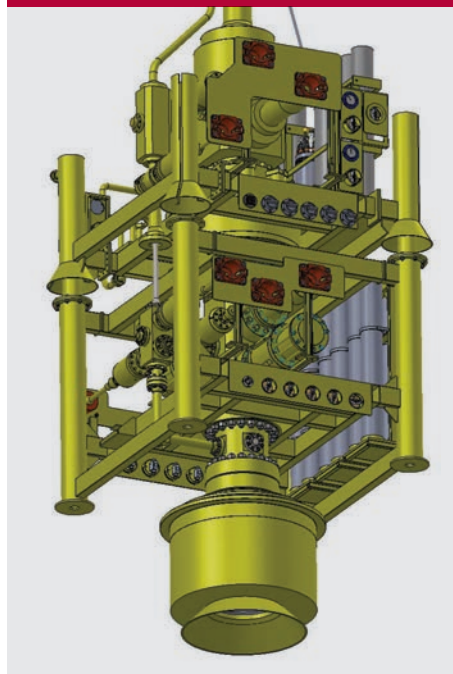




INTERVENTION RISER SYSTEM (IRS)

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Well Ops Intervention Riser System (IRS) enables access to both 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 high rate 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 IRS can be utilized for wireline intervention, production logging, coiled-tubing operations, well stimulation and full plug and abandonment operations. The system allows the Well Ops vessels to respond quickly to subsea well intervention needs as a cost-effective alternative to a drilling rig. The IRS can be used to address loss of production or other emergency intervention needs using standard tooling and procedures.

Specifications

Maximum Bore Diameter	7 ³ / ₈ in production, 2 in annulus
Maximum Working Pressure	10,000 psi
Maximum Working Depth (MWD)	10,000 ft (3,048 m), MUX control system
Hydraulics Operating Pressure	2,500 psi operational (3,000 psi max), 5,000 psi subsea accumulation
Weight	120,000 lb subsea package, 12,760 lb HPU

Well Barrier Type

1 x 7³/₈ in hydraulic cutting gate valve (LCV), 2 x 7³/₈ in spring-assist failsafe-closed gate valves (UCV & RTV), 3 x annular 2¹/₁₆ in failsafe-closed gate valves (AUV, AXV, & ALV), 2 x annular 2¹/₁₆ in ROV-operated valves (RCV & AIV)

Proven Cut Capability

Retainer Valve	Slickline / braided line / electric line
Upper Cutting Valve	Slickline / braided line / electric line
Lower Cutting Valve	2 ⁷ / ₈ in coiled tubing, 2 in bar (low pressure seal), slickline / braided line / electric line

Subsea Tree Compatibility Horizontal or vertical

Pass Through Tree Function Lines 15 spare hydraulic control lines, (7) 10,000 psi lines, (8) 5,000 psi lines

Subsea Tree Interface

Stingers are designed to match tree tubing hanger or internal tree cap profiles, can be adapted to a TRT or hydraulic connector

Applications

Coiled tubing, electric line, slickline operations

Cementing operations

Well abandonment

Tree change outs

Surface Flowhead Specifications

Maximum Through Bore Diameter 7³/₈ in production, 5¹/₈ in wings

Maximum Working Pressure (MWP) 10,000 psi

