



**INSTALLATION, OPERATION, MAINTENANCE INSTRUCTIONS & SPARE PARTS LIST  
FOR NORSEMAN™ XB EXPLOSION-PROOF CONVECTION HEATER**

**1.0 PRE-INSTALLATION**

- 1.1 Initially, inspect the heater for possible damage due to shipping and handling. Claims for shipping damages shall be placed with the carrier.
- 1.2 Check the heater nameplate to ensure that the heater area classification and temperature code are suitable for the hazardous area classification.
- 1.3 Check to ensure that the heater voltage is the same as the supply voltage.

**2.0 INSTALLATION**

The heater must be installed by qualified personnel in strict compliance with the electrical code.

**2.1 GENERAL**

- 2.1.1 Norseman™ XB heaters are approved for wall or floor mounting with the terminal housing at the bottom. Ensure that the wall is sufficiently strong to support the heater which, depending on the model, could weigh up to 100 lbs. Otherwise use the brackets supplied to stand the heater on the floor.
- 2.1.2 Do not recess the Norseman™ XB heater into the wall. Use of the brackets supplied will ensure that the minimum spacing from the wall of 95mm (3.75 in.) is maintained.
- 2.1.3 If more than one heater is being installed, maintain at least 76mm (3 in.) between adjacent heater extrusions. **NEVER INSTALL ONE HEATER ABOVE THE OTHER.**
- 2.1.4 The Norseman™ XB heater relies on natural convection and "black heat" radiation to transfer heat to the surroundings. Try to maintain a 300 mm (12 in.) clearance and **NEVER LESS THAN 150 mm (6 in.)** clearance in front of and at the sides of the heater.
- 2.1.5 Use guard rails in front of the heater if there is a possibility that moving equipment could come in contact with the heater.

**2.2 REFLECTOR BAFFLES (T2D units only)**

Refer to Figure 1 when installing reflector baffles.

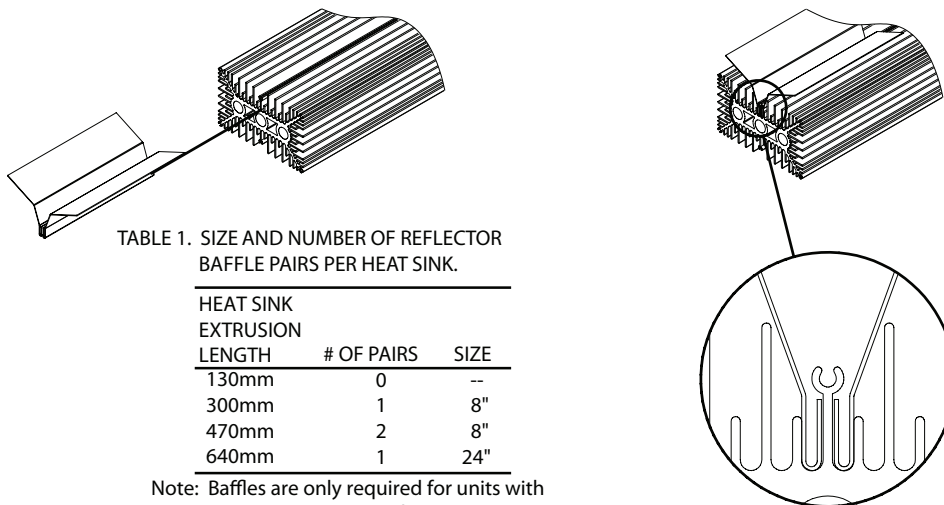


FIGURE 1. INSTALLATION OF REFLECTOR BAFFLES

- 2.2.1 Position heater front face down on a flat surface.
- 2.2.2 With the fold in the baffle positioned between the keyhole fin and the adjacent short fin, slide reflector baffles onto the back of heat sink.
- 2.2.3 Ensure reflector baffles are secure in place and flush with the top of the heat sink. If reflector baffles move freely, open the fold with a screw driver to improve the friction fit and reinstall baffles.

