

The Discovery 1000. The world's most sophisticated small submarine is now available.

The *Discovery 1000* is a state-of-the-art submersible that offers panoramic viewing, contemporary styling, hydrodynamic efficiency and extraordinary range, endurance and maneuverability.

Originally designed for launch and recovery from a superyacht, the *Discovery 1000* is a modular design available in either two-, four-, or six-, eight or 10-passenger configuration all based on an identical external framework. A 40 KW diesel engine with hydrostatic drive can be added to each vehicle as an option to dramatically increase surface range.

Unique Design Characteristics

The *Discovery* design prioritizes the following characteristics which have never before been accomplished together in a deep-diving submersible:

- Exceptional viewing
- High level of comfort
- Low hydrodynamic drag
- Aesthetically pleasing contemporary styling
- Boat-like surface characteristics
- Exceptional maneuverability
- Levels of safety consistent with ABS class

The Ultimate Yacht Tender

A turbine-powered helicopter is no longer the ultimate accoutrement to a superyacht. The new *Discovery 1000* boasts extraordinary viewing from a passenger compartment composed principally of transparent acrylic plastic. Now, guests aboard your yacht can dive to 305 meters. Enveloped in an intimate, luxury interior, your fascinating excursions into the ocean depths will surely be the topic of conversation dockside.



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The *Discovery*, classed as A1 Manned Submersible by the American Bureau of Shipping, is easy to operate, with digital proportional joystick controls and an animated graphic touch screen control and monitoring system. Superior maneuverability is accomplished with four water-jet thrusters: one bow, one stern and two oriented vertically. *Discovery's* hydrodynamic design allows for submerged speeds of 6 knots and excellent range and endurance.

We work closely with the leading manufacturer of submersible launch and recovery equipment, and a low-impact system can be fitted to most yachts above 35 meters in length.

Discovery is also well suited for use as a shore-based submarine for day-long excursions. A unique cockpit allows the occupants to remain comfortably on deck while the vehicle is on the surface.

Discovery is fully air conditioned and has an automated life support system that provides the ultimate in cabin comfort.

The sophistication of the design is certain to make the *Discovery* the natural choice for discerning yacht owners interested in exploring the subsea world.

Commercial Opportunities

The *Discovery 1000* in its four-, six-, eight- or 10-passenger configuration makes an ideal tourist submersible for resort locations. The incredible views from its transparent acrylic pressure hull coupled with its 305 meter depth capability will allow for relatively high ticket prices, enhancing this vehicle's profit-making potential. The *Discovery* is also suitable for a wide variety of commercial and military endeavors. In fact, a contract has recently been signed for six *Discovery 1000s* with optional diesels for patrol and surveillance work by a Middle Eastern law enforcement group.





Discovery 1000: Technical Specifications

General Specifications

| | |
|-------------------------|-----------------------|
| Certification | : ABS #A1 |
| Operating Depth | : 305 m |
| Passengers | : 2, 4 or 6 |
| Length | : 8.40 m |
| Beam | : 1.65 m |
| Pressure Hull Diameter | : 1.50 m |
| Height Overall | : 2.20 m |
| Draft | : 1.35 m |
| Weight in Air: | |
| 2-passenger version | : 4.5 tons |
| 4-passenger version | : 6.5 tons |
| 6-passenger version | : 7.5 tons |
| Side Viewports | : acrylic h-cylinders |
| Bow Viewport Diameter | : 1.38 m |
| Entrance Hatch Diameter | : .58 m |

Dynamic Characteristics (Predicted)

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|-------------------------|-------------|
| Maximum Surface Speed | : 6 knots |
| Cruising Surface Speed | : 5 knots |
| Maximum Submerged Speed | : 5.5 knots |

Propulsion

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|------------------------|-----------------|
| Main Electric Motor | : 15 KW, sealed |
| Vertical Thrusters (2) | : water jet |
| Lateral Thrusters (2) | : water jet |
| Propeller | : .75 m dia. |

Endurance (Predicted)

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|-----------------------|------------------------|
| Range (80% discharge) | : 56 nautical miles |
| Submerged Endurance | : 2.7 hours at 5 knots |
| | : 7.2 hours at 4 knots |
| | : 28 hours at 2 knots |

Battery & Electrical System

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|------------------------|------------|
| Main Battery | : 240 VDC |
| Communication Battery | : 24 VDC |
| Emergency Battery | : 24 VDC |
| Total Battery Capacity | : 41 KWH |
| Battery Charging Time | : 10 hours |

Ballast & Trim Systems

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|-----------------------|------------|
| Main Ballast capacity | : 2000 KG |
| Variable Ballast | : 270 KG |
| Trim/Drop weight | : 500 KG |
| Ballast Pump | : 42 L/min |

Gas Supply

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|-------------|-------------------|
| Main Oxygen | : 104 l @ 245 bar |
| Main Air | : 104 l @ 245 bar |

Life Support

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|---------------------------|-----------------------------|
| Mission Life Support | : 24 hours for 4 passengers |
| Emergency Life Support | : 72 hours for 4 passengers |
| CO ₂ Absorbent | : Sofnolime & LiOH |
| Air Conditioning | : 9,000 BTU |

Navigation & Communications

| | |
|-------------------------|--------------------------|
| Compass Main | : Magnetic fluxgate |
| Speed Log | : Digital |
| Depth Gauge | : 400 m analog & digital |
| Active Sonar (optional) | : Color imaging |
| Surface Communication | : VHF Marine |
| Subsurface UWT | : 10 & 27 KHz |

Additional Instrumentation

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|--------------------------|---------------------------|
| Custom Control LCDs | Ballast Indicators |
| Thruster Control Panel | Hydraulic Panel |
| F-16 Style Joysticks | Hydraulic Pressure Gauges |
| RPM Gauge | Depth Sounder CRT |
| Rudder Indicator | Video Camera System |
| Life Support Panel | Video Monitors |
| Oxygen Gauges | Electrical Panel |
| Oxygen Analyzer | Voltage & Current Meters |
| CO ₂ Analyzer | IR & Circuit Protection |
| Alarm Panel | Lighting Panel |
| Interlock Indicators | Clock |
| Flammable Gas Monitor | Barometer/Hygrometer |
| Fire Suppression System | Inclinometers |
| Ballast Panel | Thermometer |
| Air Pressure Gauges | |