

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 NEC, OSHA and UL Requirements
- CE Approved 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

Optional Features


- Built-in Thermostat 50°F to 90°F
- 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
 II2G Ex d 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.

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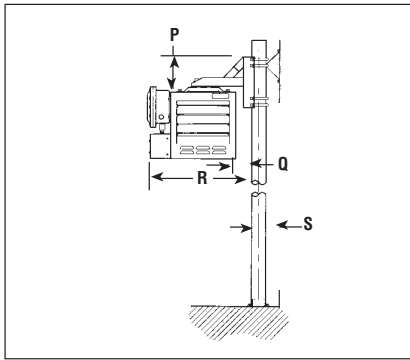
Explosion Proof Blower Heater for Hazardous Locations *(cont'd.)*

Mounting Kits

Pole (PMB)¹

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.

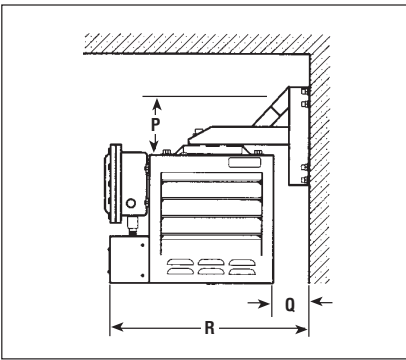
Pole Mounting Bracket



Wall (WMB)¹

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

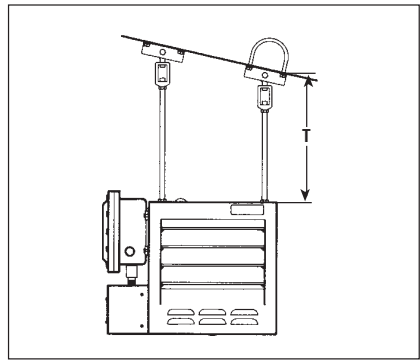
Wall Mounting Bracket



Ceiling (HMK)

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

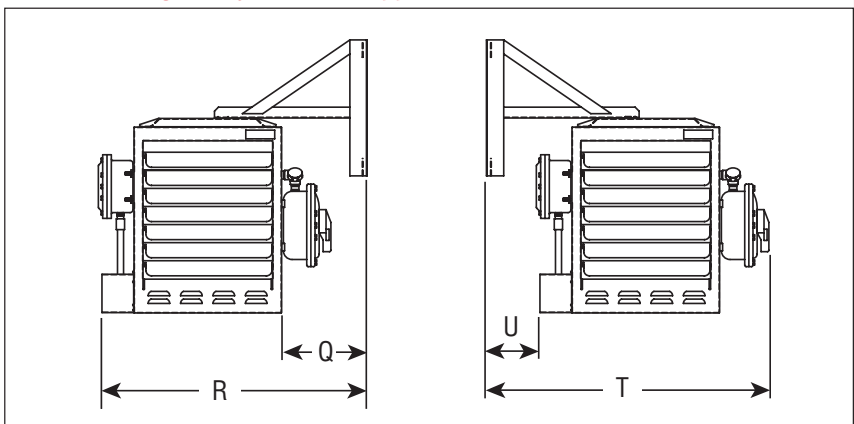
Ceiling Mounting Bracket



Mounting Kits

Heater	Pole		Wall		Ceiling		Dimensions (In.)				
	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	5-1/2	29-1/2	6	7
CXH-A-15 to -20	PMB-16	025187	WMB-16	025160	HMK-00	025195	11-1/2	5-1/8	33	6	7
CXH-A-25 to -35	PMB-20	029073	WMB-20	029065	HMK-00	025195	14-1/2	6-3/8	38-1/4	6	7

Wall Mounting Kits (for models supplied with disconnect switch)



Wall Mounting Kits (for models supplied with disconnect switch)

Heater	Model	PCN	Dimensions				Wt. Lbs
			Q	R	T	U	
CXH-A-03 to -10	WMBD-12	028880	7-7/8	31-1/16	30-1/8	6-15/16	26
CHX-A-15 to -20	WMBD-16	028898	13-3/4	40-15/16	35-3/8	8-3/16	28
CHX-A-25 to -35	WMDD-20	028900	14-7/8	46-1/16	40-1/2	9-5/16	30