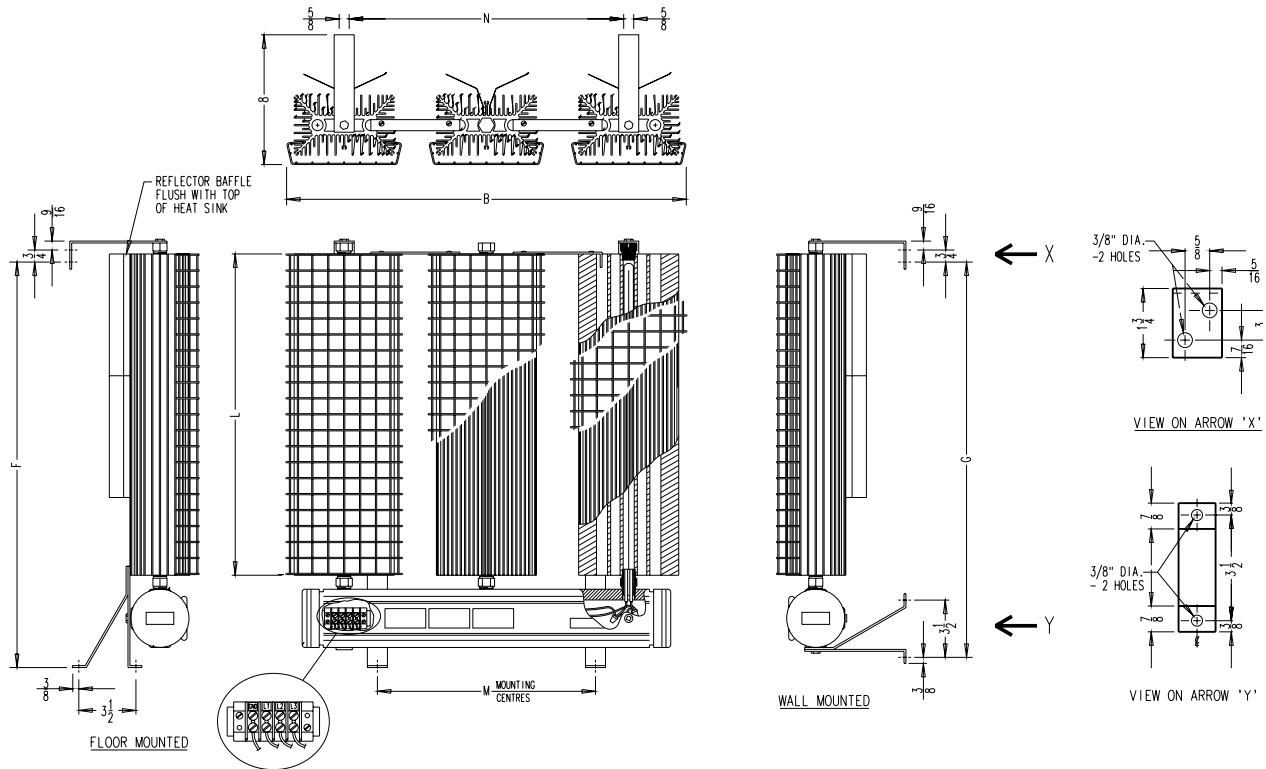


FIGURE 2. **NORSEMAN™** XB HEATER DIMENSIONS AND MOUNTING DETAILS  
NOTE: ALL DIMENSION IN INCHES UNLESS OTHERWISE STATED.

TABLE 2. **NORSEMAN™** XB HEATER DIMENSIONS

UNIT	B	F	G	M	N	L
XB1-		10 <sup>1</sup> / <sub>4</sub>	9 <sup>5</sup> / <sub>8</sub>			130mm
XB1-	7 <sup>1</sup> / <sub>4</sub>	17	16 <sup>3</sup> / <sub>8</sub>	--	--	300mm
XB1-		23 <sup>5</sup> / <sub>8</sub>	23			471mm
XB1-		30 <sup>3</sup> / <sub>8</sub>	29 <sup>3</sup> / <sub>4</sub>			640mm
XB2-		10 <sup>1</sup> / <sub>4</sub>	9 <sup>5</sup> / <sub>8</sub>			130mm
XB2-	16 <sup>1</sup> / <sub>8</sub>	17	16 <sup>3</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>4</sub>	300mm
XB2-		23 <sup>5</sup> / <sub>8</sub>	23			470mm
XB2-		30 <sup>3</sup> / <sub>8</sub>	29 <sup>3</sup> / <sub>4</sub>			640mm
XB3-		10 <sup>1</sup> / <sub>4</sub>	9 <sup>5</sup> / <sub>8</sub>			130mm
XB3-	25	17	16 <sup>3</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>4</sub>	17 <sup>1</sup> / <sub>8</sub>	300mm
XB3-		23 <sup>5</sup> / <sub>8</sub>	23			470mm
XB3-		30 <sup>3</sup> / <sub>8</sub>	29 <sup>3</sup> / <sub>4</sub>			640mm
XB4-		10 <sup>1</sup> / <sub>4</sub>	9 <sup>5</sup> / <sub>8</sub>			130mm
XB4-	33 <sup>7</sup> / <sub>8</sub>	17	16 <sup>3</sup> / <sub>8</sub>	22 <sup>5</sup> / <sub>8</sub>	26	300mm
XB4 -		23 <sup>5</sup> / <sub>8</sub>	23			470mm
XB4-		30 <sup>3</sup> / <sub>8</sub>	29 <sup>3</sup> / <sub>4</sub>			640mm

