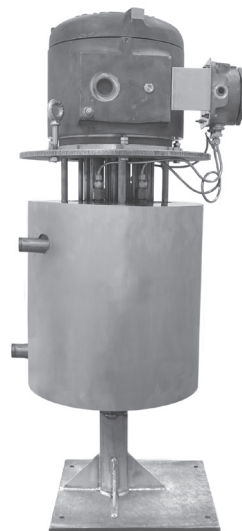


CCX

High Pressure Circulation Heater

- Heat Gas or Fluids to 3500 psi (241 bar) or 7500 psi (517 bar)
- 3 - 30 kW
- 120 - 690 V, 1 & 3 Phase
- Moisture or Explosion Resistant Terminal Housing
- ATEX Certified (Zone 2)
- ASME Section VIII and PED Pressure Code Rated
- 3/4" or 1" 316 Stainless Steel Process Piping
- INCOLOY 800 or 316 Stainless Steel Heating Elements
- (1) Type J Thermocouple Process Sensor
- (2) Type J Thermocouple Overtemperature Sensors
- 316 Stainless Steel Thermowells for Sensors
- Marine Grade Aluminum Casting
- Butt-Weld Connections
- 316 Stainless Steel Vertical or Horizontal Mounting Plate



Hazardous Area Housing shown



Description

Chromalox CCX - Cast Circulation Heat Exchanger - is designed to operate at up to 3500 psi (241 bar) at 392°F (200°C), with an available option for up to 7500 psi (517 bar).

The moisture resistant enclosure is designed to accept NPT, metric, and / or gland plate connections. An optional explosion proof terminal housing is available for hazardous area installations and is certified by both ATEX and IECex.

The aluminum casting ensures even heat transfer throughout the process piping, while limiting temperature input. The rugged design, certified by ASME and PED, ensures safe, reliable operation for many years.

Applications

The CCX heater is engineered to heat high pressure natural gas to control moisture content for turbine seals. Due to the robust design, the CCX design is also suited for many high pressure applications involving, air, nitrogen, CO₂, and other industrial gases. Seamless piping with corrosion resistant material also make it suitable for liquid applications. The casting allows definitive temperature control as the point of heat transfer to the process stream. This also makes the CCX an effective heat exchanger for temperature sensitive heating applications.

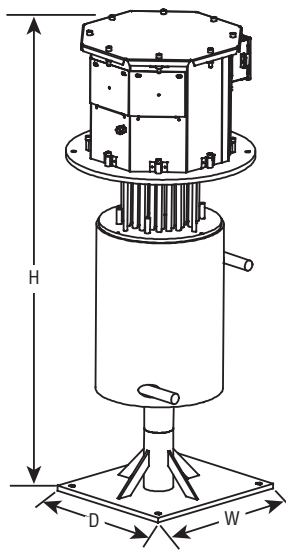
Construction

Chromalox CCX is constructed for tough industrial applications such as offshore environments or process critical areas.

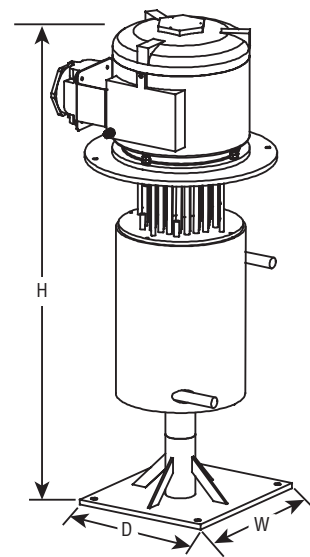
The heavy-wall piping is rated by ASME and PED for continuous high pressure usage, while the butt-weld connections will help provide a sealed process environment. A uniquely designed heat transfer configuration ensures maximum element longevity, even in tough applications. Heat transfer is provided by long-life, high temperature rated INCOLOY 800 heating elements.

The hazardous rated enclosure is certified by both IEC and ATEX for Group II, Zone 1 environments.

CCX High Pressure Circulation Heater (cont'd.)



