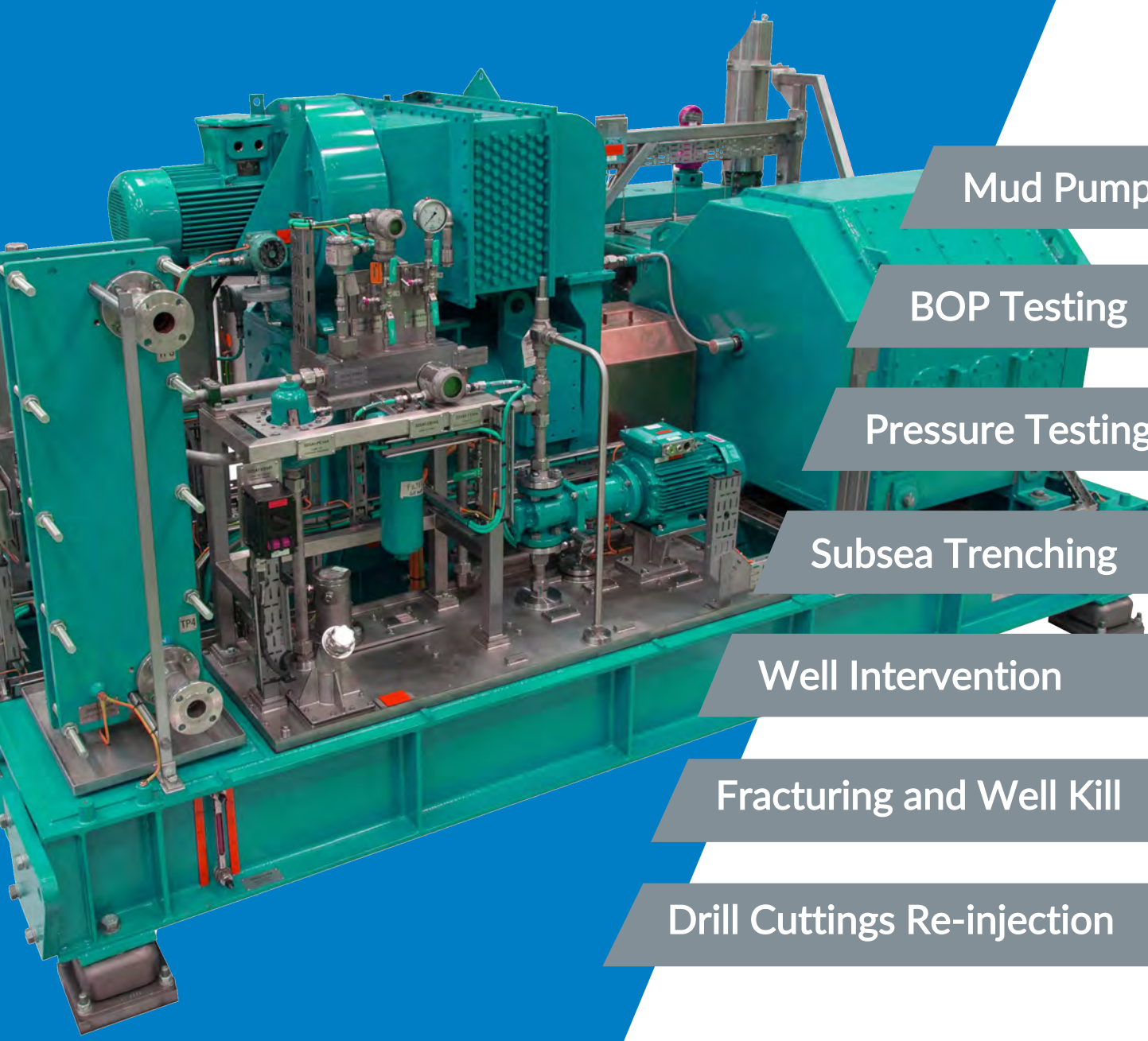
CALDER

Well Service

Pump Skid Packages and Systems



- Mud Pumping
- BOP Testing
- Pressure Testing
- Subsea Trenching
- Well Intervention
- Fracturing and Well Kill
- Drill Cuttings Re-injection

STANDARD UNITS | BESPOKE DESIGN | HAZARDOUS AREAS | HIGH PRESSURES | HIGH FLOWS | SPECIFICATION COMPLIANT

Well Service

Reliability through good design, careful component selection, and build quality is a cornerstone of our product range. Our well service pump packages are field-proven, robust machines designed and built for the harsh environments in which they operate.



