

SeaTrepid Mohican



The SeaTrepid Mohican Inspection Class ROV offers a truly versatile, professional ROV system suitable for offshore use. Its size provides a stable platform for high quality video and sonar surveys, and its enhanced propulsion system allows it to continue working in high current conditions that could stop other ROVs.

SeaTrepid owns and operates a fleet of Mohican ROV systems optimized for the harshest working environments.

The six brushless DC thrusters provide a bollard pull of 220 lbf, and the 3000 V power system allows for the use of a smaller diameter tether, minimizing drag. The A frame Launch and Recovery System comes with integral HPU and over 6,000 feet of main lift umbilical.

This ROV can accommodate a range of state of the art sensors; High Definition camera system (with overlay and mpeg4 recording), nFMD (flooded member detection), cable and pipe trackers, bathymetric systems and multibeam sonars. It can also install a 3000psi High Pressure Water Jet system, or a 6 station general function valve pack and HPU, enabling the use of a range of manipulators and hydraulic tooling.



SeaTrepid Mohican

PERFORMANCE / DIMENSIONS:

Depth Rating:	6560 fsw (2000 msw) standard
Payload:	77 lb (30 kg) lead ballast
Height:	25.5 in (800 mm)
Length:	45.3 in (1150 mm)
Width:	30.3 in (770 mm)
Mass in air:	640 lb (290 kg)
Turning Rate:	180 degrees per second

Thrust@ 0 Knots (bollard pull)	
Forward:	242 lbf (140 kgf)
Reverse:	242 lbf (140 kgf)
Lateral:	242 lbf (140 kgf)
Vertical:	165 lbf (75 kgf)

CONTROL SYSTEM:

This system incorporates a Surface Control Unit (SCU) which communicates with the vehicle's electronics housed in a one-atmosphere enclosure located on the vehicle.

- The SCU incorporates:
- Pilot's control console and joystick
 - Light dimmers
 - Automatic depth and heading control
 - Video overlay system
 - Earth leakage protection system

SCU power requirements: 220 / 240 VAC, 50 / 60 Hz, 2 kVA

The Mohican vehicle electronics are housed in an aluminum one-atmosphere enclosure, incorporating the thruster drive systems, light dimmers, telemetry system, compass, depth transducer, tilt, and camera controls. The housing also has spare electrical connectors to provide power and control for user interfaced equipment.

ROV power requirements: 440 VAC 3 phase and earth, 50 / 60 Hz, 15 kVA

BUOYANCY:

The Mohican buoyancy is manufactured from closed cell micro spheres, 6560 fsw (2000 m) rated.

TELEMETRY SYSTEM:

Downlink / uplink - 8 analog channels, 12 bit resolution and 16 digital switch channels

Telemetry baud rate - 57.6 kbps

Spare communication -
1 x user configurable single mode fiber

PROPULSION SYSTEM:

The vehicle is propelled by six Sub-Atlantic thrusters incorporating DC brushless motors, arranged for maximum efficiency:

- 4 x SPE 180 vectored thrusters mounted in the Sub-Atlantic "Dynamic Vectoring" system to optimize vehicle thrust.
- 2 x SPE 180 vertical thrusters vectored to clear the vehicle's lower deck.

The Sub-Atlantic SPE 180 brushless DC thruster develops a highly reliable 100 lbf (45 kgf) of static thrust in either direction.

CAMERAS AND SONAR:

- 1 x Compact color - Zoom high resolution camera
- 1 x General Purpose mono low - lux high resolution CCD camera
- 1 x Tritech Super Sea King Sonar

LIGHTING:

3 x 220 VDC, 250 Watt halogen lamps, dimmer controlled, and mounted on the frame and camera tilt unit rated to 48 Nm torque.

TETHER MANAGEMENT SYSTEM (TMS):

Stainless steel telescopic frame construction allows for interchangeable tooling skids. The electronic wench is pilot controlled and holds over 900 feet (300 m) of standard excursion tether.

CONTAINER:

Built in compliance with EN 12079 offshore regulations, the containers have 2 compartments with separated workshop and control areas. Comprehensive spares kits are included as part of SeaTrepid's standard package.

Height: 8.5 ft (2.6 m) Length: 20.0 ft (6.1 m)
Width: 8.0 ft (2.4 m) Weight: 22,000 lb (10,000kg)

LAUNCH AND RECOVERY SYSTEM (LARS):

A Frame Winch and HPU:
Winch: 6560 ft (2000m) of armored lift umbilical
Weight: 32,000 lb (14,500 kg)
Length: 16.4 ft (5.0 m)
Width: 9.0 ft (2.8 m)
Safe Working Load: 3,300 lb (1,500 kg)
LARS power requirements: 440 VAC 3 phase and earth, 50 / 60 Hz, 22 kVA

OPTIONAL EQUIPMENT:

The Mohican ROV system will support equipment, available as options to the standard specification, including industry standard HD cameras, HD sonar systems, compact tooling skids, side scan sonar, bathymetric, and oceanographic sensors, CP and wall thickness probes, HD TV cameras, High pressure water jet, electro hydraulic manipulators, and nFMD (flooded member detection).