


Rental IWOCS

**Custom-engineered
Intervention WorkOver
Control System (IWOCS)
packages**



PROVIDING THE
VITAL CONNECTION

A close-up photograph of an orange industrial reeler system. The surface is covered in water droplets. A white label with black and red text is visible on the left side. A metal bolt is visible on the right side. The background is blurred, showing blue and yellow colors.

We create custom-engineered Intervention WorkOver Control System (IWOCS) packages, including umbilicals, reelers and accessories for the world's leading energy companies.

We have delivered 200 reeler systems to international customers, many of which are utilised within existing rental fleets. Our turn-key solutions mitigate risk in the supply chain, by combining all aspects of the system.

Rental IWOCs

Our long track record delivering IWOCs packages combined with our strategically located service centres, makes JDR uniquely positioned to offer IWOCs Rentals.

About JDR IWOCs

IWOCs are used to support offshore operations of subsea wells including Tree Installations, Completions, Intervention, Workover, Well Testing and Plug & Abandonment. At any point in the project lifecycle, a JDR IWOC system can help operators by providing a temporary connection to their subsea well. In addition, JDR offers a wide range of supporting hardware and equipment including Chemical Injection Units, Hydraulic Test Units, Umbilical Reels, Winches, Jumpers, Mud Mats and Deployment Frames. JDR's Field Technicians are able to provide IWOCs healthcare and maintenance services both offshore and onshore.

JDR IWOCs can be deployed in a number of configurations to suit the offshore rig or vessel. This provides our customers with the optimum solution, providing flexibility and ultimately reducing cost. Deployment methods include:

- **Inside the Riser** – Utilized for Tubing Hanger, THRT & Subsea Test Tree Controls
- **Clamped to the Riser** – Minimal amount of equipment, not affected by high currents but must be deployed and retrieved with the Riser
- **Single Wire deployment** – Offers multiple deployment configurations on multiple vessel types
- **Self-supporting IWOCs** – JDR's patented umbilical design allows rapid deployment, reducing operation time and significantly saving cost for deep-water operations

Single Wire deployment

Single Wire deployment offers multiple deployment configurations suited for multiple vessel types including:

- LARS A-frame Pendulum or Kingpost can be used on rig or intervention vessel and over boarded in a safe zone away from subsea infrastructure
- Vessel davits Pendulum can be used on intervention vessel
- Moonpool Pendulum or Kingpost Style can be used on Semi-Submersible rig or Drill Ship
- Configurable for client needs
- Deployed in moonpool for minimal deck space and minimal cost.

Single wire IWOCs deployment benefits:

- Less equipment than conventional 2 x guide wire system
- Less rental charges
- Less freight
- Less personnel needed to operate
- Less deck space required
- Can be used in high seas and high currents depending on configuration.
- No bulky or complicated heave compensation system needed
- Quickly configurable for multiple subsea applications



Self-supporting IWOCs

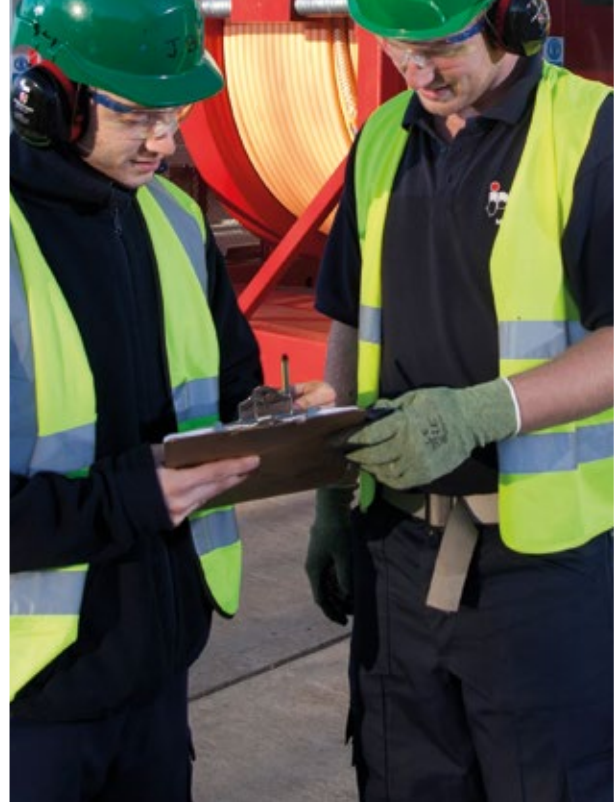
JDR's self-supporting IWOC umbilical technology significantly reduces offshore operating costs. The JDR engineering team has utilised its knowledge of industry cost-reducing and safety-focused trends to push the boundaries of conventional umbilical design limitations and deployment techniques. The Self Supporting IWOC Umbilical enables a range of well control packages to be rapidly deployed from a vessel of opportunity without the need to run a riser.

Ground breaking design

Conventional IWOCs umbilicals are designed to be lightweight and highly flexible and typically operate at low working loads. At higher deployment and operating tensions the internal electrical components and the protective external sheathing of a conventional IWOCs umbilical are susceptible to damage and distortion. JDR, through our latest advances in self-supporting umbilical materials technology and experience in reeler engineering, has developed IWOCs umbilicals that can operate at a higher load capacity. This significantly improves operational reliability and availability.

