

Sea Owl SUBROV – Submarine ROV

Purpose

The Sea Owl SUBROV system is intended for use from a submarine torpedo tube. The SUBROV has a capability for Inspection, UW-works, Mine Counter Measures, as a platform for Communication/Surveillance and an active Docking Tool for an AUV.



System Overview

The SUBROV system consists of an operator's console, a power supply, a winch and a ROV. The console is used for controlling the ROV and to display video and sonar images to the operator. The power supply is a converter that can transform the onboard battery supply to power for the ROV. The ROV can be powered by the tether or an onboard battery package.



The winch is a tether management system with functions to maintain tether/fibre length and tension in order to keep the tether/fibre safe. The ROV is a highly maneuverable and versatile vehicle that can be configured for a multitude of tasks. The ROV is based on the well-proven Sea Owl 500 MK IV used extensively in the offshore industry.

Characteristics

The system is designed to have the same dimensions and form as a torpedo. This means that installation can easily be performed in the same manner as loading a torpedo. The only interfaces required on the submarine are power and the standard penetrator for the tube hatch.

Total System

Length	6.5 m
Diameter	0.533 m
Weight	700 / 750* kg
Power Supply (max)	5 kW
<small>* including Battery Package</small>	



Wet End



ROV length	1.8 / 2.5* m
Diameter	0.533 m
Weight (ROV)	120 / 180* kg
Speed	0 – 3 knots
Thrust	Forward 250 N
	Sideways 200 N
	Up/down 400 N
Depth (operation)	0 – 500 m
Tether/Fibre Length	100 / >2000 m



Dry End

Length	3.5 / 2.5* m
Diameter	0.533 m



Roper Resources Ltd

Providing Remotely Operated Equipment for use in Hostile Environments

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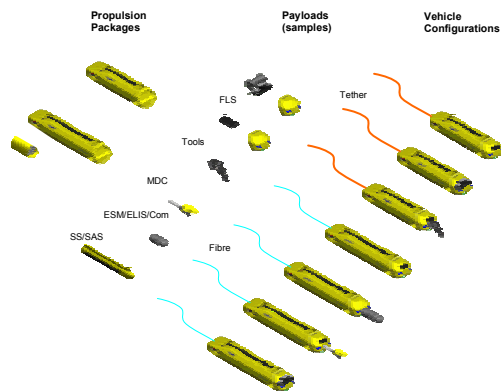
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Features and Functions

Modularity

The SUBROV system is of modular and of open design, enabling to embody new technology without the need to replace the main system elements. The design philosophy permits a step-by-step upgrading of both software and hardware. The modularity is also allowing for reconfiguration of the SUBROV to many different tasks.



Maneuverability

The ROV is extremely maneuverable. It can be operated with complete stability; 360 degrees in both pitch and roll. It has auto depth, heading, pitch and roll. Making it very easy to operate even for an untrained operator.

Inspection / Intervention

The system can be used to inspect both the submarine itself as well as the area surrounding the submarine. The ROV is equipped with both color and low light cameras. The ROV is also equipped with a sonar to help navigation and to relocate objects. The ROV can be equipped with tools to perform various tasks such as cutting wires, retrieving or moving objects with a manipulator.

Mine Counter Measures

SUBROV equipped with a high resolution sonar and camera may be used for both mine detection and mine identification. Mine disposal may also be used.



Communication / Surveillance

The system can be used to carry an antenna module (GPS/ESM/ELIS/Com) that can be brought to the surface to establish radio communication and surveillance. It can also be used to dock and connect to underwater communication nodes.



AUV Recovery

The ROV can be equipped with an AUV gripping tool allowing it to be used to dock with an incoming AUV. The ROV can then move the AUV into a torpedo tube for recovery.



Options

Manipulator / Wire cutter

Cuts up to 20 mm steel wire. The manipulator is a two-function manipulator that can be telescopically extended and used to move deploy or recover objects.

AUV Recovery tool

The Recovery tool is attached to the AUV hull. The ROV thrusters and control system can then be used to manually steer the AUV with full maneuverability allowing it to be inserted into an awaiting torpedo tube.

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