90K N2 Converter Unit

Dimension

4000mm(L) x 2440mm(W) x 2530mm(H)

Weight

8,000 KG

90K N2 Converter Unit Zone II

The Nitrogen Converter is to be designed for the following operating parameters: Area:
Classification Zone 2
Design temperature load bearing/pressure retaining: –10 Deg to + 50 Deg C.
Design temperature machinery: –10 Deg to + 50 Deg C.

1. Engine

Detroit Diesel model 8-71 rated to produce 240 BHP @ 2200 RPM. (Continuous) SAE 1 flywheel housing. Remote mount engine oil and fuel filters. Mechanical variable speed governor

2. Fuel Reservoir

The fuel reservoir capacity shall be 100 US Gallons calculated for approx. 7 running hours. The engine and will come complete with filler breather, sight level gauge, isolating and drain valves.

3. Pyroban Zone 2 System (Engine Exhaust Gas Cooling)

A Pyroban exhaust gas cooling kit would be used. The following components will be supplied: Exhaust gas coolers, clean cap type Stainless steel certified exhaust spark arrestors.
Exhaust dummy elements.

4. Engine Safety and Shut Down System

The safety and emergency system will operate on the loss of compressed air pressure. The engine will stop by shutting off the diesel fuel rack and closing the air intake valve.

Engine Protection shutdown operation will occur on the following components:

- Low lube oil pressure.
- Engine over speed shut down.
- High coolant temperature.
- GN2 pump over pressure trip by hydraulic motor drive, once this occur, the install triggle valve will be triggle and function off the hydraulic pressure in order to free drive the hydraulic pump and Triplex pump will be free off, therefore N2 pressure will be reduced.
- Emergency Stop

- Engine/system safety device System

5. Cryogenic High Pressure System

ACD triplex. high pressure pump will be supplied with 1.250" cold ends, (type 3-GUPD) Max. Pressure: 10,000 psi. Flow Rate: 1,500 SCFM. All pipework and valves will be rated for 10,000 psi working. The HP pipe-work will terminate at a discharge valve with a 1502 2" thread

6. Cryogenic Low Pressure System

The low pressure system will be manufactured from 316 stainless steel pipework and will incorporate isolating valves, check valves, relief valves and 1½" x 2½" x 6" boost pump.

7. Specifications

Skid/Frame Assembly:

Unit's built and assembly shall be to a offshore design a single skid type, the diesel hydraulic power pack is removable from the main skid for servicing and maintenance. One set of ant vibration dampener shall be installed under of the diesel power pack to minimise vibration from the engine.

No part of the equipment shall overhang outside the skid parameters.

Design:

The skid/frame shall be designed to DNV 2.7-1, 'Offshore Freight Containers Design and Certification' code. Lifting pads eyes on all four corners will be fitted, a set of 4-legs lifting slings c/w nut/bolt type shackles to be supplied.

Diesel Engine:

The engine shall conform to Zone 2 requirements.

Triplex Pump:

Flow:	1,500 SCFM. Pressure: 10,000 psi. Discharge
Temp.:	70degF.