

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.

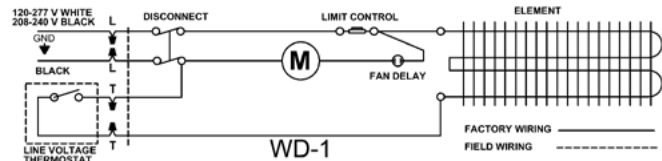
Wiring Instructions:

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

With Disconnect Reference WD-1

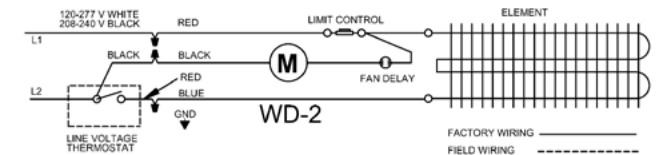
- A. Attach service leads to two black leads (L1 & L2) on 208-240 volt models and to white (L1) and black (L2) on 120-277 volt models, with approved connectors. Connect ground lead to green ground wire with approved connectors.

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



Without Disconnect Reference 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 277 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

CAUTION- High temperature, risk of fire, keep electrical cords, drapery, furnishings and other combustibles at least 3 feet (0.9m) from the front of the heater and away from the side and rear. Disconnect all power supplies before servicing.

ATTENTION - Haute température, risque d'incendie, arder les cordons électriques, des rideaux, des meubles et d'autres combustibles au moins 3 pieds (0,9m) du devant de l'appareil et loin de la côte et l'arrière. Débranchez toutes les alimentations avant l'entretien.

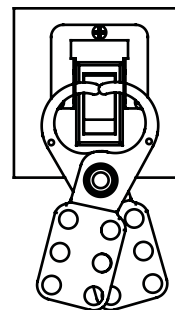
IMPORTANT INSTRUCTIONS

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electrical shock, and injury to persons, including the following:

1. Read all instructions before using this heater.
2. **CAUTION:** High temperatures. Keep cords and all other combustible material, such as furniture, papers, clothes and curtains away from the heater. For safe and efficient operation, keep an open space around heater of three feet in front and 12 inches at ends and rear.
3. Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
4. Do not operate any heater after it malfunctions, has been dropped or damaged in any manner. Return heater to authorized service facility for examination, electrical or mechanical adjustment, or repair.
5. Do not use outdoors.
6. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel (or operate internal disconnect switch if provided).
7. Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
8. To prevent a possible fire, do not block air intakes or exhaust in any manner.
9. A heater has hot and arcing or sparking parts inside. **WARNING:** Do not use it in area where gasoline, paint, or flammable liquids are used or stored.
10. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
11. This heater may include an audible or visual alarm to warn that parts of the heater are getting excessively hot. If the alarm sounds (or illuminates), immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred.
DO NOT OPERATE THE HEATER WITH THE ALARM SOUNDING (OR ILLUMINATING)
12. SAVE THESE INSTRUCTIONS

SWITCH LOCKOUT

For switch lockout hasp or padlock thru bracket as shown. Note: Front grille must remain off during lockout.



OPERATION INSTRUCTIONS:

External Thermostat

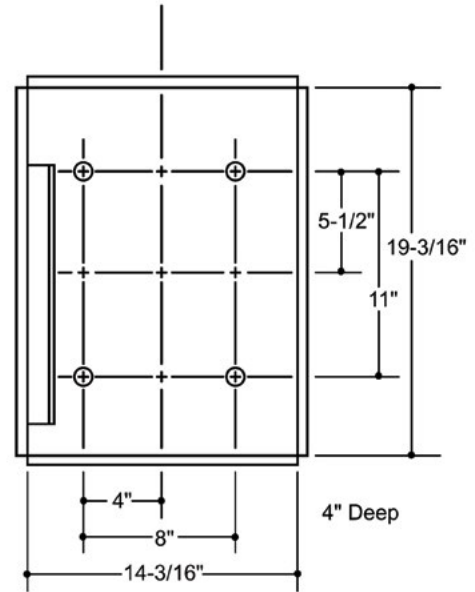
The thermostat should be mounted at the level of the desired comfort zone, but not in the direct path of the heated discharge air. A single pole thermostat with anticipator is recommended. Be sure that the ratings of the thermostat are sufficient to carry the heater load.

