

## Industrial Air Heaters Overview

### Industrial Unit Heaters

- General Purpose
- Corrosion Resistant & Washdown
- Explosion Proof

### Commercial/Architectural Heaters



- Fan-Forced
- Convection
- Radiant
- Duct

### Transportation Heaters

- Overhead Rail HVAC Duct
- Cab Blower Assemblies
- Wall Convection
- Radiant Defrost

Chromalox industrial electric air heaters provide efficient, economical heat for commercial and industrial applications. Three basic types of heaters are convection, forced air and radiant, with combinations often used. They apply safe, clean, fast heat and their heavy-duty construction affords long, dependable service.



The following descriptions aid in determining what methods of heating will provide you the best solution for any given situation.

**CXH** **HVH**

***Industrial Unit Heaters***

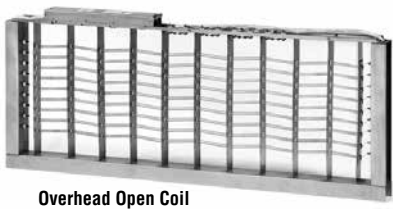

Industrial unit heaters are designed for harsh environments. Typical construction consists of heavy gauge materials and corrosion resistant coatings to allow for superior durability. Applications include safe area, washdown, and hazardous location environments

**HCH** **ChromaStar**

***Commercial and Architectural Heaters***

Commercial and Architectural Heaters are designed for use in office buildings, hospitals, schools, etc. They provide safe, uniform electric heat while providing an aesthetically pleasing design. ChromaStar radiant heaters can also be used in outdoor environments, such as loading docks.

**Overhead Open Coil** **Blower Assemblies**

***Transportation Heaters***

Transportation heaters are designed for the demanding environments in which airplanes, ships, trucks, and trains operate. They are typically designed for superior durability while meeting weight and cost requirements.

**INDUSTRIAL AIR HEATERS OVERVIEW**

## Comfort and Freeze Protection

### Application Guidelines

#### Methods of Heat Transfer

- Convection Heating
- Forced Air Heating
- Radiant Heating

#### • Heat Requirements

#### • Application Tips

#### Applications

**Methods of Heat Transfer** — To understand which method of comfort heating best meets your application it is important to understand the basic methods of heat transfer. Heat transfer is accomplished by **Conduction, Convection** or **Radiation**.

**Conduction** is defined as transferring heat through a conducting medium by way of direct contact.

**Convection** heat involves using a source of heat to warm the air and create a desired comfort level around people. Heated air is circulated by fans or blowers to generally surround a normally enclosed area. Home heating with a forced-air furnace is an example of convection heat.

**Radiant or Infrared** heat uses invisible electromagnetic waves from an energy source. The perfect example of electro-magnetic infrared energy is heat from the sun. In an infrared system, these energy waves are created by a heat source - quartz lamp, quartz tube, metal rod - which are directed by optically designed reflectors toward or onto the object or person. A fireplace is a familiar form of radiant heat.

#### Reasons to Use Convection Heating:

- Small Spaces and Rooms
- Quiet Operation
- Special Purposes like Cranes and Pump Rooms.

#### Reasons to Use Forced Air, Blower Heating:

- High Heat Output in a Small Space
- Large Areas Require Air Movement to Distribute Heat
- Primary and Supplemental Heating.

#### Reasons to Use Radiant Heating:

- Efficiently Heat Small Areas
- Heats People and Objects rather than Air or Space
- Good for Supplemental Heating.

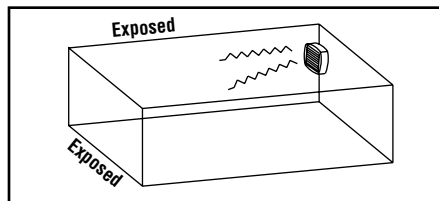
**Determining the Heat Requirement** — To get an approximate sizing of the heating requirements for a room, the following guide may be utilized. For a more detailed analysis it is recommended that the ASHRAE guidelines be followed when performing an analysis for a complete building. Your Local Chromalox Sales office can assist you in sizing your application with a computer sizing tool that is designed to perform room-by-room heat loss estimates. When sizing the job, the first step is to determine the construction data and sizing requirements. You will need to collect the following information:

- Voltage and phase
- Length, width and height of building
- R-factor for ceilings and walls
- Air changes or how much fresh air is brought in per hour
- Outside lowest temperature
- Desired inside temperature
- Size and number of windows and doors.

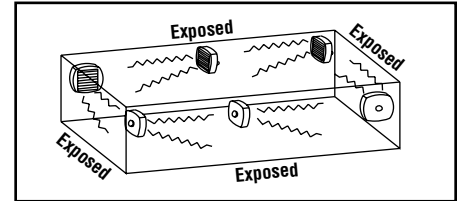
If a quick estimate is sufficient, then consult the Comfort Heating Chart in the Technical section of this catalog.

#### Application Tips

**Small Rooms** can be heated by a one (1) unit heater. Where two (2) walls are exposed, heater should be mounted as shown.



**Large Rooms** require multi-unit installations. Number and capacity of units will be determined by volume of building and square feet of floor area to be heated. Arrange units to provide perimeter air circulation.



**Air Volume** — To prevent air stratification, total CFM capacity of all units should circulate the room air volume at least 3 times per hour. Units should be located so their air streams wipe exposed walls without blowing directly at them.

**In Multiple Unit Heater Installations** locate units so each unit supports the air stream from another, thus setting up circulatory air movement.

**In Warehouse Type Applications** for maintaining minimum temperature, one or more large heaters can be used to reduce initial installation expense.

**For Individual Space** total heating capacity is calculated in the conventional way, using formulas in the ASHRAE "Guide" or those found in the NEMA handbook.

**For Pedestrian Entryways** when heating capacity is not known, a "rule of thumb" is 5000 watts per door.

**Loading Docks** — Unit heaters are used to combat cold air inrush when loading dock doors are opened. For such applications, one or more units should be arranged to blow warm air across the opening, not toward it.

**Harsh and Special Environments** may require corrosion resistant and/or explosion proof heaters — see the Selection Guidelines on the following page.

**Often a Portable Heater** or heaters can solve a unique comfort heating situation temporarily or help determine the requirement for permanently located heaters to achieve the desired comfort levels.

**Controls and Thermostats** are vital to solving a heating situation. See the Controls section of this catalog for more information, especially type WR80, WR90, WT, WTL, WR80-EP, WCRT and RTC thermostats.

## Comfort and Freeze Protection

### Selection Guidelines

#### Application Tips

**Radiant Infrared Comfort Heaters** can help many unique heating situations.

**Heats People Without Heating Air** — Infrared travels through space and is absorbed by people and objects in its path. The air does not absorb infrared energy. With convection heating the air itself is warmed and circulated, however, warm air always rises to the highest point of a building. With Infrared comfort heating, the warmth is directed and concentrated at the floor and people level where it is really needed.

**Low Maintenance** — Electric infrared is strictly a resistance type heat. There are no moving parts or motors to wear out; no air filters or lubrication required. Periodic cleaning of the reflectors and heat source replacement is all that is required.

**Clean** — Electric infrared, like other forms of electric heating, is the cleanest method of heating. There are no by-products of combustion as with fossil fuel burning units. Electric infrared adds nothing to the air nor takes anything from it.

#### Safe

- No open flames
- No moving parts to malfunction
- No fuel lines to leak
- No toxic by-products of combustion
- UL and CE available on most models
- ATEX and GOST Available on certain hazardous location heaters

The Technical section of this catalog gives additional information on “Radiant Infrared Heating — Comfort Heating”

For outdoor applications, consult your Local Chromalox Sales office.

#### Industrial Unit Heaters — Selection Guidelines

Application	Feature	kW	Model	Page
Explosion Proof and Corrosive Environment	Explosion Proof	3 - 35	CXH-A	F-4
	Explosion Proof	1.6 - 9.0	CVEP	F-11
	Explosion Proof	.16 - .6	XPMC	F-14
	Corrosion Resistant	2 - 39	HD3D	F-17
	Pump House	0.5	7150	F-20
Safe Area	Horizontal Blower	2.6 - 45	LUH	F-21
	Horizontal or Vertical Blower	2.6 - 15	HVH	F-25
	High Capacity Horizontal	2 - 50	UB	F-31
	Without Thermostat	0.25 - 0.5	EH	F-36
	With Thermostat	0.5 1.0	HVT	F-36
	Horizontal	1 - 3	H	F-37
	Vertical	2 - 4.5	V	F-38
Portable	Portable Blower Heater (High Temp)	30 - 60	SDRA	F-39
	Portable Blower	7.5 - 30	DRA	F-42
	Portable Blower	1.9 - 4	HF	F-44

#### Commercial & Architectural Heaters — Selection Guidelines

Application	Feature	kW	Model	Page
Duct	Fintube® and Open Coil Air Duct	10 - 533	DH	F-45
Radiant	Portable Ceiling Mount	1.5 - 13.5	ChromaStar	F-48
Convection	Wall Mounted	0.5 - 5.0	HCH	F-55

#### Transportation Heaters — Selection Guidelines

Application	Feature	Page
Overhead HVAC	Open Coil	F-58
Rail Cab/Car	Blower Assembly	F-58
Rail Cab/Car	Floor/Wall Convection	F-58
Car Defrost	Radiant	F-58

## CXH-A

### Explosion Proof Blower Heater for Hazardous Locations



- 3 - 35 kW
- 10,200 - 119,420 Btuh
- 208 to 600 Volts
- 1 or 3 Phase
- Meets UL, CSA, NEC and OSHA Requirements
- ATEX and EAC Models Available

#### Description

Type CXH-A is designed to heat areas classified as hazardous locations to provide primary or supplementary heating for comfort or freeze protection.

#### Applications

- Sewage Treatment Plants
- Petrochemical Facilities, Oil Rigs
- Unattended Pumping Stations
- Chemical Storage and Handling Facilities
- Paint Storage Areas
- Grain Elevators
- Coal Preparation Plants
- Aircraft Servicing Areas
- Oil Refineries
- Areas Containing Metal Dusts

#### Construction

**Cabinet** — 14 gauge steel construction with polyester powder coat paint finish.

**Adjustable Louvers** — Control the direction of airflow as needed.

**Rugged, Seamless, Copper Heating Elements** — are immersed in the sealed liquid-to-air heat exchanger.

**Factory Sealed Heat Exchanger** — Features steel tubes with integral aluminum fins and filled with glycol-water heat transfer fluid.

**Safety Pressure Relief Device** on the heat exchanger is factory helium leak tested to assure a leak-proof design.

**Explosion Proof Ball Bearing Motor** — Permanently lubricated and equipped with built-in thermal overload protection.

**Epoxy Coated Aluminum Fan** — Prevents sparking.

#### Features

**Pre-Wired Explosion Proof Control Center**

with magnetic contactor and control circuit transformer.

#### Quick-Acting Auto Reset Cutout

**Pole, Wall and Ceiling Mounting Kits** — Optional. Recessed threaded fasteners on top of heater for mounting with threaded rods.

**Warranty** — Limited Three Year (Consult Terms of Sale or Owner's Manual for more information.)

#### Optional Features


- Built-in Thermostat 50°F to 90°F (10°C to 32°C)
- Built-in Manual Disconnect Switch
- Pilot Light
- Fan Selector Switch

#### Designed for Areas Classified

Low operating temperature for atmospheres having an ignition temperature higher than 165°C (329°F) code T3B.

- Class I, Group C, D - Divisions 1 & 2
- Class II, Groups E, F, G - Divisions 1 & 2

#### Optional Classifications

- Temperature Code T3C 160°C (320°F)  
Class I, Groups C, D - Divisions 1 & 2  
Class II, Groups F, G - Divisions 1 & 2  
 IIB T3

- Arctic Duty Construction

#### Advantages

- Easy Installation
- Safe, Propylene Glycol Heat Transfer Fluid
- Low Surface Temperature
- Wall, Pole or Ceiling Mounting
- Built-in Controls
- Virtually Maintenance Free
- Corrosion Resistant
- 120V Control (24V optional)
- Rugged and Versatile

Refer to  
WR-80EP  
in the Controls section.



## CXH-A

### Explosion Proof Blower Heater for Hazardous Locations

*(cont'd.)*

#### Heater Rating and Operating Data

<b>(3 to 35 kW)</b>	Hazardous Location Classifications .....	3 to 35 kW Models - Class I, Group C & D; Class II, Groups E, F & G, Divisions 1 & 2
	Temperature Codes .....	This temperature shall not exceed the ignition temperature of the gas or vapor to be encountered. All standard models 165°C (329°F) T3B
<b>INSTALLATION</b>	Maximum Mounting Height From Floor to Bottom of Heater .....	8' to 10' (2.4 to 3 meters) normal, when heat is required at floor level.
	Ambient Temperature .....	-40°F/-40°C (Min.) 104°F/40°C (Max.)
	Operating Limits Maximum Operational Altitude Above Sea level .....	7500' (2286 meters). Check with local Chromalox sales office for recommendations for higher elevations.
<b>PROTECTION</b>	High-Limit .....	Auto reset quick acting linear type thermal cutout.
	Pressure Relief .....	Pressure relief device.
<b>HEAT EXCHANGER</b>	General Description .....	Steel tubes, with integral rolled-aluminum fins
	Core Material .....	Steel.
	Heat Transfer Fluid .....	Propylene Glycol (Ethylene Glycol available for arctic duty - check with local Chromalox sales office.)
	Heating Element Assembly .....	Immersion heater assembly with seamless copper sheathed heating elements.
<b>CABINET</b>	Cabinet .....	14 gauge steel, polyester powder-coated. Individually adjustable louvers with minimum position stops.
	Fan Guard .....	Heavy duty polyester powder-coated steel.
	Fasteners .....	Nickel plated steel for corrosion resistance.
	Conduit Material .....	Plated steel for corrosion resistance.
	Control Enclosure .....	Cast aluminum (non-copper Alloy) NEMA 7 and 9 enclosure.
	Hanger Connections .....	2 (two) 5/8" UNC tapped holes.
<b>CONTROLS</b>	Control Circuit .....	Built in 120V control. Optional 24V control available.
	Power Contactor .....	50 Amp/600V.
	Transformer .....	Primary voltage same as heater voltage - secondary voltage, 24V or 120V.

EXPLOSION PROOF  
& CORROSIVE ENV.

## CXH-A

### Explosion Proof Blower Heater for Hazardous Locations (cont'd.)

#### Ordering Information

**To Order** — Complete the Model Number using the Matrix Provided.

#### Model Numbers

When ordering CXH-A heaters, specify the model number and corresponding PCN (Product Code Number, found in the Ordering Information Table). If thermostat, or disconnect switch options are required, designate these options in addition to the model number when ordering. Use PCN Numbers only on standard models. On made to order CXH heaters, complete catalog number from matrix provided. Always specify voltage, phase and kW by listing them on the purchase order product specifications.

Model Explosion Proof Blower Heater									
CXH-A									
Code	Heating Element Rating (kW)								
03	3								
05	5								
07	7.5								
10	10								
15	15								
18	18								
20	20								
25	25								
30	30								
35	35								
Code	Heater Volts								
2	240								
3	380 (3 phase only)								
4	480 (3 phase only)								
5	415 (3 phase only)								
6	575 (3 phase only)								
8	208								
9	600 (3 phase only)								
Code	Phase								
1	1								
3	3								
Code	Control Volts								
30	24								
32	120 (Std.)								
Code	Thermostat Option								
00	Without Thermostat								
40	Thermostat								
Code	Heat Exchanger								
1	Ethylene Groups C, D, E, F, G						T3B		
2	Propylene Groups C, D, E, F, G (Std.)						T3B		
3	Ethylene Groups C, D, F, G						T3C		
4	Propylene Groups C, D, F, G						T3C		
Code	Options								
0	Without Disconnect								
1	Disconnect: 15 Amp 3-phase, 30 Amp 1-phase or 3-phase, specify as required								
2	60 Amp Disconnect								
3	Pilot Light No Disconnect								
4	Pilot Light and 30 Amp Disconnect								
5	Pilot Light and 60 Amp Disconnect								
6	Summer Fan Switch								
7	Summer with Pilot Light								
8	Disconnect with Fan Switch								
9	Disconnect Pilot Light and Fan Switch								
Code									
EP	Explosion Proof								
CXH-A	10	4	3	30	40	1	1	EP	Typical Model Number

## CXH-A

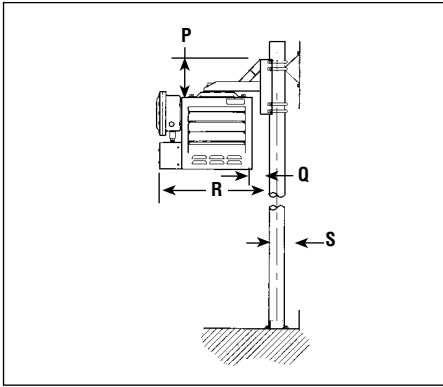
### Explosion Proof Blower Heater for Hazardous Locations (*cont'd.*)

#### Mounting Kits

##### Pole (PMB)<sup>1</sup>

Particularly useful in buildings with insufficient strength to use other types of mounts. Requires 3-1/2" schedule 40 pipe (4" O.D.) - not supplied.

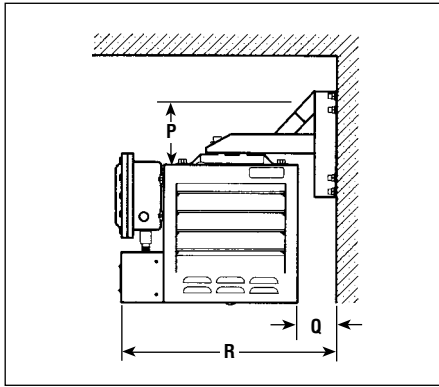
##### Pole Mounting Bracket



##### Wall (WMB)<sup>1</sup>

Ideal for use in buildings that have substantial walls. Arm only can also be bolted directly to structural steel.

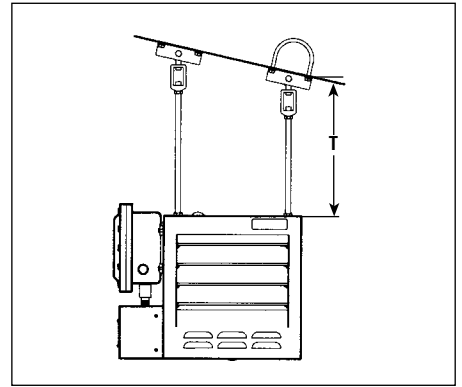
##### Wall Mounting Bracket



##### Ceiling (HMK)

Simple and economical if adequate overhead structure exists. Requires 5/8" rod, cut and threaded (not supplied).

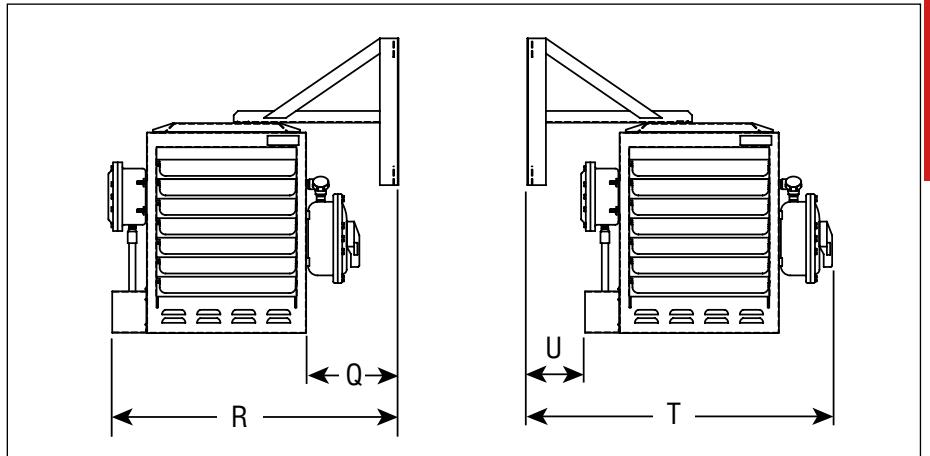
##### Ceiling Mounting Bracket



#### Mounting Kits

Heater	Pole		Wall		Ceiling		Dimensions In. (mm.)				
	Model	PCN	Model	PCN	Model	PCN	P	Q	R	S	T (Min.)
CXH-A-03 to -10	PMB-12	025179	WMB-12	025152	HMK-00	025195	10 (254.0)	5-1/2 (139.7)	29-1/2 (749.3)	6 (152.4)	7 (177.8)
CXH-A-15 to -20	PMB-16	025187	WMB-16	025160	HMK-00	025195	11-1/2 (292.1)	5-1/8 (130.2)	33 (838.2)	6 (152.4)	7 (177.8)
CXH-A-25 to -35	PMB-20	029073	WMB-20	029065	HMK-00	025195	14-1/2 (368.3)	5-3/8 (136.5)	38-1/4 (971.6)	6 (152.4)	7 (177.8)

#### Wall Mounting Kits (for models supplied with disconnect switch)



EXPLOSION PROOF  
& CORROSIVE ENV.

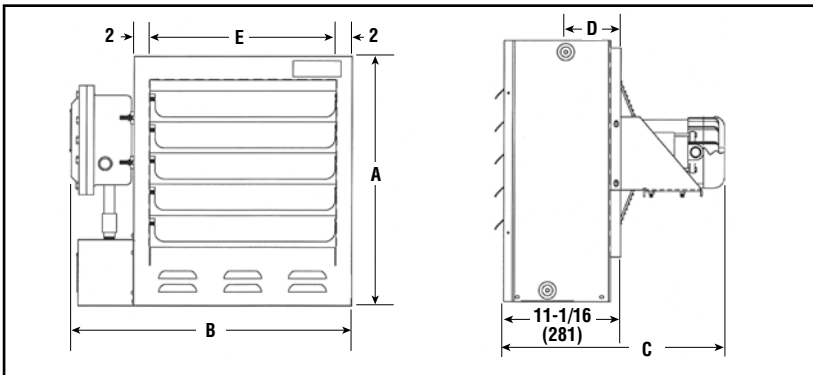
#### Wall Mounting Kits (for models supplied with disconnect switch)

Heater	Model	PCN	Dimensions In. (mm)				Wt. Lbs. (kg)
			Q	R	T	U	
CXH-A-03 to -10	WMBD-12	028880	7-7/8 (200.0)	31-1/16 (789.0)	30-1/8 (765.2)	6-15/16 (176.2)	26 (11.8)
CHX-A-15 to -20	WMBD-16	028898	13-3/4 (349.3)	40-15/16 (1039.8)	35-3/8 (898.5)	8-3/16 (208.0)	28 (12.7)
CHX-A-25 to -35	WMBD-20	028900	14-7/8 (377.8)	16-1/16 (408.0)	40-1/2 (1028.7)	9-5/16 (236.5)	30 (13.6)

## CXH-A

Explosion Proof  
Blower Heater for  
Hazardous Locations  
*(cont'd.)*

### Dimensions In. (mm)



### Heater Dimensions In. (mm)

Heater	Dimensions (In.)				
	A	B	C	D	E (Mtg. Holes)
CXH-A-03 to -10	19-1/8 (485.8)	23-7/8 (606.4)	21 (533.4)	3-1/2 (88.9)	13-5/8 (346.1)
CXH-A-15 to -20	25 (635.0)	27-7/8 (708.0)	21 (533.4)	4-13/32 (111.9)	17-5/8 (447.7)
CXH-A-25 to -35	32-5/39 (816.1)	31-7/8 (809.6)	21-3/4 (552.5)	5-1/2 (139.7)	21-5/8 (549.3)

**Notes —**

- A. E dimension mounting hole center to center.
- B. Disconnect switch option increases B dimension by 7 inches (177.8 mm).

# Industrial Air Heaters

## CXH-A

### Explosion Proof Blower Heater for Hazardous Locations (cont'd.)

#### Optional Controls & Disconnects

##### Built-in Adjustable Thermostat

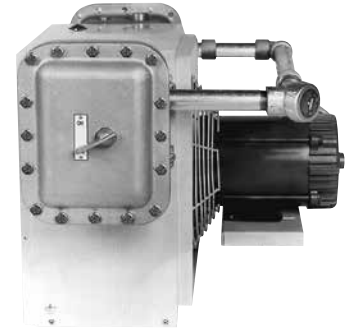
- Temperature range 50°F to 90°F (10°C to 32°C)
- Adjustable control knob on exterior of explosion-proof enclosure
- Mounted and wired to heater control center
- Eliminates installation of wall thermostats and associated explosion-proof conduit.
- Factory Installed

##### Built-in Disconnect Switch

- 15, 30 or 60 Amp as required by application
- Factory installed, eliminating field labor
- Meets National Electric Code (NEC)

##### Built-in Fan Switch

- Allows fan only operation for cooling



#### Specifications and Ordering Information

Electrical (60 Hz)				Motor				Air Delivery				Mtg. Height Ft. (mm.)	Ordering			
kW	Volts	Phase	Full Load Amps	Control Volts	Phase	HP	RPM	Air Flow f³/min (m³/hr)	Air Speed ft/min (m/min)	Temp. Rise °F (°C)	Horiz. Throw Ft. (mm)		Model	Stock	PCN	Wt. (Lbs.)
<b>Standard Models</b>																
3	208	1	16.7	120	1	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-81-32-00-20EP	NS	026008	135 (61.4)
3	208	3	9.7	120	3	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-83-32-00-20EP	NS	026016	135 (61.4)
3	240	1	14.8	120	1	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-21-32-00-20EP	NS	026024	135 (61.4)
3	240	3	8.6	120	3	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-23-32-00-20EP	NS	026032	135 (61.4)
3	480	3	4.3	120	3	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-43-32-00-20EP	NS	026040	135 (61.4)
3	575	3	3.6	120	3	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-63-32-00-20EP	NS	026059	135 (61.4)
3	208	1	16.7	24	1	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-81-30-00-20EP	NS	026067	135 (61.4)
3	208	3	9.7	24	3	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-83-30-00-20EP	NS	026075	135 (61.4)
3	240	1	14.8	24	1	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-21-30-00-20EP	NS	026083	135 (61.4)
3	240	3	8.6	24	3	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-23-30-00-20EP	NS	026091	135 (61.4)
3	480	3	4.3	24	3	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-43-30-00-20EP	NS	026104	135 (61.4)
3	575	3	3.6	24	3	1/4	1,725	700 (1189)	900 (274.3)	13 (7.2)	28 (8.5)	8 (2.4)	CXH-A-03-63-30-00-20EP	NS	026112	135 (61.4)
5	208	1	26.3	120	1	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-81-32-00-20EP	NS	026120	135 (61.4)
5	208	3	15.3	120	3	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-83-32-00-20EP	NS	026139	135 (61.4)
5	240	1	23.1	120	1	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-21-32-00-20EP	NS	026147	135 (61.4)
5	240	3	13.4	120	3	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-23-32-00-20EP	NS	026155	135 (61.4)
5	480	3	6.7	120	3	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	<b>CXH-A-05-43-32-00-20EP</b>	<b>S</b>	<b>026163</b>	135 (61.4)
5	575	3	5.6	120	3	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-63-32-00-20EP	NS	026171	135 (61.4)
5	208	1	26.3	24	1	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-81-30-00-20EP	NS	026180	135 (61.4)
5	208	3	15.3	24	3	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-83-30-00-20EP	NS	026198	135 (61.4)
5	240	1	23.1	24	1	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-21-30-00-20EP	NS	026200	135 (61.4)
5	240	3	13.4	24	3	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-23-30-00-20EP	NS	026219	135 (61.4)
5	480	3	6.7	24	3	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-43-30-00-20EP	NS	026227	135 (61.4)
5	575	3	5.6	24	3	1/4	1,725	700 (1189)	900 (274.3)	22 (12.2)	28 (8.5)	8 (2.4)	CXH-A-05-63-30-00-20EP	NS	026235	135 (61.4)
7.5	208	1	38.4	120	1	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-81-32-00-20EP	NS	026243	135 (61.4)
7.5	208	3	22.2	120	3	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-83-32-00-20EP	NS	026251	135 (61.4)
7.5	240	1	33.6	120	1	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-21-32-00-20EP	NS	026260	135 (61.4)
7.5	240	3	19.4	120	3	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-23-32-00-20EP	NS	026278	135 (61.4)
7.5	480	3	9.7	120	3	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-43-32-00-20EP	NS	026286	135 (61.4)
7.5	575	3	8.1	120	3	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-63-32-00-20EP	NS	026294	135 (61.4)
7.5	208	1	38.4	24	1	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-81-30-00-20EP	NS	026307	135 (61.4)
7.5	208	3	22.2	24	3	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-83-30-00-20EP	NS	026315	135 (61.4)
7.5	240	1	33.6	24	1	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-21-30-00-20EP	NS	026323	135 (61.4)
7.5	240	3	19.4	24	3	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-23-30-00-20EP	NS	026331	135 (61.4)
7.5	480	3	9.7	24	3	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-43-30-00-20EP	NS	026340	135 (61.4)
7.5	575	3	8.1	24	3	1/4	1,725	840 (1427)	1070 (326.1)	27 (15.0)	32 (9.8)	10 (3.0)	CXH-A-07-63-30-00-20EP	NS	026358	135 (61.4)

EXPLOSION PROOF & CORROSIVE ENV.



# Industrial Air Heaters

## CXH-A

Explosion Proof  
Blower Heater for  
Hazardous Locations  
(cont'd.)

