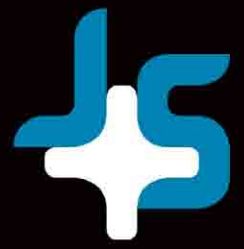


Complete engineering and equipment **support** solutions



**J+S Limited**



## J + S Limited

We are an independent engineering and support company, providing a range of subsea design, engineering, and operational support services for hardware and peripherals primarily related to subsea control systems.

We operate Project Management and support contracts comprising subsea and control systems engineering, workshops, offshore support, materials management, storage and maintenance.



[www.jands.co.uk](http://www.jands.co.uk)



## Introduction

J+S has a pedigree as a provider of support services from our Barnstaple, North Devon base to the Royal Navy stretching back over 50 years.

In 2001 we set up in Aberdeen intent on building a complementary business providing equipment support services to the North Sea Oil & Gas sector. Initially our focus was on providing installation, repair and maintenance services in support of existing production operations. More recently we have invested further in our engineering design capability and now provide turnkey sub-contract packages of engineering design and production in support of new field developments and field extension programmes.

The Aberdeen business has grown rapidly in recent years and now employs 20 staff engaged on engineering design, technician support and project management activities in support of our customer base.

We count amongst our customers both oil and gas producers and support engineering companies including Nexen, Genesis, Expro, Talisman, Dana, BG, Chevron, Camerons, GE Oil & Gas, and Aker.

At Barnstaple we employ over 100 staff and whilst naval defence remains their principal focus we have recently developed an in-house team dedicated to support the emerging Wave and Tidal sectors of the Marine Renewable Energy marketplace. We also provide volume production services and second line engineering support to the Oil & Gas business from Barnstaple.

Most recently we have begun providing engineering, production and in-field support to SIG from Barnstaple in support of their innovative pipeline inspection tool development programme.

As a Small and Medium Size Enterprise (SME), J+S has a strong pedigree and reputation in our chosen markets. We aim to be innovative, responsive and agile in meeting our customers' challenges.

We are a company owned by the Directors and Managers. We have an outstanding 50-year track record in the provision of equipment and support services to the Naval Defence, Oil & Gas and Marine Renewable Energy marketplaces.

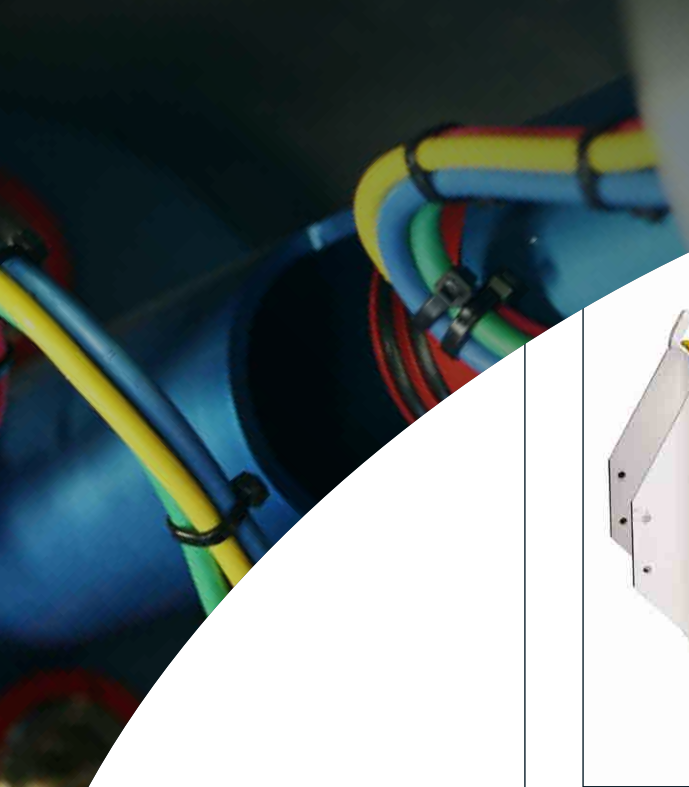
Our mission is to continue to provide a first class service to our customers for the next 50 years.