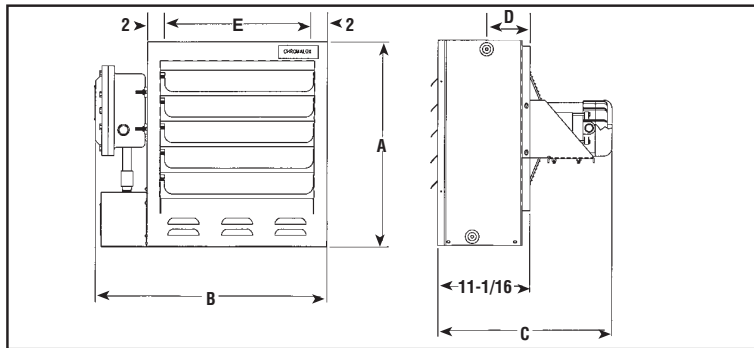
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Dimensions (Inches)



Dimensions (Inches)

Heater	Dimensions (In.)				
	A	B	C	D	E (Mtg. Holes)
CXH-A-03 to -10	19-1/8	23-7/8	21	3-1/2	13-5/8
CXH-A-15 to -20	25	27-7/8	21	4-13/32	17-5/8
CXH-A-25 to -35	32-1/8	31-7/8	21-3/4	5-1/2	21-5/8

Notes —
 A. E dimension mounting hole center to center.
 B. Disconnect switch option increases B dimension by 7 inches.

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Optional Controls & Disconnects

Built-in Adjustable Thermostat

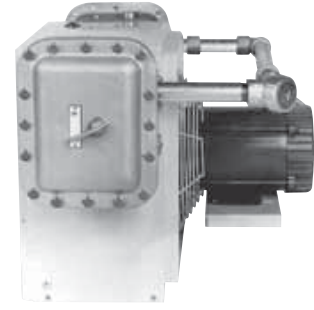
- Temperature range 50°F to 90°F
- Adjustable control knob on exterior of explosion-proof enclosure
- Mounted and wired to heater control center
- Eliminates installation of wall thermostats and associated explosion-proof conduit.
- Factory Installed

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				Ordering				
kW	Volts	Phase	Amps	Control Volts	Phase	HP	RPM	CFM	FPM	Temp. Rise (°F)	Horiz. Throw (Ft.)	Mtg. Height (Ft.)	Model	Stock	PCN	Wt. (Lbs.)
3	208	1	16.7	120	1	1/4	1,725	700	900	13	28	8	CXH-A-03-81-32-00-20EP	NS	026008	135
3	208	3	9.7	120	3	1/4	1,725	700	900	13	28	8	CXH-A-03-83-32-00-20EP	NS	026016	135
3	240	1	14.8	120	1	1/4	1,725	700	900	13	28	8	CXH-A-03-21-32-00-20EP	AS	026024	135
3	240	3	8.6	120	3	1/4	1,725	700	900	13	28	8	CXH-A-03-23-32-00-20EP	NS	026032	135
3	480	3	4.3	120	3	1/4	1,725	700	900	13	28	8	CXH-A-03-43-32-00-20EP	S	026040	135
3	575	3	3.6	120	3	1/4	1,725	700	900	13	28	8	CXH-A-03-63-32-00-20EP	NS	026059	135
3	208	1	16.7	24	1	1/4	1,725	700	900	13	28	8	CXH-A-03-81-30-00-20EP	NS	026067	135
3	208	3	9.7	24	3	1/4	1,725	700	900	13	28	8	CXH-A-03-83-30-00-20EP	NS	026075	135
3	240	1	14.8	24	1	1/4	1,725	700	900	13	28	8	CXH-A-03-21-30-00-20EP	NS	026083	135
3	240	3	8.6	24	3	1/4	1,725	700	900	13	28	8	CXH-A-03-23-30-00-20EP	NS	026091	135
3	480	3	4.3	24	3	1/4	1,725	700	900	13	28	8	CXH-A-03-43-30-00-20EP	NS	026104	135
3	575	3	3.6	24	3	1/4	1,725	700	900	13	28	8	CXH-A-03-63-30-00-20EP	NS	026112	135