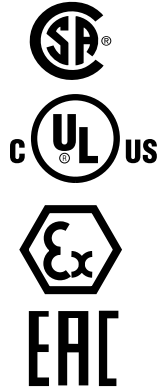
Electrical (60 Hz)				Motor				Air Delivery				Ordering				
kW	Volts	Phase	Full Load Amps	Control Volts	Phase	HP	RPM	Air Flow ft <sup>3</sup> /min (m <sup>3</sup> /hr)	Air Speed ft/min (m/min)	Temp. Rise °F (°C)	Horiz. Throw Ft. (mm.)	Mtg. Height Ft. (mm.)	Model	Stock	PCN	Wt. (Lbs.)
10	240	1	44	120	1	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	CXH-A-10-21-32-00-20EP	NS	026374	140 (63.6)
10	240	3	25.5	120	3	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	CXH-A-10-23-32-00-20EP	NS	026382	140 (63.6)
10	480	3	12.7	120	3	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	<b>CXH-A-10-43-32-00-20EP</b>	<b>S</b>	<b>025101</b>	140 (63.6)
10	575	3	10.6	120	3	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	CXH-A-10-63-32-00-20EP	NS	026390	140 (63.6)
10	208	3	29.2	24	3	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	CXH-A-10-83-30-00-20EP	NS	026403	140 (63.6)
10	240	1	44	24	1	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	CXH-A-10-21-30-00-20EP	NS	026411	140 (63.6)
10	240	3	25.5	24	3	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	CXH-A-10-23-30-00-20EP	NS	026420	140 (63.6)
10	480	3	12.7	24	3	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	CXH-A-10-43-30-00-20EP	NS	026438	140 (63.6)
10	575	3	10.6	24	3	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	CXH-A-10-63-30-00-20EP	NS	026446	140 (63.6)
15	208	3	43	120	3	1/4	1,725	1450 (2464)	1040 (317.0)	31 (17.2)	47 (14.3)	10 (3.0)	CXH-A-15-83-32-00-20EP	NS	026454	160 (72.7)
15	240	3	37.5	120	3	1/4	1,725	1450 (2464)	1040 (317.0)	31 (17.2)	47 (14.3)	10 (3.0)	CXH-A-15-23-32-00-20EP	NS	026462	160 (72.7)
15	480	3	18.7	120	3	1/4	1,725	1450 (2464)	1040 (317.0)	31 (17.2)	47 (14.3)	10 (3.0)	<b>CXH-A-15-43-32-00-20EP</b>	<b>S</b>	<b>026470</b>	160 (72.7)
15	575	3	15.7	120	3	1/4	1,725	1450 (2464)	1040 (317.0)	31 (17.2)	47 (14.3)	10 (3.0)	CXH-A-15-63-32-00-20EP	NS	026489	160 (72.7)
15	208	3	43	24	3	1/4	1,725	1450 (2464)	1040 (317.0)	31 (17.2)	47 (14.3)	10 (3.0)	CXH-A-15-83-30-00-20EP	NS	026497	160 (72.7)
15	240	3	37.5	24	3	1/4	1,725	1450 (2464)	1040 (317.0)	31 (17.2)	47 (14.3)	10 (3.0)	CXH-A-15-23-30-00-20EP	NS	026500	160 (72.7)
15	480	3	18.7	24	3	1/4	1,725	1450 (2464)	1040 (317.0)	31 (17.2)	47 (14.3)	10 (3.0)	CXH-A-15-43-30-00-20EP	NS	026518	160 (72.7)
15	575	3	15.7	24	3	1/4	1,725	1450 (2464)	1040 (317.0)	31 (17.2)	47 (14.3)	10 (3.0)	CXH-A-15-63-30-00-20EP	NS	026526	160 (72.7)
18	240	3	44.7	120	3	1/4	1,725	1400 (2379)	1000 (304.8)	39 (21.7)	43 (13.1)	10 (3.0)	CXH-A-18-23-32-00-20EP	NS	026534	171 (77.7)
18	240	3	44.7	24	3	1/4	1,725	1400 (2379)	1000 (304.8)	39 (21.7)	43 (13.1)	10 (3.0)	CXH-A-18-23-30-00-20EP	NS	026542	171 (77.7)
20	480	3	24.8	120	3	1/4	1,725	1400 (2379)	1000 (304.8)	43 (23.9)	43 (13.1)	10 (3.0)	<b>CXH-A-20-43-32-00-20EP</b>	<b>S</b>	<b>025110</b>	171 (77.7)
20	575	3	20.7	120	3	1/4	1,725	1400 (2379)	1000 (304.8)	43 (23.9)	43 (13.1)	10 (3.0)	CXH-A-20-63-32-00-20EP	NS	026550	171 (77.7)
20	480	3	24.8	24	3	1/4	1,725	1400 (2379)	1000 (304.8)	43 (23.9)	43 (13.1)	10 (3.0)	CXH-A-20-43-30-00-20EP	NS	026569	171 (77.7)
20	575	3	20.7	24	3	1/4	1,725	1400 (2379)	1000 (304.8)	43 (23.9)	43 (13.1)	10 (3.0)	CXH-A-20-63-30-00-20EP	NS	026577	171 (77.7)
25	480	3	31.1	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	32 (17.8)	54 (16.5)	10 (3.0)	CXH-A-25-43-32-00-20EP	NS	028556	216 (98.2)
25	575	3	25.8	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	32 (17.8)	54 (16.5)	10 (3.0)	CXH-A-25-63-32-00-20EP	NS	028589	216 (98.2)
25	480	3	31.1	24	3	1/2	1,725	2330 (3959)	1070 (326.1)	32 (17.8)	54 (16.5)	10 (3.0)	CXH-A-25-43-30-00-20EP	NS	028602	216 (98.2)
25	575	3	25.8	24	3	1/2	1,725	2330 (3959)	1070 (326.1)	32 (17.8)	54 (16.5)	10 (3.0)	CXH-A-25-63-30-00-20EP	NS	028609	216 (98.2)
30	480	3	37.1	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	39 (21.7)	54 (16.5)	10 (3.0)	<b>CXH-A-30-43-32-00-20EP</b>	<b>S</b>	<b>028564</b>	216 (98.2)
30	575	3	30.2	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	39 (21.7)	54 (16.5)	10 (3.0)	CXH-A-30-63-32-00-20EP	NS	028615	216 (98.2)
30	480	3	37.1	24	3	1/2	1,725	2330 (3959)	1070 (326.1)	39 (21.7)	54 (16.5)	10 (3.0)	CXH-A-30-43-30-00-20EP	NS	028620	216 (98.2)
30	575	3	30.2	24	3	1/2	1,725	2330 (3959)	1070 (326.1)	39 (21.7)	54 (16.5)	10 (3.0)	CXH-A-30-63-30-00-20EP	NS	028625	216 (98.2)
35	480	3	43.1	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	45 (25.0)	54 (16.5)	10 (3.0)	CXH-A-35-43-32-00-20EP	NS	028572	216 (98.2)
35	575	3	36	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	45 (25.0)	54 (16.5)	10 (3.0)	CXH-A-35-63-32-00-20EP	NS	028605	216 (98.2)
35	480	3	43.1	24	3	1/2	1,725	2330 (3959)	1070 (326.1)	45 (25.0)	54 (16.5)	10 (3.0)	CXH-A-35-43-30-00-20EP	NS	028612	216 (98.2)
35	575	3	36	24	3	1/2	1,725	2330 (3959)	1070 (326.1)	45 (25.0)	54 (16.5)	10 (3.0)	CXH-A-35-63-30-00-20EP	NS	028617	216 (98.2)
<b>Models with Built-In Thermostats</b>																
10	480	3	12.7	120	3	1/4	1,725	840 (1427)	1070 (326.1)	36 (20.0)	32 (9.8)	10 (3.0)	<b>CXH-A-10-43-32-40-20EP</b>	<b>S</b>	<b>028580</b>	150 (68.2)
20	480	3	24.8	120	3	1/4	1,725	1400 (2379)	1070 (326.1)	43 (23.9)	43 (13.1)	10 (3.0)	<b>CXH-A-20-43-32-40-20EP</b>	<b>S</b>	<b>028599</b>	161 (73.2)
25	480	3	31.1	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	32 (17.8)	54 (16.5)	10 (3.0)	CXH-A-25-43-32-40-20EP	NS	028601	216 (98.2)
30	480	3	37.1	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	39 (21.7)	54 (16.5)	10 (3.0)	<b>CXH-A-30-43-32-40-20EP</b>	<b>S</b>	<b>028610</b>	216 (98.2)
35	480	3	43.1	120	3	1/2	1,725	2330 (3959)	1070 (326.1)	45 (25.0)	54 (16.5)	10 (3.0)	<b>CXH-A-35-43-32-40-20EP</b>	<b>S</b>	<b>-</b>	216 (98.2)

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

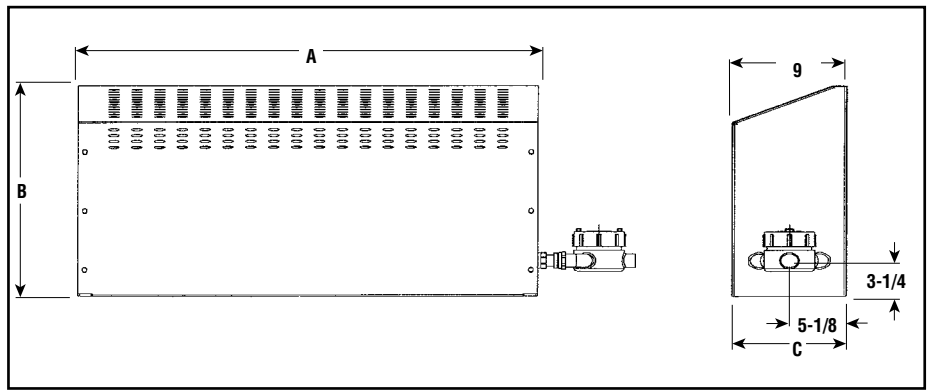
## CVEP

### Explosion Proof Convection Heater

- 1.6 - 9 kW
- 5,459 - 30,708 Btuh
- 120, 208, 240, 277, 480 and 575 Volt
- 1 & 3 Phase
- Built-in & Prewired Control Options
- UL Listed and CSA Certified for Class 1, Division 1 or 2, Group B, C & D Environments
- ATEX and EAC Models Available



#### Dimensions (Inches)



#### Description

Type CVEP explosion proof convection heater is designed to provide a rugged, corrosion-resistant heat source for areas where volatile flammable liquids, gases or vapors are present. All basic models without controls are UL listed and CSA certified for use in areas designated as Class 1, Division 1 or 2 Group B, C or D locations.

#### Applications

- Petroleum Refineries, Gasoline Storage and Dispensing Areas
- Industrial Areas Using Flammable Liquids in Dip Tanks
- Petroleum Refineries
- Dry Cleaning Plants
- Utility and Natural Gas Plants
- Aircraft Hangers/Fueling Areas
- Solvent Extraction Plants
- Storage Areas for Flammable Products or Batteries
- Sewage Treatment Plants
- Hydrogen Atmospheres

#### Dimensions (Inches)

kW	A	B	C
1.6, 1.8 and 3.6	34	20	9
3.2 and 7.6	58	20	9
4.0, 4.5 and 9.0	70	20	9

#### Construction

**Cabinet** — Sloped top, constructed of heavy 16 gauge steel, polyester powder coated for maximum corrosion resistance.

**Explosion Proof Junction Box** — For conduit entry and ease of power wiring.

**Heating Elements** — Sealed, metal sheath, heavy-duty, low watt density, enclosed high grade resistance wire embedded in MgO refractory core. Elements are inserted in a copper tube with aluminum fins.

#### Features

Integral Mounting Brackets allow for easy wall installation.

Sloped Top Cabinet ensures maximum ventilation by preventing objects from being placed on the top which would restrict air flow.

#### Designed for Areas Classified

- Class I, Division 1 or 2, Groups B, C, D
  - Temperature Code T3A 180°C (356°F) or T2A 280°C (536°F)
- Ex** II2G Ex d IIB T2-T3

#### Optional Features (Factory Installed)

- Thermostat
- Magnetic Contactor
- Control Voltage Transformer

#### Advantages

- Easy Installation
- Clean, Safer Heat Source
- Pre-Wired Control Options
- Long Life

Refer to WR-80EP in the Controls section.



EXPLOSION PROOF & CORROSIVE ENV.

## CVEP

### Explosion Proof Convection Heater

*(cont'd.)*

#### Ordering Information

**To Order** — Complete the Model Number using the Matrix provided.

#### Power & Temp. Control Options

Power Control Combination	Thermostat Option	Figure Number
00	00	1
00	40 <sup>1</sup>	5
00	42 <sup>2</sup>	2
30 - 35	00	4
30 - 35	40	5
30 - 35	42	3

<sup>1</sup> Thermostat option: 40  
 Temperature range: 40° - 90° F  
 Electrical Rating: 25 Amp 24V, 120V, 240V AC 22 Amp 277 VAC  
 Higher Voltage or 3 phase requires magnetic contactor option and transformer

<sup>2</sup> Thermostat option: 42  
 Temperature range: 50° - 90° F  
 Electrical Rating: 22 Amps 125/277 VAC  
 Higher Voltage or 3 phase requires magnetic contactor option and transformer

#### Model Explosion Proof Convection Heater

**CVEP**

##### Code Watts

16	1600	40	4000
18	1800	45	4500
32	3200	76	7600
36	3600	90	9000

##### Code Voltage

1	120	6	575
2	240	7	277
3	380	8	208
4	480	9	600
5	415		

##### Code Phase

1	Single
3	Three

##### Code Power Control Options (See Options Table)

00	no transformer no contactor
30	(24V) transformer and contactor
31	no transformer with contactor(24V)
32	(120V) transformer and contactor
33	no transformer with contactor(120V)
34	no transformer with contactor(208/240V)
35	no transformer with contactor(277V)

##### Code Thermo/Class Options (See Options Table)

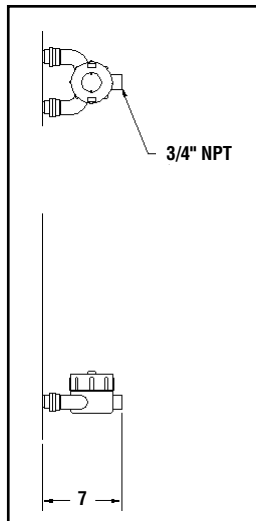
00	no thermo B, C & D
40	thermo in box B, C & D
42	thermo C & D

**CVEP 16 1 1 30 42 Typical Model Number**

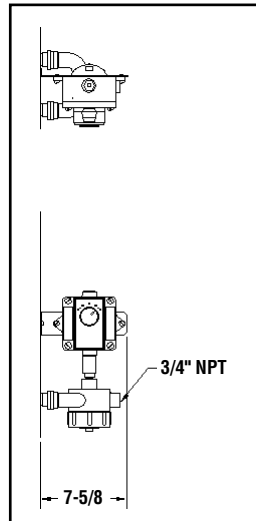
CE approved models available. Contact your Chromalox representative.

#### Dimensions (Inches)

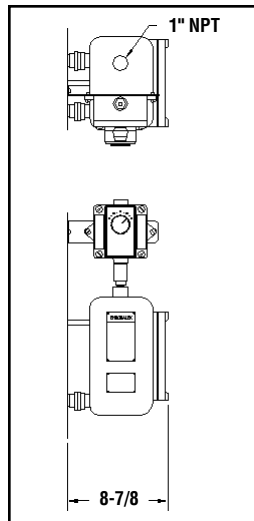
**Figure 1**



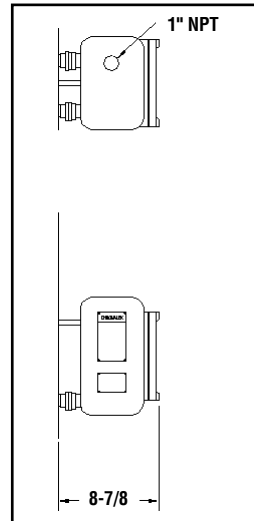
**Figure 2**



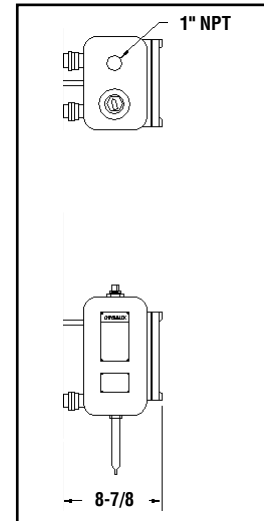
**Figure 3**



**Figure 4**



**Figure 5**



# Industrial Air Heaters

## CVEP

### Convection Heater For Hazardous Locations

#### Specifications and Ordering Information

Electrical					Model	Stock	PCN	Wt. (Lbs.)
kW	Volts	Phase	Amps	Btuh				
<b>Temperature Code T3A (356°F, 180°C) Group B, C, and D</b>								
1.6	208	1	7.7	5,500	CVEP-16-81-00-00	NS	088336	58
1.6	208	3	4.5	5,500	CVEP-16-83-00-00	NS	086844	58
1.6	240	1	6.7	5,500	CVEP-16-21-00-00	NS	086852	58
1.6	240	3	3.8	5,500	CVEP-16-23-00-00	NS	086860	58
1.6	277	1	5.8	5,500	CVEP-16-71-00-00	NS	086879	58
1.6	480	1	3.3	5,500	CVEP-16-41-00-00	NS	086887	58
1.6	480	3	1.9	5,500	CVEP-16-43-00-00	NS	086895	58
1.6	575	1	2.8	5,500	CVEP-16-61-00-00	NS	086908	58
3.2	208	1	15.4	11,000	CVEP-32-81-00-00	NS	086916	94
3.2	208	3	9.0	11,000	CVEP-32-83-00-00	NS	086924	94
3.2	240	1	13.3	11,000	CVEP-32-21-00-00	NS	086932	94
3.2	240	3	7.7	11,000	CVEP-32-23-00-00	NS	086940	94
3.2	277	1	11.6	11,000	CVEP-32-71-00-00	NS	086959	94
3.2	480	1	6.7	11,000	CVEP-32-41-00-00	NS	086967	94
3.2	480	3	3.8	11,000	CVEP-32-43-00-00	NS	086975	94
3.2	575	1	5.6	11,000	CVEP-32-61-00-00	NS	086983	94
4	208	1	19.2	13,600	CVEP-40-81-00-00	NS	086991	112
4	208	3	11.1	13,600	CVEP-40-83-00-00	NS	087003	112
4	240	1	16.7	13,600	CVEP-40-21-00-00	NS	087011	112
4	240	3	9.6	13,600	CVEP-40-23-00-00	NS	087020	112
4	277	1	14.4	13,600	CVEP-40-71-00-00	NS	087038	112
4	480	1	8.3	13,600	CVEP-40-41-00-00	NS	087046	112
4	480	3	4.8	13,600	CVEP-40-43-00-00	NS	087054	112
4	575	1	7	13,600	CVEP-40-61-00-00	NS	087062	112
<b>Temperature Code T2A (536°F, 280°C) Group B, C, and D</b>								
1.8	120	1	15	6,140	CVEP-18-11-00-00	NS	028759	46
1.8	208	1	8.7	6,140	CVEP-18-81-00-00	NS	028767	46
1.8	208	3	5	6,140	CVEP-18-83-00-00	NS	028775	46
1.8	240	1	7.5	6,140	<b>CVEP-18-21-00-00</b>	<b>S</b>	<b>028783</b>	46
1.8	240	3	4.4	6,140	CVEP-18-23-00-00	NS	028791	46
1.8	277	1	6.5	6,140	CVEP-18-71-00-00	NS	028804	46
1.8	480	1	3.7	6,140	CVEP-18-41-00-00	NS	028812	46
1.8	480	3	2.2	6,140	CVEP-18-43-00-00	NS	028820	46
3.6	208	1	17.3	12,300	<b>CVEP-36-81-00-00</b>	<b>S</b>	<b>087070</b>	58
3.6	208	3	10	12,300	CVEP-36-83-00-00	NS	087089	58
3.6	240	1	15	12,300	<b>CVEP-36-21-00-00</b>	<b>S</b>	<b>087097</b>	58
3.6	240	3	8.7	12,300	CVEP-36-23-00-00	NS	087100	58
3.6	277	1	13	12,300	CVEP-36-71-00-00	NS	087118	58
3.6	480	1	7.5	12,300	<b>CVEP-36-41-00-00</b>	<b>S</b>	<b>087126</b>	58
3.6	480	3	4.3	12,300	CVEP-36-43-00-00	NS	087134	58
3.6	575	1	6.3	12,300	CVEP-36-61-00-00	NS	087142	58
7.6	208	1	36.5	24,000	CVEP-76-81-00-00	NS	085913	94
7.6	208	3	21.1	24,000	CVEP-76-83-00-00	NS	085921	94
7.6	240	1	31.7	24,000	<b>CVEP-76-21-00-00</b>	<b>S</b>	<b>085930</b>	94
7.6	240	3	18.3	24,000	CVEP-76-23-00-00	NS	085948	94
7.6	277	1	27.4	24,000	CVEP-76-71-00-00	NS	085956	94
7.6	480	1	15.8	24,000	CVEP-76-41-00-00	NS	085964	94
7.6	480	3	9.2	24,000	CVEP-76-43-00-00	NS	085972	94
7.6	575	1	13.2	24,000	CVEP-76-61-00-00	NS	085980	94
9	208	1	43.3	30,700	CVEP-90-81-00-00	NS	087230	112
9	208	3	25	30,700	CVEP-90-83-00-00	NS	087249	112
9	240	1	37.5	30,700	CVEP-90-21-00-00	NS	087257	112
9	240	3	21.7	30,700	CVEP-90-23-00-00	NS	087265	112
9	277	1	32.5	30,700	CVEP-90-71-00-00	NS	087273	112
9	480	1	18.8	30,700	CVEP-90-41-00-00	NS	087281	112
9	480	3	10.8	30,700	CVEP-90-43-00-00	NS	087290	112
9	575	1	15.7	30,700	CVEP-90-61-00-00	NS	087302	112
<b>Stock CVEP with Built-in Thermostat</b>								
1.8	120	1	15	6,140	<b>CVEP-18-11-00-42</b>	<b>S</b>	<b>028839</b>	59
1.8	208	1	8.7	6,140	<b>CVEP-18-81-00-42</b>	<b>S</b>	<b>028847</b>	59
1.8	240	1	7.5	6,140	CVEP-18-21-00-42	NS	028855	59
1.8	277	1	6.5	6,140	CVEP-18-71-00-42	NS	028863	59
1.8	480	1	3.7	6,140	CVEP-18-41-32-42 <sup>1</sup>	NS	028871	69
3.6	208	1	17.3	12,300	<b>CVEP-36-81-00-42</b>	<b>S</b>	<b>028644</b>	60
3.6	240	1	15	12,300	<b>CVEP-36-21-00-42</b>	<b>S</b>	<b>028660</b>	60
3.6	480	1	7.5	12,300	CVEP-36-41-32-42 <sup>1</sup>	NS	028652	70

**Stock Status:** S = stock AS = assembly stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.  
 CE approved models available. Contact your Chromalox representative.

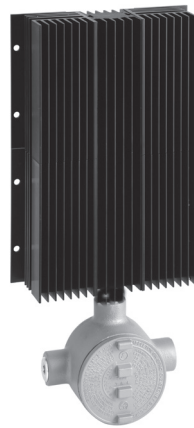
**Note —**

- Includes control transformer and contactor
- Other sizes and configurations available, contact your Local Chromalox Sales office.

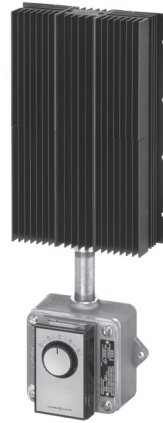
EXPLOSION PROOF  
& CORROSIVE ENV.

## XPMC Explosion Proof Enclosure Heater

- 120V-240V
  - Maximum 600W
  - Anodized Aluminum
  - 6" & 12" Lengths Available
  - 0, 1, or 2 sets of Heat Sinks
  - Available with or without ambient thermostat
  - Ambient Thermostats
    - 70°F (21°C) Open at 70°F (21°C) close at 50°F (10°C)
    - 100°F (38°C) Open at 100°F (38°C) close at 80°F (27°C)
    - Adjustable, 50°F to 90°F (10°C to 32°C)
  - CSA Certified; Class I, Div 1&2, Groups B, C, D
- \* Adjustable Thermostat Rated for Groups C&D Only, All Other Units Rated for C1, D1 & 2, B, C, D



12", 2 Heat Sinks



12", 2 Heat Sinks  
with Adjustable  
Thermostat



6", No Heat Sinks  
with Fixed  
Thermostat



### Description

XPMC Enclosure Heaters are specifically designed to provide convective and radiant heat for freeze protection and condensation evaporation in localized, hazardous location areas where combustible chemicals, solvents, gases or liquids may be present. The XPMC construction features an anodized aluminum finned extrusion body, with heat sinks. This is heated by a Chromalox cartridge heater that is engineered to yield a precise surface temperature and exceptionally long life. The units may be ordered with body only, with body + 1 heat sink or with 2 heat sinks. Each additional heat sink increases the maximum wattage of the unit. Depending on the size of the area to be heated multiples of XPMC heaters can be used in tandem to achieve higher aggregate wattages and maintain required temperature T ratings.

The number of Heat Sinks may be adjusted to suit the wattage and T-rating required. Units may be ordered in 6" or 12" lengths from 120V to 240V.

Temperature ratings of T2, T3 and T3C are available.

### Applications

- Instrumentation Control Panels
- Petrochemical plants
- Chemical Plants
- On-shore and Off-shore Oil Rigs
- Motor Control Centers
- Pump Station Houses
- Safety Storage Cabinets for volatiles and chemicals
- Utility Gas Plants – Storage of LNG and Natural Gas

### Advantages

- Allows for heat to be provided in areas otherwise inaccessible for other models
- Higher wattages than the competition
- Available in 3 different T-ratings
- cCSAus certified for hazardous locations
- Excellent for freeze and condensation protection.



## XPMC Explosion Proof Enclosure Heater *(cont'd.)*

### Ordering Information

Watts	Volts	Length In. (mm)	Heat Sinks	Model	Stock	PCN	Wt. (Lbs.)
<b>Temperature Code T3 (392°F, 200°C) Class 1, Div 1, Group B, C and D</b>							
100	120	6 (152.4)	0	<b>XPMC-6101T3</b>	<b>S</b>	<b>700015</b>	6
150	120	6 (152.4)	1	XPMC-6111T3	NS	700023	7
225	120	6 (152.4)	2	<b>XPMC-6121T3</b>	<b>S</b>	<b>700031</b>	9
200	120	12 (304.8)	0	XPMC-12101T3	NS	700040	8
300	120	12 (304.8)	1	XPMC-12111T3	NS	700058	11
400	120	12 (304.8)	2	<b>XPMC-12121T3</b>	<b>S</b>	<b>700066</b>	14
100	240	6 (152.4)	0	XPMC-6201T3	NS	700074	6
150	240	6 (152.4)	1	XPMC-6211T3	NS	700082	7
225	240	6 (152.4)	2	XPMC-6221T3	NS	700090	9
200	240	12 (304.8)	0	XPMC-12201T3	NS	700103	8
300	240	12 (304.8)	1	XPMC-12211T3	NS	700111	11
400	240	12 (304.8)	2	XPMC-12221T3	NS	700120	14
<b>Temperature Code T2 (572°F, 300°C) Class 1, Div 1, Group B, C and D</b>							
150	120	6 (152.4)	0	XPMC-6101T2	NS	700138	6
250	120	6 (152.4)	1	XPMC-6111T2	NS	700146	7
350	120	6 (152.4)	2	XPMC-6121T2	NS	700154	9
300	120	12 (304.8)	0	XPMC-12101T2	NS	700162	8
400	120	12 (304.8)	1	XPMC-12111T2	NS	700170	11
500	120	12 (304.8)	2	<b>XPMC-12121T2</b>	<b>S</b>	<b>700189</b>	14
150	240	6 (152.4)	0	XPMC-6201T2	NS	700197	6
250	240	6 (152.4)	1	XPMC-6211T2	NS	700200	7
350	240	6 (152.4)	2	XPMC-6221T2	NS	700218	9
300	240	12 (304.8)	0	XPMC-12201T2	NS	700226	8
400	240	12 (304.8)	1	XPMC-12211T2	NS	700234	11
500	240	12 (304.8)	2	XPMC-12221T2	NS	700242	14
600	480	12 (304.8)	2	XPMC-12425T2	NS	700250	16
<b>Temperature Code T3C (320°F, 160°C) Class 1, Div 1, Group B,C and D</b>							
80	120	6 (152.4)	0	XPMC-6101T3C	NS	025857	6
120	120	6 (152.4)	1	XPMC-6111T3C	NS	025865	7
225	120	6 (152.4)	2	XPMC-6121T3C	NS	025873	9
150	120	12 (304.8)	0	XPMC-12101T3C	NS	025881	8
260	120	12 (304.8)	1	XPMC-12111T3C	NS	025890	11
275	120	12 (304.8)	2	XPMC-12121T3C	NS	025902	14
80	240	6 (152.4)	0	XPMC-6201T3C	NS	025910	6
120	240	6 (152.4)	1	XPMC-6211T3C	NS	025929	7
225	240	6 (152.4)	2	XPMC-6221T3C	NS	025937	9
150	240	12 (304.8)	0	XPMC-12201T3C	NS	025945	8
260	240	12 (304.8)	1	XPMC-12211T3C	NS	025953	11
275	240	12 (304.8)	2	XPMC-12221T3C	NS	025961	14
<b>Stock Status: S = stock NS = non-stock</b> <b>To Order—Specify model, volts, heat sinks, kW, PCN and quantity.</b>							

EXPLOSION PROOF  
& CORROSIVE ENV.

### Mounting Hardware

Model	Stock	PCN	Wt. (Lbs.)
PC4683-1	S	124011	1

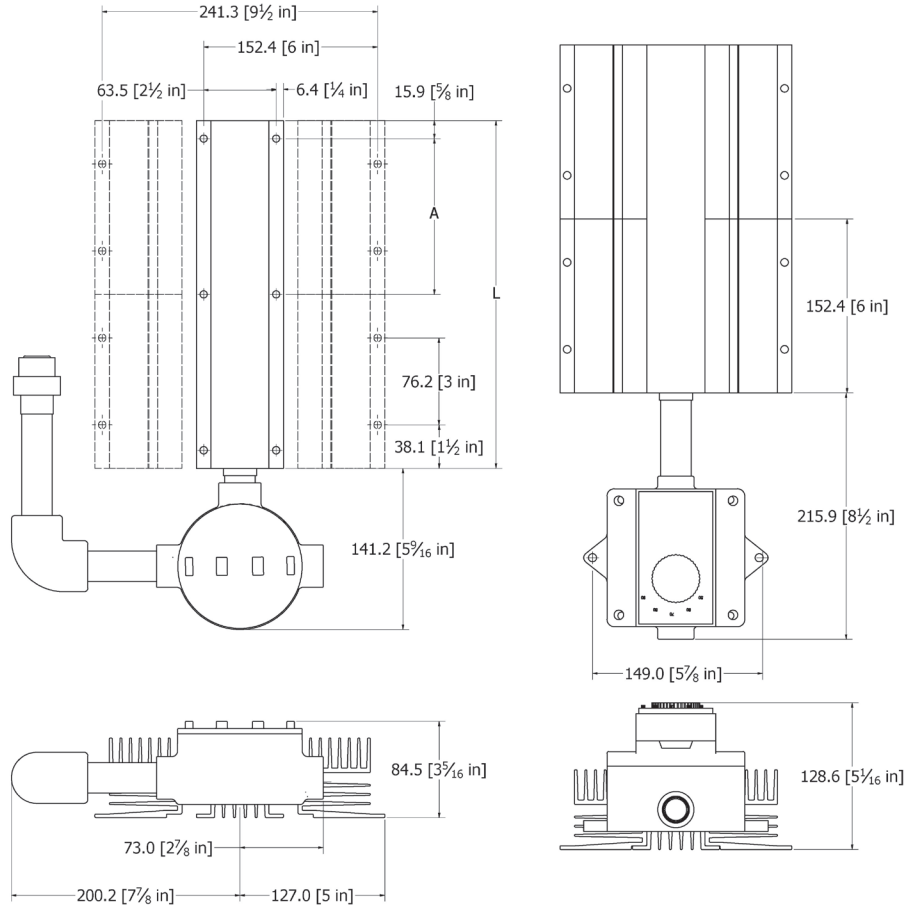
## XPMC

### Explosion Proof Enclosure Heater

*(cont'd.)*

#### Dimensions - mm (In.)

Length Code	L	A
6	151.8 (6)	60.3 (2-3/8)
12	303.6 (12)	136.5 (5-3/8)



#### Ordering Information

Complete the Model Number using the Matrix provided.

