

SEABOTIX LBV150 ROV SYSTEM



GENERAL DESCRIPTION

The SeaBotix LBV150-4 is an affordable streamlined MiniROV system. Added tether length and the integrate control console provide a well rounded system that is simple to setup and operate.

Complete MiniROV

The LBV150-4 offers all the proven features of the LBV systems. Ideally suited to inshore or civil applications where a rapid setup is required. The integrated control console, tether and ROV take only minutes to have ready for operation.

Powerful Thrusters

The LBV150-4 is equipped with four powerful, oil-compensated, Brushless DC Thrusters. There is 1-lateral, 2-forward, and 1-vertical thruster, enabling maneuverability in four axes, just like a helicopter. The additional lateral thruster adds the capability to fly sideways, allowing the operator to keep either camera on target while piloting along a ship hull or dam surface. On-the-fly, 10-step variable power control to each axis allows for smooth video and sensor recording. For added reliability, serviceability, and peace of mind, each thruster is identical and independent of the vehicle enclosure, ensuring no dynamic seals penetrate the vehicle's electronics enclosure.

Tether

The LBV150-4 comes equipped with a generous 100 meters (328ft) of our revolutionary small diameter tether. Options of 150 and 250 meter are also available. The extremely small-diameter of our tether presents at least 24% less drag than other systems meaning the vehicle is controlled by the operator, not the tether.

Intuitive Controls

Operation of the LBV150-4 is simple with the standard Integrated Control Console featuring the acclaimed LBV Hand Controller. Standard Auto-Heading, Depth, and Trim, as well as all system functions are at your fingertips in a logical, simple layout. Added features include the 38 cm (15") monitor behind a waterproof panel, sunshade for direct light operations and sealed components for harsh environment operations. The programmable Video Overlay displays heading, depth, temperature, thruster gain settings, auto settings, cable turns, and time/date.

High-Quality Video and Sensor Data

The video system provides clear images from the standard high-resolution color camera. Camera has a total 270° field of view through 180° rotation of the camera enclosure. The internal, fully-adjustable 700 Lumen LED array provides light as it tracks the color camera. The programmable Video Overlay displays heading, depth, temperature, thruster gain settings, auto settings, cable turns, and time/date.

Options

The LBV150-4 is a very complete system, however, many options are available to further customize the system to each client's requirements. Add items like a three jaw grabber, USBL tracking system and external lighting.



**Making
technology
work for you!**

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LBV

Depth Rating	150 Meters Seawater (MSW) - 500 Feet Seawater (FSW)
Length	530 mm - 21 in
Width	245 mm - 9.65 in
Height	254 mm - 10 in
Diagonal	353 mm - 13.9 in
Weight in Air	11 kg - 24.3 lbs
Protection	Protective shell and polyethylene bumper frame

Thrusters

Thruster configuration	Four (4) Brushless DC thrusters - Two (2) forward, one (1) vertical and one (1) lateral. Each thruster is identical and isolated
Bollard Thrust (forward)	7 kgf - 15.4 ft/lbs
Bollard Thrust (vertical)	3 kgf - 6.6 ft/lbs
Bollard Thrust (lateral)	3 kgf - 6.6 ft/lbs
Speed at surface	3 knots - 3.45 mph - 1.54 m/s
Max Operating Current	2 knots

Cameras & Lighting

Camera Tilt	180 degrees - internal chassis rotates
Range of View	270 degrees - 180 degrees from tilt, 90 degrees from camera lens
Camera - Primary	570 line Ex-View HAD color - 0.2 Lux
Camera - Secondary	430 line B/W - 0.03 Lux
Focus	Manual focus control via hand controller. 90mm to infinity
Video Format	NTSC or PAL
Output Signal	Composite
Transmission Type	Fiber optic
Internal Lighting	700 Lumen LED array. Variable intensity via hand controller.

Control System

Configuration	Hand controller, monitor and surface power supply built into protective case
Data Channels	1 RS-232 for LBV controls
Sensors	Heading, depth, temperature
Auto Functions	Depth, heading, trim

Hand Controller

Length	210 mm - 8.3 in
Width	160 mm - 6.3 in
Height	75 mm - 3 in
Weight	650 grams - 1.4 lbs
Joystick	Single - forward, reverse, rotate left, rotate right, roll left, roll right
Joystick Steps	32
Vertical Thruster	Proportional control knob
Additional Controls	Membrane keypad - thruster gain control, trim, auto depth, auto heading, camera tilt, camera focus, camera switch, light On/Off, light intensity, accessories, video overlay position, power On/Off, programming keypad
Safety	I.P. 64 - splash proof

Integrated Control Console

Length	452 mm - 17.8 in
Width	328 mm - 12.9 in
Height	173 mm - 6.8 in
Weight	16 kg - 35.3 lbs
Input Voltage	100-130 VAC or 200-240 VAC
Power Requirement	1,000 Watts maximum
Safety	Isolated input power, circuit breaker, line insulation monitor, leak detector. Meets and exceeds "Code of Practice for the Safe Use of Electricity in Water"
Water Proofing	I.P. 64 - Splash proof

Tether

Diameter	8 mm - 0.3 in nominal
Length	100 meters - 328 feet
Working Strength	45 kgf - 100 lbs
Breaking Strength	318 kgf - 700 lbs
Strength Member	Kevlar
Buoyancy	Neutral in fresh water - slightly positive in Seawater
Conductors	Twisted pair with shield and fiber

On-Screen Information Display

Information Displayed	Thruster gain settings, light level, Trim On/Off, heading, depth, turns counter, camera angle, water temperature, time, date, user text
User Text	Up to 28 characters
Positioning	Bottom, top or off
Menus	Quick menu, setup, calibrate, diagnostics, options

Transit Cases

Case - 1

Length	762 mm - 30 in
Width	516 mm - 20.3 in
Height	452 mm - 17.8 in
Weight	28.5 kg - 62.5 lbs
Contents	LBV with options if fitted and spares kit

Case - 2

Length	762 mm - 30 in
Width	516 mm - 20.3 in
Height	452 mm - 17.8 in
Weight	30kg - 66 lbs
Contents	Tether, integrated console, spare thruster, manuals and vacuum pump.

Spares, Tools and Manuals

Spares Contents	Fastener kit, seal kit, propellers, spare Halogen lamp, gel lube, Kluber grease, acrylic polish, fuse
Tool Contents	1.5, 2, 3, 4, 5 mm hex ball drivers, #1, #2 Phillips screw drivers, 10 mm socket driver, small straight blade screwdriver, 11/16 socket, 19 mm open end, O-ring insertion tool, vacuum pump
Spare Thruster	Brushless DC thruster assembly
Manuals	Operators manual, service and repair CD-ROM



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