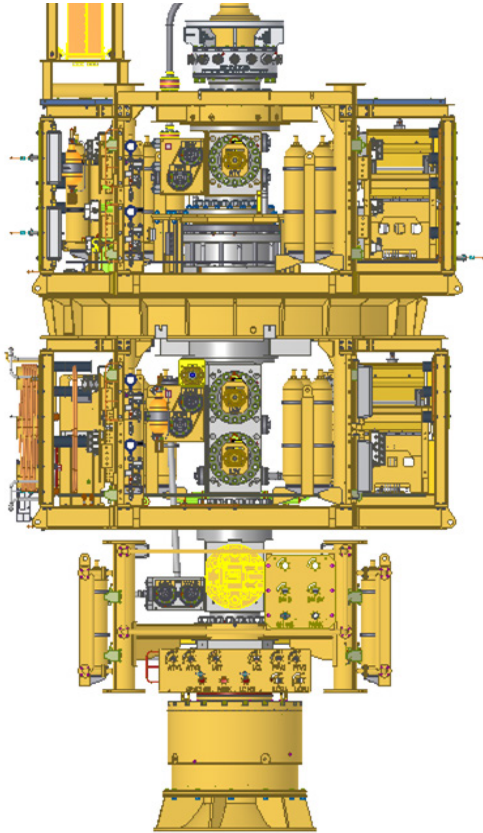


# SUBSEA SERVICES ALLIANCE

Helix | Schlumberger

## 15,000 PSI INTERVENTION RISER SYSTEM (IRS)

15,000 PSI Intervention Riser System (IRS) enables access to conventional and horizontal subsea trees in depths down to 10,000 ft. The system combines rapid response with maximum operational flexibility to meet the specific intervention needs of producing deepwater subsea assets. All required through-tubing subsea well operations can be safely serviced with the IRS, with multi-disciplinary operations being conducted in a single mobilization.



*The 15,000 PSI INTERVENTION RISER SYSTEM (IRS) can be utilized for wireline intervention, production logging, coiled-tubing operations, well stimulation and full plug and abandonment operations.*

*The system allows Helix to respond quickly to subsea well intervention needs as a cost-effective alternative.*

*The 15k IRS can be used to address loss of production or other emergency intervention needs using standard tooling and procedures.*

### SPECIFICATIONS

Bore Diameter	6 3/8 in HH-NL production, 2 1/16 in DD-NL annulus
Working Pressure	15,000 psi
Design Temperature Range	+35 F to 300 F
Maximum Working Depth (MWD)	10,000 ft
Control System	Multiplexed (MUX) with integrated redundancy via High-Integrity Pressure Protection System (HIPPS)
Maximum EDP Disconnect Angle	18 degrees
Weight	290,000 lb subsea package
Well Barrier Type	3 x 6 3/8 in hydraulic cutting gate valve 1 x 7-1/16 in hydraulic cutting ram (SH), 6 x annular 2 1/16 in failsafe-closed gate valves

### PROVEN CUT CAPABILITY

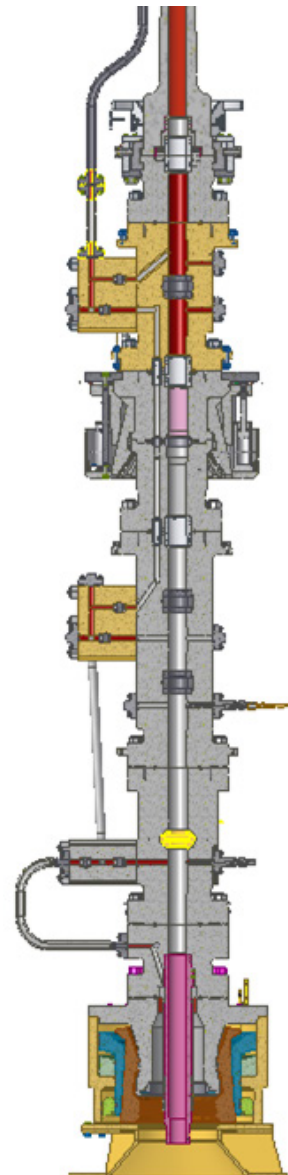
IRS Shearing Gate Valves	2 in OD x .203 in WT x 90 ksi SMYS CT Slickline / braided line / e-line
Safety Head Shearing Ram	2 7/8 in OD x 0.188 in WT x 90 ksi SMYS CT Slickline / braided line / e-line
Subsea Tree Compatibility	Horizontal or Vertical
Pass Through Client Function Lines	18 hydraulic control lines (2) 15,000 psi, (16) 5,000 psi Separate HPU for Client Equipment Functions
Subsea Tree Interface	Stingers are designed to match tree tubing hangar or internal tree cap profiles, can be adapted to a TRT or hydraulic connector

### SURFACE FLOWHEAD SPECIFICATIONS

Maximum Through Bore Diameter	6 3/8 in production, 4 1/16 in wing valves
Maximum Working Pressure (MWP)	15,000 psi

### APPLICATIONS

Coiled tubing, electric line, slickline operations
Cementing operations
Well abandonment
Tree change outs
Well flowbacks



# RISERLESS OPEN-WATER ABANDONMENT MODULE (ROAM)

*ROAM also provides an additional barrier on the well when running current technology into the well to perforate and inject or circulate cement.*

## SUBSEA SERVICES ALLIANCE

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ROAM is the Subsea Services Alliance solution for environmentally friendly production tubing removal in open water. When run as a complement to the Intervention Riser System (IRS) or Subsea Intervention Lubricator (SIL), ROAM enables the ability to capture contaminants or gas within the system and circulate them back to the safe handling systems on board the vessel. By doing such, high confidence is gained that nothing unwanted is released into the environment. The 18 3/4" Full Bore ID allows for the ability to pull tubing hangers through the ROAM to surface.

The ROAM has two barriers capable of shearing and sealing landing strings and production tubing that will pass through the system during recovery.

SPECIFICATIONS		APPLICATIONS
Nominal Bore Diameter	18 3/4 in 2 in circulation line	Pulling tubing hanger and production tubing open-water
Maximum Working Pressure (MWP)	10,000 psi	Circulating gas and hydrocarbon to surface
Maximum Working Depth (MWD)	3,000 m (10,000 ft)	Running packers and perforating open-water
Control System	Multiplexed (MUX)	
Weight	250,000 lbs	
Pressure Containing Elements	1 x 10,000 psi Annular 2 x 10,000 psi DVS Rams 2 X 10,000 psi 2 in FAI Valves	