XPMC-	Explosion Proof Convection Heater					
	<b>Code</b>	<b>Length</b>				
	6	6"				
	12	12"				
		<b>Code</b>	<b>Volts</b>			
		1	120V			
		2	240V			
			<b>Code</b>	<b># of Heatsinks</b>		
			0	None		
			1	1 side		
			2	2 sides		
			<b>Code</b>	<b>Ambient Thermostat</b>		
			0	None		
			1	70 (Standard)		
			2	100		
			3*	Adjustable Thermostat		
			<b>Code</b>	<b>T-Rating</b>		
			T2	T2 Rated		
			T3C	T3C Rated		
			T3	T3 Rated		
XPMC-	6	1	0	1	T2	Typical Model Number



## HD3D

### Hose Down Corrosion Resistant Blower Heater

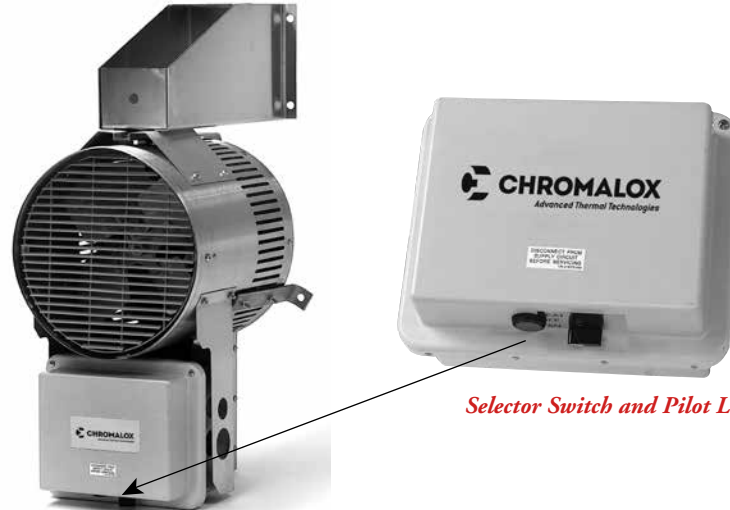
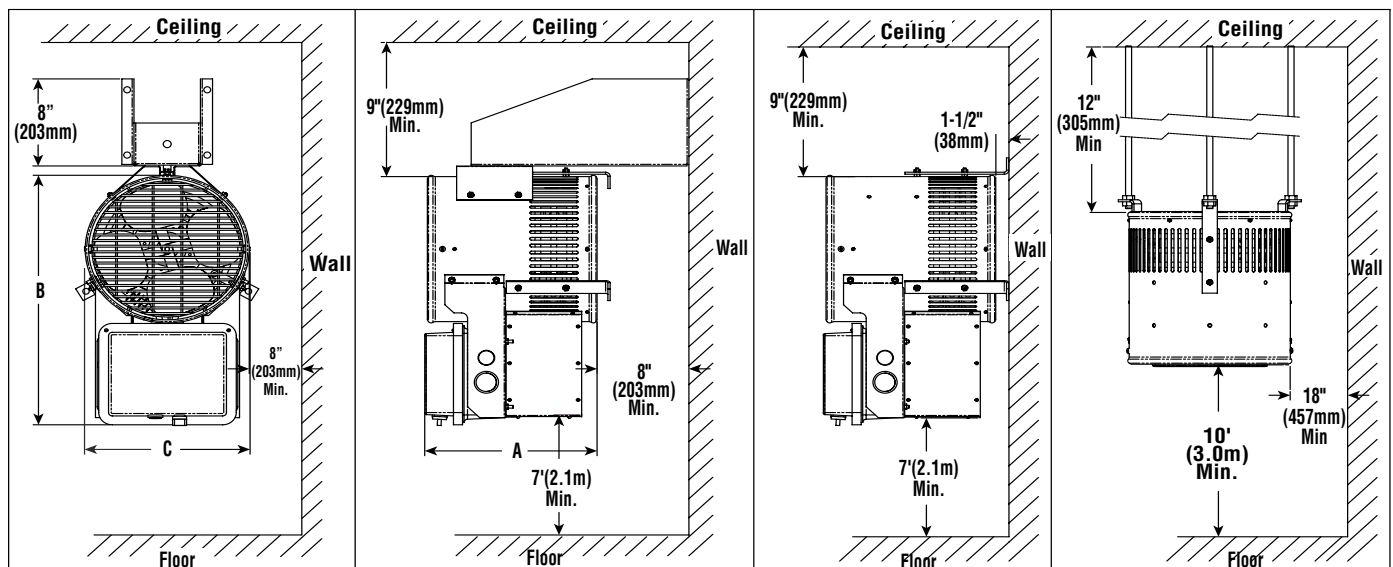
- 2 - 39 kW
- 6,800 - 133,110 Btuh
- 120, 208, 240, 277, 480 and 575 Volt (up to 690V available without 3rd party)
- 1 & 3 Phase
- Built-in Controls
- Vertical or Horizontal Airflow
- Wall or Ceiling Mounted Configurations

#### Advantages

Because it has an adjustable discharge grille to direct air flow, and can be wall or ceiling (plus swivel) mounted, the HD3D heater may be used in a variety of heating applications:

- Primary Heating
- Supplementary Heating
- Dual System Heating
- Spot Heating
- Entryway Air-Curtain Heating
- Freeze Protection

#### Dimensions In. (mm)



Selector Switch and Pilot Light

#### Description

This reliable, rugged, self-contained HD3D heater is an ideal heat source for freeze protection or comfort heat in dusty/dirty/corrosive non-hazardous environments. Standard HD3D heaters include low profile stainless steel wall/ceiling mounting brackets that can be used to mount directly to a wall for horizontal airflow perpendicular to the wall. These brackets can also be used to mount the heater directly to the ceiling for vertical airflow.

#### Applications

Waste Water Treatment Plants, Coal Handling Areas, Food Processing Plants, Foundries, Steel Mills, Cement Plants, Ships, Construction Sites, Car Washes, Swimming Pool Areas, Canneries, Hose Down (for cleaning). Corrosion Resistant for Harsh Environments and Dairies.

#### Dimensions In. (mm)

kW	Volts	Phase	A	B	C
2.0 - 7.5	All	1, 3	13-1/2 (342.9)	24-1/2 (622.3)	15 (381.0)
10.0 - 20.0	All	1, 3	17-1/4 (438.2)	28 (711.2)	15-1/8 (384.2)
25.0 - 39.0	480, 575	3	21-1/4 (539.8)	32-1/4 (819.2)	19-1/2 (495.3)

EXPLOSION PROOF & CORROSIVE ENV.

## HD3D

### Hose Down Corrosion Resistant Blower Heater

*(cont'd.)*

#### Construction

**Roll Formed Case** is constructed of 20 gauge corrosion resistant type 304 stainless steel.

**Adjustable Discharge Grille** directs air flow up or down as needed.

**NEMA 4X Control Enclosure** houses the heater controls, contactors and control voltage transformer, easily accessible from front of heater.

**Heating Elements** — High quality, long-life, Stainless Steel Fintube® (type 316) offers maximum resistance to corrosion.

**Totally Enclosed Motor** — The motor is permanently lubricated, ball bearing type and is epoxy painted for moisture and corrosion resistance.

**Dynamically Balanced Fan** — Aluminum fan is epoxy coated and provides optimum air flow across the heating elements.

#### Features

**Transformer** provides a 120V control circuit (24V optional). Standard on all units except 2 kW and 3 kW, 120V.

**Heavy Duty Contactors** for heating circuit and motor are included. (Not furnished on 120V, 2 and 3 kW units)

**Automatic Reset Thermal Cutout** is provided for fast heat response and overheat protection.

**Fan Time Delay Relay** dissipates residual heat build-up after shutdown.

**Low Profile Fixed Wall & Ceiling Mounting Bracket** (Non Swiveling)

#### Optional Features

- Integral Thermostat\*
  - 40°F to 100°F (4.4°C to 37.8°C)
- Pilot Light\*
  - Green Indicates Power On
- Selector Switch (3 position) — Heater On,\* Off or Fan Only Operation for Heater
- Manual Reset Cutout
- Epoxy Painted Stainless Steel Case
- 24V Control Circuit

#### Accessories

##### Universal Swivel Wall & Ceiling Brackets Ordering Information

Model	PCN	Used With	Stock Status
USB-1	520604	HD3D 200 to 750	S
USB-2	520612	HD3D 1000 to 2000	S
USB-3	520620	HD3D 2500 to 4000	S

##### External Drip Shields Ordering Information

Model	PCN	Used With	Stock Status
HD3DS-1	520639	HD3D 200 to 750	S
HD3DS-2	520647	HD3D 1000 to 2000	S
HD3DS-3	520655	HD3D 2500 to 4000	S

##### Field Installable Disconnect Kit

The disconnect kit consists of a complete liquid tight assembly, including a 3-pole 48 Amp Switch, power terminal block and all the hardware to mount to the main heater enclosure. Positive action to remove all power from enclosure.

##### Ordering Information

Model	PCN	Used With	Stock Status
DS-50HD	520663	All	S

# Industrial Air Heaters

## HD3D Hose Down Corrosion Resistant Blower Heater (cont'd.)

### Specifications and Ordering Information

Electrical (60 Hz)				Motor				Air Delivery					Ordering				
kW	Volts	Phase	Full Load Amps	Control Volts	Phase	HP	RPM	CFM	Air Flow ft <sup>3</sup> /min (m <sup>3</sup> /hr)	Air Speed ft/min (m/min)	Temp. Rise °F (°C)	Horiz. Throw Ft. (m)	Mtg. Ht. ** Ft. (m)	Model	Stock	PCN	Wt. Lbs. (kg)
2	120	1	17.5	115	1	1/15	1,050	405	405 (688)	430 (131.1)	21 (11.7)	12 (3.7)	7 (2.1)	HD3D-200	NS	520014	45 (20.5)
2	208	1	10	208	1	1/15	1,050	405	405 (688)	430 (131.1)	21 (11.7)	12 (3.7)	7 (2.1)	HD3D-200	NS	520022	45 (20.5)
2	240	1	9	240	1	1/15	1,050	405	405 (688)	430 (131.1)	21 (11.7)	12 (3.7)	7 (2.1)	HD3D-200	NS	520030	45 (20.5)
2	277	1	7.5	277	1	1/15	1,050	405	405 (688)	430 (131.1)	21 (11.7)	12 (3.7)	7 (2.1)	HD3D-200	NS	520049	45 (20.5)
3	120	1	25.5	115	1	1/15	1,050	405	405 (688)	430 (131.1)	31 (17.2)	12 (3.7)	7 (2.1)	HD3D-300	NS	520057	45 (20.5)
3	208	1	15	208	1	1/15	1,050	405	405 (688)	430 (131.1)	31 (17.2)	12 (3.7)	7 (2.1)	HD3D-300	NS	520065	45 (20.5)
3	240	1	13	240	1	1/15	1,050	405	405 (688)	430 (131.1)	31 (17.2)	12 (3.7)	7 (2.1)	HD3D-300	NS	520073	45 (20.5)
3	277	1	11.5	277	1	1/15	1,050	405	405 (688)	430 (131.1)	31 (17.2)	12 (3.7)	7 (2.1)	HD3D-300	NS	520081	45 (20.5)
5	208	1	24.5	208	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500	NS	520090	50 (22.7)
5	240	1	21.5	240	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500	NS	520102	50 (22.7)
5	277	1	18.5	277	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500	NS	520110	50 (22.7)
5	480	1	11	480	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500	NS	520129	50 (22.7)
5	208	3	14.5	208	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500	NS	520137	50 (22.7)
5	240	3	12.5	240	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500	NS	520145	50 (22.7)
5	480	3	6.5	480	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500 <sup>†</sup>	S	520153	50 (22.7)
5	480	3	6.5	480	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500 TSP <sup>††</sup>	S	520161	51 (23.2)
5	575	3	5.5	575	1	1/15	1,050	405	405 (688)	430 (131.1)	40 (22.2)	12 (3.7)	7 (2.1)	HD3D-500	NS	520170	50 (22.7)
7.5	208	1	36.5	208	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750	NS	520188	50 (22.7)
7.5	240	1	31.5	240	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750	NS	520196	50 (22.7)
7.5	277	1	27.5	277	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750	NS	520209	50 (22.7)
7.5	480	1	16	480	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750	NS	520217	50 (22.7)
7.5	208	3	21	208	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750	NS	520225	50 (22.7)
7.5	240	3	18.5	240	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750	NS	520233	50 (22.7)
7.5	480	3	9.5	480	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750 <sup>†</sup>	S	520241	50 (22.7)
7.5	480	3	9.5	480	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750 TSP <sup>††</sup>	S	520250	51 (23.2)
7.5	575	3	8	575	1	1/15	1,050	590	590 (1002)	640 (195.1)	37 (20.6)	13 (4.0)	7 (2.1)	HD3D-750	NS	520268	50 (22.7)
10	240	1	42	240	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	40 (12.2)	7 (2.1)	HD3D-1000	NS	520276	60 (27.3)
10	277	1	36.5	277	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	40 (12.2)	7 (2.1)	HD3D-1000	NS	520284	60 (27.3)
10	480	1	21	480	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	40 (12.2)	7 (2.1)	HD3D-1000	NS	520292	60 (27.3)
10	208	3	28	208	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	40 (12.2)	7 (2.1)	HD3D-1000	NS	520305	60 (27.3)
10	240	3	24.5	240	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	40 (12.2)	7 (2.1)	HD3D-1000	NS	520313	60 (27.3)
10	480	3	12.5	480	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	40 (12.2)	7 (2.1)	HD3D-1000 <sup>†</sup>	S	520321	60 (27.3)
10	480	3	12.5	480	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	40 (12.2)	7 (2.1)	HD3D-1000 TSP <sup>††</sup>	S	520330	61 (27.7)
10	575	3	10.5	575	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	40 (12.2)	7 (2.1)	HD3D-1000	NS	520348	60 (27.3)
12.5	277	1	45.5	277	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	36 (11.0)	7 (2.1)	HD3D-1250	NS	520356	60 (27.3)
12.5	480	1	26.5	480	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	36 (11.0)	7 (2.1)	HD3D-1250	NS	520364	60 (27.3)
12.5	208	3	35	208	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	36 (11.0)	7 (2.1)	HD3D-1250	NS	520372	60 (27.3)
12.5	240	3	30.5	240	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	36 (11.0)	7 (2.1)	HD3D-1250	NS	520380	60 (27.3)
12.5	480	3	15.5	480	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	36 (11.0)	7 (2.1)	HD3D-1250	NS	520399	60 (27.3)
12.5	575	3	13	575	1	1/15	1,050	1,180	1180 (2005)	800 (243.8)	28 (15.6)	36 (11.0)	7 (2.1)	HD3D-1250	NS	520401	60 (27.3)
15	480	1	31.5	480	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	32 (17.8)	45 (13.7)	7 (2.1)	HD3D-1500	NS	520410	60 (27.3)
15	208	3	42	208	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	32 (17.8)	45 (13.7)	7 (2.1)	HD3D-1500	NS	520428	60 (27.3)
15	240	3	36.5	240	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	32 (17.8)	45 (13.7)	7 (2.1)	HD3D-1500	NS	520436	60 (27.3)
15	480	3	18.5	480	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	32 (17.8)	45 (13.7)	7 (2.1)	HD3D-1500 <sup>†</sup>	S	520444	60 (27.3)
15	480	3	18.5	480	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	32 (17.8)	45 (13.7)	7 (2.1)	HD3D-1500 TSP <sup>††</sup>	S	520452	61 (27.7)
15	575	3	15.5	575	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	32 (17.8)	45 (13.7)	7 (2.1)	HD3D-1500	NS	520460	60 (27.3)
19.5	240	3	47.5	240	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	42 (23.3)	45 (13.7)	7 (2.1)	HD3D-2000	NS	520479	60 (27.3)
20	480	1	42	480	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	42 (23.3)	45 (13.7)	7 (2.1)	HD3D-2000	NS	520487	60 (27.3)
20	480	3	24.5	480	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	42 (23.3)	45 (13.7)	7 (2.1)	HD3D-2000 <sup>†</sup>	S	520495	60 (27.3)
20	480	3	24.5	480	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	42 (23.3)	45 (13.7)	7 (2.1)	HD3D-2000 TSP <sup>††</sup>	S	520508	61 (27.7)
20	575	3	20.5	575	1	1/15	1,050	1,330	1330 (2260)	900 (274.3)	42 (23.3)	45 (13.7)	7 (2.1)	HD3D-2000	NS	520516	60 (27.3)
25	480	3	30.5	480	3	1/3	1,725	2,700	2700 (4587)	1110 (338.3)	31 (17.2)	48 (14.6)	7 (2.1)	HD3D-2500	S	520524	80 (36.4)
25	575	3	25.5	575	3	1/3	1,550	1,800	1800 (3058)	740 (225.6)	42 (23.3)	48 (14.6)	7 (2.1)	HD3D-2500	NS	520532	80 (36.4)
30	480	3	36.5	480	3	1/3	1,725	2,700	2700 (4587)	1110 (338.3)	37 (20.6)	48 (14.6)	7 (2.1)	HD3D-3000	S	520540	80 (36.4)
30	575	3	30.5	575	3	1/3	1,550	1,800	1800 (3058)	740 (225.6)	50 (27.8)	48 (14.6)	7 (2.1)	HD3D-3000	NS	520559	80 (36.4)
35	480	3	42.5	480	3	1/3	1,725	2,700	2700 (4587)	1110 (338.3)	43 (23.9)	48 (14.6)	7 (2.1)	HD3D-3500	NS	520567	80 (36.4)
35	575	3	35.5	575	3	1/3	1,550	1,800	1800 (3058)	740 (225.6)	57 (31.7)	48 (14.6)	7 (2.1)	HD3D-3500	NS	520575	80 (36.4)
39	480	3	47.5	480	3	1/3	1,725	2,700	2700 (4587)	1110 (338.3)	50 (27.8)	48 (14.6)	7 (2.1)	HD3D-4000	S	520583	80 (36.4)
39	575	3	39.5	575	3	1/3	1,550	1,800	1800 (3058)	740 (225.6)	65 (36.1)	48 (14.6)	7 (2.1)	HD3D-4000	NS	520591	80 (36.4)

EXPLOSION PROOF  
& CORROSIVE ENV.

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

\*HD3D Series heaters with TSP suffix includes thermostat, selector switch and pilot light.

†Models can be field re-wired for use on single phase

\*\*Mounting height if mounted for horizontal airflow. For vertical mounting, minimum height is 10'.



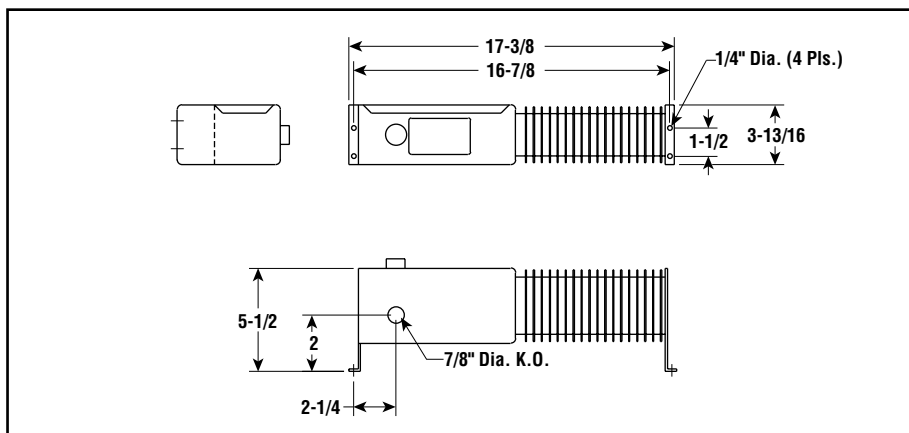


## 7150 Pump House Convection Heater



- 500 Watts
- 1,706 Btuh
- 120 and 240 Volt
- Single Phase

### Dimensions (Inches)



### Description

CPHH pump house heaters provide around the clock freeze protection or heat anywhere it's needed. The heater features a built-in thermostat and can be left unattended all winter long. The rugged cast grid heating element can withstand most any environment.

### Applications

- Boiler Rooms
- Water Pump Sheds (golf course)
- Garage Grease Pits
- Equipment Buildings
- Control Panels

### Construction

**Control Enclosure** — Heavy gauge formed steel corrosion treated and painted with a hybrid polyester epoxy coating.

**Heating Element** — Cast aluminum heating grid.

**Control** — Built-in bimetallic adjustable thermostat with 40 to 80°F range.

**CAUTION** — Not intended for use where flammable vapors, gases, liquids or other combustible atmospheres are present.

### Advantages

- Long Life
- Self Contained
- For Unattended Locations
- Corrosion Resistant

### Specifications and Ordering Information

Electrical					Dimensions (In.)			Ordering			Wt. (Lbs.)
Watts	Volts	No. Elem.	Amps	Btuh	Height	Width	Depth	Model	Stock	PCN	
500	120	1	4.2	1,707	2-1/2	18-7/8	6-1/8	7150B11	S	350190	5
500/375	240/208	1	2.1	1,707	2-1/2	18-7/8	6-1/8	7150B31	NS	350203	5

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.



## LUH Horizontal Blower Heater

- 2.6 - 45 kW
- 8,900 - 153,000 Btuh
- 208, 240, 277, 480 and 600 Volt
- 1 or 3 Phase
- Wall or Ceiling Mounted Configurations

### Description

Type LUH self-contained heater provides quiet, reliable fan-forced heating in all types of commercial and industrial applications.

### Applications

- Shipping and Receiving Areas
- Pump Houses
- Power Generating Stations
- Aircraft Hangers
- Factories
- Warehouses
- Garages

### Construction

**Die Formed Cabinet** — Heavy 18 gauge steel, phosphate undercoated for corrosion resistance and finished in almond polyester powder coat.

**Louvers** — Individually adjustable louvers direct air flow up or down as needed.

**Fintube Heating Elements** have corrosion resistant steel fins that are furnace brazed to the tubular element to assure long life and superior heat transfer.



**Fan Motor** — Totally enclosed fan motor is rated for continuous duty with built-in thermal cutout and operates on same voltage as the heating circuit.

**Dynamically Balanced Fan** is attached with rubber vibration insulators for smooth, quiet operation. Blade pitch is carefully selected so that the volume of air moved results in the optimum discharge air temperature.

### Features

- **Sub-divided Circuits with Individual Fuse Protection** — Standard on all heaters with a total current draw of 48 Amps or greater. The fuse compartment is conveniently located for easy access.
- **Integral 120V Control Transformer** — Standard on 480V models, eliminates the need for an external control source (24V optional).
- **Heavy Duty Magnetic Contactors** are standard on all models.
- **Thermal Cutouts** open the control circuit and disconnect power to the heating elements if overheating occurs. **Automatic Reset** allows the control circuit to reclose and restore power when temperature returns to normal.
- **Field Convertible** — Combination 208/240V and 1 or 3 phase operation through 10 kW.
- **Mounting Configurations** — Recessed welded fasteners on top of the heater cabinet are internally threaded for suspension of unit with threaded rods. Ceiling and Universal Wall Swivel brackets are optional. The ceiling bracket lets you mount heater directly to ceiling or over-head member, simply and easily. The swivel mounting allows you to readily adjust the direction of warm air flow for maximum comfort up to 180 degrees.

### Optional Features (Factory Installed or Field Installation Kits)

- **Summer Fan Switch Kit** — Field installable for circulating warm stratified air. Available for all models.
- **Thermostat Kit** — Field installable on all models. Range 40°F - 100°F.
- **Power Disconnect Kit** — Field installable switch enables power to be disconnected while servicing heater. 63, 80 and 100 Amp models available. Mounts in the back of the heater.
- **Ceiling Bracket** (shown above)
- **Wall Mounting Bracket**

### Advantages

- Self Contained
- Versatile, Flexible and High Performance
- Easy Installation
- Minimum Maintenance
- Long Life
- Attractive Appearance

Because it has individually adjustable discharge louvers to direct air flow, and can be wall or ceiling (plus swivel) mounted, the LUH heater may be used in a variety of heating applications:

- Primary Heating
- Supplementary Heating
- Dual System Heating
- Spot Heating
- Entryway Air-Curtain Heating

Refer to  
WR-80, RTC, WR-90  
in the Controls section.



## LUH

### Horizontal Blower Heater (cont'd.)

#### Dimensions (Inches)

(4) Welded fasteners<sup>2</sup> for threaded rod mounting to overhead steel.

6" Min. to Wall

Wall Line

Min. to Wall

6"

#### Wall Mounted Universal Bracket

(4) 13/32" dia. wall mounting holes.<sup>1</sup>

Stop for limiting rotation.

Swivel bolt permits heater to be rotated to face desired direction. Four bolts are provided for field attachment of swivel bracket to welded fasteners on top of unit.

Minimum mounting height is 7 feet from floor.

#### Ceiling Mounted

(1) 11/16" dia. swivel mounting hole.

#### Wall Mounted Heaters

Heater	Dimensions (In.)					Wall Bracket	PCN	Stock	Wt. (Lbs.)
	P	Q	R	S	T				
LUH-02 to -05	1-3/4	21-1/2	6-3/4	5-1/2	14-15/16	WUH-01A	303474	S	3
LUH-07, 10, 12, 15	2	28-7/16	9-1/2	8-3/8	22-1/4	WUH-02	300484	S	5
LUH-20, 25	2	32	9-1/2	8-3/8	22-1/4	WUH-02	300484	S	7
LUH-30, 35, 40, 45	5-1/2	28-11/16	5	3-1/2	33-1/4	WUH-03	300492	S	10

#### Ceiling Mounted Heaters

Heater	Dimensions (In.)														Ceiling Bracket	PCN	Stock	Wt. (Lbs.)		
	A	B	C	D	E	F	G	H	I	J	K	M	N	U					V	W
LUH-02 to -05	16	13-1/8	8-7/8	11-5/8	10-3/4	9-3/4	5-1/2	3-13/16	4-1/2	4-15/16	6-5/8	6	4-7/16	4	4-1/2	10-1/2	WUH-04A	303466	NS	1
LUH-07, 10, 12, 15	20-1/2	17-1/4	11-1/2	16-3/8	14-3/8	12-3/8	8-1/4	4-1/2	6-1/4	7-7/16	8-5/8	8	6-1/4	6	7-1/4	16	WUH-05	300513	NS	2
LUH-20, 25	24	20-1/8	11-1/2	20-1/2	16-3/4	16	8-1/4	6	6-1/4	12	10-1/16	8	6-1/4	6	7-1/4	16	WUH-05	300513	NS	3
LUH-30, 35, 40, 45	24	20-1/8	17	26	16-3/4	16	8-1/4	6	11-3/4	12	10-1/16	13-3/4	9-5/16	6	7-1/4	21	WUH-06	300521	NS	3

- Notes —
1. Wall mounting fasteners to be supplied by customer.
  2. Threaded rod to be supplied by customer.

#### Optional Control Accessories & Remote Thermostats Fan Only Operation Kits



Summer Fan Switch

Thermostat Kit

Note — A fan only operation (optional) is available by means of a built-in switch or by external control.

Summer Fan Switch	2 - 15 kW		20 - 45 kW		Stock	Wt. (Lbs.)
	Model	PCN	Model	PCN		
Internal 208 - 277V	ISFS-02 <sup>2</sup>	305007	ISFS-02	305007	NS	0.25
External <sup>1</sup> with Relay (24V control)	ESFS-40	305015	ESFS-40A	305058	NS	0.5
External <sup>1</sup> with Relay (120V control)	ESFS-41	305023	ESFS-41A	305066	NS	0.5
External <sup>1</sup> with Relay (240V control)	ESFS-42	305031	ESFS-42A	305074	NS	0.5
External <sup>1</sup> with Relay (277V control)	ESFS-47	305040	—	—	NS	0.5

1. Kit includes wall plate (discard plate if switch is to be installed on heater).  
 2. Do not use for 480V rated heaters. 480V heaters require fan relay option with proper control voltage relay coil.

#### Thermostat Kits

Model	PCN	Stock	Wt. (Lbs.)
LUH-TK1 (SPST)	301129	S	0.25

#### Power Disconnect Kits



3 Pole, 600V Rating

Model	Rating	PCN	Stock	Wt. (Lbs.)
EDS-1	63 Amp	303431	S	0.5
EDS-2	80 Amp	303440	S	0.5
EDS-3	100 Amp	303458	NS	1

#### Mounting Limitations

**Hazardous Atmosphere** — Unit heaters should not be used in potentially explosive atmospheres. **Corrosive Atmosphere** — The finish is not intended for direct salt spray exposure in marine applications or the highly corrosive atmospheres of greenhouses, swimming pools, chemical storage bins, etc. **Mounting Height** — Do not install unit heaters above recommended maximum mounting height. **Obstructions** must not block unit heater air inlet or discharge.

# Industrial Air Heaters

## LUH Horizontal Blower Heater (cont'd.)

### Specifications and Ordering Information

Electrical (60 Hz)				Motor				Air Delivery					Ordering			
kW	Volts	Ckt & Phase	Amps <sup>4</sup>	Volts	Phase	HP	RPM	CFM	FPM	Temp. Rise (°F)	Horiz. Throw (Ft.)	Mtg. <sup>5</sup> Height (Ft.)	Model	Stock	PCN	Wt. (Lbs.)
2.6	208	1 - 1	13.1	208	1	1/40	1,650	410	880	21	12	8	LUH-02-81-34	S	303001	32
2.0/2.6	208/240	1 - 1	11.4 <sup>2</sup>	240	1	1/40	1,650	410	880	21	12	8	LUH-02-21-34	S	303010	32
2.6	277	1 - 1	9.6	277	1	1/30	1,550	360	770	24	12	8	LUH-02-71-35	S	303028	32
4	208	1 - 1	19.8	208	1	1/40	1,650	410	880	31	12	8	LUH-04-81-34	S	303036	32
4	208	1 - 3 <sup>3</sup>	11.7	208	1	1/40	1,650	410	880	31	12	8	LUH-04-83-34	S	303044	32
3/4	208/240	1 - 1	17.2 <sup>2</sup>	240	1	1/40	1,650	410	880	31	12	8	LUH-04-21-34	S	303052	32
3/4	208/240	1 - 3 <sup>3</sup>	10.2 <sup>2</sup>	240	1	1/40	1,650	410	880	31	12	8	LUH-04-23-34	S	303060	32
4	277	1 - 1	14.6	277	1	1/30	1,550	360	770	35	12	8	LUH-04-71-35	S	303079	32
4	480	1 - 3	5.1	480	1	1/35	1,550	380	815	33	12	8	LUH-04-43-32	S	303087	32
5	208	1 - 1	24.6	208	1	1/40	1,650	410	880	39	12	8	LUH-05-81-34	S	303095	32
5	208	1 - 3 <sup>3</sup>	14.5	208	1	1/40	1,650	410	880	39	12	8	LUH-05-83-34	S	303108	32
3.75/5	208/240	1 - 1	21.4	240	1	1/40	1,650	410	880	39	12	8	LUH-05-21-34	S	303116	32
3.75/5	208/240	1 - 3 <sup>3</sup>	12.6	240	1	1/40	1,650	410	880	39	12	8	LUH-05-23-34	NS	303124	32
5	277	1 - 1	18.3	277	1	1/30	1,550	360	770	44	12	8	LUH-05-71-35	NS	303132	32
5	480	1 - 3	6.3	480	1	1/35	1,550	380	815	42	12	8	LUH-05-43-32	S	303140	32
7.5	208	1 - 1 <sup>3</sup>	36.5	208	1	1/15	1,725	850	1,040	28	27	8	LUH-07-81-34	NS	303159	50
7.5	208	1 - 3	21.3	208	1	1/15	1,725	850	1,040	28	27	8	LUH-07-83-34	S	303167	50
5.6/7.5	208/240	1 - 1 <sup>3</sup>	31.7 <sup>2</sup>	240	1	1/15	1,725	850	1,040	28	27	8	LUH-07-21-34	S	303175	50
5.6/7.5	208/240	1 - 3	18.5 <sup>2</sup>	240	1	1/15	1,725	850	1,040	28	27	8	LUH-07-23-34	NS	303183	50
7.5	277	1 - 1	27.7	277	1	1/15	1,550	750	920	32	27	8	LUH-07-71-35	NS	303191	50
7.5	480	1 - 3	9.9	480	3	1/15	1,725	850	1,040	28	27	8	LUH-07-43-32	S	303204	50
7.5	600	1 - 3	7.6	575	3	1/3	1,725	850	1,040	28	27	8	LUH-07-63-32	NS	—	50
9.7	208	1 - 1 <sup>3</sup>	47.1	208	1	1/15	1,725	850	1,040	37	27	9	LUH-10-81-34	NS	303212	50
9.7	208	1 - 3	27.4	208	1	1/15	1,725	850	1,040	37	27	9	LUH-10-83-34	S	303220	50
7.5/10	208/240	1 - 1 <sup>3</sup>	42.1 <sup>2</sup>	240	1	1/15	1,725	850	1,040	37	27	9	LUH-10-21-34	S	303239	50
7.5/10	208/240	1 - 3	24.5 <sup>2</sup>	240	1	1/15	1,725	850	1,040	37	27	9	LUH-10-23-34	NS	303247	50
10	480	1 - 3	12.9	480	3	1/15	1,725	850	1,040	37	27	9	LUH-10-43-32	S	303255	50
10	600	1 - 3	10.6	575	3	1/3	1,725	850	1,040	37	27	9	LUH-10-63-32	NS	—	50
12.5	208	1 - 3	35.2	208	1	1/15	1,725	850	1,040	47	27	9	LUH-12-83-34	S	303263	50
9.3/12.5	208/240	1 - 3	30.6	240	1	1/15	1,725	850	1,040	47	27	9	LUH-12-23-34	NS	303271	50
12.5	480	1 - 3	15.9	480	3	1/15	1,725	850	1,040	47	27	9	LUH-12-43-32	S	303280	50
12.5	600	1 - 3	12.6	575	3	1/3	1,725	850	1,040	47	27	9	LUH-12-63-32	NS	—	50
15	208	1 - 3	42.1	208	1	1/15	1,725	850	1,040	56	27	10	LUH-15-83-34	NS	303298	50
11.25/15	208/240	1 - 3	36.6 <sup>2</sup>	240	1	1/15	1,725	850	1,040	56	27	10	LUH-15-23-34	NS	303300	50
15	480	1 - 3	19.0	480	3	1/15	1,725	850	1,040	56	27	10	LUH-15-43-32	S	303319	50
15	600	1 - 3	15.6	575	3	1/3	1,725	850	1,040	56	27	10	LUH-15-63-32	NS	—	50
14.5/19.4	208/240	1 - 3	48.0 <sup>2</sup>	240	3	1/3	1,725	1,240	1,160	53	31	11	LUH-20-23-34	NS	303327	73
20	480	1 - 3	25.0	480	3	1/3	1,725	1,240	1,160	53	31	11	LUH-20-43-32	S	303335	73
20	600	1 - 3	19.6	575	3	1/3	1,725	1,240	1,160	53	31	11	LUH-20-63-32	NS	—	73
25	480	1 - 3	31.0	480	3	1/3	1,725	1,350	1,260	60	31	12	LUH-25-43-32	S	303343	73
25	600	1 - 3	24.6	575	3	1/3	1,725	1,350	1,260	60	31	12	LUH-25-63-32	NS	—	73
30	208	2 - 3	85.2	240	3	1/3	1,725	1,555	1,450	64	46	13	LUH-30-83-34	NS	303351	106
22.5/30	208/240	2 - 3	74.0 <sup>2</sup>	240	3	1/3	1,725	1,555	1,450	64	46	13	LUH-30-23-34	NS	303360	106
30	480	2 - 3	37.1	480	3	1/3	1,725	1,555	1,450	64	46	13	LUH-30-43-32	S	303378	106
30	600	2 - 3	29.6	575	3	1/3	1,725	1,555	1,450	64	46	13	LUH-30-63-32	NS	—	106
26.25/35	208/240	2 - 3	86.0 <sup>2</sup>	240	3	1/3	1,725	1,555	1,450	71	45	14	LUH-35-23-34	NS	303386	106
35	480	2 - 3	43.1	480	3	1/3	1,725	1,555	1,450	71	45	14	LUH-35-43-32	S	303394	106
35	600	2 - 3	34.7	575	3	1/3	1,725	1,555	1,450	71	45	14	LUH-35-63-32	NS	—	106
28.5/38	208/240	2 - 3	93.3	240	3	1/3	1,725	1,555	1,450	84	44	15	LUH-40-23-34	NS	303407	106
39	480	2 - 3	47.9	480	3	1/3	1,725	1,555	1,450	84	44	15	LUH-40-43-32	S	303415	106
40	600	2 - 3	39.7	575	3	1/3	1,725	1,555	1,450	84	44	15	LUH-40-63-32	NS	—	106
45	480	2 - 3	55.1	480	3	1/3	1,725	1,555	1,450	94	42	17	LUH-45-43-32	S	303423	106
45	600	2 - 3	43.7	575	3	1/3	1,725	1,555	1,450	94	42	17	LUH-45-63-32	NS	—	106

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

- For motor data, see table.
- 208V amperage is 86% of 240V value.
- Models can be field wired for 1 or 3 phase.
- Includes motor Amps.
- Maximum mounting height for effective heat distribution. Minimum height is 7 feet.

