



ROV Beluga Technical Specifications

200 meters rated Inspection-Class ROV

Current Status: Active since November 2016

VEHICLE	Length	730 mm
	Width	820 mm
	Height	600 mm
	Weight in Air (without Payload)	53 kgs
	Payload Capacity	5-10 kgs
	Vehicle Power Input	220 VAC @ 50-60 Hz (Single Phase)
	Type of Power	Electric
	Power of Vehicle System	1600 W (Nominal), 3000 W (Max.)
	Depth Rating	200 meters
	Min. Operating Temperature	0 Deg. C
Max. Operating Temperature	45 Deg. C	
Launch and Recovery (LARS)	Manual, Crane & Garage	

DISPLAY CONSOLE WITH GUI	Screen Size, Brightness	1 x 19 inch, 1000 nits (Primary); 1 x 10 inch, 1000 nits (Secondary)
	Controller Joystick	4-axes
	Length	570 mm
	Width	480 mm
	Height	260 mm
	Weight	15 kgs
	Electrical Safety & Distribution Box	IP64 enclosure; Short-circuit protection; Ground-fault/current-leak protection; Kill Switch; Over current protection

TETHER	Type of Tether	Neutrally Buoyant
	Standard Length	100 m
	Max. Length	300 m
	Tether Diameter	12/15 mm
	Tether Control Winch	Hand operated with Brakes

OPERATION	Buoyancy	Neutral
	Reserve Buoyancy	+1.5%; Controlled using Buoyancy Modules
	Automatic Depth Control	Yes
	Automatic Heading Control	Yes
	Payload Data Interfaces and Protocol	RS232, RS485 & Ethernet 10/100/1000

SENSORS	Navigation Unit	10 Axis IMU & AHRS
	Pitch and Roll	Yes
	Max. Pitch and Roll Angle	Pitch \pm 90 Deg., Roll \pm 180 Deg.
	Pitch, Roll and Heading Resolution	0.05 Deg.
	Depth Sensor	0.01% Full-Scale Accuracy; Temperature Compensated

THRUSTERS	Type of Thrusters	Brushless DC
	No. of Forward Thrusters	2
	No. of Vectored Thrusters	4 (Horizontal Plane)
	No. of Up-Down Thrusters	2
	Max. Horizontal Speed	2-3 kts
	Max. Up-Down Speed	1 kts
	Max. Forward (Reverse) Thrust	17 Kg-F (14.5 Kg-F) @ 45 Deg. Vectored
	Max. Lateral Thrust (Left/Right)	9.2 Kg-F @ 45 Deg. Vectored
Max. Downwards (Upwards) Thrust	7.1 Kg-F (6 Kg-F)	

LIGHTS AND CAMERAS	No. of Lights	3 (2 x Front, 1 x Bottom)
	Type of Lights	LED
	Brightness Control	Yes, 30% - 100%
	Lumen Capacity	Brightness: 4000 Lumens Forward, 4000 Lumens Downward
	No. of Cameras	3 (2 x Front, 1 x Bottom), Bottom Switchable to Front, Rear & Side
	Simultaneous Camera Views	2
	Additional Switched Cameras	-
	Video Transmission	NTSC
	Specifications of Primary Camera	720p/ 50 fps; 60 Deg. Horizontal FOV; 20x Optical Zoom; Image Stabilization, Image Defog
	Specifications of Secondary Camera(s)	720p/ 50 fps; 100 Deg. Horizontal FOV; Autofocus
Pan and Tilt Platform	Not Available Live	
Tilt Platform	Manually	
Auxillary Cameras	Max. 2	
Type of External Recording Camera	GoPro Hero 4 (No Streaming)	

PAYLOADS	Altimeter	200 kHz, 2–200 m Range; 200 kHz, 0.3– 50 m Range
	Acoustic Imaging	450 kHz Side-Scan SONAR
	LASER Ranging Unit	2 x 5 mW Red Dot LASER
	Thickness Measurement Probes	2.25 MHz Ultrasonic Probes 4 mm – 150 mm Range
	Spot Cleaning	Electric Rotating Brush Type Spot Cleaning Unit; Soft Marine Growth Removal; Speeds upto 5500 rpm
	Linear Actuator	1 DOF Extensible Arm (23 cm Ext.)

CERTIFICATIONS

- Class (IRS, RINA, ABS, DNV-GL) Certification in progress
- IMCA Certification in progress