

TITAN

5-Person Submersible | 4,000 meters



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FOR CHARTER
AND EXPLORATION TRAVEL

TITAN: MANNED SUBMERSIBLE

<https://oceangate.com/our-subs.html>

Titan is a Cyclops-class manned submersible designed to take five people to depths of 4,000 meters (13,123 feet) for site survey and inspection, research and data collection, film and media production, and deep sea testing of hardware and software. Designed and built by OceanGate, Inc. *Titan* provides a unique solution to the growing need for direct human observation, inspection and exploration in the deep ocean.

DIRECT OBSERVATION, INSPECTION AND EXPLORATION

Titan is outfitted with state-of-the-art lighting and sonar navigation systems plus internally and externally mounted 4K video and photographic equipment. The interior provides ample space for additional monitoring, inspection, and data collection equipment.

LAUNCH AND RECOVERY PLATFORM

All Cyclops class submersibles are equipped with an integrated launch and recovery platform. Operated similarly to a ship dry dock, the platform is used to launch and recover manned submersibles by flooding its flotation tanks with water for a controlled descent to a depths of 9.1 meters (30 feet) to avoid any surface turbulence. Once submerged, the platform uses a patented motion-dampening flotation system to remain coupled to the surface yet still provide a stable underwater platform from which our manned submersibles lift off of and return to after each dive. At the conclusion of each dive, the sub lands on the submerged platform and the entire system is brought to the surface in approximately two minutes by filling the ballast tanks with air.

The launch and recovery platform is modular and easily transported using standard over-highway truck and trailer combinations. It can be cost-effectively deployed at sea because it does not require a large ship with a man-rated crane or A-frame to launch and recover the submersibles. This allows us to work in remote areas using smaller, locally available commercial ships at a much lower cost.

SPECIFICATIONS

Seating	5 persons (1 pilot + 4 crew)
Depth	4,000 meters (13,123 feet)
Dimensions	670 cm x 280 cm x 250 cm (22 ft x 9.2 ft x 8.3 ft)
Payload	685 kg (1,510 lbs)
Weight	9,525 kg (21,000 lbs)
Speed	3 knots
Propulsion	Four Innerspace electric thrusters: 2 vertical, 2 horizontal.
Life Support	96 hours for a crew of 5
Navigation	Teledyne BlueView 2D sonar, Teledyne Doppler Velocity Log (DVL), INS/USBL
Lighting	4 Deep Sea Power & Lights LED Sealites, 40,000 lumens total output
Cameras	External: SubC Imaging iCam Rayfin, 4K camera, 3 Axis Cameras
Other	2G Robotics Dynamic Underwater Laser Scanner (ULS-500 PRO)



Mission Specialists onboard Titan.



Titan launched off the platform.

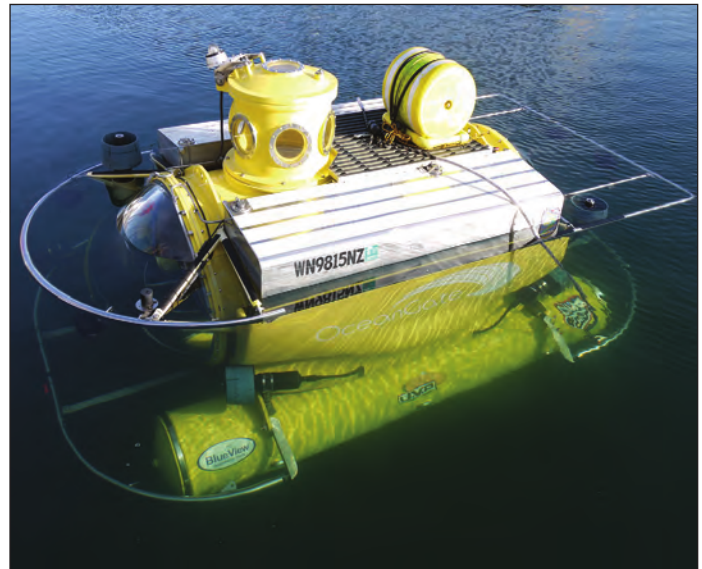
ANTIPODES

MANNED SUBMERSIBLE

UTILIZED FOR DEEP-SEA EXPEDITIONS, OceanGate's flagship *Antipodes* is a manned submersible that enables commercial and scientific applications for researchers, scientists, filmmakers, and content providers. This unique submersible comfortably accommodates a crew of 5, including a pilot, and has a 305-meter (1,000 feet) depth rating, opening access to much of the world's continental shelves and the biology that exists in those areas.