## 2.0 INSTALLATION CONT'D

### 2.3 WALL MOUNTING

Refer to Figures 2 and 3 for wall mounting instructions.

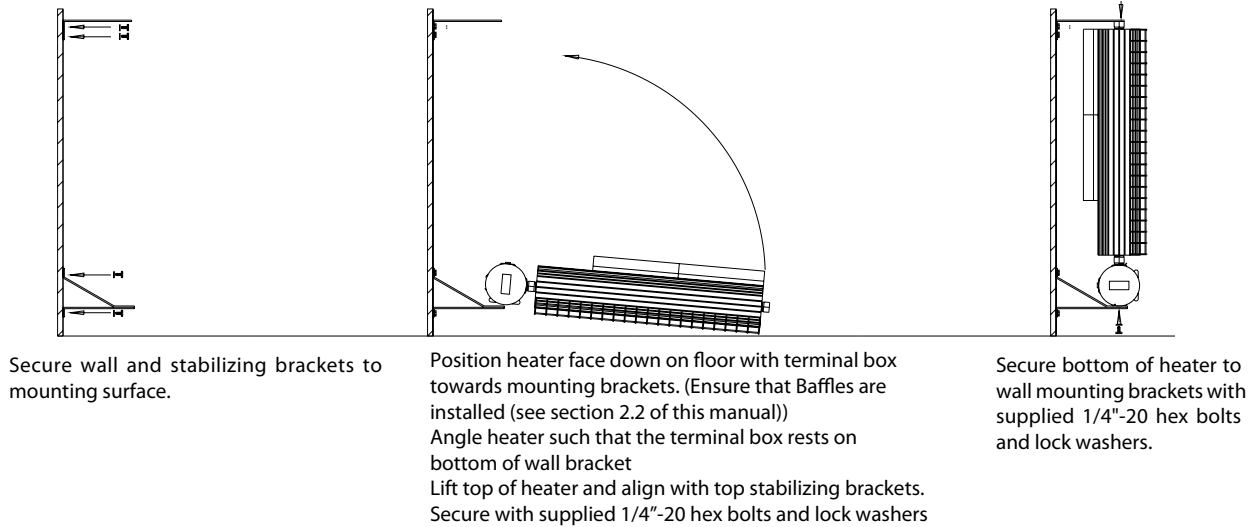


FIGURE 3. WALL MOUNTING DIAGRAM

### 2.4 FLOOR MOUNTING

Follow the instructions below referring to Figures 2 and 4.

