

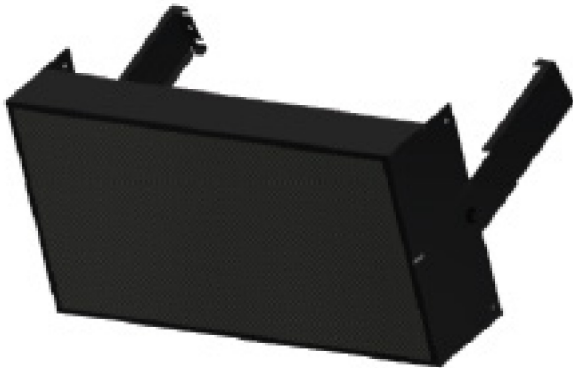
# STS



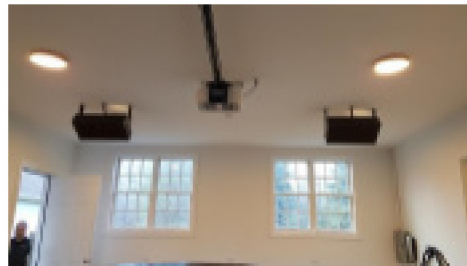
# &

# STT Thin

## ELECTRIC INFRARED COMFORT HEATERS



- 100% electric IR flat panel emitter, operates in long wave length.
- Listed for mounted or suspended indoor and outdoor protected environments. Ideal for comfort heating and snow/ice control.
- Single and Three Phase designs. All standard US voltages available.
- All models available in Stainless Steel or high temp powder coated black or white.
- ZERO MAINTENANCE: no moving parts, , no fans, and no dangerous bulbs to clean or replace.
- No orange glow: this heater does not emit any visible light.
- 95% energy efficient
- MADE IN THE USA



Brasch

425 Hanley Industrial Court – St. Louis, MO 63144 – (314) 333-5531

[www.Braschmfg.com](http://www.Braschmfg.com)

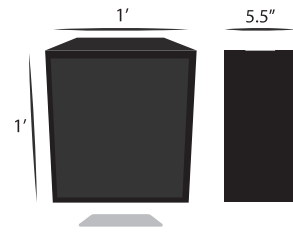
# Table of Contents

|                                     |    |
|-------------------------------------|----|
| Features                            | 1  |
| Heater Models and Dimensions Heat   | 3  |
| Distribution and Selecting Quantity | 4  |
| STS Mounting Applications           | 5  |
| STS Specifications                  | 7  |
| STS Wiring Requirements             | 7  |
| STS Wiring Diagrams                 | 9  |
| STT Thin Mounting Applications      | 16 |
| STT Thin Specifications             | 19 |
| STT Thin Wiring Requirements        | 19 |
| STT Thin Wiring                     | 20 |

# STS SERIES

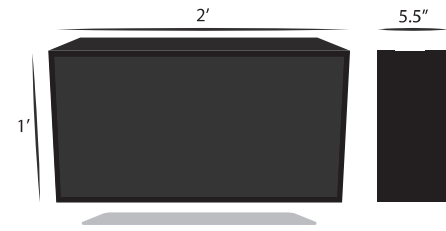


| 12" Model        |       | Single Phase |      |      |
|------------------|-------|--------------|------|------|
| Model            | BTUs* | Watts        | 120V | 240V |
| BH-STS-U12-0871B | 2972  | 871          | 7.3  | -    |
| BH-STS-U12-1081B | 3707  | 1081         | 9.0  | -    |
| BH-STS-U12-1111B | 3789  | 1111         | 9.3  | -    |
| BH-STS-U12-1681B | 5927  | 1681         | 14.2 | -    |
| BH-STS-U12-1436J | 5573  | 1436         | 6.8  | -    |



Shipping Weight 10 lbs.

| 24" Model        |       | Single Phase |      |      |      | Three Phase |
|------------------|-------|--------------|------|------|------|-------------|
| Model            | BTUs* | Watts        | 120V | 208V | 240V | 240V        |
| BH-STS-U24-1015V | 3559  | 783 /1015    | -    | 3.8  | 4.3  | -           |
| BH-STS-U24-1316B | 4490  | 1316         | 11.0 | -    | -    | -           |
| BH-STS-U24-1297V | 4426  | 974 /1297    | -    | 4.7  | 5.4  | -           |
| BH-STS-U24-1659B | 5662  | 1659         | 13.8 | -    | -    | -           |
| BH-STS-U24-1701V | 5804  | 1278 /1701   | -    | 6.1  | 7.1  | -           |
| BH-STS-U24-2192B | 7479  | 2192         | 18.3 | -    | -    | -           |
| BH-STS-U24-2001V | 6827  | 1503 /2001   | -    | 7.2  | 8.3  | -           |
| BH-STS-U24-2222B | 7578  | 2222         | 18.5 | -    | -    | -           |
| BH-STS-U24-2428V | 8285  | 1824 /2428   | -    | 8.8  | 10.2 | -           |
| BH-STS-U24-3363B | 11614 | 3363         | 28.4 | -    | -    | -           |
| BH-STS-U24-3239V | 11052 | 2433 /3239   | -    | 11.7 | 13.5 | -           |
| BH-STS-U24-1992P | 6811  | 1992         | -    | -    | -    | 4.8         |
| BH-STS-U24-2442P | 8351  | 2442         | -    | -    | -    | 5.9         |
| BH-STS-U24-3041P | 10400 | 3041         | -    | -    | -    | 7.3         |



Shipping Weight 20 lbs.

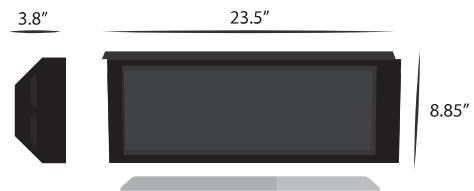
| 48" Model        |       | Single Phase |      |      |      |      |      | Three Phase |      |
|------------------|-------|--------------|------|------|------|------|------|-------------|------|
| Model            | BTUs* | Watts        | 120V | 208V | 240V | 277V | 480V | 240V        | 480V |
| BH-STS-U48-2030T | 7118  | 2030         | -    | -    | -    | -    | 4.3  | -           | -    |
| BH-STS-U48-2030V | 7118  | 1567 /2030   | -    | 7.5  | 8.7  | -    | -    | -           | -    |
| BH-STS-U48-2594T | 8851  | 2594         | -    | -    | -    | -    | 5.4  | -           | -    |
| BH-STS-U48-2594V | 8851  | 1948 /2594   | -    | 9.4  | 10.8 | -    | -    | -           | -    |
| BH-STS-U48-3402T | 11608 | 3402         | -    | -    | -    | -    | 7.1  | -           | -    |
| BH-STS-U48-3402V | 11608 | 2555 /3402   | -    | 12.3 | 14.2 | -    | -    | -           | -    |
| BH-STS-U48-4002T | 13654 | 4002         | -    | -    | -    | -    | 8.3  | -           | -    |
| BH-STS-U48-4002V | 13654 | 3006 /4002   | -    | 14.5 | 16.7 | -    | -    | -           | -    |
| BH-STS-U48-3964N | 13526 | 3964         | -    | -    | -    | 14.3 | -    | -           | -    |
| BH-STS-U48-4856T | 16570 | 4856         | -    | -    | -    | -    | 10.1 | -           | -    |
| BH-STS-U48-4856V | 16570 | 3647 /4856   | -    | 17.5 | 20.2 | -    | -    | -           | -    |
| BH-STS-U48-4776N | 16296 | 4776         | -    | -    | -    | 17.2 | -    | -           | -    |
| BH-STS-U48-6478T | 22104 | 6478         | -    | -    | -    | -    | 13.5 | -           | -    |
| BH-STS-U48-6478V | 22104 | 4866 /6478   | -    | 23.4 | 27.0 | -    | -    | -           | -    |
| BH-STS-U48-6056N | 20516 | 6056         | -    | -    | -    | 21.7 | -    | -           | -    |
| BH-STS-U48-3971P | 13582 | 3971         | -    | -    | -    | -    | -    | 9.6         | -    |
| BH-STS-U48-3928U | 13803 | 3928         | -    | -    | -    | -    | -    | -           | 4.9  |
| BH-STS-U48-4794P | 16396 | 4797         | -    | -    | -    | -    | -    | 11.6        | -    |
| BH-STS-U48-4838U | 16545 | 4838         | -    | -    | -    | -    | -    | -           | 5.8  |
| BH-STS-U48-5954P | 20933 | 5954         | -    | -    | -    | -    | -    | 14.8        | -    |
| BH-STS-U48-6060U | 20729 | 6060         | -    | -    | -    | -    | -    | -           | 7.3  |



Shipping Weight 38 lbs.

