

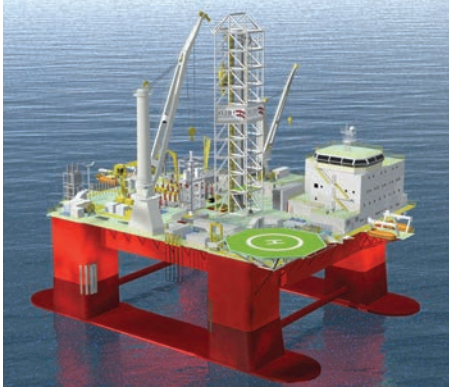


Q5000
DP3 WELL INTERVENTION VESSEL



Q5000

DP3 WELL
INTERVENTION VESSEL



The Q5000 DP3 Well Intervention Vessel is a second-generation design based on the successful Q4000 MODU. This multiservice vessel provides a stable platform for a wide variety of tasks, including subsea well intervention, field and well decommissioning, installation and recovery of subsea equipment, well testing as well as subsea construction activities.

The vessel features a 750 (ST) tower capable of fulfilling all traditional derrick roles, plus a deepwater crane with lifting capacity to 440 ST and a work crane rated to 176 ST. The vessel also features a 81 ft x 26 ft moon pool and 23 ft x 22 ft mechanized fully opening rig floor door, a 7³/₈ in intervention riser system, two 10,000 ft heavy-weather ROV systems and an overall VDL of 4,000 mT. The open deck space allows for quick and efficient loading and offloading of project supplies and equipment in a single lift.

Q5000 Service Capabilities

Riser-based or riserless through-tubing well intervention

Surface top hole drilling and casing installation

Extended top hole and riserless return system

Subsea and surface equipment installation / recovery

Well testing and production flow-back services

Slickline / electric line / coiled tubing service deployment

Cementing, pumping, well stimulation

Riser-based or riserless well and field decommissioning

Casing cutting and wellhead recovery

Tree recovery and replacement

Emergency well control support

Main Characteristics

Vessel Name Q5000

Owner Helix Energy Solutions Group, Inc.

Builder Jurong Shipyard, Singapore

Design Helix / Bassoe Tech / JSPL

Flag Bahamas

Accommodations 140 persons

Helideck CAP 437 rated for S-92 and S61N

Vessel Crew 76

Class

ABS A1 Column Stabilized MODU, + AMS, ACCU, DPS-3, CDS, CRC, (E), WT-READY, WI-READY

Dimensions

Length Overall 358 ft

Beam, Lower Hull 230 ft

Depth of Pontoon 27.72 ft

Depth of Deck Box 26 ft

Operating Draft 60.7 ft

Column Height 92 ft

Operational Deck Area 28,589 ft²

Propulsion and Power

Thrusters Fixed Pitch / Azimuthing 8 x 2.8 MW LIPS

Main Engines 8 x 3.9 MW Wartsila

Power Distribution 11 kV, 690V and 480V switchboards

Emergency Power Generators 1 and 8 for blackout recovery

Dynamic Positioning DP3-rated triple redundant, Kongsberg K-POS DP-32 & DP-12

Cranage

Huisman 440 ST with 10,000 ft capacity traction winch

Huisman 176 ST crane, main hoist single line to 1,197 ft, 55 ST; whip hoist single line to 689 ft, 65.6 ST

THE Q5000
DP3 WELL
INTERVENTION VESSEL
IS A DESIGN BASED
ON THE SUCCESSFUL
Q4000 MODU.



Capacities

Variable Deck Load	4,000 mT operation
Total Payload	6,955 mT
Liquid Mud	5,250 bbls
Bulk Mud	9,619 ft ³
Bulk Cement	3,200 ft ³
Sacks	4,000 sacks
Drill Water	5,185 bbls
Potable Water	2,340 bbls
Brine	1,900 bbls
Fuel Oil	13,670 bbls
Lube Oil	Tote tanks

Moon Pool

Dual Activity Moon Pool	81 ft x 26 ft with 23 ft x 22 ft mechanized fully opening rig floor door
Maximum Load	750 ST @ rotary table
Rotary Table Size	49.5 in false rotary
Moon Pool Trolley Capacity	500 ST

Remote Operated Vehicles

2 x Triton XLS 150 hp deck-launched ROVs
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Multipurpose Tower

Lifting Capacity	750 ST
Free Lift Height	136 ft
Traveling System	Dolly with 4 fall spreader
Pipe Handling System	Horizontal and vertical, BHA pipe racking systems, 25 mT pipe handling, knuckle boom crane
Passive Heave Compensation DLC	750 ST, 25 ft stroke
Active Heave Compensation	+ / - 90 mT active, vertically-installed cylinder hoisting system, with 2:1 mechanical hoisting advantage
Max Pipe Tripping Speed	5.5 ft / sec at 372 ST

Top Drive

NOV HPS	750 ST
Maximum Lift	750 ST hoisting, 584 ST rotating
Pipe Handling Torque	115,000 lb – ft
Drilling Power	2 x 1,150 hp
Drilling Torque	78,181 lb – ft
Drilling Speed	0 to 280 rpm
Water Course	7,500 psi

Intervention Riser System

Product Bore	7 ³ / ₈ in ID
Annulus	2 in ID
Working Pressure	10,000 psi
Depth Rating	10,000 fsw
Well Barrier Type	1 x 7 ³ / ₈ in “fail close” hydraulic cutting gate valve (LCV), 2 x 7 ³ / ₈ in fail safe closed gate valves (UCV and RTV), 3 x annular 2 ¹ / ₁₆ in fail safe closed gate valves, flowhead with swivel

IRS Control System	
Subsea MUX control system	
IRS MUX HPU	5,000 psi mp / 10,000 psi hp
IRS MUX Control Van, Two (2) Remote Touch Screen Stations for Operating IRS / Flowhead Control System	
2 IRS Hose Reels	10,000 fsw max supply / test
IRS MUX Cable Reel	10,000 fsw
Secondary Disconnect E-line Reeler	10,000 ft
Riser Clamps	As required for 6 $\frac{3}{8}$ in riser pipe, 2 $\frac{3}{8}$ in annulus and associated umbilical control lines

Mud Pumps	
NOV Model	2 x 14P – 220
Maximum Output per Pump	1,215 gpm
Maximum Pressure	7,500 psi
Maximum Liner Size	9 in

Shale Shakers and Solids Processing

Mission-specific portable equipment to be installed on upper deck

Iron Roughneck NOV ARN 200	
Make-up Torque	0 – 103,259 ft / lb
Break-out Torque	0 – 147,512 ft / lb
Pipe Range	3 $\frac{1}{2}$ in – 9 $\frac{3}{4}$ in
Casing Range	2 $\frac{3}{8}$ in – 8 $\frac{5}{8}$ in

Air Supply	
Compressors	3 x medium pressure rig air
Make	Ingersoll Rand R 160L – W – 125
Rated Capacity	25.6 m ³ / min
Working Pressure	8.6 bar
Prime Mover	Electric motor
Continuous Power	160 kW each



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