Q5000

DP3 well intervention vessel
The Helix Q5000 DP3 semi-submersible is an advanced, harsh environment Well Intervention Unit.

The Helix Q5000 DP3 Well Intervention Vessel is a second-generation design based on the successful Q4000 MODU. This multi-service 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 Q5000 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 Q5000 includes a 81-ft x 26-ft moon pool and 23-ft x 22-ft mechanized fully opening rig floor door, a 7-3/8” 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.

The larger moon pool will allow the Q5000 to keep its intervention riser system (IRS) in the water at well depth while moving aside to let drill pipe or other equipment be lowered to the same well for another task. This ability to keep the IRS in the water while performing separate operations on the same location will save hours and enhance the vessel’s overall efficiency.

Experience
Developed upon the hugely successful sister vessel Q4000, the Q5000 extends this capability with increased power, deck space and lifting capacity to set the reference for deepwater rigless intervention.

Innovation
Upgraded and updated tower specifications combined with subsea hangoff; the Q5000 continues Helix’s tradition of design innovation.

Value
Retained for most of the year by a super-major client, Q5000 is available to deliver similar value operations to the market during its off-contract windows.
Main characteristics

**Vessel Name**

Q5000

**Owner**

Helix Energy Solutions Group, Inc.

**Builder**

Jurong Shipyard, Singapore

**Design**

Helix / Bassoe Tech / JSPL

**Year Built**

2015

**DNV Class Notation**

ABS A1 Column Stabilized MODU, + AMS, ACCU, DPS-3, CD5, CRC, E, WT-READY, WI-READY

**Flag**

Bahamas [BS]

**Helideck**

CAP 437 v. 7 for S-92 and S-61N

**Accommodations**

140 Persons

Dimensions

**Length Overall**

109 m (358 ft)

**Beam, Lower Hull**

70.0 m (230 ft)

**Depth of Pontoon**

8.45 m (27.72 ft)

**Depth of Deck Box**

7.9 m (26 ft)

**Operating Draft**

18.5 m (60.7 ft)

**Column Height**

28.0 m (92 ft)

**Operational Deck Area**

28,589 ft²

Propulsion & power

**Thrusters Fixed Pitch / Azimuth**

8 x 2.8 MW LIPS

**Main Engines**

8 x 3.9 MW Wartsila

**Power Distribution**

11kV, 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

Capacities

**Variable Deck Load**

4,000 t operation

**Total Payload**

6,955 mT

**Liquid Mud**

5,250 bbls

**Bulk Mud**

9,619 ft³

**Bulk Cement**

3,200 ft³

**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

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

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

Multi-purpose 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

**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 5/8 in riser pipe, 2 3/8 in annulus and associated umbilical control lines

Iron roughneck

**Make-up Torque**

0 – 103,259 ft / lb

**Break-out Torque**

0 – 147,312 ft / lb

**Pipe Range**

3 ½ in – 9 ¾ in

**Casing Range**

2 3/8 in – 8 5/8 in