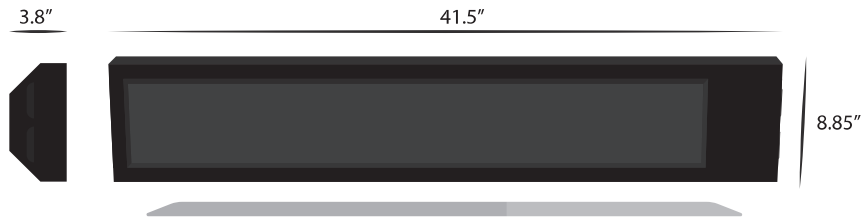
# STT THIN SERIES

| 18" Model        |       | Single Phase |      |  |
|------------------|-------|--------------|------|--|
| Model            | BTUs* | Watts        | 120V |  |
| BH-STT-U18-1091B | 3723  | 1091         | 9.1  |  |
| BH-STTU18-1330B  | 4712  | 1330         | 11.5 |  |
| BH-STT-U18-1767B | 6053  | 1767         | 14.8 |  |
| BH-STT-U18-2161B | 7373  | 2161         | 18.1 |  |

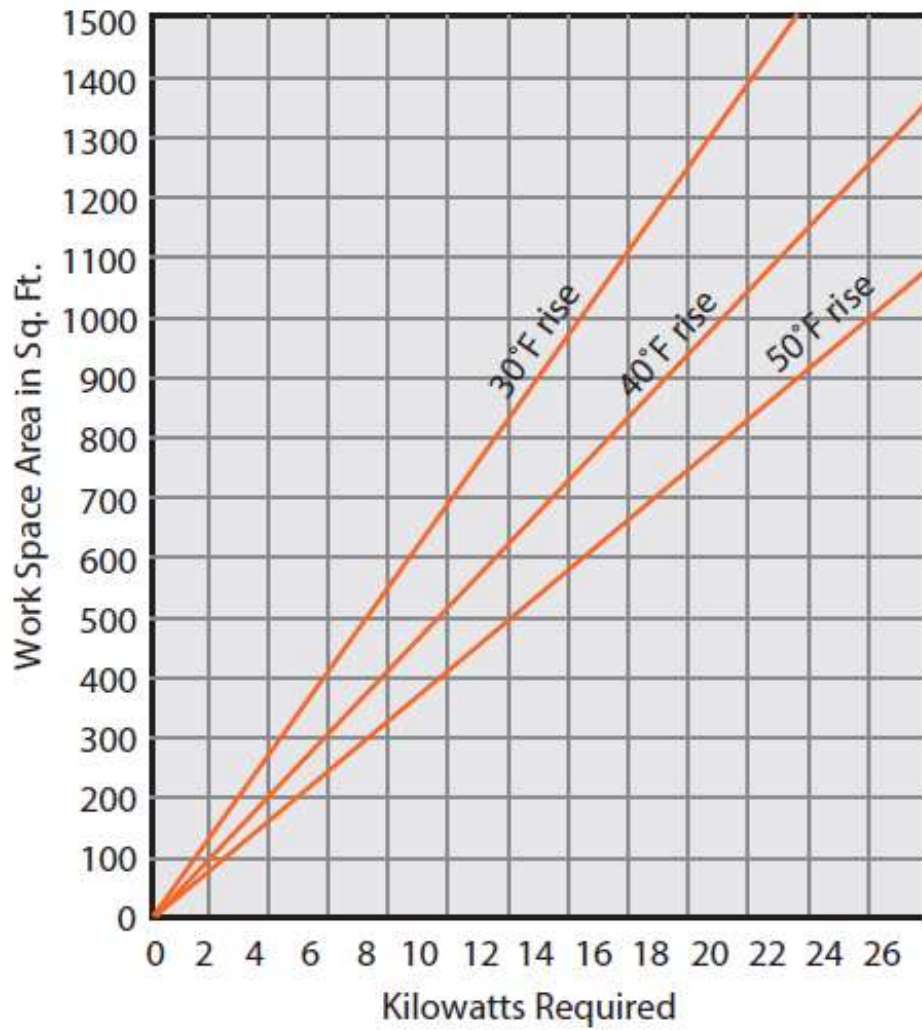


Shipping Weight 16 lbs.

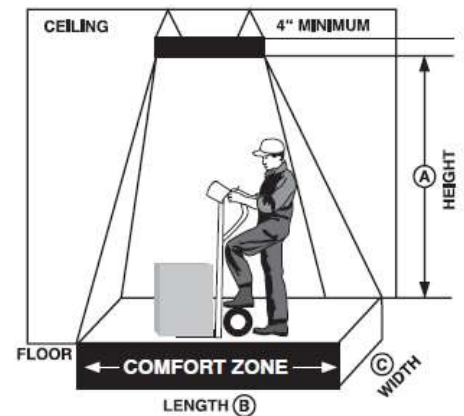
| 36" Model        |       | Single Phase |      |      |  |
|------------------|-------|--------------|------|------|--|
| Model            | BTUs* | Watts        | 240V | 208V |  |
| BH-STT-U36-2180V | 7438  | 1635 /2180   | 9.1  | 6.8  |  |
| BH-STT-U36-2660V | 9421  | 2071 /2660   | 11.5 | 8.6  |  |
| BH-STT-U36-3104V | 10591 | 2328 /3104   | 12.9 | 9.7  |  |
| BH-STT-U36-3534V | 12106 | 2661 /3534   | 14.8 | 11.1 |  |
| BH-STT-U36-4322V | 14747 | 3242 /4322   | 18.1 | 15.6 |  |



Shipping Weight 21 lbs.



| LENGTH B |                        |                        |                        |         |
|----------|------------------------|------------------------|------------------------|---------|
| HEIGHT A | Model #1<br>12" Length | Model #2<br>24" Length | Model #3<br>48" Length | WIDTH C |
| 6 ft.    | 7' 10"                 | 8' 10"                 | 10' 10"                | 7' 10"  |
| 8 ft.    | 10' 2"                 | 11' 2"                 | 13' 2"                 | 10' 2"  |
| 10 ft.   | 12' 6"                 | 13' 6"                 | 15' 6"                 | 12' 6"  |
| 12 ft.   | 14' 10"                | 15' 10"                | 17' 10"                | 14' 10" |
| 14 ft.   | 17' 2"                 | 20' 2"                 | 22' 2"                 | 17' 2"  |



# STS METHODS OF INSTALLATION:



Do not install the heater closer than:

