Proserv
The Controls Technology Company
Proserv is a controls technology company

- We provide leading edge technologies to our customers at conception of their asset development and throughout the asset’s life, creating improved reliability, maximising production and enhanced asset integrity.

- By combining technical ingenuity with design, engineering, manufacturing and field service expertise, we create innovative solutions that can be applied to standardised systems.
Global operations and diverse client base

- 18 global locations servicing over 60 countries
- >1300 employees

Select Customers:

Majors: Total, ExxonMobil, Repsol, ConocoPhillips, Shell,Chevron

IOC: Repsol, Talos Energy, Apache, EnQuest

NOC: Aramco, Equinor, BP

Drillers: Transocean, Seadrill

EPIC: Subsea 7, TechnipFMC, McDermott, Petrofac

Oilfield Service: Schlumberger, Weatherford, GE
Proserv has an extensive brand heritage spanning over 50 years.

Our Evolution
Our Values

A FRESH Perspective

Our values drive the culture we aspire to in our business. How we interact together as colleagues, with customers, with partners and in the communities in which we operate define our company.

We strive to create an environment where we can all give of our best and our values are fundamental to this, and to delivering customer success.

Right thing, right way

Entrepreneurial Spirit

Serious about Service

Help, Share & Communicate

Forward as a Team
Award Winning

2018

Workforce Engagement Award
Oil & Gas UK Awards 2018

Innovator & Technology Award
Subsea UK Awards 2017

Subsea Company of the Year
Subsea UK Awards 2015

Great Large Company of the Year
Offshore Achievement Awards 2015

Apprentice of the Year
Oil & Gas UK Awards 2014

Business of the Year
Spirit of Enterprise Awards 2014

Great Engineering & Manufacturing Company
Spirit of Enterprise Awards 2014

Technology of the Year
Middle East Oil & Gas Awards 2013

Entrepreneur of the Year
Ernst & Young Awards 2013

2017

2016

2015

2014

2013
**Operational Excellence** is an essential component of Proserv’s continuous improvement efforts, helping to deliver world-class performance and drive business results.

**Our OE Vision**
Our vision is to create an organisation in which every individual feels accountable for their actions and strives to ensure that every product, service and solution is delivered on time, right first time in the safest and most efficient way.
Technology Solutions

Engineering is the backbone of our business and we are continually striving to develop **reliable** and **fit-for-purpose** ingeniously simple technology solutions that increase performance and efficiency.

THE PROSERV APPROACH

- **Fast-track project delivery** using our technical competencies and broad ranging services portfolio, all under one-roof
- **Reduce project execution time** using our in-house R& D and proven technologies
- **Maximise the life of customer assets** through refurbishments and **upgrades** to ensure long-term competitiveness
- **Remove equipment obsolescence risk** through our proactive management programmes and novel techniques
People are at the core of Proserv and managing their development is fundamental to our success.

The Proserv Academy helps to build a culture of aspirational learning and performance where people are motivated, ambitious and who continually strive to improve and do their best for our customers.

"What we have at Proserv is a unique learning culture and one that not only supports and empowers us as individuals but is setting us apart from our competitors by ensuring we have the best team possible to deliver now and in the future."
Life of Field Services
Life of Field Services

- Renewables
- Sampling and Injection Solutions
- Nautronix a Proserv Company
- Subsea Bespoke Solutions
- Testing and Calibration Solutions
Production Controls

- Production control services
- Automation services
- Fluid sampling solutions

- Instrumentation and calibration
- Flushing and chemical injection
- Shutdown support services
- Well monitoring and performance

- Asset reliability and integrity
- Equipment rehabilitation, repair and upgrade
- Platform/topside structural upgrades
- Training

- Valves and coupling
- Water jetting and pumps
- Instrumentation and control

Field Development

Life of Field Services

Third Party Product Sales

750+
Production equipment systems commissioned and serviced

6,000+
control panels designed, manufactured and supplied to clients globally

240+
Bespoke technology solutions
Production Controls Technologies

1. Wellhead control panels
2. Hydraulic power units
3. Chemical injection
4. Master control
5. Instrumentation panels
6. CALM buoy systems
7. Flow line pilot
8. Sampling systems
9. Automatic sampling system
10. Emergency shut down systems
11. RTU/DCS
12. Smart box
13. Gas modular skids
Drilling Controls

