



ORIGINAL DOCUMENT



# INVIZATHERM™

*COMFORT HEATERS*

*INDEECO*

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# IMPORTANT INSTRUCTIONS:

**Read all these instructions before installing or using this heater.**

Indeeco is interested in the safe operation of its equipment. All wiring to this equipment must be connected to the electrical source in strict accordance with National Electrical Code (N.E.C.), Canadian Electrical Code (C.E.C.), international and/or any local codes having jurisdiction.

Do not further insulate the back of the heater section which might cause a heat buildup in the wiring raceway. The back surface of the raceway should be at least 4 inches from combustible material.

Puncture of the element face may result in a shock hazard.

This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, paper, clothes, etc. and curtains at least 3 feet from the front of the heater and keep them away from the sides and rear.

Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.

Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.

To disconnect the heater, turn off power to heater circuit at main disconnect panel.

Do not insert or allow foreign objects to enter any ventilation opening as this may cause an electric shock or fire, or damage to the heater.

A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.

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.

## SAVE THESE INSTRUCTIONS

# INSTALLATION:

All wiring to this equipment must be connected to the electrical source in strict accordance with National Electrical Code (N. E. C.), Canadian Electrical Code (C.E.C.), international and/or any local codes having jurisdiction.

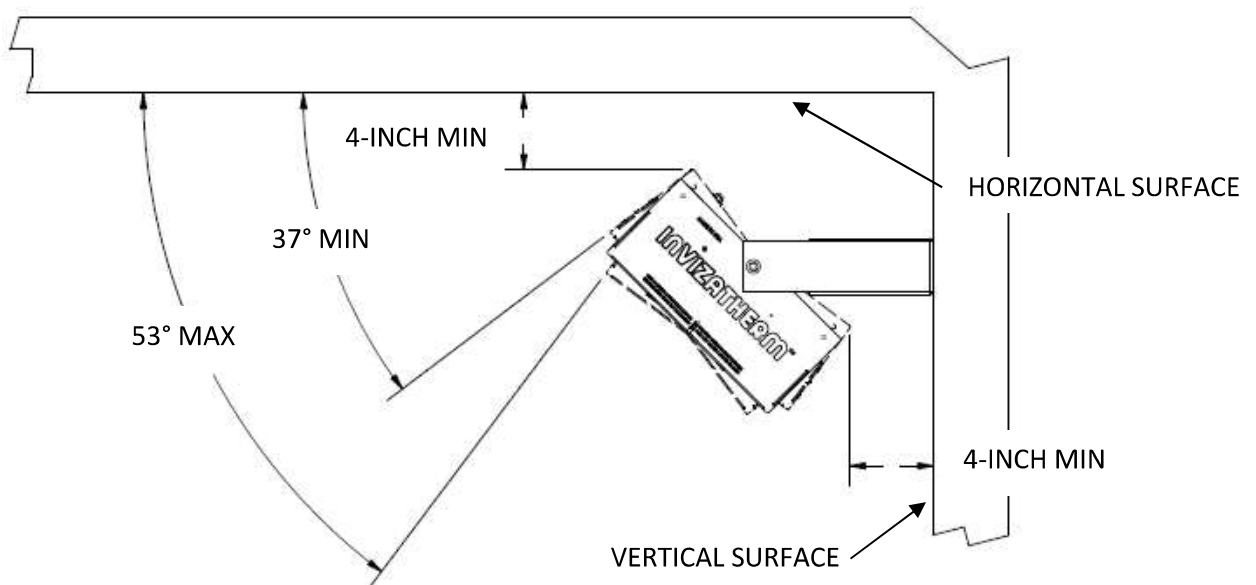
## FOR WALL MOUNTING:

Do not install the section closer than:

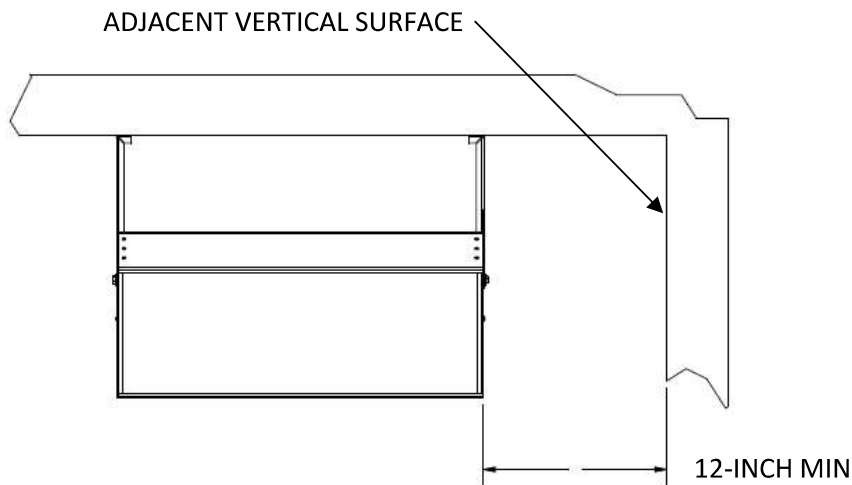
- 4 inches to a horizontal surface
- 12 inches to an adjacent vertical surface
- 36 inches to another heater
- 6 feet from the floor

For angle positioning, the heater should not be directed toward any vertical surface closer than 6 feet.

**IMPORTANT:** When using the mounting brackets, a minimum of 4 inches should be left between the corners of the heating section and any horizontal or vertical surface. See drawing below.



**Fig. 1a – WALL MOUNTING**



**Fig. 1b – WALL MOUNTING**

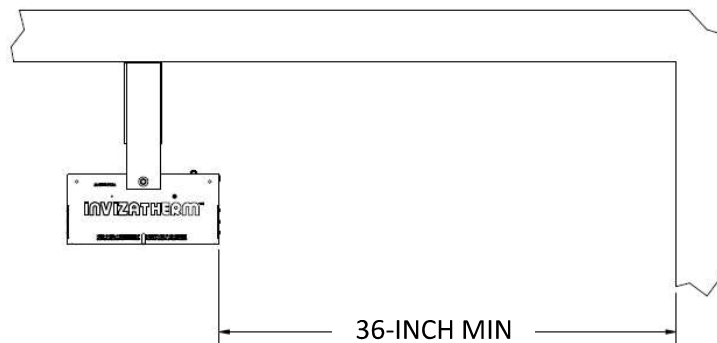
Once the heater is mounted to the wall, position the heater to the desired angle between 37° and 53° downward from the horizontal, limited by the flanges of the mounting bracket. Tighten the two bolts to secure the heater.