David Jeffries, Managing Director



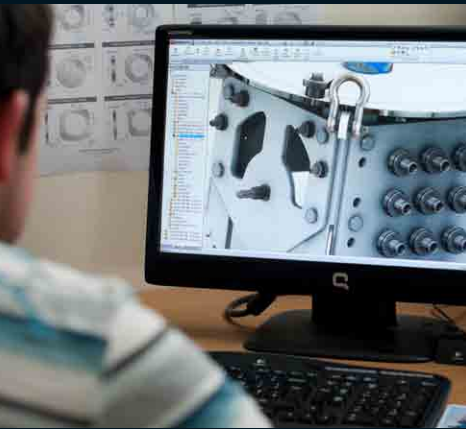
J+S Aberdeen Office



Subsea Distribution Unit



Electrical Distribution Box



Solidworks Design and Modeling

## Engineering Design

### Design and Development

Applying the design and manufacturing excellence we have gained through our longstanding defence experience, we offer innovative solutions to customer requirements.

For the Oil & Gas market, we design and manufacture a range of equipment including: electrical and hydraulic subsea distribution units, umbilical terminations, break-out boxes, pulling heads, stab plates, and other equipment relating to subsea control systems.

### Standards

We work to the industry design practices for subsea tooling, subsea power distribution, pressure compensation, finite element analysis for mechanical structures, selection of materials, ATEX, and the need for qualification testing and independent verification.

### Design Tools

We use SolidWorks, AutoCAD, and Mathcad software design tools. SolidWorks is used extensively for drawing, modelling, design and manufacturing calculations and simulations. We utilise a range of software tools to manage requirements capture, risk and reliability analysis, and project management.

### Cable and umbilical terminations

Reliable termination design is critical both for installation and during the lifetime of subsea cables and umbilicals. We manufacture complete mechanical assemblies with electrical, fibre, and hydraulic connectors, water block, strain terminations, and bend restrictors.

### High/Medium Voltage Connections

Through our work in Defence, Oil & Gas, and Offshore Renewables, we have developed a strong in-house capability in the design of subsea medium and high voltage connection techniques.



Subsea Control Module Manufacture

## Engineering Manufacture

We focus on high variety, low and medium volume manufacturing and production. Working with electronic, mechanical, hydraulic, electrical, and acoustic assemblies, we have an outstanding track record of complex manufacture and repair work.

Our specialist and multi-skilled staff carry out a broad range of assembly, wiring and test functions, offering customers unique expertise in manufacture for the maritime environment.

### Subsea Hardware

We manufacture a range of hardware related to subsea control systems. This includes: pressure-compensated housings, stab plates, electro-hydraulic distribution units, jumper bundles, and project-specific equipment.

### Cables and Jumpers

Our technicians are trained in the assembly and testing of industry standard subsea connectors. We manufacture subsea cables and electro-hydraulic jumpers.

### Moulding

One of our core capabilities over the years has been moulding and bonding of Polyurethane and Polyethylene thermoplastics to metals. We design and manufacture high integrity hull and pressure housing penetrators for transducers and subsea electrical equipment.

### Transducers

We manufacture a wide range of ceramic and composite transducers for sonar and underwater communications applications. We have full design, test, and manufacturing facilities.

### Build to Print

We can deliver manufacturing work, using customer-supplied manufacturing packs as the input to the process. We also work with customers who take their ideas to the concept stage, which we then turn into a realisable reliable equipment.

### Cabinets / Cabinet Wiring

We manufacture cabinets, racks, and consoles to meet the EMC, vibration, shock, and environmental standards required for use in naval defence applications. We have a wiring shop that produces low volume and bespoke wiring for cabinets, racks, consoles, to exacting quality and build standards.



Cabinet and Console Wiring



Stab Plates



Inline Splice

## Products

### Subsea Distribution Unit (SDU)

As subsea equipment works towards and past its planned design life, failure rates increase and replacement can be a slow and costly exercise. We have a modular design for an electro-hydraulic SDU that can be adapted to meet a range of requirements.

### Fibre Optic Penetrator

Fibre optics offer a huge leap in performance for subsea communications, but brings with it complex demands on handling skills, splicing, and equipment. We have developed a fibre optic penetrator that obviates the need for subsea fibre optic in-line connectors and does not introduce any losses in the overall power budget.

### Fibre Optic / Copper Subsea In-Line Splice

The ability to quickly and reliably join together two fibre optic or copper cables in the field can save time and money. Whether it provides a simpler cheaper installation and hook-up methodology as part of a planned project, or a fast reliable repair in the event of damage or failure, our in-line splice has been designed for field use. It is designed for operation to 3,000 metres and includes strain termination on both ends so that the mechanical strength of the finished splice is not compromised.