Drilling Operations
- Topside equipment and components
- Subsea drilling control systems
- Underwater positioning

Technical Services
- Piping and tubing
- Instrumentation and electrical
- Flushing
- Welding

Lifecycle and Aftermarket
- Rig upgrade and maintenance
- Testing, calibration and re-certification
- Aftermarket servicing & repair
- Certified training
- BOP control system upgrade and maintenance

40+ Years’ experience in the drilling services sector
240+ Drilling control system refurbishments
4,500+ Bespoke precision valve solutions manufactured
Drilling Controls

1. Topside control systems
2. Hydraulic system T&A
3. NASDrill riser positioning
4. NASeBOP
5. Gilmore valves
6. NASDrill RS925 positioning
7. NASNet® DPR
8. DCV control valves (under development)
9. Production control valves
10. Critical service control valves
Subsea Controls

- Full subsea control system provider
- Bespoke engineering solutions
- Backward compatible market leading electronics

New Field Development
- Production optimisation with Proserv ACT
- Co-exist communication technology

Brownfield Upgrades
- Managing existing OEM assets
- Installation and commissioning
- Subsea monitoring and surveillance
- Equipment refurbishment
- Storage, preservation and maintenance

Life of Field Services
- SCM/SEM refurbishment
- Topside upgrades
- Subsea distribution

227 Subsea control modules supplied to clients
16 Augmented Control Technology projects delivered
120+ Subsea controls projects completed
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**Diagram:**
- 1. Master control systems
- 2. Electrical power units
- 3. Umbilical termination units
- 4. Fire and gas IWOCS
- 5. Subsea umbilical termination assemblies
- 6. Subsea distribution unit
- 7. Electrical/hydraulic flying lead
- 8. Subsea control module
- 9. Open communications hub
- 10. HIPPS
- 11. Artemis 2G
Field Technology Services

- Feasibility studies
- Custom engineered solutions

New Field Development

- Pipeline intervention services
- Remote intervention tooling
- Surface preparation
- Corrosion prevention
- Dredging
- Well intervention control
- Subsea intervention

Brownfield Upgrades

- Deck and module separation
- Structural removal
- Jack/pile removal

Life of Field Services

Subsea infrastructure removal

Topside and substructure

Well Abandonment

- Subsea well severance
- Conductor recovery, sectioning and pinning
- Wellhead and tree recovery

350+ Pipeline intervention projects

3,000+ Specialised cutting projects

260+ Wells cut and recovered
Field Technologies

1. JetCut abrasive water jetting
2. Band saw
3. Drill and pin
4. Marine growth removal (MGR)
5. Slot recovery
6. Diamond wire cutting (DWC)
7. Internal pile cutting (IPC)
8. Multi string cutting (MSC)
9. Multi wellhead retrieval (MWR)
10. IWOCS
11. Pipeline coating removal
12. Dredging
13. Friction welding
Other Services

- Survey services,
- Offshore technicians
- Marine growth removal
- Cathodic protection
- Balance of plant
- Water jetting
- Dredging/soil plug removal
- Decommissioning

- Reservoir evaluation and appraisal
- Production optimisation
- Decommissioning
- Production chemistry
- Chemical injection

- Subsea equipment design
- Intervention engineering and emergency response
- ROV tooling

- Calibration services and metrology
- Umbilical services
- Pressure testing services
- Flushing equipment and management
- Ancillary equipment and services
Client Feedback
What our Clients say

The positioning performance during all installations and seabed surveys reinforced our confidence in NASNet® LBL, and the system contributed increased flexibility, simplicity and efficiency to marine operations, ultimately reducing vessel time and cost...

Project Team, Statoil

“Without your team’s determination and commitment, the riser removal scope of the Anasuria riser replacement project would not have been a success. It has been a pleasure to work with the Proserv team.”

Project Manager, Shell

“We were very satisfied with Proserv’s MSC cutting solution and the timescales in which they completed this project, which exceeded our expectations.”