## INDOOR

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

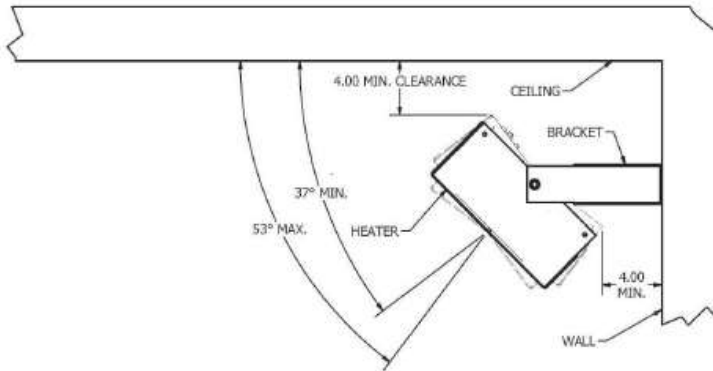


Fig. 1 – WALL MOUNTING

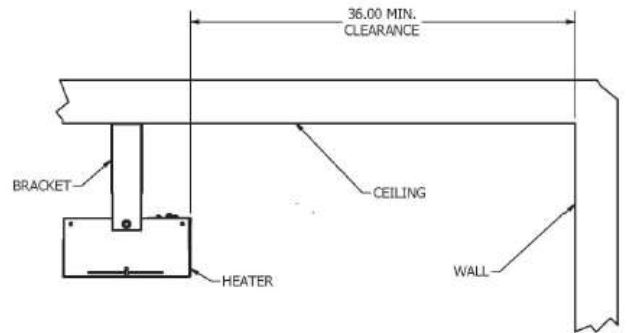


Fig. 2 – CEILING MOUNTING VERTICAL

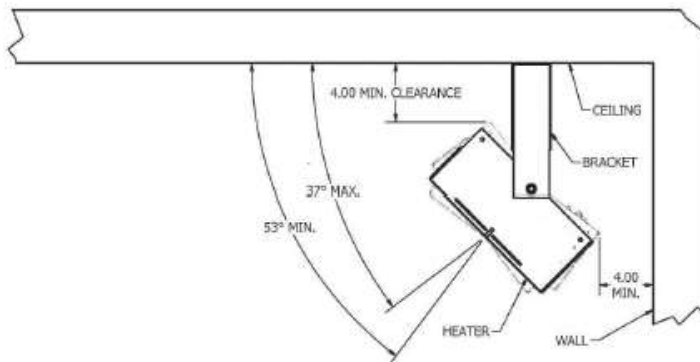


Fig. 3 – CEILING MOUNTING ANGLED AWAY FROM VERTICAL SURFACE

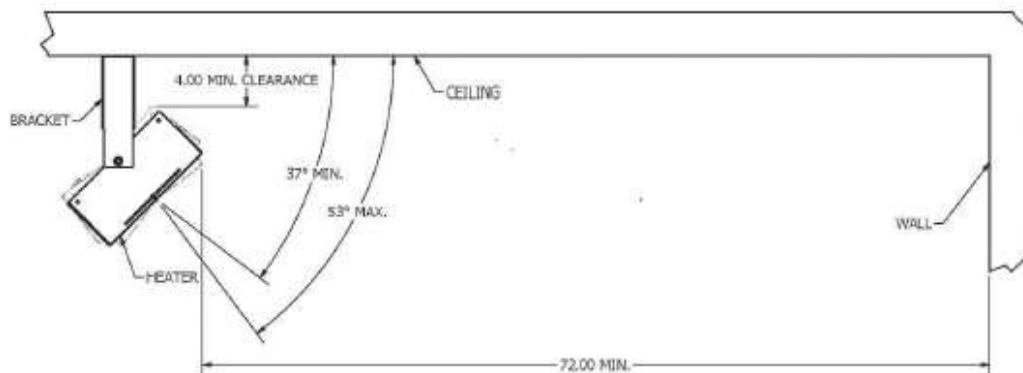


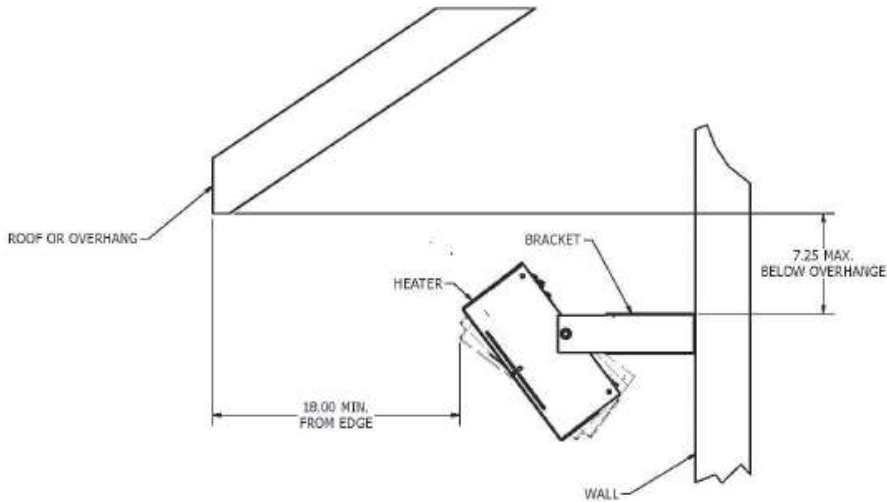
Fig. 4 – CEILING MOUNTING ANGLED TOWARDS VERTICAL SURFACE

# PROTECTED AREA

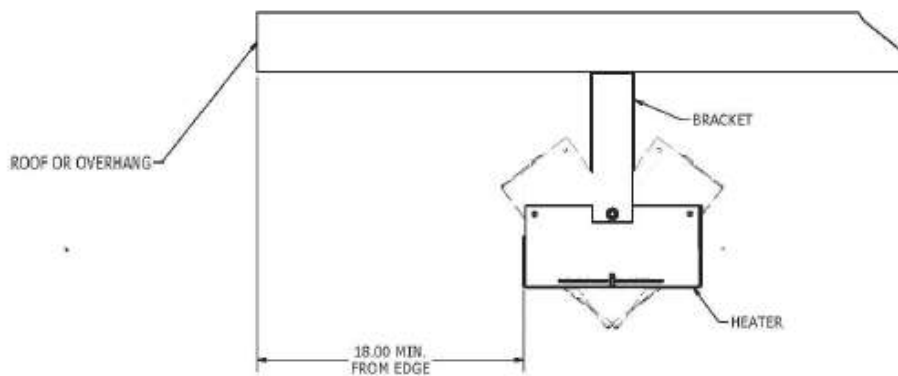
A *Protected Area* is defined as “Located in an area that is partially protected from the effects of weathering.” Typical *protected areas* would be the underside of a pavilion with a roof, garage port, and the like.



Adhere to all mounting guidelines above. Additionally: no less than 18" from ledge.



**Fig. 5 – PROTECTED AREA WALL MOUNTING**



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

# STS



## Infrared Heater Specifications

The electric infrared heater shall be STS as manufactured by Indeeco, St. Louis, MO. The construction and design shall permit it to be ceiling or wall mounted, with the use of the mounting brackets supplied, or chain hung according to supplied instructions. Heaters shall include the features listed below.

**HEATING ASSEMBLY:** The heating assembly shall be UL listed under standard 2021 and shall consist of single stranded, non-coiled Ni-Chrome wire embedded in vitrified ceramic fiber and backed with high density, low biopersistent Fiberfrax insulation. The emitting surface is covered with a black-coated high temperature fiberglass cloth.

**WIRING:** For connection to the power supply, STS heaters will be prewired with leads housed in a 24 inch flexible metal conduit and connector for j-box mounting.

**CONSTRUCTION:** The heaters are formed and welded together out of 16 ga. and 20 ga. CRS or stainless steel. If CRS, the heater must be powder coated with a high temp black or white finish.



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).

| SUPPLY CONNECTIONS   |                            |                                |                            |                            |
|--|----------------------------|--------------------------------|----------------------------|----------------------------|
| MODEL NUMBER   | 120 VOLT<br>AWG. WIRE SIZE | 208/240 VOLT<br>AWG. WIRE SIZE | 277 VOLT<br>AWG. WIRE SIZE | 480 VOLT<br>AWG. WIRE SIZE |
| BH-ST5-U24-1992P<br>BH-ST5-U24-2442P<br>BH-ST5-U24-3041P<br>BH-ST5-U48-3971P | -                          | 14                             | -                          | -                          |
| BH-ST5-U48-4794P<br>BH-ST5-U48-5954P   | -                          | 12                             | -                          | -                          |
| BH-ST5-U48-3928U<br>BH-ST5-U48-4838U<br>BH-ST5-U48-6060U                     | -                          | -                              | -                          | 14                         |



## SUPPLY CONNECTIONS

| MODEL NUMBER   | 120 VOLT<br>AWG. WIRE SIZE | 208/240 VOLT<br>AWG. WIRE SIZE | 277 VOLT<br>AWG. WIRE SIZE | 480 VOLT<br>AWG. WIRE SIZE |
|--|----------------------------|--------------------------------|----------------------------|----------------------------|
| BH-ST5-U12-0871B<br>BH-ST5-U12-1081B   | 14                         | -                              | -                          | -                          |
| BH-ST5-U12-1111B<br>BH-ST5-U12-1681B   | 12                         | -                              | -                          | -                          |
| BH-ST5-U12-1436J   | -                          | 14                             | -                          | -                          |
| BH-ST5-U24-1015V<br>BH-ST5-U24-1316B   | 14                         | -                              | -                          | -                          |
| BH-ST5-U24-1659B   | 12                         | -                              | -                          | -                          |
| BH-ST5-U24-2192B<br>BH-ST5-U24-2222B   | 10                         | -                              | -                          | -                          |
| BH-ST5-U24-3363B   | 8                          | -                              | -                          | -                          |
| BH-ST5-U24-1297V<br>BH-ST5-U24-1701V<br>BH-ST5-U24-2001V<br>BH-ST5-U24-2428V | -                          | 14                             | -                          | -                          |
| BH-ST5-U24-3239V   | -                          | 12                             | -                          | -                          |
| BH-ST5-U48-2030V<br>BH-ST5-U48-2594V   | -                          | 14                             | -                          | -                          |
| BH-ST5-U48-3402V   | -                          | 12                             | -                          | -                          |
| BH-ST5-U48-4002V<br>BH-ST5-U48-4856V   | -                          | 10                             | -                          | -                          |
| BH-ST5-U48-6478V   | -                          | 8                              | -                          | -                          |
| BH-ST5-U48-2030T<br>BH-ST5-U48-2594T   |                            | 14                             | -                          | 14                         |
| BH-ST5-U48-3402T   |                            | 12                             | -                          | 14                         |
| BH-ST5-U48-4002T<br>BH-ST5-U48-4856T   |                            | 10                             | -                          | 14                         |
| BH-ST5-U48-6478T   |                            | 8                              | -                          | 12                         |
| BH-ST5-U48-3964N   |                            |                                | 12                         | -                          |
| BH-ST5-U48-4776N<br>BH-ST5-U48-6056N   | -                          | -                              | 10                         | -                          |