**WARNING!** Risk of fire. Do not position any heater at an angle not allowed by the flanged bracket (37°-53°).

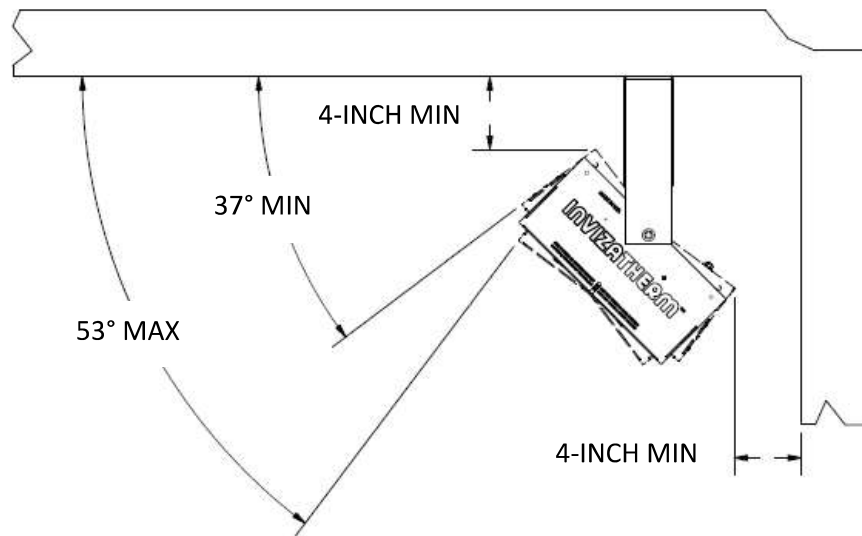
**FOR CEILING MOUNTING:**

Do not install the section closer than:

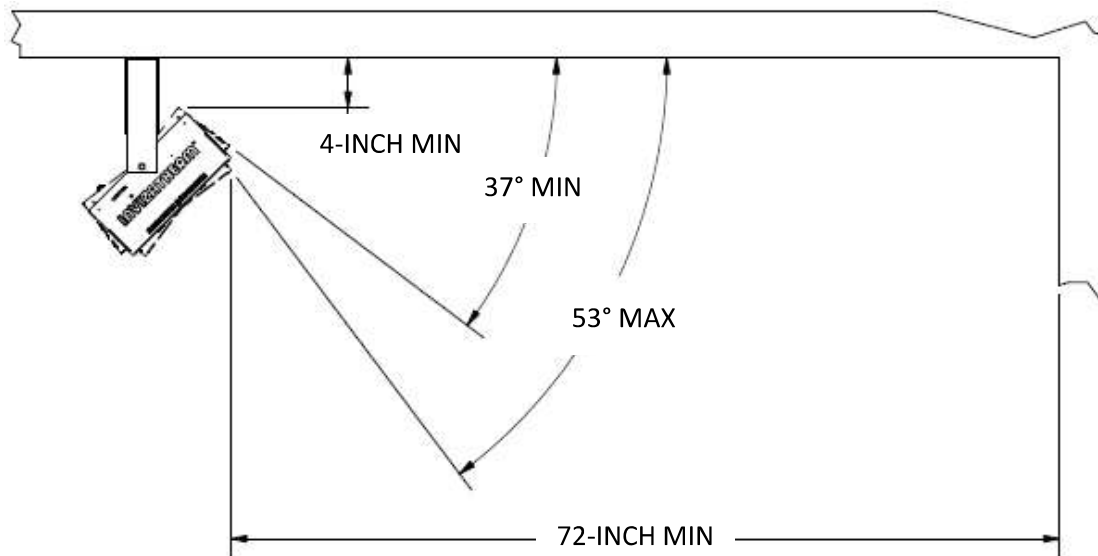
- 36 inches to a vertical surface for vertical mounting
- 4 inches to a vertical surface for angled ceiling mounting
- 12 inches to an adjacent vertical surface
- 36 inches to another heater
- 6 feet from the floor



**Fig. 2 – CEILING MOUNTING VERTICAL**



**Fig. 3 – CEILING MOUNTING ANGLED AWAY FROM VERTICAL SURFACE**



**Fig. 4 – CEILING MOUNTING ANGLED TOWARDS VERTICAL SURFACE**

**PROTECTED AREA MOUNTING:**

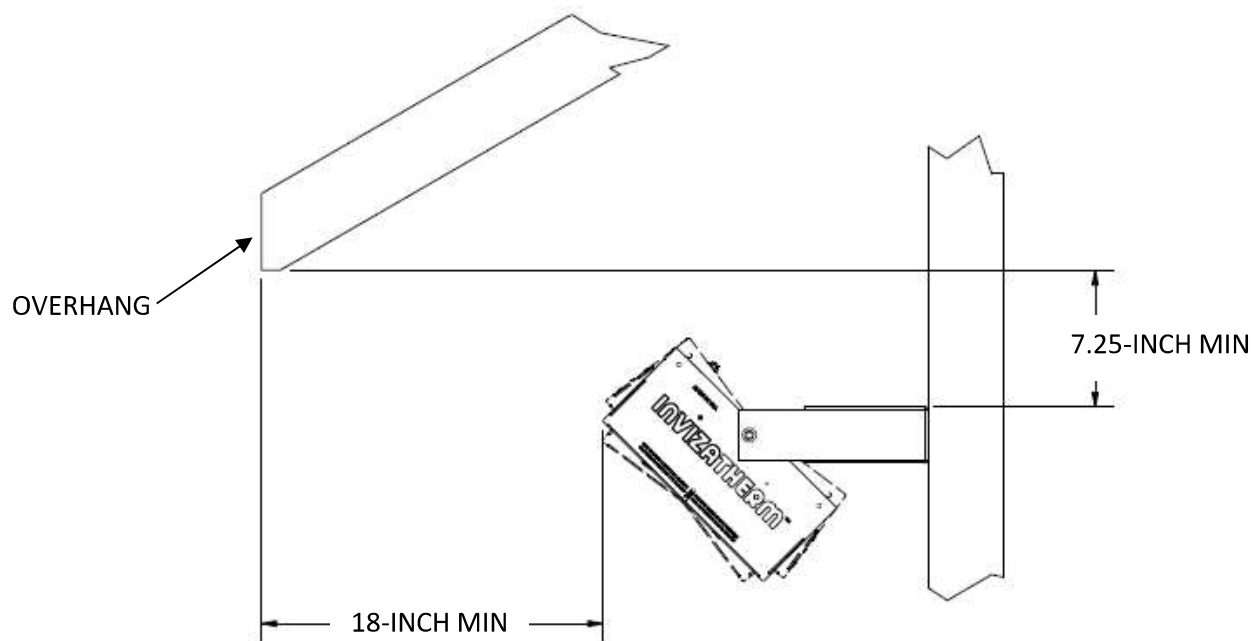
A *Protected Area* is defined as “Located in an area that is partially protected from the effects of weathering.” Typical *protected areas* would be the underside of a pavilion with a roof, garage port, and the like.