**Other Notes —**

- All heaters have built-in contactors and stock 480V models have built-in control transformers and contactor with 120V holding coils. All stock 208 and 240V models have 208/240V holding coils. All stock 277V models have 277V holding coils.
- Optional contactors available with 120 or 24V holding coils on made-to-order models, contact your Local Chromalox Sales office.
- When total heater capacity exceeds 48 Amps, built-in fusing is provided behind a hinged and latched door in the side which allows easy access.

# Industrial Air Heaters

## LUH Horizontal Blower Heater (cont'd.)

### Recommended Control Options

PCN	Description	Kits				PCN	Description	Kits			
		Thermostat	Fan Only	Remote Fan	Dis-connect			Thermostat	Fan Only	Remote Fan	Dis-connect
303001	LUH-02-81-34-00 208V 1P 2.6kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303220	LUH-10-83-34-00 208V 3P 10kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1
303010	LUH-02-21-34-00 240V 1P 2.6kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303239	LUH-10-21-34-00 240V 1P 10kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1
303028	LUH-02-71-35-00 277V 1P 2.6kW	LUH-TK1	ISFS-02	ESFS-47	EDS-1	303247	LUH-10-23-34-00 240V 3P 10kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1
303036	LUH-04-81-34-00 208V 1P 4kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303255	LUH-10-43-32-00 480V 3P 10kW	LUH-TK1	ESFS-41	ESFS-41	EDS-1
303044	LUH-04-83-34-00 208V 3P 4kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303263	LUH-12-83-34-00 208V 3P 12.5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1
303052	LUH-04-21-34-00 240V 1P 4kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303271	LUH-12-23-34-00 240V 3P 12.5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1
303060	LUH-04-23-34-00 240V 3P 4kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303280	LUH-12-43-32-00 480V 3P 12.5kW	LUH-TK1	ESFS-41	ESFS-41	EDS-1
303079	LUH-04-71-35-00 277V 1P 4kW	LUH-TK1	ISFS-02	ESFS-47	EDS-1	303298	LUH-15-83-34-00 208V 3P 15kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1
303087	LUH-04-43-32-00 480V 3P 4kW	LUH-TK1	ESFS-41	ESFS-41	EDS-1	303300	LUH-15-23-34-00 240V 3P 15kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1
303095	LUH-05-81-34-00 208V 1P 5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303319	LUH-15-43-32-00 480V 3P 15kW	LUH-TK1	ESFS-41	ESFS-41	EDS-1
303108	LUH-05-83-34-00 208V 3P 5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303327	LUH-20-23-34-00 240V 3P 20kW	LUH-TK1	ISFS-02	ESFS-42A	EDS-1
303116	LUH-05-21-34-00 240V 1P 5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303335	LUH-20-43-32-00 480V 3P 20kW	LUH-TK1	ESFS-41A	ESFS-41A	EDS-1
303124	LUH-05-23-34-00 240V 3P 5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303343	LUH-25-43-32-00 480V 3P 25kW	LUH-TK1	ESFS-41A	ESFS-41A	EDS-1
303132	LUH-05-71-35-00 277V 1P 5kW	LUH-TK1	ISFS-02	ESFS-47	EDS-1	303351	LUH-30-83-34-00 208V 3P 30kW	LUH-TK1	ISFS-02	ESFS-42A	N/A
303140	LUH-05-43-32-00 480V 3P 5kW	LUH-TK1	ESFS-41	ESFS-41	EDS-1	303360	LUH-30-23-34-00 240V 3P 30kW	LUH-TK1	ISFS-02	ESFS-42A	EDS-3
303159	LUH-07-81-34-00 208V 1P 7.5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303378	LUH-30-43-32-00 480V 3P 30kW	LUH-TK1	ESFS-41A	ESFS-41A	EDS-1
303167	LUH-07-83-34-00 208V 3P 7.5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303386	LUH-35-23-34-00 240V 3P 35kW	LUH-TK1	ISFS-02	ESFS-42A	N/A
303175	LUH-07-21-34-00 240V 1P 7.5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303394	LUH-35-43-32-00 480V 3P 35kW	LUH-TK1	ESFS-41A	ESFS-41A	EDS-1
303183	LUH-07-23-34-00 240V 3P 7.5kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1	303407	LUH-40-23-34-00 240V 3P 40kW	LUH-TK1	ISFS-02	ESFS-42A	N/A
303191	LUH-07-71-35-00 277V 1P 7.5kW	LUH-TK1	ISFS-02	ESFS-47	EDS-1	303415	LUH-40-43-32-00 480V 3P 40kW	LUH-TK1	ESFS-41A	ESFS-41A	EDS-2
303204	LUH-07-43-32-00 480V 3P 7.5kW	LUH-TK1	ESFS-41	ESFS-41	EDS-1	303423	LUH-45-43-32-00 480V 3P 45kW	LUH-TK1	ESFS-41A	ESFS-41A	EDS-2
303212	LUH-10-81-34-00 208V 1P 10kW	LUH-TK1	ISFS-02	ESFS-42	EDS-1						

When ordering LUH heaters, specify the model number and corresponding PCN (Product Code Number). If controls or thermostat/fan options are required, designate these options in the model number when ordering, as shown below. Always specify voltage, phase and kW by listing them on the purchase order product specifications.

### Model Numbers

#### Chromalox Horizontal Unit Heater

##### Heating Elements

<b>02</b> = 2.6 kW	<b>10</b> = 10.0 kW	<b>25</b> = 25.0 kW	<b>45</b> = 45.0 kW
<b>04</b> = 4.0 kW	<b>12</b> = 12.5 kW	<b>30</b> = 30.0 kW	
<b>05</b> = 5.0 kW	<b>15</b> = 15.0 kW	<b>35</b> = 35.0 kW	
<b>07</b> = 7.5 kW	<b>20</b> = 20.0 kW	<b>40</b> = 40.0 kW	

##### Heater Voltage and Phase

<b>81</b> = 208V, 1 Phase	<b>71</b> = 277V, 1 Phase
<b>83</b> = 208V, 3 Phase	<b>43</b> = 480V, 3 Phase
<b>21</b> = 240V, 1 Phase	<b>63</b> = 600V, 3 Phase
<b>23</b> = 240V, 3 Phase	

##### Control

<b>00</b>	No Contactor(s)
<b>30</b>	24V Control Internal Transformer
<b>31</b>	24V Control Externally Supplied
<b>32</b>	120V Control Internal Transformer
<b>33</b>	120V Control Externally Supplied
<b>34</b>	208/240V Control Internally Supplied, No Transformer
<b>35</b>	277V Control Internally Supplied

##### Control

<b>00</b>	No Thermostat, No Summer Fan Switch
<b>40</b>	Internal Thermostat Only
<b>41</b>	Internal Therm. and Internal Sum. Fan Sw.
<b>42</b>	External Sum. Fan Sw. Only (Not 480V)
<b>43</b>	External Sum. Fan Sw. and Fan Relay (All Volts)
<b>44</b>	Rem. Fan Sw. and Internal Therm. (Not 480V)
<b>45</b>	Rem. Fan Sw., Fan Relay and Int. Therm. (All Volts)D, E, F, G
<b>46</b>	Internal Sum. Fan Sw. (Not 480 V)
<b>47</b>	Internal Sum. Fan Sw., Fan Relay (All Volts)

##### Disconnect Switch

<b>1</b>	63 Amp
<b>2</b>	80 Amp
<b>3</b>	100 Amp

LUH 05 21 34 41 1 Typical Model Number



## HVH

### Horizontal or Vertical Discharge Fan Forced Unit Heater

- 2.6 - 50 kW
- 8,900 – 170,600 Btuh
- 208, 240, 277, 480, and 600 volt
- 1 or 3 phase
- Vertical or Horizontal Airflow
- Wall or Ceiling Mounted Configurations
- CSA Certified to US and Canadian Standards
- CE Certified to European Standards

#### Description

The Chromalox HVH self-contained blower heater provides quiet, reliable, fan-forced heat for all types of commercial and industrial applications. The hallmark of the HVH blower heater is its versatility. It can provide vertical or horizontal airflow and can be mounted on walls or ceilings. Optional wall or ceiling swivel mounting brackets help direct airflow exactly where it is needed. Heavy-duty construction affords long, dependable service, while its two-tone gray polyester powder coat finish makes an attractive appearance.

#### Applications

- Shipping and Receiving Areas
- Pump Houses
- Power Generating Stations
- Aircraft Hangars
- Factories
- Warehouses
- Garages

#### Construction

**Cabinet** – Heavy 20-gauge steel, 2.6 to 15 kW models; 18-gauge steel, 25 to 50 kW models. Phosphate undercoated for corrosion resistance. Finished in a two-tone gray polyester powder coat.

**Louvers** – Individually adjustable. Direct airflow up or down as needed. Fintube® Heating Elements Corrosion resistant steel fins furnace-brazed to a tubular heating element, assuring long life and superior heat transfer.



**Fan Motor** – Totally enclosed fan motor is rated for continuous duty with built-in thermal cutout and operates on the same voltage as the heating circuit.

**Dynamically Balanced Fan** – Ensures smooth, quiet operation. Blade pitch is carefully selected so that the volume of air moved results in the optimum discharge air temperature. Pull-through airflow design draws air across heating elements for more even airflow distribution and cooler element operation.

#### Features

- **Integral 24V Control Transformer** is standard on 480V models and eliminates the need for an external control source (120V is optional).
- **Heavy Duty Magnetic Contactors** are standard on all models except 2.6 thru 5 kW single phase models, except for 480V models.
- **Linear Thermal Cutouts** open the control circuit and disconnect power to the heating elements if overheating occurs. Automatic Reset allows the control circuit to reclose and restore power when temperature returns to normal.
- **Field Convertible** — Combination 208/240V and 1 or 3 phase operation through 10 kW.

#### VERSATILE MOUNTING CONFIGURATIONS

**Vertical Discharge** Recessed fasteners on the rear of the heater cabinet are internally threaded for suspension of unit in the vertical discharge mode with threaded rods.

**Horizontal Discharge Ceiling Bracket** – The ceiling bracket allows you mount the heater directly to the ceiling or over-head member, simply and easily. The swivel mounting allows you to readily adjust the direction of warm air flow for maximum comfort up to 180° rotation.

**Wall Mounting Bracket** – The wall mounting brackets permits the heater to be rotated to face any direction.

#### Factory Installed or Field Installation Kits

**Summer Fan Switch Kit** – Field installable for circulating warm, stratified air. Available for all models.

**Thermostat Kit** – Field installable on all models. Range 40° to 100°F (4° to 38°C).

**Disconnect Switch Kits** – Field-installable switch enables power to be disconnected while servicing heater. Mounts on the front of the heater.

**Outlet Screen** – Prevents objects from coming in contact with fan

#### Factory Installed options

- Pilot Light (recommended)
- Time Delay (heat on and off): Provides delay of fan operation until elements have warmed up. The fan stays on until cool.

#### Advantages

- Self Contained
- Versatile, Flexible and High Performance
- Easy Installation
- Minimum Maintenance
- Long Life
- Attractive Appearance

Because it has individually adjustable discharge louvers to direct air flow, and can be wall or ceiling (plus swivel) mounted, the HVH heater may be used in a variety of heating applications:

- Primary Heating
- Supplementary Heating
- Dual System Heating
- Spot Heating
- Entryway Air-Curtain Heating

## HVH

### Horizontal or Vertical Discharge Fan Forced Unit Heater (cont'd.)

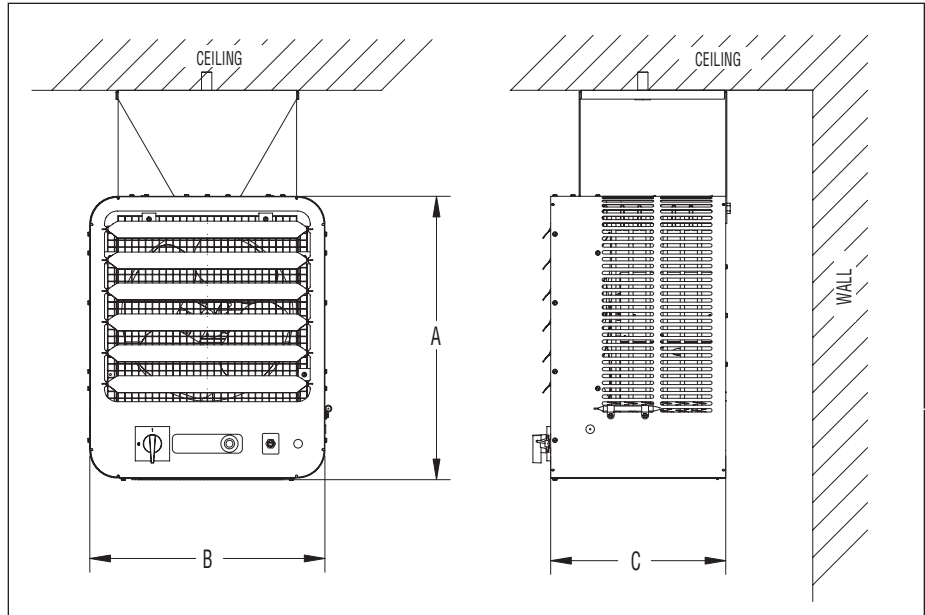
#### Thermostat Kits (40-90°F)

Model	Rating	PCN	Stock
TK-5	SPST	219475	S

#### Available Disconnect Switch Kits

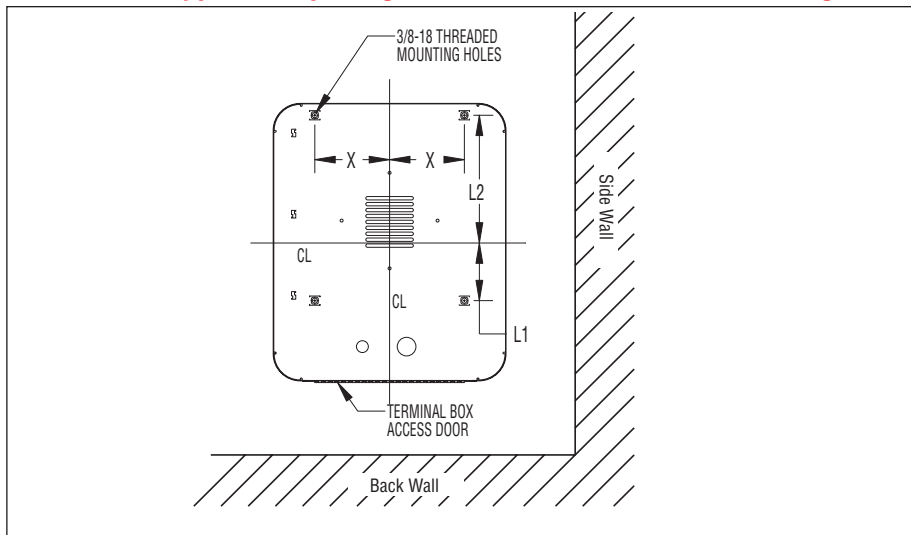
Model	Rating	PCN	Stock
HDS-1	63 Amps	219491	S
HDS-2	80 Amps	219790	NS
HDS-3	100 Amps	219803	NS

#### Horizontal Discharge



Heater	Dimensions In. (mm)		
	A	B	C
HVH-02 to 05 (Except 600 V)	16-1/8 (410)	13 (330)	10 (254)
HVH-07 to 15 (Except 600 V)	20-5/8 (524)	17-1/8 (435)	12-3/4 (324)
HVH 02 to 15 (600 V)	20-5/8 (524)	17-1/8 (435)	12-3/4 (324)
HVH-20 (All Voltages)	20-5/8 (524)	17-1/8 (435)	12-3/4 (324)
HVH-25 to 50 (All Voltages)	29-3/16 (741)	26-1/16 (662)	14-5/8 (371)

#### Rod Thread Type and Spacing Dimensions for Vertical discharge



#### Mounting Limitations

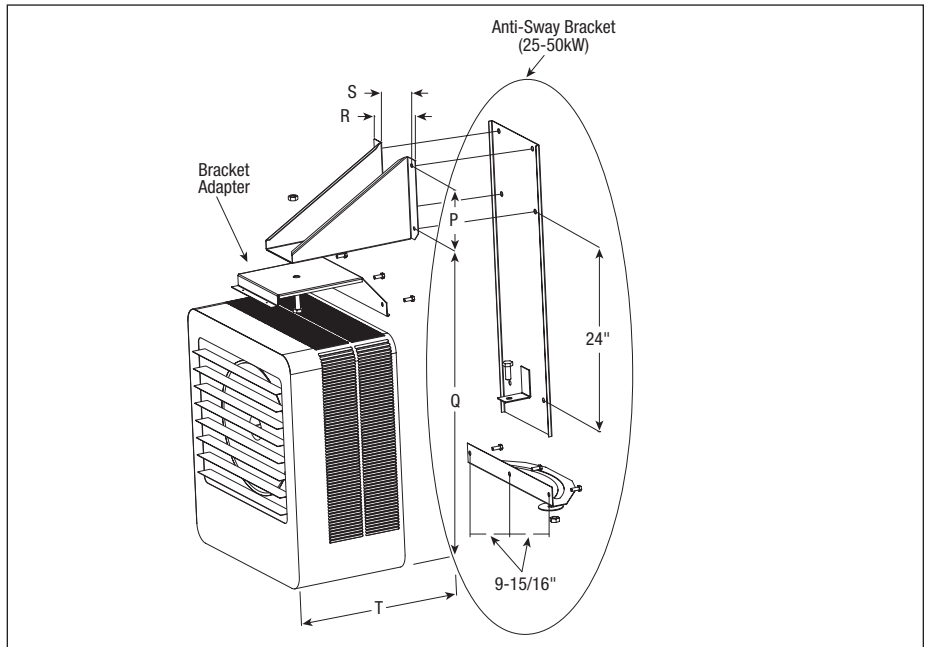
**Hazardous Atmosphere** — Unit heaters should not be used in potentially explosive atmospheres. **Corrosive Atmosphere** — The finish is not intended for direct salt spray exposure in marine applications or the highly corrosive atmospheres of greenhouses, swimming pools, chemical storage bins, etc. **Mounting Height** — Do not install unit heaters above recommended maximum mounting height. Obstructions must not block unit heater air inlet or discharge.

Unit	Rod Thread Type	Dimensions In. (mm)		
		L <sub>1</sub>	L <sub>2</sub>	X
2 to 5 kW	3/8 - 16	2-7/8 (73)	7-1/8 (181)	3-3/4 (95)
7-1/2 to 20 kW	3/8 - 16	4-5/16 (110)	9-3/8 (238)	5-1/2 (140)
25 to 50 kW	3/8 - 16	8-5/16 (211)	14 (356)	9-15/16 (252)

## HVH

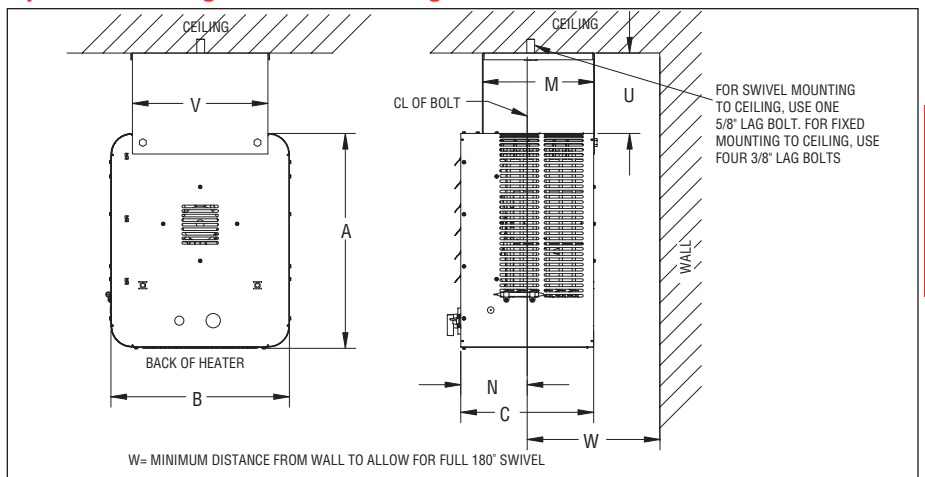
### Horizontal or Vertical Discharge Fan Forced Unit Heater *(cont'd.)*

#### Optional Wall Swivel Mounting Bracket



Bracket Model No.	Dimensions In. (mm)					Bracket Wt. lbs. (kg.)	Use With
	P	Q	R	S	T		
HVW-1	6 (152)	18-7/8 (479)	7 (178)	5 (127)	17-5/8 (448)	4 (1.8)	HVH-02 to 05
HVW-2	6 (152)	23-1/4 (591)	7 (178)	5 (127)	18-5/8 (473)	6 (2.7)	HVH-07 to 15
HVW-3	6 (152)	23-7/16 (595)	7 (178)	5 (127)	20-1/16 (510)	6 (2.7)	HVH-02 to 15 (600 V), HVH-20 (All Voltages)
HVW-4	8 (203)	23-13/16 (605)	10-3/8 (264)	8-1/2 (216)	22-7/16 (570)	27 (12.3)	HVH-25 to 50

#### Optional Ceiling Swivel Mounting Bracket



Bracket Model No.	Dimensions In. (mm)								Bracket Wt. lbs. (kg.)	Use With
	A	B	C	M	N	U	V	W		
HVC-1	16-1/8 (410)	13 (330)	10 (254)	8-3/8 (213)	5-3/4 (146)	7-3/4 (197)	9-3/4 (248)	12 (305)	4 (1.8)	HVH-02, 04, 05
HVC-2	20-5/8 (524)	17-1/8 (435)	12-3/4 (324)	10-3/4 (273)	6-3/4 (171)	7-3/4 (197)	12 (305)	12 (305)	8 (3.6)	HVH-07, 10, 12, 15
HVC-3	20-5/8 (524)	17-1/8 (435)	14-1/16 (357)	12-1/16 (306)	8-1/16 (205)	7-3/4 (197)	13-5/16 (338)	8 (203)	8 (3.6)	HVH-02 to 15 (600V), HVH-20 (All Voltages)
HVC-4	29-13/16 (757)	26-1/16 (662)	14-5/8 (371)	11-3/4 (298)	8-3/16 (208)	7-3/4 (197)	22-5/16 (567)	8-7/16 (214)	17 (7.7)	HVH-25 to 50

#### Optional Fan Only Kits

Description	Model	PCN	Stock
Fan switch (no relay)	HVF-01	219504	S
Fan switch (24V relay)	HVF-02	219512	NS
Fan switch (120V relay)	HVF-03	219520	NS

