

# Powerful, Rugged, Reliable

The Teledyne Benthos line of ROVs incorporates some of the best features available in inspection class ROVs. Our current line of vehicles addresses a broad range of applications, options, and accessories.

The SeaROVER, our newest addition to the ROV product line, was designed with the payload centric approach — the ROV is built around the sensor! The SeaROVER Series can be expanded to accommodate different sensors and literally “flies” the sensor underwater.

The MiniROVER® is an extremely powerful, highly portable system with built in connectivity for many optional sensors, including imaging sonars. It was developed in response to customer requests for a portable but powerful ROV system. Over 500 of Benthos' MiniROVER series vehicles have been sold, making the MiniROVER one of our most popular ROVs.

Rounding out our ROV product line is the Stingray. The Stingray ROV has two built-in slide rails for easy installation of additional buoyancy, tools, cameras, lights, sensors, sonars or frames. The Stingray comes standard with three connectors for optional equipment and two camera connectors, giving the vehicle a high level of flexibility.

The SeaROVER, MiniROVER, and Stingray are Teledyne Benthos' solution to the ever-changing needs of inspection class ROV customers.



SeaROVER

MiniROVER

Stingray



## SeaROVER

# SeaROVER

## 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

### 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
- Artificial reef monitoring
- Real-time monitoring of marine construction operations



## SeaROVER

# Payload Specific ROV System

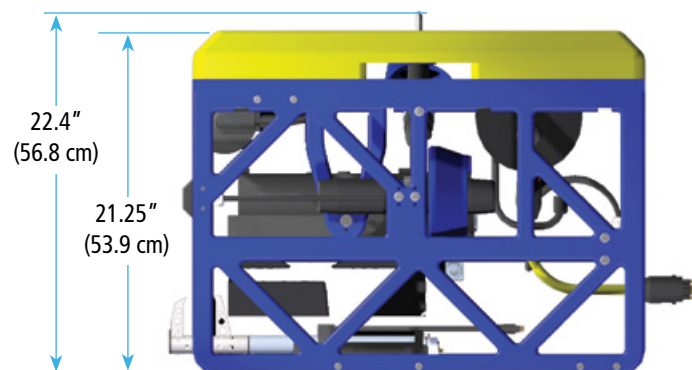
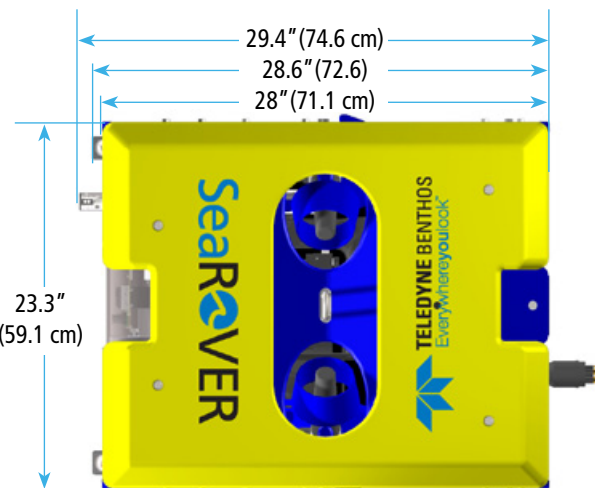
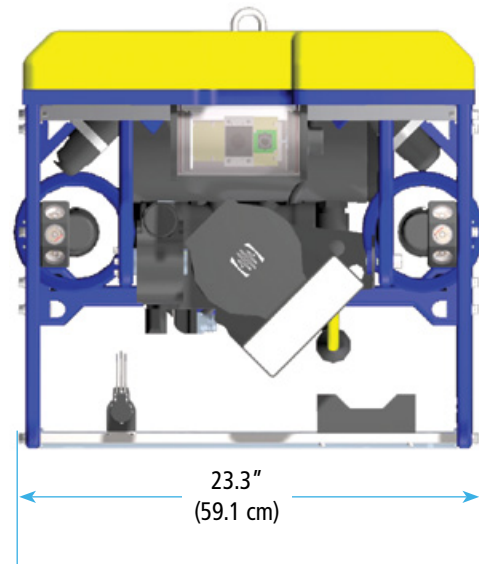
Part Number: 014570