FIG. 2 - 12" x 12" SECTIONS  
120 / 208 / 240 VOLT - SINGLE PHASE

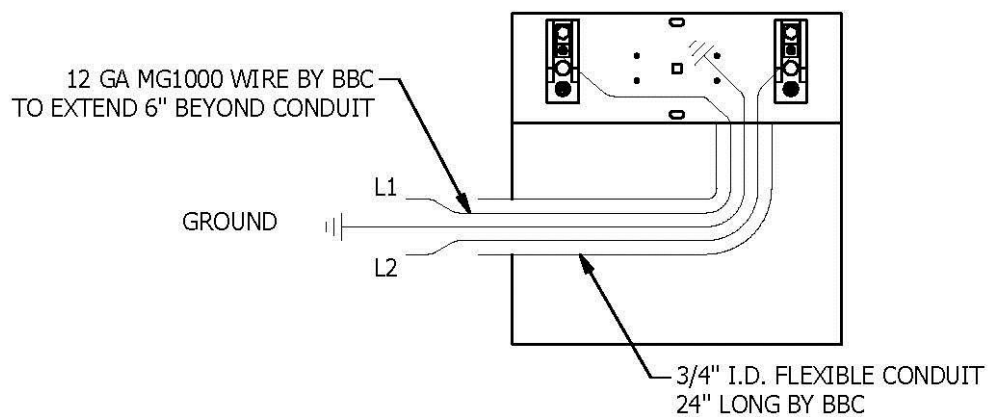
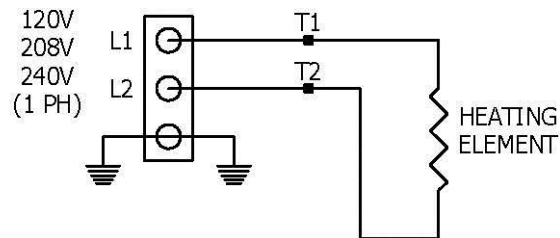
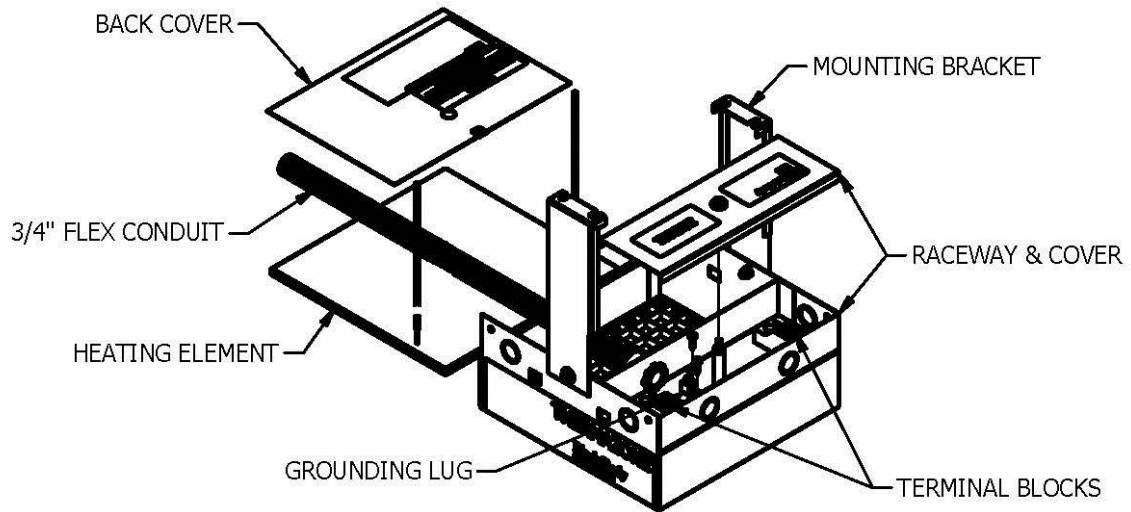


FIG. 3 - 24" x 12" SECTIONS (DUAL ELEMENT)  
120 VOLT - SINGLE PHASE

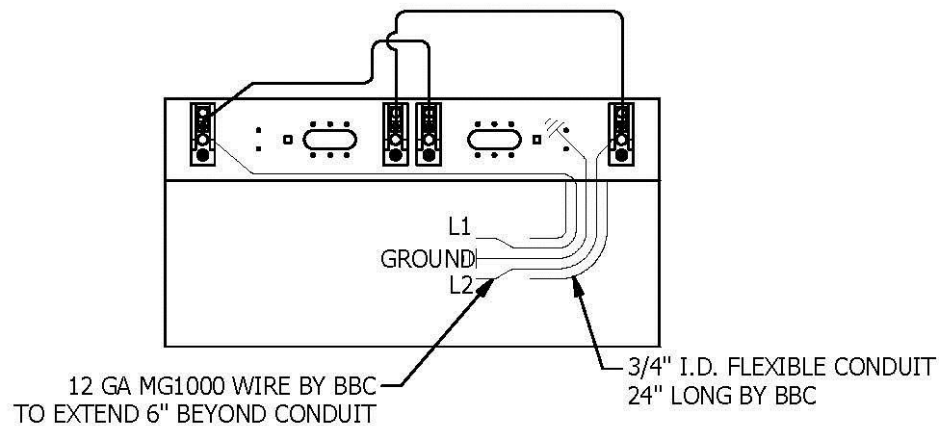
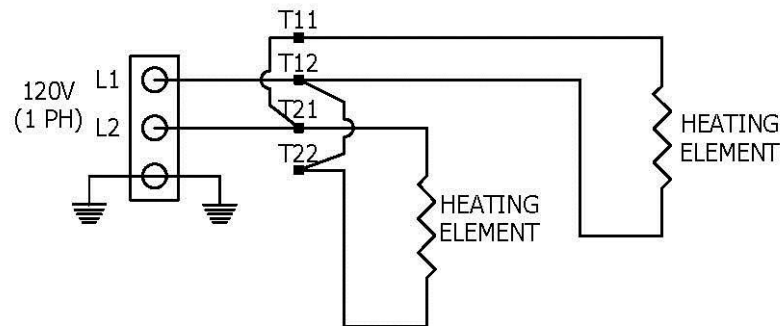
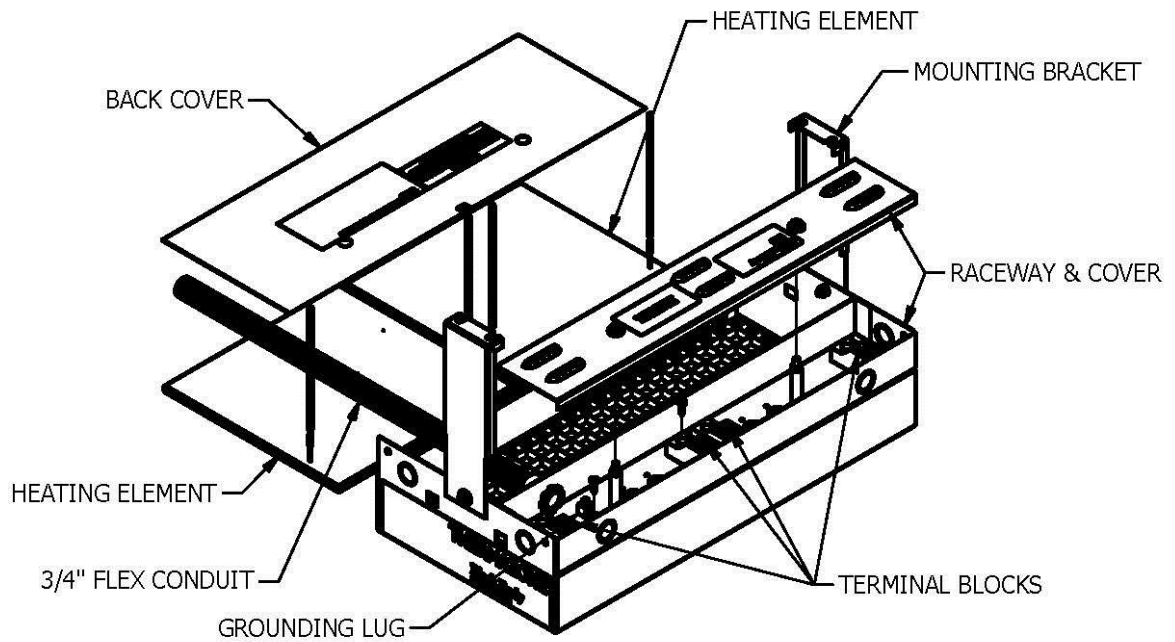


