

WORK MODULES

The MORSWIN vehicle can be utilized as observation ROV without additional equipment.

To extend its capabilities purpose oriented modules can be installed. Standard module weights up to 60 kg and is 0,3 m high. Higher modules can be designed to contain requested equipment.



INFORMATION ABOUT THE COMPLETED PROJECT:

Project Title: Active unmanned system to detect and identification dangerous materials in the areas of water
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BASIC SPECIFICATION

Operating depth:	5 - 200 m
Horizontal range	400m (1000m cable)

Dimensions

Length	1,6 m
Beam:	0,85 m
Height:	1,00 m

Masses

Vehicle without payload	325 kg
Maximum vehicle mass	500 kg
Total system mass	3000 kg

The MORSWIN system power consumption
3 phase, 50-60 Hz, 45 kW,

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PURPOSE AND BASIC EQUIPMENT:

RECONNAISSANCE:

side scan sonar, multibeam echosounder, subbottom profiler, magnetometer, digital cameras.

MANIPULATION:

general purpose electric or hydraulic manipulators.

MCM CHARGE DELIVERY:

the delivery equipment for Toczek A, B, and C type charges

MORŚWIN

The Multipurpose Remotely Operated Underwater Vehicle System





MORŚWIN

The MORŚWIN is a multipurpose high power, fully electric Remotely Operated Vehicle System. The MORŚWIN system uses a typical open frame ROV, supplied and controlled by an umbilical cable. 35 kW of power is available at the vehicle for propulsion and work systems. Due to high power it is able to operate at a distance of up to 400m from a launch point in 1 m/s sea currents. Structurally it is divided to a control/propulsion unit and a detachable work module. The open frame design of the bottom mounted work module and open control system architecture offers easy access to all components for checkout maintenance, repair and modifications. The low magnetic version is manufactured as specialized mine countermeasure Remotely Operated Vehicle System.

SYSTEM COMPONENTS

The MORŚWIN ROV system is composed of the following components:

- ▶ Remotely Operated Vehicle
- ▶ Pilot Control Console
- ▶ Power Supply Unit
- ▶ Umbilical
- ▶ Umbilical Cable Winch
- ▶ Tools and deck equipment
- ▶ Set of spare parts
- ▶ System container (optional)

The MORŚWIN vehicle is controlled by a pilot using two or three TV images and status information. The status information can be overlaid on one of the TV images. All the images are displayed as windows on a single monitor screen or splitted to as many screens as required. These are supplemented by two sonar images and navigation situation window. Vehicle movements are controlled by means of two displacement type joysticks. System commands are inserted using a PC compatible keyboard with IP 66 sealed, membrane keys. Pilot work is aided by several auto piloting functions such as auto-heading, auto-depth, auto position and auto pitch stabilisation. Diagnostic functions are built in into system software. All the data and TV signals, between ROV and deck control room, are transmitted using fibre optic technology, giving high quality and high speed communication links that are immune to electromagnetic interference. A single, single mode (SM) fibre is used for easy assembly and maintenance. This can be supplemented by another fibre to transmit additional payload data.

The MORŚWIN system can be delivered with integrated training simulator that is built into the Pilot Console. Simulated images of four imaging devices are displayed for comprehensive "real life" training. Several lessons are available to train personnel of different skill levels. Complete trainer console, identical to real Pilot Console, can be separately supplied for training purposes.