### System Includes:

- SeaROVER vehicle
- ROV topside control unit
- Handbox controller
- Handbox cable
- Rugged plastic shipping cases for vehicle and topside

### Key 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



# SeaROVER

## Options

<b>012200</b>	17" Color Flat Panel LCD Multi-Input Display
<b>014587</b>	Color 0.1 LUX Low Light Fixed Focus camera with Universal Bracket and Shielded Cable (NTSC)
<b>014588</b>	B&W 600 Line 0.0003 LUX Very Low Light Fixed Focus Camera with Universal Bracket and Shielded Cable (NTSC)
<b>014589</b>	Color 0.1 LUX Low Light Fixed Focus camera with Universal Bracket and Shielded Cable (PAL)
<b>014590</b>	B&W 600 Line 0.0003 LUX Very Low Light Fixed Focus Camera with Universal Bracket and Shielded Cable (PAL)
<b>D251-0580</b>	2 function manipulator - wrist rotation and open/close

## Spares

Part Number: 014580		TOPSIDE SPARES KIT	
Items included in kit	Part Number	Quantity	Description
	<b>010781</b>	1	Topside Power Supply +5VDC and +/- 12VDC
	<b>B251-1313</b>	1	GFI/Filter Board
	<b>B251-1124</b>	1	CPU Board with Programmed Compact Flash Card for Topside
	<b>MRC-220</b>	1	I/O Board

Part Number: 014581		SUBSEA SPARES KIT	
Items included in kit	Part Number	Quantity	Description
	<b>007458</b>	1	Subsea Power Supply 12VDC DC-DC Converter
	<b>009314</b>	1	Subsea PC-104 Power Supply Board
	<b>013173</b>	1	DC-DC Power Converter, 150VDC to 24VDC 100W
	<b>009875</b>	1	Subsea Camera PCB
	<b>B251-1125</b>	1	CPU Board with Programmed Compact Flash Card for Subsea
	<b>MRC-220</b>	1	I/O Board

Part Number: 013167		Handbox Spare Kit	
Items included in kit	Part Number	Quantity	Description
	<b>009336</b>	1	3-Axis Joystick
	<b>009337</b>	1	1-Axis Joystick
	<b>010785</b>	1	Handbox Cable
	<b>010850</b>	2	Switch Boot
	<b>010849</b>	2	Switch Boot
	<b>010709</b>	2	Switch Boot
	<b>009406</b>	2	Shaft Boot
	<b>B251-0025</b>	1	Test Cable

# SeaROVER

(Spares continued)

<b>Part Number: A251-0048</b>		<b>Magnesium Anode</b>	
<b>Part Number: 013169</b>		<b>Fuse kit - comprehensive set</b>	
<b>Items included in kit</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
	<b>010771</b>	20	7 Amp fuses
	<b>0501-017</b>	10	2 Amp fuses
	<b>0600-103</b>	10	1 Amp fuses
	<b>010772</b>	10	1.5 Amp fuses
<b>Part Number: 013171</b>		<b>Lubricants kit</b>	
<b>Items included in kit</b>	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
	<b>003051</b>	1	Dow Corning Low Temp Silicon grease
	<b>001123</b>	1	Super Lube Clear Silicon O-ring grease
	<b>013129</b>	1	Silicon Spray lube
<b>Part Number: 012930</b>		<b>Spare 1HP Thruster - 40 lbs forward thrust - Stainless propeller</b>	
<b>Part Number: 011034</b>		<b>Spare 1/3 HP Thruster - 18lbs forward thrust - Stainless propeller</b>	