FIG. 4 - 24" x 12" SECTIONS (SINGLE ELEMENT)  
120 / 208 / 240 VOLT - SINGLE PHASE

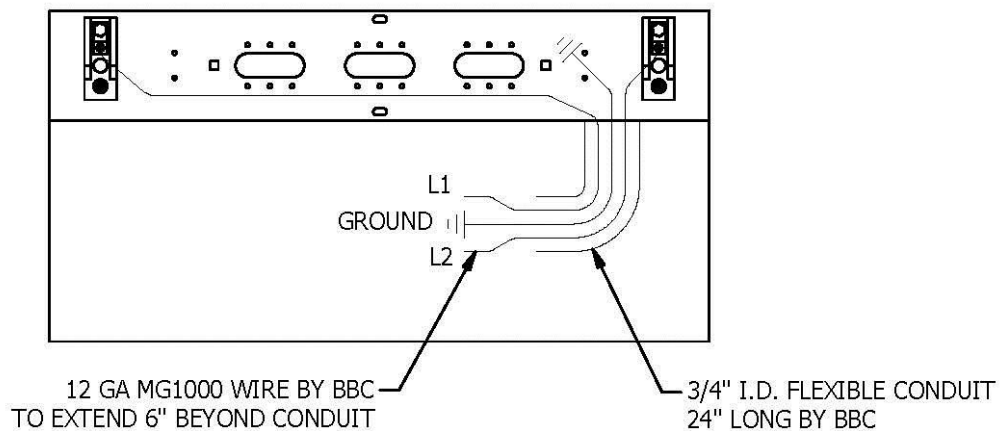
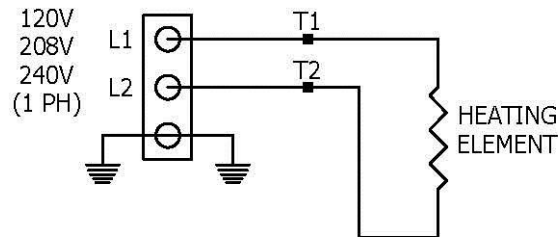
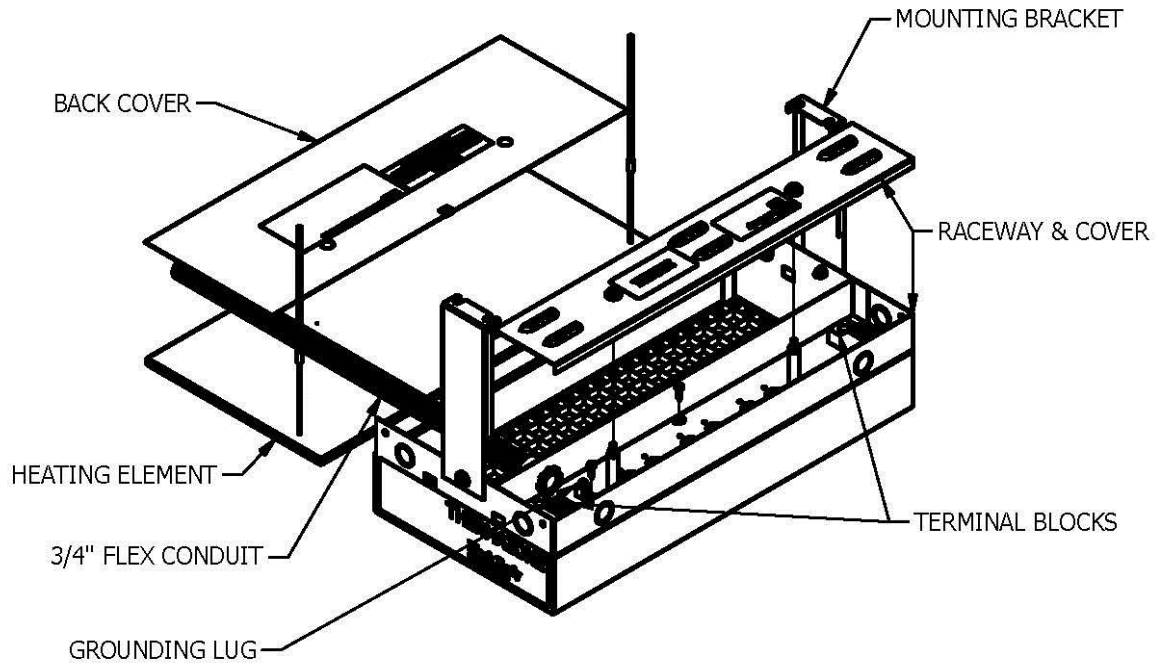


FIG. 5 - 48" x 12" SECTIONS  
 208 / 240 / 277 VOLT - SINGLE PHASE

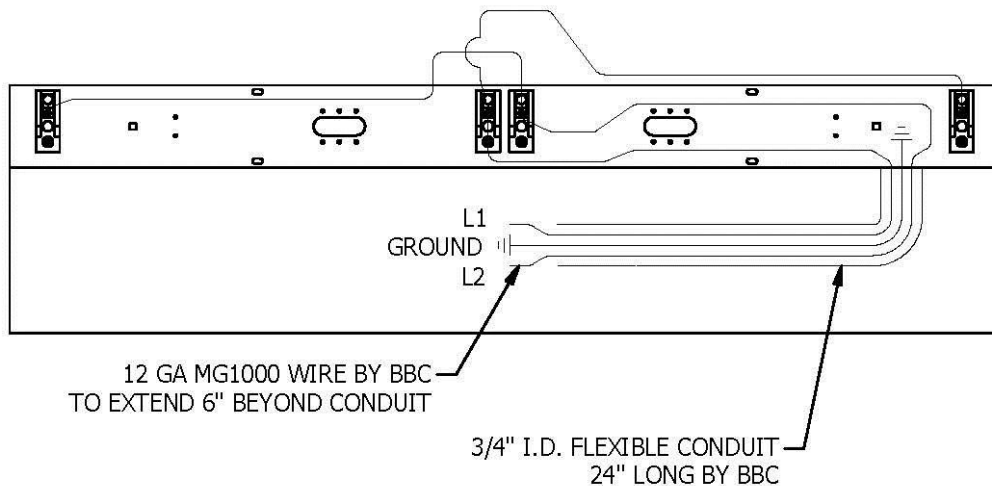
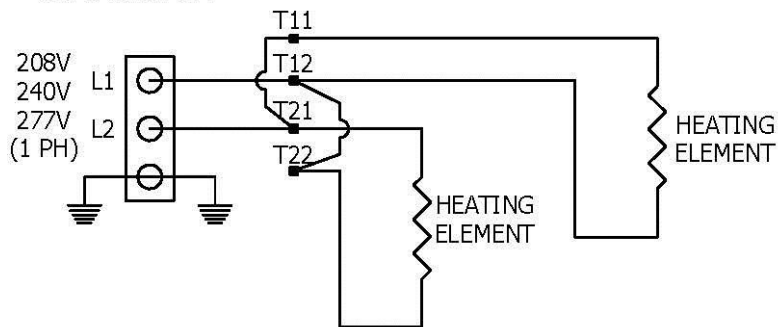
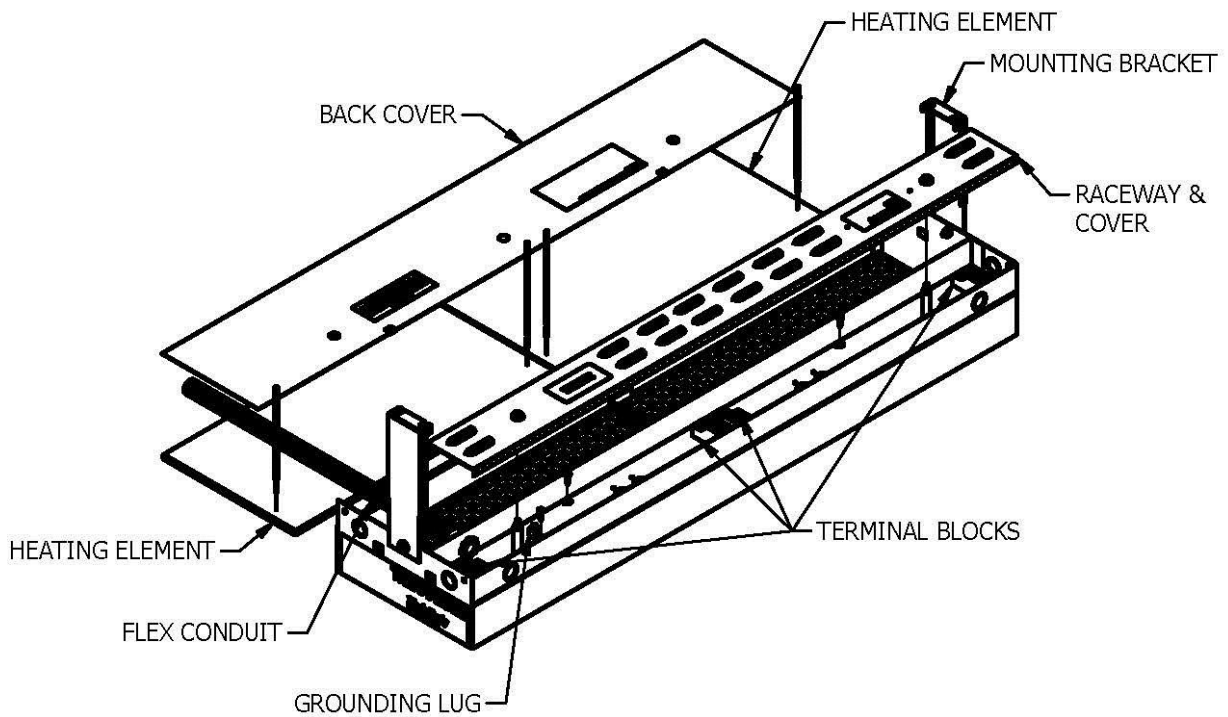