Fan Operation

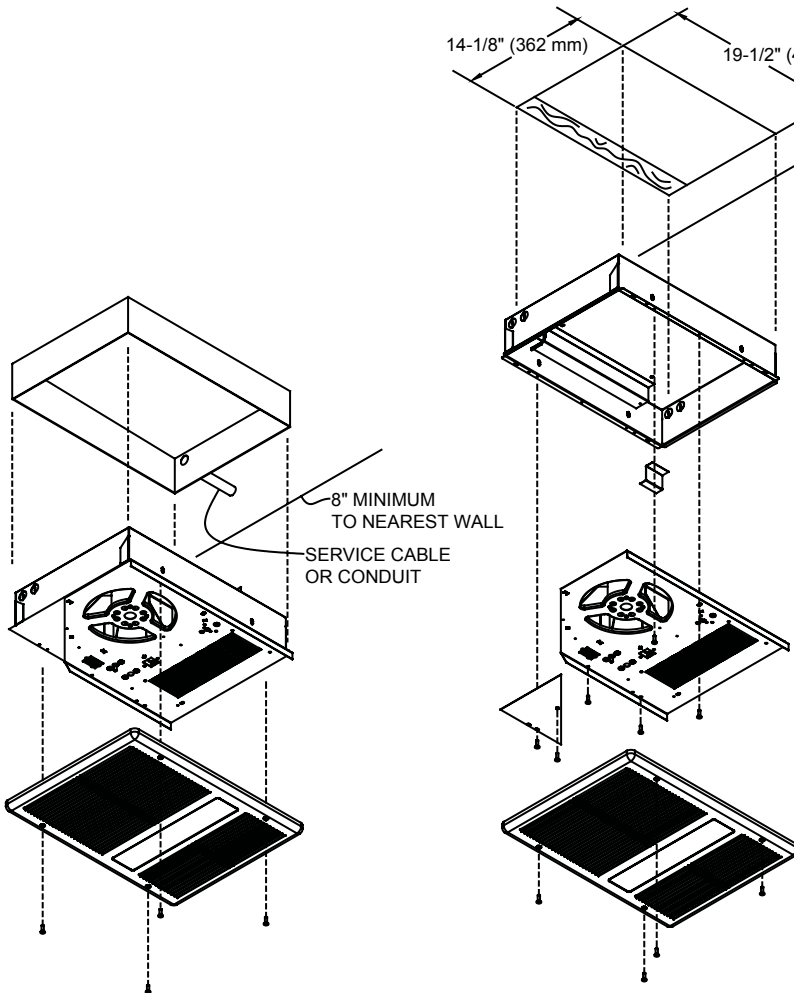
This heater is equipped with a fan delay control. When the thermostat calls for heat, the fan control delays the fan operation until the element is fully hot. Then the fan will energize and operate. After the thermostat is satisfied, the element will de-energize and the fan will continue to run until 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.

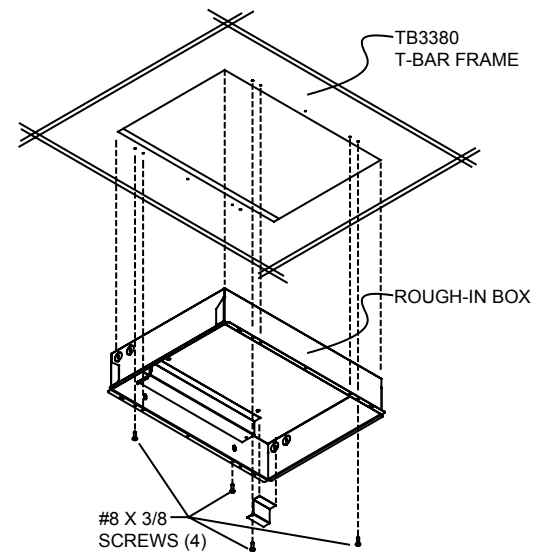


Rough-In Box Dimensions



**FIG. 1
SURFACE MOUNTING**

**FIG. 2
FLUSH MOUNTING**



**FIG. 3
T-BAR MOUNTING**