### Instrumentation

We combine a set of skills and capabilities gained in both Oil & Gas and Defence to offer instrumentation packages for use in hazardous environments. We supply packages that comprise sensors, data transmission, logging, display, and analysis functions. The sensors, packaging and data transmission media are rated for use in hazardous environments where ATEX (zone 0, 1, 2) equipment specifications are required.

### Subsea Transformer

The subsea transformer solves a problem that is regularly met in supporting subsea equipment. It provides a replacement for the inductive couplers that are still in use on subsea control systems in the North Sea and elsewhere. We select the transformers to match the electrical characteristics of the coupler being replaced. The transformers are packaged in an oil-filled pressure compensated housing fitted with industry-standard subsea mateable connectors.



Subsea Transformer



Fibre Optic Penetrator



### Engineering Solutions

In the Oil & Gas market, products tend to be low volume specialist and often subtly different every time. We can offer engineering solutions using the building blocks of technology, skills and experience gained in our domain to develop a product that meets your needs for function, performance and cost.

### Position and Load Monitoring

We offer position and load monitoring solutions for a variety of applications providing a safe and secure method of giving the operator an instant and direct measurement of the load on an anchor chain or moorings. These can be used on devices measuring a few tonnes to an FPSO at 1000 tonnes plus.

### Electrical Distribution Box

Our EDB comes in a range of sizes and configurations. It has been fully tested and qualified for use in mission critical applications. There are two basic configuration options, these are: a one atmosphere dry internal housing with oil filled pressure compensation external, or a fully oil filled, pressure compensated, with novel internal compensating piston arrangement.

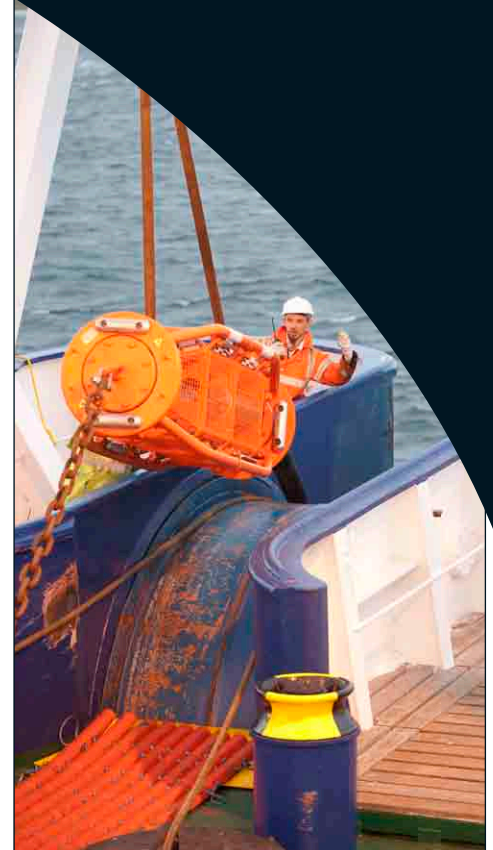
### Jumpers

We manufacture electrical and hydraulic jumper and jumper bundle assemblies. These can range in length from 1 metre to hundreds of metres and provide electrical power and communications, and hydraulic controls between the various control system components on the seabed. Jumpers and bundles are manufactured to high standards and undergo rigorous QA checks prior to offshore installation.

### High Power Connectors

Utilising our experience in subsea connection in both Military and Oil & Gas market places we have been able to develop high and medium voltage connection solutions to support the rapidly expanding Marine Renewables industry. This has also allowed us to further expand our offering to the Oil & Gas industry.

To complement this we also have a qualified team of engineers experienced in high and medium voltage, who can complete installation of our devices both on and offshore, and offer ongoing maintenance support.



EMEC Splice Deployment



Subsea Electrical Jumpers



Control Module Test Panel



Downline Test Reeler



HV Power Connection

## Offshore Support Services

### Spares Management

We provide a full management service for critical operational spares, ensuring the correct parts are available and in full working order at any time.

We store customers spares at our premises in Aberdeen. Amongst the services we offer are: optimisation of spares holding, obsolescence management, condition monitoring, equipment shelf life monitoring, replacement and reverse engineering.