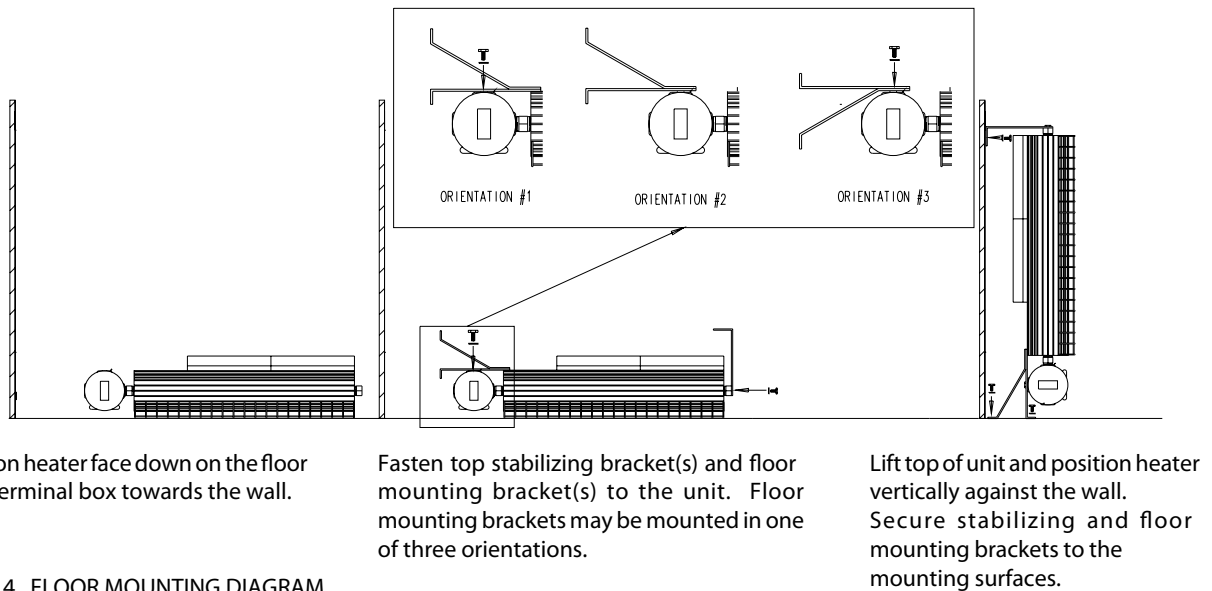


FIGURE 4. FLOOR MOUNTING DIAGRAM

### 2.5 INSTALLATION OF THERMOSTAT

#### 2.5.1 Factory Installed

For shipping purposes the thermostat well (located at back of unit) has not been installed.

Position thermostat bulb perpendicular to housing being careful not to kink the capillary. Slide well over bulb and screw into place. Make sure that a minimum 5 threads engagement is achieved.

#### 2.5.2 Field Installed Kit

Most Norseman™ XB units are suitable for field installation of a thermostat kit with the operator shaft hole on the front side of the unit and plugged with a socket head cap screw. If a thermostat is to be field installed, check to verify that you have been supplied with the correct thermostat kit. Single phase heaters use a single pole thermostat as supplied in kit number XTKW04481. Three phase heaters use a double pole thermostat as supplied in kit number XTKW04483. Follow the instructions supplied with the kit.

## 2.0 INSTALLATION CONT'D

### 2.6 WIRING

- 2.6.1 Whenever hazardous materials are present, ensure that the terminal housing covers are secure before powering the heater.
- 2.6.2 Use supply wires suitable for 105°C (221°F).
- 2.6.3 Use approved conduit and conduit seals as required by the code for hazardous locations.
- 2.6.4 To provide maximum protection each Norseman™ XB heater should be fused individually using the nearest standard fuse size which is not less than 120% of the expected line current.
- 2.6. All heaters come factory prewired and ready for direct connection to the power supply leads.
  - (a) Connect the power leads to terminals marked L1 and L2 for single phase and L1, L2 & L3 for three phase heaters as shown in Figure 5.
  - (b) Connect the ground wire to the ground connection located in the heater terminal housing.

## 3.0 START-UP

- 3.1 For heaters with a tamper-proof thermostat, to set temperature, disconnect the power and remove the socket head cap screw. Set the thermostat to the desired room temperature with a screw driver and replace cap screw.
- 3.2 For heaters with an externally adjustable thermostat, set thermostat to desired temperature by adjusting the dial.  
NOTE: The thermostat temperature range is -18°-40°C (0°-100°F) with an operating differential of 3-4°C (5-7°F).  
The room temperature setting should not exceed 24°C (77°F).
- 3.3 Install the terminal box cover and tighten securely.
- 3.4 Check to ensure that all plugs, screws, and covers are securely in place.
- 3.5 Check associated electrical equipment.
- 3.6 Check that all wall/floor mounting bracket connections are tight.
- 3.7 Turn on the supply power.

## 4.0 MAINTENANCE

- 4.1 Periodically inspect the heater installation to ensure that all connections, fittings, plugs, screws, covers, etc. are tight and free of corrosion.
- 4.2 Check that the reflector baffles (if required) have not moved upwards or downwards in relation to the heat sink.
- 4.3 Check the extrusions of the heater for dust and debris. A blast of compressed air is recommended for cleaning the fins. If air is not available, disconnect the power supply to the heater and when cool, wipe it down with a damp cloth or soft brush. Remove wire guards prior to cleaning.

