



- 208 Ah or 312 Ah lithium battery pack.
- Time-series vertical profiles at known locations.
- Continuous data collection while profiling.
- Near real-time data telemetry with non-volatile flashcard data storage backup.
- Well-suited for deep-ocean profiling with 6,000 m depth-rating.
- Titanium controller housing, motor housing and drive wheel provide added durability.
- Highly visible and removable polyethylene skin covers the frame.
- Energy-efficient drive motor and bearings resist fouling on the mooring cable.
- For more information about this profiler, see the Moored Profiler pages at mclanelabs.com.

McLane Moored Profiler

Application:

The McLane Moored Profiler (MMP) is an autonomous time-series instrument that profiles the water column by traveling along a fixed wire carrying an array of sensors. Depending on the sensors that are selected, *in situ* measurements can include conductivity, temperature, depth, chlorophyll-a and dissolved oxygen data. An optional underwater inductive modem provides near real-time communication between the MMP and a surface buoy or seabed node. Profiling depth, time intervals and pressure stops are user-defined and profiling patterns can span specific seasons or timeframes.

Features:

Body design provides easy access to sensors, electronics and the battery. Two models are available: the standard and extended version. The extended MMP provides 50% more battery capacity and is only 12.7 cm longer than the standard MMP.

Sample schedule options:

Data collection is controlled by user-defined profiles and scheduled sampling. A Deployment Planner option also provides a PC-based application for creating reusable deployment schedules and patterns.

Deployment:

A drive motor provides smooth, steady ascent/descent. Standard profiling speed is 25cm/sec with 10cm/sec and 33cm/sec motor options. Depending on installed sensors and profile settings, 208 Ah or 312 Ah battery options make multi-year deployments possible.

Supported sensors:

CTD sensor is required. All currently integrated sensors are listed below*.

Sea-Bird 52MP CTD	Sea-Bird Inductive Modem
Sea-Bird 43F DOX	Biospherical PAR
Aanderaa Optode DOX	Sea-Bird ECO, C-STAR, SeaOwl
Falmouth Scientific ACM	Sea-Bird BBFL2, FLBBCD, FLBB(RT)/D
ProOceanus CO ₂ or CH ₄	Satlantic SUNA Nitrate
Seapoint Fluorometer	Seapoint Turbidity

*Integration of other sensors possible depending on sensor size and battery drain.

McLane Moored Profiler Specifications

DIMENSIONS:

Length: 131 cm (51 in)

Width: 33 cm (13 in) (max diameter)

Height: 51 cm (20 in)

WEIGHT (APPROX):

In air CTD only, no battery: 71 kg (155 lbs)

In water: neutrally buoyant

CONTROLLER:

Power supply: Supplied 12V primary lithium battery pack

Power consumption: 250 mA* (profiling)

**nominal estimate (power depends on installed sensors)*

OPERATIONS:

Depth: 30 m - 6000 m (mooring dependent)

Battery endurance: 208 Ah or 312 Ah lithium battery pack

Minimum water temperature: -2 °C (non freezing)

Profiling speed: 25cm/sec (10cm/sec, 33cm/sec options)

Data storage: Compact flash backup data storage

MATERIALS:

Guide wheels: Ertalyte

Drive wheel: Urethane-coated titanium

Pressure housing: Titanium

Flotation spheres: Borosilicate glass

Connectors: Titanium

Hardware: Nylon, 316 stainless steel

* Contact mclane@mclanelabs.com if deploying in operational conditions (deck, water surface) below freezing.