

NOVA

AUTONOMOUS PROFILING FLOAT

Innovative and Compact Design

Bi-directional Communication

Submersible to 2000m



The NOVA (**N**ew generation **O**ceanographic **V**ariable buoyancy **A**utonomous) profiling float is an innovative subsurface profiling float. NOVA's buoyancy control system is a closed system that requires no maintenance or service. A high-pressure pump is used exclusively to increase buoyancy by transferring fluid to an external bladder. Subsequently, a manifold valve is responsible for achieving negative buoyancy by decreasing the volume of the external bladder. The displacement generated by the buoyancy engine enables NOVA to be utilised for numerous global ocean applications including ARGO.

NOVA is extremely compact, light weight, and does not require ballasting prior to deployment. NOVA is equipped with Bluetooth Technology, which enables the end-user to communicate via wireless with the float prior to deployment and to program duty cycles, as per project requirements. The various features of NOVA allow for effortless deployments from any vessel. NOVA is equipped with Iridium satellite telemetry, which allows for quicker, bi-directional, and more cost effective data transmissions. NOVA is capable of operating autonomously for extended periods of time; 300+ profiles to a maximum depth of 2000m.

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NOVA Float



PROFILING FLOAT

Technical Specifications

NOVA Float Dimensions

Overall Length	134cm (52.8in.) with Iridium/GPS antenna
Hull Length	114 cm (44.9 in.)
Hull Diameter	16.5 cm (6.5 in.)
Maximum Diameter	16.5cm (6.5in.)
Weight	22.8kg (50 lbs.)

NOVA Float Construction

Hull	Hard Anodised Aluminum casing
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Operation

Operating Temperature	-2°C to 35°C (28° F to 95° F)
Operating Life	10 years or 300 2000-dbar cycles
Power Supply	30 Saft LSH Lithium Cells (IATA Certified)

Storage Conditions

Temperature	-40° C to 55° C (-40° F to 131° F)
Time Before Use	≤ 2 year

Buoyancy Management

Accuracy	±30 m (98.4 ft.)
Number of Profiles	≥ 300

User Interface

Function	Mission programming; float checking; etc.
Terminal	PC ~ MAC
Link	Bluetooth
Deployment	Magnet removal launches float

Telemetry

Iridium Communication	SBD (ARGO) / RUDICS (BioGeo-Chemical)
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Sensors

Temperature

Range	-5° C to 45°C (28° F to 95° F)
Accuracy	±.002° C
Resolution	.0001° C

Pressure

Range	0 dBar to 2000 dBar
Accuracy	±2 dBar
Resolution	.04 dBar

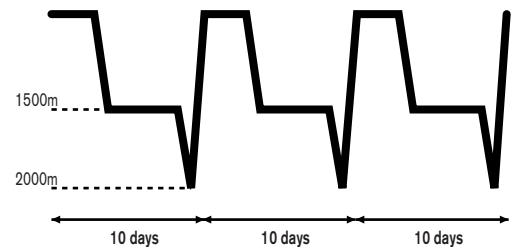
Salinity

Range	2 to 42 PSU
Accuracy	±0.005 PSU
Resolution	0.0002 PSU

CTD Manufacturing

Sea-Bird Electronics	SBE 41 CP
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Typical ARGO profile mission



NOVA Float



Full Buoyancy



Data collection and communication experts

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