

XMP

Expendable Microstructure Profiler

Features:

- Single use, easy deployment;
- 2 Shear Probes, 1 Thermistor, Pressure Sensor ;
- Depth rating down to 6000 m;
- Bottom boundary measurements.

Description:

The XMP is an expendable turbulence profiler for single use. It measures two components of small scale velocity shear, temperature, and depth. Data are transmitted via an expendable, fibre optic wire link and recorded on a ship board laptop.

The XMP can be used in variety of situations. It is ideal for bottom boundary measurements, as the profiler is designed to crash into the sea floor. Alternatively, the XMP is useful when measurements are carried out in busy waterways, where it is difficult to hold position during profiling operations with regular microstructure profilers.

No prior expertise is required to operate the XMP.



RSI's Engineer, Brett, with the XMP

Preliminary Specifications:

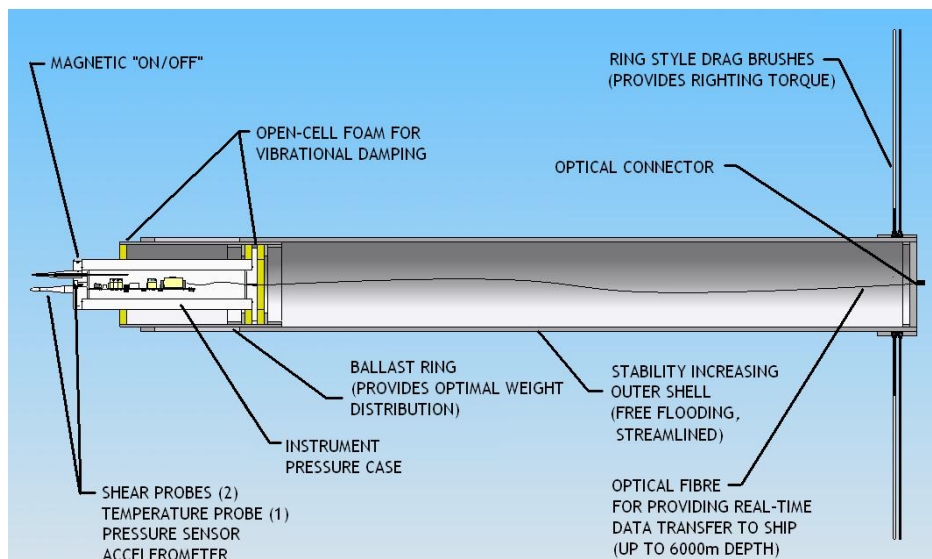
Sampling rate 512 Hz
Depth rating 0 – 6000 m

Velocity shear:

Range 10^{-10} to 10^{-4} $W\ kg^{-1}$
Accuracy 5%
Resolution 2.5×10^{-3} s^{-1} rms (1 – 10 Hz)

Mechanical:

Length 152 cm (5')
Diameter 18 cm (7")
Weight 15 kg (33 lbs) in air



Cross section of the XMP. The pressure case on the left is decoupled from the main housing by open-cell foam. This reduces vibration contamination. The main housing fills with water to increase the total mass of the instrument.