## HVH

 Horizontal or Vertical Discharge Fan Forced Unit Heater

Electrical (60 Hz)					Motor				Air Delivery					Ordering			
kW	Volts	Ckt & Phase	Amps	Control Volts	Volts	Phase	HP	RPM	Air Flow ft <sup>3</sup> /min (m <sup>3</sup> /hr)	Air Speed ft/min (m/min)	Temp. Rise °F (°C)	Horiz. Throw ft. (m)	Mtg. <sup>5</sup> Height ft. (m)	Model	Stock	PCN	Wt. lbs. (kg)
2.6	208	1-1	13.1	N/A	208	1	1/40	1,650	410 (697)	880 (268.2)	21 (11.7)	12 (3.7)	8 (2.4)	HVH-02-81-00	S	219096	32 (14.5)
2/2.6	208/240	1-1	11.4 <sup>2</sup>	N/A	240	1	1/40	1,650	410 (697)	880 (268.2)	21 (11.7)	12 (3.7)	8 (2.4)	HVH-02-21-00	S	219109	32 (14.5)
2.6	277	1-1	9.6	N/A	277	1	1/30	1,550	360 (612)	770 (234.7)	24 (13.3)	12 (3.7)	8 (2.4)	HVH-02-71-00	S	219117	32 (14.5)
4	208	1-1	19.8	N/A	208	1	1/40	1,650	410 (697)	880 (268.2)	31 (17.2)	12 (3.7)	8 (2.4)	HVH-04-81-00	S	219125	32 (14.5)
4	208	1-3 <sup>3</sup>	11.7	208/240	208	1	1/40	1,650	410 (697)	880 (268.2)	31 (17.2)	12 (3.7)	8 (2.4)	HVH-04-83-34	S	219133	32 (14.5)
3/4	208/240	1-1	17.2 <sup>2</sup>	N/A	240	1	1/40	1,650	410 (697)	880 (268.2)	31 (17.2)	12 (3.7)	8 (2.4)	HVH-04-21-00	S	219141	32 (14.5)
3/4	208/240	1-3	10.2 <sup>2</sup>	208/240	240	1	1/40	1,650	410 (697)	880 (268.2)	31 (17.2)	12 (3.7)	8 (2.4)	HVH-04-23-34	S	219150	32 (14.5)
4	277	1-1	14.6	N/A	277	1	1/30	1,550	360 (612)	770 (234.7)	35 (19.4)	12 (3.7)	8 (2.4)	HVH-04-71-00	S	219168	32 (14.5)
4	480	1-3	5.1	24	480	1	1/35	1,550	380 (646)	815 (248.4)	33 (18.3)	12 (3.7)	8 (2.4)	HVH-04-43-30	S	219176	32 (14.5)
5	208	1-1	24.6	N/A	208	1	1/40	1,650	410 (697)	880 (268.2)	39 (21.7)	12 (3.7)	8 (2.4)	HVH-05-81-00	S	219184	32 (14.5)
5	208	1-3 <sup>3</sup>	14.5	208/240	208	1	1/40	1,650	410 (697)	880 (268.2)	39 (21.7)	12 (3.7)	8 (2.4)	HVH-05-83-34	S	219192	32 (14.5)
3.75/5	208/240	1-1	21.4	N/A	240	1	1/40	1,650	410 (697)	880 (268.2)	39 (21.7)	12 (3.7)	8 (2.4)	HVH-05-21-00	S	219205	32 (14.5)
3.75/5	208/240	1-3 <sup>3</sup>	12.6	208/240	240	1	1/40	1,650	410 (697)	880 (268.2)	39 (21.7)	12 (3.7)	8 (2.4)	HVH-05-23-34	S	219213	32 (14.5)
5	277	1-1	18.3	N/A	277	1	1/30	1,550	360 (612)	770 (234.7)	44 (24.4)	12 (3.7)	8 (2.4)	HVH-05-71-00	S	219221	32 (14.5)
5	480	1-3	6.3	24	480	1	1/35	1,550	380 (646)	815 (248.4)	42 (23.3)	12 (3.7)	8 (2.4)	HVH-05-43-30	S	219230	32 (14.5)
7.5	208	1-1 <sup>3</sup>	36.5	208/240	208	1	1/15	1,725	850 (1444)	1040 (317.0)	28 (15.6)	27 (8.2)	8 (2.4)	HVH-07-81-34	S	219248	50 (22.7)
7.5	208	1-3	21.3	208/240	208	1	1/15	1,725	850 (1444)	1040 (317.0)	28 (15.6)	27 (8.2)	8 (2.4)	HVH-07-83-34	S	219256	50 (22.7)
5.6/7.5	208/240	1-1 <sup>3</sup>	31.7 <sup>2</sup>	208/240	240	1	1/15	1,725	850 (1444)	1040 (317.0)	28 (15.6)	27 (8.2)	8 (2.4)	HVH-07-21-34	S	219264	50 (22.7)
5.6/7.5	208/240	1	18.5 <sup>2</sup>	208/240	240	1	1/15	1,725	850 (1444)	1040 (317.0)	28 (15.6)	27 (8.2)	8 (2.4)	HVH-07-23-34	S	219272	50 (22.7)
7.5	277	1-1	27.7	24	277	1	1/15	1,550	750 (1274)	920 (280.4)	32 (17.8)	27 (8.2)	8 (2.4)	HVH-07-71-30	S	219280	50 (22.7)
7.5	480	1-3	9.9	24	480	3	1/15	1,725	850 (1444)	1040 (317.0)	28 (15.6)	27 (8.2)	8 (2.4)	HVH-07-43-30	S	219299	50 (22.7)
7.5	600	1-3	7.6	24	575	3	1/3	1,725	850 (1444)	1040 (317.0)	28 (15.6)	27 (8.2)	8 (2.4)	HVH-07-63-30	NS	—	50 (22.7)
9.7	208	1-1 <sup>3</sup>	47.1	208/240	208	1	1/15	1,725	850 (1444)	1040 (317.0)	37 (20.6)	27 (8.2)	9 (2.7)	HVH-10-81-34	S	219301	50 (22.7)
9.7	208	1-3	27.4	208/240	208	1	1/15	1,725	850 (1444)	1040 (317.0)	37 (20.6)	27 (8.2)	9 (2.7)	HVH-10-83-34	S	219310	50 (22.7)
7.5/10	208/240	1-1 <sup>3</sup>	42.1 <sup>2</sup>	208/240	240	1	1/15	1,725	850 (1444)	1040 (317.0)	37 (20.6)	27 (8.2)	9 (2.7)	HVH-10-21-34	S	219328	50 (22.7)
7.5/10	208/240	1-3	24.5 <sup>2</sup>	208/240	240	1	1/15	1,725	850 (1444)	1040 (317.0)	37 (20.6)	27 (8.2)	9 (2.7)	HVH-10-23-34	S	219336	50 (22.7)
10	480	1-3	12.9	24	480	3	1/15	1,725	850 (1444)	1040 (317.0)	37 (20.6)	27 (8.2)	9 (2.7)	HVH-10-43-30	S	219344	50 (22.7)
10	600	1-3	10.6	24	575	3	1/3	1,725	850 (1444)	1040 (317.0)	37 (20.6)	27 (8.2)	9 (2.7)	HVH-10-63-30	NS	—	50 (22.7)
12.5	208	1-3	35.2	208/240	208	1	1/15	1,725	850 (1444)	1040 (317.0)	47 (26.1)	27 (8.2)	9 (2.7)	HVH-12-83-34	S	219352	50 (22.7)
9.3/12.5	208/240	1-3	30.6	208/240	240	1	1/15	1,725	850 (1444)	1040 (317.0)	47 (26.1)	27 (8.2)	9 (2.7)	HVH-12-23-34	S	219360	50 (22.7)
12.5	480	1-3	15.9	24	480	3	1/15	1,725	850 (1444)	1040 (317.0)	47 (26.1)	27 (8.2)	9 (2.7)	HVH-12-43-30	S	219379	50 (22.7)
12.5	600	1-3	12.6	24	575	3	1/3	1,725	850 (1444)	1040 (317.0)	47 (26.1)	27 (8.2)	9 (2.7)	HVH-12-63-30	NS	—	50 (22.7)
15	208	1-3	42.1	208/240	208	1	1/15	1,725	850 (1444)	1040 (317.0)	56 (31.1)	27 (8.2)	10 (3.0)	HVH-15-83-34	S	219387	50 (22.7)
11.25/15	208/240	1-3	36.6 <sup>2</sup>	208/240	240	1	1/15	1,725	850 (1444)	1040 (317.0)	56 (31.1)	27 (8.2)	10 (3.0)	HVH-15-23-34	S	219395	50 (22.7)
15	480	1-3	19.0	24	480	3	1/15	1,725	850 (1444)	1040 (317.0)	56 (31.1)	27 (8.2)	10 (3.0)	HVH-15-43-30	S	219408	50 (22.7)
15	600	1-3	15.6	24	575	3	1/3	1,725	850 (1444)	1040 (317.0)	56 (31.1)	27 (8.2)	10 (3.0)	HVH-15-63-30	NS	—	50 (22.7)
14.7/19.8	208/240	1-3	47.7	24	240	3	1/3	1,725	1500 (2549)	1750 (533.4)	49 (27.2)	27 (8.2)	13 (4.0)	HVH-20-23-30	NS	219563	65 (29.5)
19.8	480	1-3	23.9	24	480	3	1/3	1,725	1500 (2549)	1750 (533.4)	49 (27.2)	27 (8.2)	13 (4.0)	HVH-20-43-30	NS	219571	65 (29.5)
19.8	600	1-3	19.4	24	575	3	1/3	1,725	1500 (2549)	1750 (533.4)	49 (27.2)	27 (8.2)	13 (4.0)	HVH-20-63-30	NS	219580	65 (29.5)
18.7/24.9	208/240	1-3	60.1	24	240	3	1/3	1,725	2500 (4248)	1650 (502.9)	27 (15.0)	36 (11.0)	13 (4.0)	HVH-25-23-30	NS	219598	90 (40.9)
25.0	480	1-3	30.2	24	480	3	1/3	1,725	2500 (4248)	1650 (502.9)	27 (15.0)	36 (11.0)	13 (4.0)	HVH-25-43-30	NS	219600	90 (40.9)
25.0	600	1-3	24.3	24	575	3	1/3	1,725	2500 (4248)	1650 (502.9)	27 (15.0)	36 (11.0)	13 (4.0)	HVH-25-63-30	NS	219619	90 (40.9)
22.4/29.9	208/240	1-3	72	24	240	3	1/3	1,725	2500 (4248)	1650 (502.9)	34 (18.9)	36 (11.0)	13 (4.0)	HVH-30-23-30	NS	219627	90 (40.9)
30.0	480	1-3	36.2	24	480	3	1/3	1,725	2500 (4248)	1650 (502.9)	34 (18.9)	36 (11.0)	13 (4.0)	HVH-30-43-30	NS	219635	90 (40.9)
30.0	600	1-3	29	24	575	3	1/3	1,725	2500 (4248)	1650 (502.9)	34 (18.9)	36 (11.0)	13 (4.0)	HVH-30-63-30	NS	219643	90 (40.9)
25.6/34.0	208/240	1-3	82.1	24	240	3	1/3	1,725	3100 (5267)	2100 (640.1)	40 (22.2)	36 (11.0)	13 (4.0)	HVH-35-23-30	NS	219651	90 (40.9)
34.0	480	1-3	41.1	24	480	3	1/3	1,725	3100 (5267)	2100 (640.1)	40 (22.2)	36 (11.0)	13 (4.0)	HVH-35-43-30	NS	219660	90 (40.9)
34.2	600	1-3	33	24	575	3	1/3	1,725	3100 (5267)	2100 (640.1)	40 (22.2)	36 (11.0)	13 (4.0)	HVH-35-63-30	NS	219678	90 (40.9)
28.1/37.4	208/240	1-3	90.1	24	240	3	1/3	1,725	3100 (5267)	2100 (640.1)	45 (25.0)	36 (11.0)	16 (4.9)	HVH-40-23-30	NS	219686	100 (45.5)
37.4	480	1-3	45.1	24	480	3	1/3	1,725	3100 (5267)	2100 (640.1)	45 (25.0)	36 (11.0)	16 (4.9)	HVH-40-43-30	NS	219694	100 (45.5)
37.5	600	1-3	36.2	24	575	3	1/3	1,725	3100 (5267)	2100 (640.1)	45 (25.0)	36 (11.0)	16 (4.9)	HVH-40-63-30	NS	219707	100 (45.5)
33.7/44.8	208/240	1-3	108	24	240	3	1/3	1,725	3100 (5267)	2100 (640.1)	51 (28.3)	36 (11.0)	16 (4.9)	HVH-45-23-30	NS	219715	100 (45.5)
44.8	480	1-3	54	24	480	3	1/3	1,725	3100 (5267)	2100 (640.1)	51 (28.3)	36 (11.0)	16 (4.9)	HVH-45-43-30	NS	219723	100 (45.5)
45.2	600	1-3	43.6	24	575	3	1/3	1,725	3100 (5267)	2100 (640.1)	51 (28.3)	36 (11.0)	16 (4.9)	HVH-45-63-30	NS	219731	100 (45.5)
38.4/51.1	208/240	1-3	123.1	24	240	3	1/3	1,725	3100 (5267)	2100 (640.1)	57 (31.7)	36 (11.0)	16 (4.9)	HVH-50-23-30	NS	219740	100 (45.5)
51.1	480	1-3	61.6	24	480	3	1/3	1,725	3100 (5267)	2100 (640.1)	57 (31.7)	36 (11.0)	16 (4.9)	HVH-50-43-30	NS	219758	100 (45.5)
51.3	600	1-3	49.5	24	575	3	1/3	1,725	3100 (5267)	2100 (640.1)	57 (31.7)	36 (11.0)	16 (4.9)	HVH-50-63-30	NS	219766	100 (45.5)

**Stock Status:** S = Stock NS = Non-Stock.  
**To order specify** model, PCN, kW, volts, phase and quantity.

1. For motor data, see table.
2. 208V amperage is 86% of 240V value.
3. Models can be field wired for 1 or 3 phase.
4. Includes motor amps.
5. Max. mounting height for effective heat distribution. Min. height is 7 ft.

**Other Notes:**

- A. All heaters have built-in contactors except 2.6 kW thru 5 kW single phase models, and stock 480V models have built-in control transformers and contactors with 24V holding coils. Stock 208V and 240V, 3 phase models, 4 kW through 15 kW, have 208/240V holding coils while stock 208V and 240V 3 phase models above 15 kW have 24V holding coils. All stock 277V models have 277V holding coils.
- B. Optional contactors holding coil voltages of 24V or 120V and control voltage transformers, are available as made-to-order models for all heater ratings.

# INDUSTRIAL AIR HEATERS

## HVH Horizontal or Vertical Discharge Fan Forced Unit Heater

### Recommended Control Options

Heater		Field Installed Options															Factory Installed Options			
		Wall Bracket Options				Ceiling Bracket Options				Outlet Screen Options			Thermostat Options	Disconnect Options					Fan Switch Options	
Model No.	PCN	HVW-1 219416	HVW-2 219424	HVW-3 219782	HVW-4 219820	HVC-1 219432	HVC-2 219440	HVC-3 219811	HVC-4 219838	HVS-1 219459	HVS-2 219467	HVS-3 219774	TK-5 219475	HDS-1 219491	HDS-2 219790	HDS-3 219803	HVF-01 219504	HVF-02 219512	HFD-1 <sup>a</sup>	PL-1 <sup>b</sup>
HVH-02-81-00	219096	X				X				X				X						X
HVH-02-21-00	219109	X				X				X				X						X
HVH-02-71-00	219117	X				X				X				X						
HVH-04-81-00	219125	X				X				X				X						X
HVH-04-83-34	219133	X				X				X			X	X			X		X	X
HVH-04-21-00	219141	X				X				X				X						X
HVH-04-23-34	219150	X				X				X			X	X			X		X	X
HVH-04-71-00	219168	X				X				X				X						X
HVH-04-43-30	219176	X				X				X			X	X			X		X	X
HVH-05-81-00	219184	X				X				X				X						X
HVH-05-83-34	219192	X				X				X			X	X			X			X
HVH-05-21-00	219205	X				X				X				X						X
HVH-05-23-34	219213	X				X				X			X	X			X			X
HVH-05-71-00	219221	X				X				X				X						
HVH-05-43-30	219230	X				X				X			X	X			X		X	X
HVH-07-81-34	219248		X				X				X		X	X			X			X
HVH-07-83-34	219256		X				X				X		X	X			X			X
HVH-07-21-34	219264		X				X				X		X	X			X			X
HVH-07-23-34	219272		X				X				X		X	X			X			X
HVH-07-71-30	219280		X				X				X		X	X			X			
HVH-07-43-30	219299		X				X				X		X	X			X	X	X	X
HVH-10-81-34	219301		X				X				X		X	X			X			X
HVH-10-83-34	319310		X				X				X		X	X			X			X
HVH-10-21-34	219328		X				X				X		X	X			X			X
HVH-10-23-34	219336		X				X				X		X	X			X			X
HVH-10-43-30	219344		X				X				X		X	X			X	X	X	X
HVH-12-83-34	219352		X				X				X		X	X			X			X
HVH-12-23-34	219360		X				X				X		X	X			X			X
HVH-12-43-30	219379		X				X				X		X	X			X	X	X	X
HVH-15-83-34	219387		X				X				X		X	X			X			X
HVH-15-23-34	219395		X				X				X		X	X			X			X
HVH-15-43-30	219408		X				X				X		X	X			X	X	X	X
HVH-20-23-30	219563			X				X			X		X	X			X			X
HVH-20-43-30	219571			X				X			X		X	X			X			X
HVH-20-63-30	219580			X				X			X		X	X			X			X
HVH-25-23-30	219598				X				X			X			X		X		X	X
HVH-25-43-30	219600				X				X			X		X			X		X	X
HVH-25-63-30	219619				X				X			X		X			X		X	X
HVH-30-23-30	219627				X				X			X				X		X		X
HVH-30-43-30	219635				X				X			X		X			X		X	X
HVH-30-63-30	219643				X				X			X		X			X		X	X
HVH-35-23-30 <sup>c</sup>	219651				X				X			X		X			X		X	X
HVH-35-43-30	219660				X				X			X		X			X		X	X
HVH-35-63-30	219678				X				X			X		X			X		X	X
HVH-40-23-30 <sup>c</sup>	219686				X				X			X					X		X	X
HVH-40-43-30	219694				X				X			X		X			X		X	X
HVH-40-63-30	219707				X				X			X		X			X		X	X
HVH-45-23-30 <sup>c</sup>	219715				X				X			X					X		X	X
HVH-45-43-30	219723				X				X			X			X		X		X	X
HVH-45-63-30	219731				X				X			X			X		X		X	X
HVH-50-23-30 <sup>c</sup>	219740				X				X			X		X			X		X	X
HVH-50-43-30	219758				X				X			X		X			X		X	X
HVH-50-63-30	219766				X				X			X		X			X		X	X

**Notes:**

- A. HFD-1 is a fan delay on / fan delay off. Fan delay is standard on heaters 20 kW and above
- B. PL-1 is a green pilot indicating power to heater
- C. Factory installed disconnect switch not available
- D. Field installed thermostat kits not available on models with control code 00.

INDUSTRIAL

## HVH

# Horizontal or Vertical Discharge Fan Forced Unit Heater

When ordering HVH heaters, specify the model number and corresponding PCN (Product Code Number). If controls (thermostat, fan switch, transformer, disconnect) or other options are required, designate these options in the model number when ordering, as shown below. Always specify voltage, phase and kW by listing them on the purchase order specifications.

HVH	Horizontal or Vertical Discharge Blower Heater										
	<b>kW</b>										
	<b>02</b>	2.6 kW		<b>20</b>	19.8 kW						
	<b>04</b>	4.0 kW		<b>25</b>	25.0 kW						
	<b>05</b>	5.0 kW		<b>30</b>	30.0 kW						
	<b>07</b>	7.5 kW		<b>35</b>	33.3 kW						
	<b>10</b>	10.0 kW		<b>40</b>	37.5 kW						
	<b>12</b>	12.5 kW		<b>45</b>	45.0 kW						
	<b>15</b>	15.0 kW		<b>50</b>	50.0 kW						
	<b>Volts</b>										
	<b>2</b>	240V									
	<b>4</b>	480V									
	<b>6</b>	600V									
	<b>7</b>	277V									
	<b>8</b>	208V									
	<b>A</b>	220V									
	<b>B</b>	380V									
	<b>C</b>	400V									
	<b>D</b>	415V									
	<b>Phase</b>										
	<b>1</b>	1									
	<b>3</b>	3									
	<b>Control</b>										
	<b>00</b>	No Contactor									
	<b>30</b>	Contactor with 24V Transformer									
	<b>31</b>	Contactor with 24V Externally Supplied									
	<b>32</b>	Contactor with 120V Transformer									
	<b>33</b>	Contactor with 120V Externally Supplied									
	<b>34</b>	Contactor with 208/240V Internally Supplied									
	<b>35</b>	Contactor with 277V Internally Supplied									
	<b>Integral Thermostat</b>										
	<b>0</b>	None									
	<b>TL</b>	40-100°F Range (4° to 38°C)									
	<b>Disconnect Switch</b>										
	<b>0</b>	None									
	<b>D</b>	Yes									
	<b>Fan Only Switch</b>										
	<b>00</b>	None									
	<b>FI</b>	Internal (In Heater)									
	<b>FE</b>	External (On Wall)									
	<b>Time Delay (Standard on 20kW and above)</b>										
	<b>0</b>	None									
	<b>R</b>	Yes									
	<b>Pilot Light</b>										
	<b>0</b>	None									
	<b>P</b>	Yes									
	<b>Outlet Screen</b>										
	<b>0</b>	None									
	<b>S</b>	Yes									
<b>HVH</b>	<b>05</b>	<b>2</b>	<b>1</b>	<b>34</b>	<b>TL</b>	<b>D</b>	<b>FI</b>	<b>-0</b>	<b>-0</b>	<b>-0</b>	<b>Typical Model Number</b>

**Note:** 20-50 kW models available in 208/240, 480, and 600 V only.  
Units with thermostats must include built-in contactor.





## UB High Capacity Horizontal Blower Heater

- 2 - 50 kW
- 6,820 - 170,600 Btuh
- 120, 208, 240, 277, 480 and 550 Volt
- 1 or 3 Phase
- Wall or Ceiling Mounted Configurations

### Description

Rugged, industrial UB heaters are ideal for factories, warehouses, garages or any other area that requires a high volume of forced-air heat.

### Applications

- Entryway Air-Curtain Heating
- Power Generating Stations
- Factories
- Freeze Protection of Machinery

### Construction (2 - 50 kW models)

**Painted Finish** — For attractive appearance and corrosion resistance.

**Cabinet** — 16 gauge steel cabinet construction supported with an 18 gauge base assembly and finished in almond powder.

**Louvers** — Adjustable discharge grille to direct the air flow up or down.

**Heavy Gauge Rear Wire Grille** protects against accidental contact with rapidly rotating fan blade.



### Metal Sheath Fintube® Heating Elements —

The electric heat bank - Chromalox patented metal sheath Fintube® heating elements. Heat radiation fins are corrosion-resistant copper-clad steel, furnace brazed to the tubular heating elements to assure superior heat transfer. Wide spacing prevents clogging. Air is evenly drawn across the circumferential elements preventing hot spots and prolonging element life.

**Rugged Motor and Dynamically Balanced Fan** provides a high volume of hot air.

**Integral Automatic Reset Thermal Cutout** for fast heat response and overheat protection.

### Features (2 - 20 kW models)

**Fan Only Operation** — UB-23 and UB-32, (excluding the 120V UB-32), have a separate fan control switch for circulating air during summer months.

**Totally Enclosed Fan Motor** — Continuous duty with built-in automatic reset thermal overload protection operates on same voltage as supplied to the heater, except on 480 and 550 volt where motor is either 115 or 230 volts. All motors are single phase with sleeve bearings.

Heaters with model numbers having a suffix "T" include a transformer to stepdown the voltage for operating the fan motor.

External contactor is not necessary with heaters having a model number suffix "R".

**Wall or Ceiling Mounting Brackets** are available separately for field installation depending on mounting arrangement desired.

### Features (25 - 50 kW models)

**Universal Wall & Ceiling Mounting Bracket** is included to provide flexibility in the mounting arrangement.

**Fan Interlock** — Fan motor contactor includes a set of auxiliary contacts to prevent heating elements from being energized unless contacts of fan motor contactor are closed.

**Thermal Fan Delay** allows fan motor to continue to operate after heating thermostat has been satisfied to maximize transfer of generated heat to space being heated and extend operating life of heating elements.

**Built-in Controlling Contactors and Line Fusing** — All heaters drawing 48 Amps or greater are sub-divided into two (2) circuits with built-in line fuses and controlling contactors. Units drawing less than 48 Amps have built-in contactors only, line fusing must be provided externally. All units regardless of amperage rating have built-in fuse protection for the motor and transformer.

**Integral 120V Control Circuit** — 120 volt power for the control circuit is provided from the unit mounted transformer to eliminate the need to run separate power to the unit for control.

**Heavy Duty 1/3 HP Motor** operates at 1,550 RPM on line voltage. Motor has built-in thermal overload protection, permanently lubricated ball bearings and factory installed line fuses for maximum trouble-free service life.

### Advantages

- Low Maintenance
- High Capacity
- Primary Heating
- Supplementary Heating
- Dual System Heating
- Long Horizontal Air Throw
- Long Life

Refer to  
WR-80, WR-90  
in the Controls section.



## UB

### High Capacity Horizontal Blower Heater *(cont'd.)*

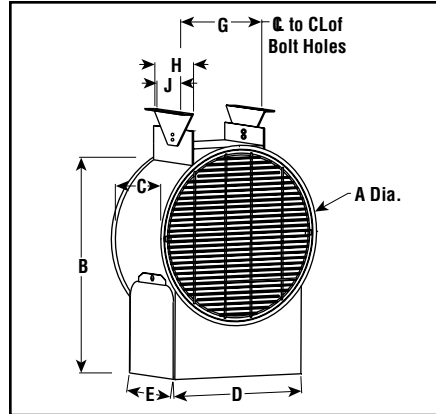
#### Mounting Kits

For 2 - 20 kW Heaters - Order Separately

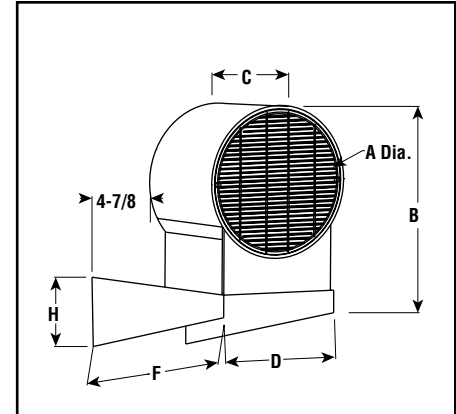
Heater	Model	PCN
<b>Ceiling Mounting Brackets</b>		
UB-23 and 32	1-44419	264330
UB-502 and 752	2-44419	264348
UB-1002, 1252, 1502 and 2002	3-44419	264356
<b>Wall Mounting Brackets</b>		
UB-23 and 32	WUB-1	264305
UB-502 and 752	WUB-3	264313
UB-1002, 1252, 1502 and 2002	WUB-4	264321

For 25 - 50 kW Heaters - a Universal Wall & Ceiling Mounting Bracket is included.

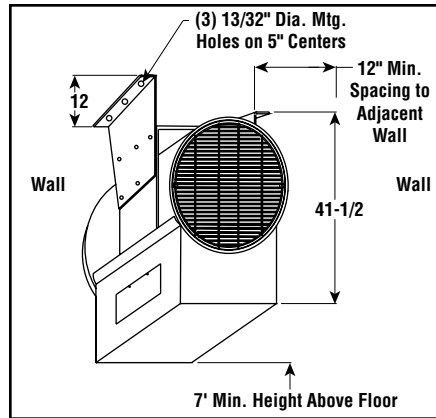
#### Ceiling Mounting Kit (2-20 kW) — Dimensions (Inches)



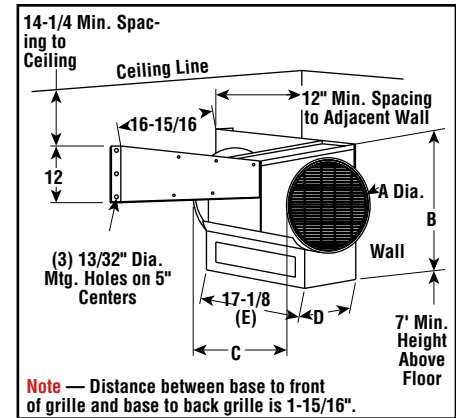
#### Wall Mounting Kit (2-20 kW) — Dimensions (Inches)



#### Ceiling Mounting Kit (25-50 kW) — Dimensions (Inches)



#### Wall Mounting Kit (25-50 kW) — Dimensions (Inches)



**Note** — Distance between base to front of grille and base to back grille is 1-15/16".

#### Dimensions (Inches)

Model	Dimensions (In.)									
	A	B	C	D	E	F	G	H	J	
UB-23	10-3/8	13-1/2	8	6-7/16	3	11-3/8	9-7/16	6	4	
UB-32	10-3/8	13-1/2	8	6-7/16	3	11-3/8	9-7/16	6	4	
UB-502	13-5/8	17-3/16	13	8-7/16	7-9/16	15-9/16	11-7/8	8	6	
UB-752	13-5/8	17-3/16	13	8-7/16	7-9/16	15-9/16	11-7/8	8	6	
UB-1002	17-1/8	20-3/4	15-3/16	11-3/4	9-5/16	17-5/32	12-1/4	10	8	
UB-1252	17-1/8	20-3/4	15-3/16	11-3/4	9-5/16	17-5/32	12-1/4	10	8	
UB-1502	17-1/8	20-3/4	15-3/16	11-3/4	9-5/16	17-5/32	12-1/4	10	8	
UB-2002	17-1/8	20-3/4	15-3/16	11-3/4	9-5/16	17-5/32	12-1/4	10	8	
UB-2502	17-1/8	23-5/16	21	14	17-1/8	17-5/32	18-15/16	10	8	
UB-3002	17-1/8	23-5/16	21	14	17-1/8	17-5/32	18-15/16	10	8	
UB-3502	21-1/8	27-5/16	21	17-7/16	17-1/8	17-5/32	22-15/16	10	8	
UB-4002	21-1/8	27-5/16	21	17-7/16	17-1/8	17-5/32	22-15/16	10	8	
UB-4502	21-1/8	27-5/16	21	17-7/16	17-1/8	17-5/32	22-15/16	10	8	
UB-5002	21-1/8	27-5/16	21	17-7/16	17-1/8	17-5/32	22-15/16	10	8	

# Industrial Air Heaters

## UB High Capacity Horizontal Blower Heater *(cont'd.)*

Electrical (60 Hz)				Motor				Air Delivery					Ordering			
kW	Volts	Phase	Amps	Volts	Phase	HP	RPM	CFM	FPM	Temp. Rise (°F)	Horiz. Throw (Ft.)	Mtg. Height (Ft.)	Model	Stock	PCN	Wt. (Lbs.)
2	120	1	16.7	115	1	1/15	1,550	316	657	21	10	8	UB-23	S	261403	13.5
2	208	1	9.6	208	1	1/15	1,550	316	657	21	10	8	UB-23	NS	261411	13.5
2	240	1	8.3	230	1	1/15	1,550	316	657	21	10	8	UB-23	NS	261420	13.5
3	120	1	25	115	1	1/15	1,550	316	657	31	10	8	UB-32	S	261438	13.5
3	208	1	14.4	208	1	1/15	1,550	316	657	31	10	8	UB-32	S	261446	13.5
3	240	1	12.5	230	1	1/15	1,550	316	657	31	10	8	UB-32	S	261454	13.5
5	120	1	41.7	115	1	1/15	1,050	405	430	40	12-1/2	8	UB-502D	NS	261462	43
5	208	1	24	208	1	1/15	1,050	405	430	40	12-1/2	8	UB-502D	NS	261489	43
5	240	1	20.8	230	1	1/15	1,050	405	430	40	12-1/2	8	UB-502D	NS	261500	43
5	550 <sup>1</sup>	3	5.3	230	1	1/15	1,050	405	430	40	12-1/2	8	UB-502D	NS	285368	43
5	240	1	20.8	230	1	1/15	1,050	405	430	40	12-1/2	8	UB-502R	NS	264250	43
5	550 <sup>1</sup>	3	5.3	115	1	1/15	1,050	405	430	40	12-1/2	8	UB-502	NS	266685	43
5	208	3	13.9	208	1	1/15	1,050	405	430	40	12-1/2	8	UB-502D	NS	261497	43
5	240	3	12	230	1	1/15	1,050	405	430	40	12-1/2	8	UB-502D	NS	261518	43
5	240	3	12	230	1	1/15	1,050	405	430	40	12-1/2	8	UB-502R	NS	269755	43
5	480	1	10.4	115	1	1/15	1,050	405	430	40	12-1/2	8	UB-502	NS	261526	43
5	480	1	10.4	230	1	1/15	1,050	405	430	40	12-1/2	8	UB-502	NS	269114	43
5	480	3	6	115	1	1/15	1,050	405	430	40	12-1/2	8	UB-502	NS	261534	43
5	480	3	6	115	1	1/15	1,050	405	430	40	12-1/2	8	UB-502T	S	269704	51
5	480	3	6	230	1	1/15	1,050	405	430	40	12-1/2	8	UB-502	NS	265199	43
5	480	3	6	115	1	1/15	1,050	405	430	40	12-1/2	8	UB-502R	NS	264268	43
5	480	3	6	230	1	1/15	1,050	405	430	40	12-1/2	8	UB-502T	NS	264233	51
7.5	208	1	36.1	208	1	1/15	1,050	590	640	37	13	8	UB-752	NS	261569	43
7.5	208	3	20.8	208	1	1/15	1,050	590	640	37	13	8	UB-752D	NS	261577	43
7.5	240	1	31.3	230	1	1/15	1,050	590	640	37	13	8	UB-752D	NS	261585	43
7.5	240	3	18.1	230	1	1/15	1,050	590	640	37	13	8	UB-752D	NS	261593	43
7.5	240	3	18.1	230	1	1/15	1,050	590	640	37	13	8	UB-752R	NS	264276	43
7.5	480	1	15.6	115	1	1/15	1,050	590	640	37	13	8	UB-752	NS	261606	43
7.5	480	1	15.6	230	1	1/15	1,050	590	640	37	13	8	UB-752	NS	269122	43
7.5	480	3	9	115	1	1/15	1,050	590	640	37	13	8	UB-752	S	261614	43
7.5	480	3	9	230	1	1/15	1,050	590	640	37	13	8	UB-752	NS	265228	43
7.5	480	3	9	230	1	1/15	1,050	590	640	37	13	8	UB-752R	NS	264292	43
7.5	480	3	9	115	1	1/15	1,050	590	640	37	13	8	UB-752T	NS	265324	51
7.5	480	3	9	115	1	1/15	1,050	590	640	37	13	8	UB-752R	NS	264284	43
7.5	480	3	9	230	1	1/15	1,050	590	640	37	13	8	UB-752T	NS	264241	51
7.5	550 <sup>1</sup>	3	7.9	115	1	1/15	1,050	590	640	37	13	8	UB-752	NS	266693	43
7.5	550	3	7.9	230	1	1/15	1,050	590	640	37	13	8	UB-752	NS	285376	43
10	208 <sup>1</sup>	1	48.1	208	1	1/15	1,050	1,180	800	28	40	9	UB-1002E	NS	261622	48
10	208	3	27.8	208	1	1/15	1,050	1,180	800	28	40	9	UB-1002	NS	261630	48
10	240	1	41.7	230	1	1/15	1,050	1,180	800	28	40	9	UB-1002	NS	261649	48
10	240	3	24.1	230	1	1/15	1,050	1,180	800	28	40	9	UB-1002E	NS	261657	48
10	480	1	20.1	115	1	1/15	1,050	1,180	800	28	40	9	UB-1002	NS	261665	48
10	480	3	12	115	1	1/15	1,050	1,180	800	28	40	9	UB-1002E	NS	261673	48
10	480	1	20.8	230	1	1/15	1,050	1,180	800	28	40	9	UB-1002	NS	265244	48
10	550 <sup>1</sup>	3	10.5	115	1	1/15	1,050	1,180	800	28	40	9	UB-1002	NS	266706	48
10	480	3	12	230	1	1/15	1,050	1,180	800	28	40	9	UB-1002	NS	265236	48
10	550 <sup>1</sup>	3	10.5	230	1	1/15	1,050	1,180	800	28	40	9	UB-1002	NS	285350	48
10	480	3	12	115	1	1/15	1,050	1,180	800	28	40	9	UB-1002T	NS	277843	56
10	480	3	12	230	1	1/15	1,050	1,180	800	28	40	9	UB-1002T	NS	277851	56
12.5	208	3	34.7	208	1	1/15	1,050	1,180	800	36	40	9	UB-1252	NS	261681	48
12.5	240 <sup>1</sup>	1	52.1	230	1	1/15	1,050	1,180	800	36	40	9	UB-1252	NS	261690	48
12.5	240	3	30.1	230	1	1/15	1,050	1,180	800	36	40	9	UB-1252	NS	261702	48
12.5	480	1	26	115	1	1/15	1,050	1,180	800	36	40	9	UB-1252	NS	261710	48
12.5	480	1	26	230	1	1/15	1,050	1,180	800	36	40	9	UB-1252	NS	265260	48
12.5	480	3	15.1	115	1	1/15	1,050	1,180	800	36	40	9	UB-1252	NS	261729	48
12.5	480	3	15.1	230	1	1/15	1,050	1,180	800	36	40	9	UB-1252	NS	265252	48
15	208	3	41.7	208	1	1/15	1,050	1,330	900	32	45	10	UB-1502	NS	261737	52
15	240 <sup>1</sup>	1	62.5	230	1	1/15	1,050	1,330	900	32	45	10	UB-1502	NS	261745	52
15	240	3	36.1	230	1	1/15	1,050	1,330	900	32	45	10	UB-1502	NS	261753	52
15	480	1	31.3	115	1	1/15	1,050	1,330	900	32	45	10	UB-1502	NS	261761	52
15	480	1	31.3	230	1	1/15	1,050	1,330	900	32	45	10	UB-1502	NS	265279	52
15	480	3	18.1	115	1	1/15	1,050	1,330	900	32	45	10	UB-1502	S	261770	52
15	480	3	18.1	230	1	1/15	1,050	1,330	900	32	45	10	UB-1502	NS	265295	52
15	480	3	18.1	115	1	1/15	1,050	1,330	900	32	45	10	UB-1502E-T	S	266677	60
15	550 <sup>1</sup>	3	15.8	115	1	1/15	1,050	1,330	900	32	45	10	UB-1502	NS	264364	52
19.9	240	3	47.9	230	1	1/15	1,050	1,330	900	42	45	11	UB-2002	NS	261809	52
20	480	1	41.7	115	1	1/15	1,050	1,330	900	42	45	11	UB-2002	NS	261817	52
20	480	1	41.7	230	1	1/15	1,050	1,330	900	42	45	11	UB-2002	NS	265287	52
20	480	3	24.1	115	1	1/15	1,050	1,330	900	42	45	11	UB-2002	NS	261825	52
20	480	3	24.1	230	1	1/15	1,050	1,330	900	42	45	11	UB-2002	NS	265308	52
20	480	3	24.1	115	1	1/15	1,050	1,330	900	42	45	11	UB-2002E-T	S	285384	60
20	550 <sup>1</sup>	3	21	115	1	1/15	1,050	1,330	900	42	45	11	UB-2002	NS	264372	52