**FOR PROTECTED AREA WALL MOUNTING:**

Adhere to all requirements for mounting listed above. Additionally:

Do not install the section closer than 18 inches to edge of overhang of roof and no more than 7.25 inches (to top of bracket) below the edge.

The heater needs to be installed in a position such that it is protected from rain, snow, and similar outdoor wet areas.



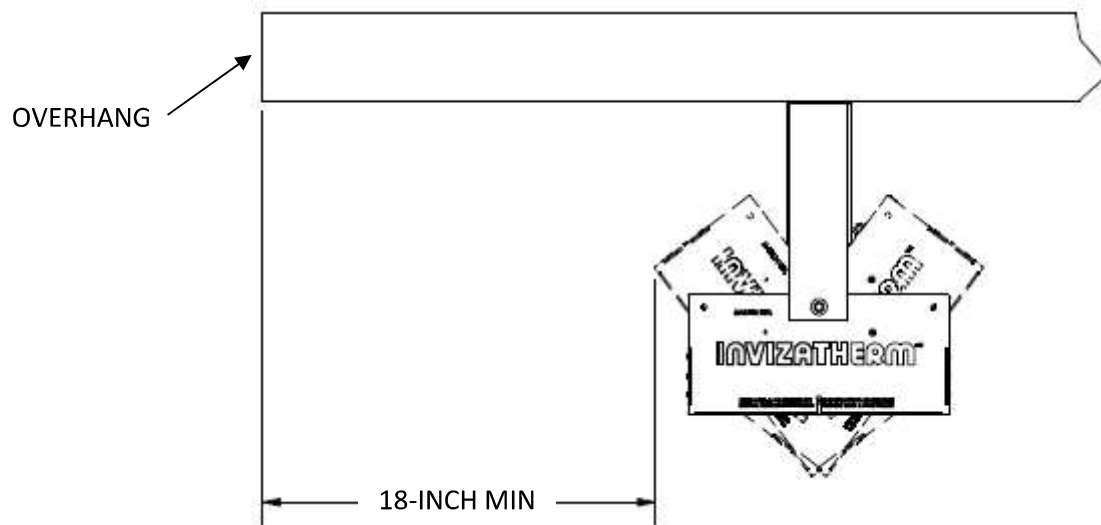
**Fig. 5 – PROTECTED AREA MOUNTING**

**FOR PROTECTED AREA CEILING MOUNTING:**

Adhere to all requirements for Ceiling Mounting listed above. Additionally:

Do not install the section closer than 18 inches to edge of overhang of roof.

The heater needs to be installed in a position such that it is protected from rain, snow, and similar outdoor wet areas.



**Fig. 6 – PROTECTED AREA CEILING MOUNTING**

For supply connections use the wire size (or larger) as directed by the chart below. All wires must be suitable for at least 75°C (167°F).

SINGLE PHASE SECTIONS						
MODEL NUMBER	120 VOLT	208/240 VOLT	277 VOLT	347 VOLT	480 VOLT	600 VOLT
	AWG WIRE SIZE	AWG WIRE SIZE	AWG WIRE SIZE	AWG WIRE SIZE	AWG WIRE SIZE	AWG WIRE SIZE
STS-U12-0871B STS-U12-1081B	14	-	-	-	-	-
STS-U12-1111B STS-U12-1681B	12	-	-	-	-	-
STS-U12-1436J	-	14	-	-	-	-
STS-U24-1316B	14	-	-	-	-	-
STS-U24-1659B	12	-	-	-	-	-
STS-U24-2192B STS-U24-2222B	10	-	-	-	-	-
STS-U24-3363B	8	-	-	-	-	-
STS-U24-1015V STS-U24-1297V STS-U24-1701V STS-U24-2001V STS-U24-2428V	-	14	-	-	-	-
STS-U24-3239V	-	12	-	-	-	-
STS-U24-1982N STS-U24-2388N STS-U24-3008N	-	-	14	-	-	-
STS-U24-2060I STS-U24-2488I STS-U24-3176I	-	-	-	14	-	-
STS-U48-2030V STS-U48-2594V	-	14	-	-	-	-
STS-U48-3402V	-	12	-	-	-	-
STS-U48-4002V STS-U48-4856V	-	10	-	-	-	-
STS-U48-6478V	-	8	-	-	-	-
STS-U48-2030T STS-U48-2594T	-	14	-	-	14	-
STS-U48-3402T	-	12	-	-	14	-
STS-U48-4002T STS-U48-4856T	-	10	-	-	14	-
STS-U48-6478T	-	8	-	-	12	-
STS-U48-3964N	-	-	12	-	-	-
STS-U48-4776N STS-U48-6056N	-	-	10	-	-	-



