

Teledyne Benthos

# SeaROVER®

Remotely Operated Vehicle

## Payload Specific ROV System

The SeaROVER® is a powerful, compact, open-frame inspection class vehicle, that was designed with a Payload Centric approach - the ROV is built around the sensor. The payload centric design of the SeaROVER is a significant departure from other inspection class ROV designs. While other ROV systems have tool sleds or modifications that allow them to accept additional sensors, the SeaROVER has an open frame specifically designed to carry the sensors in an optimized position for the best flight stability and sensor performance. The system includes the SeaROVER ROV, topside control unit, handbox controller, handbox cable, and rugged plastic shipping cases for the vehicle and the topside controller. Payload sensors are sold separately.



SeaROVER



The SeaROVER with customized payload

### PRODUCT FEATURES

#### Features

- Color zoom camera, ultra low light B/W camera
- 180° tilt camera NTSC/PAL
- Dual, fully dimmable, LED light arrays
- Auto heading and depth features
- Two 1 HP horizontal thrusters and two 1/3 HP thrusters (Vertran) - standard
- Two additional 1 HP thrusters (variable configuration) - optional

#### Applications

- Port and harbor security
- Ship hull inspections
- Dam and tunnel inspections
- Floating Petroleum Storage & Off-loading (FPSO) inspections
- Search and rescue (SAR) operations
- Surveys
- Salvage operations
- Real-time monitoring of marine construction operations
- Pipe and cable tracking



# SeaROVER

Remotely Operated Vehicle

## TECHNICAL SPECIFICATIONS

### Performance

<b>Maneuverability:</b>	4-axis translation
<b>Operating depth:</b>	300 m (984 ft) of seawater

### Physical Characteristics

<b>Size:</b>	56.8 cm (22.4 in) high
	59.1 cm (23.3 in) wide
	74.6 cm (29.4 in) long
<b>Weight:</b>	32 kg (70 lb) for standard 2-horizontal thruster configuration, excluding ballast and installed options

### Thrusters

<b>Horizontal:</b>	Two 1 HP magnetically coupled brushless DC motors
<b>Forward static thrust:</b>	18.1 kg (40 lb) per thruster
<b>Reverse static thrust:</b>	10.4 kg (23 lb) per thruster
<b>Vertical:</b>	Two 1/3 HP magnetically coupled brushless DC motor (Vertran configuration)
<b>Upward static thrust:</b>	8.2 kg (18 lb) per thruster
<b>Downward static thrust:</b>	4.1 kg (9 lb) per thruster
<b>Lateral (optional):</b>	One 1/3 HP magnetically coupled brushless DC motor
<b>Port static thrust:</b>	8.2 kg (18 lb) per thruster
<b>Starboard static thrust:</b>	4.1 kg (9 lb) per thruster
<b>Propeller:</b>	Stainless Steel
<b>Nozzle:</b>	Nylon Kort

### Viewing System (Both cameras mounted in Lexan tube)

<b>Camera 1:</b>	High resolution color video - NTSC or PAL
<b>Resolution:</b>	470 lines/576 lines PAL
<b>Sensitivity:</b>	0.1 lux @ 50 IRE
<b>Camera 2:</b>	High resolution B/W video - NTSC or PAL
<b>Resolution:</b>	600 lines
<b>Sensitivity:</b>	0.003 lux @ 50 IRE
<b>Lights:</b>	Variable intensity LED arrays - 1 Port & 1 Starboard - External to camera enclosure
<b>Tilt mechanism:</b>	180° for both cameras simultaneously

### Optional Rear Facing Camera

<b>Camera Option A:</b>	High resolution color video- NTSC
<b>Resolution:</b>	480 lines
<b>Sensitivity:</b>	0.01 lux @ 50 IRE

### Sensors

<b>Heading:</b>	0-360°, 1° resolution
<b>Depth:</b>	±1° of operating depth

### Surface Control Unit & Vehicle Power Supply

#### Physical Characteristics

<b>Size:</b>	37.1 cm (14.6 in) high
	56.2 cm (22.1 in) wide
	56.0 cm (22.0 in) long
<b>Weight:</b>	41kg (90 lbs)

### Electrical Specifications

<b>Input Power Requirements:</b>	100-130 VAC or 200-250 VAC, 47-63 Hz, auto-sensing - single phase, 3000 Watts, 5000 VA maximum, depending on installed options. Adjustable current limiting for use with small generators
<b>Output Power to Vehicle:</b>	150-300 VDC 12 Amps - isolated, regulated at vehicle

### Tether - Dual Coax (Call for fiber optic options)

<b>Diameter:</b>	1.65 cm (0.65 in)
<b>Weight in Fresh Water:</b>	Neutral
<b>Weight in Air:</b>	65 kg/305 m (143 lb/1000 ft) nominal
<b>Breaking Strength:</b>	900 kg (2000 lb) nominal
<b>Peak Tension Load:</b>	164 kg (360 lb) maximum
<b>Minimum Bend Radius:</b>	20 cm (8 in)
<b>Construction:</b>	Outer yellow foam polyurethane flotation jacket over Kevlar braid
<b>Conductors</b>	(2) 75 ohm coax, (4) 16 AWG, and (2) 26 AWG twisted shielded pair
<b>Maximum Length:</b>	500 m (1640 ft)

