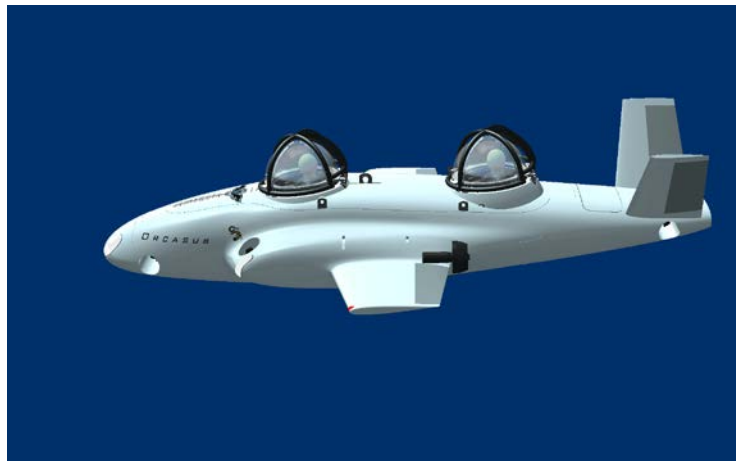




ORCASUB



ORCASUB is a two person, 2000-foot depth rated 'flying' submersible. Utilizing Nuytco's patented, welded steel pilot hulls allows for a more comfortable, "business class" cockpit for each pilot. ORCASUB also benefits by incorporating Nuytco's aluminum battery cylinders thereby allowing for a variety of battery types to be employed, which are easily hot-swappable in the field. Long range underwater communications, advanced sonar capability and a powerful lighting package are standard equipment on every ORCASUB. A training course for two pilots and one crew chief is included.

Preliminary Specifications

General:

- Operating depth: 2000 ft. (600 m)
- 1 pilot, 1 observer
- Weight in air 8500 lbs (3855 kg)
- Length: 21 ft. (6.4 m)
- Beam: 14 ft. (4.25 m) wings extended
- Height: 5.0 ft. (1.5 m)
- Payload: 250lbs(113 kg) with 400lbs(181kg) crew
- Max Speed: 6 knots

Life Support:

- Redundant O2 systems, total capacity 80 man-hours

- Carbon dioxide removed via scrubbers
- Emergency breathing gas via air BIBS

Propulsion:

- All-axis thruster package
- Variable buoyancy provided by 2 ballast tanks

Viewing:

- Two 24 inch (60 cm) acrylic viewports, also serve as entry hatches

Communication:

- Surface: ICOM VHF
- Sub-surface: UQC and 27 KHZ Acoustic

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ORCASUB

SAS

ORCASUB

HIGH PERFORMANCE SUBMERSIBLE

SUB AVIATOR SYSTEMS

Multiple Lift and Tie-down Configurations Enhance Operational Flexibility

Wings, Batteries and Thrusters may be Jettisoned for Safety

High Quality Composite Construction

Vertical Thruster

Wrap-around Inflatable Emergency Flotation

Sonar

Powerful Configurable Lighting

Bow Thruster

Nuytco 'Deepworker' Battery Housings - Dry, One-Atmosphere with Leak Sensors - the Safest, Most Reliable Way to Carry Power

Variable Ballast Tank

HP Breathing Air (BIBS)

HP Oxygen

HP Ballast Air

Thrusters - Commercial Off-the-Shelf Economical, Serviceable, Replaceable

Stern Thruster

Vertical Thruster

Responsive, Low-Drag V-Tail

Spacious Electronics Housings Upgradeable, Expandable

Surface Rescue System - Pilot Deployable Buoy with 2000' Hi-Strength Line

Nuytco 'Deepworker' Pressure Hulls Roomy, Ultra Rugged Welded Steel Tested, Certified and Proven in 25 Working Submersibles

Compact for Stowage and Transport

NUYTCO RESEARCH LTD

- A VERSATILE AND INNOVATIVE SUBMERSIBLE FOR RECREATIONAL, COMMERCIAL, SCIENTIFIC AND OTHER USES, INCORPORATING LLOYDS CERTIFIED NUYTCO RESEARCH PRESSURE HULLS AND LIFE SUPPORT SYSTEMS - THE GOLD STANDARD IN THE COMMERCIAL DIVING INDUSTRY
- INTUITIVE FLY - BY - WIRE JOYSTICK CONTROLS
- 80+ HOURS LIFE SUPPORT
- QUICK AND MANOEVRABLE IN FLIGHT AND HOVER MODES
- ADVANCED COMMUNICATIONS, NAVIGATION AND TRACKING
- POWERFUL, CONFIGURABLE LIGHTING
- REDUNDANT SAFETY SYSTEMS
- CUSTOMIZABLE FOR EXPLORATION, FILM AND SCIENCE

Lloyds Certified Depth: 2000' Length: 20" Height: 5' Beam: 14' - 7' Wings Folded

Power Source:

- Lithium-Ion: 22KW @240 VDC Main, 500Watts 12/24 VDC by converter

Accessories:

- SONAR
- Long range underwater communications: 27 kHz Nuytcom DSP acoustic telephone
- Delux lighting package

Emergency Equipment:

- Drop weight jettison capability
- Battery jettison capability
- Emergency battery (for comms and CO2 scrubber)

Optional Equipment:

- HD Camera: H.264 (Blu-Ray Codec) camera
- Nuytco Newtcam @ HDV video system
- Hard Disk video recording unit
- manipulator which can be mounted to the nose of the sub for special missions
- surface docking Launch, Recovery and Transport (LRT) craft
- Nuytco Newtsun @ 600W LED light heads
- Multiple laser scaling lights
- DVL (Doppler Velocity Logger) recording depth, altitude, distance over ground, salinity, temperature and bearing

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