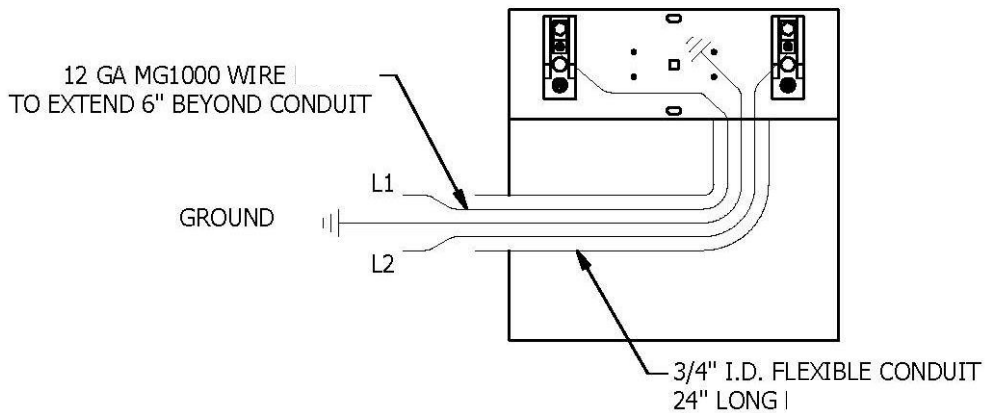
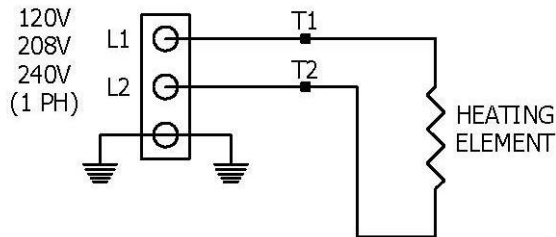
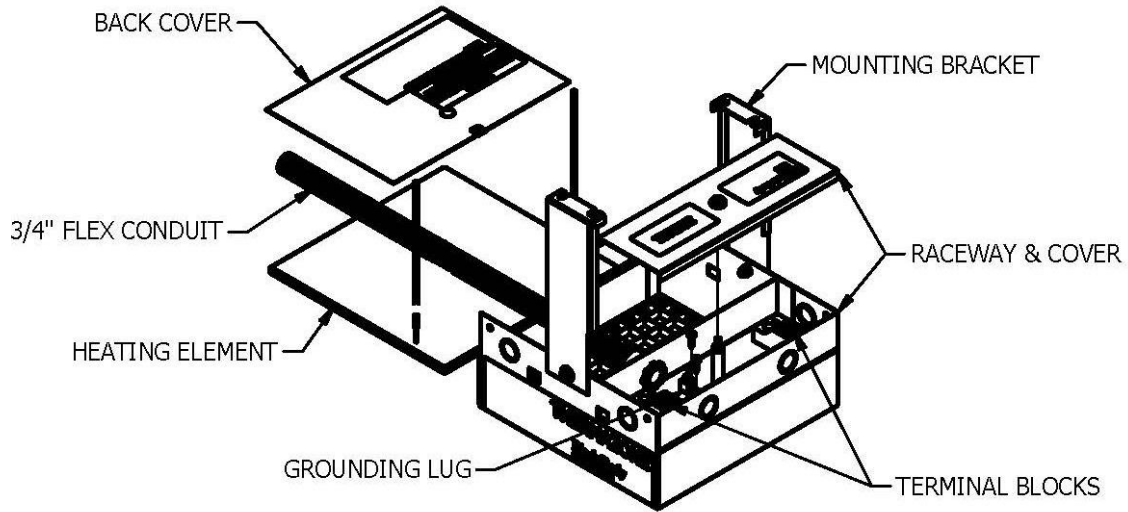
SINGLE PHASE SECTIONS - Continued						
MODEL NUMBER	120 VOLT	208/240 VOLT	277 VOLT	347 VOLT	480 VOLT	600 VOLT
	AWG. WIRE SIZE	AWG. WIRE SIZE	AWG. WIRE SIZE	AWG. WIRE SIZE	AWG. WIRE SIZE	AWG. WIRE SIZE
STS-U48-2014I STS-U48-2502I STS-U48-3206I	-	-	-	14	-	-
STS-U48-4120I STS-U48-4976I	-	-	-	12	-	-
STS-U48-6352I	-	-	-	10	-	-
STS-U48-4042Y STS-U48-4878Y STS-U48-6118Y	-	-	-	-	-	14
3-PHASE SECTIONS						
MODEL NUMBER	120 VOLT	208 / 240 VOLT	277 VOLT	347 VOLT	480 VOLT	600 VOLT
	AWG. WIRE SIZE	AWG. WIRE SIZE	AWG. WIRE SIZE	AWG. WIRE SIZE	AWG. WIRE SIZE	AWG. WIRE SIZE
STS-U24-1992P STS-U24-2442P STS-U24-3041P	-	14	-	-	-	-
STS-U48-3971P	-	14	-	-	-	-
STS-U48-4794P STS-U48-5954P	-	12	-	-	-	-
STS-U48-3928U STS-U48-4838U STS-U48-6060U	-	-	-	-	14	-
STS-U48-3963Z STS-U48-4797Z STS-U48-5982Z	-	-	-	-	-	14

To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.

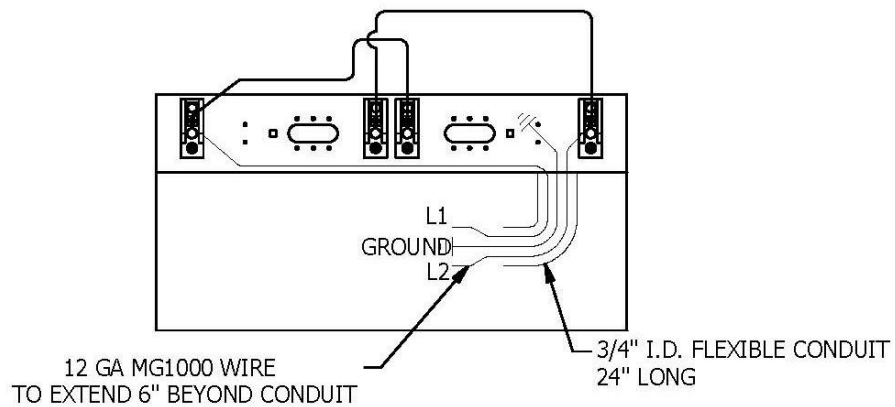
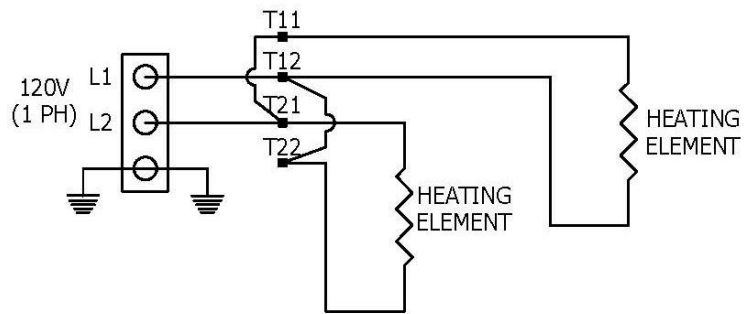
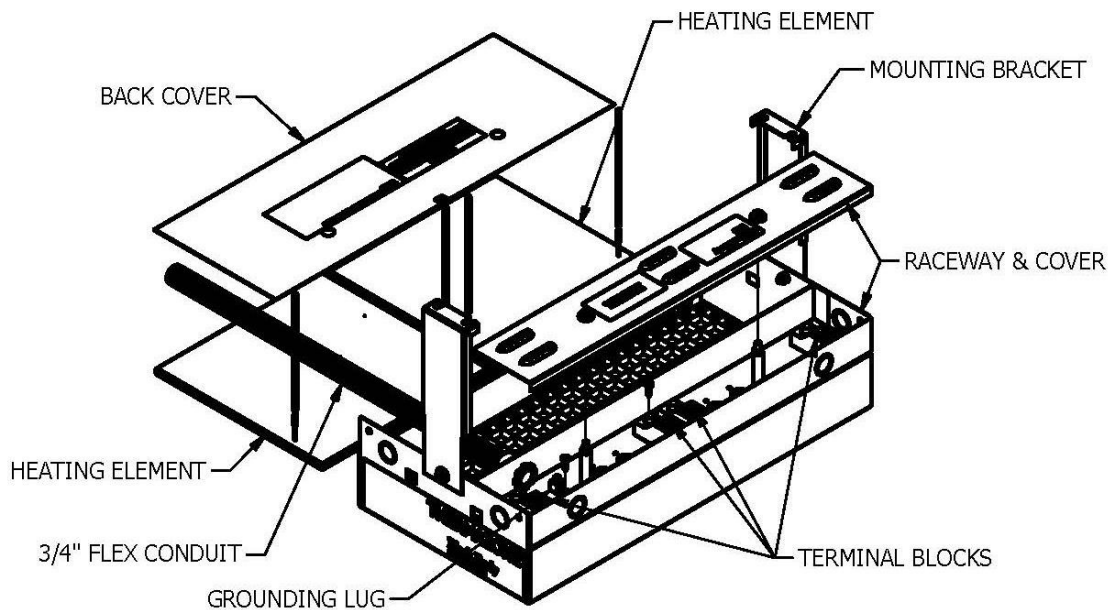
**CAUTION** – High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 6 feet (0.9 m) from the front of the heater and away from the side and rear.

