

H1000

1000 meters inspection and light work ROV

DIMENSIONS/STRUCTURE

Length 1.34 m
Width 1.09 m
Height 1.00 m
Weight in air (equipped ROV) 525 Kgs
Structure:
All housings are in 316 L stainless steel
Frame and fittings are in 316 L stainless steel

OPERATING DEPTH 1000 m

PROPULSION

6x dc thrusters: - 4x horizontal (vectored)
- 2x vertical

Forward thrust 80 Kgs

SPEED 3 knots

BUOYANCY AND BALLAST

Low density syntactic foam buoyancy and lead weight ballast (user adjustable)

PAYLOAD 15 Kg in sea water

INSTRUMENTATION AND TOOLS

Underwater tools and manipulators

Hydraulic pumps and related telemetry control system
1 x 5 function and 1 x 4 function manipulators
Optional set of hydraulic tools (operated by the manipulator arms), such as:
- Blade cutter for up to OD 30 mm umbilical (according to its specifications).
- Disc cutter

Cameras/video/lighting

3 x simultaneous video channels (2 from the ROV and 1 from the cage).
Transmission to the surface is via fibre optic cores; fibre-optic de-multiplexers are situated in the surface junction box (supplied) in the ROV control cabin.

Mounted on hydraulic P/T unit:

- 1x HYTEC zoom colour TV camera
- 1x HYTEC digital still camera, with flash gun
- 2x HYTEC 75w lights

Fixed:

- 2x HYTEC low light B/W navigation TV cameras:
1x forward and 1x backward
- 5x HYTEC 75w lights : 3 forwards, and 2x backwards

Mounted on the manipulator arm:

- 1x HYTEC colour TV camera
- 1x HYTEC 35w light

Instrumentation/navigation/tracking

Depth sensor full scale accuracy:
+/- 0.1% ; auto depth

Heading sensor:
Accuracy 0.5°, resolution 0.1°; auto-heading
Incorporates a pitch control sensor

Altimeter (above sea bed):
measurement range 1 to 100m, or 0.7 to 50m
accuracy 0.025%

Detection sonar: range 100m
Hydrophone
Acoustic positioning
Acoustic pinger

SHIPBOARD SUPPORT for 1000 m system

Deployment system

Hydraulic winch and A frame;
Overall dimensions:
- Length: 3.6 m
- Width: 2.0 m
A frame deployment: 2.5 m

Electromechanical umbilical 1100 m (standard length) x 18.5 mm

Tether Management System inside cage (dimensions: 1.50 x 1.40 x H 2.25 m, total weight in water: 790 kg) equipped with 2 B/W TV cameras and lights.

Tether 125 m (standard length) x 25 mm,
PUR sheathing, breaking strain: 900 Kgs

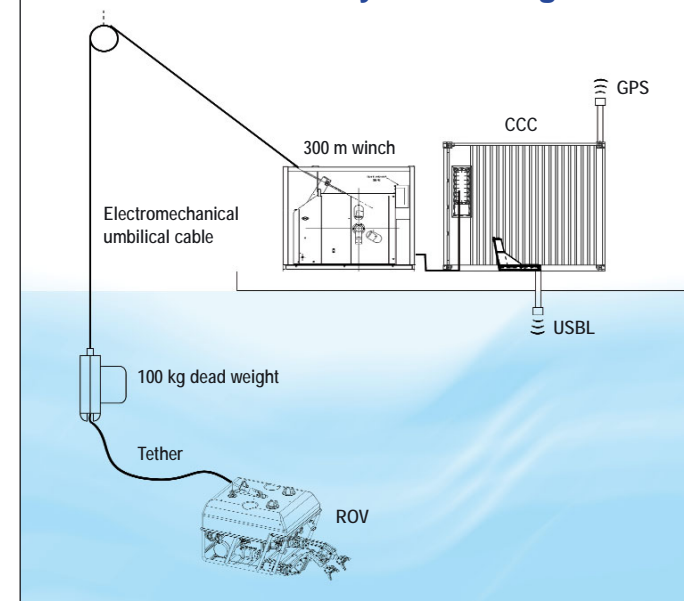
Surface control room

- Controls power supply and all system functions (LARS / TMS / ROV)
- Installed in a 10' container