INDUSTRIAL

# Industrial Air Heaters

## UB High Capacity Horizontal Blower Heater *(cont'd.)*

Electrical (60 Hz)				Motor				Air Delivery					Ordering			
kW	Volts	Phase	Amps	Volts	Phase	HP	RPM	CFM	FPM	Temp. Rise (°F)	Horiz. Throw (Ft.)	Mtg. Height (Ft.)	Model	Stock	PCN	Wt. (Lbs.)
25	240	3	60.2	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332558	185
25	240	3	60.2	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332566	185
25	240	3	60.2	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332574	185
25	240	3	60.2	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332582	185
25	480	3	30.1	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332590	185
25	480	1	52.1	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332603	185
25	480	1	52.1	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332611	185
25	480	1	52.1	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332620	185
25	480	1	52.1	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332638	185
25	480	3	30.1	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332646	185
25	480	3	30.1	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332654	185
25	480	3	30.1	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332662	185
25	480	3	30.1	460	3	1/3	1,725	1,450	920	57	48	12	UB-2502	NS	332670	185
25	480	3	30.1	460	3	1/3	1,725	1,450	920	57	48	12	UB-2502	NS	332689	185
25	480	3	30.1	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332697	185
25	550	3	26.3	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332700	185
25	550	3	26.3	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332718	185
25	550	3	26.3	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332726	185
25	575	3	26.3	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332734	185
25	575	3	26.3	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332742	185
25	575	3	26.3	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332750	185
25	575	3	26.3	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332769	185
25	600	3	24.1	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332777	185
25	600	3	24.1	115	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332785	185
25	600	3	24.1	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332793	185
25	600	3	24.1	230	1	1/3	1,550	1,300	825	64	48	12	UB-2502	NS	332806	185
30	240	3	72.3	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332814	185
30	240	3	72.3	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332822	185
30	240	3	72.3	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332830	185
30	240	3	72.3	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332849	185
30	480	1	62.5	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332857	185
30	480	1	62.5	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332865	185
30	480	1	62.5	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332873	185
30	480	1	62.5	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332881	185
30	480	3	36.1	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332890	185
30	480	3	36.1	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332902	185
30	480	3	36.1	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332910	185
30	480	3	36.1	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332929	185
30	480	3	36.1	460	3	1/3	1,725	1,450	920	69	48	13	UB-3002	NS	332937	185
30	480	3	36.1	460	3	1/3	1,725	1,450	920	69	48	13	UB-3002	NS	332945	185
30	550	3	31.5	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332953	185
30	550	3	31.5	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332961	185
30	550	3	31.5	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332970	185
30	550	3	31.5	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332988	185
30	575	3	30.2	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	332996	185
30	575	3	30.2	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	333008	185
30	575	3	30.2	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	333016	185
30	575	3	30.2	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	333024	185
30	600	3	28.9	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	333032	185
30	600	3	28.9	115	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	333040	185
30	600	3	28.9	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	333059	185
30	600	3	28.9	230	1	1/3	1,550	1,300	825	77	48	13	UB-3002	NS	333067	185
35	240	3	84.3	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333075	210
35	240	3	84.3	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333083	210
35	480	1	72.9	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333091	210
35	480	1	72.9	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333104	210
35	480	1	72.9	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333112	210
35	480	1	72.9	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333120	210
35	480	3	42.2	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333139	210
35	480	3	42.2	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333147	210
35	480	3	42.2	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333155	210
35	480	3	42.2	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333163	210
35	480	3	42.2	460	3	1/3	1,725	2,800	1,165	42	54	14	UB-3502	NS	333171	210
35	480	3	42.2	460	3	1/3	1,725	2,800	1,165	42	54	14	UB-3502	NS	333180	210
35	550	3	36.8	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333198	210
35	550	3	36.8	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333200	210
35	550	3	36.8	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333219	210
35	550	3	36.8	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333227	210
35	575	3	35.2	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333235	210
35	575	3	35.2	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333243	210
35	575	3	35.2	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333251	210
35	575	3	35.2	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333260	210
35	600	3	33.7	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333278	210



# Industrial Air Heaters

## UB High Capacity Horizontal Blower Heater

Electrical (60 Hz)				Motor				Air Delivery					Ordering			
kW	Volts	Phase	Amps	Volts	Phase	HP	RPM	CFM	FPM	Temp. Rise (°F)	Horiz. Throw (Ft.)	Mtg. Height (Ft.)	Model	Stock	PCN	Wt. (Lbs.)
35	600	3	33.7	115	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333286	210
35	600	3	33.7	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333294	210
35	600	3	33.7	230	1	1/3	1,550	2,500	1,040	47	54	14	UB-3502	NS	333307	210
40	480	1	83.3	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333315	210
40	480	1	83.3	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333323	210
40	480	1	83.3	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333331	210
40	480	1	83.3	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333340	210
40	480	3	48.2	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333358	210
40	480	3	48.2	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333366	210
40	480	3	48.2	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333374	210
40	480	3	48.2	230	1	1/3	1,500	2,500	1,040	53	54	15	UB-4002	NS	333382	210
40	480	3	48.2	460	3	1/3	1,725	2,800	1,165	48	54	15	UB-4002	NS	333390	210
40	480	3	48.2	460	3	1/3	1,725	2,800	1,165	48	54	15	UB-4002	NS	333403	210
40	550	3	42	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333411	210
40	550	3	42	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333420	210
40	550	3	42	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333438	210
40	550	3	42	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333446	210
40	575	3	40.2	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333454	210
40	575	3	40.2	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333462	210
40	575	3	40.2	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333470	210
40	575	3	40.2	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333489	210
40	600	3	38.5	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333497	210
40	600	3	38.5	115	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333500	210
40	600	3	38.5	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333518	210
40	600	3	38.5	230	1	1/3	1,550	2,500	1,040	53	54	15	UB-4002	NS	333526	210
45	480	1	93.8	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333534	210
45	480	1	93.8	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333542	210
45	480	3	54.2	115	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333550	210
45	480	3	54.2	115	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333569	210
45	480	3	54.2	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333577	210
45	480	3	54.2	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333585	210
45	480	3	54.2	460	3	1/3	1,725	2,800	1,165	54	54	17	UB-4502	NS	333593	210
45	480	3	54.2	460	3	1/3	1,725	2,800	1,165	54	54	17	UB-4502	NS	333606	210
45	550	3	47.3	115	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333614	210
45	550	3	47.3	115	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333622	210
45	550	3	47.3	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333630	210
45	550	3	47.3	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333649	210
45	575	3	45.2	115	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333657	210
45	575	3	45.2	115	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333665	210
45	575	3	45.2	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333673	210
45	575	3	45.2	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333681	210
45	600	3	43.4	115	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333690	210
45	600	3	43.4	115	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333702	210
45	600	3	43.4	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333710	210
45	600	3	43.4	230	1	1/3	1,550	2,500	1,040	60	54	17	UB-4502	NS	333729	210
50	480	3	60.2	115	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333737	210
50	480	3	60.2	115	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333745	210
50	480	3	60.2	230	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333753	210
50	480	3	60.2	230	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333761	210
50	480	3	60.2	460	3	1/3	1,725	2,800	1,165	60	54	17	UB-5002	NS	333770	210
50	480	3	60.2	460	3	1/3	1,725	2,800	1,165	60	54	17	<b>UB-5002</b>	<b>S</b>	<b>333788</b>	210
50	550	3	52.5	115	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333796	210
50	550	3	52.5	115	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333809	210
50	550	3	52.5	230	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333817	210
50	550	3	52.5	230	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333825	210
50	575	3	50.3	115	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333833	210
50	575	3	50.3	115	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333841	210
50	575	3	50.3	230	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333850	210
50	575	3	50.3	230	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333868	210
50	600	3	48.2	115	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333876	210
50	600	3	48.2	115	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333884	210
50	600	3	48.2	230	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333892	210
50	600	3	48.2	230	1	1/3	1,550	2,500	1,040	67	54	17	UB-5002	NS	333905	210

**Stock Status:** S = stock NS = non-stock

**To Order**—Specify model, PCN, kW, volts, phase and quantity.

1. Not UL Listed.

**Other Note** — Up to 600V available, contact your Local Chromalox Sales office.

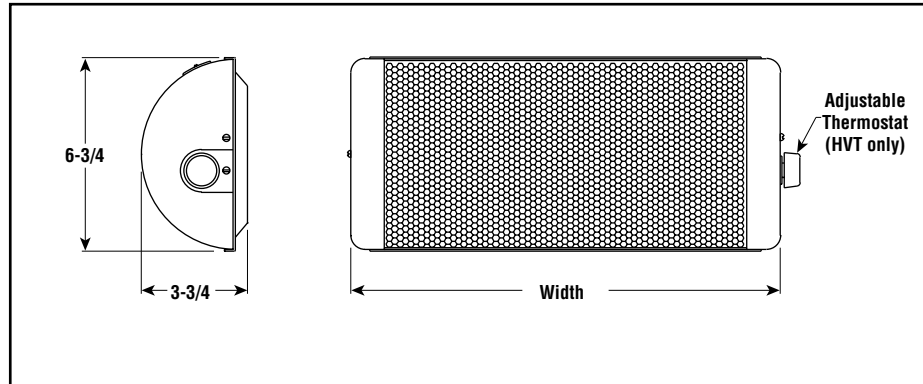
INDUSTRIAL

## EH & HVT Industrial Convection Heaters



- Without Thermostat (type EH)
- With Thermostat (type HVT)
- 250 - 1,000 Watts
- 853 - 3,412 Btuh
- 120 and 240 Volt
- Single Phase

### Dimensions (Inches)



### Description

EH and HVT industrial convection heaters are designed for the highest dependability for rough plant areas and small manned or unattended areas.

### Applications

- Crane Cabs
- Shop Offices
- Small Plant Areas
- Non-Hazardous Pump Sheds

### Construction

**Cabinet** — Heavy gauge perforated steel case finished in corrosion resistant almond polyester powder coat paint.

**Heating Elements** are strip type construction and are the most rugged, durable, long-lasting elements available to industry.

**Built-in Thermostat** — (HVT only). Furnished standard to provide temperatures from 50°F - 110°F.

### Advantages

- Long Life
- Rugged for High Traffic Areas
- Easy Installation
- Corrosion Resistant

**CAUTION** — Not intended for use where flammable vapors, gases, liquids or other combustible atmospheres are present.

### Specifications and Ordering Information

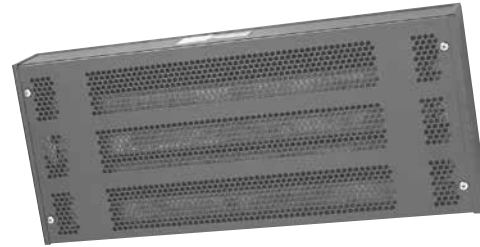
kW	Volts	Phase	Amps	Btuh	Dimensions (In.)			Model	Stock	PCN	Wt. (Lbs.)
					Height	Width	Depth				
<b>EH — Without Thermostat</b>											
0.25	120	1	2.1	853	6-3/4	14-5/8	3-3/4	EH-1221	S	261833	7
0.25	240	1	1	853	6-3/4	14-5/8	3-3/4	EH-1221	NS	261841	7
0.5	120	1	4.2	1,706	6-3/4	14-5/8	3-3/4	EH-1251	S	261850	7
0.5	240	1	2.1	1,706	6-3/4	14-5/8	3-3/4	EH-1251	NS	261868	7
<b>HVT — With Thermostat</b>											
0.5	120	1	4.2	1,706	6-3/4	28-5/8	3-3/4	HVT-1251	S	240055	13
1	120	1	8.3	3,412	6-3/4	28-5/8	3-3/4	HVT-2411	S	240071	15

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

Refer to  
WR-80, WR-90  
in the Controls section.

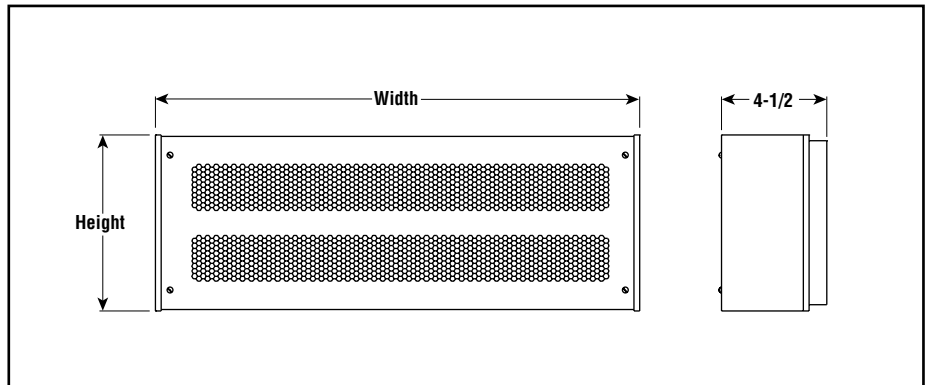


## H Horizontal Convection Heater



- 1 - 3 kW
- 3,412 - 10,236 Btuh
- 120, 240 and 480 Volt
- Single Phase

### Dimensions (Inches)



### Description

Type H horizontal convection heaters are designed for the highest dependability for rugged plant areas and small manned or unattended areas.

### Applications

- Crane Cabs
- Shop Offices
- Small Plant Areas
- Non-Hazardous Pump Sheds

### Construction

**Cabinet** — Heavy gauge perforated steel case finished in corrosion resistant black polyester powder coat paint.

**Heating Elements** are strip type construction and are the most rugged, durable, long-lasting elements available to industry.

**CAUTION** — Not intended for use where flammable vapors, gases, liquids or other combustible atmospheres are present.

### Advantages

- Long Life
- Durable for High Traffic Areas
- Easy Installation
- Corrosion Resistant

### Specifications and Ordering Information

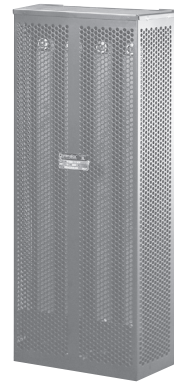
kW	Volts	No. Elem.	Amps	Btuh	Dimensions (In.)			Model	Stock	PCN	Wt. (Lbs.)
					Height	Width	Depth				
1	120	2	8.3	3,412	7-1/2	20-3/4	4-1/2	H-1801	S	261948	28
1	240	2	4.2	3,412	7-1/2	20-3/4	4-1/2	H-1801	NS	261956	28
1.5	120	2	12.5	5,118	7-1/2	26-1/2	4-1/2	H-2405	NS	262000	30
1.5	240	2	6.3	5,118	7-1/2	26-1/2	4-1/2	H-2405	S	262019	30
1.5	480	2	3.1	5,118	7-1/2	26-1/2	4-1/2	H-2405	NS	262027	30
2	120	4	16.7	6,824	11-1/4	26-1/2	4-1/2	H-2406	S	262060	32
2	240	4	8.3	6,824	11-1/4	26-1/2	4-1/2	H-2406	S	262078	32
2	480	4	4.2	6,824	11-1/4	26-1/2	4-1/2	H-2406	S	262086	32
3	240	4	12.5	10,236	11-1/4	26-1/2	4-1/2	H-2407	S	262131	32
3	480	4	6.3	10,236	11-1/4	26-1/2	4-1/2	H-2407	S	262140	32

**Stock Status:** S = stock AS = assembly stock NS = non-stock  
**To Order** — Specify model, PCN, kW, volts, phase and quantity.

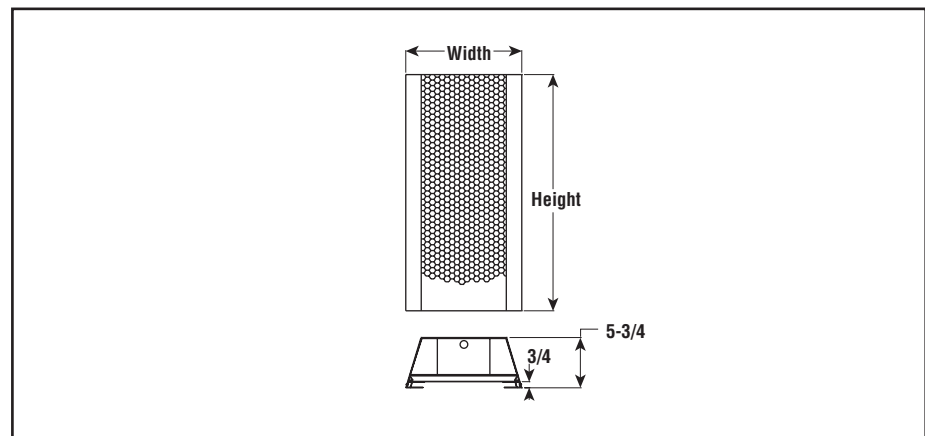
Refer to  
WR-80, WR-90  
in the Controls section.

## V Vertical Convection Heater

- 2 - 4.5 kW
- 6,824 - 15,354 Btuh
- 120, 240 and 480 Volt
- Single Phase



### Dimensions (Inches)



### Description

Type V vertical convection heaters are designed for the highest dependability for rugged plant areas and small manned or unattended areas.

### Applications

- Crane Cabs
- Shop Offices
- Small Plant Areas
- Non-Hazardous Pump Sheds

### Construction

**Cabinet** — Heavy gauge perforated steel case finished in corrosion resistant black polyester powder coat paint.

**Heating Elements** are strip type construction and are the most rugged, durable, long-lasting elements available to industry.

**CAUTION** — Not intended for use where flammable vapors, gases, liquids or other combustible atmospheres are present.

### Advantages

- Long Life
- Durable for High Traffic Areas
- Easy Installation
- Corrosion Resistant
- Low Maintenance

### Specifications and Ordering Information

kW	Volts	No. Elem.	Amps	Btuh	Dimensions (In.)			Model	Stock	PCN	Wt. (Lbs.)
					Height	Width	Depth				
2	240	4	8.3	6,824	27	12-3/4	5-3/4	V-2020	NS	262254	34
3	240	4	12.5	10,236	27	12-3/4	5-3/4	V-2030	S	262318	34
3	480	4	6.3	10,236	27	12-3/4	5-3/4	V-2030	NS	262326	34
4.5	120	6	37.5	10,236	27	17-3/4	5-3/4	V-2040	NS	262369	44
4.5	240	6	18.8	15,354	27	17-3/4	5-3/4	V-2040	NS	262377	44
4.5	480	6	9.4	15,354	27	17-3/4	5-3/4	V-2040	S	262385	44

**Stock Status:** S = stock AS = assembly stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

Refer to  
WR-80, WR-90  
in the Controls section.

## SDRA Portable High Temperature Blower Heater

- 30, 48 and 60kW
- 102,360 to 240,720 BTUH
- 480 or 600 Volts Three Phase
- Built-in Controls
- Air Temperature to 180°F
- Use with Flexible Duct



### Applications

- Aircraft Cabin Heating
- Plant Maintenance
- Building Construction Sites
- Curing Plaster and Concrete
- Warming Workers
- Drying After Flood Damage
- Insect Control in Grain Mills
- Thawing Frozen Pipes
- Re-circulating Fresh Air
- Circulating Fresh Air
- Exhausting Contaminated Air

### Description

The Chromalox SDRA SuperDragon is a rugged, self contained, mobile electric blower heater that can be used with or without optional inlet or outlet 20" diameter flexible duct. The SDRA units can be used for comfort heating or process heating temperatures to 180°F, and can be located in an ambient of up to 130°F. The SDRA includes a fan only switch, that allows the unit to be used to recirculate room air, supply fresh air source, or capture fume exhaust. The SDRA heaters provide for easily adjustable airflow for a wide variety of applications including flexible ducting up to 165 feet in length. Each unit includes two thermostats to enable the operator to set the maximum inlet and outlet temperatures, magnetic contactor(s), a 120 volt control transformer, power on pilot lights and a high limit cutout to protect the heater against unintended low air flow conditions. The SDRA can be left unattended without the threat of fire or by-product of combustion from fuel fired heaters. The bright red polyester powder coated heater can be easily moved because of two 10" diameter pneumatic wheels on the outlet and a 4" lockable swivel castor on the inlet.

### Construction

#### Heating Section

A structural frame consisting of 2 spun steel rings and formed steel channels support a 20 gauge steel cylinder phosphate coated for corrosion resistance and finished in red polyester powder coat paint. The cylinder contains patented metal sheath Fintube® heating elements that include industrial grade .475" diameter steel sheath tubular heaters with furnace brazed steel fins for maximum

heat transfer. The elements are firmly attached to a robust steel assembly with steel bulkhead threaded fittings.

#### Fan Section

The fan assembly includes a 16" tubeaxial fan designed for industrial use and includes a streamlined belt tunnel that isolates the motor, drives and bearings from the air stream. The fan blades are precision balanced made with spark resistant aluminum and includes permanently lubricated ball bearings. Safety belt guards are supplied to protect operating personnel from harm. The drip proof motor is rated 1hp, 3 phase 1,725 rpm and operates on line voltage. Fan speed can be varied from 1,500 to 2,300 RPM for various air flows by use of adjustable pulleys.

#### Controls

Two adjustable thermostats (60 to 180°F) are located on the heater cylinder to allow the inlet and outlet temperatures to be adjustable for single pass heating or recirculated air temperature control. The power is switched by magnetic contactor(s) which are located in a gasketed NEMA 4 enclosure along with the motor starter, control voltage transformer and heater power fusing. A fan only toggle switch and pilot lights for power and heater are also located in the enclosure.

#### Safety Guards

Front and rear grills are 10 gauge, finished in black polyester powder coat paint and are designed to meet OSHA requirements.

PORTABLE

## SDRA

### Portable High Temperature Blower Heater *(cont'd.)*

#### Specifications and Ordering Information

kW	Volts 3 Ph	Amps	BTUH	HP	CFM	Temp. Rise of F	Model	Stock	PCN	Dimensions (In.)			Wt. (Lbs)
										W	L	H	
30	480	37.2	102,360	1	1100-2700	35-88	<b>SDRA-30-43</b>	<b>S</b>	<b>295689</b>	26	44	38.5	200
30	600	30.0	102,360	1	1100-2700	35-88	SDRA-30-93	NS	295697	26	44	38.5	200
48	480	58.9	163,776	1	1100-2700	59-141	SDRA-48-43	NS	295700	30.25	44	38.5	210
48	600	47.3	163,776	1	1100-2700	59-141	SDRA-48-93	NS	295718	30.25	44	38.5	210
60	480	73.3	204,720	1	1100-2700	70-172	<b>SDRA-60-43</b>	<b>S</b>	<b>295726</b>	30.25	44	38.5	220
60	600	58.9	204,720	1	1100-2700	70-172	SDRA-60-93	NS	295734	30.25	44	38.5	220

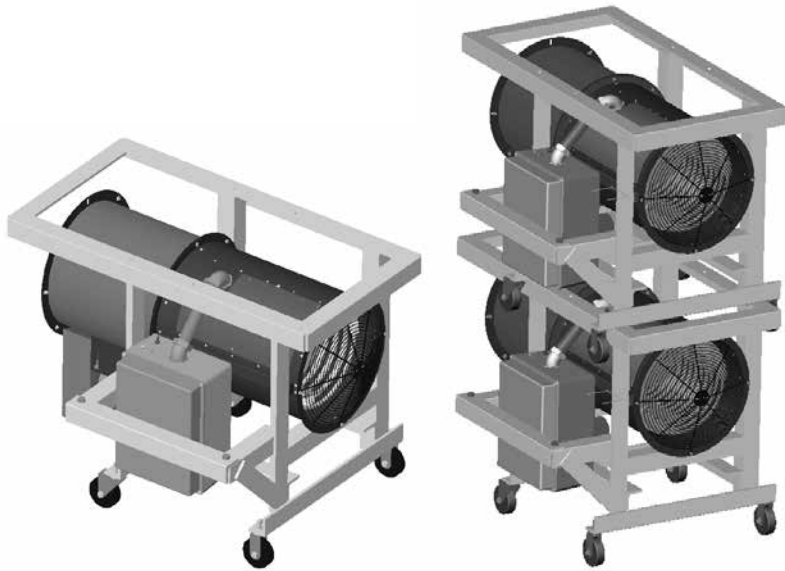
**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

## SDRA-RG Series

### Rental Grade Portable Blower Heater

#### Description

The SDRA-RG series of SuperDragons have the same features as the standard industrial grade units except that they feature a welded steel frame and can be stacked two high to reduce floor space during storage or transportation to various venues. The rental grade units feature 4" diameter casters, two of which lock.



Two SDRA-RG Stacked

#### Specifications and Ordering Information

kW	Volts 3 Ph	Amps	BTUH	HP	CFM	Temp. Rise of F	Model	Stock	PCN	Dimensions (In.)			Wt. (Lbs)
										W	L	H	
30	480	37.2	102,360	1	1100-2700	35-88	<b>SDRA-30-43RG</b>	<b>S</b>	<b>295742</b>	35.75	45.75	34.5	280
30	600	30.0	102,360	1	1100-2700	35-88	SDRA-30-93RG	NS	295750	35.75	45.75	34.5	280
48	480	58.9	163,776	1	1100-2700	59-141	SDRA-48-43RG	NS	295769	35.75	45.75	34.5	290
48	600	47.3	163,776	1	1100-2700	59-141	SDRA-48-93RG	NS	295777	35.75	45.75	34.5	290
60	480	73.3	204,720	1	1100-2700	70-172	<b>SDRA-60-43RG</b>	<b>S</b>	<b>295785</b>	35.75	45.75	34.5	300
60	600	58.9	204,720	1	1100-2700	70-172	SDRA-60-93RG	NS	295793	30.25	45.75	34.5	300

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

## SDRA

Portable High Temperature Blower Heater (*cont'd.*)

Model DRA-CC  
ChromaCube Portable Heating System for Use with Customer Supplied Air Source



### Description

The DRA-CC series of SuperDragons have the same construction features as the rental grade units except do not include the blower section. The units require customer supplied air via 20" diameter flexible duct. The control circuit includes an air flow switch to protect



Two DRA-CC Stacked

the heater in case of a restricted or loss of air flow. The control enclosure includes a contactor(s), control transformer, power fusing and power on pilot lights.

### Specifications and Ordering Information

kW	Volts 3 Ph	Amps	BTUH	CFM	Temp. Rise of	Model	Stock	PCN	Dimensions (In.)			Wt. (Lbs)
									W	L	H	
30	480	36.1	102,360	1100-2700	35-88	SDRA-CC-30-43	NS	295806	35.75	45.75	34	150
30	600	28.9	102,360	1100-2700	35-88	SDRA-CC-30-93	NS	295814	35.75	45.75	34	150
48	480	57.8	163,776	1100-2700	59-141	SDRA-CC-48-43	NS	295822	35.75	45.75	34	160
48	600	46.2	163,776	1100-2700	59-141	SDRA-CC-48-93	NS	295830	35.75	45.75	34	160
60	480	72.2	204,720	1100-2700	70-172	SDRA-CC-60-43	NS	295849	35.75	45.75	34	170
60	600	57.8	204,720	1100-2700	70-172	SDRA-CC-60-93	NS	295857	35.75	45.75	34	170

**Stock Status:** S = stock AS = assembly stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

**Note:** Units do not include fan/blower.

### Accessories



#### AD-16 Adjustable Damper

The adjustable damper can be attached to the intake side of the SuperDragon heaters to reduce the amount of airflow to insure the required air temperature is realized. This is especially important when the unit will be used without flexible duct.

Model	Description	Stock	PCN	Wt. (lbs)
AD-16	Adjustable Damper	S	295902	12



#### Duct Adapter Ring

Provides a means to attach 20" flexible duct to the intake or outlet of the SuperDragon series heaters. Two are required if using duct on the inlet and outlet for applications where air is recirculated.

Model	Description	Stock	PCN	Wt. (lbs)
DAR-20	20" Duct Adaptor	S	295873	20



#### Flexible Duct Splice

The flexible duct splice is designed to splice two or more 25' lengths of flexible duct to create longer lengths.

Model	Description	Stock	PCN	Wt. (lbs)
FDS-20	20" Dia. Duct Splice Kit	NS	295881	40

#### Duct Clamp (not shown)

Stainless steel band is designed to fit over the flexible duct for a secure attachment to the adapter ring or flexible duct splice.

Model	Description	Stock	PCN	Wt. (lbs)
DC-20	20" Dia. Duct Clamp	S	295890	3



#### FX-20 Flexible Duct

Chromalox heavy duty, flexible duct is constructed of 100% polyester based fabric and is 20" diameter and 25' long. It is made to resist wear and is suitable for temperatures from -40 to 220°F. The duct is internally supported with a steel wire helix and can be used on the air intake end of the heater and will not collapse under the negative pressure.

Model	Description	Stock	PCN	Wt. (lbs)
FX-20	20" Dia. Flexible Duct 25'	S	295865	45

PORTABLE



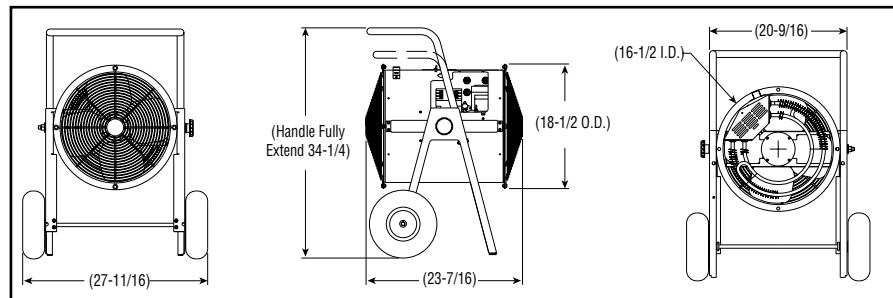
## DRA

### Portable Spot Industrial Salamander Blower Heater



- 7.5 to 30 kW
- 25,590 to 102,360 BTUH
- 208, 240, 480 and 600 Volts
- No Assembly Required
- Built-in Controls

#### Dimensions (Inches)



#### Description

The Chromalox DRA Dragon is a rugged industrial grade, self contained, highly mobile, electric blower heater. The DRA can be left unattended without the threat of poisoning from combustion by-products associated with fuel fired heaters. The built in safety features include an adjustable thermostat to control the outlet air temperature, auto-reset cutouts for the fan motor and heating elements. The thermostat provides settings for full off, fan only and temperature control in the heating setting. Dragon heaters feature a large, easily accessible control and wiring compartment containing a magnetic contactor; additional safety is provided by a 120 volt control voltage transformer and motor starter on 480 and 600 volt units. The bright red polyester powder coated heating cylinder is highly visible and can be rotated to direct heat or fan driven air movement where it is needed. For assured safety, all standard units meet the requirements of UL (File No. E7061) and CSA (File No. LR40859).