# WIRING DIAGRAMS

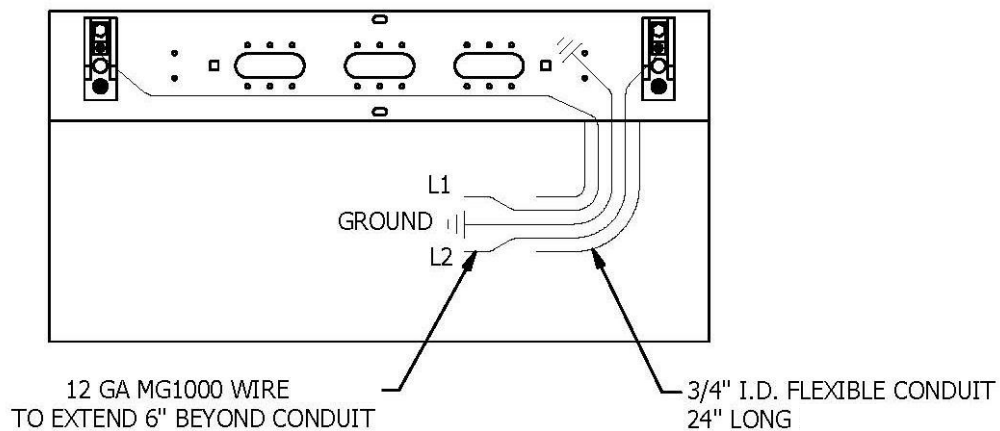
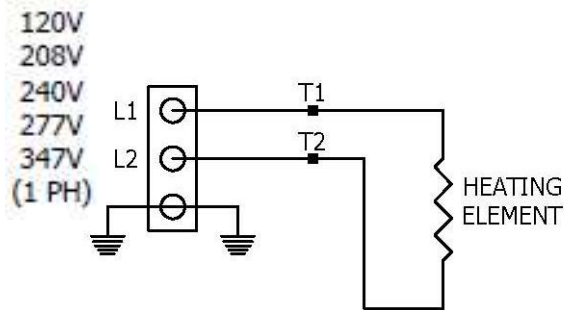
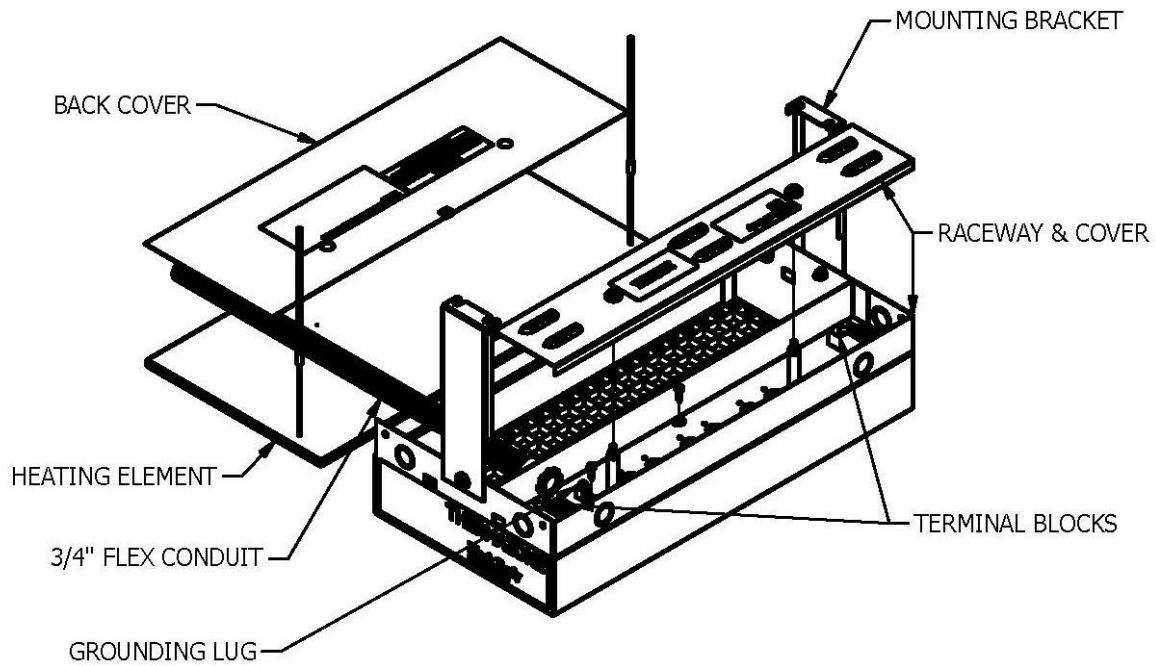
# FIG. 1 – 12" x 12" SECTIONS 120 / 208 / 240 VOLT – SINGLE PHASE



