

Super Mohawk Inspection ROV System

Sub-Atlantic's fully electric Super Mohawk remotely operated vehicle is an excellent general purpose, professional ROV system suitable for observation, survey, pipe-lay support, light to medium work and NDT inspections.

Super Mohawk can carry out many of the tasks currently carried out by work class vehicles. An abundance of space, the rigid open-frame design and the generous payload capability provide a versatile solution for the fitting of manipulators, additional equipment and sensors. Two angled vertical thrusters allow an unhindered lower deck area for placement of equipment and attachment of tooling skids. Super-Mohawk provides high quality video for inspection work but also has the capabilities for running under-slung tool packages such as tree valve torque tools, high-pressure water jetting pumps and small hydraulic or electric manipulators.



Super-Mohawk is rated at 2000 metres standard

- ▶ High Reliability, Easy Maintenance
- ▶ Multiple Camera and Sensor Interfaces
- ▶ 2,000 metres Depth Rated
- ▶ Auto-Heading and Depth and Altitude
- ▶ Sub-Atlantic AC Propulsion Thrusters
- ▶ 2-Manipulator Capability
- ▶ TMS Operation
- ▶ 60 kg Payload with options
- ▶ Superb Work Skid Capability

Specification & Dimensions

Depth Rating: 2000 metres

Payload: 60 kg of lead ballast

Dimensions

Height: 850 mm Length: 1400mm

Width: 900mm

Mass in Air: 290 kg 639 lb.

Thrust @ 0 Knots with zero voltage losses:

Forward: 1148 N 117 kgf

Lateral: 863 N 88 kgf Vertical: 765 N 78 kgf

Maximum Velocity/Operational Current:

Forward: >1.75m/s >3.5 Kt.

Lateral: >1.25m/s >2.5 Kt. Vertical: >0.75m/s >1.5 Kt.

Turning Rate: 120 Degrees Per Second

Control System

The surface control system will be supplied in a purpose built 19" rack Mounted unit.

The SCU consists of Following items: -

- Control module (19" rack mount)
- 2 x 9" twin channel colour video monitors
- Pilot's hand console
- Optional Sonar Processor

A power supply isolation transformer and interconnection cables are also supplied loose. All deck and power leads are connected via IP65 connectors and sockets.

Electronics Housings and Connectors

Super-Mohawk has two housings with ample space and connector outlets for additional user equipment to be fitted. The bottles contain the thruster drive cards, telemetry, auto-functions, video boards, power supplies, depth transducer, etc. Power supplies are available for additional equipment and consist of 440 Vac 3Ph, 220 Vac, 24 Vdc. All electrical connectors are high integrity stainless steel for long-term reliability.

Telemetry System

The system provides 8 analogue inputs and outputs and 16 digital inputs and outputs. Additionally, there are two RS232 inputs and outputs. All multiplexed data is transmitted via a single screened twisted pair in RS485 format. The cards communicate in half duplex mode over a serial data link that uses RS485 drivers at a maximum rate of 115200 baud. The data transmission rate is user selectable.

Propulsion System

The reliable CTE-02 models of brushless AC electric thrusters are used. At 60 Hz, in open water tests, they produce an impressive 45 kilograms of bollard thrust. Output thrust is proportionally regulated from the joystick by a control PCB located in the electronics bottle. The thrusters are oil filled, pressure compensated and rated to full-ocean depth. Each thruster has an integral power cable and high integrity stainless steel connector. Thrusters are mounted to the ROV frame using quick release clamping bands. CTE-02 propulsion thruster produces 45 kgf of thrust.

Lighting

Three 250-Watt units are mounted on the frame and the Tilt/Pan & Tilt and are dimmed using thruster drive card.

Frame

The ROV frame is manufactured from impact and corrosion resistant polypropylene material built around a central alloy load frame that provides strength for lifting. The lower deck on each ROV is a perfect platform for fixing additional equipment and sensors. All frames incorporate quick connect anchor points for fitting tooling and manipulator skids. All parts are bolted together making replacement of damaged parts quick and easy. The polypropylene is neutrally buoyant in water.

Deployment Systems

The Super Mohawk is deployed from a light-weight, compact, A Frame / Winch making it ideal for platform or vessel operations. Size 2 TMS is a high reliability, fully electric 'garage' type system with 250 metres tether capacity on a rotating drum with slip ring.



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