# SeaROVER

## Specifications

### PERFORMANCE

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

### PHYSICAL CHARACTERISTICS

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

### THRUSTERS

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

### VIEWING SYSTEM (Both cameras mounted in Lexan tube)

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

### OPTIONAL REAR FACING CAMERA

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

### SENSORS

Heading:	0–360°, 1° resolution
Depth:	±1° of operating depth

### SURFACE CONTROL UNIT & VEHICLE POWER SUPPLY

#### Physical Characteristics

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

### ELECTRICAL SPECIFICATIONS

Input Power Requirements:	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
Output Power to Vehicle:	150-300 VDC 12 Amps - isolated, regulated at vehicle

### TETHER - DUAL COAX (Call for fiber optic options)

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

*(Specifications continued next page)*

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# SeaROVER

## CONTROLS AND INDICATORS

Front panel displays:	Hours
	Power supply voltage
	Power supply current
Front panel indicators:	Vehicle power
	12 VDC power
	Over temperature alarm
	Ground fault alarm
	Water leak alarm
	Communications loss alarm
	Audio alarm
	Power supply over voltage shutdown
	Power supply AC fault
	Front panel controls:
Ground fault bypass switch	
Alarm silence switch	
Graphics overlay on/off switch	
Power supply on/off switches	
Front panel fuses:	AC (2)
	12 VDC
Video overlay displays:	Depth, digital with analog bar graph
	Heading, compass rose
	Altitude, digital with bar graph (optional)
	Date in month, day and year
	Time in hours and seconds
	Cable turns, up to 99 turns
Input/output connections:	Ethernet (factory or advanced users only)
	GPS
	RS-232 / RS-485
	Video out A and B
	Handbox
	Tether
	Sonar
	Power supply
	Power source AC in

## HANDBOX

The handbox connects to the surface control unit with the handbox extension cable and is used to control all of the MiniRover's functions. It is packaged in a rugged, cast aluminum housing with drop protectors and includes a comfortable padded neck strap.

### Physical Characteristics

Size:	14.0 cm (5.5 in) high
	22.2 cm (8.8 in) wide
	15.9 cm (6.3 in) long
Weight	1.7 kg (3.7 lb)
Extension cable length:	15.2 m (50 ft)

## HAND BOX CONTROLS AND INDICATORS

Indicators:	Vehicle power
	GFI/leak/temperature alarms
Controls:	Auto heading/depth/optional altitude
	Horizontal joystick (3-axis)
	Vertical joystick (1-axis)
	Vertical trim control
	Range trim control
	Vehicle power switch
	Tilt down/up switch
	Tilt return home button
	Camera select A/B switch
	Zoom in/out switch
Optional manipulator:	Focus auto/manual
	Lights/brightness switch
	Depth/altitude select switch
	Auto heading/depth/altitude button
	Manipulator functions – open/grip jaw, rotate wrist

**Note:** Specifications are subject to change.

## MiniRover

# MiniROVER®

## Portable Inspection Class ROV

### High Performance, Low Logistics Inspection

The MiniROVER Remotely Operated Vehicle is Teledyne Benthos' answer to our customers' request for a more portable and powerful ROV system. Over 500 Benthos MiniROVER series vehicles have been sold worldwide. The latest MiniROVER is an extremely robust, highly portable system. With its extreme thrust capability, the MiniROVER allows the user to extend the operational envelope of their ROV projects and explore areas never before possible. The MiniROVER is one man deployable and has built in connectivity for many optional sensors, including Teledyne BlueView sonars. This versatility allows the MiniROVER to be used for a wide array of applications.