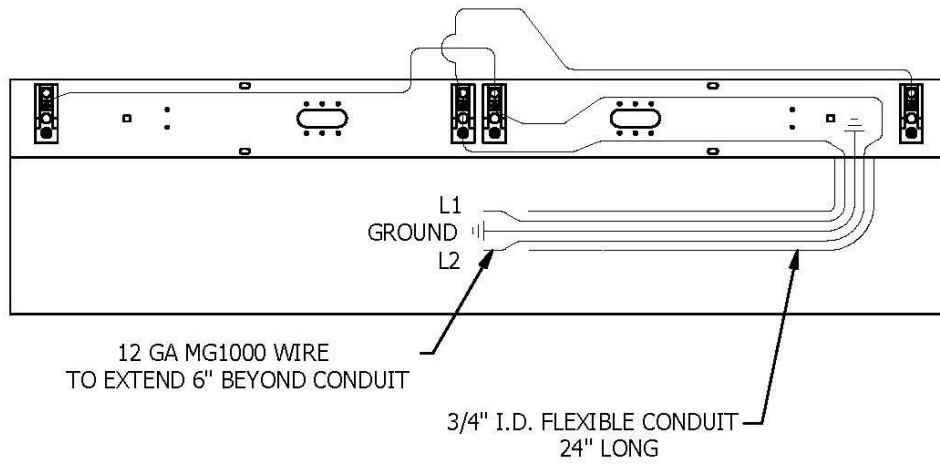
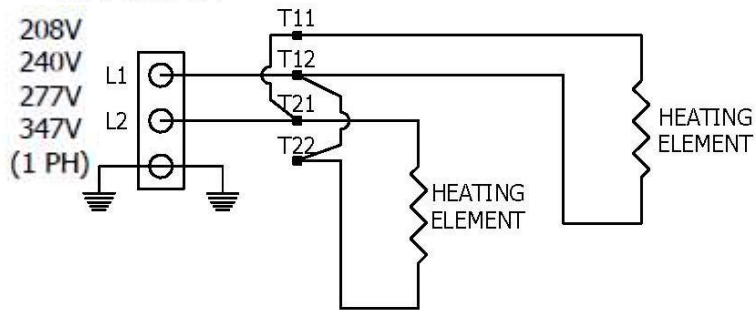
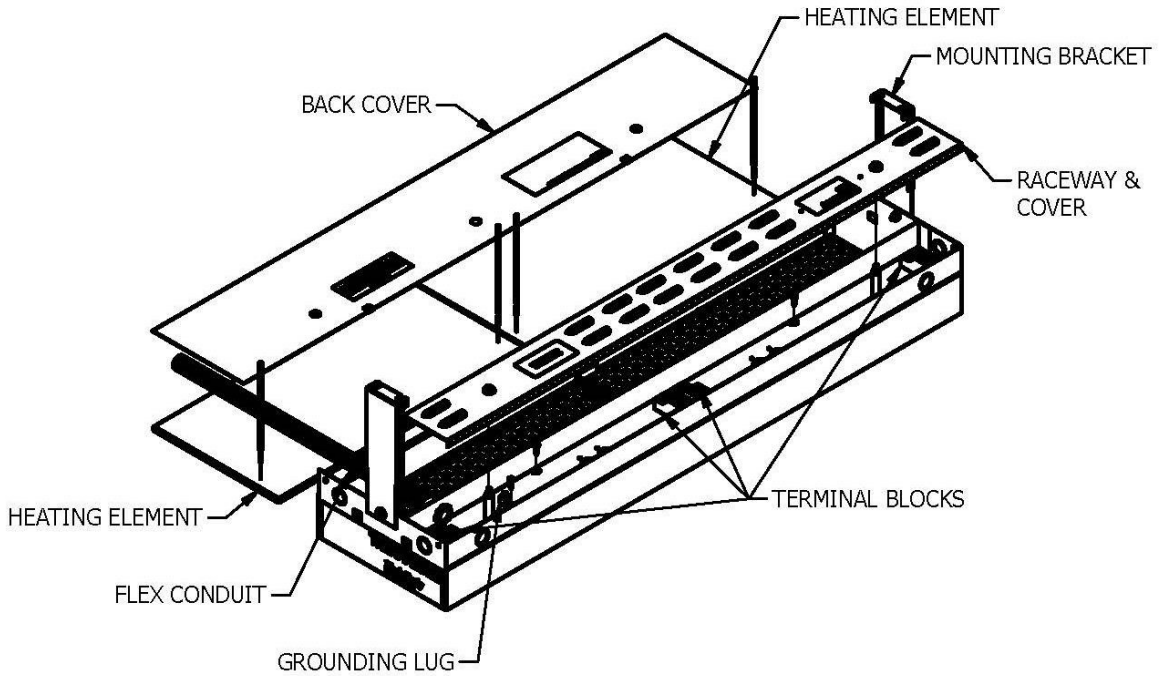
# FIG. 2 – 24" x 12" SECTIONS (DUAL ELEMENT) 120 VOLT – SINGLE PHASE



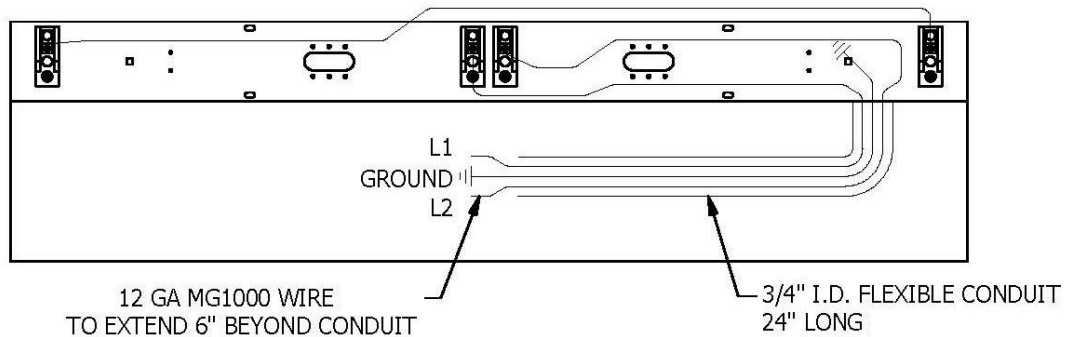
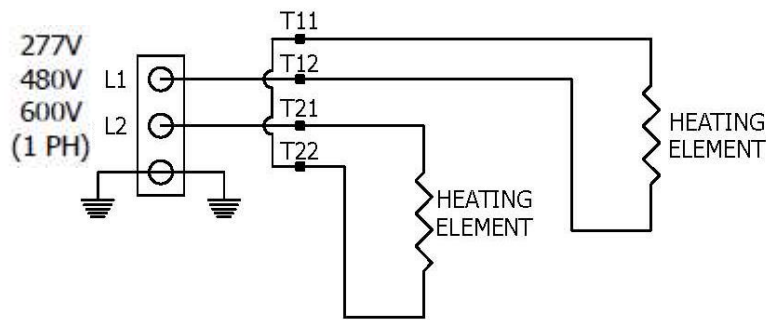
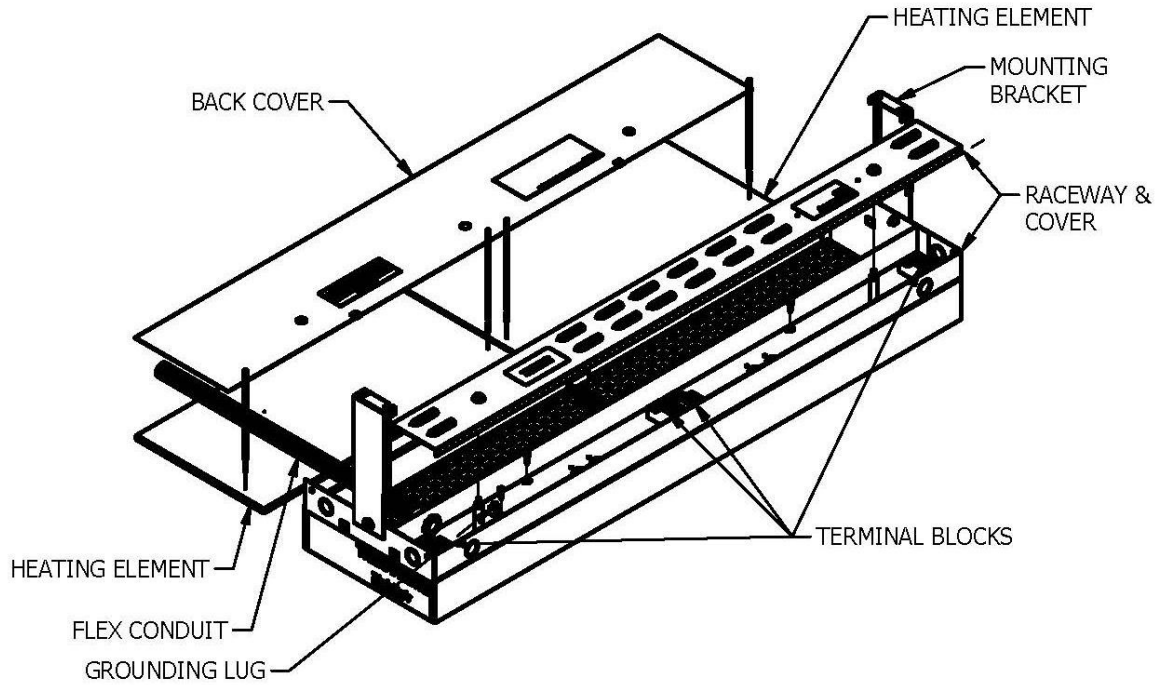
# FIG. 3 – 24" x 12" SECTIONS (SINGLE ELEMENT) 120 / 208 / 240 / 277 / 347 VOLT SINGLE PHASE



