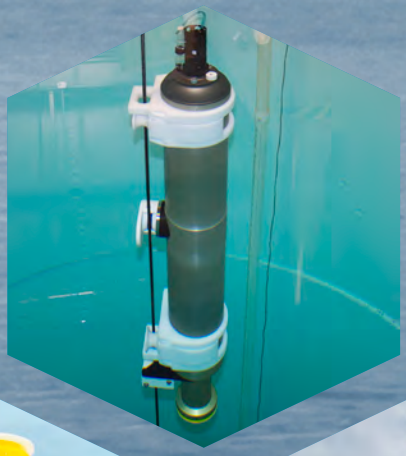

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Sediment Trap

The **Parflux Sediment Trap** collects the export flux of settling particles from oceans and lakes in individually sealed bottles. Sampling is pre-programmed or adaptively triggered from an on-shore device.

- Maximum depth: 7,000 m (10,000 m deep model available).
- Number of samples: 13 or 21 samples of 250 mL or 500 mL.
- Models: Standard models collect 13 or 21 samples. 8-13 model (small cone) collects 13 samples of 250 mL or 500 mL.

The **Signal Activated Bottom Lander** (SABL) Sediment Trap is a low-profile sediment sampler with remotely started and terminated sample collection to target specific events. SABL also allows programmed time-series calendar event deployments. Components are based on the flagship McLane Parflux Sediment Trap.

- Maximum depth: 400 m (deep model available)
- Number of samples: up to 13 samples of 250 mL.
- Options: Ethernet communication, and pressure sensor.

Wet Sample Divider (WSD), available for all Sediment Trap models, splits wet samples into five or ten equal parts.

Top: Standard Sediment Trap & 8-13 Small Cone Sediment Trap
Bottom: SABL Sediment Trap

Imaging FlowCytobot

The **Imaging FlowCytobot (IFCB)**, is an automated submersible microscope that uses a combination of flow cytometric and video technology to capture high resolution (~ 2.7 pixels/micron) images and optical data of suspended particles in-flow, from the aquatic environment. IFCB images can be used to classify organisms to the genus or species level with accuracy comparable to that of human experts, which makes the IFCB well suited to phytoplankton monitoring programs.

- Maximum depth: 40 m.
- Sample rate: 15 mL/hr. Generates up to 30,000 high resolution images per hour (target population dependent). Continuous sampling for up to 6 months.
- Laser-induced fluorescence and light scattering from individual particles are measured and used to trigger targeted image acquisition. Automated or interactive image collection schedule.
- Remote optical and image data in near real time. Antifouling and periodic standard analysis maintains sampler performance in-situ.

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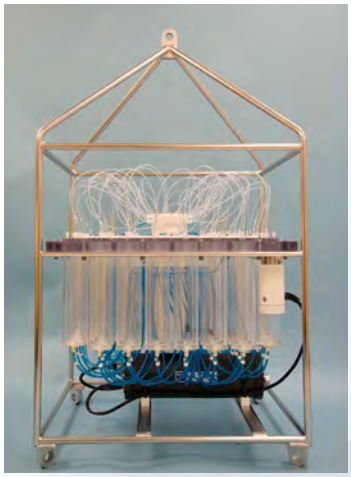

Remote Access Sampler

The **Remote Access Sampler** (RAS) collects individual 100 mL or 500 mL water samples in clear or opaque bags. Samples are suited for biological, dissolved major and minor nutrient studies, and dissolved trace metal analyses. User settings control sample collection time, and sample volume. Programmable biofouling acid flush is available. Optional Fixative Flush floods and seals each sample bag with reagent solution after user specified incubation time.

- Maximum depth: 5,500 m.
- Number of samples: 48.
- Models: RAS-500 collects up to 48 individual samples of 500 mL each, RAS-100 collects up to 48 individual samples of 100 mL each.
- Options: 47 mm filter holder on each sample (25 mm filter holder for each RAS-100 sample), heavy duty frame for energetic environments.

Phytoplankton & Particle Sampler

The **Phytoplankton & Particle Sampler** (PPS) collects filtered individual in-situ particulate water samples onto 47 mm filter media. Samples can be analyzed for trace metals, phytoplankton, and suspended particles. An in-line filtered water flush port protects the pump from large particle interference. Flow rates of 50-125 mL/min or 100-250 mL/min.