### Applications

- Port and harbor security tasks
- Ship hull inspections
- Dam and tunnel inspections
- Inspection of water tanks
- FPSO inspections
- Police evidence search and recovery operations
- Search and rescue (SAR) operations
- Under-ice surveys and operations
- Interior and exterior pipe inspections
- Inspection of nuclear reactor facilities
- Offshore structure surveys
- Salvage operations
- Real-time monitoring of marine construction operations
- Artificial reef monitoring operations
- Pipe and cable tracking

### Standard Features

- Auto heading and depth
- 2 cameras in Lexan Tube – A High Resolution zoom color camera and a low-light level B & W camera
- 90 degrees up/ -90 degrees down camera tilt range
- 2 LED Arrays – fully dimmable – external to camera enclosure
- Heading and depth sensors
- Rugged frame constructed from Ultra-High Molecular Weight Polyethylene (UHMWPE)
- 3 powerful, reliable, magnetically coupled DC brushless thrusters (lateral thruster is optional)
- Lightweight and water resistant hand control box
- Built in I/O's (RS-232, RS-485)

▼ The MiniRover is unmatched in its ease of use in any environment.



▲ The MiniRover is easily deployed and recovered by one person.



▲ The compact dimensions of the MiniRover make it ideal for inspection tasks where limited access presents a problem with larger vehicles.



# MiniRover

## High-output MiniRover ROV System with Lateral Thruster Option Installed (12 Amp)

Part Number: 014412 (NTSC)

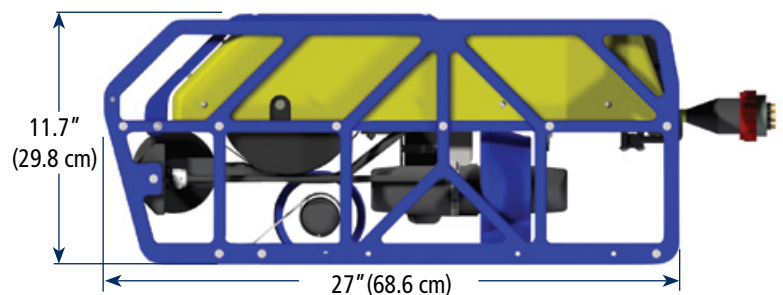
### This system includes:

- ROV Vehicle
- Topside
- Handbox
- Handbox Cable
- Topside shipping case and ROV shipping case

### Features of this system:

- Lightweight splash-proof hand box controller with 50' extension cable.
- High-resolution color zoom video camera: 470 Lines Resolution, 1.0 LUX Minimum Illumination, +90 degrees up / -90 degrees down Tilt, NTSC - Lexan housing also contains fixed focus black and white high resolution, low light level camera. - 600 lines, 0.003 lux - tilts with color zoom camera.
- Video Overlay with Depth, Heading, Date, Time, Cable Turns Indicator Displays.
- Two variable intensity LED light arrays.
- Two high output 1 HP rare earth, magnetically coupled brushless motors with stainless steel propellers (Max 40 lbs thrust each) for horizontal control, one 1/3 HP thruster for vertical and one 1/3 hp lateral thruster.
- Heading sensor, rate gyro, auto heading and auto depth features.
- Heavy duty rugged and reusable watertight shipping and storage cases.

**Note:** Specifications subject to change.



\* Tether sold separately.

# MiniRover

## High-output MiniRover ROV System without Lateral Thruster Option Installed(12 Amp) Part Number: 013427 (NTSC)

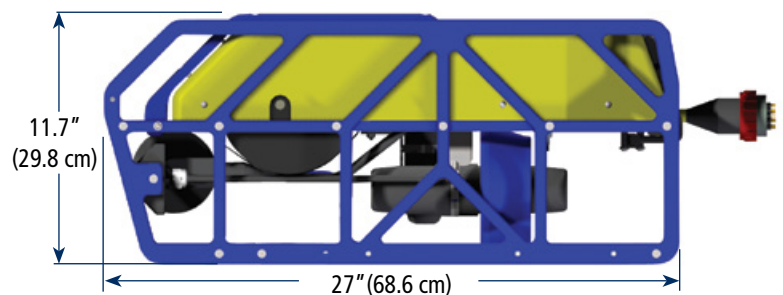
### This system includes:

- ROV Vehicle
- Topside
- Handbox
- Handbox Cable
- Topside shipping case and ROV shipping case

### Features of this system:

- Lightweight splash-proof hand box controller with 50' extension cable.
- High-resolution color zoom video camera: 470 Lines Resolution, 1.0 LUX Minimum Illumination, +90 degrees up / -90 degrees down Tilt, NTSC - Lexan housing also contains fixed focus black and white high resolution, low light level camera. - 600 lines, 0.003 lux - tilts with color zoom camera.
- Video Overlay with Depth, Heading, Date, Time, Cable Turns Indicator Displays.
- Two variable intensity LED light arrays.
- Two high output 1 HP rare earth, magnetically coupled brushless motors with stainless steel propellers (Max 40 lbs thrust each) for horizontal control, one 1/3 HP thruster for vertical.
- Heading sensor, rate gyro, auto heading and auto depth features.
- Heavy duty rugged and reusable watertight shipping and storage cases.

**Note:** Specifications subject to change.



\* Tether sold separately.

# MiniRover

## Options

<b>012200</b>	17" Color Flat Panel LCD Multi-Input Display
<b>014587</b>	Color 0.1 LUX Low Light Fixed Focus camera with Universal Bracket and Shielded Cable (NTSC)
<b>014588</b>	B&W 600 Line 0.0003 LUX Very Low Light Fixed Focus Camera with Universal Bracket and Shielded Cable (NTSC)
<b>014589</b>	Color 0.1 LUX Low Light Fixed Focus camera with Universal Bracket and Shielded Cable (PAL)
<b>014590</b>	B&W 600 Line 0.0003 LUX Very Low Light Fixed Focus Camera with Universal Bracket and Shielded Cable (PAL)
<b>D251-0580</b>	2 Function Manipulator - Wrist Rotation and Open/Close
<b>B251-0476-2</b>	Dual Frequency Miniature Scanning Sonar System Option (675 kHz and 850 kHz)

## Spares

Part Number: 014580		TOPSIDE SPARES KIT	
Items included in kit	Part Number	Quantity	Description
	<b>010781</b>	1	Topside Power Supply +5VDC and +/- 12VDC
	<b>B251-1313</b>	1	GFI/Filter Board
	<b>B251-1124</b>	1	CPU Board with Programmed Compact Flash Card for Topside
	<b>MRC-220</b>	1	I/O Board

Part Number: 014581		SUBSEA SPARES KIT	
Items included in kit	Part Number	Quantity	Description
	<b>007458</b>	1	Subsea Power Supply 12VDC DC-DC Converter
	<b>009314</b>	1	Subsea PC-104 Power Supply Board
	<b>013173</b>	1	DC-DC Power Converter, 150VDC to 24VDC 100W
	<b>009875</b>	1	Subsea Camera PCB
	<b>B251-1125</b>	1	CPU Board with Programmed Compact Flash Card for Subsea
<b>MRC-220</b>	1	I/O Board	

Part Number: 013167		Handbox Spare Kit	
Items included in kit	Part Number	Quantity	Description
	<b>009336</b>	1	3-Axis Joystick
	<b>009337</b>	1	1-Axis Joystick
	<b>010785</b>	1	Handbox Cable
	<b>010850</b>	2	Switch Boot
	<b>010849</b>	2	Switch Boot
	<b>010709</b>	2	Switch Boot
	<b>009406</b>	2	Shaft Boot
	<b>B251-0025</b>	1	Test Kit

# MiniRover

(Spares continued)

**Part Number: A251-0048      Magnesium Anode**

**Part Number: 013169      Fuse kit - comprehensive set**

	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
<b>Items included in kit</b>	<b>010771</b>	20	7 Amp fuses
	<b>0501-017</b>	10	2 Amp fuses
	<b>0600-103</b>	10	1 Amp fuses
	<b>010772</b>	10	1.5 Amp fuses