#### Construction

##### Heating Cylinder

A structural frame consisting of 2 spun steel rings and 2 formed steel channels support a 20 gauge steel cylinder phosphate coated for corrosion resistance, and finished in red polyester powder coat paint. The heating cylinder pivots vertically to direct air flow.

#### Leg Assembly

Each side consists of a one piece, 12 gauge, formed steel member, which accepts a steel tubular handle, held in place with a 1-1/2" long x 1/4" bolt on each side. The handle can be raised from the shipping position if desired. The rubber, pneumatic wheels are 10" diameter and 3 1/2" wide to provide ease of transporting the heater on irregular and gravel surfaces. The large wheels make it easy to roll up stairways without damage to decorative step surfaces.

#### Fan Assembly

The self-centering fan assembly consists of a totally enclosed, permanently lubricated motor and a dynamically balanced aluminum fan blade for smooth, quiet operation.

#### Controls

A thermostat, with a temperature range of 40°F to 100°F is included, with a full off position, a fan only position and an adjustable range of temperature settings in the heating mode position. Each unit includes a 3 pole magnetic contactor and auto-reset thermal cutout. 480 volt and 600 volt units also include a motor relay and 120 volt control voltage transformer for personnel safety.

#### Safety Guards

Front and rear grills are 10 gauge, finished in black polyester powder coat and are designed to meet OSHA safety requirements.

#### Heating Assembly

The patented metal sheath Fintube® heating elements consist of steel fins furnace brazed on industrial grade .475 diameter steel sheath tubular heaters for maximum heat transfer. The elements are held in place with steel bulkhead fittings for durability. The elements feature a high temperature finish for corrosive protection.

#### Applications

- For Best Results Use in Enclosed Area with Ceiling Heights Below 15'
- Warming Workers
- Thawing Frozen Pipes
- Thawing Railroad Cars
- Heating Large Tents
- Non-Hazardous Areas



# Industrial Air Heaters

## DRA

### Portable Spot Industrial Salamander Blower Heater (cont'd.)

#### Specifications and Ordering Information

kW	Volts	Phase	Amps <sup>1</sup>	BTU/H	HP	CFM	Temp. Rise °F <sup>2</sup>	Model	Stock	PCN	Wt. (Lbs.)
7.5	208	1 and 3	36.3/21.0	25,590	0.06	1070	23	DRA-07-83	NS	295523	65
7.5/5.6	240/208	1 and 3	31.5/18.3 <sup>3</sup>	25,590	0.06	1070	23	<b>DRA-07-23</b>	<b>S</b>	<b>295531</b>	65
9.75	208	1 and 3	47.1/27.3	33,267	0.06	1070	31	<b>DRA-10-83</b>	<b>S</b>	<b>295540</b>	65
10/7.5	240/208	1 and 3	40.8/23.7 <sup>3</sup>	33,267	0.06	1070	31	<b>DRA-10-23</b>	<b>S</b>	<b>295558</b>	65
15	208	3	41.8	51,180	0.06	1070	46	DRA-15-83	NS	295566	65
15/11.2	240/208	3	36.3 <sup>3</sup>	51,180	0.06	1070	46	<b>DRA-15-23</b>	<b>S</b>	<b>295574</b>	65
15	480	1 and 3	31.4	51,180	0.06	1070	46	<b>DRA-15-43</b>	<b>S</b>	<b>295582</b>	65
15	600	1 and 3	25.2	51,180	0.06	1070	46	DRA-15-93	NS	295596	65
19.5/15	240/208	3	47.1 <sup>3</sup>	66,534	0.06	1070	61	DRA-20-23	NS	295603	75
20	480	1 and 3	42.0	68,240	0.06	1070	62	<b>DRA-20-43</b>	<b>S</b>	<b>295611</b>	75
20	600	1 and 3	33.5	68,240	0.06	1070	62	DRA-20-93	NS	295620	75
30	480	3	36.3	102,360	0.06	1070	92	<b>DRA-30-43</b>	<b>S</b>	<b>295638</b>	75
30	600	3	29.1	102,360	0.06	1070	92	DRA-30-93	NS	295646	75

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

1. Includes motor amps
2. Temperature rise at 240V operation
3. 208V amperage is 86% of 240V value

Models designated 1 and 3 can be field converted from three phase to single phase. Consult product installation, operation, and maintenance manual for details.

All models factory pre-wired with an 8 foot cord and plug for use in 3 phase operation (See table 1 factory installed plug and cord information)

#### Factory Installed Plug and Cord Data

Model	Plug Type	Cable Type	Model	Plug Type	Cable Type
DRA-07-83	NEMA 18-30P, Straight Blade	10 AWG, 4 Wire	DRA-15-93	NEMA 17-30P, Twist-Lock	12 AWG, 4 Wire
DRA-07-23	NEMA 18-30P, Straight Blade	10 AWG, 4 Wire	DRA-20-23	NEMA 15-50P, Straight Blade	4 AWG, 4 Wire
DRA-10-83	NEMA 18-30P, Straight Blade	8 AWG, 4 Wire	DRA-20-43	NEMA 16-30P, Twist-Lock	8 AWG, 4 Wire
DRA-10-23	NEMA 18-30P, Straight Blade	8 AWG, 4 Wire	DRA-20-93	NEMA 17-30P, Twist-Lock	10 AWG, 4 Wire
DRA-15-83	NEMA 18-50P, Straight Blade	6 AWG, 4 Wire	DRA-30-43	Non-NEMA 50A, Twist-Lock	6 AWG, 4 Wire
DRA-15-23	NEMA 15-50P, Straight Blade	6 AWG, 4 Wire	DRA-30-93	Non-NEMA 50A, Twist-Lock	8 AWG, 4 Wire
DRA-15-43	NEMA 16-30P, Twist-Lock	10 AWG, 4 Wire			

PORTABLE

#### Standard Locking Plugs

Plug Type	Catalog Number	Description	Volts	Amps	NEMA#	Fits Cable Dia. (In.)	Stock	PCN	Wt. (Lbs.)
LOCKING	PGL-15-20	3 Pole, 4 Wire	250	20	L15-20	.385 to .780	NS	338845 / 511556014	0.5
LOCKING	PGL-16-30	3 Pole, 4 Wire	480	30	L16-30	.595 to 1.150	NS	338861 / 511556023	0.5
LOCKING	PGL-17-30	3 Pole, 4 Wire	600	30	L17-30	.595 to 1.150	<b>S</b>	<b>338870 / 511556032</b>	0.5
LOCKING	PGL-3763C	2 Pole, 3 Wire	600	50	N/A	.750 to 1.125	NS	338917 / 511556033	0.5
LOCKING	PGL-3765C	3 Pole, 4 Wire	600	50	N/A	.750 to 1.125	NS	338925 / 511556034	0.5
NON LOCKING	PGN-6-50	2 Pole, 3 Wire	250	50	6-50	.625 to 1.187	<b>S</b>	<b>338888 / 511506014</b>	0.5
NON LOCKING	PGN-15-20	3 Pole, 4 Wire	250	20	15-20	.390 to .775	<b>S</b>	<b>338896 / 511506006</b>	0.5
NON LOCKING	PGN-18-30	4 Pole, 4 Wire	208	30	18-30	.625 to 1.310	NS	511506026	0.5
NON LOCKING	PGN-18-50	4 Pole, 4 Wire	208	30	18-50	.625 to 1.310	NS	511506024	0.5
LOCKING	PGL-8165C	3 Pole, 4 Wire	480	50	N/A	.92 to 1.2	NS	511556031	0.5
NON LOCKING	PGN-8461C	3 Pole, 4 Wire	250	60	N/A	.625 to 1.310	NS	511506028	0.5

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

**FASTShip**

Same-day shipping on stock item orders received before 4 pm CST.  
 3-day shipping on assembly-stock items.

## HF

### Portable Blower Heater



- 1.9 - 4 kW
- 6,483 - 13,648 Btuh
- 120 and 240 Volt
- Single Phase
- AC and DC Rated Models

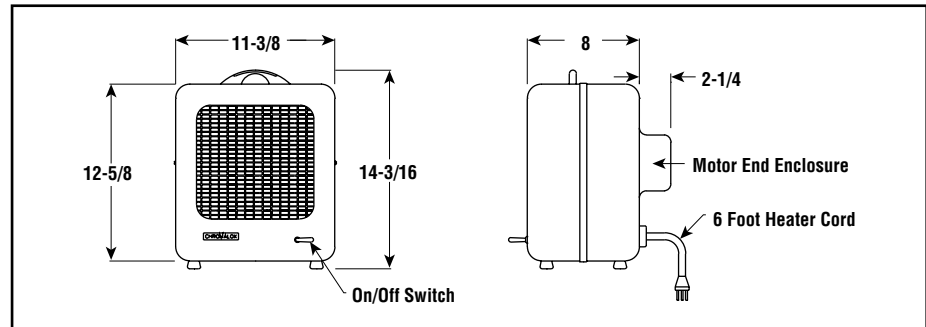
#### Description

Heavy duty HF portable blower heaters are ideal for heating small areas in industrial environments and are available in DC ratings for use in crane cabs.

#### Applications

- Construction Sites
- Garages
- Work Stations
- Warehouses
- Crane Cabs
- Storage Buildings

#### Dimensions (Inches)



#### Construction

**Cabinet** — Heavy 20 gauge steel, phosphate undercoated for corrosion resistance and finished in almond powder coat providing a good, clean appearance. Includes carrying handle.

**Heating Elements** — Shock-resistant metal sheath heating elements, designed for long life.

**AC Rated Models** include a quiet, completely enclosed, vibration-free AC motor, overheat cutout, on/off toggle switch and 6 ft. cord and ground plug (except HF-303AC, which does not include a plug).

**DC Rated Models** equipped with DC motors and DC rated magnetic contactors wired in series with the overheat cutout. Like the AC models, DC rated units also include on/off toggle switch, 6 ft. cord and plugs except on HF-303H and HF-303E which includes the cord only and HF-403E which includes neither the cord nor the plug.

#### Advantages

- Clean and Reliable
- Easy to Move
- Built-in Thermal Cutout
- DC Ratings

#### Specifications and Ordering Information

Electrical (60 Hz)				Motor				Air Delivery <sup>1</sup>				Mtg. Height (Ft.)	Ordering			
kW	Volts	Phase	Amps	Volts	Phase	HP	RPM	CFM	FPM <sup>1</sup>	Temp. Rise (°F) <sup>1</sup>	Horiz. Throw (Ft.)		Model <sup>1</sup>	Stock	PCN	Wt. (Lbs.)
1.9	120	1	15.8	115	1	1/30	1,550	170	410	35	6	13-3/16	HF-203G AC	S	261307	16.5
1.9	120	1	15.8	125	1	1/60	1,725	200	480	30	6	13-3/16	HF-203EG DC	S	261323	16.5
2	240	1	8.3	240	1	1/30	1,550	170	410	37	6	13-3/16	HF-203G AC	NS	261315	16.5
2	240	1	8.3	125	1	1/60	1,725	200	480	32	6	13-3/16	HF-203DG DC	S	261331	16.5
3	120	1	25	115	1	1/30	1,550	170	410	56	6	13-3/16	HF-303H AC <sup>3</sup>	S	261340	19
3	240	1	12.5	240	1	1/30	1,550	170	410	56	6	13-3/16	HF-303G AC	NS	261358	19
3	120	1	25	125	1	1/60	1,725	200	480	48	6	13-3/16	HF-303E DC <sup>3</sup>	NS	261366	19
3	240	1	12.5	125	1	1/60	1,725	200	480	48	6	13-3/16	HF-303DG DC	S	261374	19
4	240	1	16.7	240	1	1/30	1,550	170	410	75	6	13-3/16	HF-403G AC	S	261382	19
4	240	1	16.7	125	1	1/60	1,725	200	480	63	6	13-3/16	HF-403E DC <sup>2</sup>	S	261390	19

**Stock Status:** NS = non-stock

**To Order**—Specify model, PCN, kW, volts, phase and quantity.

1. Approximate value.
2. Without cord and plug.
3. Cord only, no plug.

#### Other Notes —

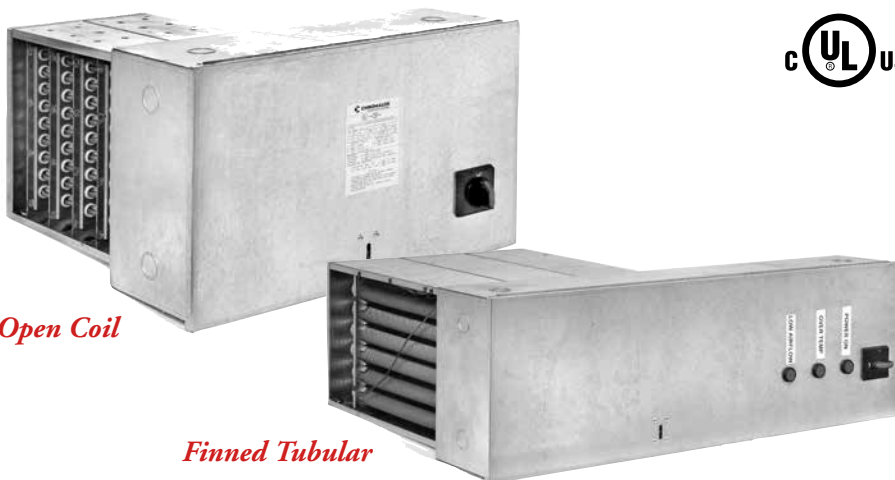
- A. Alternating current (AC) 60 Hz (supplied with on/off switch).
- B. Direct current (DC).



## DH

### UL Listed Open Coil & Fintubular Air Duct Heaters

- Up to 458 kW
- Up to 35 kW/Ft<sup>2</sup> Power Densities
- Up to 600 Volt
- 6 x 8" to 40 x 72" Duct Sizes
- Slip-In and Flanged Mounting
- Heavy Gauge Galvanized Frame
- NEMA1 Control Panel
- Meets NEC Requirements
- Configured to Order
- cULus Listed
- Available with CE mark for Europe



*Open Coil*

*Finned Tubular*

#### *Description*

Type DH duct heaters are pre-engineered, factory assembled units consisting of a standard frame section, heating elements and a prewired control panel. They are available in a wide range of standard frame sizes, with various heating capacities and heating stages operating on AC voltage ratings of 120 to 600V.

The standard duct heater is designed to be inserted in a rectangular opening cut in the side of a horizontal or vertical duct. For larger ducts or where it may be more desirable to attach the duct directly to the heater, a frame may be added to the heater.

#### *Applications*

- Primary Room Heating (Central or Zone)
- Supplemental Room Heating (Heat Pumps)
- Air Tempering (Outside Air)
- Preheating (Make-Up Air)
- Reheating (Overcooling applications)
- Industrial and Commercial Buildings

#### *Standard Features*

**Heater Frame** — Galvanized for corrosion protection.

**Heating Elements** — 80/20 Nickel/Chromium open coil or painted steel finned.

**Mounting** — Insert or flanged designs configured for horizontal airflow.

**Control Panel** — Integral control panel pre-wired for easy wiring and installation.

**Listed** for zero clearance to combustible materials.

**Overtemperature Protection** — provided with both manual and automatic resets.

**Factory Prewired** — 48 Amp maximum circuits to meet NEC requirements.

**Controls** — 24V transformer, magnetic contactors, airflow switch, disconnect switch and overtemperature cutouts allow for thermostat control.

**Fusing** — Power fusing on heaters above 48 amps.

**Easy Wiring** access through opening in terminal box.

#### *Optional Features*

**Heater Frame** — Outdoor Use (per UL1996) galvanized frame, stainless steel (NEMA 1 or Outdoor Use) frame.

**Heating Elements** — Stainless steel finned tubular or Monel<sup>®</sup> finned tubular for added corrosion resistance.

**Mounting** — Insert or flanged designs for vertical or bottom mounting.

**Control Panel** — Remote control panel allows for additional space around heater.

**Pilot Lights** — "Heat-on", fault, low airflow, "Stage On".

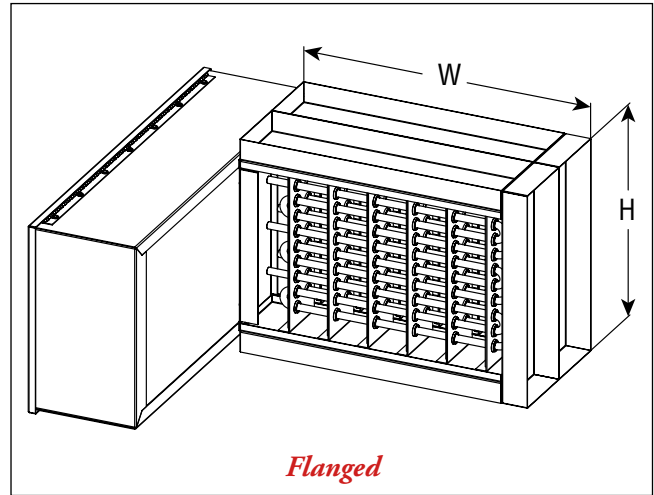
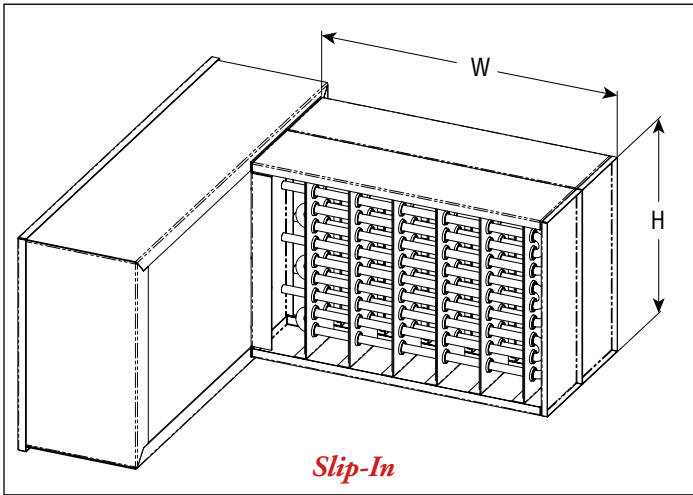
**SCR Power Control** — SCR with proportional control, or vernier control for more precise temperatures.

**Staging Control** — Prewired for remote thermostat staging or built in staging control with 4-20 mA, 0-10.

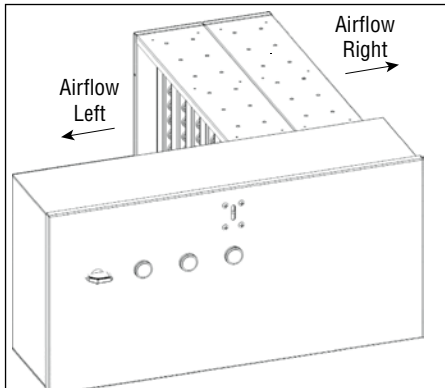
## DH

### UL Listed Open Coil & Fintubular Air Duct Heaters (*cont'd.*)

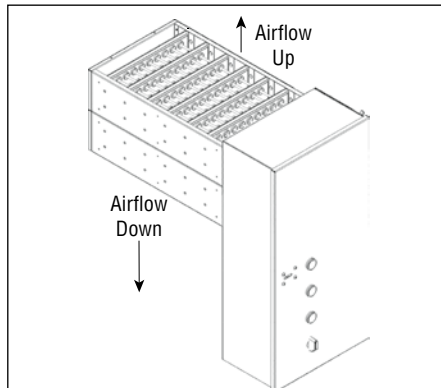
#### Heater Dimensions



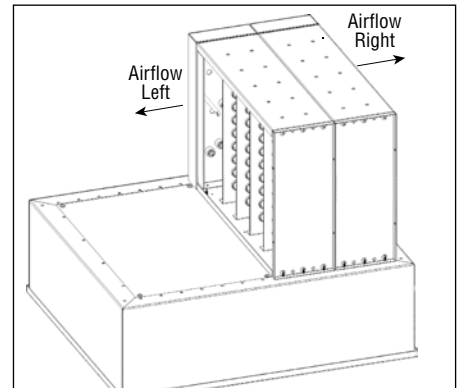
#### Airflow Orientation



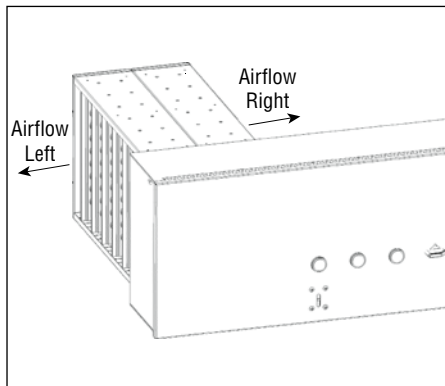
*Horizontal duct with panel extended in LEFT direction*



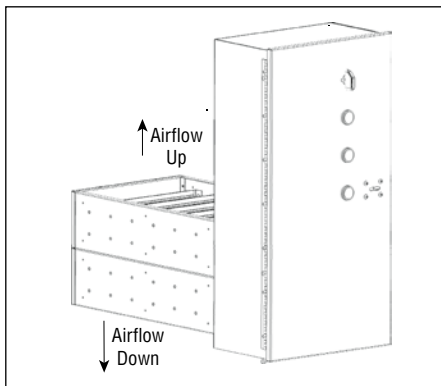
*Vertical duct with panel extended in DOWNWARD direction*



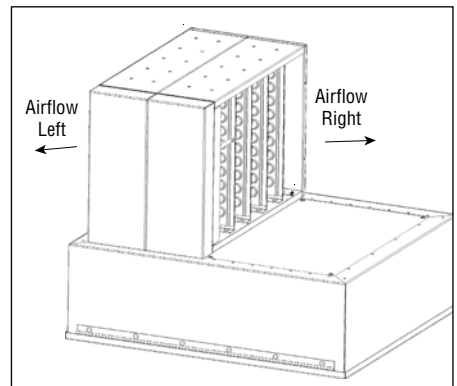
*Bottom mount in horizontal duct with panel extended in LEFT direction*



*Horizontal duct with panel extended in RIGHT direction*



*Vertical duct with panel extended in UPWARD direction*



*Bottom mount in horizontal duct with panel extended in RIGHT direction*

# Industrial Air Heaters

## DH UL Listed Open Coil & Fintubular Air Duct Heaters (*cont'd.*)

### Ordering Information

To Order — Complete the Model Number using the Matrix provided.

DH Open Coil & Tubular Duct Heater													
Code		Element Type											
OC		Open Coil Elements					SS					304 Stainless Steel Finned Tubular Element	
PS		Painted Steel Finned Tubular Elements					MO					MONEL® Elements	
Code		Panel and Heater Mounting											
		IS					RS					Remote Control Panel, Slip-In Frame	
		IF					RF					Remote Control Panel, Flange Frame	
Code		Terminal Box and Frame Construction											
		GPG										Galvanized Terminal Box and Frame (NEMA 1)	
		DPG										Outdoor Use Galvanized Terminal Box and Frame	
		GPS										Stainless Steel Terminal Box and Frame (NEMA 1)	
		DPS										Outdoor Use Stainless Steel Terminal Box and Frame	
Code		Height of Duct in Inches											
		XXX											
Code		Width of Duct in Inches											
		XXX											
Code		Line Voltage											
		12	120V	27	277V	44	440V	57	575V				
		28	208V	38	380V	46	460V	60	600V				
		24	240V	40	400V	48	480V	69	690V				
		22	220V	41	415V								
Code		Phase											
		1										Single Phase	
		3										Three Phase	
Code		Kilowatts											
		XXX											
Code		Airflow Direction											
		F1				F4				Vertical Down			
		F2				F5				Bottom Mount			
		F3										Vertical Up	
Code		Panel Orientation (Integral Panel Only)											
		P1										Extend Left Direction (Horiz. & Bottom Mount Configs Only)	
		P2										Extend Right Direction (Horiz. & Bottom Mount Config. Only)	
		P3										Extend Upward (Vertical Airflow Only)	
		P4										Extend Downward (Vertical Airflow Only)	
DH-	OC-	II-	GPG-	O10-	O12-	48-	1-	O15-	F1-	P1	Typical Model Number		

#### Notes

1. Unless otherwise specified, heaters are wired for single stage operation and provided with on/off contactor control and a 24V control circuit
2. Heaters above 277V line voltage or three phase include a 24V control circuit transformer
3. To comply with UL requirements all heaters are design not to exceed 48 amps per circuit and are provided with both automatic and manual reset cutouts
4. Although Chromalox can provide heaters with line voltage terminal blocks in place of a disconnect, per NEC requirements a disconnect must be supplied within line of sight of the heater.
5. Finned tubular heaters are provided with back-up contactors
6. Maximum number of heater stages is 12 on all heaters. Minimum of 4 stages on pneumatic control.

### Optional Features

Code	Description	Code	Description
D1	Remove Disconnect (Replaced with Terminal Block)	T1	120V Control Circuit Transformer
D2	Add Disconnect Fusing	T2-XXX	Remove Transformer (External control, XXX specifies contactor voltage)
S1	Remove Airflow Switch (Must add Fan Interlock Relay)	T3	Remove Transformer and Contactor (Line voltage thermostat control)
S2-XXX	Add Fan Interlock Relay (XXX Specifies Coil Voltage, e.g. S1-120 for 120V)	C1	SCR (Full SCR control On/Off, 24V to 265V input)
F1	Add Power Fusing (Models below 48 amps)	C2-X	SCR Controller (X specifies control signal - see table)
L1	Heater On Pilot Light	C3-XX	Staging (XX specifies number of stages)
L2	Stage On Pilot Light	C4-X	Electronic Staging Controller (Full contactor control, X specifies control signal - see table)
L3	Low Airflow Alarm Light	C5	Pneumatic-Electronic Proportional Controller (Specify pressure range on schedule)
L4	Automatic Reset Overtemperature Cutout Alarm Light	C6-X	Vernier Control (Uses contactors and SCR, X specifies control signal)

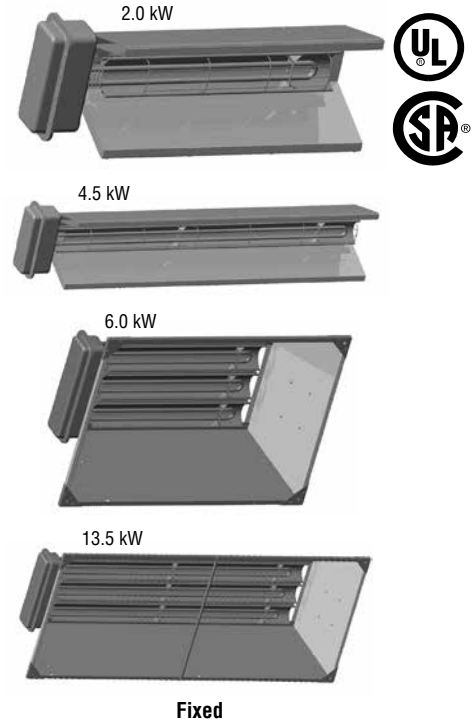
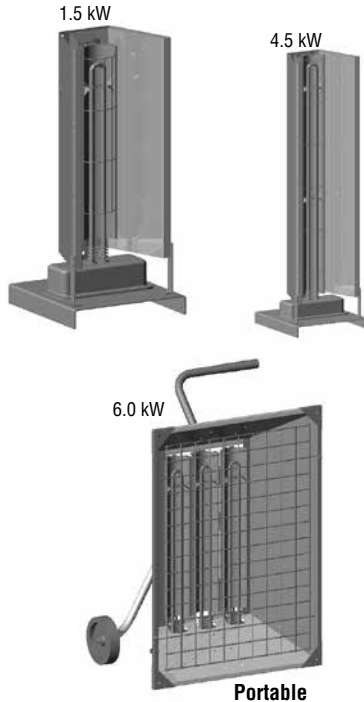
#### Control Signal Codes

Code	Description	Code	Description
1	0 to 5 vdc (available on SCR control only)	3	4 to 20 mA
2	0 to 10 Vdc (2 to 10 Vdc control range)	4	0 to 135 Ω (available on Vernier and electronic staging control)



## ChromaStar™ Infra-Red Radiant Heaters

- 1.5 to 13.5 kW
- 5,118 to 46,062 BTU/Hr
- 120, 208, 240, 277, 480, and 600 Volts
- Single or 3 Phase - Most Models Field Convertible
- Fixed Overhead - Convertible to Portable
- Portable/Factory Assembled
- Optional Accessories
  - Ground Fault
  - Disconnect
  - Tip Over Shut Down
- UL Listed, CSA (Fixed Overhead Models Only)
- INCOLOY Sheath



### Description

The Chromalox ChromaStar™ infra-red comfort heaters are designed to provide a rugged source of heat for use in areas where dependence on air movement is impractical. The heaters are versatile, designed to provide warmth directly where it is needed for primary or spot heating applications. Each unit is constructed for long life and requires minimal maintenance. There are no moving parts or motors to wear out, no air filters or lubrication required.

All Chromalox ChromaStar™ radiant heaters feature the exclusive "Arctic End" Patent Pending heating element terminal construction. This feature lowers the terminal box temperatures resulting in extended element and wiring life.

Extruded aluminum housings are rigid to provide added protection to the heating elements located at the focal point of a built-in mirrored aluminum reflector(s).

The heater(s) consist of hairpin bent .430" diameter alloy sheath tubular element(s) constructed of high quality resistance wire embedded in carefully selected MgO refractory insulation. The element feature "Arctic end" terminal construction for longer life and cooler terminal enclosure temperatures. The element(s) also feature terminal construction using a waded-in silicone bushings that produce unequalled resistance to moisture absorption. The heating element(s) connect to a gasketed, moisture resistance terminal enclosure with liquid-tight bulkhead threaded fittings. An extension reflector constructed of

0.050" mirrored aluminum extends over the assembly to provide a more uniform heating pattern.

### Portable

All portable heaters are supplied fully assembled to a rugged, chrome-nickel plated tubular steel cart and handle (1.5 and 2.0 kW heater has a fixed pedestal). The cart features large wheels for easy portability. All portable heaters include safety grills to protect personnel from contacting hot elements.

Field wiring is accomplished through a 3/4" conduit opening in terminal enclosure. The 1.5 kW unit comes complete with a factory installed 6 foot cord and 2 prong grounding type plug. Other models can be field wired using accessory cable and plug kits shown.

### Fixed Overhead

The Chromalox ChromaStar™ radiant heater is shipped fully assembled and can be hung from the ceiling with 2 chains or rigid angle brackets attached to the heater brackets located on the back of the heater.

Field wiring is accomplished through the liquid tight terminal enclosure. No secondary splice box required.

Protective screens, disconnect switches and portable carts are available for these heaters as shown.