### 24/7 Support

We operate a 24/7 service for all products and systems we support. This service includes engineering support, breakdowns, repairs, spares, installation, testing, and offshore diagnostics.

### Offshore

We provide offshore services including fault diagnostics (IR, TDR), repair and replacement of sensors, electrical and hydraulic umbilical connections and terminations.

We can manage customer dedicated offshore equipment (reeler, umbilical, jumpers) or supply our own. We deliver the equipment to the quayside fully prepared and tested and provide trained offshore personnel to conduct the hydraulic, electrical, or fibre optic testing and fault diagnostics.

### Hydraulic Flushing and Testing

We provide full hydraulic flushing and testing services at your site. Services include: initial inspection and report, production of all process and test documentation, any required remediation and flush and test.

### Cable Jointing and Termination

All offshore support technicians are trained in the accepted techniques of electrical cable jointing, working with and on behalf of the major cable OEMs and Oil Companies.





Subsea Connectors and Sensors

## Engineering Services

A broad range of engineering expertise combined with our established offshore support capability places us in a unique position to offer a complete engineering service from front-end design through to offshore installation, acceptance and repair.

Providing operational support services including rapid-response offshore support to the UK and overseas Oil & Gas industry in areas including:

- Subsea low and medium voltage power distribution and connections analysis
- Subsea asset management
- Technology insertion
- Client witness
- Preparation of Project documentation
- Offshore procedures
- Production cable jointing

### Cable Splicing

We have designed equipment and developed fully qualified methodologies for the splicing and jointing of power and signal cables.

Cable manufacturers may need to supply cable lengths that cannot be manufactured in a single production run. Our equipment and process produces a joint that fully reinstates the cores, any screen braid, has the same overall diameter, the same bend radius and more than 90% of the original cable strength.

The same equipment and techniques can be used for emergency cable repair and jointing offshore.



Re-Engineered Hydraulic SCM



Subsea Electrical and Fibre Splices

## Certification

Quality, Environmental Protection and Occupational Health and Safety are top priorities for J+S.

J+S have obtained and maintain certification to the relevant International Standards and have an integrating management system to provide a single simplified business model.

### Quality Assurance

Certification to the internationally recognised ISO 9001:2008 for quality management demonstrates our ability to consistently provide products and services meeting customer and regulatory requirements.

TickIT certification recognises our quality standards in software development. As members of the First Point Assessment Scheme (FPal) we commit to an impartial and transparent approach to shared objectives, expectations and standards in the oil and gas industry.

### Environment

Our commitment to the environment is recognised by certification to ISO 14001:2004. This internationally accepted standard demonstrates the effectiveness of our Environmental Management Systems and our compliance with environmental laws and regulations. Adhering to these standards enables us to successfully minimise the environmental impact of all our activities.

### Health and Safety

Our OHSAS 18001:2007 certified Health and Safety management system ensures we eliminate or minimise risk associated with our activities for employees, customers and all other parties.

### Investors in People

Through recognising the value of our people, their performance and their contribution to the success of the organisation, we have held the Investors in People Standard since 1999.

This is the only quality standard focusing on people, and provides a framework for continuous improvement. We acknowledge that to achieve business aims and objectives, people need the right knowledge, skills and motivation to work efficiently. The Investors in People Standard supports this growth and development.

### TickIT

TickIT is a guide for software developers to achieve customers' quality expectations within the framework of ISO 9001.

To meet these expectations, we have defined and implemented a quality system which covers all the essential business processes in our software product life cycle.

### FPal

FPal operates a supplier management service on behalf of the major Oil & Gas organisations. As a pre-qualified, registered supplier with this service, all aspects of our business performance can be reviewed by the Oil & Gas organisations that subscribe to the system.





**Head Office:**

J+S Limited  
Riverside Road,  
Pottington Business Park,  
Barnstaple,  
Devon EX31 1LY

T: +44 (0) 1271 337500  
F: +44 (0) 1271 337501  
E: [headoffice@jands.co.uk](mailto:headoffice@jands.co.uk)

**Aberdeen Office:**

J+S Limited  
The Lombard Centre,  
Kirkhill Place,  
Dyce,  
Aberdeen AB21 0GU

T: +44 (0) 1224 773435  
F: +44 (0) 1224 725202  
E: [oilandgas@jands.co.uk](mailto:oilandgas@jands.co.uk)