Vehicle power requirements

380/440Vac 50-60Hz - 70Kva

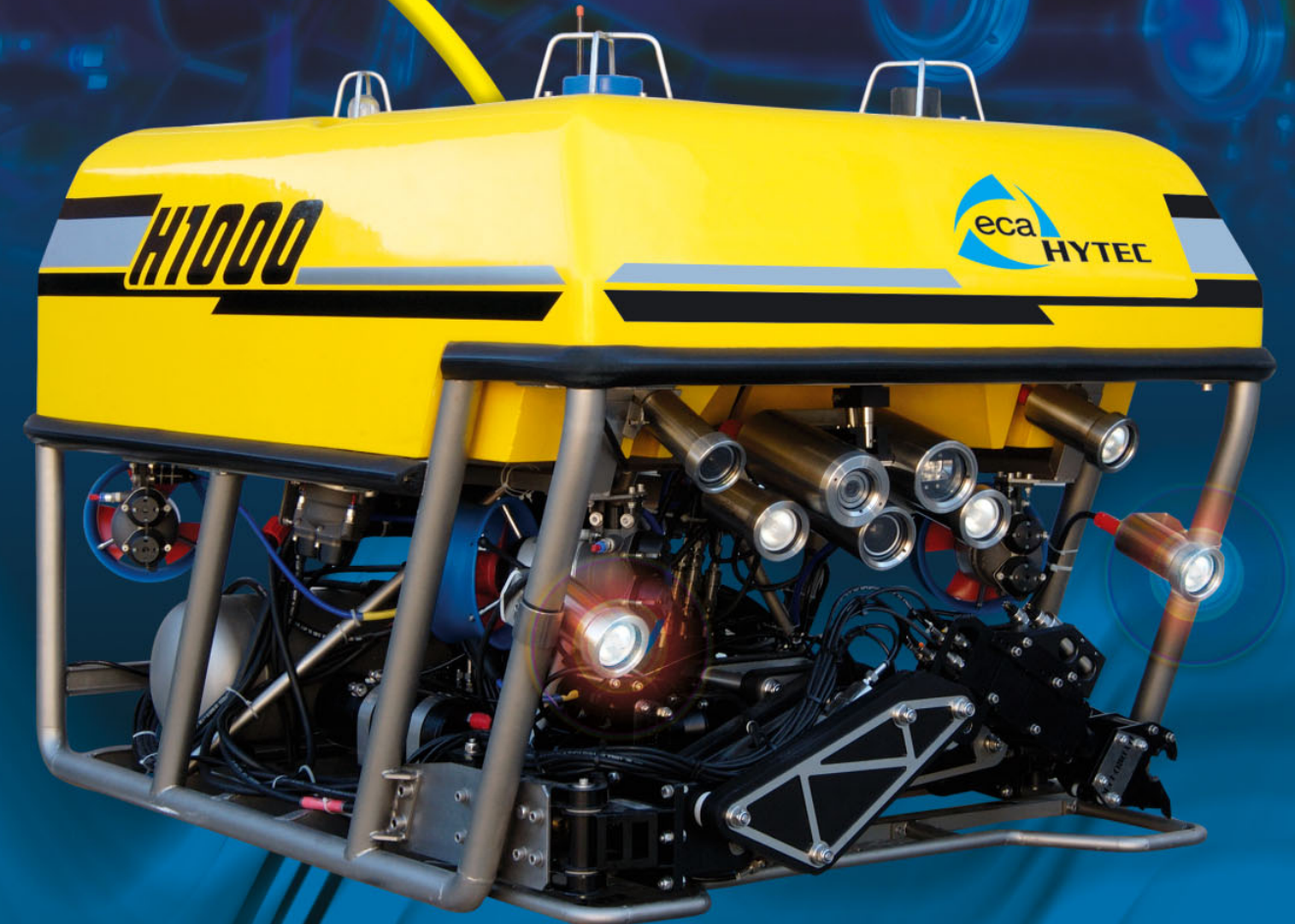
Alternative : 300m system configuration



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WORK CLASS ROV

H1000



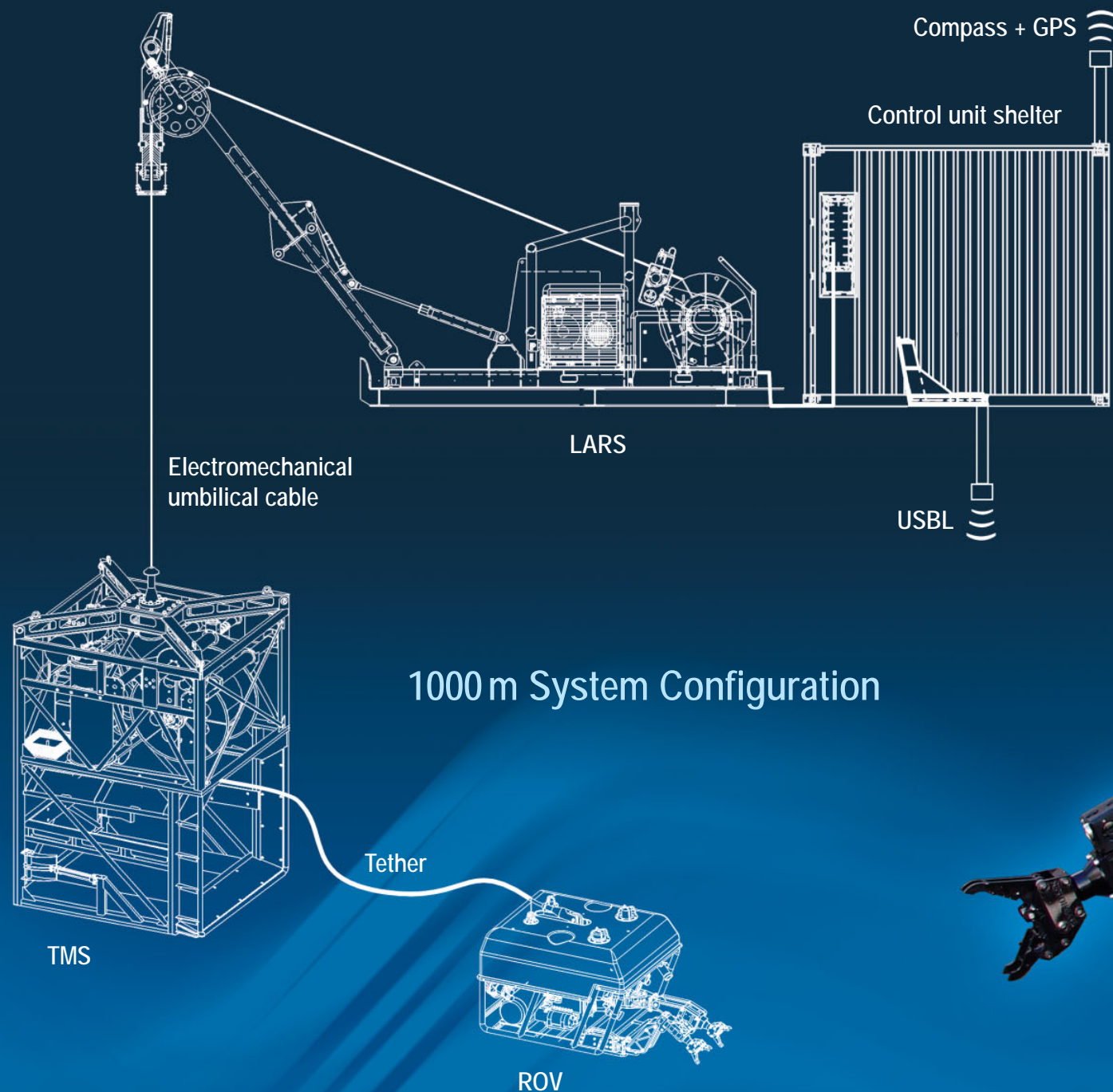
Optimized design :

- for inspection, with high performance viewing system
- for work, with 2 manipulators and set of hydraulic tools

Flexible design with 2 depth versions :

- 1000 m, with TMS and LARS
- 300 m, with deadweight on umbilical cable

Modular design, options simple to add



1000 m System Configuration

Since 1983, ECA HYTEC has designed and built inspection and work class ROV's, rated to depth up to 6000 m (as was the ROBIN which was installed on IFREMER'S NAUTILE manned submarine, and was used for inspection of the Titanic wreck in 1987).

H1000 was selected by the French Navy for the intervention on wrecks of ships and aircrafts laying on the seabed at depths up to 1000 m.

