

LIGHT WORK CLASS ROV

OPEN FRAME STRUCTURE
AND MODULAR DESIGN

- POWERFUL WHILE COMPACT IN SIZE
- EQUIPPED WITH 2 MANIPULATORS & HYDRAULIC TOOLS
- HIGH PERFORMANCE VIEWING AND SONAR SYSTEM
- EASY ACCESS TO ALL SUB-SYSTEMS FOR MAINTENANCE
- AIR TRANSPORTABLE
- VALIDATED AND USED BY FRENCH NAVY
- DEPTH RATED UP TO 2000M



LIGHT WORK CLASS ROV

OPEN FRAME STRUCTURE AND MODULAR DESIGN



RANGE OF SOLUTIONS

- Well head monitoring
- Riser inspection and cleaning
- Pipeline survey
- Mooring inspection

H1000

rated to 1000m

PERFORMANCE

- Movements: in three axis, plus rotation on its own axis
- Forward speed: 3 knots (in 0 knot current)
- Operating depth: 1000 meters in sea water
- Stability: inherent low center of gravity
- Payload: 15 kg

GENERAL CHARACTERISTICS

- Dimensions (m): 1.34 L x 1.09 W x 1.00 H
- Weight in air: 525 kg excluding optional equipment
- Material: frame and fittings in 316L stainless steel

PROPULSION

- 6x dc thrusters: 4x horizontal (vectored) / 2x vertical
- Forward thrust: 80 kg

TOOLS

- 1x5 function and 1x4 function hydraulic manipulators
- Optional set of hydraulic tools (blade cutter, disc cutter, gripping tool)

H2000

rated to 2000m

PERFORMANCE

- Movements: in three axes, plus rotation on vertical axis
- Forward speed: 3 knots (in zero knot current)
- Operating depth: 2000 meters in sea water
- Stability: inherent, due to low center of gravity
- Payload: 80 kg

GENERAL CHARACTERISTICS

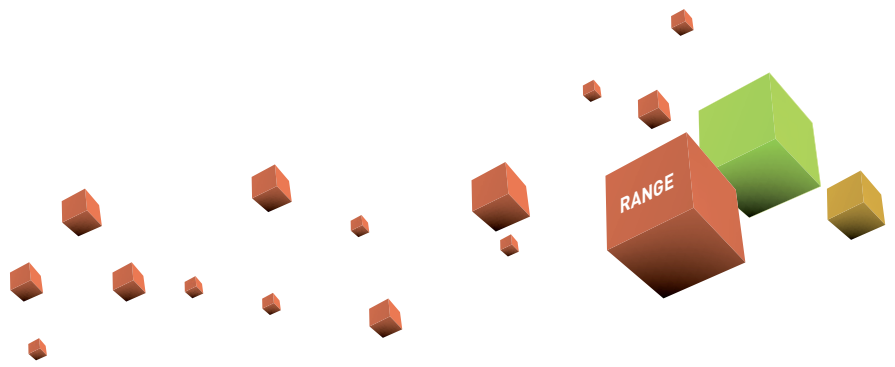
- Dimensions (m): 2.00 L x 1.24 W x 1.15 H
- Weight in air: 99 kg excluding optional equipment
- Material: frame and fittings in 316L stainless steel

PROPULSION

- 6x dc thrusters: 4x horizontal (vectored) / 2x vertical
- Forward thrust: 260 kg
- Vertical thrust: 170kg

TOOLS

- 1x7 function and 1x5 function hydraulic manipulators
- Optional set of hydraulic tools (blade cutter, disc cutter, gripping tool)



Viewing system

- Mounted on the hydraulic P/T unit:
1 x zoom colour TV camera and lights
1 x digital still camera with flash gun
- Fixed: 2 x very low light
B/W navigation TV cameras
and headlights
- Mounted on the manipulator arm:
1 x colour TV camera
- Mounted on rear edges of buoyancy
(H2000 only):
2x upwards looking dome
colour TV cameras