DESIGN | BUILD | TEST | COMMISSION

Hazardous Areas

Our units achieve your application-specific flow and pressure requirements and meet the hazardous area standards and specifications of the operating region including NORSOK, ATEX, and IECEx. These pump units all benefit from Calder's wealth of offshore, hazardous area design and engineering experience which has made our products popular and trusted with offshore energy operators for over three decades.

Subsea Trenching

Where the jetting sled is the optimum means of subsea trenching (generally clay, sand, silt, and some soft rocks), our pump units offer the performance and reliability required by the application.

To accommodate the need to control trench depth and width, our pump units can be supplied with variable pressures and flow rates. Units can be designed for permanent installation on a vessel, or mounted in a crash frame or container for easy transportation between projects.



Well Service

Our range of products covers all pumping applications for well intervention work towards the end of the life of a well.

Our combination of standard products, bespoke engineering capabilities, and product quality ensure we have the solution to your well intervention and well service pumping requirements.

Cuttings Re-injection

For over 25 years, we have been at the forefront of offshore drill cuttings re-injection pump package development.

Our pump skids are in use in hazardous areas around the world. They are used in both onshore and offshore locations for continuous cuttings injection over a wide range of flows and pressures.

Pressure Test

For pressure testing we select from the Hammelmann range of high pressure, reciprocating plunger pumps. This range offers performances of >1,000 bar. They feature a vertical mounting orientation which helps to keep the unit footprint to a minimum. Above all, these pumps are renowned for their reliability and long service intervals.

Fracturing

As part of our range of well service pump units, we employ traditional horizontal pump designs that can withstand the rigours of formation fracturing and well kill operations. We design cost-effective pump units for a varied range of flows and pressures to suit specific duties. These units are often of a bespoke design to suit your specific operating and application requirements.

ATEX
NORSOK
IECEX
CSA



Applications - Overview

BOP Testing
Bull Heading
Cementing
Cuttings Re-injection
Fracturing
Managed Pressure Drilling
Mud Pumping
Pressure Equalization
Pressure Testing
Subsea Trenching
Waste Injection
Water Flood
Well Intervention
Well Kill
Well Stimulation

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Well Service

Our engineers relish the challenge of designing well service pump packages for some of the most demanding applications and operating environments.

We like a challenge!



DESIGN | BUILD | TEST | COMMISSION

Enclosures

Whether onshore or offshore, a good quality environmental enclosure offers your operators and well service equipment significant levels of protection and increases equipment longevity.

Options for our environmental enclosures include internal lighting, internal heating, noise attenuation, fire suppression systems, and design to account for explosion/blast loads. Many enclosures are skid mounted, others mounted on the floor.

ATEX
NORSOK
IECEX
CSA

Controls

Our in-house electrical & instrumentation team ensure you have the control and monitoring capabilities to suit your needs.

We manufacture everything from basic pump package control systems for incorporation into the customer's existing system, to complete turnkey systems with full control, data logging and system monitoring facilities.

Compact and Modular

Our experience designing well service pump packages for platforms and vessels with limited space is extensive.

Requirements for small footprint pump units has increaesd significantly over the last decade. Through good design, innovation and a can-do attitude, our design team address challenging space restrictions without compromising on quality or serviceability, utilising existing and new technologies and components from alternative industries.

Where access is limited, we design modular pump skids - built and tested in our factory, dis-assembled, transported, and re-assembled on site. One particularly interesting project was a modular well service unit where the site was in-accessible other than by helicopter. Thus, each module could weigh no more than 3,500 kg.



Skid, Container, or Crash Frame

Skid – the lightest and most economical solution. Skid-mounted pump units can feature comprehensive on-board controls, local operator panel, be linked to existing control infrastructure, or remotely controlled – whatever the application demands.

Skid with separate environmental/noise enclosure – all the benefits of the skid with the added protection of an enclosure. The enclosure offers protection from the elements and has a range of noise attenuation options.

Crash frame – a good choice offering a lightweight solution for equipment that requires a level of protection during transportation and onsite movements.