E4 Moisture Resistant Housing



E2 Hazardous Area Housing

Options

- Hazardous Rated Certified by ATEX & IECex
- 7500 psi (517 bar) Construction
- 1" 316 Stainless Process Piping (specify 3500 or 7500 psi design)
- Electropolished Process Piping
- Exterior Insulation with 316 Stainless Jack-eting
- RTD Temperature Sensors
- Extended Voltage Capability (up to 690 V)
- 2500# 316SS ANSI flanged connections (specify 3/4" or 1" size, for 3500 psi design only)
- 316 Stainless Steel Heating Elements
- Bracket for Wall or Horizontal Mounting
- Vertical Lifting Eyes
- Anti-Condensation Heater for Terminal Enclosure

Model Proportions

Units	Design Pressure	Temp Rating (T3)	Weight	Width	Depth*	Height	Inlet/Outlet Connections	Piping Volume
Imperial	3500/7500 psi	392°F	550 lbs.	18-1/2"	14"	50-3/8"	3/4" ANSI	36.5 in ³
Metric	241/517 bar	200°C	250 kg	47 cm	35.6 cm	128 cm	3/4" ANSI	598 cm ³

* For wall/horizontal mounting bracket, depth will increase to 18-1/4" (46.4 cm)

Standard Features

Seamless, 316 Stainless Steel Piping Corrosion Resistant, ASME/PED rated 3500 psi (241 bar)
 Moisture Resistant Terminal Enclosure CE & ATEX rated Rated for IEC Zone 2, safe area
 Multiple Sensors Provides both process and overtemperature monitoring
 Marine Grade Aluminum Casting External corrosion resistance for harsh environments
 Butt-Weld Connections Welded, sealed connections minimize potential leakage
 Heavy-Wall INCOLOY 800 Elements High-temperature, corrosion resistant offering
 Compact Footprint Space saving design
 Floor Mounting Plate Pre-drilled mounting plate for easy installation
 Integrated Heat Distribution Stringent temperature control of film interface

Benefits

CCX High Pressure Circulation Heater (cont'd.)

Ordering Information

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

Model Description Table

CCX Cast Circulation Exchanger									
Code		Pressure Designation							
SD		Standard Duty - 3500 psi (241 bar)							
XD		Xtreme Duty - 7500 psi (517 bar)							
CD		Special Pressure / Temperature Design							
Code		Element Sheath Material							
I		INCOLOY							
S		Stainless Steel							
X		Other Material							
Code		Wattage							
-30P-		30.0 kW (use actual kilowatt in two digits)							
Code		Terminal Housing Style							
E4		Moisture Resistant							
E2		Explosion / Moisture Resistant							
Code		Non-Standard Feature							
(Blank)		Standard Item							
XX		Custom Feature							
Code		Voltage							
208		208V		240		240V		380 380V	
415		415V		480		480V		575 575V	
Code		Number of circuits							
1		One				1 One			
2		Two				2 Two			
Code		Phase							
1P		Single Phase							
3P		Three Phase							
Code		Kilowatts							
30		kW							
CCX-	SD	S	-30P	-E2	415V	1	-3P	30	Typical Model

Note: Shaded sections of the model build table are not a finite list. Items such as Number of Elements, Wattage, Voltage, Circuits, and Phase should be adjusted to match design.

Notes on installation area and operating conditions

The CCX unit with E4 terminal housing is rated for safe area, ATEX category 3 (Zone 2).

The hazardous location option (E2) is certified to operate per IEC Certificate No. IECEx ITS 15.0018X and ATEX Certificate Number ITS14ATEX18050X and is rated for II 2G Exde IIC T3 or T3Gb in ambient conditions of -20°C to +40°C or +60°C. Refer to certificate for complete details.

The pressure rating is certified by ASME, Sect VIII, Division 1. PED certification will be by SEP (Sound Engineering Practice).

All CCX units are designed for a maximum rating of T3 (392°F / 200°C) at either 3500 psi (241 bar) or 7500 psi (517 bar).