
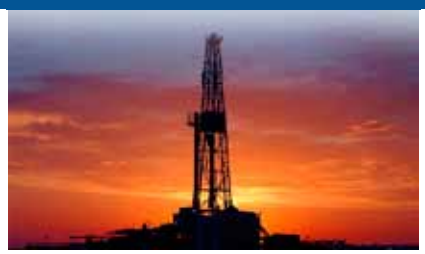

ENVIRONMENTAL TEST CHAMBERS FOR THE OIL & GAS INDUSTRY

Understanding the importance of reliability and safety in deep sea oil drilling, Cincinnati Sub-Zero (CSZ) supplies high-quality environmental chambers to manufacturers of valves, actuators and other components used for drilling. Environmental test chambers are used to test products to extreme levels in order to ensure they will work effectively in the field. With the ability to reach temperatures as low as -70°C* and as high as +250°C, CSZ's chambers are built with quality in mind. CSZ chambers test capabilities comply with industry test specifications and requirements including API-6A, Annex F, API-17D and others.

Our Z-Plus Temperature Cycling Chambers are ideal for basic to rapid cycling. The chamber size ranges from 8 cu.ft. to 80 cu.ft and comes standard with a variety of user-friendly features. These features include:

- CSZ EZT-570S Touch Screen Controller with datalogging, remote control monitoring and more.
- Ethernet, RS-232, RS-485 serial communications
- Slide-Out, adjustable product shelf
- Two, 4" circular ports
- Fog-free viewing window & interior light

Other popular chamber choices for the oil & gas industry are Walk-in and Remote Conditioner Chambers. CSZ has fully welded test chambers to meet high temperature cycling requirements. CSZ's dual-purpose RC-Series Remote Conditioners are designed to either deliver temperature-conditioned air to remote sites or operate as completely independent, self-contained temperature chamber. If these choices are not the right solution, CSZ can build fully custom chambers to meet your needs.

*Ultimate low to -120C using LN2°C




Custom Chambers for the Oil & Gas Industry

CSZ also specializes in fully custom-designed chambers that are tailored to meet your size and performance criteria with high volume airflow, large horsepower compressors, LN2 cooling and more. The following are some examples of chambers CSZ has built for the gas and oil industry.

Custom Test Chamber System for Testing Oil Drilling Components

CSZ designed this specialized environmental chamber to help qualify the reliability of oil drilling system materials and electronics at various temperature extremes to help ensure that they will perform in extreme environments. The components of these drilling systems can measure over 30 feet long, so there was a need for a specialized custom chamber.

- Two different types of chambers were designed to accommodate this unique testing need.
- The first system included two separate chamber sections that interfaced together in order to accommodate the vast length of the 30 foot part.
- The temperature range of these systems went from 70°C to 235°C in 20 minutes with the load.
- A second chamber was designed to go from ambient to -40°C in 80 minutes with the load.

Custom Walk-In Chamber for Testing Oil Valves

CSZ built this chamber in order to fulfill industry requirements for testing sub-sea drilling and production systems; particularly Blow-Out Preventer (BOP) valves. The enormous size and mass of these valves not only required significant thermal management, but also required special consideration for the handling of the valve and safety aspects for the user. CSZ designed a stainless steel chamber with a reinforced floor to accommodate the customer support rack for easy loading of the valve. It was also equipped with a full bi-parting, horizontal-sliding door that featured a “clam-shell” style interface port.

- High performance chamber with rapid temperature change rates and increased live load capabilities throughout the operating range of -42.8C to +260C.
- The extended temperature range allowed the customer to thermally stress their deep-well valves and seals to meet API-17D standards.

A GENTHERM COMPANY

Cincinnati, OH 45241 I 513-772-8810

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