

# CEH / 3380 SERIES CEILING HEATER

## INSTALLATION INSTRUCTIONS

### Location of Heater:

Heaters are designed for surface, recessed or "T-bar" ceiling mounting. Heaters must be mounted to provide a minimum clearance of 8" from the intake or exhaust end or from the sides of the heater to the nearest wall or obstruction. For T-Bar installation (Fig. 3), use the optional T-Bar frame CEH-TBF / TB3380. Select a 2' x 2' section of framework in such a location that the minimum 8" spacing is maintained. Follow the installation wiring diagram carefully. A green ground lead is provided. Insure that supply voltage matches voltage rating on the label of the heater. Disconnect power supply at breaker box before installation.

### Mounting Instructions:

1. Disassemble heater as shown in Fig. 1 & Fig. 2.
2. Flush Mounting (Fig. 2). Provide opening in ceiling 14 1/4" wide by 19 5/16" long. Note that the direction of air flow is parallel to the 19 5/16" side of the opening. Depth must be a minimum of 4" from the finished ceiling surface. Install rough-in box into the opening so that the flanges are flush with finished ceiling surface. Secure rough-in box with nails, screws or appropriate fasteners. Wiring may be brought into the box from either end using the knockouts provided.
3. Surface Mounting (Fig. 1). Insert rough-in box into surface adapter CEHA /3380EX33. Secure rough-in box into ceiling through holes provided in the back. Be sure that rough-in box is centered in the surface adapter. Bring wiring in through air outlet end knockouts only.
4. Remove all construction dirt and debris from inside the heater.
5. Place heater assembly inside the rough-in box and secure with six screws.

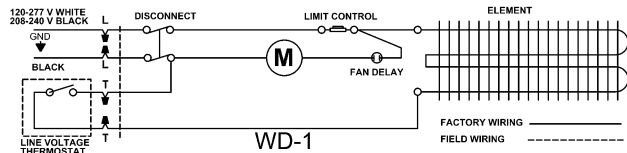
### Wiring Instructions:

6. All wiring must conform to National and local electrical codes.

#### With Disconnect Ref. WD-1

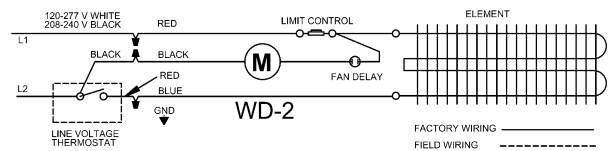
- A. Attach service leads to two black leads (L1 & L2) on 208-240 volt models and to white (L1) and black (L2) on 120-277 volt models, with approved connectors. Connect ground lead to green ground wire with approved connectors.

- B. Run service leads from remote thermostat and connect to lead wire T1 & T2 with approved connectors. Replace wiring compartment cover.



#### Without Disconnect Ref. WD-2

For proper fan operation, three conductor wires and a ground wire must be used between the thermostat and the heater. For 277 and 120 volt applications use a white, black, red and ground combination. For 208 and 240 volt applications use a black, black, red and ground combination. The wiring diagram is color coded in this manner.



#### **For 120 and 200 Volt Operation:**

Connect the white (neutral) supply lead to the red pigtail lead, the black supply lead (L2) to the black pigtail lead, and the red supply lead (L2) to the blue pigtail lead. The ground wire should be connected to the green pigtail lead.

#### **For 208 and 240 Volt Operation:**

Connect the black supply lead (L1) to the red pigtail lead, the black supply (L2) to the black pigtail lead, and the red supply lead (L2) to the blue pigtail lead. The ground wire should be connected to the green pigtail lead. Replace wiring compartment cover.

7. Attach front grille with four screws.

**Note:** The wall thermostat cycles the heating element only. Direct runs of supply service leads L1 & L2 supplies continuous power to the fan motor, and the heater should be considered live at all times. Move the disconnect switch to off position or disconnect power at main distribution box before any maintenance work. Turning the thermostat to off position will not disconnect the heater.

**IMPORTANT: OWNER SHOULD RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE**

## OPERATION INSTRUCTIONS:

### External Thermostat

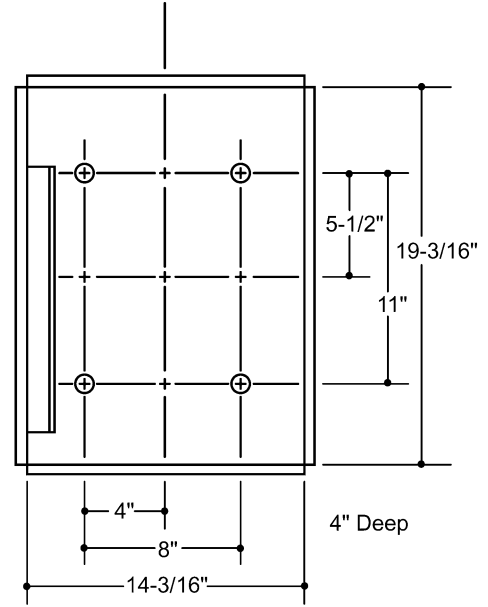
The thermostat should be mounted at the level of the desired comfort zone, but not in the direct path of the heated discharge air. A single pole thermostat with anticipator is recommended. Be sure that the ratings of the thermostat are sufficient to carry the heater load.

