Teledyne SeaBotix

vLBV & vLBC

vectored Little Benthic Vehicles

Small ROV, **BIG** ROV Performance

vLBV300 & vLBV950 MiniROV Systems

The SeaBotix vLBV® represents an evolution in small, capable, vectored MiniROV systems. Four powerful 100 mm (4 in) horizontal thrusters, arranged in a vectored format, offer nearly equal horizontal thrust in all 360-degrees of flight. The horizontal thrusters can be manually adjusted to bias thrust in the forward direction for extreme pulling power. This works well in applications such as long internal pipe penetrations and high forward currents.

High resolution cameras and sensors combined with SeaBotix' industry-leading low drag tether make the vLBV the standard in offshore capability and portability. Also available with SmartFlight™ automated navigation.

Standard features include a high resolution color camera, powerful LED lighting, depth, heading and temperature sensors, auto-depth, auto-heading and thruster trim, low-drag neutrally buoyant tether, and fully Integrated Control Console (ICC) with daylight-readable monitor. For operations using multiple sensors, upgrading the ICC to an Integrated Navigation/Control Console (INC) is recommended.

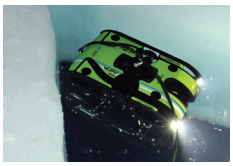
All systems are offered with a 2-year limited manufacturer's warranty. 24-hour technical support and service by factory staff and authorized service centers across the globe are standard.

vLBC Crawler Systems

Unmatched in versatility, the SeaBotix vLBC is a revolutionary approach to ship hull and infrastructure inspections for a wide range of military and commercial applications.

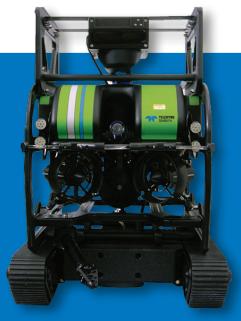
With no magnets or thrusters (churning the water, impeding visibility), SeaBotix Crawlers employ the patented Vortex Generator to attach to any relatively flat, hard surface with 22 kgf (48 lbf) of attraction force. With no relative motion between the inspection surface and the sensors, output data is the highest quality possible and operator fatigue is greatly reduced.

The patented Crawler Skid is attached to a standard vLBV300 MiniROV in minutes, converting it from a 4-axis ROV to a 5-axis hull and infrastructure crawler. No other system provides such a complete solution for quality underwater inspection and light work.



PRODUCT FEATURES

- 300 and 950 Meter Depth Rating
- 6X Vectored Brushless DC Thrusters
  - 4X Lateral Thrusters (Adjustable)
  - 2X Vertical Thrusters
- Versatile Sensor Platform
- Low Drag Tether - 8.9 mm (0.35 in)
- High Resolution Sensors
- High Intensity LED Lights that Track with Camera
- Optional Hull & Infrastructure Crawler




vLBC System Views

TELEDYNE SEABOTIX
Everywhereyoulook™

A Teledyne Marine Systems Company

ALAVA INGENIEROS
www.alavaingenieros.com

TECHNICAL SPECIFICATIONS

vLBV MINIROV SYSTEMS

GENERAL

Depth rating	300 m (1,000 ft) & 950 m (3,100 ft)
Length	625 mm (24.6 in)
Width	390 mm (15.4 in)
Height	390 mm (15.4 in)
Weight in air	18 kg (39.9 lbs)

THRUSTERS/PERFORMANCE

Configuration	4 horizontal vectored, 2 vertical
Vector Angle	Adjustable 45°/35°, 35°, 18° or combination
Motor type	Brushless DC direct drive
Prop Diameter	100 mm (4.0 in)
Bollard Thrust	See matrix below
Speed at Surface	3 knots (1.54 m/sec)

CAMERAS/LIGHTING

Camera	650 TVL high resolution color
Camera Tilt	180 Degrees
Sensitivity	.01 lux @ f2.0
Format	NTSC or PAL
Lighting	2,160 lumen LED tracking camera. 1080 per head
Focus	Fixed 100 mm (4.0 in) - infinity

CONTROL SYSTEM

Configuration	Dual rugged cases, with monitor, OCU & SPS
Monitor	Color LCD, daylight readable
Power requirements	3300 W, 85-265 VAC (vLBV300) - typical 4500 W, 85-265 VAC (vLBV950) - typical
Safety	Isolated power, circuit breaker, LIM, leak monitor
Auto functions	Depth, heading, trim (speed)
Video overlay	Depth, heading, lights, thruster gain, turns counter, camera angle, time, date & user programmable characteristics, options status

TETHER REEL

Diameter	8.9 mm (0.35 in) nominal
Length	250 m (820 ft) standard
Working load	100 kgf (220 lbf)
Breaking strength	700 kgf (1,543 lbf)
Buoyancy	Neutral in fresh water Slightly positive in salt water
Reel	Heavy duty with slip ring

OPTIONS

Tether Lengths	250 - 2,000 m (820 - 6,562 ft)
Cameras	Low light b/w, zoom, rear facing, HD
Grabber	Three jaw, interlocking small, interlocking large, parallel and cutter
Sonar	Scanning sonar, multi-beam sonar, profiling sonar
Tracking	USBL positioning system
Console	Integrated Navigation and Control Console (INC)
Other	Additional lighting, thickness gauge, CP and more

vLBC CRAWLER SYSTEMS

GENERAL

Length	625 mm (24.6 in)
Width	390 mm (15.4 in)
Height	500 mm (19.7 in)
Diagonal	634 mm (25 in)
Weight in air	35 kg (70 lbs)

DRIVE MECHANISM

Drive Train	Tracked drive with single axle, dual motor/gearbox
Pulling Force	Up to 12 kgf (26 lbf)
Speed	35 m/min (115 ft/min)
Tracks	75 mm (3 in) wide 30.6 cm^2 (4.75 in^2) contact area

ATTRACTION DEVICE

Type	SeaBotix Vortex Generator
Attraction	22+ kgf (48+ lbf)
Surface Capability	Any relatively flat, hard surface
Clearance	25 mm (1 in)

vLBV300 Bollard Thrust | 100 mm Props	
45°/35° Vector	
Forward:	18.1 kgf
Lateral:	15.2 kgf
35° Vector	
Forward:	19.4 kgf
Lateral:	13.6 kgf
18° Vector	
Forward:	22.5 kgf
Lateral:	7.3 kgf

Crawler Skid Attachment (CSA) Contains:

- Crawler Skid Assembly
- SeaBotix Vortex Generator
- Dual track, single axle system
- Connection cables
- Transit case
- Operator manual for vLBC

TELEDYNE SEABOTIX
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