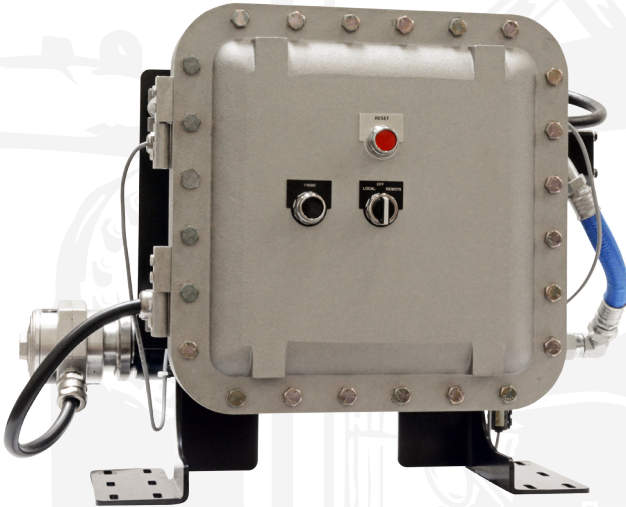


Explosion Proof Coolant Heating System

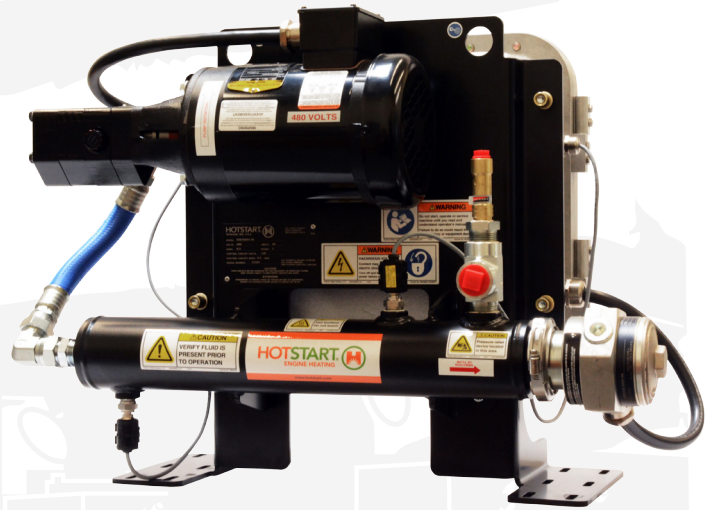
CSE



HOTSTART's CSE is a compact coolant heating system for use in North American hazardous locations and is designed to maintain optimal engine starting temperatures for gas compression or offshore equipment applications.



CSE
front view



CSE
rear view

BENEFITS & FEATURES

ENGINE AVAILABILITY

To improve equipment startability and availability, the CSE maintains a consistent and uniform temperature by circulating heated coolant throughout the engine block – eliminating hot spots and preventing overheating at engine shutdown.

COMPLETE PACKAGED DESIGN

Designed as a user-friendly, pre-packaged system, the CSE includes all necessary components and features a compact configuration to reduce overall footprint. Its remote automatic function and customer interface connections enable the CSE to be easily integrated into any control system.

REDUCED MAINTENANCE & EMISSIONS

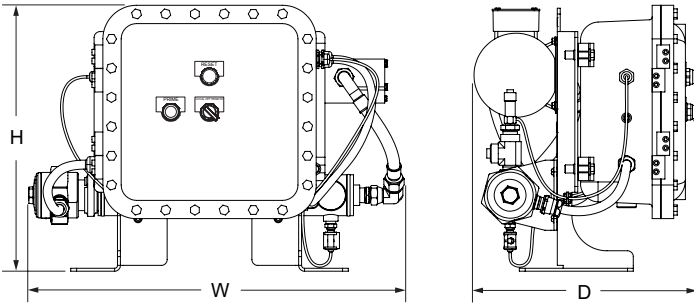
When compared to cold engine starts, maintaining optimal temperature during down time lowers NOx emissions at engine startup. Engine heating also eliminates the need for extended idling, reducing overall maintenance expenses.

PREVENTS CONDENSATION

In warmer, humid climates, temperature variation can cause condensation to collect in the cylinders, resulting in starting issues and frequent maintenance. By maintaining temperatures above the dew point, the CSE eliminates the risk of condensation forming inside the heads during cool down periods.

Explosion Proof Coolant Heating System

CSE



Height (H)	Width (W)	Depth (D)	Weight
22.75"	32"	19.2"	225 lbs
578 mm	812 mm	488 mm	102 kg

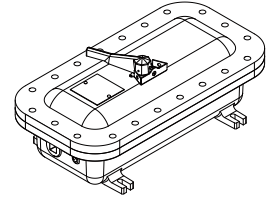
System					
Phase	three-phase (3 Ø)				
Voltage	208 V	240 V	400 V	480 V	575 V
Control Box Ingress	NEMA 4				
Motor Ingress	IP44				
Min./Max. Ambient Temp.	-4°F/104°F (-20°C/40°C)				
Temp. Class	T3C				
Altitude Rating (Motor)	3,300 ft (1,000 m)				
Certification	Class 1, Div. 2, Group D CSA Standards with CSA approved components				

Coolant				
Fluid Type	Coolant mix (50% water/50% glycol)			
Heat Power	3 kW	6 kW	9 kW	12 kW
Temp. Control	32–212°F (0–100°C), adjustable			
Control Set Point	122°F (50°C), factory set			
Temp. High-limit	195°F (90°C)			
Pump Power	1 hp (0.75 kW)			
Flow	10 gpm (2.2 m³/hr)			
Inlet/Outlet	0.75" NPT		1" NPT	
Pressure Relief	100 psi (690 kPa)			

Optional Lockout/Tagout Breaker Box for Hazardous Locations

Breaker Box

Optional breaker box provides a lockout/tagout disconnection point and overcurrent protection for Class I, Div 1 and 2, Group D classified heating systems.



Height	Length	Width	Weight
7.78"	20.5"	10.5"	45 lbs
230 mm	152 mm	161 mm	20.4 kg

MODEL INFORMATION

Proper heating system specification is dependent on multiple factors, including heated area dimensions, fluid volumes, ambient conditions, and other considerations. Additional heating system options not listed, including heat power, may be available. For assistance in selecting the heating system for your application, contact the HOTSTART Oil & Gas office at 281.600.3700 or oil.gas@hotstart.com.