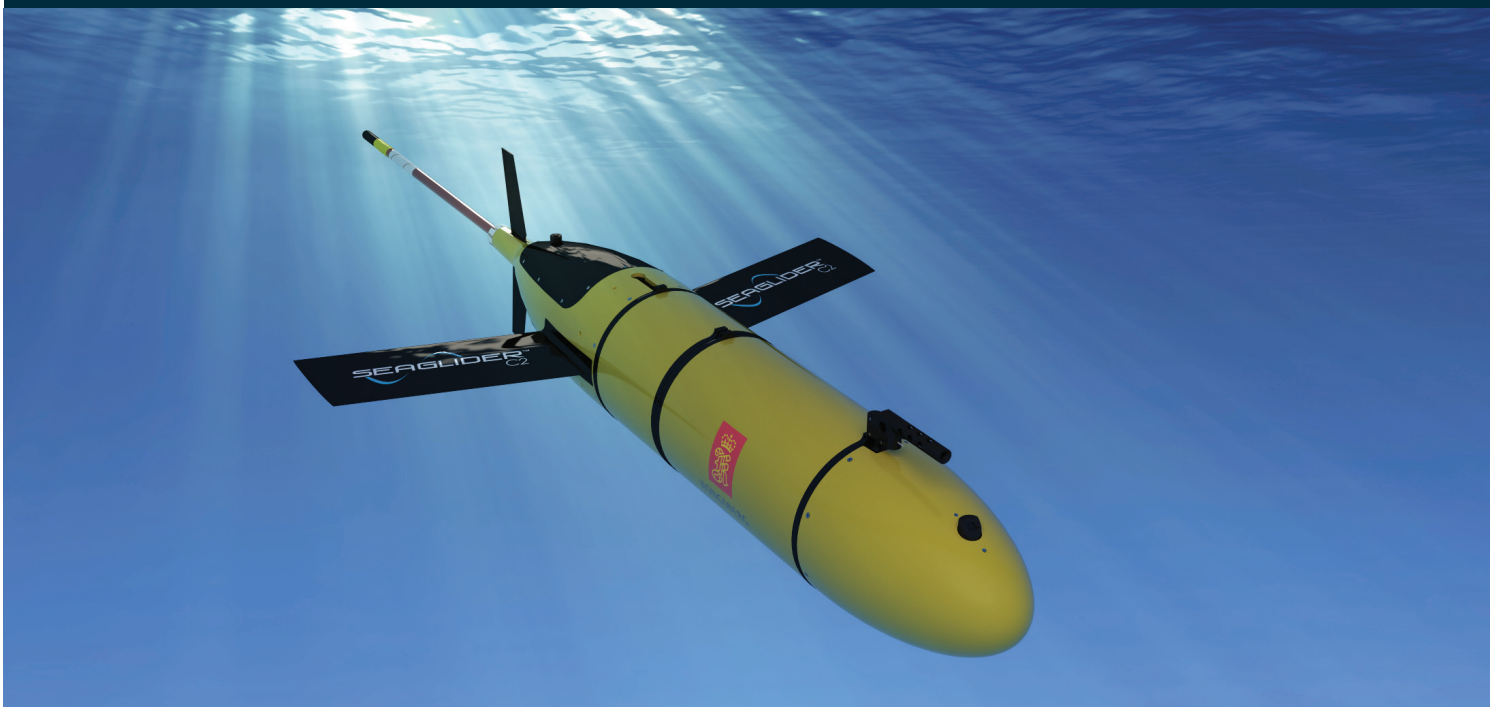
SEAGLIDER C2

KONGSBERG



April 2017

SHALLOW WATER GLIDER

Like the original Seaglider system, the C2 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.

Seaglider C2 is optimized for performance in littoral (i.e. shallow, coastal) waters. The vehicle design incorporates an extremely large variable buoyancy device with a high rate of volumetric change. Adaptations to the mass shifter enable high turn rates. The end result is a more maneuverable glider, capable of high speeds, that can fly from fresh water to seawater in a single mission, making it extremely useful for operations near the mouths of large rivers and other areas with highly variable density.

