DATA SHEET

High Flow Pressure Test & Flood Pumps Diesel Engine Drive









Introduction:

The Calder Range of mobile or fixed Diesel Engine Driven High Pressure Multistage Centrifugal Pump Units are designed and built primarily for the Oil & Gas Industry. Pump units for operation in hazardous and non-hazardous locations; On-shore fields from the Siberian Arctic to Kuwait Desert; Offshore facilities from Northern Norwegian waters to Asian and African tropical oceans.

Applications:

- Pipe Line Pressure Testing
 Pigging,
- Water-Flood
 Sub Sea Trenching.

Technical Specifications:

- Skid mounting options:
 Open Oil Field Type Skid Crash Frame Skid. (DNV2.7-1) Containerised Split Skids Semi Trailer Mounted.
- Noise attenuated to 90, 85, 83 or 78 Db(A) at 1M (if requested).
- Environmental conditions -40°C (-40°F) to 55°C (130°F).
- Diesel Engine type: CAT, Detroit, MTU or Volvo.

Hazardous Area:

• Zone 1, Zone 2, Rig Safe or Safe Area.

Pump Liquids:

 Sea water, Produced Water, Potable Water, Diesel, Including a range of chemicals & dilute acids.

Operation & Control Systems:

- Simple controls to fully integrated unmanned control systems.
- Pump flow rate controls allow fixed or variable flow rates using variable frequency or hydraulic drives.
- Pump unit control system configurations featuring the following options:
 - Single or Multiple pump unit control systems which can be operated from a remote location.
 - Local control systems available which can be skid mounted.
 - Full integration & interface with client control systems.
 - Use of latest communication protocols.
 - Comprehensive instrumentation with health/status monitoring functions.
 - Full data acquisition and logging capabilities.









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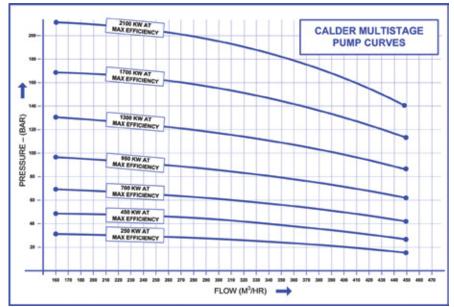












Performance Curve

Chart illustrates the range of flows and pressures available.

Pump Types:

- Ring Section Pumps or Horizontal Split Case API 610 design pumps.
 - Pressure range: 30 bar (435 psi) to 250 bar (3,600 psi)
 - Flow range: 300M³/hr (1,320 gpm) to 600M³/hr (2,640 gpm)
- Material Options:
 - 316SS Duplex Stainless Steel Super Duplex Stainless Steels (25% Cr)
 - Cast Iron with Bronze Impellors.



Standards & Specifications:

Calder pump packages can comply with most international standards and specifications including:

ATEX | IEC | GOST | EN | DNV | API | ANSI | PED | AS/NZ | NORSOK | NACE | CE | PED

| ISO 9001 Quality standard has been practised by Calder since 1987 with award of certification in 1999. Our rigorous application of this highly respected International Quality Standard has ensured that we consistently meet and exceed our customers' most demanding expectations for both quality and reliability.



ISO 14001 Environmental Standard has been held by Calder since 1999. Careful and judicious management of our working environment with the application of sound and well informed design applications utilising the latest and most efficient technologies helps us to produce equipment which minimises the environmental footprint of our production facility and the operating equipment in the field.

OHSAS 18001 We at Calder pride ourselves on our safety record. As members of the British Safety Council we practise the strictest safety procedures within our factory and working environments, applying rigorous risk assessments to all activities and equipment which we design and build.













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