safely and to know it well enough to be able to instruct a customer on its safe use.

## HEATER INSTALLATION

Refer to the package unit installation instructions for proper installation of this heater. Control wiring connections are made by a (3) pin plug connection in the unit. Make power supply circuit connections.

To install the heater kit accessory:

1. DISCONNECT all incoming power to the unit.
2. Remove the blower access panel.
3. Remove necessary heater block-off plate(s) and save the block-off plate screws for mounting of heater kit (FOR 5, 8, & 10KW KITS, REMOVE THE TOP BLOCK-OFF PLATE).
4. Insert the heater into the blower section and secure using screws from block-off plate. Make sure the airflow label will match the actual air flow.
5. Place the circuit breakers onto the breaker bracket as shown.
6. Secure the breaker bracket to the cabinet mounting rail with screws provided, making sure that all wiring is routed away from sharp edges.
7. Wire incoming power supply to circuit breaker(s) on the heater kit.
8. Connect the 3-pin plug to the control circuit board of the air handler.
9. Use provided wire nuts to connect the black and red wires to the adapter harness.
10. Ground per NEC requirements. Lugs are provided on heat kit.

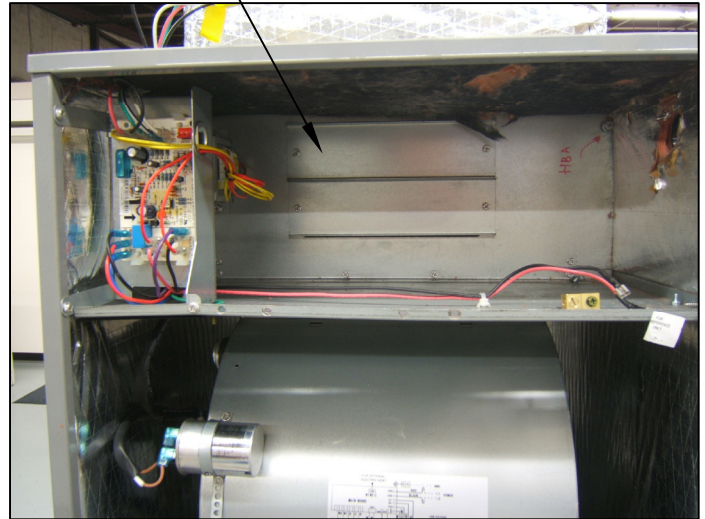
Upon completion of installation, affix heater wiring diagram, supplied, next to the basic unit wiring diagram for future reference. Test the heater to insure it runs properly.

### CAUTION

**BEFORE INSTALLING ELECTRIC HEATER PACKAGES, OBSERVE & FOLLOW ALL REQUIRED UNIT, PLENUM, & DUCT CLEARANCES AS STATED ON THE UNIT RATING PLATE.**

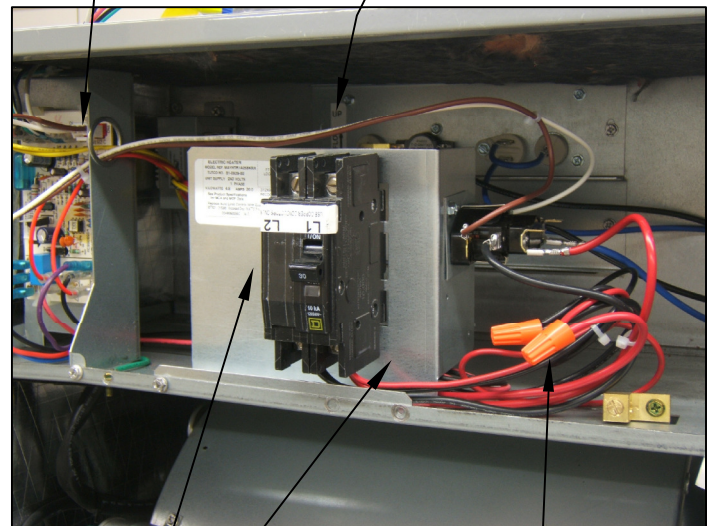
Store these instructions along with the package unit instructions in a safe place for future use.

