

Observation ROV

Mini TORTUGA



Current resistance
2.5 knots



Horizontal thrusters 4 x 7 kg
Vertical thrusters 2 x 7 kg



Ultra-compact and
lightweight



Depth rating 300 m



SUBSEA TECH

Marine and Underwater Technologies

The Mini TORTUGA is a compact observation-class underwater robot capable of operating down to 300 m depth. Its shape, largely inspired by the TORTUGA ROV, provides excellent hydrodynamic performance while offering a lighter, more robust and compact structure.

Each of its four horizontal thrusters is manually orientable to optimize vehicle behavior in currents. This configuration allows the ROV to operate in waters with currents of up to 2.5 knots, regardless of direction.

Thanks to its high payload capacity and fully integrated acoustic imaging solution, the Mini TORTUGA is the ideal tool for underwater inspections in complex operational conditions such as low visibility and confined spaces.



PROPULSION

The Mini TORTUGA is equipped with four horizontal thrusters, each delivering a maximum thrust of 7 kg, with manually adjustable orientation depending on mission requirements. Predefined configurations are available: vector, in-line or lateral mode.



COMMUNICATION

The umbilical integrates a PLC system (Power Line Communication), ensuring robustness and ease of repair. Its optimized diameter ($\varnothing 10.5$ mm) reduces drag in complex operating conditions.



HYDRODYNAMICS

The fully shrouded design minimizes drag while maintaining an open architecture for easy sensor integration, ensuring an optimal balance between hydrodynamic performance and robustness.

TECHNICAL SPECIFICATIONS

ROV – GENERAL

Maximum depth	300m
ROV dimensions	L 728 mm × W 310 mm × H 366 mm
ROV weight	19 kg (ROV only, weight in air)
Maximum ROV speed	2.5 knots
Payload	5 kg (wet weight) and 10 kg through frame lift (dry weight)

PROPULSION & POWER

Thrusters	Horizontal thrusters: 4 × 7 kg, manual orientation, 80 mm propellers with protective nozzles Vertical thrusters: 2 × 7 kg, 80 mm propellers
Power supply	230 Vac (mains or generator)
Required power	3 kW

SYSTEM CONTROL

Piloting	Integrated console with Linux-based PC in a Pelican case, 634 × 505 × 220 mm, 16 kg
Display	2 screens (21" + 17"), selectable sources (sonar, navigation, other sensors...)
Controls	2 multifunction joysticks + predefined buttons (auto modes, recording...)
Data recording	250 GB standard on integrated PC
Automatic functions	Heading, depth Optional: altitude, roll, dynamic positioning
Connectivity	2 × HDMI, 2 × USB, RJ45

INTEGRATED SENSORS

Front camera	Full HD (4K option), 1080p resolution, 0.01 lux sensitivity, 130° lens, 60 fps Option : Rear full HD camera
Pan & Tilt	Pan & Tilt on front camera
Lighting	Front LED lighting, 2 × 10,000 lumens, adjustable intensity
Inertial sensor	XXsens MTi3 or equivalent
Other sensors	heading, depth, water ingress detection

UMBILICAL

Standard	300 m (Ø10.5 mm neutral), 500 kg breaking load – extension on request
Communication	PLC (Power Line Communication) with 2-pin electrical connector
Optional fiber optic	Fiber optic umbilical (Ø13 mm)

PACKAGING

Standard	Wooden crate Optional: flight case
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MAINTENANCE & WARRANTY

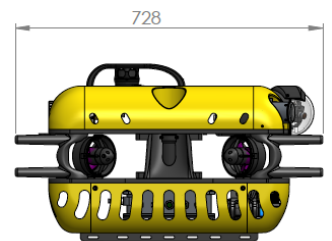
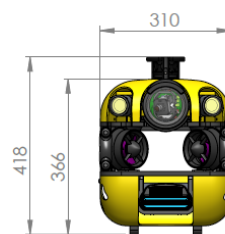
Documentation	Operator & maintenance manual
Maintenance	Annual maintenance contract (optional)
Warranty	1 year parts and labor – extension available
Technical support	Response: < 8h (business days) Resolution: < 48h average

OPTIONAL SENSORS & TOOLS

The Mini TORTUGA can be equipped with a wide range of sensors and instruments to suit your missions.

OUR RECOMMENDATIONS:

Control	14" semi-rugged PC + joystick control unit
Imaging sonar	BluePrint Oculus dual-frequency multibeam sonars
Profiling sonar	Imagenex 831-A or equivalent
DVL	Waterlinked A50
Acoustic positioning	Blueprint SeaTrac USBL
Thickness measurement	Cygnus ultrasonic probe
CP measurement	Buckleys UCP1-A probe
Cleaning tool	Subsea Tech SBT-70 brush
Cavitation cleaning tools	Subsea Tech cavitation lance
Physico-chemical measurements	Salinity, pH, turbidity, etc.
Manipulators	EG-2F, EG-1F
Samplers	Water and sediment
Automatic navigation	Autonav



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