

Inspection class ROV

Mini TORTUGA



Up to 3 knot current



Azimuthal thrust 4 x 2.5kgf



Ultra-compact and lightweight



Depth rating 300m



SUBSEA TECH
Marine and Underwater Technologies

The Mini TORTUGA

is a 300m depth rated underwater inspection robot inspired from the Tortuga ROV. Built on the same principles and following similar form factor, the Mini TORTUGA is lighter and smaller than the standard Tortuga. Each one of the 4 horizontal thrusters develops a 2.5 kgf thrust and is manually adjustable to preset orientation configurations (vectored, in line, lateral). This system allows operating the ROV in strong current conditions up to 3 knots, regardless of the direction.

Thanks to a high payload capacity and its fully integrated acoustic imaging solution, the Mini TORTUGA is the perfect match for underwater inspections in complex operational conditions (low visibility, strong currents, long range inspections, etc.).



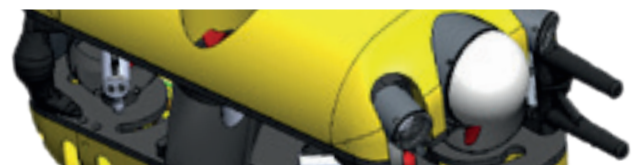
AZIMUTHAL THRUST CONTROL

Mini TORTUGA is powered by 4 horizontal thrusters (2.5 kgf thrust each) with manually adjustable orientation.



COMMUNICATION

Power Line Communication (PLC) technology allows using a single electrical pair in the umbilical up to 1,100m length, keeping the tether diameter to a minimum (8mm) and making it robust and easy to repair.



HYDRODYNAMIC FORM FACTOR

The hydrodynamic shape of the Mini TORTUGA drastically reduces the drag of the vehicle, while keeping an open frame design to ease sensor integration.

TECHNICAL SPECIFICATIONS

GENERAL ROV

Depth rating	300m
ROV dimensions	L 650mm x W 310mm x H 350mm
ROV weight in air	15 kg (ROV alone)
ROV max. speed	4 knots

PROPULSION AND POWER SUPPLY

Thrusters	Horizontal thrusters: - 4 x 2.5 kgf manually adjustable thrusters with 100mm propellers and protection nozzles. Vertical thrusters: - 2 x 2.5 kgf vertical thrusters with 100mm propellers
Power supply	220 Vac (main power or generator)
Surface power requirement	3 kW

SURFACE UNIT

Interface	Console integrated in a waterproof case 625mm x 500mm x 218 mm
Display	2 integrated 21"+17" PC screens, switchable for video, sonar and other sensors
Control	2 multifunction joysticks and preset buttons
Recorder	Data saved on integrated PC
Auto functions	Heading, depth, altitude (optional)
Ports	2x HDMI, 2x UBS, RJ45

INTEGRATED SENSORS

Front	Full HD video camera (1920 x 1080 p) 0,001lux Option: Rear full HD video camera
Pan & Tilt	Pan & Tilt on front camera
Lighting	2x 10,000 lumens front LED lighting with intensity control. LED direction manually adjustable Option: integrated LED lighting in rear camera
INS	FSM-9
Sensors	Compass, pressure (depth) sensor

TETHER

Standard	300m (9.5mm neutral / 8mm negatively buoyant), breaking strenght 500kg
Communication	Power Line Communication (PLC)
Fibre optic option	fibre optic tether (Ø15mm)

PACKAGING

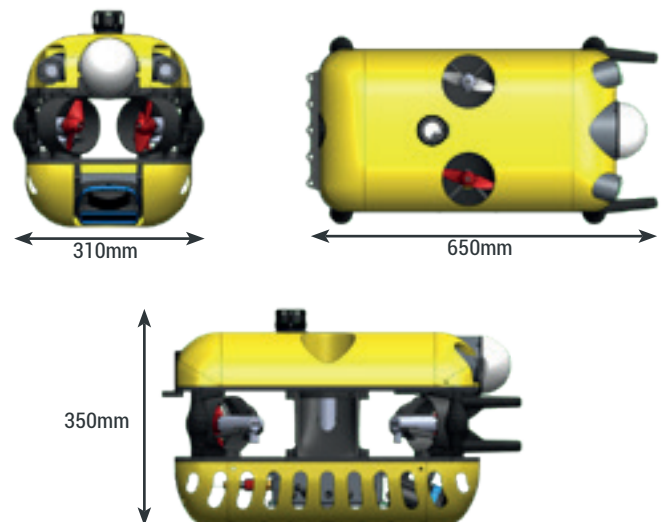
Standard	Single crate for the whole system
Option	Flight case

MAINTENANCE AND WARRANTY

Documentation	Operator/maintenance manual
Maintenance	Maintenance contract (optional)
Warranty	1 year spares and labour

OPTIONS

Imaging sonar	BluePrint Oculus or Teledyne Blueview M900 multibeam sonars
Mechanical sonar	Tritech Micron DST or equivalent
Acoustic posit.	BluePrint SeaTrac USBL
Thickness meas.	Cygnus US gauges
CP meas.	Buckleys CP probes
Laser measurement	Laser measurement tool with dedicated software
Altimeter	Tritech PA200/500, Impact Subsea ISA500 or equivalent, auto-altitude
DVL	Teledyne Wayfinder, Waterlinked A50
Position holding	Dynamic positioning mode
Phys-chem meas.	Salinity, pH, turbidity probes, etc.
Manipulator	2 or 3 functions manipulator arm with interchangeable jaws
Samplers	Water and sediments



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