FIG. 6 - 48" x 12" SECTIONS  
 277 / DV (480 VOLT WIRING) - SINGLE PHASE

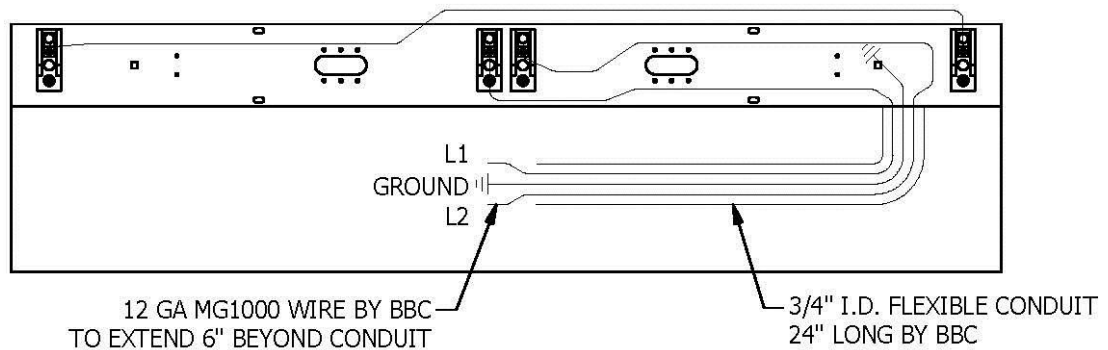
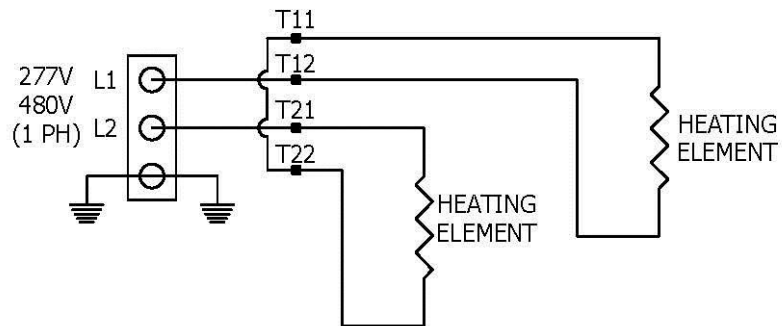
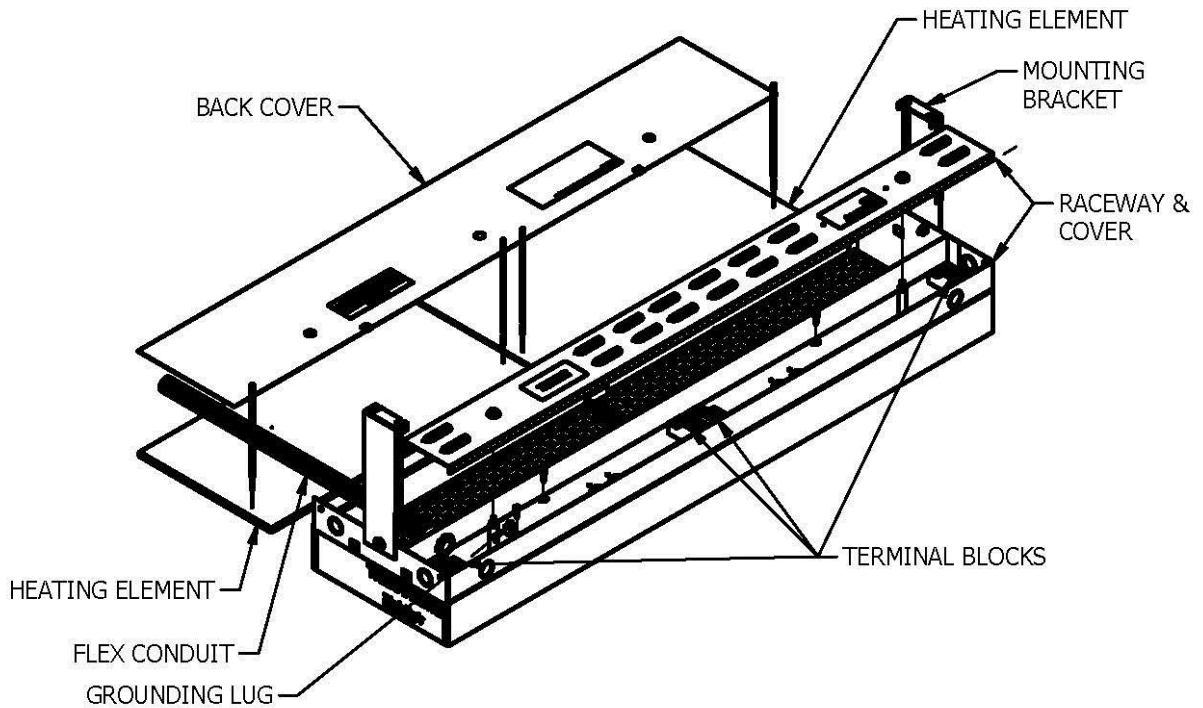
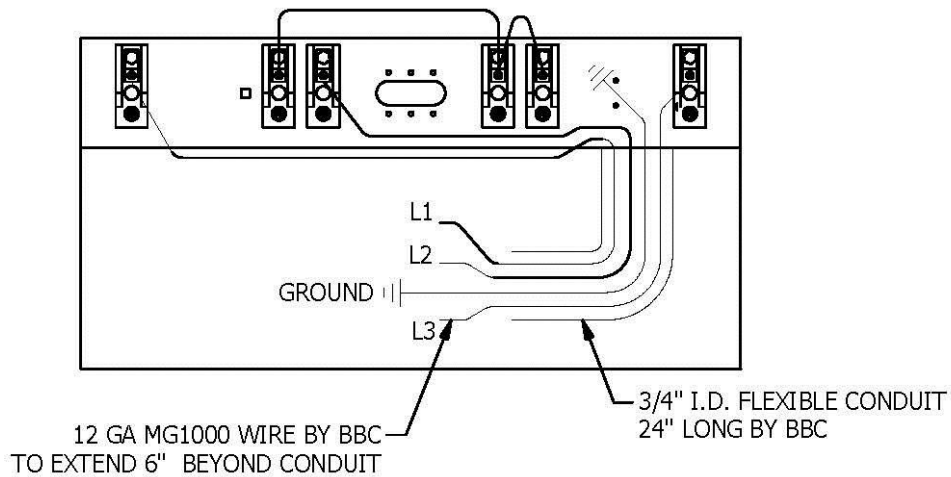