A SUPERIOR PLATFORM FOR DATA COLLECTION, OBSERVATION AND COLLABORATIVE TASK PERFORMANCE

Antipodes boasts twin 1.47-meter (58-inch) hemispherical acrylic domes which provide exceptional views for direct scientific observation and filming during deep-sea expeditions. Her capacity allows crew members from multiple disciplines to collaborate in real time, so that inspection is not limited to areas of interest dictated by the operator, but rather by the consensus of those in the vessel, allowing for different perspectives. *Antipodes* is also fully capable, thanks to her full array of



navigational and sonar equipment, of operating around the clock in low visibility and varying weather conditions, making her crews able to conduct timely, efficient surveys of the marine environment. In addition to a standard suite of navigational and sampling equipment, including a manipulator arm, multibeam sonar, and high-def imaging capabilities, *Antipodes* is fully configurable to fit the most complex data collection needs of the research and commercial community.

The **ENHANCED DIVE TIME CAPABILITY** of *Antipodes* offers crews the ability to work in a comfortable, controlled environment on enhanced bottom-time dives in excess of 8 hours, while still maintaining three days of additional life support for a crew of five.

GLOBAL DEPLOYMENT is made possible by OceanGate's tested and proven technology, which focuses on quick, efficient transport and deployment of submersibles through our mobile launch, retrieval and transport platforms. Large surface-support vessels are not required for operations, translating to significant cost savings. OceanGate can quickly deploy *Antipodes* after a hurricane, spill, or other event requiring rapid response. *Antipodes'* 6,350 kg (14,000 lbs) weight and 4.5 m x 2.3 m x 2.4 m (15 ft. x 7.5 ft. x 8 ft.) dimensions ensure impressive portability on a variety of ships.

SAFETY is of primary concern to OceanGate. Over the course of 1,300 dives in a variety of sea conditions, *Antipodes* has proven to be a safe and effective vessel. We are the only US company that owns, operates and charts a multi-person research submersible. *Antipodes* is classed by the American Bureau of Shipping, is fully insured, and operates under a letter of designation as Oceanographic Research Vessel from the U.S. Coast Guard—permitting us to legally take researchers for hire.


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Manned
submersible
solutions to
access the
ocean's resources.

ANTIPODES

MANNED SUBMERSIBLE



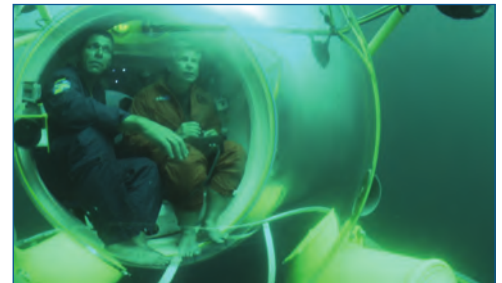
**Manned
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BENEFITS

- 5-person occupancy allows teams to multi-task and collaborate during each dive
- 1,000-foot depth rating gives access to virtually all of the world's continental shelves and biology below the photic zone
- 1.47-meter (58-inch) hemispherical acrylic domes open up unparalleled views for direct observation and underwater work
- 6,350-kg (7-ton) weight and 4.5 m x 2.3 m x 2.4 m (15 ft. x 7.5 ft. x 8 ft.) dimensions allow for maximum portability on a variety of ships of opportunity
- Enhanced flexibility through customizable configuration, allowing for additional electrical equipment, fiber-optic connectors and hydraulic lines to meet clients' needs.