**Part Number: 013171      Lubricants kit**

	<b>Part Number</b>	<b>Quantity</b>	<b>Description</b>
<b>Items included in kit</b>	<b>003051</b>	1	Dow Corning Low Temp Silicon grease
	<b>001123</b>	1	Super Lube Clear Silicon O-ring grease
	<b>013129</b>	1	Silicon Spray lube

**Part Number: 012929      Spare 1HP Thruster - 40 lbs forward thrust - (RH) - Stainless propeller**

**Part Number: 012930      Spare 1HP Thruster - 40 lbs forward thrust (LH) - Stainless propeller**

**Part Number: 011034      Spare 1/3 HP Thruster - 18 lbs forward thrust - Stainless propeller**

# MiniRover Specifications

## PERFORMANCE

Maneuverability:	3-axis translation
Horizontal speed:	4 knots on surface with minimal tether deployed
Operating depth:	300 m (984 ft) of seawater

## PHYSICAL CHARACTERISTICS

Size:	29.8 cm (11.7 in) high 40.6 cm (16 in) wide 68.6 cm (27 in) long
Weight:	23.5 kg (51.8 lbs) for standard 2-horizontal thruster configuration, excluding ballast and installed options

## THRUSTERS

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

## VIEWING SYSTEM (Both cameras mounted in Lexan tube)

Camera 1:	High resolution color video - NTSC
Resolution:	470 lines
Sensitivity:	1.0 lux
Tilt mechanism:	180° for both cameras simultaneously
Camera 2:	High resolution B/W video - NTSC
Resolution:	600 lines
Sensitivity:	0.003 lux
Lights:	Variable intensity LED arrays - 1 Port & 1 Starboard – External to camera enclosure

## OPTIONAL REAR FACING CAMERA

Camera Option A:	High resolution color video- NTSC
Resolution:	480 lines
Sensitivity:	0.01 lux

## SENSORS

Pitch/Roll:	±20°, 0.2° resolution
Heading:	0–360°, 1° resolution
Depth:	±1° of operating depth

## SURFACE CONTROL UNIT & VEHICLE POWER SUPPLY

### Physical Characteristics

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

## ELECTRICAL SPECIFICATIONS

Input Power Requirements:	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
Output Power to Vehicle:	150-300 VDC 12 Amps - isolated, regulated at vehicle

## TETHER - DUAL COAX

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

(Specifications continued next page)

# MiniRover

(Specifications continued)

## CONTROLS AND INDICATORS

Front panel displays:	Hours
	Power supply voltage
	Power supply current
Front panel indicators:	Vehicle power
	12 VDC power
	Over temperature alarm
	Ground fault alarm
	Water leak alarm
	Communications loss alarm
	Audio alarm
	Power supply over voltage shutdown
	Power supply AC fault
Front panel controls:	System power switch
	Ground fault bypass switch
	Alarm silence switch
	Graphics overlay on/off switch
	Power supply on/off switches
Front panel fuses:	AC (2)
	12 VDC
Video overlay displays:	Depth, digital with analog bar graph
	Heading, compass rose
	Altitude, digital with bar graph (optional)
	Date in month, day and year
	Time in hours and seconds
	Cable turns, up to 99 turns
Input/output connections:	Ethernet (factory or advanced users only)
	GPS
	RS-232 / RS-485
	Video out A and B
	Handbox
	Tether
	Sonar
	Power supply
	Power source AC in

## HANDBOX

The handbox connects to the surface control unit with the handbox extension cable and is used to control all of the MiniRover's functions. It is packaged in a rugged, cast aluminum housing with drop protectors and includes a comfortable padded neck strap.