### HEATER BLOCK-OFF PLATE



### 3-PIN PLUG

### AIRFLOW LABEL



### GROUND LUG

### BREAKER BRACKET

### WIRE NUT

Unit	Units							
	18	24/25	30/32	36	42	44	48	60
Heater	Minimum Fan speed Required *							
MAYHTR05	L	L	L	L	L	L	L	L
MAYHTR08	M	L	L	L	L	L	L	L
MAYHTR10	H	M	L	L	L	L	L	L
MAYHTR15	----	----	----	M	M	L	L	L
MAYHTR20	----	----	----	H	H	L	L	L

\* Verify Fan speed(s) and applicable heater/unit combinations in unit instructions and/or on unit data plate for both Electric heat only & simultaneous heat pump and electric heat operation.

**TABLE 1: Minimum Fan Speeds**

# Product Specifications

**Ameristar MAYHTR, (M, W) EHK, CHE2 & 7800-5 Series Electric Heat Kits**

**For M4AH, WATPM, BVA, MVA, HD2, HDG, D13/D14 & Equivalent Air Handlers**

**Nomenclature:**

( ex. MAYHTR1A05BKRA )

	<b>MAYHTR</b>	<b>1A</b>	<b>05</b>	<b>BKR</b>	<b>A</b>				
<b>Heater Kit Family</b>						<b>Revision</b>			
<b>Phase</b>							<b>Breaker</b>		
1A----240 V									
<b>KW</b>							<b>BKR</b> Breaker		
							<b>LUG</b> Terminal Block		

<b>05</b> ----04.80 KW	<b>15</b> ----14.40 KW
<b>08</b> ----07.50 KW	<b>20</b> ----19.20 KW
<b>10</b> ----09.60 KW	

REV. B

**Heating kw Correction Factor**

Supply Voltage	240	230	220	210	208			
Correction Factor	1.00	0.92	0.84	0.77	0.75			

**Standard Features**

- Controlled by Relays or Contactors
- Plug-in wiring harness for ease on installation into air handler
- ETL certified

## Electrical Data \*

### Air Handlers

Model and Heat Kit Usage	Phase	Unit MCA ‡	CIRCUIT #1		CIRCUIT #2		Coil Qty Used	ACTUAL KW @ 240V	
			MCA	MOP	MCA	MOP			
<b>18 CABINET(s)... M4AH3, M4AH4, D13,D14, HDG &amp; HD2</b>	Ø	0.85							
MAYHTR1A05BKR, or (LUG) CHE2-05 or (B) 7800-505-1D (M, W) EHK05A or (B)	1		25.9	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) CHE2-08 or (B) 7800-508-1D (M, W) EHK08A or (B)			39.9	45	-----	-----	2	7.50	
MAYHTR1A10BKR, or (LUG) CHE2-10 or (B) 7800-510-1D (M, W) EHK10A or (B)			50.9	60	-----	-----	2	9.60	
<b>24/25 CABINET(S)... M4AH3, M4AH4, D13,D14, HDG &amp; HD2</b>	Ø	1.19							
MAYHTR1A05BKR, or (LUG) CHE2-05 or (B) 7800-505-1D (M, W) EHK05A or (B)	1		26.2	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) CHE2-08 or (B) 7800-508-1D (M, W) EHK08A or (B)			40.3	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) CHE2-10 or (B) 7800-510-1D (M, W) EHK10A or (B)			51.2	60	-----	-----	2	9.60	
<b>30/32 CABINET(s)... M4AH3, M4AH4, D13,D14, HDG &amp; HD2</b>	Ø	1.85							
MAYHTR1A05BKR, or (LUG) CHE2-05 or (B) 7800-505-1D (M, W) EHK05A or (B)	1		26.9	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) CHE2-08 or (B) 7800-508-1D (M, W) EHK08A or (B)			40.9	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) CHE2-10 or (B) 7800-510-1D (M, W) EHK10A or (B)			51.9	60	-----	-----	2	9.60	