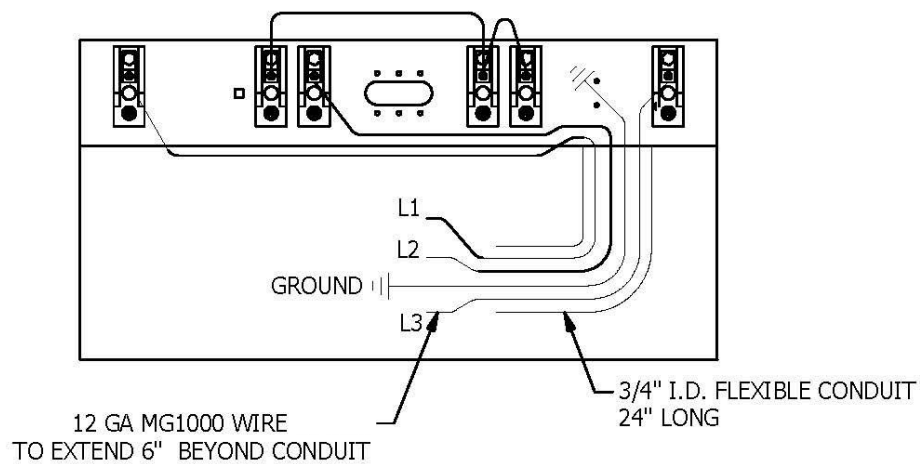
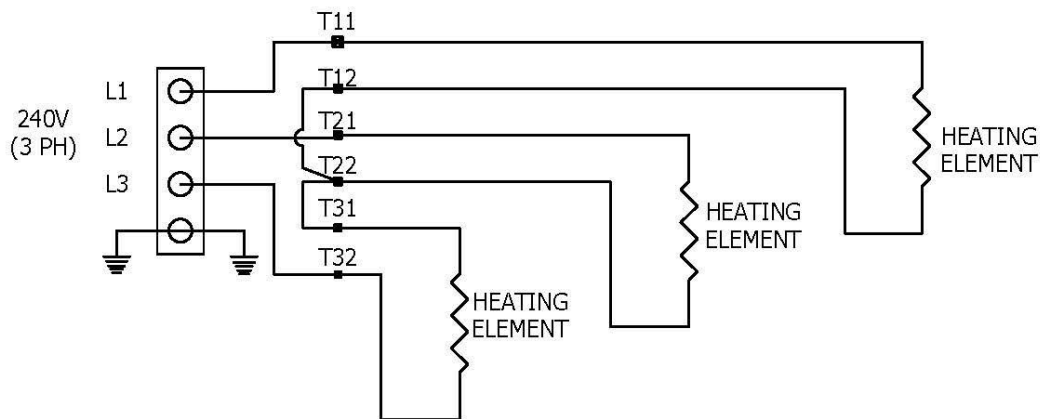
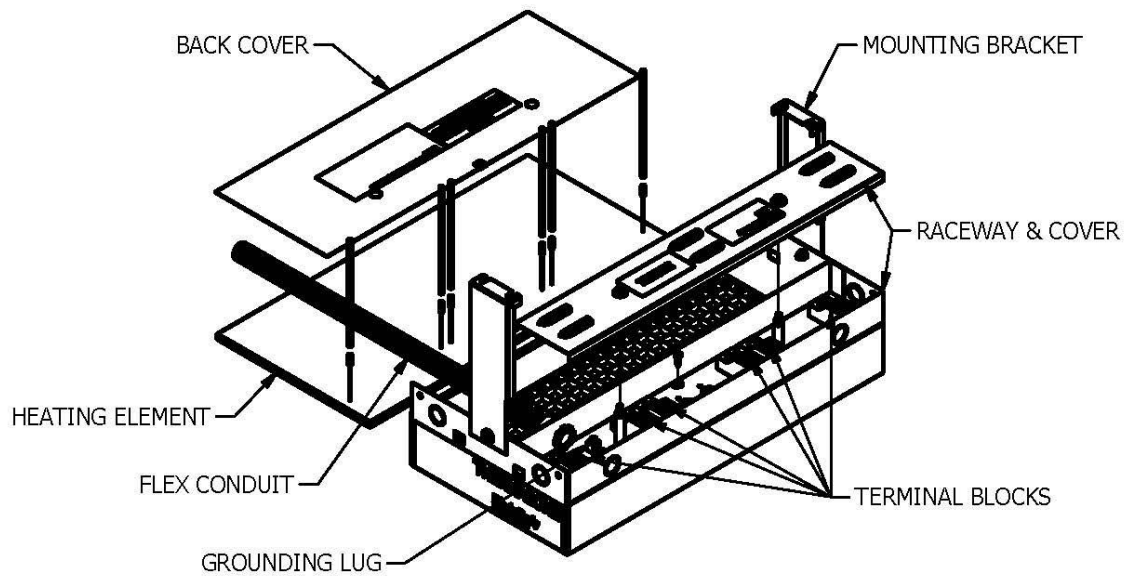
# FIG. 4 – 48" x 12" SECTIONS 208 / 240 / 277 / 347 VOLT – SINGLE PHASE