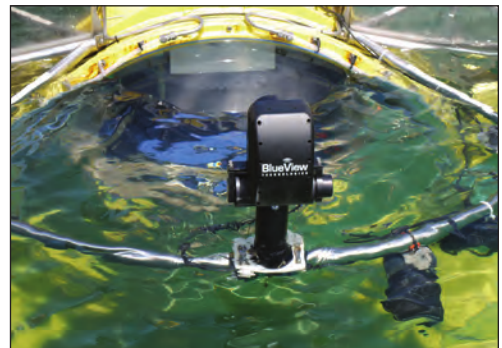
NAVIGATION AND SCIENTIFIC EQUIPMENT

- Fluxgate compass
- Depth sounder for altitude off bottom
- Depth gauge
- External temperature probe
- GPS for surface location
- VHF radio for surface to 25' depth communication
- 27kHz Scubaphone with transponder
- Linkquest 1500 tracking system with acoustic messaging option
- Teledyne BlueView 2D and 3D multibeam sonars: (1) P450E-45; (1) P900-130; (1) MB1350-45 (3D imaging)
- PC with dual display of sonar data
- ROS PT10 pan-and-tilt unit
- 6000-lumen white mix LED lights (x2)
- 600-watt and 1000-watt halogen lights



SPECIFICATIONS

- Seating:** 5 persons (1 pilot + 4 crew)
- Depth:** 305 meters (1,000 feet)
- Dimensions:** 4.5 m x 2.3 m x 2.4 m
(15 ft x 7.5 ft x 8 ft)
- Crane Weight:** 6,350 kg (14,000 lbs)
- Speed:** 1 knot (cruising), 3 knots (max)
- Propulsion:** Six 5-hp reversible thrusters vectored for 3-axis maneuvering
- Life Support:** 72 hours (w/5 persons)
- Classification:** American Bureau of Shipping (ABS) ★A1 Submersible (ABS ID: 7310882)



No part of a report of a marine casualty investigation shall be admissible as evidence in any civil or administrative proceeding, other than an administrative proceeding initiated by the United States. 46 U.S.C. §6308

CYCLOPS 1

5-Person Submersible | 500 meters



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CYCLOPS 1: MANNED SUBMERSIBLE

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Cyclops 1 is a research class submersible capable of taking five people to depths of 500 meters (1,640 feet) for site survey and inspection, research and data collection, film and media production, and deep sea testing of hardware and software. *Cyclops 1* is ideally suited for direct subsea monitoring, inspection and exploration.

DIRECT OBSERVATION, INSPECTION AND EXPLORATION

Cyclops 1 offers excellent undersea views through a 1.44-meter (56.85-inch) acrylic dome, which provides a wide, a 150-degree field of view with very little distortion. In addition, *Cyclops 1* is outfitted with state-of-the-art illumination and sonar navigation systems, internally and externally mounted high-definition video and photographic equipment. The interior provides ample space for additional monitoring, inspection, and data collection equipment.

LAUNCH AND RECOVERY PLATFORM

All Cyclops class submersibles are equipped with an integrated launch and recovery platform. Operated similarly to a ship dry dock, the platform is used to launch and recover manned submersibles by flooding its flotation tanks with water for a controlled descent to a depths of 3.6 to 9.14 meters (12 - 30 feet) to avoid any surface turbulence. Once submerged, the platform uses a patented motion-dampening flotation system to remain coupled to the surface yet still provide a stable underwater platform from which our manned submersibles lift off of and return to after each dive. At the conclusion of each dive, the sub lands on the submerged platform and the entire system is brought to the surface in approximately two minutes by filling the ballast tanks with air.

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SPECIFICATIONS

Seating	5 persons (1 pilot + 4 crew)
Depth	500 meters (1,640 feet)
Dimensions	664 cm x 283 cm x 217 cm (21.8 ft x 9.3 ft x 7.1 ft)
Payload	567 kg (1,250 lbs)
Weight	9,075 kg (20,007 lbs)
Speed	2.5 knots
Propulsion	Four Innerspace 1002 electric thrusters: 2 vertical, 2 horizontal.
Life Support	72 hours for a crew of 5
Navigation & Sonar	Teledyne Blueview 2D and 3D sonar External HD Cameras; Rowe technology (DVL)
Lighting	Two Teledyne Bowtech LED, 40,000 lumens total output
Cameras	Internal: Canon 5D Mark III External: Multiple HD for image capture and navigation
Other	Laser scaler



Cyclops 1 submersible.



Mission Specialist taking a photo of anemones onboard Cyclops 1.