Model and Heat Kit Usage	Phase	Unit MCA ‡	CIRCUIT #1		CIRCUIT #2		Coil Qty Used	ACTUAL KW @ 240V	
			MCA	MOP	MCA	MOP			
<b>36 CABINET(S)... M4AH3, M4AH4, D13,D14, HDG &amp; HD2</b>	Ø	2.04							
MAYHTR1A05BKR, or (LUG) CHE2-05 or (B) 7800-505-1D (M, W) EHK05A or (B)	1		27.0	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) CHE2-08 or (B) 7800-508-1D (M, W) EHK08A or (B)			41.1	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) CHE2-10 or (B) 7800-510-1D (M, W) EHK10A or (B)			52.0	60	-----	-----	2	9.60	
MAYHTR1A15BKR CHE2-15B 7800-515-1D (M, W) EHK15B			52.0	60	25.0	30	3	14.40	
MAYHTR1A20BKR CHE2-20B 7800-520-1D (M, W) EHK20B			52.0	60	50.0	60	4	19.20	
<b>42 CABINET(S)... M4AH3, M4AH4, D13,D14, HDG &amp; HD2</b>	Ø	2.25							
MAYHTR1A05BKR, or (LUG) CHE2-05 or (B) 7800-505-1D (M, W) EHK05A or (B)	1		27.3	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) CHE2-08 or (B) 7800-508-1D (M, W) EHK08A or (B)			41.3	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) CHE2-10 or (B) 7800-510-1D (M, W) EHK10A or (B)			52.3	60	-----	-----	2	9.60	
MAYHTR1A15BKR CHE2-15B 7800-515-1D (M, W) EHK15B			52.3	60	25.0	30	3	14.40	
MAYHTR1A20BKR CHE2-20B 7800-520-1D (M, W) EHK20B			52.3	60	50.0	60	4	19.20	

Model and Heat Kit Usage	Phase	Unit MCA ‡	CIRCUIT #1		CIRCUIT #2		Coil Qty Used	ACTUAL KW @ 240V	
			MCA	MOP	MCA	MOP			
<b>44/48 CABINET(s)... M4AH3, M4AH4, D13,D14, HDG &amp; HD2</b>	Ø	2.64							
MAYHTR1A05BKR, or (LUG) CHE2-05 or (B) 7800-505-1D (M, W) EHK05A or (B)	1		27.6	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) CHE2-08 or (B) 7800-508-1D (M, W) EHK08A or (B)			41.7	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) CHE2-10 or (B) 7800-510-1D (M, W) EHK10A or (B)			52.6	60	-----	-----	2	9.60	
MAYHTR1A15BKR CHE2-15B 7800-515-1D (M, W) EHK15B			52.6	60	25.0	30	3	14.40	
MAYHTR1A20BKR CHE2-20B 7800-520-1D (M, W) EHK20B			52.6	60	50.0	60	4	19.20	
<b>60 CABINET(s).... M4AH3, M4AH4, D13,D14, HDG &amp; HD2</b>	Ø	3.49							
MAYHTR1A05BKR, or (LUG) CHE2-05 or (B) 7800-505-1D (M, W) EHK05A or (B)	1		28.5	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) CHE2-08 or (B) 7800-508-1D (M, W) EHK08A or (B)			42.6	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) CHE2-10 or (B) 7800-510-1D (M, W) EHK10A or (B)			53.5	60	-----	-----	2	9.60	
MAYHTR1A15BKR CHE2-15B 7800-515-1D (M, W) EHK15B			53.5	60	25.0	30	3	14.40	
MAYHTR1A20BKR CHE2-20B 7800-520-1D (M, W) EHK20B			53.5	60	50.0	60	4	19.20	