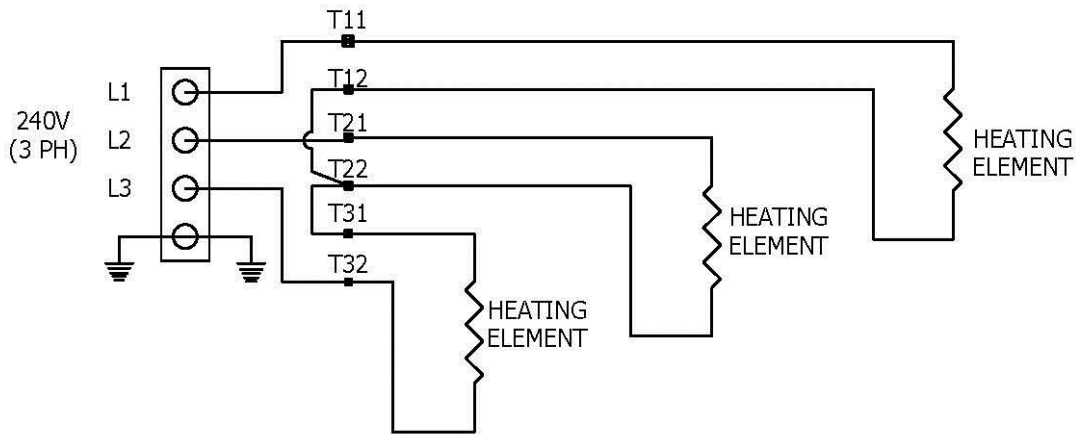
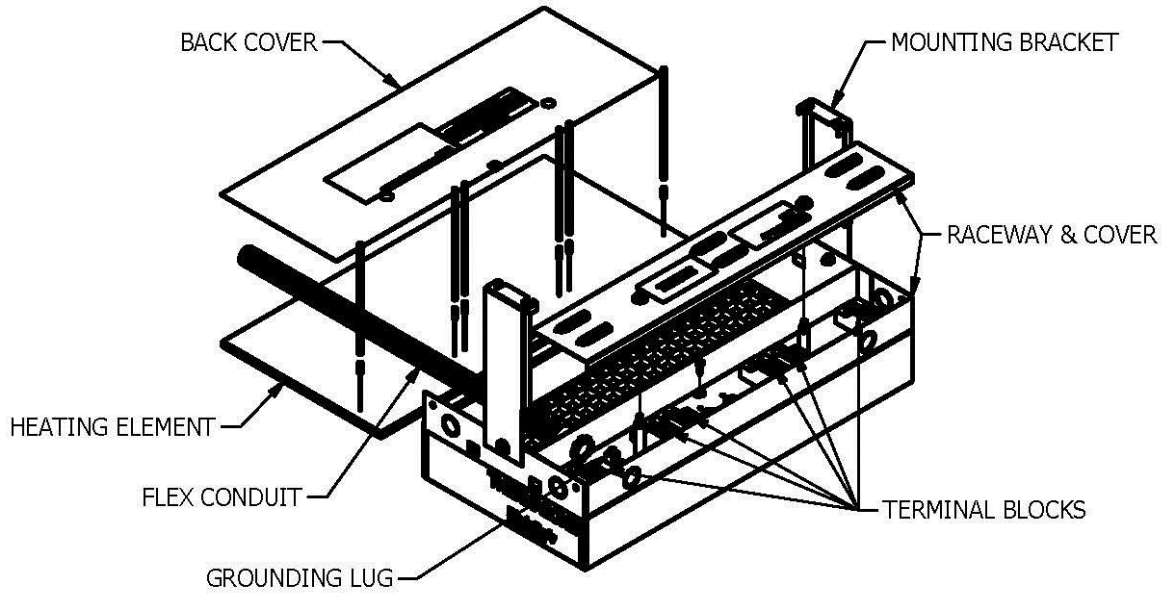
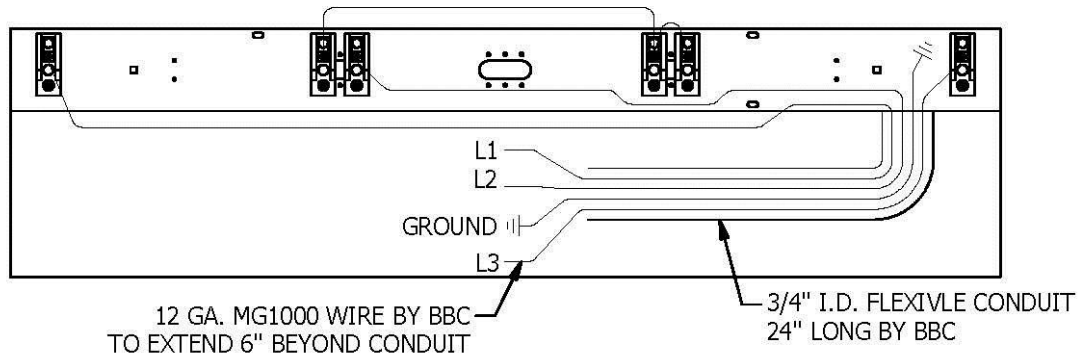
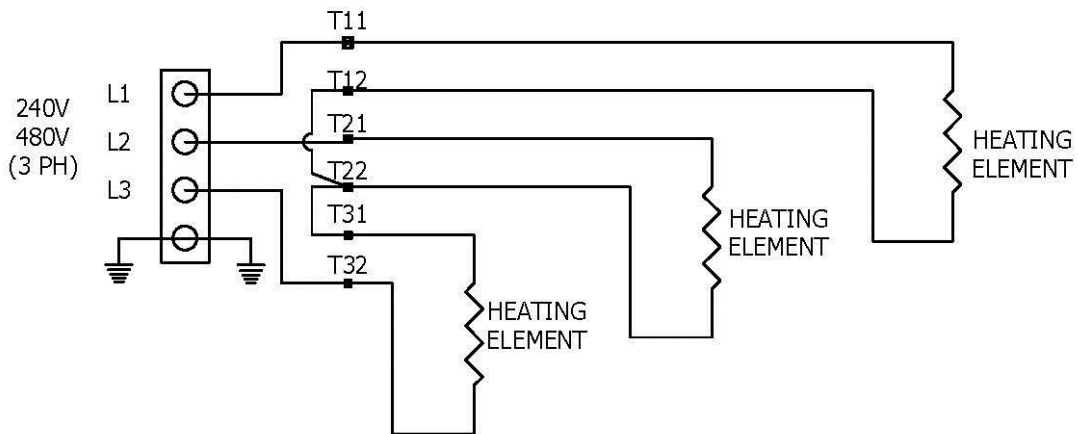
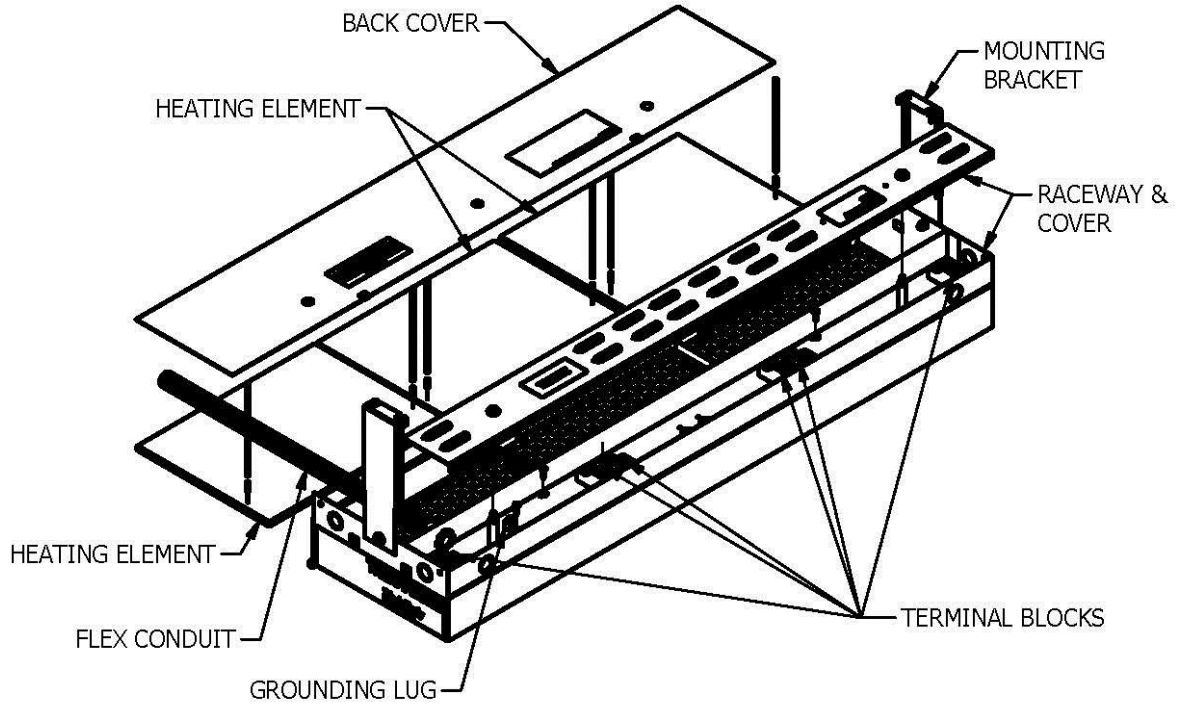