Project Team, Maersk
What our Clients say

“We would like to thank the Proserv team for a job well done. We truly appreciate the dedication and efforts put forth to make the Tornado installation and the Typhoon upgrade a success.”

Manager – HPI Floating Production Unit, Talos Energy

“For the Callater field, Proserv played an integral role in its delivery and again was one of the key partners in ensuring that the project remained on budget and on time.”

Lead Subsea Controls Engineer, Apache

“We would like to thank the Proserv team for a job well done. We truly appreciate the dedication and efforts put forth to make the Tornado installation and the Typhoon upgrade a success.”

Senior Subsea Consultant, Apex Subsea
What our Clients say

“Proserv stepped up to the challenge of providing a co-exist controls solution to ‘extend and enhance’ our aging subsea asset where no viable solution was available from the OEM.”

Technical Authority, CNR

“The installation part of the anode retrofit project is now complete with work being carried out much quicker than expected. This was way within budget and a much better result than we hoped for.”

Principle Engineer, Statoil

“Apache North Sea has developed a strong and long-term relationship with Proserv and the project team was professional and well versed in delivering our requirements.”

Senior Project Manager, Apache
Case Studies
**Subsea Controls – Subsea Production Control System**

**Client:** Noble Energy  
**Location:** Gulf of Mexico  
**Equipment:** Subsea control system

**Project Background**  
With a step out distance of 38 km and water depth of 1,900 metres, the challenge was to provide power and communication to the wells and to the multiphase flowmeters. The topside control system was to be installed onto an existing host facility with minimal space available for Proserv equipment.

**Solution**  
The A2G subsea electronic modules (SEM) incorporated within the subsea control modules (SCM), the first A2Gs installed subsea globally, and the open communication hubs (OCH) delivered all the key requirements on performance as set out by the client. Proserv delivered two SCMs with a spare and a dual open OCH solution to provide reliable and redundant hi-speed communications.

Using fibre optics, with copper as a backup, Proserv provided the power and data rates required for the power and data intensive multiphase flowmeters. To meet host space constraints, Proserv engineered a custom, stackable hydraulic power unit (HPU).

**Scope**  
Proserv designed, manufactured and delivered the two well subsea system at its manufacturing locations in Houston and Great Yarmouth. The project required a master control station (MCS), topside umbilical termination assembly (TUTA), HPU, three SCMs and two OCHs.

**Benefits**  
- High speed communication with powerline back-up  
- Future proof A2G technology with obsolescence management  
- The dual OCH solution allowed for a fully redundant power and communication system  
- First A2G deployed globally
Subsea Controls – Subsea Production Upgrade

Client: Talos Energy LLC
Location: US Gulf of Mexico, water depth: 2,500ft
Equipment: A2G subsea electronic modules (SEM) replacements and master control station (MCS) extension

Project Background
With the Talos Tornado 2 project, in which Proserv was awarded a production control system, Proserv also gained the contract award to upgrade third party subsea control modules for the Typhoon and Boris Field tie-backs into the Helix Producer 1. The contract called for the upgrade of six SCMs using the Artemis 2G technology for the Typhoon (4) and Boris (2) fields.

Project Scope
Proserv removed the existing SEMs from the SCMs and replaced with our A2G SEMs. In order to communicate with the new fields, Proserv installed an MCS extension to the existing Phoenix MCS to provide power and communications to both Typhoon and Boris Fields.

This was a truly global project, as the SCM upgrades were executed at the Proserv Great Yarmouth facility with project management and client interface handled by the team in Houston. The MCS software and hardware upgrades were executed and implemented out of the Houston facility.

Conclusion
After successful execution and contract close-out, Proserv now control eight wells while co-existing with other wells in the Phoenix Field, offering future SCM upgrade opportunities. Proserv is focused on building a solid track record of reliability to become the controls provider of choice for Talos Energy.

