COPETECH-SM
Compagnie de Pêche Technologique et de Surveillance Sous-Marine

MIN de Saumaty – Chemin du littoral
13016 MARSEILLE
Tél. : 04 96 15 15 45 – Fax. : 04 96 15 15 48
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LTI SUPER ACHILLE ROV System 2000

DESCRIPTION

The **SUPER ACHILLE** is a versatile, powerful and robust observation and light work ROV. The **SUPER ACHILLE** capitalizes the assets of more than 55 Achilles sold and operated worldwide, together with the latest developments of the AJAX.

The **SUPER ACHILLE** is operated via a garage and TMS together with a launching system. It may also be used as a free swimming unit up to 200 meters.

Typical jobs for **SUPER ACHILLE** are diver assistance and large ROV assistance but also underwater site surveys (wrecks, coral, shells, pipelines, etc.) in heavy polluted water, or difficult current conditions (up to 3 knots).

With the addition of purpose built tools, the **SUPER ACHILLE** is able to complete surface monitored underwater tasks, such as : wreck salvage, measurements and sample gathering, setting of explosive charge, rope cutting, etc.

The **SUPER ACHILLE** system consists of an underwater vehicle equipped with a colour TV camera, connected to the surface via an umbilical, and operated from a surface PC based control unit, the picture being visualized on a colour monitor. This picture can be recorded with e video recorder compatible with the delivered video signal (video recorder on request).

The system may be operated either as a free swimming unit or via a subsea garage, TMS and launching system.

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SPECIFICATIONS

THE UNDERWATER VEHICLE

The system is rated up to 400 msw as standard. However all components ate designed and manufactured to enable 750 msw capacity. Upgrading necessitates the replacement of the PVC buoyancy foam only.

4 THRUSTERS: ASYNCHRONOUS ELECTRICALLY DRIVEN.
GLOBAL POWER ABSORBED 3 KW / 220 VAC

2 thrusters drive the super-achille system horizontally, forward/backward, left, right, and generate **45 kg** of trust (static).
1 thruster for vertical motion, up/down (around 7 kg of thrust).
1 thruster for lateral motion, developing **8 kg** of thrust (static)
All thrusters work on equipressure whatever the depth and are theoretically maintenance free.

1 PAL CCD LOW LIGHT COLOUR CAMERA WITH PAN & TILT
(SONY FCB-IX11AP OR BETTER):

Vertical tilt motion 170°
Horizontal pan motion 90°. Camera position is displayed on surface control GVA monitor.
Image sensor with CCD charge transfer device
Minimum lighting: 1.5 lux (50 IRE)
Effective picture elements : approx 440,000 pixels
Automatic and manual focus
Optical Zoom: 1/10
Automatic control of colour temperature
Two simultaneous video channels are supplied as standard. The ROV is equipped with a plug and play like connection and transmission for an additional camera and light.

1 ELECTRONIC CENTRAL UNIT

Fitted into an atmospheric pressure watertight container, the electronic central unit gathers the microprocessors and the electronic P.C. boards necessary for the management of information coming from and going to the vehicle.

1 ELECTRICAL CENTRAL UNIT

Fitted in an equipressure container filled with special oil, the electrical unit houses the thruster's electronic variators.

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NAVIGATIONAL INSTRUMENTS

1 echo sounder for altitude (distance to sea bed) monitoring
1 pressure sensor for depth monitoring
1 fluxgate compass combined with a gyrometer for head monitoring and navigation assistance
1 built-in imaging sonar : 360° scanning head; Range: 0 / 100 m; High resolution; Scan rate:8.40°/s
A system of auto-course, auto-depth and auto-altitude.

LIGHTING

2x220V/250W halogen lights
1x19V/80W halogen optional

STAND-BY CONNECTIONS

1 x 24V power 2 pins watertight connector remotely activated. ; Connection for tools, additional light, etc.
1 x watertight dry contact connector remotely activated. Connection for strobe light, underwater photo camera, etc.

3 Functions electric manipulator

ARM MANIPULATORS :

1 arm electric manipulator 3 functions
Possibility of using a hydraulic arm from 5 to 7 functions according to model

DIMENSIONS

Width 600 mm / Length 720 mm / Height 510 mm
Total weight 90 kg approx

TUBULAR STAINLESS STEEL FRAME

POSITIVE BUOYANCY PVC FOAM

POWER SUPPLY:

220V tension booster transformer
Required power : 6 KW/220 VAC
Fully protected
Earth leakage system to North Sea standard

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THE UMBILICAL

Thanks to its unique multiplexed transmission system, the **SUPER ACHILLE** is equipped with a low drag, easy repair, cost effective single KX4 coaxial umbilical mounted on a winch with slip ring. The first 30 meters from the underwater vehicle consist in a KX15 positive buoyancy single coax to avoid any umbilical snag when sailing close to the seabed.

Umbilical weight in water:

KX15: positive buoyancy
KX4: 70 g/meter

Connectors: 2 contact Jupiter underwater series
Outside diameter: 11 mm
Total umbilical length:
Standard 200 m

400 m optional optional

Super Achille on a Tunisian Army Supply

COMPUTERIZED CONTROL UNIT STANDARD

Minimum Pentium IV 3.2 GHZ microprocessor, Ram 512 MB, Graphic Card 64 MB, Window XP, Software Programme pacakage SACH 2000 Version 2.20 a in English with all necessary connections and controls to supervise video and data processing and display, self diagnosis, parameter adjustment etc.
Keyboard and mouse
The control unit is connected to the GVA monitor for dive parameters and a comprehensive range of digital and graphic informations are displayed on the 15'' GVA colour flat LCD monitor.

Parameters

Depth: digital
Altitude: digital & graphic
Heading: digital & graphic
Camera: pan & tilt camera location
Sonar: 360° colour display, distance and heading to mouse pointed echo
Miscellaneous: umbilical coil status, electronics container temperature, thrusters power status, electrical consumption