# FIG. 5 – 48" x 12" SECTIONS 277 / DV (480) / 600 VOLT SINGLE PHASE



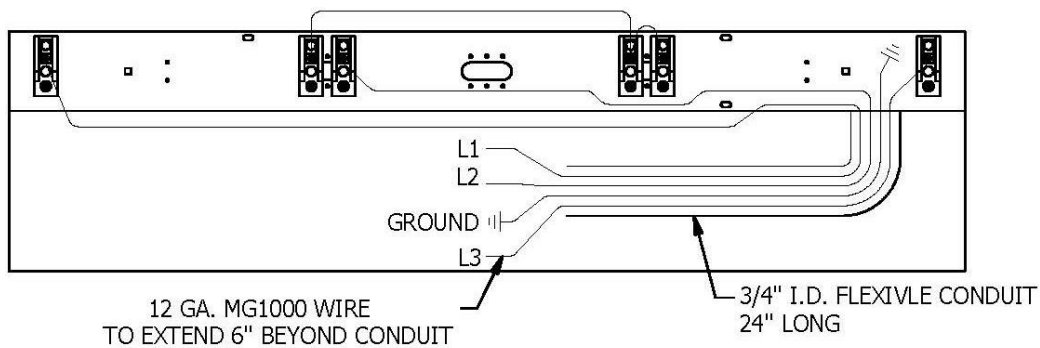
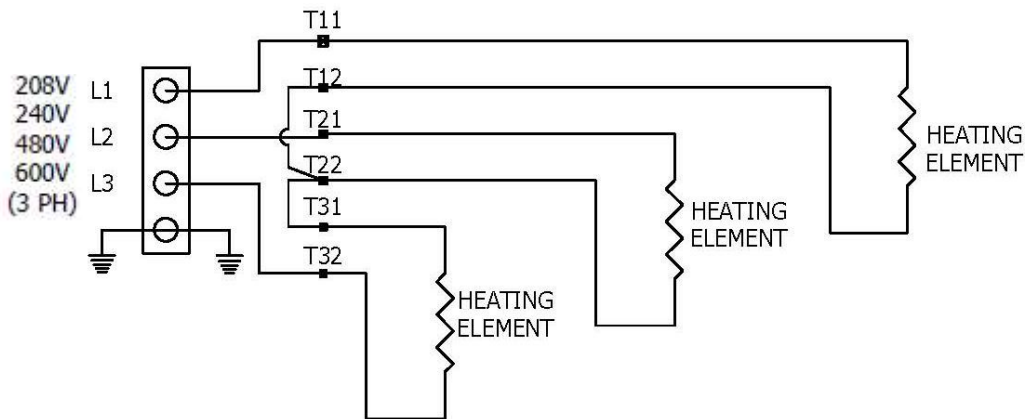
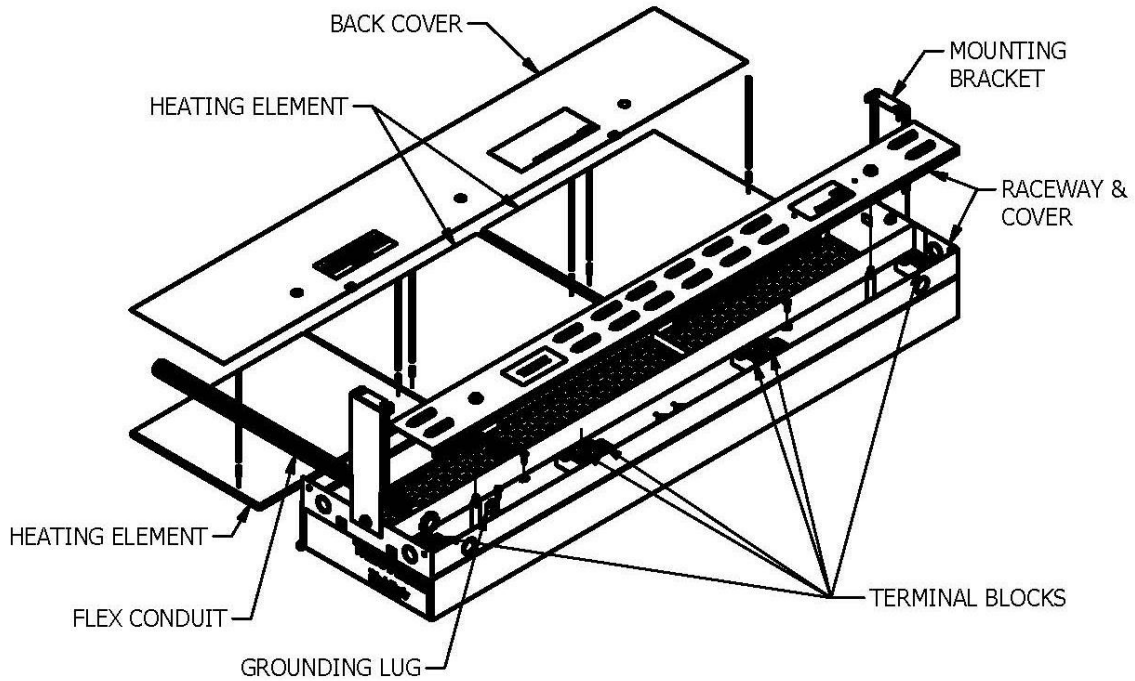
# FIG. 6 – 24" x 12" SECTIONS 240 VOLT – THREE PHASE





# FIG. 7 – 48" x 12" SECTIONS

## 208 / 240 / 480 / 600 VOLT – THREE PHASE



## OPERATION:



Heaters must be properly installed before use.

Do not operate heaters without all covers in place.

No user maintenance is needed for heaters. Any other servicing should be performed by authorized service personnel.

During production, the heating element of this unit may have absorbed moisture. The first time your heater is turned ON, it may smoke/steam while the moisture is released. This smoke/steam is NORMAL and not harmful. It will stop after 10-15 minutes of operation and not occur after first use.