### Physical Characteristics

Size:	14.0 cm (5.5 in) high
	22.2 cm (8.8 in) wide
	15.9 cm (6.3 in) long
Weight	1.7 kg (3.7 lb)
Extension cable length:	15.2 m (50 ft)

## HANDBOX CONTROLS AND INDICATORS

Indicators:	Vehicle power
	GFI/leak/temperature alarms
	Auto heading/depth/optional altitude
Controls:	Horizontal joystick (3-axis)
	Vertical joystick (1-axis)
	Vertical trim control
	Range trim control
	Vehicle power switch
	Tilt down/up switch
	Tilt return home button
	Camera select A/B switch
	Zoom in/out switch
	Focus auto/manual
	Lights/brightness switch
	Depth/altitude select switch
	Auto heading/depth/altitude button
Optional manipulator:	Manipulator functions – open/grip jaw, rotate wrist

**Note:** Specifications are subject to change.

## MiniRover

# Shipping Weights & Dimensions

	<b>Dimensions</b>	<b>Weight</b>
MiniROVER- in case	(in) 32 x 21 x 16 (cm) 81 x 53 x 42	75 lbs 34 kg
MiniROVER topside - in case	(in) 29 x 27 x 27 (cm) 74 x 69 x 69	150 lbs 68 kg
100 m tether (on a spool, no case - no slip ring)	(in) 21 x 16 x 21 (cm) 53 x 41 x 53	100 lbs 45 kg
120 m tether, reel in case with slip ring	(in) 33 x 21 x 28 (cm) 84 x 53 x 71	150 lbs 68
300 m tether (on wooden spool - no slip ring)	(in) 30 x 30 x 21 (cm) 76 x 76 x 53	180 lbs 82 kg
Tether and reel (300 m on Reel with slip ring/no pallet)	(in) 40 x 32 x 32 (cm) 102 x 81 x 81	275 lbs 125 kg
Tether and reel (300 m on Reel with slip ring/with pallet)	(in) 47 x 36 x 41 (cm) 119 x 91 x 104	300 lbs 136 kg

# Stingray

# Stingray

## Portable Inspection Class ROV

The Stingray is designed for easy deployment from any location. ▶

### Applications

- In-situ biological studies and sampling
- Port and harbor security tasks
- Ship hull inspections
- Dam and tunnel inspections
- Under-ice surveys and operations
- Interior and exterior pipe inspections
- Inspection of nuclear reactor facilities
- FPSO mooring chain inspections
- Salvage operations
- Offshore structure surveys
- Inspection of water tanks and systems
- Search and rescue (SAR) operations
- Police evidence search and recovery operations
- Real-time monitoring of marine



◀ Here, the Stingray was outfitted with a hooking mechanism to attach a line to the top bail of a platform which was then hauled to the surface.

The Stingray adjacent to the 4,000 lb bottom-moored data collection platform after it was recovered. ▶





# Stingray

## High-output Stingray ROV System

Part Number: 012204 (NTSC)

Part Number: 013480 (PAL)

### This system includes:

- Topside
- Handbox
- Handbox Cable
- ROV Vehicle
- Topside shipping case and ROV shipping case

A complete Stingray system includes the ROV, hand control box, topside control console and shipping case. A variety of optional tools and accessories are available. Pictured with optional display and Portable Surface Tether Management System.

### Features of this system:

- Surface power/control console available user inputs: RS-232 serial and RS-485 serial ports
- Lightweight splash-proof hand box controller with 50' extension cable
- High-resolution 18X zoom color video camera: 470 lines resolution, 1.0 LUX minimum illumination, mounted on tilt bar +90 Degrees-90 Degrees, with 3.24 to 38.9mm auto iris lens, 2.2 to 53 degrees field of view horizontal (NTSC or PAL)
- Video overlay with depth, heading, date, time, cable turns indicator displays
- Two variable intensity quartz halogen lights.
- Four high output 1 HP rare earth, magnetically coupled brushless motors with stainless steel propellers (Max 40 lbs, thrust each, two thrusters for horizontal control, one thruster for vertical and one lateral thruster.
- Pitch, roll, heading sensor, rate gyro, auto heading and auto depth
- Camera tilt-home feature
- Rugged reusable watertight shipping and storage cases for topside control console and ROV
- 12 Amp vehicle power supply auto sensing 110/120VAC and 220/240VAC single phase input



### Optional Tools & Devices

Note: Specifications subject to change.



