

Estuarine and Lake Turbulence Profiler



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The **MicroCTD** is a small profiler for lake and estuarine environments that can **directly measure micro-scale turbulence** with Rockland's piezoceramic shear probe, and augmented by the included fast thermistor (FP07) and integrated oceanographic CTD sensors. Standard internal battery and memory empower our customers to achieve their research goals in mixing dynamics and climate change in shallow locations.



Measure low epsilon

Proven results in peer-reviewed publications.



Fast sample rate

Optional sample rates up to 2048 Hz available.



User-friendly software interface

Optional Zissou Premium software available for advanced processing capabilities.



Depth rating

MicroCTD

Shallow Microstructure Profiler



APPLICATIONS

Typical deployment methods include loosely tethered discrete profiles from a surface vessel, or through an ice hole. The included uprising kit makes the MicroCTD an excellent profiler for measuring microstructure up to – and through the air/sea interface. Optional integrated biogeochemical sensors for fluorescence, optical backscatter, and micro-conductivity can better inform fisheries researchers interested in frontal zones and phytoplankton bloom dynamics, or physical oceanographers investigating vertical flux of compounds near the bottom boundary layer.



GENERAL SPECIFICATIONS

Length housing / overall	0.78 m / 1.0 m
Diameter housing / net	88 mm / 356 mm
Weight in air (water)	8.2 kg (2.6 kg)
Depth rating	100 m
Sampling rate	512 Hz microstructure sensors 64 Hz other sensors
Battery life	Up to 10 hours continuous operation (depending on configuration)

CONFIGURATIONS

Standard Sensors	2x Shear probes 1x FP07 micro-temperature probe 1x Conductivity-temperature (CT) sensor 1x Pressure sensor 1x Tilt sensor 2x Vibration sensors
Optional Sensors	Additional FP07 micro-temperature Fluorometer-turbidity sensor Micro-conductivity sensor
Uprising Profiling Kit	Flotation and weight release hardware for uprising measurements (included)

SENSOR SPECIFICATIONS

All specifications subject to change without notice

		Range	Accuracy	Resolution
Velocity Shear Probe		0 - 10 s ⁻¹	5%	10 ⁻³ s ⁻¹
FP07 micro-temperature		-5 - 35 °C	0.005 °C	10 ⁻⁵ °C
Pressure		0 - 10 bar	0.1% FS	5 × 10 ⁻⁴ bar
Micro-Conductivity		0 - 70 mS/cm	0.005 mS/cm	0.001 mS/cm
CT sensor	Conductivity	2 - 65 mS/cm	0.01 mS/cm	0.001 mS/cm
	Temperature	-3 - 45 °C	0.01 °C	0.001 °C
CLTU sensor	Chlorophyll	0 - 400 ppb	1% of FS	0.01 ppb
	Turbidity	0 - 1000 FTU	0.3 FTU or 2% of measured value	0.03 FTU