FIG. 7 - 24" x 12" SECTIONS  
240 VOLTS - THREE PHASE



# FIG. 8 - 48" x 12" SECTIONS 240 / 480 VOLTS - THREE PHASE





# STT THIN METHODS OF INSTALLATION:



Do not install the section closer than:

## INDOOR

- 36 inches to a vertical surface for vertical mounting
- 6-7/8 inches to a vertical surface for angled ceiling mounting
- 6-7/8 inches to a horizontal surface for wall mounting
- 12 inches to an adjacent vertical surface
- 36 inches to another heater
- 6 feet from the floor

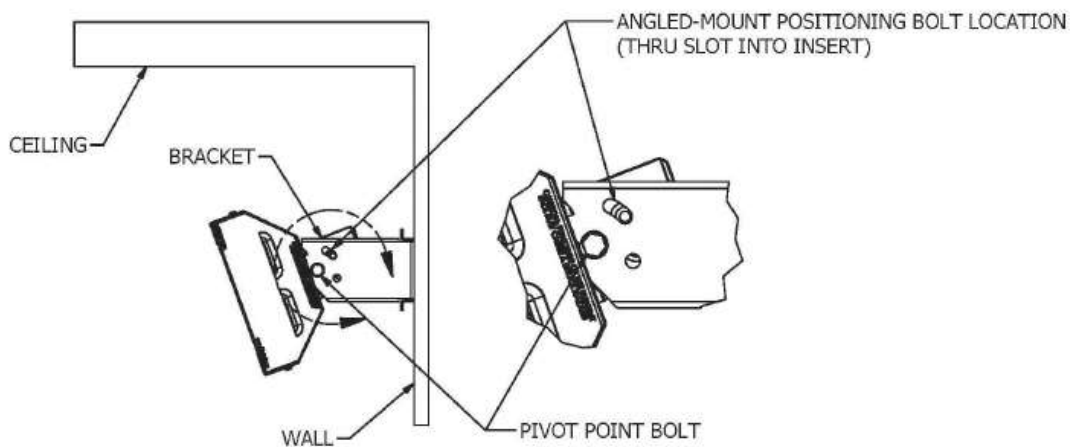


Fig. 1 – ANGLED POSITIONING FOR WALL MOUNTING



**WARNING! Risk of fire. Do not position any heater at an angle not allowed by the slotted hole (20°-45°).**

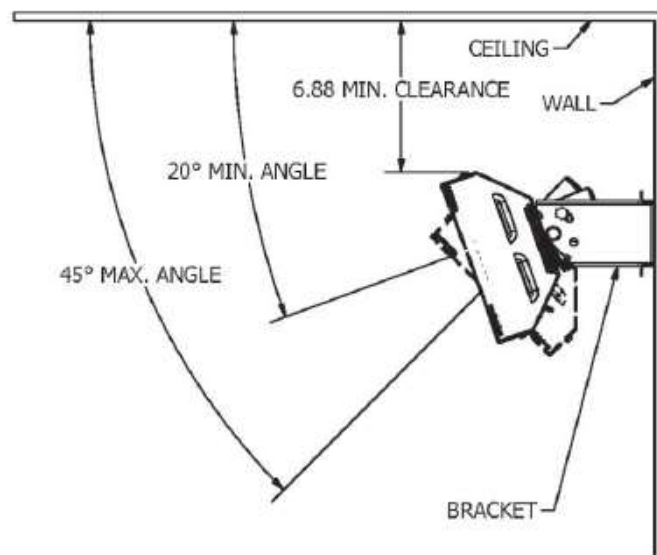
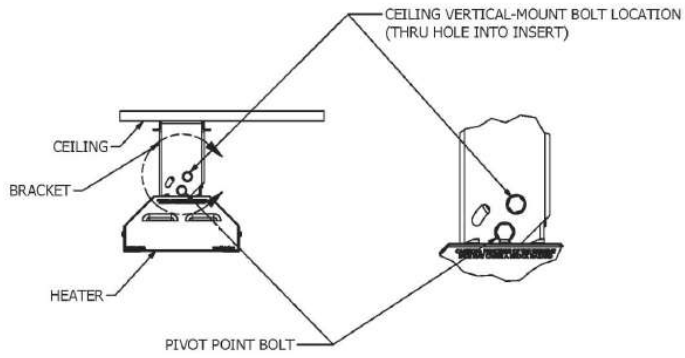
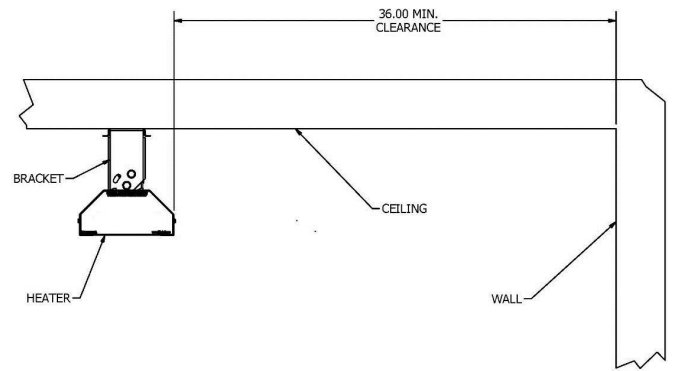


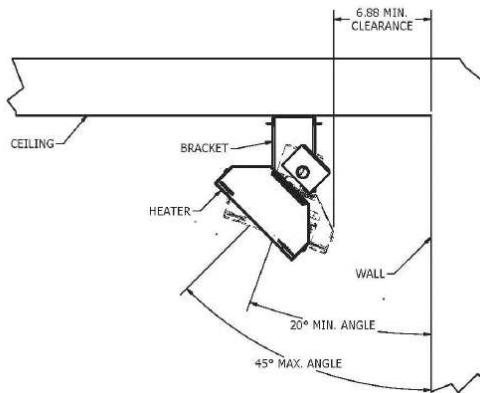
Fig. 2 – WALL MOUNTING



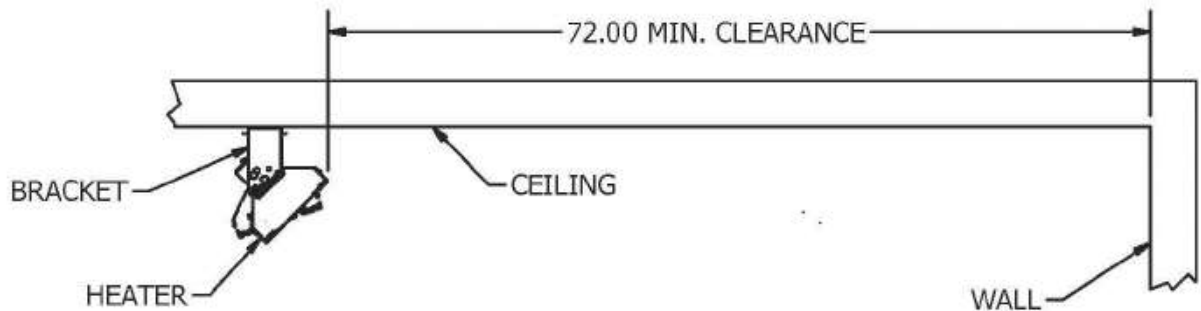
**Fig. 3 – CEILING ONLY VERTICAL MOUNTING POSITIONING**



**Fig. 4 – CEILING MOUNTING ANGLED AWAY FROM VERTICAL SURFACE**



**Fig. 5 – CEILING MOUNTING VERTICAL**



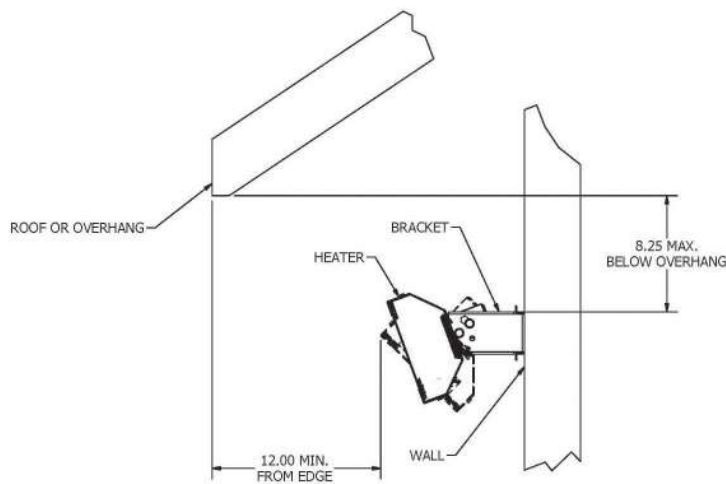
**Fig. 6 – CEILING MOUNTING ANGLED TOWARDS VERTICAL SURFACE**

# PROTECTED AREA

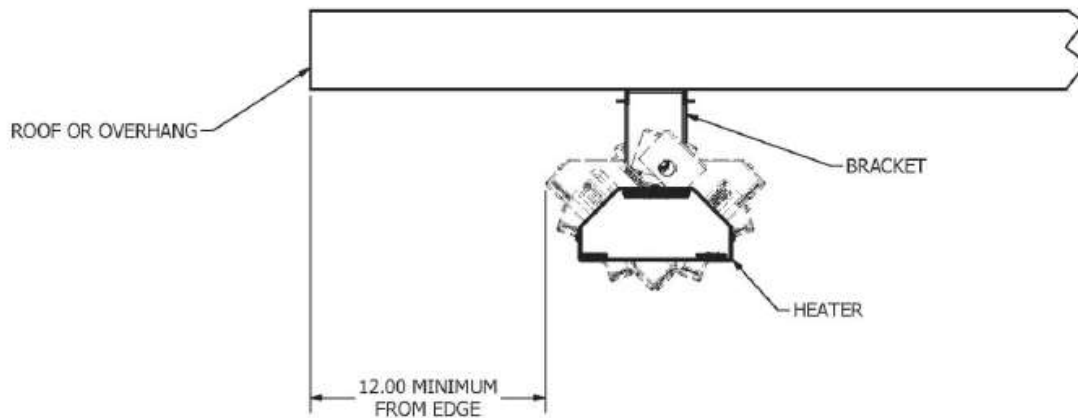
A *Protected Area* is defined as “Located in an area that is partially protected from the effects of weathering.” Typical *protected areas* would be the underside of a pavilion with a roof, garage port, and the like.

 Adhere to all mounting guidelines above. Additionally: no less than 12" from ledge.

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



**Fig. 7 – PROTECTED AREA WALL MOUNTING**



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

## STT Thin Infrared Heater Specifications

The electric infrared heater shall be STT Thin as manufactured by Brasch, St. Louis, MO. The construction and design shall permit it to be ceiling or wall mounted, with the use of the mounting brackets supplied, or chain hung according to supplied instructions. Heaters shall include the features listed below.

**HEATING ASSEMBLY:** The heating assembly shall be cULus listed under standard 2021 and shall consist of single stranded, non-coiled Ni-Chrome wire embedded in vitrified ceramic fiber and backed with high density, low biopersistent Fiberfrax insulation. The emitting surface is covered with a black-coated high temperature fiberglass cloth.

**WIRING:** For connection to the power supply, STT heaters will include an indoor outdoor rate j-box mounted to the heaters raceway.

**CONSTRUCTION:** The heaters are formed and welded together out of 16 ga. and 20 ga. CRS or stainless steel. If CRS, the heater must be powder coated with a high temp black or white finish.



For supply connections use the wire size (or larger) as directed by the chart below. All wires must be suitable for at least 90°C (194°F).

| SUPPLY CONNECTIONS                   |                            |                                |
|--------------------------------------|----------------------------|--------------------------------|
| MODEL NUMBER                         | 120 VOLT<br>AWG. WIRE SIZE | 208/240 VOLT<br>AWG. WIRE SIZE |
| BH-STT-U18-1091B<br>BH-STT-U18-1330B | 14                         | -                              |
| BH-STT-U18-1767B                     | 12                         | -                              |
| BH-STT-U18-2161B                     | 10                         | -                              |
| BH-STT-U36-2180V<br>BH-STT-U36-2660V | -                          | 14                             |
| BH-STTU36-3104V<br>BH-STT-U36-3534V  | -                          | 12                             |
| BH-STT-U36-4322V                     | -                          | 10                             |