Articulator arm  
(Part Number: 013327).

## Accessories

**Note:** Tethers, reels and sonar options fit all Benthos ROVs unless otherwise noted. Tether prices are subject to change based on market rates

## Tethers

**BASE ROV TETHER** – Base ROV Tethers with a Kevlar braid strength member and high visibility polyurethane flotation jacket have one coax conductor and 1 Twisted Shielded Pair (TSP). There is one video channel available and no spare TSP for options or RS-485 devices. 16 gauge power conductors. Maximum length - 300 meters. Neutral buoyancy in seawater.

**D251-0074-200** 200 Meter Base ROV Tether Assembly with single coax and no TSP  
\*Not available with SeaROVER

**NEUTRAL TETHER** – Dual coax and a second Twisted Shielded Pair (TSP) allow 2 channels of simultaneous video and simple integration of a range of RS-485 options. A high visibility polyurethane flotation jacket and Kevlar braid strength member. 16 gauge power conductors. Maximum length - 500 meters. Neutral buoyancy in seawater.

<b>D251-0004-100</b>	100 Meter Neutral ROV Tether Assembly with dual coax and spare TSP
<b>D251-0004-120</b>	120 Meter Neutral ROV Tether Assembly with dual coax and spare TSP
<b>D251-0004-150</b>	150 Meter Neutral ROV Tether Assembly with dual coax and spare TSP
<b>D251-0004-200</b>	200 Meter Neutral ROV Tether Assembly with dual coax and spare TSP
<b>D251-0004-300</b>	300 Meter Neutral ROV Tether Assembly with dual coax and spare TSP
<b>D251-0004-400</b>	400 Meter Neutral ROV Tether Assembly with dual coax and spare TSP
<b>D251-0004-450</b>	450 Meter Neutral ROV Tether Assembly with dual coax and spare TSP
<b>D251-0004-500</b>	500 Meter Neutral ROV Tether Assembly with dual coax and spare TSP

**TETHER EXTENSIONS** have wet-mateable connectors and are fabricated with integrated strain relief assemblies at both ends. They are a simple, effective way to increase the operating range of the ROV and an excellent alternative to having separate tethers for shallow and deep water projects. It is also possible to daisy-chain multiple extensions with the tether to maximize operational flexibility

<b>D251-0153-25</b>	25 Meter Neutral Tether Extension with dual coax and spare TSP
<b>D251-0153-50</b>	50 Meter Neutral Tether Extension with dual coax and spare TSP
<b>D251-0153-150</b>	150 Meter Neutral Tether Extension with dual coax and spare TSP

## Reels

**REEL**– The D251-0060 tether reel, in a watertight, reusable shipping case accommodates 120 meters of the Neutral ROV Tether or 200 meters of the Base ROV Tether. The 013176 reel is an open frame design fabricated of stainless steel and holds 300 meters of Neutral ROV Tether. Both reels have a 14 conductor slip ring.

**D251-0060** Portable Surface Tether Management System 120m maximum of D251-0004 tether (manual)  
Includes 14 Conductor Slip ring Assembly. TETHER NOT INCLUDED

**013176** Portable Surface Tether Management System 300m max tether (manual),  
Includes 14 Conductor Slip ring Assembly. TETHER NOT INCLUDED

## Terms & Conditions

### **S** Standard product

*(All standard products require 4-6 weeks lead time)*

Seller's Offer, and any order issued by Buyer to Seller for the goods and/or services specified herein, is strictly limited to Seller's Terms and Conditions of Sale, which can be found at [www.benthos.com](http://www.benthos.com)



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