Benefits
• Maintenance of current subsea interfaces
• Latest specification SEM with additional interfaces available
• Fully supported SCM electronics with obsolescence management
• Maximised use of existing infrastructure to reduce CAPEX and risks
• As new SCM with upgraded functionality
• Opportunity for phased upgrade without affecting production
• Remote support
• Improved subsea production system reliability
Production Controls – Chemical Injection

Client: BP Fionaven
Location: West Shetlands
Equipment: Modular chemical injection system

Project Background
Petrojarl Fionaven is an offshore production system specially designed for oil production in the ultra-harsh environment of the North Sea and North Atlantic margin. It is designed to stay connected to the production wells in the harsh West of Shetland environmental conditions. Teekay Petrojarl required an upgrade of the existing chemical injection pump system, which involved the installation of a new scale/corrosion inhibitor pump skid in order to fulfil BP’s requirements for over 95% system availability.

Solution
Access restrictions on the vessel required the skid to be supplied in three sections so it could easily pass through the access hatch and into its location. Each part of the skid was fitted with lifting lugs and supplied with slings which allowed them to be lifted by crane from the supply vessel, onto the FPSO and into location. The skid was manufactured in three modular sections with the provision for lifting the bottom frame vertically by providing side lifting lugs. The skid can be split in such a way that the sections, excluding the base, contain one duty and one standby pump for high flow and for low flow demand.

Removable feet were provided, bolted to the skid base section, for fixing of the skid package to the existing deck plate offshore. The feet were manufactured to be suitable for welding to the deck and the bolting arrangement incorporated means of levelling the skid using shims/packer plates between the feet and the base structure.

Conclusion
Proserv worked together across the globe in developing their first CE compliant corrosion Inhibitor and scale inhibitor package, while also managing to deliver to meet the client’s urgent delivery schedule.

Benefits
• 99% system availability
• CE & EC directive compliant
• Modular design
• Remote shut down facility
• Intrinsically safe instrumentation suitable for Zone 1
• DNV certified package
Client: Global Operator
Location: Middle East
Equipment: Smart Box

**Project Background**
Our client had 800 onshore solar powered wells with basic hydraulic controls with no communication back to their control center. Due to the amount of panels and their location and geographical spread, they were only able to visit each well every four to eight weeks. Varying well pressures were tripping the panel and closing the well safety valves losing up to 1000 BOE/D, without any notification in some instances.

**Solution**
Proserv developed the Smart Box, which was manufactured by our engineering teams in the Middle East as a real-time monitoring solution for evaluating onshore and offshore wells in remote sites. Unplanned shutdowns can cost operators up to 1% of total annual production and with the Smart Box, shutdowns are detected instantly avoiding prolonged production losses and lowering operating costs.

The Smart Box is an intelligent device with an inbuilt GSM modem that collects information from production equipment at the well site then transmits alerts to personnel via GSM straight to a mobile device. This innovative technology solution can be embedded within any of our systems and customised to a client’s exact specification for increased operational efficiency.

**Conclusion**
This is a perfect example of how Proserv can use its extensive engineering capabilities to quickly develop an ingeniously simple technical solution to solve a very particular client challenge and provide significant cost savings.

**Benefits**
- Smart Box solution saved the client potentially up to **$500k** of lost production
- Shutdowns are detected instantly avoiding prolonged production losses
- Lower operating costs due to the reduced need for vigorous visual inspections
- Can be customised to suit each customer’s application
Client: A leading drilling operator
Location: USA
Equipment: BOP control system refurbishment

Project Background
A leading drilling operator requested the preventative assessment of a BOP stack as a measure to review maintenance processes that may have led to $20 million in downtime.

Solution
Proserv introduced a BOP Integrity Program aimed at assessing complex mission critical control system fluid flow components, supports, and connections. Based on the findings of the assessment, training plans were proposed to help improve maintenance processes.

Scope of Work
The Proserv team mobilised on location to perform the assessment, beginning with tubing and pipe mapping routes for length, line identification and supports. Once tubing and pipe identification was recorded an evaluation of tube fitting make-up and life fatigue using Proserv’s proprietary gauging system could be properly noted for future maintenance tracking throughout the system.

Life fatigue contributors such as vibration and human error due to improper clamp restraint placement were outlined. Visual and liquid penetrant testing of welds was performed to insure system fitness for service along with an evaluation and inspection of the control valves for optimum performance. In closing, a process performance improvement audit plan was prepared and presented to the customer for review and determination of an action plan going forward.