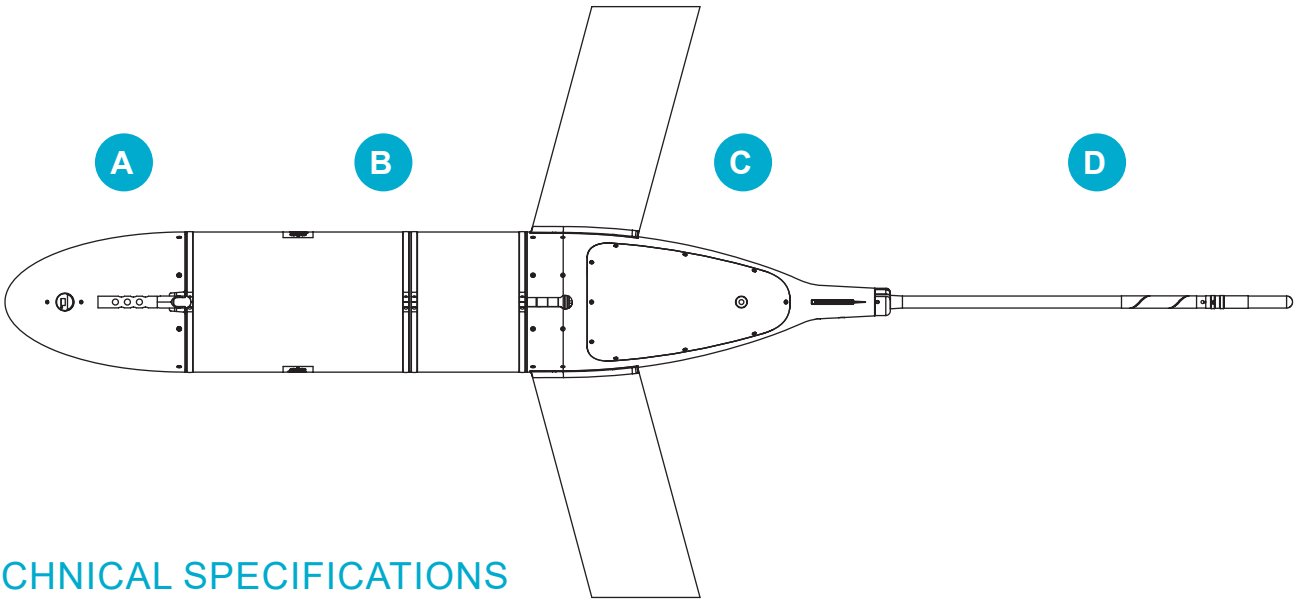
Vehicle design allows for maximum flexibility in sensor integration. Like most ocean gliders, typical sensors include conductivity/ temperature sensor, oxygen optode and fluorometer/optical backscatter devices, but Seaglider C2 is also capable of carrying significantly larger sensors. In addition to fore & aft wet payload bays, it is possible to accommodate a large, modular dry payload section. For science payloads requiring significant power, two additional 10 V battery packs can be added.

FEATURES

- Based on the proven Seaglider technology
- No external moving parts, making it very robust
- Capable of carrying modular, dry payload bay
- 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: Modular Pressure Hull** **C:Aft Sensor Payload Bay** **D: Telemetry Mast**



TECHNICAL SPECIFICATIONS

Mechanical

- Body Length: 1.9 m (without dry payload bay)
- Body diameter: 30 cm maximum
- Wing span: 1.25 m
- Antenna mast length: 1 m (typical)
- Weight: 74 kg (nominal, in air)

Operation

- Maximum depth: 200 m
- Typical speed: 0.3 – 1.0 m/s (0.6 – 2.0 kt)
- Glide angle: 7 – 45 degrees
- Variable buoyancy: 3500 cc
- Volumetric rate of change: 20 cc/sec

Electrical

- Power source: Lithium prim. batteries, 24 V & 10 V, 25 MJ max.
- 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.

KONGSBERG UNDERWATER TECHNOLOGY, Inc.
Switchboard: +1 425 712 1107
Global support 24/7: +47 33 03 24 07
E-mail sales: km.sales.lynnwood@km.kongsberg.com
E-mail support: km.support.seaglider@km.kongsberg.com

km.kongsberg.com

KONGSBERG