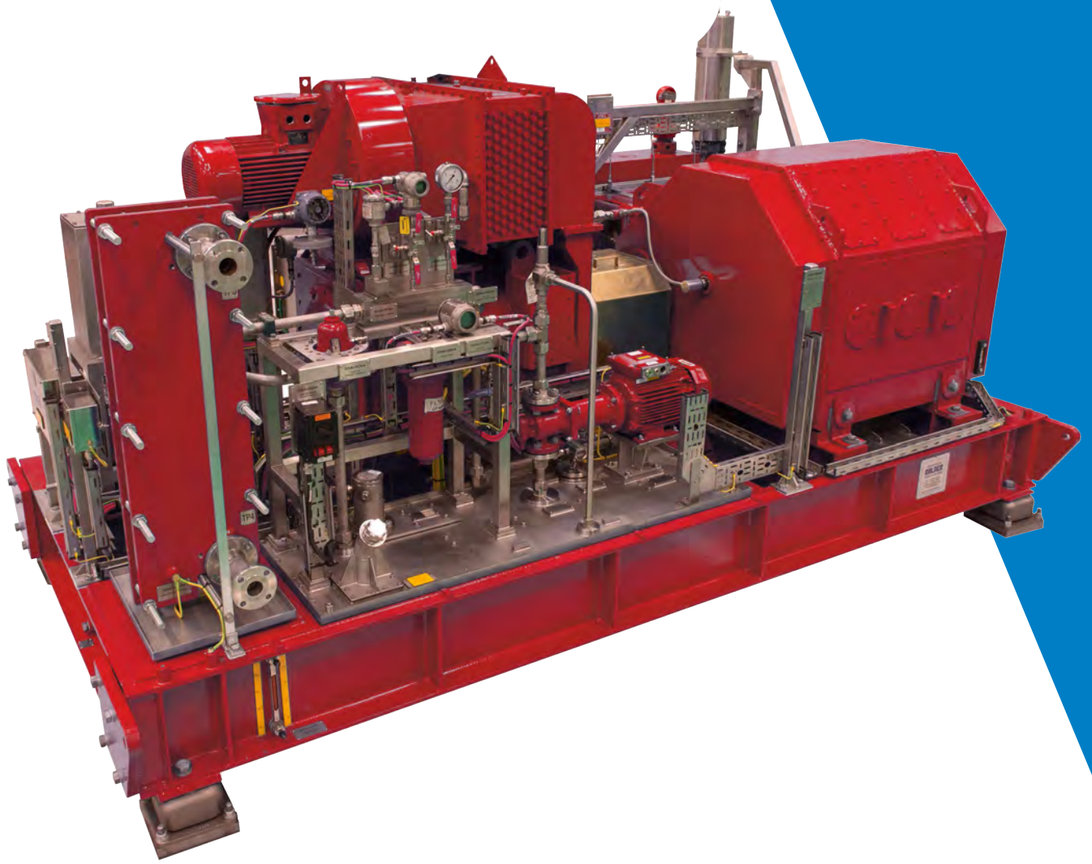
Container – providing maximum protection from transportation operations and environmental conditions. Comes with a choice of noise attenuation options.

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Multi-purpose Well Service Pump

Our multi-purpose well service pump units are used for multiple applications which include the injection of: drill cuttings, slops, deck drainage, completion fluids, slurries, etc.

At the heart of every multi-purpose pump package is a triplex reciprocating plunger pump. These proven and robust pumps, which conform generally to API674, are selected and configured to suit the customer's exact duty requirements.



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Compliance

We back up our expertise in design, manufacturing and documentation with a rigid adherence to the ISO9001, ISO14001, and ISO45001 regulations.

Standards

ATEX
Our experience of supplying ATEX pump packages for both Zone 1 and Zone 2 is extensive. With our design and manufacturing facilities based in Worcester, UK, it is only natural that these European standards feature heavily in our supply history.

NORSOK
The standards of the Norwegian petroleum industry are, as far as possible, intended to replace oil company specifications. However, for many of our projects our equipment has to comply not only with NORSOK regulations, but also the very demanding requirements of customers operating in hostile and potentially dangerous environments.

CSA
We have designed many pump systems for operation in offshore Canadian waters. These units comply with the regulations of the CSA Group (formerly the Canadian Standards Association).

IECEx
We manufacture units to International Electrotechnical Commission System standards for operation around the globe. Australia was an early adopter of these standards and we have supplied many units to the Australasian markets over the years.

Documentation

For Calder, documentation plays a vital role in providing supporting evidence that our systems comply with contract requirements. Without doubt, as important as the engineering design and the build.

Offshore and hazardous area projects are subject to the most stringent requirements for safety and quality. We must demonstrate our adherence to the plethora of rules and regulations from both industry and customer specifications.

Calder - Your passport to a compliant package

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We are **Calder**

A team of skilled, dedicated people striving to build the best at our base in Worcester, UK. From design to build, from installation to commissioning, we are there with you from start to finish



We **Design**

In addition to our standard units, we have in-house design teams producing bespoke fluid-handling products from sc atch.



We **Build**

Our pump units are built by our own engineers at our factory in Worcester, UK - and they have been for over 40 years.



We **Test**

We have two substantial, fully equipped test bays which allows us to ensure all units receive comprehensive testing before despatch. Customer witness testing of unit performance, vibration and noise is available due to our state-of-the-art facilities.

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