

Control Panel & Pump House Heater - PXFT



(Guard optional on some units)

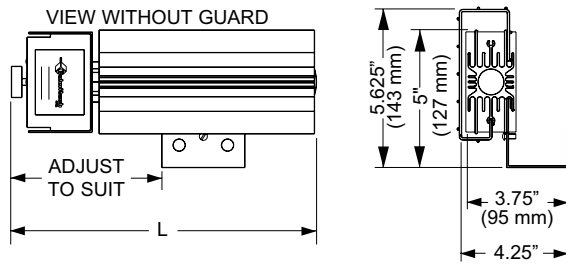


Figure 2

Application

Caloritech™ PXFT heaters are designed to maintain a stable temperature inside control enclosures, pump houses or similar spaces. The standard units are not suitable for use outdoors, unprotected from the weather. All heaters have a built-in thermostat. The heater is also available without a thermostat on special order.

Features

The PXFT heater uses a high surface area aluminum heat emitter to eliminate the need for a fan while providing low radiation and high convection heating to the enclosure. The thermostat rating is 25 A at 240V, Single Pole, Single Throw, adjustable from 30°F to 120°F (0°C to 50°C). A movable bracket allows the heater to be floor or wall mounted with the terminal box located on the left or right side, top or bottom. Wire guards are provided standard with the PXFT-300, PXFT-400 and PXFT-600 watt heaters, and are available as an option on the PXFT-050, PXFT-125 and PXFT-200-watt units. Moisture resistant heaters (shown below) are available on special order.



Figure 3

Selection

The wattage requirement is determined from a consideration of the surface area, insulation properties of the enclosure or space and the temperature difference between the ambient and the enclosure. For small enclosures (less than 100 ft² (9.3 m²) surface area) conservative values for heat losses are as shown in Table 4, page C6.

Table 4 – Temperature Difference

Watts/ft ² Per 10°F	Indoors	Outdoors
Uninsulated	5	7
Insulated (Min. 1")	1	1.2
Watts/m ² Per 5.5°C	Indoors	Outdoors
Uninsulated	54	75
Insulated (Min. 2.5 cm)	11	13

Example: To find wattage requirements in an uninsulated enclosure 2' x 3' x 1/2' (0.61 m x 0.91 m x 0.15 m), which must be held at 40°F (4°C) in a 10°F (-12°C) outdoor ambient.

$$\text{Surface Area (ft}^2\text{)} = 2 [(2' \times 3') + (2' \times 1/2') + (3' \times 1/2')] = 17 \text{ ft}^2$$

$$\begin{aligned} \text{Surface Area (m}^2\text{)} &= 2[(0.61 \text{ m} \times 0.92 \text{ m}) + (0.61 \text{ m} \times 0.15 \text{ m}) \\ &\quad + (0.92 \text{ m} \times 0.15 \text{ m})] \\ &= 1.5814 \text{ m}^2 \end{aligned}$$

Heat Loss: From Table 4, page C6, an uninsulated outdoor enclosure requires 7 watts for each 10°F temperature difference. (75 watts for each 5.5°C temperature difference).

$$\text{Temperature Difference (°F)} = 40^\circ\text{F to } 10^\circ\text{F} = 30^\circ\text{F}$$

$$\text{Temperature Difference (°C)} = 4.4^\circ\text{C} - (-12.2^\circ\text{C}) = 16.6^\circ\text{C}$$

$$\text{Wattage Required} = (30^\circ\text{F} \div 10^\circ\text{F}) \times 7 \times 17 = 357 \text{ watts}$$

Or:

$$\text{Wattage Required} = (16.6^\circ\text{C} \div 5.5^\circ\text{C}) \times 75 \times 1.5814 \text{ m}^2 = 357 \text{ watts}$$

Use one PXFT400 rated at 400 watts. For enclosures requiring more than 600 watts, two or more PXFT heaters can be used. Higher wattage heaters are available. Check factory.

Installation

Caloritech™ PXFT heater is approved for horizontal or vertical mounting on the floor or lower wall of the enclosure. Heaters must be installed using the mounting bracket provided to ensure minimum spacing between the heater and the wall or floor. Try to maximize the spacing between the heater and temperature sensitive components. Surface temperatures of the 50-watt and 125-watt units are about 212°F (100°C) and 338°F (170°C) respectively. The other units listed operate around 410°F (210°C).

Table 5 – PXFT Series - Control Panel and Pump House Heaters

Watts	Standard Voltages	Length 'L'		Catalog No.*	Weight	
		in	mm		lbs	kg
50	120	8.375	213	PXFT050	2.6	1.1
125	120	8.375	213	PXFT125	2.6	1.1
200	120	8.375	213	PXFT200	2.9	1.3
300	120, 240	15.000	381	PXFT300	3.5	1.6
400	120, 240	21.750	553	PXFT400	5.5	2.5
600	120, 240	28.500	724	PXFT600	7.5	3.4

Note:

*For units without thermostat, omit 'T' in catalog number.

Inventory - these heaters are normally stocked in limited quantities

To Order Specify

- Quantity
- Voltage
- Catalog number
- Special features