

Inspection class ROV

Tortuga^{XS}



Up to 4 knot current



Azimuthal thrust 4 x 17kgf



Compact and lightweight



Depth rating 500m



Atlantic Marine &
Oilfield Services Ltd.

The Tortuga^{XS} ROV

is a 500m depth rated underwater inspection robot. Each one of the 4 horizontal thrusters develops a 17 kgf thrust and is fitted with an unique azimuthal control system that allows operating the ROV in strong current conditions up to 4 knots, regardless of the direction.

Thanks to its unrivalled 1.5 thrust to weight ratio and its fully integrated acoustic imaging solution, Tortuga is the ultimate vehicle for underwater inspections in harsh operational conditions (low visibility, strong currents, long range inspections, etc.).



THRUST

Tortuga is powered by 4 horizontal thrusters with azimuthal control developing each a 17kgf thrust. It offers the highest thrust to weight ratio on the inspection class ROV market.



COMMUNICATION

Thanks to an innovative communication protocol, the ROV tether has a reduced diameter (9.5mm) to minimize drag and optimize inspection range.



HYDRODYNAMIC DESIGN

Tortuga's innovative form factor inspired from AUV design allows enhanced navigation capabilities and increased inspection range.

TECHNICAL SPECIFICATIONS

GENERAL ROV

Depth rating	500m
ROV dimensions	L 996mm x W 430mm x H 461mm
ROV weight	45kg in air (35kg for Lite configuration) / neutral in water
ROV max. speed	4.2 knots (max. operational current. 4 knots)

PROPULSION AND POWER SUPPLY

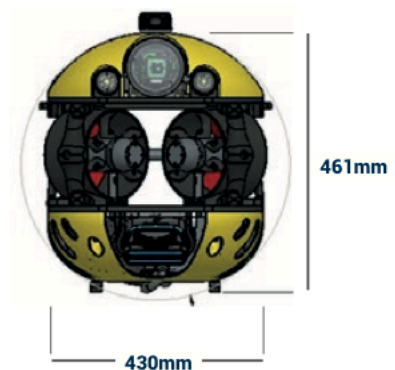
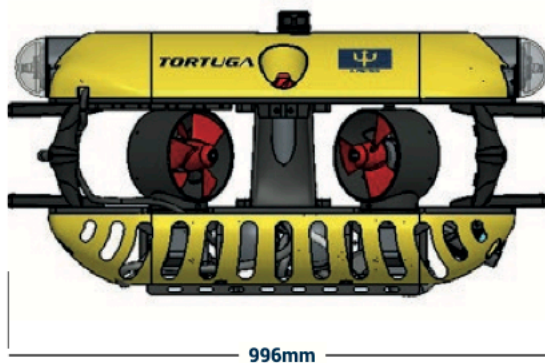
Thrusters	4 horizontal thrusters manually adjustable (Lite) or with azimuthal control (17kgf per thruster) and 2 vertical thrusters (10 kgf per thruster)
Power supply	External power 400/230 VAC
Surface power requirement	10 kVA

SYSTEM CONTROL

Piloting	Console integrated in a waterproof case 625mm x 500mm x 218 mm
Display	2 integrated 17" PC screens, switchable for video, sonar, other sensors
Control	2 x multi-function joysticks and touchpad
Recorder	Data saved on integrated PC
Auto functions	Heading, depth, up/down
Video output	HDMI

INTEGRATED SENSORS

Front/Rear camera	Full HD video cameras 1080p, 0.08 lux
Pan & Tilt	Pan & Tilt unit integrated on front and rear camera
Lighting	Front : 2 x 10,000 lumens, Rear : 2 x 10,000 lumens, intensity control
INS	SBG Ellipse 2 series
Sensors	Compass, depth, temperature, leak detector (internal moisture level)



TETHER

Standard	300m buoyant (diam. 9.5mm), breaking strength 500kg. Extensions up to 500m
Communication	Power Line Communication (PLC)
Fibre optic option	Lengths up to 3000m

PACKAGING

Case 1	ROV + manual winch with tether
Case 2	Control console + power supply unit

MAINTENANCE AND WARRANTY

Documentation	Operator manual in soft version
Maintenance	No specific maintenance needed
Warranty	1 year spares and labour

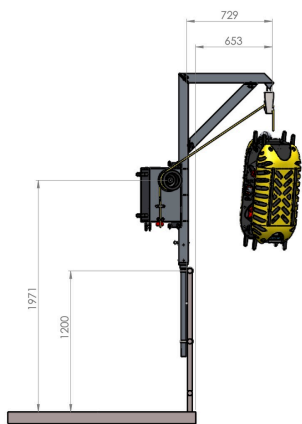
OPTIONS

Option interface	Quick fastening system and ancillary plug for easy sensor integration (300W max.)
Position holding	Dynamic positioning mode
Laser measurement	Laser measurement tool with dedicated software
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
Altimeter	Tritech PA100, Impact Subsea ISA500 or equivalent, auto-altitude
Phys-chem meas.	Salinity, pH, turbidity probes, etc.
Manipulator	2 to 5 functions manipulator arm with interchangeable jaws
Samplers	Water and sediments
Wifi link	Video transmission on external screen

LAGOS . PORT HARCOURT . TAKORADI

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Mini winch:

- Motor drive 800W@24VDC, gearbox + worm wheel transmission
- Power supply 230Vac
- Foot actuation
- IP54
- Weight: 20kg

Crane:

- Aluminium 6060 rotating boom
- The 3 beams are mounted/dismounted without tools
- Safety coefficient 5 for the 40kg ROV load
- The 2 rotating positions are locked by captive pin
- Weight: 25kg

Tether management:

- 2 - 4 dead loops on the drum
- The tether is hold on a cam cleat while hands need to be free
- All tether interfaces are open to easily engage/disengage the tether

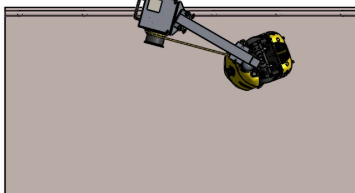
Handling:

- All elements are dismountable and storable in one flycase

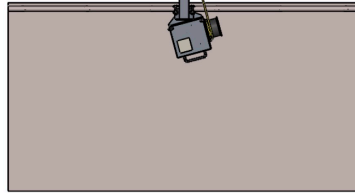
Supports:

- Railing attachment by standard Ø42mm clamps
- Bolted or welded on other bases

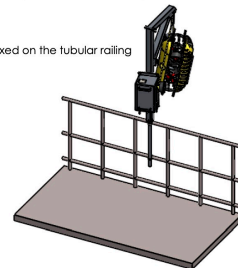
View from the top,
Tortuga on the deck



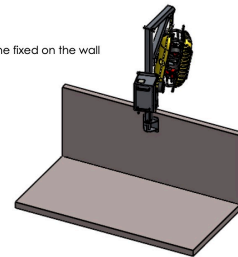
View from the top,
Tortuga out of the deck



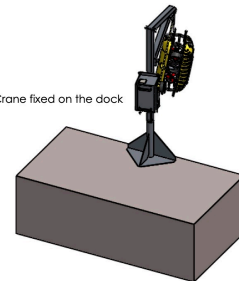
Crane fixed on the tubular railing



Crane fixed on the wall



Crane fixed on the dock



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