- Maximum depth: 5,500 m. Number of samples: 24.
- Sample collected upstream of pump.
- Options: Fixative valve allows flooding of each filter holder with fixative after a sample is collected, antifouling solution reservoir can supply a post-sample flush with antifouling fluid to prevent biofouling between sample events.

Large Volume Water Transfer System

The **Large Volume Water Transfer System** (WTS-LV) collects a single suspended particulate sample in-situ onto 142 mm filter media. Flow rates and filter porosity support a range of specimen collection needs. Up to 45,000 L of water can be pumped and filtered (high capacity model).

- Maximum depth: 5,500 m (Standard and Bore Hole), 5,000 m (Dual Filter and High Capacity) All models have 7,000 m option. Number of samples: Single event sampler.
- Models: Standard system, Dual Filter (separately metered, modular 142 mm vertical intake filter holders for parallel filtration), High Capacity (30 Ah high capacity battery for 3 times the battery power), Bore Hole (configured to fit through a 30 cm hole in the ice).
- Options: 4 L/min, 8 L/min or 30 L/min pump heads, 3-tier filter holder for an additional level of pre-filtering, 293 mm filter holder, trigger start (time synchronizes multiple samplers) and vertical intake filter holder.

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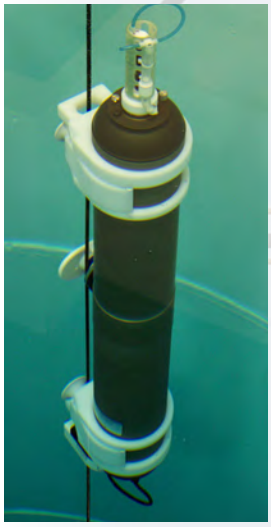
Prawler

The **Prawler** (PRofiling crAWLER) is a wave-actuated vehicle that moves along the mooring wire, collecting data from the water column. Wave motion and special ratcheting clamps move the vehicle up the wire. Prawler collects measurements while falling to the bottom of the user-programmed profiling range. Minimal wave action needed for movement. Suitable for the energetic ocean to low-wave freshwater lakes and reservoirs. Depth range: Surface to 500 m.

- Minimum operating temperature: -2° C water.
- Available sensors: Sea-Bird CTD, Sea-Bird Optical backscatter, Aanderaa Optode DOX.
- Profiling: Wave-actuated (sensors powered by lithium primary batteries).



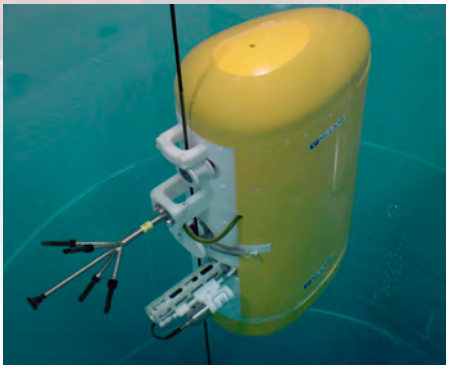
Ice Tethered Profiler

The **Ice Tethered Profiler** (ITP) vertically travels along a fixed mooring wire at 25 cm/sec. Suited for (but not limited to) water column sampling under the ice, data collection in lakes and shelves, and coastal oceans studies. Narrow anodized aluminum housing fits through a bore-hole. The ITP transmits near real-time data via inductive modem when connected to a customer-supplied surface controller. Depth range*: 30 m-1000 m (open ocean or lake), 5 m-1000 m (ice floe).

- Minimum operating temperature: -2° C water.
- Available sensors: CTD, dissolved oxygen, PAR, optical backscatter (other sensors can be integrated).
- Options: 360 Ah battery for 50% more battery capacity, motor speeds of 10 cm/sec or 33 cm/sec, mooring bumpers for top and bottom profile limits.

McLane Moored Profiler

The **McLane Moored Profiler** (MMP) vertically profiles at 25 cm/sec along the water column carrying an array of sensors. User sets profiling depths, time intervals, and pressure stops. Profiling patterns can span seasons or shorter time frames. Extended MMP model has 50% more battery capacity. Depth range*: 30 m - 6,000 m.



- Minimum operating temperature: -2° C water.
- Available sensors: CTD, fluorometry, dissolved oxygen, PAR, optical backscatter, turbidity, CO_2 methane, and nutrients (other sensors can be integrated).
- Options: Inductive communications (customer supplies surface buoy), motor speeds of 10 cm/sec or 33 cm/sec, mooring bumpers.

* Depth ranges are based on application and mooring. Contact mclane@mclanelabs.com for details.

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