

### **Installation/ Start-up/ Maintenance**

FOR HORIZONTAL OR VERTICAL AIRFLOW  
PERMANENT OR SUPPLEMENTARY ELECTRIC FORCED AIR HEATING FROM THE SAME  
VERSATILE UNIT

These heavy-duty heaters provide spot heating for hard to heat areas, or they can be used as the primary

source of heat for areas not reached by an existing heating system.

The fan and motor are carefully matched to insure quiet, trouble-free operation and fan blades are precision balanced before installation.

Heaters in all capacities (3, 5, 7-1/2, 10 or 12kw) have the same dimensions, and use the same mounting brackets. All components and controls, including thermostat, transformers, relays, and switches are enclosed inside the case. Wiring is simple and all heaters can operate from a single power source.

**1. HEATER LOCATION:** Unit heaters should be located along outside walls to provide perimeter air circulation. The discharge air should wipe the walls without blowing directly on them. (Figure 1)

a. Small rooms - can be heated by one or two units. Locate the unit heater(s) to provide circular air movement within the space.

b. Large rooms - requiring multiple unit installations. Units should be located so that the discharge air from one unit supports the discharge from another unit and provides a circular air movement.

c. Remote thermostats - should be located on interior walls or posts away from heat sources, cold drafts, and away from heater discharge streams.

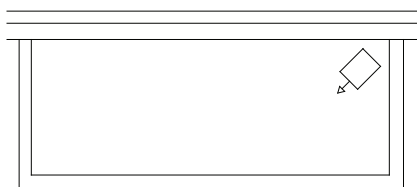
**2. MOUNTING UNIT HEATER(S):** Heater should be mounted a minimum of ten (10) inches from walls and six (6) feet above floor (8 feet for vertical air flow) with the discharge parallel to or away from wall. (See Table A for recommended mounting heights)

a. **MOUNTING BRACKET** - The heater is shipped with a mounting bracket packed separately in the carton. Secure the bracket to threaded attachment points on the sides of the heater with two bolts (provided). Select desired angle of tilt (Horizontal, 15, 30, 45, 60, 75, or Vertical), remove corresponding knockouts on sides of the heater, then screw the remaining two bolts into the threaded holes in the bracket so that the bolts pass through the knockout holes. The unit is now ready for hanging.

b. **CEILING MOUNTING** - Fasten the heater securely to the ceiling using the center hole in the bracket or the two holes on either side of the center hole. The Unit mounting bracket may be attached directly to the ceiling.

c. **WALL MOUNTING** - The heater may also be mounted to a wall with accessory wall bracket, (Part # EUHWB). The wall bracket attaches to the center hole of the unit mounting bracket.

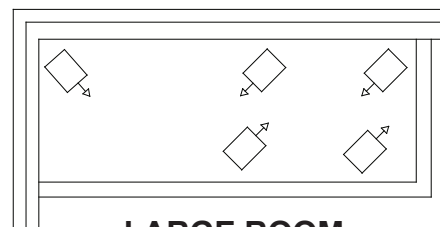
**EXPOSED OUTSIDE WALL**



**SMALL ROOM**

**EXPOSED OUTSIDE WALL**

**EXPOSED OUTSIDE WALL**



**LARGE ROOM**

**FIGURE 1**

*Heater is now ready for wiring*

### 3. WIRING:

- a. Connect the heater only to the voltage and frequency specified on the nameplate.
- b. All wiring to be in accordance with local and national electric codes.
- c. Remove two screws securing the access door (See Figure 2) and swing the door down to expose the wiring and control compartment.
- d. Three knockouts are provided at the back of the heater for power and control wiring. (See Figure 2)
- e. Rough-in branch circuit wiring to the heater using wire rated for 75 degrees C. Wire heater supply according to diagram attached to the access door.