Model and Heat Kit Usage	Phase	Unit MCA ‡	CIRCUIT #1		CIRCUIT #2		Coil Qty Used	ACTUAL KW @ 240V	
			MCA	MOP	MCA	MOP			
<b>18/24 CABINET(s)... MVA</b>	Ø	3.80							
MAYHTR1A05BKR, or (LUG) (M, W) EHK05A or (B)	1		28.8	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) (M, W) EHK08A or (B)			42.9	45	-----	-----	2	7.50	
MAYHTR1A10BKR, or (LUG) (M, W) EHK10A or (B)			53.8	60	-----	-----	2	9.60	
<b>30/36 CABINET(s)... MVA</b>	Ø	4.50							
MAYHTR1A05BKR, or (LUG) (M, W) EHK05A or (B)	1		29.5	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) (M, W) EHK08A or (B)			43.6	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) (M, W) EHK10A or (B)			54.5	60	-----	-----	2	9.60	
MAYHTR1A15BKR (M, W) EHK15B			54.5	60	25	30	3	14.40	
<b>42 CABINET(S)... MVA</b>	Ø	6.10							
MAYHTR1A05BKR, or (LUG) (M, W) EHK05A or (B)	1		31.1	35	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) (M, W) EHK08A or (B)			45.2	50	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) (M, W) EHK10A or (B)			56.1	60	-----	-----	2	9.60	
MAYHTR1A15BKR (M, W) EHK15B			56.1	60	25.0	30	3	14.40	
MAYHTR1A20BKR (M, W) EHK20B			56.1	60	50.0	60	4	19.20	
<b>48 CABINET(s)... MVA</b>	Ø	7.50							
MAYHTR1A05BKR, or (LUG) (M, W) EHK05A or (B)	1		32.5	35	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) (M, W) EHK08A or (B)			46.6	50	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) (M, W) EHK10A or (B)			57.5	60	-----	-----	2	9.60	
MAYHTR1A15BKR (M, W) EHK15B			57.5	60	25.0	30	3	14.40	
MAYHTR1A20BKR (M, W) EHK20B			57.5	60	50.0	60	4	19.20	
<b>60 CABINET(s)... MVA</b>	Ø	9.50							
MAYHTR1A05BKR, or (LUG) (M, W) EHK05A or (B)	1		34.5	35	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) (M, W) EHK08A or (B)			48.6	50	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) (M, W) EHK10A or (B)			59.5	60	-----	-----	2	9.60	
MAYHTR1A15BKR (M, W) EHK15B			59.5	60	25.0	30	3	14.40	
MAYHTR1A20BKR (M, W) EHK20B			59.5	60	50.0	60	4	19.20	

Model and Heat Kit Usage	Phase	Unit MCA ‡	CIRCUIT #1		CIRCUIT #2		Coil Qty Used	ACTUAL KW @ 240V	
			MCA	MOP	MCA	MOP			
<b>24 CABINET(S)... WATPM &amp; BVA</b>	Ø	3.50							
MAYHTR1A05BKR, or (LUG) (M, W) EHK05A or (B)	1		28.5	30	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) (M, W) EHK08A or (B)			42.6	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) (M, W) EHK10A or (B)			53.5	60	-----	-----	2	9.60	
<b>36 CABINET(S)... WATPM &amp; BVA</b>	Ø	5.10							
MAYHTR1A05BKR, or (LUG) (M, W) EHK05A or (B)	1		30.1	35	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) (M, W) EHK08A or (B)			44.2	45	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) (M, W) EHK10A or (B)			55.1	60	-----	-----	2	9.60	
MAYHTR1A15BKR (M, W) EHK15B			55.1	60	25.0	30	3	14.40	
<b>48/60 CABINET(s)... WATPM &amp; BVA</b>	Ø	7.50							
MAYHTR1A05BKR, or (LUG) (M, W) EHK05A or (B)	1		32.5	35	-----	-----	1	4.80	
MAYHTR1A08BKR, or (LUG) (M, W) EHK08A or (B)			46.6	50	-----	-----	2	7.20	
MAYHTR1A10BKR, or (LUG) (M, W) EHK10A or (B)			57.5	60	-----	-----	2	9.60	
MAYHTR1A15BKR (M, W) EHK15B			57.5	60	25.0	30	3	14.40	
MAYHTR1A20BKR (M, W) EHK20B			57.5	60	50.0	60	4	19.20	
‡	- Please refer to Units Series and Rating plate for confirmation of MCA & MOP values.								
*	- Please refer to Unit Specifications for Single point and additional electrical ratings data								
The electric heat kits designed for use with these units may include a combination of 15 through 60 amp circuit breakers to provide an electrical disconnect for service personnel that are intended to help protect internal electrical components in the even									