180K 10,000 PSI 0911 Injection Unit

Ranges

Maximum Working Pressure: 10,000 psi / 690 Bar
Maximum Flow rate: 180,000 scf/hr/ 4700Nm3/hr
Hydrostatic Test Pressure: 15,000 psig/1035 bar
Maximum Design Flow Temperature: 20°C /70°F
Maximum Pressure and Simultaneous flow: 180.000 scf/hr, 4700Nm3/hr @ 10,000psi / 690 bar
Standard Room Temperature: +50°C
Gross Weight: 9.5 tons
Dimensions: L4570mm/180”x W 2438mm/96” x H 2590mm/102”
Fuel Capacity: 375 liters/100 US Gallons

Standard features

4-point lifting structure
Designed according to DNV 2.7-1/ BS EN 120079
Ground transportation structure
Unit tested before shipment
Non-slip safety material on the steps and harness points on the stairs
Caterpillar 3406C DITA Diesel Engine for Petroleum application tested to produce intermittent “D”
Hazardous Area Engine Protection Package including exhaust gas pipe cooler, flame trap, stop valve and spark arrestor
Hydraulic heat charging system
NP200 “power end”
1.625” 10,000 psi Pistons (DNV-approves)
1.5” x 2.5” x 6” Impeller centrifugal pump

Emergency stop

Fuel/air shutoff valves are automatically activated by:

- High engine speed
- Emergency stop
- High coolant temperature
- Low oil pressure

Special Features

- 316 or 304 stainless steel cryogenic pipeline
- Stainless steel flooring in all areas exposed to cryogenic spills
- Cryogenic ball valves for liquid nitrogen circuit.
- Quench line around the vaporizer to control the discharge nitrogen temperature.
- Unloading valve at 11,000 psi and check valve for gas in the unit.
- Engine equipped with cryogenic suction air starting system and 1.5” CGA return pipe
- 2 x 1 manually operated dump valve

Equipment specifications

- DNV-certified
- Mounted Nitrogen and Vaporization pumping system
- Designed and built for onshore and offshore operation
- Motor designed to meet the requirements of motors for use in an area type "Zone II"
- Caterpillar 3406C DITA 490BHP Diesel Engine
- Engine loading is achieved using a Deninson hydraulic pump, with applied load controlled by remote activation of the sequence valve. The pump is Triplex model NP200 complete with reduction unit and hydraulic steering motor. Includes a Deninson P14 variable flow, high pressure piston hydraulic pump.
- DNV approved 1 5/8” pistons: 10,000 psi working pressure, 180,000 scf/hr flow, 1.5”x2.5”x6” centrifugal pump and high-pressure vaporizer used to convert waste heat obtained from electrical circuits into useful heat for liquid nitrogen conversion.
- Stainless steel exhaust system

Instrumentation and controls

To make easier the operation the local panel contains all the instruction and controls, including:
Engine Controls
Start/stop
RPM Engine emergency stop
Oil pressure
Air pressure
Water temperature
Speed control
Hour’s control
HP Nitrogen Pumps and Discharge system
Hydraulic loading pressure