

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.

Optional USBL Tracking System



Optional Grabber

Optional Multi-Beam Imaging Sonar System

### 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.

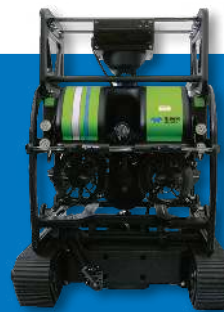
With no magnets or thrusters (churning the water, impeding visibility), SeaBotix Crawlers employ the patented Vortex Generator to attach to any relatively flat, hard surface with 22 kgf (48 lbf) of attraction force. With no relative motion between the inspection surface and the sensors, output data is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



## TECHNICAL SPECIFICATIONS

### vLBV MINIROV SYSTEMS

#### GENERAL

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

#### THRUSTERS/PERFORMANCE

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

#### CAMERAS/LIGHTING

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

#### CONTROL SYSTEM

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

#### TETHER REEL

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

#### OPTIONS

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

### vLBC CRAWLER SYSTEMS

#### GENERAL

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

#### DRIVE MECHANISM

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

#### ATTRACTION DEVICE

<b>Type</b>	SeaBotix Vortex Generator
<b>Attraction</b>	22+ kgf (48+ lbf)
<b>Surface Capability</b>	Any relatively flat, hard surface
<b>Clearance</b>	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

