

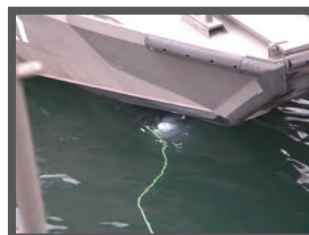
## HBS MiniROV System

**The HBA BHS is a revolutionary system approach to ship hull inspections and other maritime security applications.**

- Patented crawler attachment with unique vortex attractor for unprecedented stability
- Operation in up to 5 knots of current in crawler mode
- Simplistic ship hull attach mode
- Easily and quickly converts between ROV and Crawler mode
- Normal attitude video (not upside down)
- Powerful Brushless DC thrusters with individual oil-compensators
- Ultimate versatility with ROV and Crawler mode in one system



The HBA BHS is unmatched in versatility and capability offering the highest level of stability possible in the demanding field of ship hull inspection. The patented Crawler Skid is attached to a standard LBO300-5 ROV in minutes converting it from a 4-axis ROV to a 5-axis hull crawler with over 22kgf of attractive force. Combined with precise USBL tracking and imaging sonars, clearing a ship hull in currents exceeding five knots has never been more precise.



## General

Length:	530mm (21in) with skid
Width:	500mm (19.7in) with skid
Height:	400mm (15.7in) with skid
Diagonal:	640mm (25.2in) with skid
Weight in air:	28kg (61.7lbs) with skid

## Thrusters/Performance

Configuration:	2 forward, 2 vertical, 1 lateral
Motor Type:	Brushless DC direct drive
Bollard Thrust:	4.9kgf (10lbf) each
Suction Device:	Vortex attractor
Attraction:	22kgf (48.5ft/lbs)
Speed at Surface:	2.8 knots (1.44m/sec) ROV mode
Speed along Hull:	30m/min (100ft/min) Crawl mode
Max Operating Current:	2 knots (1.03m/sec) ROV mode 5 knots (2.57m/sec) Crawl mode

## Cameras/Lighting

Camera:	680 line High resolution color
Range of View:	270 Degrees
Focus:	Manual (90mm to infinity)
Format:	NTSC or PAL
Lighting:	Internal 700 Lumen LED array Tracks color cam

## Control System

Configuration:	Rugged case with weatherproof monitor and removable operator control unit
Monitor:	38cm (15") LCD
Power Requirement:	1,000 watts, 100-130/200-240 VAC
Safety:	Isolated input, circuit breaker, LIM, leak monitor Meets & exceeds AODC 035 "Code of Practice for the Safe use of Electricity in Water"
Auto Functions:	Depth, heading, trim
Video Overlay:	Depth, heading, lights, mode, thruster gain, turns counter, camera angle, time, date and user programmable characters

## Tether/Reel

Diameter:	8.9mm (0.35in) nominal
Length:	250m (820ft) standard
Working Load:	100kgf (220lbf)
Breaking Strength:	700kgf (1,543lbf)
Buoyancy:	Neutral in fresh, slightly positive in seawater

## Options

Tether Lengths:	250-350m (820-1,082ft)
Grabber:	Three jaw, interlocking small, interlocking large, parallel and cutter
Sonar:	Multi-beam, scanning and profiler
Tracking:	USBL positioning system
Lights:	Multiple head ultra bright LED
Console:	Integrated navigation/control console
Other:	Laser scaling, zoom camera and more