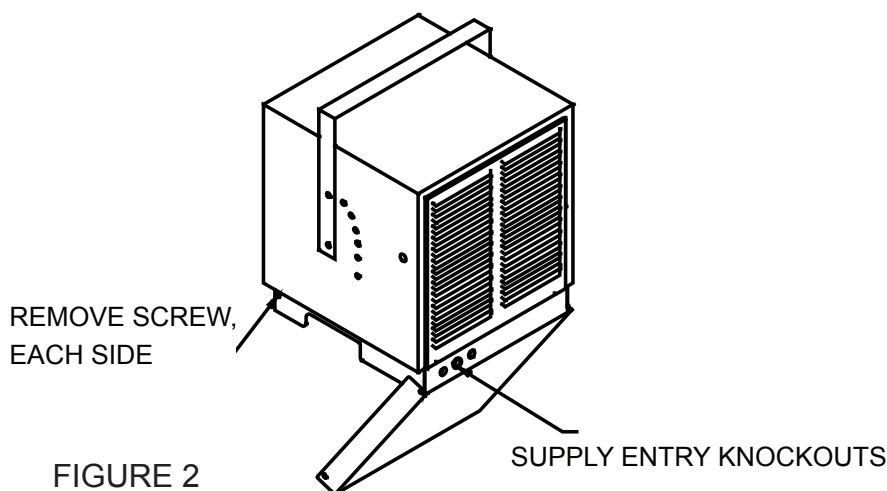


FIGURE 2

### 4. CONTROLS: Factory installed.

- a. Fan delay - The heater is equipped with a fan delay control. The fan will remain on for a few moments after the elements are de-energized.
- b. Automatic High Limit - Each heater is equipped with automatic reset thermal cutouts located above the elements. Should these safety switches operate, they will automatically reset once the element reaches a safe operating temperature, however the cause of the high limit condition should be determined and corrected to insure satisfactory operation.
- c. Thermostat - All heaters are equipped with a hydraulic type thermostat which has a nominal operating range of 40F (low) to 100F (high).

### 5. OPTIONAL CONTROLS: Field installed.

- a. Remote line voltage thermostat - An optional remote line voltage thermostat may be used to control the unit. Field connections may simply be connected to the control terminal block located in the wiring compartment in accordance with the wiring diagram attached to the access door.

#### **CAUTION - Disconnect the built-in thermostat**

- b. Remote Low voltage thermostat with relay - An optional low voltage thermostat/relay kit may be used to control the unit (Catalogue #EUAR11, 120V primary; EUAR21, 208V primary; EUAR31, 240V primary; EUAR41, 277V primary). The relay is installed through the hole provided in the back left corner of the blower deck. Power connections are made to the control terminal block located in the wiring compartment in accordance with the wiring diagram attached to the access door. A knockout is provided on the left side of the heater for the 24 volt thermostat control wiring. It is important that the plastic insulation bushing be installed into the knockout hole before running low voltage control wiring. The thermostat is installed and wired in accordance with the instructions packaged with the kit.

#### **CAUTION - Disconnect the built-in thermostat**

c. Fan only Switch - An optional "Fan only" switch kit (Catalogue EUAF2) is available for field installation in the unit. The fan switch is mounted in the space provided adjacent to the built-in thermostat located at the front of the unit. Field connections are made at the control terminal block in accordance with the unit wiring diagram.

#### 6. START-UP:

a. Before the unit is energized, the discharge louvers should be adjusted for desired air deflection. Louvers may be adjusted for either horizontal or vertical air deflection by rotating the louver frame. (See figure 3)

b. Check to see that all controls and optional accessories are operating properly.

#### 7. MAINTENANCE:

a. Under normal conditions, the heater should be cleaned once a year. **DISCONNECT ALL POWER** before cleaning or servicing the heater.

b. All motors are lubricated for extended life operation, and will not have to be oiled.

