

Yoing Ocean Data Acquisition Profiler

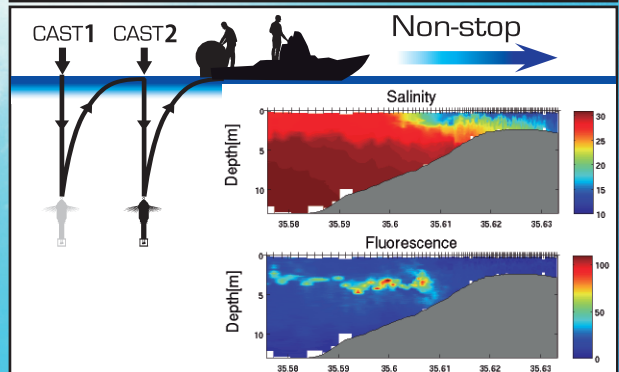
YODAPProfiler

ISO9001



JQA0950

Tow-yo CTD system for coastal monitoring



Masunaga, E., & Yamazaki, H. (2014). A new tow-yo instrument to observe high-resolution coastal phenomena. *Journal of Marine Systems*, 129, 425-436.

- Repetitive vertical CTD profiling during cruising
- Brush attachment for constant free-falling speed
- Built-in memory and rechargeable batteries
- Fast-response DO sensor (90%: less than 1 s in air)

YODAPProfiler developed by Prof. Hidekatsu Yamazaki
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JFE Advantech Co., Ltd.

YODAP Profiler



■ Description

The YODA profiler ("Yoing" Ocean Data Acquisition Profiler) is a "tow-yo" instrument to profile the water column with high spatial resolution from small boats without occupying much space. The instrument is provided with a deployment winch and sensors measuring conductivity, temperature, pressure, chlorophyll, turbidity and dissolved oxygen. The brush at the top of the instrument allows for a stabilizing effect on the free-fall sinking speed, which is approximately constant at 0.2 m/s. All data are stored internally and downloaded into a PC through a wet-connector and interface.

■ Sensor specification

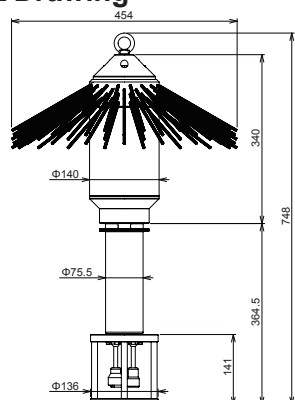
Parameters	Method	Range	Accuracy	Resolution	Response time *1
Depth	semiconductor	0 to 600m	±0.3%FS	0.01m	0.2s
Temperature	thermistor	-3 to 45°C	±0.01°C (0 to 35°C)	0.001°C	0.2s
Conductivity	7 electrodes	0.5 to 70mS cm ⁻¹	±0.01mS cm ⁻¹ (28 to 65mS cm ⁻¹)	0.001mS cm ⁻¹	0.2s
Salinity	PSS-78	2 to 42		0.001	0.2s
DO	phosphorescence	0 to 20mg L ⁻¹ (0 -200%)	±2%FS	0.001 to 0.004 mg L ⁻¹ (0.01 to 0.04%)	0.4s (in air, 1atm, 25°C)
Chlorophyll	fluorescence	0 to 400 ppb (Uranine)	±1%FS (0 drift ±0.1ppb)	0.01ppb	0.2s
Turbidity	backscatter	0 to 1000 FTU	±0.3 FTU or ±2%	0.03FTU	0.2s

*1. Response time: 63%

■ Instrument specification

Measurement mode	Depth trigger	Time trigger
Interval	0.1, 0.2, 0.5 and 1.0 m	0.1 to 1.0 s (0.1 s increment), 1 to 600 s (1 s increment)
Storage medium	1GB internal flash memory	
Recording capacity	1000 profiles (100m, 0.1m interval)	Approx. 8.000.000 samples
Power	Rechargeable lithium-ion battery (available 10-hour operation)	
Material	Titanium (grade 2)	
Dimensions	Φ454mm×748mm (including flange and floatation)	
Weight	6kg (in air)	
Depth rating	600m equivalent	
Accessories	Ballast for falling speed adjustment	

■ Drawing

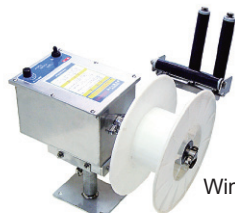


■ Interface (ASTD-IF)

Power	AC 100 to 240V or 4 AA Alkaline batteries
Dimension	W170mm×H66mm×D169mm
Weight	Approx. 1kg



ASTD-IF



Winch system

■ Winch system

Components	Main body, controller and bobbin
Load	Max. 30kg
Rewind Speed	100 to 160r.p.m
Power	DC 24V
Material	Stainless steel
Weight	approx. 15kg
Dimension	W360mm×H(max.)480mm×D430mm
Rope	φ3mm×300m (polyethylene)

※ Dimensions are in mm. ※ All specifications on this leaflet are subject to change without notice.



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