5	208	1	26.3	120	1	1/4	1,725	700	900	22	28	8	CXH-A-05-81-32-00-20EP	NS	026120	135
5	208	3	15.3	120	3	1/4	1,725	700	900	22	28	8	CXH-A-05-83-32-00-20EP	S	026139	135
5	240	1	23.1	120	1	1/4	1,725	700	900	22	28	8	CXH-A-05-21-32-00-20EP	NS	026147	135
5	240	3	13.4	120	3	1/4	1,725	700	900	22	28	8	CXH-A-05-23-32-00-20EP	S	026155	135
5	480	3	6.7	120	3	1/4	1,725	700	900	22	28	8	CXH-A-05-43-32-00-20EP	S	026163	135
5	575	3	5.6	120	3	1/4	1,725	700	900	22	28	8	CXH-A-05-63-32-00-20EP	NS	026171	135
5	208	1	26.3	24	1	1/4	1,725	700	900	22	28	8	CXH-A-05-81-30-00-20EP	NS	026180	135
5	208	3	15.3	24	3	1/4	1,725	700	900	22	28	8	CXH-A-05-83-30-00-20EP	NS	026198	135
5	240	1	23.1	24	1	1/4	1,725	700	900	22	28	8	CXH-A-05-21-30-00-20EP	NS	026200	135
5	240	3	13.4	24	3	1/4	1,725	700	900	22	28	8	CXH-A-05-23-30-00-20EP	NS	026219	135
5	480	3	6.7	24	3	1/4	1,725	700	900	22	28	8	CXH-A-05-43-30-00-20EP	NS	026227	135
5	575	3	5.6	24	3	1/4	1,725	700	900	22	28	8	CXH-A-05-63-30-00-20EP	NS	026235	135
7.5	208	1	38.4	120	1	1/4	1,725	840	1,070	27	32	10	CXH-A-07-81-32-00-20EP	NS	026243	135
7.5	208	3	22.2	120	3	1/4	1,725	840	1,070	27	32	10	CXH-A-07-83-32-00-20EP	S	026251	135
7.5	240	1	33.6	120	1	1/4	1,725	840	1,070	27	32	10	CXH-A-07-21-32-00-20EP	NS	026260	135
7.5	240	3	19.4	120	3	1/4	1,725	840	1,070	27	32	10	CXH-A-07-23-32-00-20EP	NS	026278	135
7.5	480	3	9.7	120	3	1/4	1,725	840	1,070	27	32	10	CXH-A-07-43-32-00-20EP	S	026286	135
7.5	575	3	8.1	120	3	1/4	1,725	840	1,070	27	32	10	CXH-A-07-63-32-00-20EP	NS	026294	135
7.5	208	1	38.4	24	1	1/4	1,725	840	1,070	27	32	10	CXH-A-07-81-30-00-20EP	NS	026307	135
7.5	208	3	22.2	24	3	1/4	1,725	840	1,070	27	32	10	CXH-A-07-83-30-00-20EP	NS	026315	135
7.5	240	1	33.6	24	1	1/4	1,725	840	1,070	27	32	10	CXH-A-07-21-30-00-20EP	NS	026323	135
7.5	240	3	19.4	24	3	1/4	1,725	840	1,070	27	32	10	CXH-A-07-23-30-00-20EP	NS	026331	135
7.5	480	3	9.7	24	3	1/4	1,725	840	1,070	27	32	10	CXH-A-07-43-30-00-20EP	NS	026340	135
7.5	575	3	8.1	24	3	1/4	1,725	840	1,070	27	32	10	CXH-A-07-63-30-00-20EP	NS	026358	135

