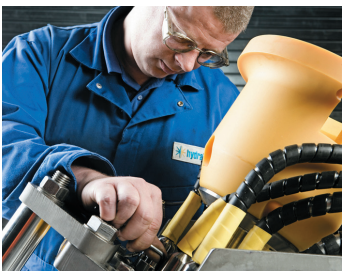


UMBILICALS & SUBSEA CONNECTORS





With over 35 years' experience, Hydrasun has achieved an enviable record successfully delivering flexible hose, hydraulic, integrated instrumentation products, umbilical solutions and integrity management services worldwide.

Hydrasun's umbilical manufacturing capability produces a wide range of hydraulic and electro-hydraulic umbilicals, jumpers and HFL's for a variety of subsea control, topside and workover control applications.

From our custom built umbilical facility we deliver a complete turnkey umbilical solution from assembly through to end connection termination complete with stab plate integration, pressure testing and flushing to NAS/ISO standards and associated documentation packages.

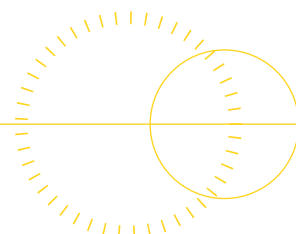
Over the years, Hydrasun has built up considerable experience and expertise manufacturing and delivering proven subsea umbilical solutions to major oil and gas operators and contractors in the subsea controls, well intervention and drilling sectors.

Hydrasun's extensive stockholding, in-house manufacturing capability and unrivalled response from quotation through to delivery provide customers with shorter lead times and on-time delivery.

Dedicated project management of the design and engineering process assures the technical integrity of products in line with industry standards as well as meeting our customers' specific requirements. All projects are delivered with documentation packages that are in accordance with customer specific and industry standard requirements.

Customer benefits

- Fast track delivery
- Dedicated project management service
- Operational cost saving in terms of minimising downtime
- Product standardisation
- Future project cost savings
- Optimisation of spare and consignment stock
- Improvement of supply efficiencies and reduced transaction costs
- Complete turnkey umbilical solutions
- Specialise in subsea control, topside and workover control applications
- Pressure testing and flushing to NAS/ISO standards
- Stab plate assembly and integration including tube fabrication and autogeneous welding to client specific requirements
- In-house capability to manufacture bespoke or specialist end connections
- Extensive stockholding of specialist hydraulic control line and High collapse resistant (HCR) hoses



SUBSEA CONTROL, WORKOVER CONTROL & DRILLING SOLUTIONS

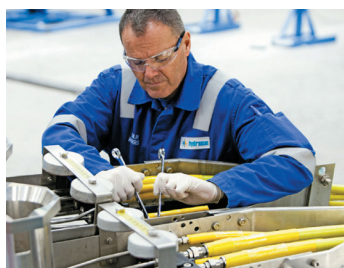
Hydrasun's in-house design, engineering and manufacturing of umbilicals, subsea jumpers and hydraulic flying leads complete with stabplate integration provides customers with a complete integrated umbilical turnkey solution for subsea control systems.

Our integrated turnkey package includes the project management of the umbilical from design to delivery and includes pressure testing and flushing to the appropriate standards supplied with the necessary documentation packages.

- Hydraulic flying leads (HFLs)
- Subsea jumpers
- Stabplates
- Specialist end connections
- Engineering



Hydrasun is a leading specialist provider of integrated fluid transfer, power and control solutions to the energy, petrochemical, marine and utilities industries.



Workover control and well intervention operations require umbilicals and hoses that can withstand specific pressure requirements and suitability for use with harsh chemicals.

Dynamic applications

Workover control and well intervention operations require umbilicals and hoses that can withstand specific pressure requirements and suitability for use with harsh chemicals.

Umbilicals designed for use in dynamic applications need to withstand the flexing forces of repeated winding in and out on the winch and operate over a heave compensation system, as well as withstanding underwater subsea conditions.

Hydrasun

Workover umbilicals with aramid reinforcement are flexible and lightweight as they do not contain any steel armour reinforcement layers. These umbilicals are ideal for workover applications as they require a lighter handling system and a reduced safe working load requirement on the winch and winding equipment. This also reduces the safe working load of the handling sheaves and heave compensation systems.

The bend radius of an aramid reinforced umbilical is smaller than that of the equivalent steel reinforced umbilical, and therefore the sheave and winch bend radii are reduced accordingly.

Hydrasun's aramid reinforced umbilicals for workover applications are beneficial to the customer as a result of reduced OD and weight resulting in lighter handling systems and ancillary equipment providing cost benefits to the operator. HCR hoses and Aramid Fibre braided umbilicals are ideal for workover control and well intervention applications.

Hydrasun's high collapse resistant hoses reinforced with an internal stainless steel carcass prevents hose collapse when used in deep water or where there is a high differential pressure between the outside and internal pressure of the hose.

Drilling Solutions

There is an increasing need to find effective solutions for control over Blowout Preventors (BOP). Hydrasun BOP solutions allow customers to meet the stringent specifications for blow out prevention and well control for subsea and topside applications.

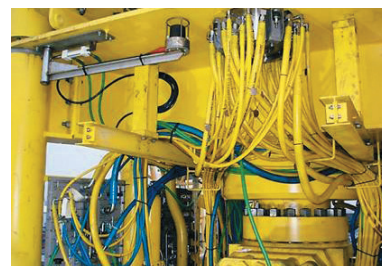
Hydrasun's Firemaster 16D Hydraulic Hose system is designed to address the strict specifications required for blowout prevention and well control on topside applications suited for high pressure hydraulic applications where hoses are required to be fire rated and capable of working in extreme heat in case of emergency.

The heavy-duty cover and wide range of integral fittings resist abrasion, weathering and maximise life expectancy providing the highest level of product integrity. The Firemaster 16D Hydraulic Hose system can withstand temperatures of 1,100 °C for 5 minutes and also conforms to API16D.

Hydrasun's Subsea BYPOD hose delivers blow-out prevention control in the subsea environment. The BYPOD features total assembly encapsulation with the prevention of sea water ingress, particularly from external pressure in deep water operations.

Additional Services

- Full integration service for any specific subsea termination
- Complete in house testing & flushing service
- Autogeneous Welding
- Pipework bending
- Fully integrated reeler packages
- Wellhead control panels



UMBILICALS & SUBSEA CONNECTORS AT A GLANCE

- Jumpers & Hydraulic flying leads (HFLs)
- Topside control umbilicals
- Workover and well intervention umbilicals
- CALM buoy umbilicals
- Fully Integrated turnkey solutions
- Stab plates, monocouplers and ROV connectors
- Project Management



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