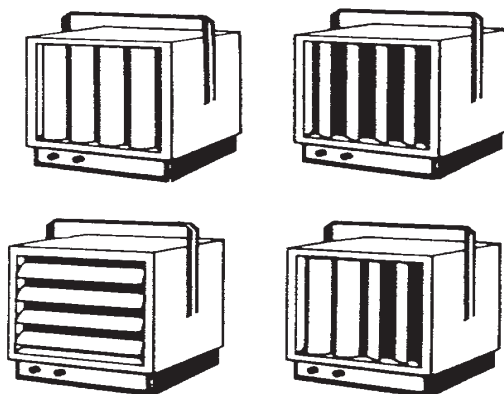


FIGURE 3

TABLE A

CAPACITY	HEATER	VOLTS	PHASE	CONTROL & MOTOR VOLTS	CONTACTOR	CFM	AIR TEMP. RISE	AIR THROW	MTG HEIGHT FT/MTR	SHIP WEIGHT LBS/KG
3 KW 10,245 BTU	EUH03B11T	120	1	120	NOT REQ'D	350	30/16	15/4.57	8/2.43	36/16
	EUH03B21T	208	1	208	NOT REQ'D	350	30/16	15/4.57	8/2.43	36/16
	EUH03B24CT	208	1/3	208	BUILT IN	350	30/16	15/4.57	8/2.43	40/18
	EUH03B31T	240	1	240	NOT REQ'D	350	30/16	15/4.57	8/2.43	36/16
	EUH03B34CT	240	1/3	240	BUILT IN	350	30/16	15/4.57	8/2.43	40/18
	EUH03B41CT	277	1	240	BUILT IN	350	30/16	15/4.57	8/2.43	40/18
	EUH03B51CT	347	1	240	BUILT IN	350	30/16	15/4.57	8/2.43	40/18
	EUH03B71CT	480	1	240	BUILT IN	350	30/16	15/4.57	8/2.43	40/18
	EUH03B73CT	480	3	240	BUILT IN	350	30/16	15/4.57	8/2.43	40/18
	EUH03B81CT	600	1	240	BUILT IN	350	30/16	15/4.57	8/2.43	40/18
	EUH03B93CT	600	3	240	BUILT IN	350	30/16	15/4.57	8/2.43	40/18
5 KW 17,075 BTU	EUH05B21T	208	1	208	NOT REQ'D	350	50/27	15/4.57	9/2.74	36/16
	EUH05B24CT	208	1/3	208	BUILT IN	350	50/27	15/4.57	9/2.74	40/18
	EUH05B31T	240	1	240	NOT REQ'D	350	50/27	15/4.57	9/2.74	36/16
	EUH05B34CT	240	1/3	240	BUILT IN	350	50/27	15/4.57	9/2.74	40/18
	EUH05B41CT	277	1	240	BUILT IN	350	50/27	15/4.57	9/2.74	40/18
	EUH05B51CT	347	1	240	BUILT IN	350	50/27	15/4.57	9/2.74	40/18
	EUH05B74CT	480	1/3	240	BUILT IN	350	50/27	15/4.57	9/2.74	40/18
	EUH05B94CT	600	1/3	240	BUILT IN	350	50/27	15/4.57	9/2.74	40/18
7.5 KW 25,613 BTU	EUH08B24CT	208	1/3	208	BUILT IN	600	46/26	20/6.0	10/3.05	46/21
	EUH08B34CT	240	1/3	240	BUILT IN	600	46/26	20/6.0	10/3.05	46/21
	EUH08B41CT	277	1	240	BUILT IN	600	46/26	20/6.0	10/3.05	50/22
	EUH08B51CT	347	1	240	BUILT IN	600	46/26	20/6.0	10/3.05	50/22
	EUH08B74CT	480	1/3	240	BUILT IN	600	46/26	20/6.0	10/3.05	50/22
	EUH08B94CT	600	1/3	240	BUILT IN	600	46/26	20/6.0	10/3.05	50/22
10 KW 34,130 BTU	EUH10B24CT	208	1/3	208	BUILT IN	600	60/33	20/6.0	10/3.05	46/21
	EUH10B34CT	240	1/3	240	BUILT IN	600	60/33	20/6.0	10/3.05	46/21
	EUH10B51CT	347	1	240	BUILT IN	600	60/33	20/6.0	10/3.05	50/22
	EUH10B74CT	480	1/3	240	BUILT IN	600	60/33	20/6.0	10/3.05	50/22
	EUH10B94CT	600	1/3	240	BUILT IN	600	60/33	20/6.0	10/3.05	50/22
12 KW 42,000 BTU	EUH12B23CT	208	3	208	BUILT IN	600	75/42	20/6.0	10/3.05	46/21
	EUH12B33CT	240	3	240	BUILT IN	600	75/42	20/6.0	10/3.05	46/21
	EUH12B51CT	347	1	240	BUILT IN	600	75/42	20/6.0	10/3.05	50/22
	EUH12B74CT	480	1/3	240	BUILT IN	600	75/42	20/6.0	10/3.05	50/22
	EUH12B94CT	600	1/3	240	BUILT IN	600	75/42	20/6.0	10/3.05	50/22



CATALOG NO.	CAPACITOR	CASING	CONTACTOR	CONTROL KNOB	CUT-OUT	ELEMENT	
						RP NO.	QTY/HEATER
EUH03B11T	3200070600RP	1006060168RP	N/A	8800540368RP	00009112RP	2200210100RP	3
EUH03B21T			N/A			2200210200RP	
EUH03B24CT			2400170900RP			2200210200RP	
EUH03B31T			N/A			2200210300RP	
EUH03B34CT			2400170900RP			2200210300RP	
EUH03B41T			N/A			2200210400RP	
EUH03B51CT			2400160300RP			2200211200RP	
EUH03B73CT			2400160300RP			2200210400RP	
EUH03B81CT			2400160300RP			2200212100RP	
EUH03B83CT			2400160300RP			2200211200RP	
EUH05B21T			N/A			2200210800RP	
EUH05B24CT			2400170900RP			2200210800RP	
EUH05B31T			N/A			2200210500RP	
EUH05B34CT			2400170900RP			2200210500RP	
EUH05B41T			N/A			2200210600RP	
EUH05B51CT	3200070200RP		2400160300RP			2200211500RP	
EUH05B74CT			2400170900RP			2200211900RP	
EUH05B84CT			2400170900RP			2200212300RP	
EUH08B24CT			2400170900RP			2200210500RP	
EUH08B34CT			2400170900RP			2200210600RP	
EUH08B51CT			2400160300RP			2200211300RP	
EUH08B74CT			2400170900RP			2200211800RP	
EUH08B84CT			2400170900RP			2200212200RP	
EUH10B24CT			2400170900RP			2200210800RP	
EUH10B34CT			2400170900RP			2200210500RP	
EUH10B51CT			2400160300RP			2200211500RP	
EUH10B74CT			2400170900RP			2200211900RP	
EUH10B84CT			2400170900RP			2200212300RP	
EUH12B23CT			2400160300RP			2200210900RP	
EUH12B3CT			2400160300RP			2200211000RP	
EUH12B74CT			2400170900RP			2200212000RP	
EUH12B84CT			2400170900RP			2200212400RP	