

SEAGLIDER M6



KONGSBERG



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DEEP DIVING OCEAN GLIDER

Seaglider M6 represents a new paradigm in the oceanographic data collection market. Like other underwater gliders, the M6 propels itself through the water using a variable buoyancy device to achieve vertical velocity. The vehicle's wings then translate that vertical velocity into forward motion. This results in a saw-tooth shaped trajectory through the water. The Seaglider M6, however, represents a giant leap forward in deep diving ocean glider capabilities. Its maximum operating depth of 6000 meters allows it to perform full depth profiles in over 98% of the world's oceans thus opening new realms to oceanographic data collection.

The vehicle's large variable buoyancy allows operation even in significantly stratified waters. It also enables the glider to generate up to 1 knot of forward velocity, making it easier to operate in areas of relatively high current.

A patented, passive buoyancy compensation scheme minimizes the amount of oil that must be transferred, therefore saving significant energy. On a single set of batteries the vehicle can cross entire ocean basins in missions lasting over a year. Typical sensors include conductivity/temperature, oxygen optode and fluorometer/optical backscatter devices.

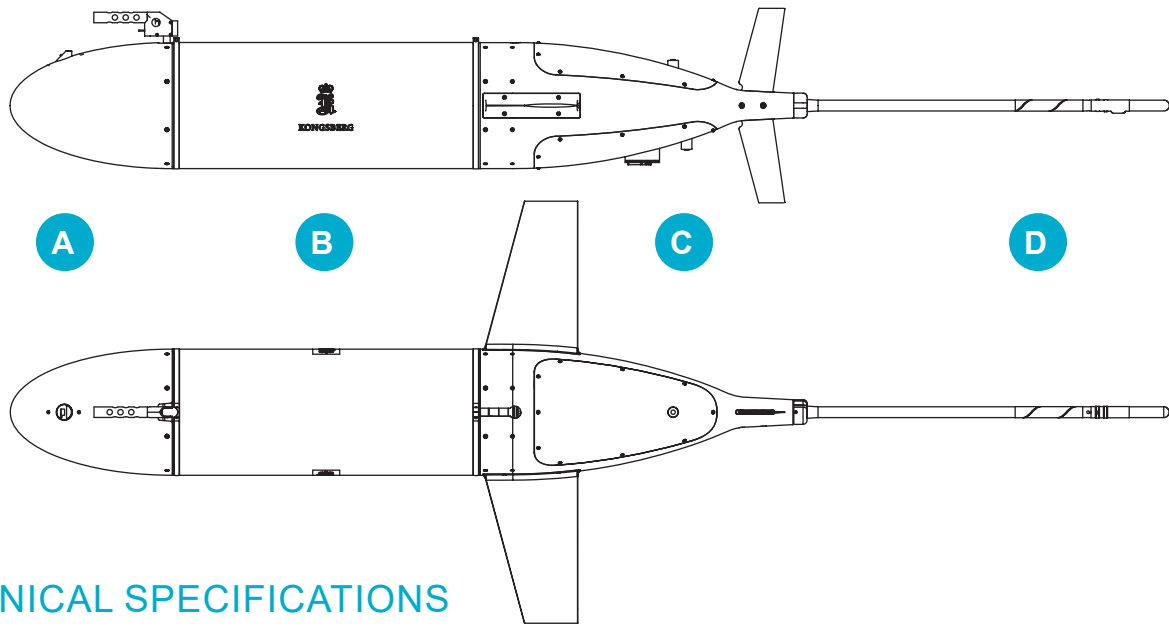
Custom sensor packages can be developed upon request.

FEATURES

- Based on the proven Seaglider technology
- Light weight, carbon fiber pressure hull
- No external moving parts, making it very robust
- Fore & aft wet payload bays
- Can be launched & recovered manually from small boats with a crew of two avoiding reliance on costly ships
- Automatically provides estimates of depth averaged current and surface current
- Operation costs just a few dollars per kilometer traveled
- Obtains high resolution profiles of physical, chemical and bio-optical ocean variables
- Can be piloted from anywhere in the world via internet connection & satellite telemetry
- All data from simple serial devices is transmitted to shore-side basestation after each profile

FEATURES

A: Fwd Sensor Payload Bay B: Carbon Fiber Pressure Hull C: Aft Sensor Payload Bay D: Telemetry Mast



TECHNICAL SPECIFICATIONS

Mechanical

- Body Length: 1.8 m
- Body diameter: 30 cm maximum
- Wing span: 1 m
- Antenna mast length: 1 m
- Weight: 79 kg (in air)

Operation

- Maximum depth: 6000 m
- Typical speed: 0.2 – 0.5 m/s (0.4 – 1.0 kt)
- Glide angle: 14 – 45 degrees
- Variable buoyancy: 1125 cc
- Maximum range: 10,000 km (approximately 250 profiles to 6000 m)

Electrical

- Power source: Lithium primary batteries, 24V & 10V, 16.5 MJ
- Memory storage: 1 GB compact flash
- Sensor interfaces: RS-232, frequency input

Communications

- Telemetry: Iridium RUDICS communications
- Pre-launch test & programming: RS-232

Navigation & Control

- Integrated GPS module provides position while at surface
- Dead reckoning while submerged using 3-axis compass and pressure sensor
- Integrated altimeter & bathymetry map features for near bottom profiles
- Kalman filter for prediction of mean and oscillatory currents

Specifications subject to change without any further notice.

