AspiROV

Tank inspection and cleaning without draining

- Suction module
- Thrusters + driven wheels
- 2 adjustable cameras
- Ballast-adjustable

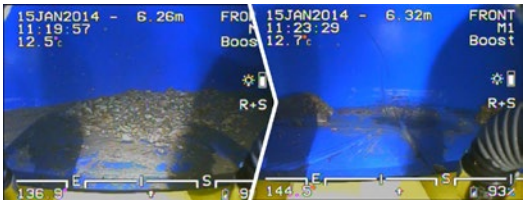
SUBSEA TECH
Marine and Underwater Technologies

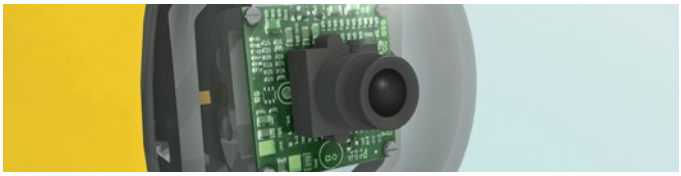
The AspiROV robot is designed for in-service tank inspection and cleaning without draining. It consists of:

- a Guardian Micro-ROV for full visual inspection of the tank;
- a motorized module, mounted under the ROV, for cleaning the tank bottom.

Sediments are removed via a hose connected to a pump located outside the tank, ensuring fast and efficient removal of sediment layers up to 30 mm thick. An optional ballast system allows buoyancy adjustment, facilitating obstacle clearance.

Commercialized since 2009, AspiROV is a portable, reliable, and robust solution for maintaining tank cleanliness and structural integrity without service interruption.



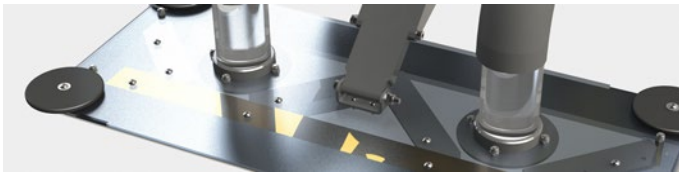


CAMERAS

The AspiROV is equipped with two high-sensitivity 700 TVL color cameras. The rear camera is mounted on tilt, and the front camera is integrated into a Pan & Tilt unit.

MOBILITY

Equipped with two driven wheels and one idler wheel, the AspiROV offers excellent maneuverability, enabling access to all areas of the tank.



SUCTION SYSTEM

Transparent suction nozzles allow operators to visually monitor pumping efficiency. Once the siphon is primed, the pump can be stopped and discharge continues through simple hydrostatic pressure.

TECHNICAL SPECIFICATIONS

ROV – GENERAL

Maximum depth	100 m
Dimensions	L 660 mm × W 430 mm × H 530 mm
Weight	12 kg in air / 6 kg in water (neutral), adjustable via ballast
Maximum speed	Navigation: 1.5 m/s Rolling mode: 0.2 m/s

PROPULSION AND POWER

Thrusters	5 submersible brushless motor thrusters (4 longitudinal, 1 vertical)
Wheels	2 rear driven wheels with differential control + 1 front idler wheel
Ballast (optional)	Apparent weight adjustment to optimize traction in rolling mode
Power supply	Alimentation externe en 220 VAC (110 VAC sur demande) - 1 kW max

SYSTEM CONTROL

System console	Integrated console in a watertight case including 8'' LCD video screen, digital recorder/player, joysticks, keyboard, and connectors
Ballast control (optional)	Pneumatic compressor for ballast filling and emptying
Video display	8'' LCD screen with on-screen display
Recorder	Digital recorder/player on digital storage (SD card)
Auto functions	Heading, depth, speed

SUCTION SYSTEM

Suction hose	25 m spiral hose + 10 m flexible hose, diameter 50 mm
Suction pump	30 m³/h centrifugal motor pump, 40 m fire-type discharge hose for evacuation to stormwater drainage

UMBILICAL

Standard	50 m neutrally buoyant umbilical (Ø 7.9 mm), Kevlar reinforced (tensile strength > 100 kg), secured along the discharge hose
Option	50 m standalone umbilical for visual inspection only

INTEGRATED SENSORS

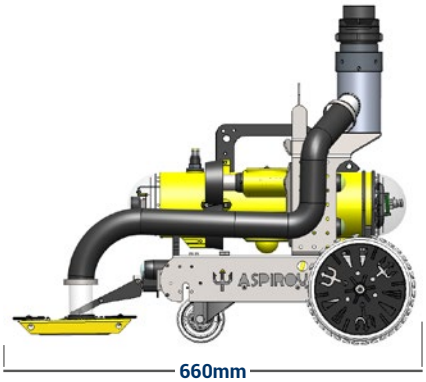
Front/Rear cameras	700 TVL color cameras, 0.01 lux sensitivity
Pan & Tilt	Integrated Pan & Tilt on front camera, tilt on rear camera
Lighting	Front: 2 × 2400 lumens Rear: 3 × 1000 lumens (adjustable intensity)
Sensors	Compass, depth sensor, temperature, internal humidity sensor

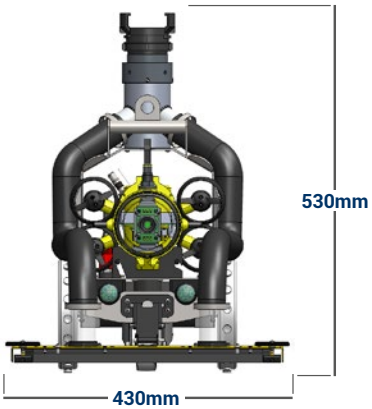
PACKAGING

Transport (optional)	Transport case including the Guardian mini-ROV in its Pelicase, skid, pump, and hoses

MAINTENANCE AND WARRANTY

Documentation	Operator manual
Maintenance	No specific maintenance required
Warranty	1 year parts and labor, excluding transport costs
Technical support	Response: < 8 hours (business days) Resolution: < 48 hours (business days)





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