### Applications

- Localized heating in large plants
- Loading Docks
- Narrow warehouse aisle heating
- Garages
- Dry paint
- Prevent freezing of pipes, valves
- Heat hoppers



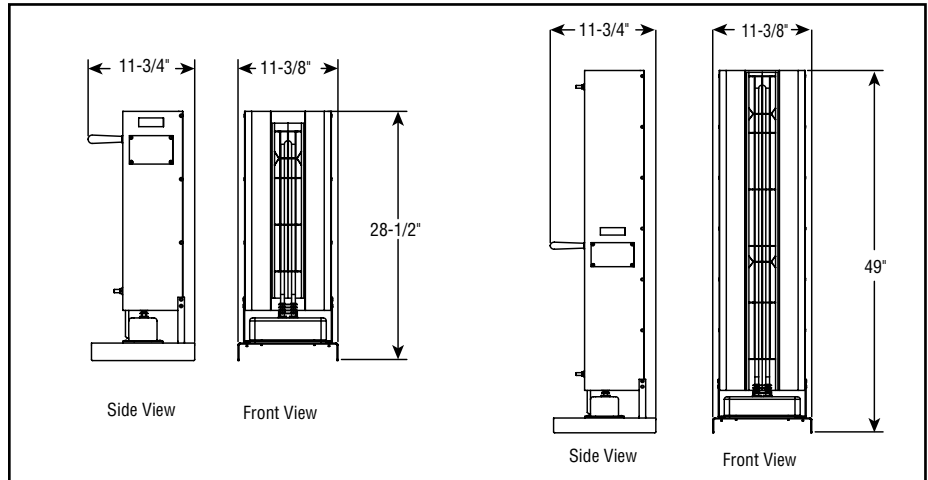
# Industrial Air Heaters

## ChromaStar™

### Infra-Red Radiant Heaters

(cont'd.)

#### Portable Radiant Heaters 1.5 to 4.5 kW Dimensions

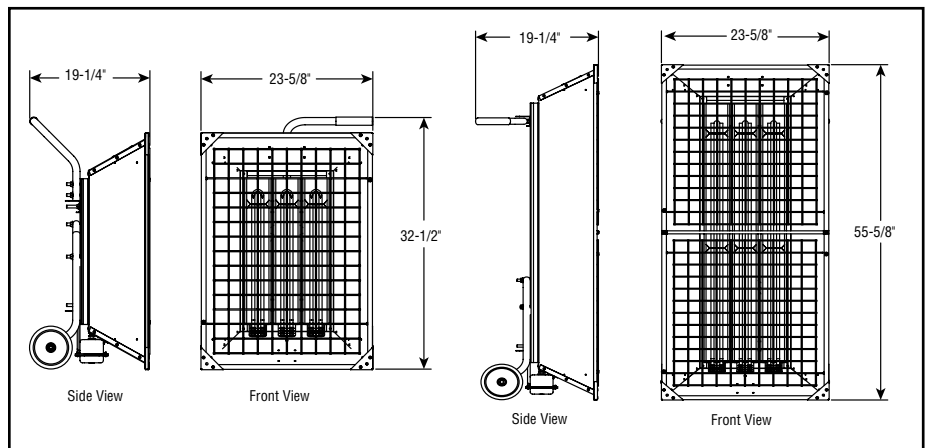


#### Specifications and Ordering Information

Electrical					Dimensions (in.)				Ordering			
kW	Volts	Phase	No. Elem.	Amps	Btuh	Height	Base Width	Base Depth	Model	Stock	PCN	Wt. (Lbs.)
1.5	120	1	1	12.5	5,118	28-1/2	11-3/8	11-3/4	STAR-02A-11-PC*	S	340486	15
2	208	1	1	9.6	6,824	28-1/2	11-3/8	11-3/4	STAR-02A-81-P	NS	340494	15
2	240	1	1	8.3	6,824	28-1/2	11-3/8	11-3/4	STAR-02A-21-P	NS	340507	15
2	277	1	1	7.2	6,824	28-1/2	11-3/8	11-3/4	STAR-02A-71-P	NS	340515	15
2	480	1	1	4.2	6,824	28-1/2	11-3/8	11-3/4	STAR-02A-41-P	NS	340523	15
2	600	1	1	3.2	6,824	28-1/2	11-3/8	11-3/4	STAR-02A-61-P	NS	340531	15
4.5	208	1	1	21.6	15,354	49	11-3/8	11-3/4	STAR-05A-81-P	NS	340380	25
4.5	240	1	1	18.8	15,354	49	11-3/8	11-3/4	STAR-05A-21-P	NS	340398	25
4.5	277	1	1	16.2	15,354	49	11-3/8	11-3/4	STAR-05A-71-P	NS	340400	25
4.5	480	1	1	9.4	15,354	49	11-3/8	11-3/4	STAR-05A-41-P	NS	340419	25
4.5	600	1	1	7.5	15,354	49	11-3/8	11-3/4	STAR-05A-61-P	NS	340427	25

**Stock Status:** S = stock NS = non-stock \*Incl 6 foot cord and 2-prong grounding type plug.  
**To Order** — Specify model, PCN, kW, volts, phase and quantity.

#### Portable Radiant Heaters 6 to 13.5 kW Dimensions



#### Specifications and Ordering Information

Electrical					Dimensions (in.)				Ordering			
kW	Volts	Phase	Amps	Btuh	Height	Base Width	Base Depth	Model	Stock	PCN	Wt. (Lbs.)	
6	208	3	16.7	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-83-P	NS	341163	26	
6	240	3	14.4	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-23-P	S	341171	26	
6	277	1	21.7	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-71-P	NS	341180	26	
6	480	3	7.2	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-43-P	S	341198	26	
6	600	3	5.8	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-63-P	NS	341200	26	
13.5	208	3	37.5	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-83-P	S	341219	44	
13.5	240	3	32.5	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-23-P	NS	341227	44	
13.2	277	1	47.7	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-71-P	NS	341235	44	
13.5	480	3	16.3	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-43-P	S	341243	44	
13.5	600	3	3	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-63-P	NS	341251	44	

**Stock Status:** S = stock NS = non-stock \*Includes 6 foot cord and 2-prong grounding type plug.  
**To Order** — Specify model, PCN, kW, volts, phase and quantity. Assembly Stock shipped in one week.  
 For Stock shipment, order fixed overhead heaters on following page and appropriate cart kit.

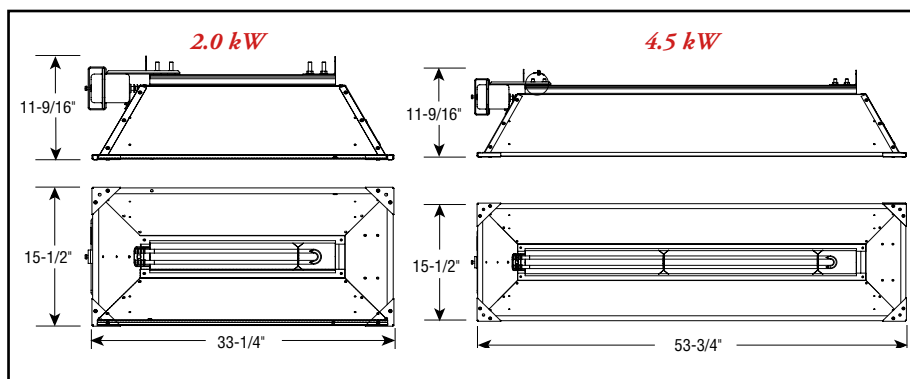
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# Industrial Air Heaters

## ChromaStar™

### Infra-Red Radiant Heaters (cont'd.)

#### Fixed Overhead Radiant Heaters 2.0 to 4.5 kW Dimensions U.L Listed & CSA Certified for Fixed Installations

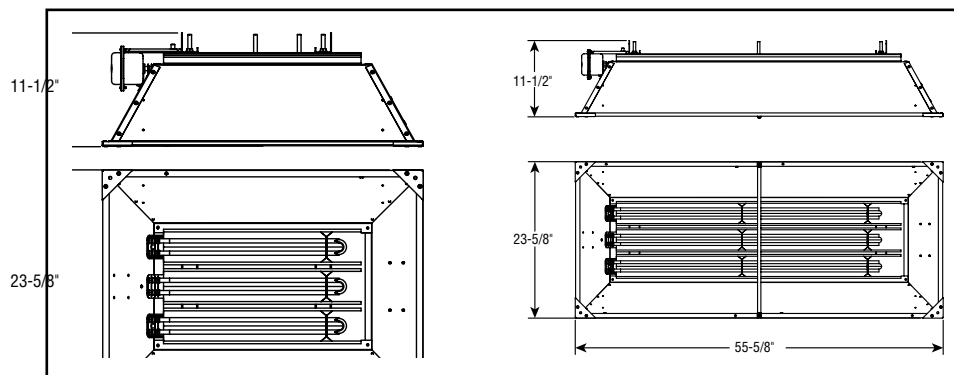


#### Specifications and Ordering Information

Electrical				Dimensions (in.)				Ordering			
kW	Volts	Phase	Amps	Btuh	Height	Base Width	Base Depth	Model	Stock	PCN	Wt. (Lbs.)
2	208	1	9.6	6,824	27-11/16	9-7/8	6-13/16	STAR-02A-81-F	S	340558	14
2	240	1	8.3	6,824	27-11/16	9-7/8	6-13/16	STAR-02A-21-F	S	340566	14
2	277	1	7.2	6,824	27-11/16	9-7/8	6-13/16	STAR-02A-71-F	NS	340574	14
2	480	1	4.2	6,824	27-11/16	9-7/8	6-13/16	STAR-02A-41-F	S	340582	14
2	600	1	3.3	6,824	27-11/16	9-7/8	6-13/16	STAR-02A-61-F	NS	340590	14
4.5	208	1	21.6	15,354	48-3/16	9-7/8	6-13/16	STAR-05A-81-F	NS	340435	23
4.5	240	1	18.8	15,354	48-3/16	9-7/8	6-13/16	STAR-05A-21-F	NS	340443	23
4.5	277	1	16.2	15,354	48-3/16	9-7/8	6-13/16	STAR-05A-71-F	NS	340451	23
4.5	480	1	9.4	15,354	48-3/16	9-7/8	6-13/16	STAR-05A-41-F	S	340460	23
4.5	600	1	7.5	15,354	48-3/16	9-7/8	6-13/16	STAR-05A-61-F	NS	340478	23

Stock Status: S = stock NS = non-stock  
To Order — Specify model, PCN, kW, volts, phase and quantity.

#### Fixed Overhead Radiant Heaters 6.0 to 13.5 kW Dimensions



32-1/2"

#### Specifications and Ordering Information

Electrical				Dimensions (in.)				Ordering			
kW	Volts	Phase	Amps	Btuh	Height	Base Width	Base Depth	Model	Stock	PCN	Wt. (Lbs.)
6	208	3	16.7	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-83-F	NS	340339	26
6	240	3	14.4	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-23-F	S	340347	26
6	277	1	21.7	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-71-F	NS	340355	26
6	480	3	7.2	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-43-F	S	340363	26
6	600	3	5.8	20,472	32-1/2	23-5/8	11-1/2	STAR-06A-63-F	NS	340371	26
13.5	208	3	37.5	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-83-F	NS	340232	44
13.5	240	3	32.5	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-23-F	S	340240	44
13.5	277	1	48.7	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-71-F	NS	340259	44
13.5	480	3	16.3	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-43-F	S	340267	44
13.5	600	3	13	46,062	55-5/8	23-5/8	11-1/2	STAR-14A-63-F	NS	340275	44

Stock Status: S = stock NS = non-stock  
To Order — Specify model, PCN, kW, volts, phase and quantity.

## ChromaStar™ Infra-Red Radiant Heaters (cont'd.)

### Accessories

For use with both Fixed Overhead and Portable Heaters

### Disconnect Kits

The disconnect kit consists of a complete liquid tight assembly including a 3 pole 48 Amp switch, power terminal block and all hardware to mount either the fixed overhead or portable radiant heater. Disconnects are used for shutting off power to unit. Kits can be used on all STAR heaters.



### Specifications and Ordering Information

Model No.	kW	Status	PCN	Wt. (Lbs.)
DS-50600	All	AS	340662	3

### Tip-Over Switch and Ground Fault Detector Kits

(for Portable STAR-06 and STAR-14 Heaters)

The Chromalox STAR-TG series kits include the components and features of the STARTIP tip-over kits with the additional protection provides by a ground fault detector. The ground fault detector will monitor for any gradual changes in the insulation level due to humidity or mechanical damage as they develop and will de-energize the contactor to prevent arcing type faults, preventing premature element failure and potential fire damage.

### Specifications and Ordering Information

Model No.	Volts	Status	PCN	Wt. (Lbs.)
STAR-TG-8	208	NS	340726	16
STAR-TG-2	240	NS	340734	16
STAR-TG-7	277	NS	340742	16
STAR-TG-4	480	NS	340750	16
STAR-TG-6	600	NS	340769	16

## ChromaStar™

### Accessories

(cont'd.)

#### Plug Kits for Portable Heaters

Plug Type	Model Number	Description	Volts	Amps	Config.	NEMA#	ANSI#	Fits Cable Dia.	Stock	PCN	Wt. (Lbs.)
Locking	PGL-15-20	3 Pole 4 Wire	250	20		L15-20	C73.85	.385"-.780	NS	338845	0.5
Locking	PGL-15-30	3 Pole 4 Wire	250	30		L15-30	C73.86	.385"-.780	NS	338853	0.5
Locking	PGL-16-30	3 Pole 4 Wire	480	30		L16-30	C73.88	.595"- 1.150	NS	338861	0.5
Locking	PGL-17-30	3 Pole 4 Wire	600	30		L17-30	C73.89	.595"- 1.150	NS	338870	0.5
Locking	PGL-3763C	2 Pole 3 Wire	600	50		-	-	.750"-1.125	NS	338917	0.5
Locking	PGL-3765C	3 Pole 4 Wire	600	50		-	-	.750"-1.125	NS	338925	0.5
Non Locking	PGN-6-50	2 Pole 3 Wire	250	50		6-50	C73.53	.625"-1.187	NS	338888	0.5
Non Locking	PGN-15-20	3 Pole 4 Wire	250	20		15-20	C73.59	.390"-.775	NS	338896	0.5
Non Locking	PGN-15-50	3 Pole 4 Wire	250	50		15-50	C73.61	.750"-1.250	NS	338909	0.5

#### Cable Kits for ChromaStar™ Series Portable Radiant Heaters

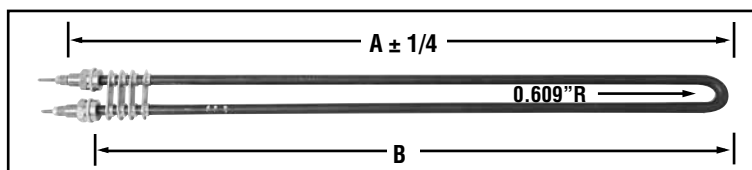
Cable packages include 25 feet Type SO cable, with either 3-conductors or 4-conductors, depending on the heater requirements. Each cable assembly includes the proper cord (connector). Plugs are not included. All models are factory wired for 3-phase, but can be field wired for single phase, select plug and cord accordingly.

Model No.	Cable Specifications			Cord Connector		Stock	PCN	Wt. (Lbs.)
	Size/Type	Max. Amp	Temperature Ratings	NPT				
PLC-2514-4	14/4SO	15	90 Deg. C	3/4"	NS	295427	7	
PLC-2514-3	14/3SO	18	90 Deg. C	3/4"	NS	295670	23	
PLC-2512-4	12/4SO	20	90 Deg. C	1"	NS	295435	9	
PLC-2512-3	12/3SO	25	90 Deg. C	3/4"	NS	295662	6	
PLC-2510-3	10/3SO	30	90 Deg. C	1"	NS	295443	9	
PLC-2508-3	8/4SO	35	90 Deg. C	1"	NS	295460	15	
PLC-2506-4	6/4SO	45	90 Deg. C	1"	NS	295494	17	
PLC-2506-3	6/3SO	55	90 Deg. C	1"	NS	295486	16	

SO = hard Service Cord, 600V      Length = 25 Feet

#### Replacement Elements

Model No.	kW	Volts	Win2	Dimensions - inches		Status	PCN	Wt. Lbs.
				A	B			
UTU-STAR 21	1.5	120	32	21-1/2	20-1/2	NS	106059	2
UTU-STAR 28	2	208	42	21-1/2	20-1/2	NS	106067	3
UTU-STAR 22	2	240	42	21-1/2	20-1/2	NS	106075	3
UTU-STAR 27	2	277	42	21-1/2	20-1/2	NS	106083	3
UTU-STAR 24	2	480	42	21-1/2	20-1/2	NS	106091	3
UTU-STAR 26	2	600	42	21-1/2	20-1/2	NS	106104	3
UTU-STAR 48	4.5	208	42	43-3/8	42-3/8	NS	106403	4
UTU-STAR 42	4.5	240	42	43-3/8	42-3/8	NS	106411	4
UTU-STAR 47	4.5	277	42	43-3/8	42-3/8	NS	106796	4
UTU-STAR 44	4.5	480	42	43-3/8	42-3/8	NS	106964	4
UTU-STAR 46	4.5	600	42	43-3/8	42-3/8	NS	106972	4



UTU-STAR

## ChromaStar™ Accessories (cont'd.)

### Accessories for Fixed Overhead Heaters

#### Hanger Kit

Hanger kits include 24 feet of chain, 4 "S" hooks to mount units in a fixed overhead position using the universal mounting brackets included on the back of fixed overhead radiant models. The chain is long enough to allow all heaters to be mounted up to 6 feet from the ceiling.

#### Specifications and Ordering Information

Model No.	kW	Status	PCN	Wt. (Lbs.)
STAR-HK	All	S	340654	2

#### Portable Cart Kits

Chromalox series ChromaStar™ fixed overhead radiant heaters can be field converted to portable spot heaters with the use of the cart kits. Each kit includes wheels, legs, handle, grill(s), baffle (if required) and all of the necessary hardware to complete the modification. These kits are easy to install with standard tools.

#### Specifications and Ordering Information

Model No.	kW	Status	PCN	Wt. (Lbs.)
STAR-06A CART	6	NS	340830	8
STAR-14A CART	13.5	S	340849	8

#### Floor Protection Baffle Kit

The Chromalox safety baffle kit includes a reflector baffle which can be field installed on the lower reflective panel on portable STAR radiant heaters. The baffle will protect temperature sensitive flooring materials such as vinyl tile from being damaged due to radiant heat.

#### Specifications and Ordering Information

Model No.	kW	Status	PCN	Wt. (Lbs.)
FP-614	6 or 13.5	NS	340865	2

#### Safety Grill Kits

The safety grill kits contain one (2kW, 4.5kW and 6kW) or two grills (13.5kW) to protect personnel from coming in contact with hot heating elements. The grills are constructed of heavy gauge plated steel and are simple to install.

#### Specifications and Ordering Information

Model No.	kW	Status	PCN	Wt. (Lbs.)
GR-2	2	S	111878	5
GR-4	4.5	S	111894	5
GR-6KW	6	NS	340638	6
GR-14AKW	13.5	NS	340857	12

#### Ground Fault Detection

The Chromalox STAR-GF series wall mounted ground fault detectors are designed to monitor for any gradual changes in the insulation level due to humidity or mechanical damage as they develop and will de-energize the load to prevent arcing type faults, preventing premature element failure and potential fire damage. The detector consists of a ground fault sensor, control circuit transformer, magnetic contactor and an on off toggle switch with rubber boot, completely pre-wired in a NEMA 4 enclosure.

#### Specifications and Ordering Information

Model No.	Heater Volts	Status	PCN	Wt. Lbs.
STAR-GF-8	208	NS	340777	16
STAR-GF-2	240	NS	340785	16
STAR-GF-7	277	NS	340793	16
STAR-GF-4	480	NS	340806	16
STAR-GF-6	600	NS	340814	16



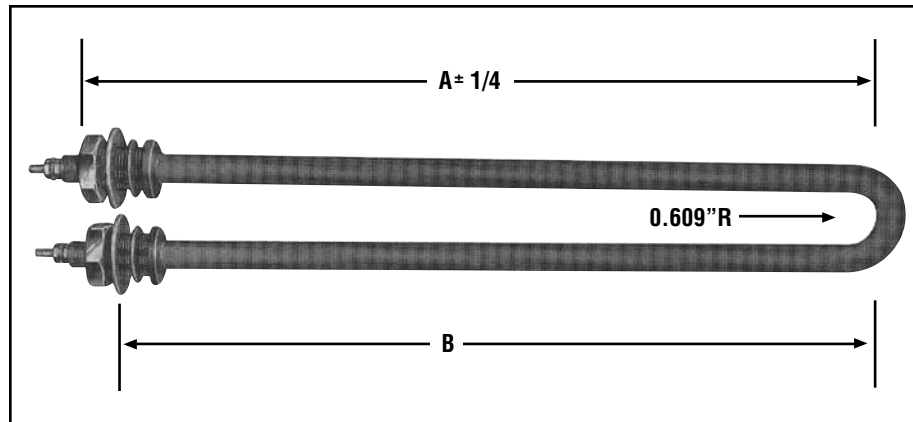


## UTUA-LT

430" Dia.  
Round Cross- Section

- INCOLOY Sheath
- 2000 and 4500 Watts  
240 and 480 Volt
- 9/16 - 18 Bulkhead Fittings
- Replacement Element for  
Aitken\* OH, SH, PPH and  
PHX Radiant Heaters

### Replacement Elements - Dimensions (Inches)



### Applications

Replaces heating elements in radiant comfort heaters manufactured by Aitken Products, Inc. It can also be used in other heating applications where threaded liquid-tight fittings permit mounting for high-velocity air or immersion heating of liquids which are not corrosive to INCOLOY. When used for immersion heating, heated section of element must be immersed at all times.

### Advantages

Specially constructed to provide excellent service life in radiant heating applications.

### Features

**Liquid-Tight Fittings** - 9/16-18 Brass for mounting. Nuts, washers and gaskets included.

**10-32 Terminals** - Stainless steel, complete with nuts and washers.

**Work Temperatures** - See Tubular Heater overview section for element rated 40 W/In<sup>2</sup>

**Bending** - Lengthwise only. See Tubular Heater Overview Section.

### Specifications and Ordering Information

40 W/In <sup>2</sup> Watts	Volts	Dimensions (In)		Model	Aitken* Part No.	Stock	PCN	Wt. (Lbs)
		A	B					
2000	240	21.5	20.5	UTUA-224LT	HE20240	S	106016	2
2000	480	21.5	20.5	UTUA-248LT	HE20480	S	106024	2
4500	240	43	42	UTUA-424LT	HE45240	S	106032	3
4500	480	43	42	UTUA-448LT	HE45480	S	106040	3

**Stock Status:** S = stock NS = non-stock

**To Order**—Specify model, watts, volts, phase and quantity.

\*Aitken is a registered trademark of Aitken Products, Inc.

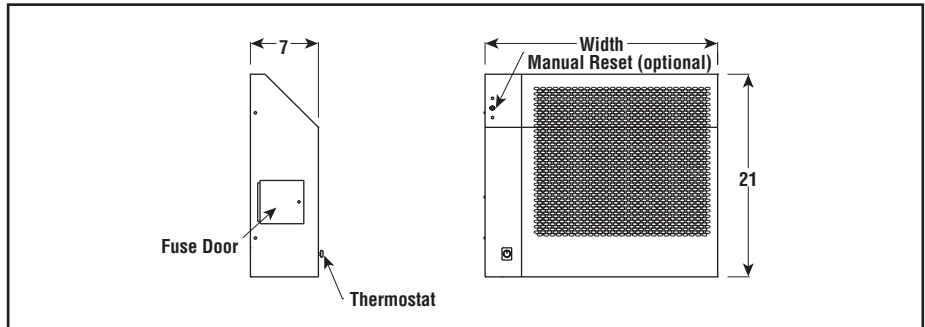


## HCH Wall Mounted Convection Heater

- 500 - 5,000 Watts
- 1,706 - 17,060 Btuh
- 120, 208, 240, 277, 480, 575 and 600 Volt
- 1 & 3 Phase
- Built-in Controls
- 24, 36 or 48" Widths



### Dimensions (Inches)



### Description

Type HCH convection heaters are designed for easy installation in hard-use areas. The patented metal sheath Fintube® radiating heating elements with furnace brazed steel fins assures long life and superior heat transfer. Each unit is self-contained, complete with thermostat, automatic reset (standard) and manual reset (optional) cutout.

### Applications

- Entryways
- Stairwells
- Guard Shacks
- Isolated Buildings
- Cold Spots in Offices or Plants

### Construction

**Cabinet** — Heavy 18 gauge steel, zinc chromate primer and almond polyester powder coat finish.

**Heating Elements** — Rugged, shock-proof 0.475" diameter steel with furnace brazed steel fins.

### Features

**Power Terminal Block** — Provided to facilitate field installation.

**Built-in Contactors and Fused Control Voltage Transformers** — Typical on all models rated over 277V and all three-phase heaters.

**Thermostat and Overtemperature Cutout** — All models include a thermostat (55 - 105°F) and automatic reset overtemperature cutout. Models with suffix M in the model number include an additional manual reset cutout.

### Advantages

- Minimum Maintenance
- Attractive Design
- Self Contained
- Safer to Operate in Unattended Areas

**CAUTION** — Not intended for use where flammable vapors, gases, liquids or other combustible atmospheres are present.

COMMERCIAL



# Industrial Air Heaters

## HCH

### Wall Mounted

### Convection Heater *(cont'd.)*

#### Specifications and Ordering Information

Electrical				Dimensions (In.)			w/o Manual Reset			w/ Manual Reset			Wt. (Lbs.)	
kW	Volts	Phase	Amps	Btuh	Height	Width	Depth	Model	Stock	PCN	Model	Stock		PCN
3.5	208	1	16.8	11,942	21	36	7	HCH-351	NS	331010	HCH-351M	NS	332099	57
3.5	240	1	14.6	11,942	21	36	7	HCH-351	NS	331029	HCH-351M	NS	332101	57
3.5	277	1	12.6	11,942	21	36	7	HCH-351	NS	331037	HCH-351M	NS	332110	57
3.5	480	1	7.3	11,942	21	36	7	HCH-351	NS	331045	HCH-351M	NS	332128	57
3.5	208	3	9.7	11,942	21	36	7	HCH-351	NS	331053	HCH-351M	NS	332136	57
3.5	240	3	8.4	11,942	21	36	7	HCH-351	NS	331061	HCH-351M	NS	332144	57
3.5	480	3	4.2	11,942	21	36	7	HCH-351	NS	331070	HCH-351M	NS	332152	57
3.5	550	3	3.7	11,942	21	36	7	HCH-351	NS	331088	HCH-351M	NS	332160	57
3.5	575	3	3.5	11,942	21	36	7	HCH-351	NS	331096	HCH-351M	NS	332179	57
3.5	600	3	3.4	11,942	21	36	7	HCH-351	NS	331109	HCH-351M	NS	332187	57
3.5	480	3	4.2	11,942	21	36	7	HCH-351 (4W)	NS	331117	HCH-351M (4W)	NS	332195	57
4	208	1	19.2	13,648	21	48	7	HCH-401	NS	331125	HCH-401M	NS	332208	70
4	208	3	11.1	13,648	21	48	7	HCH-401	NS	331168	HCH-401M	NS	332240	70
4	240	1	16.7	13,648	21	48	7	<b>HCH-401</b>	<b>S</b>	<b>331133</b>	HCH-401M	NS	332216	70
4	240	3	9.6	13,648	21	48	7	HCH-401	NS	331176	HCH-401M	NS	332259	70
4	277	1	14.4	13,648	21	48	7	HCH-401	NS	331141	HCH-401M	NS	332224	70
4	480	1	8.3	13,648	21	48	7	HCH-401	NS	331150	HCH-401M	NS	332232	70
4	480	3	4.8	13,648	21	48	7	HCH-401	NS	331184	HCH-401M	NS	332267	70
4	550	3	4.2	13,648	21	48	7	HCH-401	NS	331192	HCH-401M	NS	332275	70
4	575	3	4.0	13,648	21	48	7	HCH-401	NS	331205	HCH-401M	NS	332283	70
4	600	3	3.9	13,648	21	48	7	HCH-401	NS	331213	HCH-401M	NS	332291	70
4	480	3	4.8	13,648	21	48	7	HCH-401 (4W)	NS	331221	HCH-401M (4W)	NS	332304	70
4.5	208	1	21.6	15,354	21	48	7	HCH-451	NS	331230	HCH-451M	NS	332355	70
4.5	240	1	18.8	15,354	21	48	7	HCH-451	NS	331248	HCH-451M	NS	332320	70
4.5	277	1	16.2	15,354	21	48	7	HCH-451	NS	331256	HCH-451M	NS	332339	70
4.5	480	1	9.4	15,354	21	48	7	HCH-451	NS	331264	HCH-451M	NS	332347	70
4.5	208	3	12.5	15,354	21	48	7	HCH-451	NS	331272	HCH-451M	NS	332355	70
4.5	240	3	10.8	15,354	21	48	7	HCH-451	NS	331280	HCH-451M	NS	332363	70
4.5	480	3	5.4	15,354	21	48	7	HCH-451	NS	331299	HCH-451M	NS	332371	70
4.5	480	3	5.4	15,354	21	48	7	HCH-451 (4W)	NS	331336	HCH-451M (4W)	NS	332419	70
4.5	550	3	4.7	15,354	21	48	7	HCH-451	NS	331301	HCH-451M	NS	332380	70
4.5	575	3	4.5	15,354	21	48	7	HCH-451	NS	331310	HCH-451M	NS	332398	70
4.5	600	3	4.3	15,354	21	48	7	HCH-451	NS	331328	HCH-451M	NS	332400	70
5	208	1	24	17,060	21	48	7	HCH-501	NS	331344	HCH-501M	NS	332427	70
5	208	3	13.9	17,060	21	48	7	HCH-501	NS	331387	HCH-501M	NS	332460	70
5	240	1	20.1	17,060	21	48	7	HCH-501	NS	331352	HCH-501M	NS	332435	70
5	240	3	12	17,060	21	48	7	HCH-501	NS	331395	HCH-501M	NS	332478	70
5	277	1	18.1	17,060	21	48	7	HCH-501	NS	331360	HCH-501M	NS	332443	70
5	480	1	10.4	17,060	21	48	7	<b>HCH-501</b>	<b>S</b>	<b>331379</b>	HCH-501M	NS	332451	70
5	480	3	6	17,060	21	48	7	HCH-501	NS	331408	HCH-501M	NS	332486	70
5	480	3	6	17,060	21	48	7	HCH-501 (4W)	NS	331440	HCH-501M (4W)	NS	332523	70
5	550	3	5.3	17,060	21	48	7	HCH-501	NS	331416	HCH-501M	NS	332494	70
5	575	3	5	17,060	21	48	7	HCH-501	NS	331424	HCH-501M	NS	332507	70
5	600	3	4.8	17,060	21	48	7	HCH-501	NS	331432	HCH-501M	NS	332515	70

**Stock Status:** S = stock NS = non-stock  
**To Order**—Specify model, PCN, kW, volts, phase and quantity.

**Note** — (4W) represents 4 wire.

COMMERCIAL



## Transportation Heaters

### Application Guide

Chromalox is a world leader in providing custom heating solutions to the transportation industry. Our broad product offering and decades of experience allow us to select the optimal solution to your application. Whether its air, sea, rail, or road we have the electric heating solution to meet your need.

For more information regarding our capabilities visit [www.chromalox.com](http://www.chromalox.com) or contact your local sales rep.

#### *Overhead Tubular*

Overhead tubular heaters are used to heat incoming air for railcar HVAC. Tubular heaters are extremely robust and resist vibration damage.



#### *Blower Assemblies*

Blower assemblies are designed for comfort and defrost applications. Their fan forced design allows for efficient air movement.



#### *Convection*

Convection heaters are designed to fit into compact spaces such as under passenger seating or along walls. Because they have no fan or other moving parts, they also operate quietly.



#### *Radiant Defrost*

Radiant defrost heaters are designed for thawing and removing snow and ice from vehicles. Because radiant heat does not require the transfer of energy to another media such as air, it allows efficient heating in cold environments.



#### *Overhead Open Coil*

Like tubular heaters, overhead open coil heaters are designed for rail car HVAC. Their light weight is ideal for the passenger rail industry.