Instrumentation

- Inertial measurement unit
for heading (accuracy 0.5° +
Auto heading function) and for
pitch and roll inclinometer
- Depth: Piezoresistive type
sensor - Precision: 0.1% full
scale - Auto depth function
- Altimeter: range 0.3 to
50m - accuracy $\pm 2\%$ -
auto-altitude function
- Other sensors: Inside
temperature - Water ingress
- Amperage feedback
- Dual frequency detection
sonar - range 100 or 300m
- Acoustic positioning system
- Target relocation system:
ROV homer
- Locating system

LARS

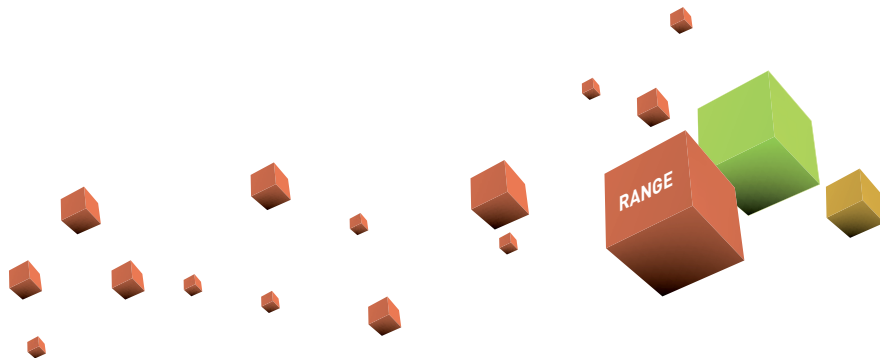
- Hydraulic A-Frame and winch
- Electomechanical umbilical
- Equipped with TV cameras

TMS

- Remote controlled winch housing
a 130m neutral weight tether
- Equipped with TV camera,
lights, and depth/altimeter/
current meter sensors

SHELTERS

- 1 X 10' container for
surface control room
- 1 X 10' container for
maintenance workshop



SPECIFICATIONS	H1000	H2000
System power requirements	Tri Phase 380 to 480 VAC - 25kVA	Tri phase 380 to 480 VAC - 40kVA
Maximum umbilical length	1000 m	2000m
Depth rating	1000 msw	2000 msw
Length	992 mm	2000 mm
Height	551 mm	1150 mm
Width	720 mm	1240 mm
Launch weight	340 kg	900 kg
Forward speed	4 knots	3 knots
Thrust forward	140 kgf	260 kgf
Thrust lateral	90 kgf	165 kgf
Thrust vertical	50 kgf	170 kgf
Number of thrusters	6 (4 vectored horizontal + 2 vertical)	6 (4 vectored horizontal + 2 vertical)
Payload	30 kg + more by adding buoyancy	80 kg + more by adding buoyancy
Number of TV cameras	1 Black & White navigation TV camera	1 Black & White navigation TV camera
	1 Pan & Tilt unit including 1 color zoom TV camera with laser scaling	1 Black & White rear TV camera
	1 mobile micro TV camera mounted on manipulator arm	-
	-	1 Pan & Tilt unit including 1 color zoom TV camera with laser scaling
	-	1 mobile micro TV camera mounted on manipulator arm
Number of LED lights	6 (3 fixed, 2 moving on Pan & Tilt unit, 1 mounted on manipulator arm)	4 (2 fixed and 2 moving on Pan & Tilt unit)
Auto functions	Auto heading & auto depth / optional auto altitude	Auto heading & auto depth / optional auto altitude
Type of manipulator arms compliance	ARM 5E MINI (one or two units)	ARM 5E (one or two units)
	ARM 5E (one unit)	ARM 7E MINI (one unit)
	ARM 7E MINI(one unit)	ARM 5E & ARM 7E MINI
Type of sonar compliance	Any type (side scan, scanning single or double frequency, 2D multibeam, 3D imaging, echoscope...)	Any type (side scan, scanning single or double frequency, 2D multibeam, 3D imaging, echoscope...)



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