### WARNING: DO NOT USE WATER TO CLEAN HEATER

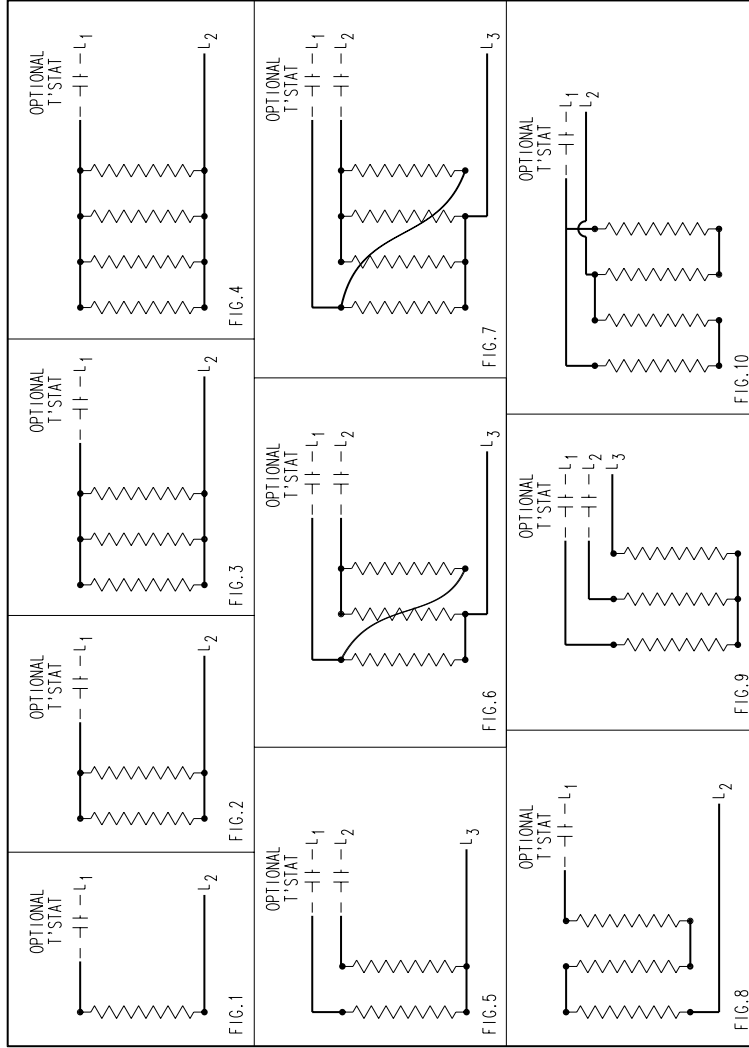
- 4.4 The heat sink is anodized or painted black to ensure that the maximum area code temperature is not exceeded. After an extended period of use or in extremely harsh environments the anodization/paint may wear away leaving bare surfaces. For continued safe operation, these surfaces must be repainted. When repainting use only black high temperature resistant paint.
- 4.5 Except for thermostat replacement, field repair of the heater shall not be normally undertaken. In the event that the heater must be repaired, contact the factory for a return authorization number.

## 5.0 SPARE PARTS

### 5.1 REPLACEMENT THERMOSTATS

VOLTAGE	THERMOSTAT PART NO.
ONE PHASE HEATERS	XTKW04481
THREE PHASE HEATERS	XTKW04483

FIGURE 5. WIRING DIAGRAMS FOR NORSEMAN™ XB HEATERS



XB4-6500T2D	FIG. 4 EXCEPT XB4-6160T4A 600V & XB4-3250T2D 600V USE FIG. 10	FIG. 7
XB4-6450T2D		
XB4-4375T2D		
XB4-6300T3B		
XB4-3250T2D	FIG. 3 EXCEPT XB3-4150T3B 600V & XB3-6125T4A 600V USE FIG. 8	FIG. 6 EXCEPT XB3-4150T3B 600V & XB3-6125T4A 600V USE FIG. 9
XB4-4225T3B		
XB4-6160T4A		
XB4-1150T2D		
XB4-6080T6		
XB3-6375T2D		
XB3-4300T2D		
XB3-6225T3B		
XB3-3200T2D		
XB3-4150T3B		
XB3-6125T4A		
XB3-1125T2D		
XB3-3100T3B		
XB3-1100T2D		
XB3-6060T6		
XB2-6250T2D		
XB2-4200T2D		
XB2-6150T3B		
XB2-3150T2D		
XB2-4100T3B		
XB2-6085T4A		
XB2-1075T2D		
XB2-6040T6		
XB1-6135T2D		
XB1-6125T2D		
XB1-4100T2D		
XB1-3075T2D		
XB1-3047T3B		
XB1-1047T2D		
XB1-6045T4A		
XB1-1030T3B		
XB1-6020T6		
XB1-1017T4A		
XB1-1010T4A		
XB1-1005T6		
CAT. NO.	1Ø	3Ø
	WIRING DIAGRAM	



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