



MINI-ROV GUARDIAN 2.1

Data Sheet



Main features

Depth rating: 150 m
ROV Maximum speed: 4 kts
Maximum current: 2.5 kts
ROV Dimensions (mm):
 L 470 x W 245 x H 162

ROV Weight: 4.5 kg (10 lbs)
Umbilical: 100 m with wet pluggable Impulse connector (50, 150, 200 m options)
External power: 220VAC (110VAC on demand)

Vision

2 high resolution (600 lines)/ high sensitivity (0,15 lux) **color cameras**

Pan & tilt unit on front camera

4 x 900 lumen LED lights, variable intensity

Navigation

- Auto heading
- Auto depth
- Auto speed
- Auto up/down

Standard Sensors

Compass, depth, temperature

Options

- Sonar
- Acoustic camera
- USBL Acoustic Positioning
- 2 functions manipulator
- Digital thickness gauge
- Laser pointer
- Sediment sampler
- Manual winch
- Salinity/pH probe
- Video enhancement system

Guardian 2.1 is a **high speed** hand portable **observation vehicle**. Especially designed for pipeline inspection and long range missions, it can reach a speed of 4 knots almost instantaneously, thanks to a reduced inertia and 4 powerful horizontal thrusters.



Packaged in **one single waterproof case**, with a total weight of **29,5 kg** (60 lbs), including the umbilical and the control console, it is a highly portable system with no compromises on inspection capabilities. The standard version is equipped with **2 high quality color cameras**. A micro sonar, an acoustic camera, a 2 functions manipulator and many other sensors and tools can be mounted on the ROV thanks to a user friendly **ancillary plug** (power/data/ control) on the external hull of the vehicle and its payload of 0.9 kg.

The control console is contained in a waterproof case and includes a **8,0" LCD video display**, an **integrated digital recorder/reader** (on digital support), 2 video output (for external display or recorder), 2 x 3 axis joysticks (navigation and camera pan & tilt) and a 30 keys soft pad for the multiple automatic or on/off functions of the system.





GUARDIAN 2.1 Specifications

Main Features		
Rated depth	150 m (500 ft)	
ROV Dimensions	L 470 mm x W 245 mm x 162 mm (L 17.7 in x W 9.6 in x 6.4 in)	
ROV Weight	In air: 4.5 kg (10 lbs) In water: payload 0.9 kg provided with weight for neutralizing/adjusting	
ROV Speed	4 knots (maximum operating current: 2.5 knots)	
Propulsion and Energy		
Thrusters	4 longitudinal thrusters (forward/backward), 1 vertical thruster (up/down)	
Propellers	5 x 3 blade propellers with nozzles	
External Power	220VAC standard (110VAC on demand)	
Control System		
Console	Integrated in a 14" x 11" waterproof case. Video screen and digital recorder/reader in the lid, joystick, keypad and connectors in the base	
Video display	8,0" Color LCD screen Front or rear camera overlay: date/hour, heading, depth, temperature	
Display options	LCD glasses	Option
Digital recorder	Integrated digital recorder/reader with data storage on digital support	
Keypad	30 keys soft pad, with back light, for auto functions and configuration switches	
Auto functions	Auto depth, auto heading, auto up/down, auto speed	
Outputs	2 RCA connectors for additional video display or recorder	
Additional control	Wireless remote joystick control	Option
Video cameras and lighting		
Front camera	Color camera, 600 lines, 0.15 lux	
Rear camera	Color camera, 600 lines, 0.15 lux	
Front lighting	4 x 900 lumen LEDs, with intensity control	
Rear lighting	1 x 65 lumen LEDs, with intensity control	
Pan & tilt	Pan & tilt unit on front camera, optional on rear camera	
Sensors and tools		
On board	Compass, pressure (depth), temperature	
Sonar	Tritech Micron DST sonar or equivalent	Option
Acoustic camera	Blueview acoustic camera (multibeam sonar)	Option
Acoustic positioning	Mini USBL (Tritech Micro Nav) or GIB Lite™ (« Underwater GPS »)	Option
Sampling	Water and/or sediment sampling tool	Option
Thickness gauge	Cygnus Digital Thickness Gauge, with overlay data display (Console /PC)	Option
Manipulator	2 functions (wrist rotation/grabbing) manipulator	Option
Salinity/PH...	Physicochemical sensors, with overlay data display (Console/PC)	Option
Video enhancement	LYYN video enhancement system for turbid waters (integrated/external)	Option
Laser pointer	Laser pointer for default measurement	Option
Umbilical		
Standard	100 m umbilical (20 m neutral Ø 7.9 mm diameter and 80 m flowing Ø 6.3 mm) with Kevlar braid	
Extensions	50 or 100m umbilical extensions (up to 200 m)	Option
Packaging and documentation		
Shipping container	«All in one» case waterproof, lifetime guarantee, with wheels and handle Total weight: 29.5 kg (60 lbs), incl. vehicle, control system and umbilical	
Manuals	Detailed operator + maintenance manual, paper and electronic version	
Warranty	One year warranty parts and labor (excluding transport)	
Support contract	Annual maintenance and reconditioning contract, with free upgrades	Option