Benefits of JDR's self-supporting IWOC umbilicals:

- Rapidly deployed inside riser or in open water from vessel of opportunity
 - › Operates in open water without a wireline
 - › Operates in DPR or other riser applications without the need of clamps
- This state-of-the-art, patented product has advanced umbilical design and deployment techniques
- Increased safety for personnel (eliminates clamping requirements)
- Significantly reduces offshore operating time and costs
- Reduced equipment and smaller footprint

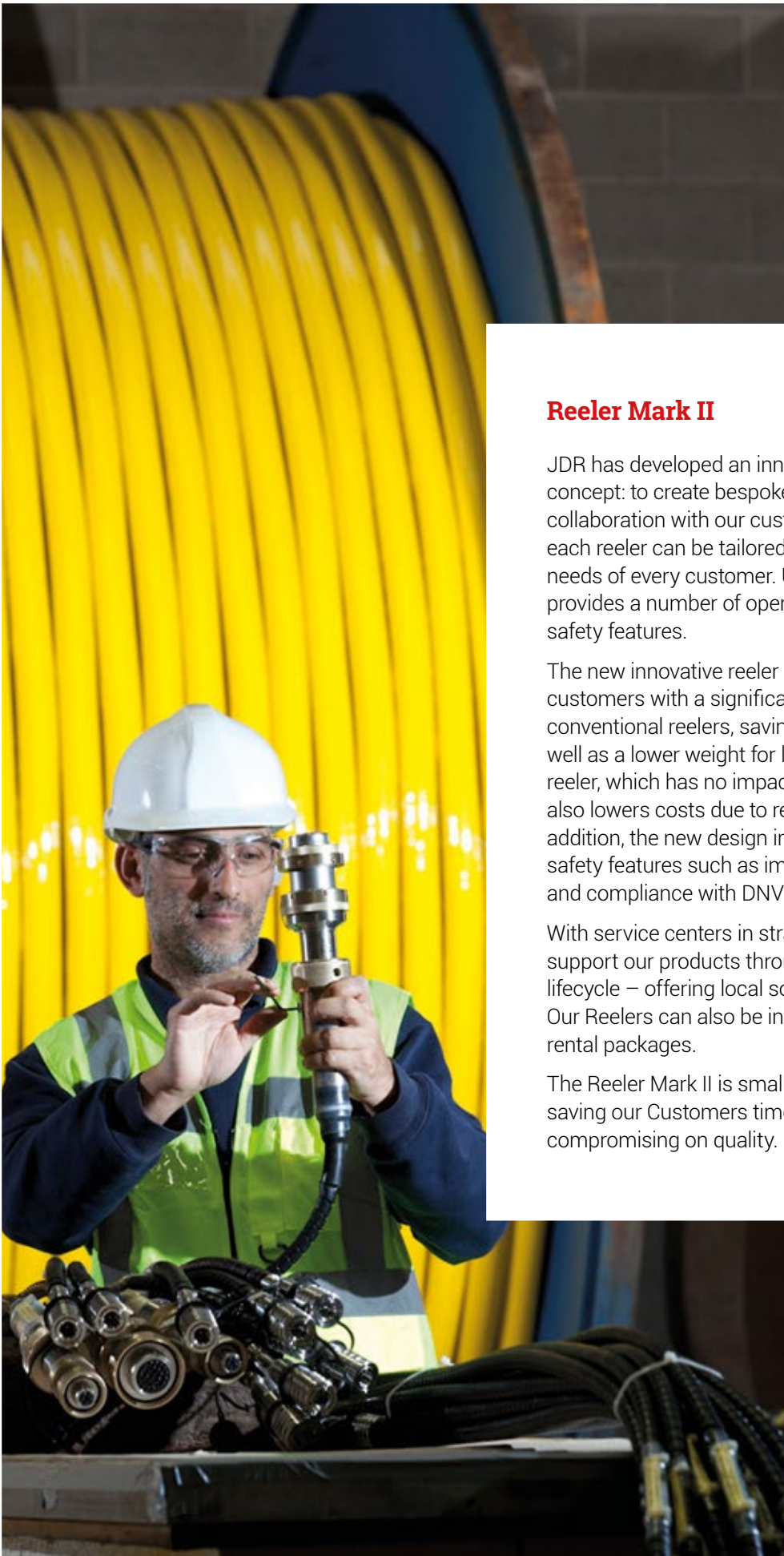


Ultra-deep deployments

A number of JDR umbilical designs are fully qualified, with an excellent track record in beyond deep-water environments. JDR is now extending the technology to enable customers to achieve riserless intervention for ultra-deep deployments to 10,000ft/3000m.

We provide associated self-supporting IWOC umbilical dynamic analysis. This service enables us to work with customers to define the operational and environmental conditions the product can reliably work within.

Our self-supporting IWOC umbilical rentals are supported in the field by JDR's global service team network. The service team provides 24/7 installation (testing and commissioning) and maintenance support through an international network of highly experienced and fully certified technicians.



Reeler Mark II

JDR has developed an innovative new reeler concept: to create bespoke solutions developed in collaboration with our customers. This means that each reeler can be tailored to fulfil the individual needs of every customer. Using this new approach provides a number of operational benefits and key safety features.

The new innovative reeler design provides customers with a significant reduction in size versus conventional reelers, saving valuable deck space, as well as a lower weight for lifting and handling. The reeler, which has no impact on umbilical capacity, also lowers costs due to reduced materials. In addition, the new design includes a number of key safety features such as improved operator access and compliance with DNV lifting requirements.


With service centers in strategic locations, we support our products throughout the project lifecycle – offering local solutions on a global scale. Our Reelers can also be incorporated into IWOCs rental packages.

The Reeler Mark II is smaller, lighter and safer – saving our Customers time and money without compromising on quality.

What can JDR do for you?



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 jdr-cable-systems

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