Benefits
• Overall health check of the BOP stack hydraulic control lines
• Meantime to failure improvement
• Improved BOP stack reliability
Drilling Controls – BOP Control Refurbishment

Client: Multinational oil and gas company (via KCA Deutag)
Location: Norway
Equipment: BOP control system refurbishment

Project Background
KCA contracted Proserv to carry out the refurbishment of an entire BOP control system that was manufactured in 1984 and had been in use since 1986.

Solution
Proserv’s skilled engineers refurbished the entire BOP control system changing out ‘like for like’ and refurbishing pumps and machinery where necessary. New tubing was also installed and all the electrical controls were changed out with new.

Conclusion
As the system was built in 1984, it had other requirements than systems of today. Refurbishment of the current system and changing some of the components ‘like for like’, was significantly less expensive in comparison to buying a new one whilst still being within API 16D regulations.

Our skilled teams delivered the system within a very short timeframe and managed the deadline even when having it pushed back four weeks.

Changing out tubing and installing it in a new way ensures the maintenance of the stack manifold will be much simpler. Furthermore, it will reduce time spent on maintenance both on the stack manifolds and the rest of the BOP control system in the long-term.

Benefits
• Proserv offers a viable cost-effective alternative to buying new
• Fast project turnaround to meet challenging client schedule
• Estimated project cost savings in excess of 70%
Project Background
The client required a solution for attaching retrofit cathodic protection to 88 windfarm monopiles using remote intervention. Four connection points per monopile were required to allow the installation of anode mattresses which were to be positioned on the seabed around each pile.

Solution
Proserv provided their HMS 3000 friction welding technology and worked with a third party tooling supplier to provide a solution that enabled the welding of M16 carbon steel studs directly to the monopiles. These studs allowed for cables from the anode mattresses placed on the seabed to be directly connected to the monopile providing the required cathodic protection. The welding tool control panel was integrated with the ROV and the hydraulic feed taken directly from the ROV’s HPU.

Scope
Proserv carried out an initial DNV approved weld qualification process, laying the foundations for the offshore scope to be undertaken at a later date. During offshore operations Proserv provided a complete HMS 3000 friction welding system consisting of a subsea weld head, subsea control system which was integrated into the project ROV, subsea stud changer and qualified personnel. Full contingency equipment was provided and all welds were completed to the client’s full satisfaction. Real time data was recorded and issued to the client to show the operation was carried out as per the approved procedure by DNV.

Conclusion
The HMS 3000 system and stud changer allowed for the project to be completed without the need for diver intervention. The DNV qualified weld procedure gave the client confidence that welding operations would provide cathodic protection without compromising the structural integrity of the monopiles during the welding operation. The provision of the cathodic protection has extended the working life of each monopile.

Benefits
• No need for diver intervention
• Cost savings through preventative maintenance
• High quality, high integrity approved cathodic protection solution
Field Technology Services – Decommissioning

Client: Maersk
Location: Leadon, North Sea, UKCS
Equipment: Multi string cutting (MSC) tool

Project Background
Maersk has embarked on a programme of work to decommission the Leadon Field in the North Sea. Proserv was engaged to supply a solution for the internal cutting and recovery of wells in the South Cluster during March 2016. The semi-submersible Serco 704 was contracted by Maersk to complete the work and Proserv deployed its MSC equipment spread to complete the operation.

Solution
Proserv’s MSC tool uses abrasive water jetting technology and was selected as the solution to conduct internal well severance. This method was chosen over traditional methods as it offered significant time savings and the adaptability to sever strings made up of differing IDs, cemented or un-cemented. Tooling to recover the severed wellheads was also mobilised allowing single trip severance and recovery. The cutting time for a three string well ranged between four and six hours with the eight well campaign completed over the course of nine operational days.

Conclusion
This is the first rig-based well severance and recovery project completed by Proserv in the North Sea. The operation was completed ahead of schedule with well severance times exceeding client expectations. A strong collaborative effort between Proserv, the client and rig teams resulted in an efficient and successful campaign.

Benefits
• Reliable cut of cemented or non-cemented casing strings
• Contactless cutting technology reduces risk of stuck in hole
• Single trip severance and recovery
• Adaptable tooling that can deal with various casing IDs
• Reduced vibration in drill string