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Specifications and Ordering Information

Electrical (60 Hz)					Motor			Air Delivery					Ordering			
kW	Volts	Phase	Amps	Control Volts	Phase	HP	RPM	CFM	FPM	Temp. Rise (°F)	Horiz. Throw (Ft.)	Mtg. Height (Ft.)	Model	Stock	PCN	Wt. (Lbs.)
10	208	3	29.2	120	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-83-32-00-20EP	NS	026366	140
10	240	1	44	120	1	1/4	1,725	840	1,070	36	32	10	CXH-A-10-21-32-00-20EP	NS	026374	140
10	240	3	25.5	120	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-23-32-00-20EP	NS	026382	140
10	480	3	12.7	120	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-43-32-00-20EP	S	025101	140
10	575	3	10.6	120	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-63-32-00-20EP	NS	026390	140
10	208	3	29.2	24	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-83-30-00-20EP	NS	026403	140
10	240	1	44	24	1	1/4	1,725	840	1,070	36	32	10	CXH-A-10-21-30-00-20EP	NS	026411	140
10	240	3	25.5	24	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-23-30-00-20EP	NS	026420	140
10	480	3	12.7	24	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-43-30-00-20EP	NS	026438	140
10	575	3	10.6	24	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-63-30-00-20EP	NS	026446	140
15	208	3	43	120	3	1/4	1,725	1,450	1,040	31	47	10	CXH-A-15-83-32-00-20EP	NS	026454	160
15	240	3	37.5	120	3	1/4	1,725	1,450	1,040	31	47	10	CXH-A-15-23-32-00-20EP	NS	026462	160
15	480	3	18.7	120	3	1/4	1,725	1,450	1,040	31	47	10	CXH-A-15-43-32-00-20EP	S	026470	160
15	575	3	15.7	120	3	1/4	1,725	1,450	1,040	31	47	10	CXH-A-15-63-32-00-20EP	NS	026489	160
15	208	3	43	24	3	1/4	1,725	1,450	1,040	31	47	10	CXH-A-15-83-30-00-20EP	NS	026497	160
15	240	3	37.5	24	3	1/4	1,725	1,450	1,040	31	47	10	CXH-A-15-23-30-00-20EP	NS	026500	160
15	480	3	18.7	24	3	1/4	1,725	1,450	1,040	31	47	10	CXH-A-15-43-30-00-20EP	NS	026518	160
15	575	3	15.7	24	3	1/4	1,725	1,450	1,040	31	47	10	CXH-A-15-63-30-00-20EP	NS	026526	160
18	240	3	44.7	120	3	1/4	1,725	1,400	1,000	39	43	10	CXH-A-18-23-32-00-20EP	NS	026534	171
18	240	3	44.7	24	3	1/4	1,725	1,400	1,000	39	43	10	CXH-A-18-23-30-00-20EP	NS	026542	171
20	480	3	24.8	120	3	1/4	1,725	1,400	1,000	43	43	10	CXH-A-20-43-32-00-20EP	S	025110	171
20	575	3	20.7	120	3	1/4	1,725	1,400	1,000	43	43	10	CXH-A-20-63-32-00-20EP	NS	026550	171
20	480	3	24.8	24	3	1/4	1,725	1,400	1,000	43	43	10	CXH-A-20-43-30-00-20EP	NS	026569	171
20	575	3	20.7	24	3	1/4	1,725	1,400	1,000	43	43	10	CXH-A-20-63-30-00-20EP	NS	026577	171
25	480	3	31.1	120	3	1/2	1,725	2,330	1,070	32	54	10	CXH-A-25-43-32-00-20EP	S	028556	216
25	575	3	25.8	120	3	1/2	1,725	2,330	1,070	32	54	10	CXH-A-25-63-32-00-20EP	NS	028589	216
25	480	3	31.1	24	3	1/2	1,725	2,330	1,070	32	54	10	CXH-A-25-43-30-00-20EP	NS	028602	216
25	575	3	25.8	24	3	1/2	1,725	2,330	1,070	32	54	10	CXH-A-25-63-30-00-20EP	NS	028609	216
30	480	3	37.1	120	3	1/2	1,725	2,330	1,070	39	54	10	CXH-A-30-43-32-00-20EP	S	028564	216
30	575	3	30.2	120	3	1/2	1,725	2,330	1,070	39	54	10	CXH-A-30-63-32-00-20EP	NS	028615	216
30	480	3	37.1	24	3	1/2	1,725	2,330	1,070	39	54	10	CXH-A-30-43-30-00-20EP	NS	028620	216
30	575	3	30.2	24	3	1/2	1,725	2,330	1,070	39	54	10	CXH-A-30-63-30-00-20EP	NS	028625	216
35	480	3	43.1	120	3	1/2	1,725	2,330	1,070	45	54	10	CXH-A-35-43-32-00-20EP	S	028572	216
35	575	3	36	120	3	1/2	1,725	2,330	1,070	45	54	10	CXH-A-35-63-32-00-20EP	NS	028605	216
35	480	3	43.1	24	3	1/2	1,725	2,330	1,070	45	54	10	CXH-A-35-43-30-00-20EP	NS	028612	216
35	575	3	36	24	3	1/2	1,725	2,330	1,070	45	54	10	CXH-A-35-63-30-00-20EP	NS	028617	216
Models with Built-In Thermostats																
10	480	3	12.7	120	3	1/4	1,725	840	1,070	36	32	10	CXH-A-10-43-32-40-20EP	S	028580	150
20	480	3	24.8	120	3	1/4	1,725	1,400	1,070	43	43	10	CXH-A-20-43-32-40-20EP	S	028599	181
25	480	3	31.1	120	3	1/2	1,725	2,330	1,070	32	54	10	CXH-A-25-43-32-40-20EP	S	028601	226
30	480	3	37.1	120	3	1/2	1,725	2,330	1,070	39	54	10	CXH-A-30-43-32-40-20EP	S	028610	226
35	480	3	43.1	120	3	1/2	1,725	2,330	1,070	45	54	10	CXH-A-35-43-32-40-20EP	S	028628	226

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

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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

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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	Options
EP	Explosion Proof

CXH-A 10 4 3 30 40 1 1 EP Typical Model Number

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Explosion Proof Blower Heater for Hazardous Locations

(cont'd.)

Heater Rating and Operating Data



(3 to 35 kW)

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
INSTALLATION	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	-49°F/-45°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.
PROTECTION	High-Limit	Auto reset quick acting linear type thermal cutout.
	Pressure Relief	Pressure relief device.
HEAT EXCHANGER	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.
CABINET	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.
CONTROLS	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.