

Profiling Float Powered by Ocean Thermal Energy

Navis-SL1 Autonomous Profiling Float

Seatrec is partnering with Sea-Bird Scientific to deliver the Navis-SL1 autonomous profiling float to offer greater capabilities in support of BGC Argo applications. The SL1 is the only energy harvesting system that provides clean, renewable electricity from naturally occurring environmental temperature differences.

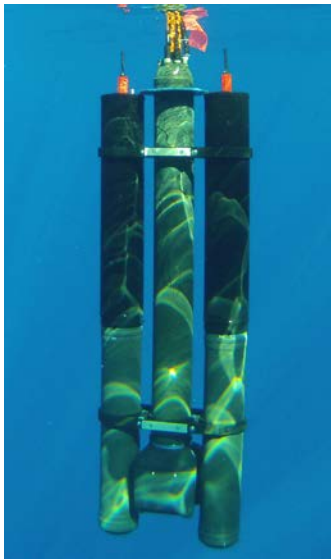
More Power, More Possibilities

- Increase the number of profiles
- Reduce the cost of profile data
- Power additional sensors and/or anti-biofouling devices
- Deploy a green and sustainable energy solution

SL1 Configurations



Single SL1



Twin SL1s

SL1 Specifications

Length	149 cm (58.5 in)
Max Diameter	15.3 cm (6.0 in)
Weight (air)	25 kg (55 lbs)
Weight (submerged)	Neutrally-buoyant
Max Operating Depth	1000 m
Power Output	8 kJ (2.2 Wh) per cycle

Use the Clean Power of the Ocean

Seatrec's SL1 uses Solid-to-Liquid (SL) phase change of specially selected materials to convert the ocean thermal energy to electrical energy and stores it for use by the float. Sea trials have demonstrated that when coupled with SL1s, profiling floats used for ocean observing can be 100% powered by naturally occurring temperature differences in the ocean.

Integration of the SL1 with other float types (e.g., NKE) is in progress. Variants of the SL1 are currently being developed for integration with underwater gliders (SLG), moored profilers, and other underwater profiling platforms.

The SL technology was developed by Jet Propulsion Laboratory in collaboration with Scripps Institute of Oceanography with funding from the Office of Naval Research. With an exclusive license from California Institute of Technology, Seatrec has advanced the SL technology for research, commercial, and defense applications.

Increase Data Collection on Your Next Ocean Mission

Seatrec is now accepting orders on its Navis-SL1 profiling floats with single or twin SL1 configurations. For product inquiries or more information, contact us at sales@seatrec.com.