### Fan Operation

This heater is equipped with a fan delay control. When the thermostat calls for heat, the fan control delays the fan operation until the element is fully hot. Then the fan will energize and operate. After the thermostat is satisfied, the element will de-energize and the fan will continue to run until the element has cooled down. If the fan does not function in this manner, check all wiring connections against the wiring diagram.

## MAINTENANCE INSTRUCTIONS:

Once a year, disconnect electrical power at source. Remove front grille and clean dust from heater and grille. Lubricate the motor with SAE No. 10 oil. Two oil spouts are located on front and back of motor. Once finished turn power back on to heater.



Rough-In Box  
Dimensions

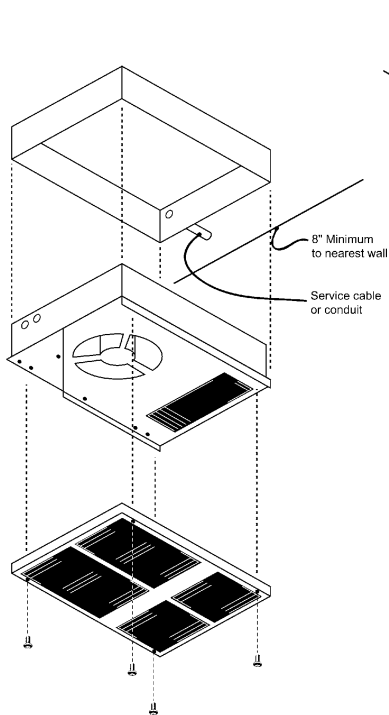


Fig. 1  
Surface Mounting

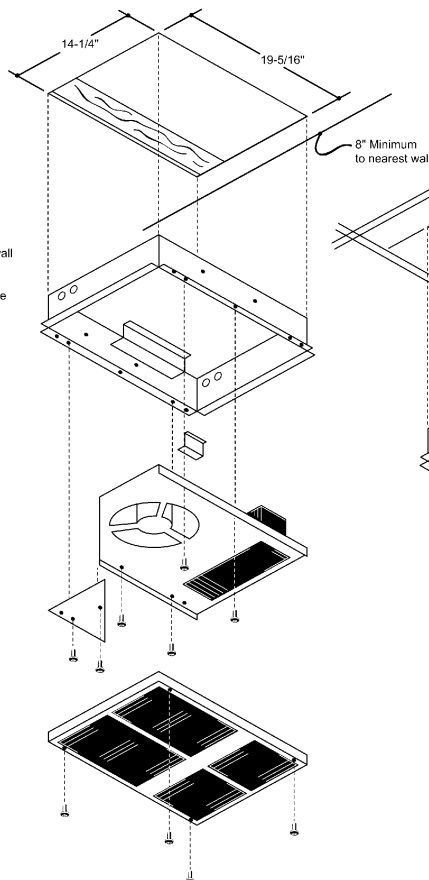


Fig. 2  
Flush Mounting

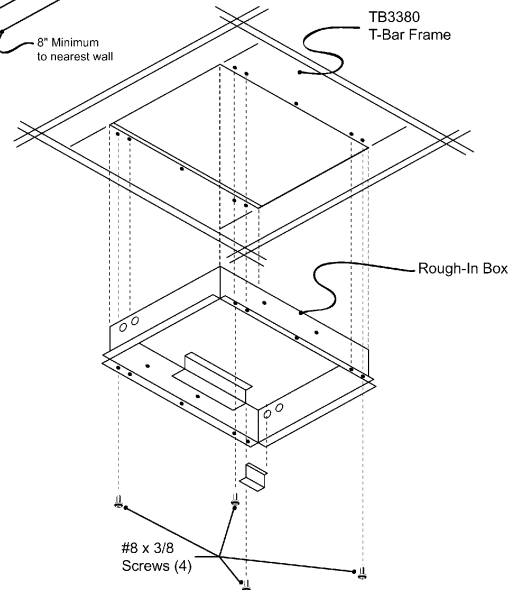


Fig. 3  
T-Bar Mounting