Dartmouth Ocean Technologies Inc

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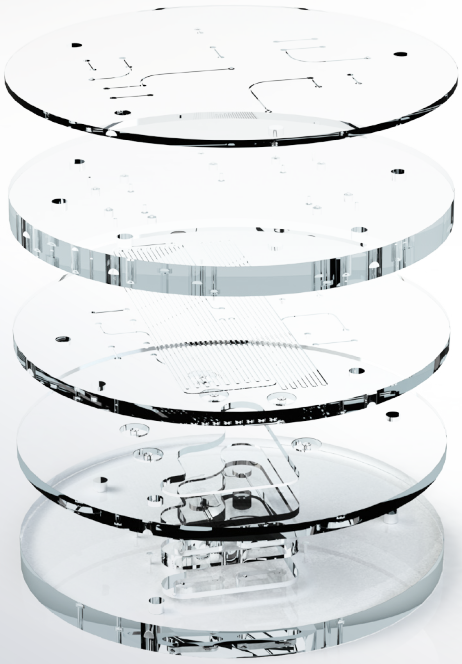
Phosphate Sensor

In-Situ Nutrient Detection

Cost Effective Solution to Real-Time Measurement of Phosphate Concentration

Phosphate Sensor A1000-200 Features at a Glance:

- Lab-on-a-Chip (LOC): Microfluidic wet-chemistry sensor featuring patented and proprietary "Inlaid Optical Cell Technology™"*
- Reduces reagent consumption, decreases reaction time, and reduces power draw
- Self-Powered/Self-Logging for real time measurement
- Technology Flexibility: An excellent contender for towed systems, unmanned vehicles, gliders, ROVs, Voluntary Observation Ships, buoys, and profiling floats
- Customizable and configurable to fit into most platforms



*U.S. Patent 11,231,356 B2

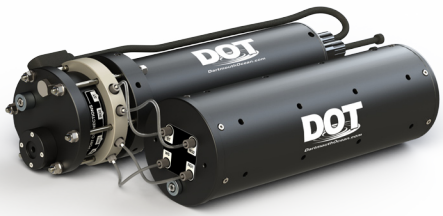
Phosphate Sensor - In-Situ Nutrient Detection

Autonomous

- Phosphate Sensor
- Reagent Housing
- Battery Housing
- Tri-mount Bracket
- Easy transport and deployment
- Sample time:
  1 - 2 min @ 20 °C
  20 min @ 4 °C

Autonomous deployment on a seafloor/river bed deployment frame

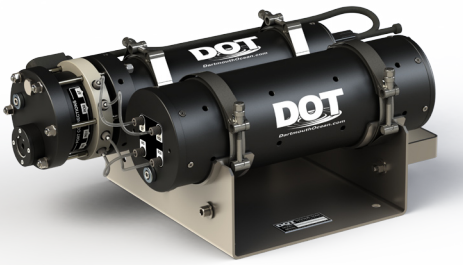
Towed Payload



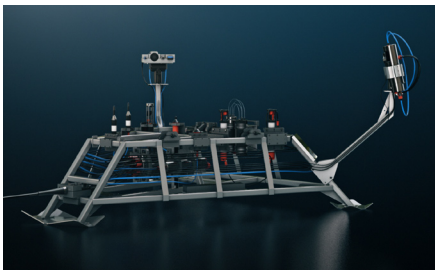
- Phosphate Sensor
- Reagent Housing
- 1000 samples per reagent load
- Quick disconnect fittings
- Reagent bags inside housing
- Requires power from platform

Phosphate Sensor and Reagent Housing deployed on a V-Wing. Powered from EM tow cable

Platform-Mounted



- Phosphate Sensor
- Reagent Housing
- Dual Mount Bracket
- Typical configuration on platform with power



Phosphate Sensor and Reagent Housing mounted on Multi-Sensor Seafloor Platform (MSSP) by COVE

Specifications			
Weight - In Air - In Salt Water	 5.0 kg (11.0 lbs) 1.8 kg (4.0 lbs)	**Dimensions:** - Diameter - Length	 8.9 cm (3.5 in) 44.2 cm (17.4 in)
Sample Rate:	1/minute to 1/day (programmable)	**Depth Rating:**	200 m (656 ft)
Intake Filter:	25mm - 0.45µm pore size (default)	**Power Draw:**	1 to 10 watts
Reagents:	• NIST traceable standards • Blue method (modified EPA 365.2) standard • Yellow method upon request	**Data Output:**	• Ethernet, RS232 • Binary, Hex
Concentration Range:	0.15 µM - 25 µM [orthophosphate] 15 ppb - 2.4 ppm [orthophosphate] 0.014 mg/L - 2.4 mg/L orthophosphate] 0.005 mg/L - 0.78 mg/L [orthophosphate-P]	**Options:**	• Mounting brackets • Software visualization • Real time data output • External battery case (Lithium Primary) • Hard, floodable reagent case

* Specifications subject to change

Dartmouth Ocean Technologies Inc
MAKING WAVES IN DATA COLLECTION

25 Parker Street, Suite 202
Dartmouth, Nova Scotia
Canada B2Y 4T5
sales@dartmouthocean.com
DartmouthOcean.com