# Delta SubSea

### **ROV Services**





Delta SubSea (DSS) is a leading integrated provider of ROV Services and Solutions. Delta SubSea's ROV fleet is focused on solutions for customers in the inspection, repair and maintenance, construction, drilling and decommissioning market segments.

DSS provides clients with an enhanced TITAN 4 spares kit containing parts for major repair and refurbishment jobs. A complete inventory of ROV and manipulator system spare parts are available. With global support centers around the world DSS is able to provide clients with a 100% redundancy, which maximizes uptime.

DSS provides clients with <1 hour part replacement supported by a vast inventory of system spares and long lead items not normally stocked by other ROV Service providers. DSS has on staff full time technical managers in hydraulics, tooling, and electronics with extensive offshore experience.

#### **DSS ROV Services include**

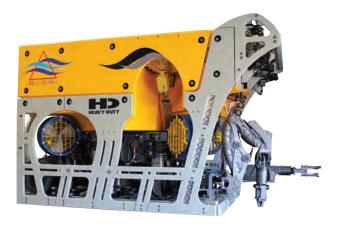
- Subsea installations
- ▲ Cutting operations
- ▲ Drill rig support
- ▲ Debris removal
- ▲ Valve operations
- ▲ Subsea facilities abandonment
- ▲ Inspection, survey, video, & photos
- ▲ Leak detections
- ▲ Connect / disconnect rigging equipment
- A Replacement of jumpers, cables, hose, & flying leads
- ▲ UXO (Unexploded Ordnance) location / removal
- ▲ Wellhead, manifold & subsea tree intervention

#### **DSS ROV Fleet include**

- ▲ Schilling Robotics HD 150 HP ROV
- ▲ Schilling Robotics UHD III 250 HP ROV
- ▲ OROV's specific to client / project needs
- AUV's

# **DSS Schilling Robotics**

**DSS - HD 150** 



Delta SubSea HD vehicles are designed for performance, reliability, and no hassle maintenance. Innovative features in the frame design and modular sub-systems combine to produce a high performance vehicle suitable for IMR, drill support, and heavy-duty construction operations while maintaining a compact system footprint ideal for rapid transportation and mobilization. The key to the HD's overall performance is in the development of subsystems, and how they quickly and easily interface with each other. A number of unique features that dramatically improve the system reliability and productivity set the HD apart from other similar systems in the market. Several of these key features are detailed below and include:

- ▲ Integrated HPU (motor, pumps, reservoirs & filters)
- ▲ T4 with camera
- Atlas
- ▲ Survey Junction Box
- ▲ HD video (STD)
- ▲ Hydraulic power system
- ▲ Vehicle control-StationKeep
- ▲ Open deck space for tooling
- ▲ Automated operator system
- Std. Depth Rating3,000 m13,124 ft.Payload250 kgs551 lbs.Electric motor110 kW150 HP

- Control system technology (no large pressure vessels)
- Mini POS NAV
- ▲ DVI
- Altimeter
- ▲ 110v junction box
- ▲ High voltage power system (4,160 VAC)
- ▲ Removable full buoyancy protection
- ▲ Propulsion System



## Delta SubSea

XE Tether Management System (TMS)





Delta SubSea's XE extended-excursion tether management is designed to support IMR, drill support, and medium-duty construction operations in up to 4,000msw with an excursion limit of c. 450m / 850m with its durable, neutrally buoyant tether.

The XE-TMS has been designed around a field- proven 'shuttling drum' concept that provides exceptionally simple tether routing. The complete tether drum moves on a carriage system allowing the tether to exit the drum directly above and through the payout sheave.

Power supply to the XE-TMS requires only a single branch circuit from the surface. This contributes to a smaller umbilical cross section and a more compact surface power distribution unit, without sacrificing performance.

Electrically operated drive and latch systems simplify the system and significantly reduce the number of components. This promotes increased reliability and ease of maintenance. An AC variable frequency drive system provides exceptional tether handling performance, with closed loop control of the drive sheave torque and speed ensuring optimal handling of the tether under all operating conditions.

The XE-TMS incorporates extended instrumentation facilitated by a rotary position sensor array. This unit connects up to eight sensors into a single DTSTM serial port, reporting all compensation circuit levels and information including drum and pinch wheel speed and latch status.

#### **DSS XE Tether Management System**

- ▲ Electrically Driven without Hydraulics
- ▲ 450 / 850m Tether Capacity
- ▲ Shock Absorbing Docking Snubber Unit
- ▲ 6.7Te Lower Latch Capacity

- ▲ Duplex Stainless Steel Construction
- ▲ 28mm Neutrally Buoyant Tether
- ▲ 12.5Te Safe Working Load
- ▲ 4,000msw Option



#### **Tether**

The 28mm tether takes advantage of Reduced conductor size at 4,160vAc to enable a durable, neutrally buoyant jacket

#### **Electric Drive**

The HD TMS is electrically operated. Powered by a single 4,160vAC primary branch circuit, AC motors provide the drum and pinch wheel drive motion, under close control of AC variable frequency drives installed on the TMS. An electrically operated fail-safe latch system has two sets of pre-engaged latches.

#### **Tether Handling**

The HD's tether management system utilizes a shuttling drum concept to ensure that the tether always spools from the drum directly in line with the TMS exit point. A simple tether routing path through the pinch wheel and sophisticated software control of motor torque provide exceptional tether handling performance, regardless of the conditions created by any tether surface contamination.

### **Tether Handling**

Sliprings, tether, and umbilical connections are managed by a quick connect system that eliminates a rotary junction box. Connections are made outside the drum for easy access.

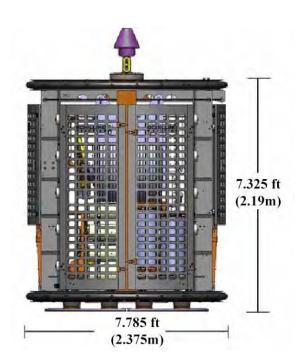
### **TMS Specification**

#### TMS:

Safe Working Load	9,700kg	21,385lb
Through-Frame Load	6,700kg	14,771lb
Weight in Air	2,680kg	5,750lb
Weight in Water	1,580kg	3,549lb
Tether Capacity	450m/850m	2,789ft
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Haul in Speed	50mpm	2,7691t 164fpm
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#### Tether:

Manufacturer	Nexans	RT487
Length	450/850m	2,789ft
Depth rating	4,000msw	13,123ft
Diameter	28mm	1,102in
Jacket	TPr	Yellow
Weight in Air	675kg/km	1,488lb/km
Weight in Water	45kg/km	99lb/km
Minimum Bend Diameter	425mm	16.73in
Safe Working Load	20kN	4,496lbf
Minimum Break Load	110kN	24,729lbf





#### Delta SubSea

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