

VMP 250 TurboVMP

Vertical Turbulence Profiler



DESCRIPTION

The **VMP-250** is a versatile profiler for the measurement of micro-scale turbulence. The profiler is designed for operation from small vessels with limited deck space (e.g., Zodiacs), or where electrical power facilities are limited or missing (e.g. ice camps). The **VMP-250** records data internally on a memory card, eliminating the requirement for a deck-side power supply and data recording system (i.e. laptop). The battery and memory allow for up to 24 hours of continuous autonomous operation. An optional real-time data transmission system is available.



CONFIGURATION

Standard Sensors	2x Shear Probe, 1x Micro-temperature (FP07), 2x Vibration Sensors, 1x Pressure, 1x Tilt Sensor
Optional Sensors	Conductivity-temperature Combo Sensor, Fluorometer-turbidity Combo Sensor, Micro-conductivity Sensor, Additional Micro-temperature (FP07)
Uprising Profiling Kit	Floatation and weight release hardware for uprising measurements (optional).

GENERAL SPECIFICATIONS

Model Designations	VMP-250-IR (Internal Data Recording) VMP-250-RT (Real-time Data Transmission)
Depth Range	0 - 500 m (1000 optional)
Weight in Air/Water	11 kg / 3 kg (other weights available)
Length Housing/Overall	1.1 m / 1.6 m
Sampling Rate	512 Hz / 64 Hz fast channel / slow channels (up to 2048 Hz available)
Data Acquisition	Internal recording (Real-time transmission, optional)

SENSOR SPECIFICATIONS

		Range	Accuracy	Resolution	Bandwidth*
Velocity Shear Probe		0 - 10 s ⁻¹	5%	10 ⁻³ s ⁻¹	0.1 - 100 Hz
Micro-Temperature FP07		-5 - 35 °C	0.005 °C	10 ⁻⁵ °C	0 - 25 Hz
Pressure		50 / 100 bar	0.1% FS	5 × 10 ⁻⁴ bar	0 - 5 Hz
Vibration Sensor		±1g	2%	3 × 10 ⁻⁵ g	0.1 - 100 Hz
Micro-Conductivity SBE7		0 - 70 mS/cm	0.005 mS/cm	0.001 mS/cm	0 - 100 Hz
CT sensor	Conductivity Temperature	2 - 65 mS/cm -3 - 45 °C	0.01 mS/cm [†] 0.01 °C [†]	0.001 mS/cm 0.001 °C	0 - 16 Hz
FT sensor	Fluorescence Turbidity	0 - 400 ppb 0 - 1000 FTU	1% of FS 0.3 FTU or 2% of measured value	0.01 ppb 0.03 FTU	0 - 100 Hz

All specifications are subject to change without notice.

* other bandwidths available upon request
† higher-accuracy calibrations available upon request

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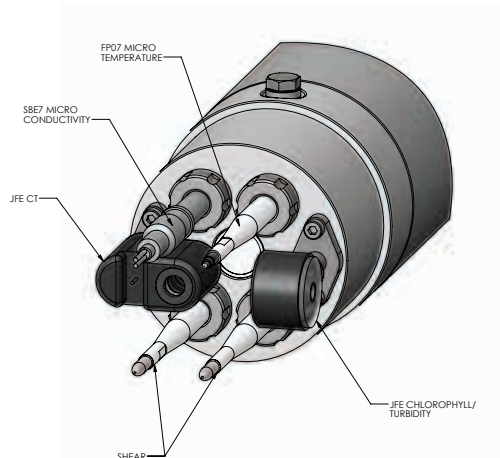
VMP 250 TurboVMP

Vertical Turbulence Profiler

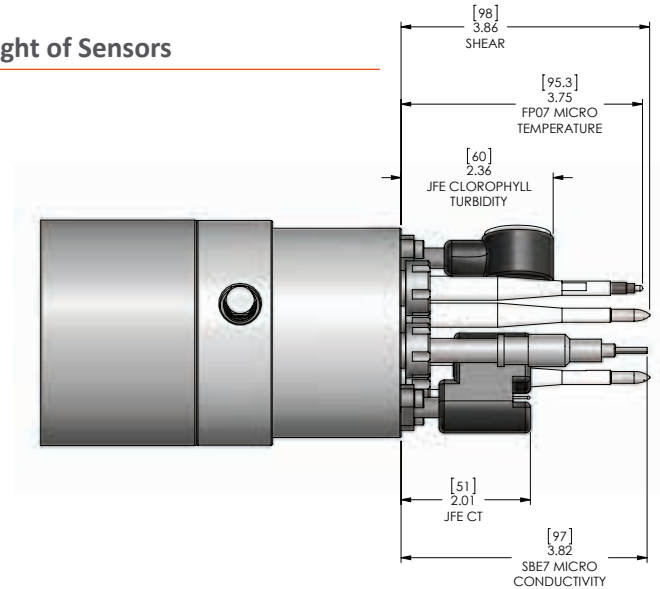


OUTLINE DRAWINGS inches [mm]

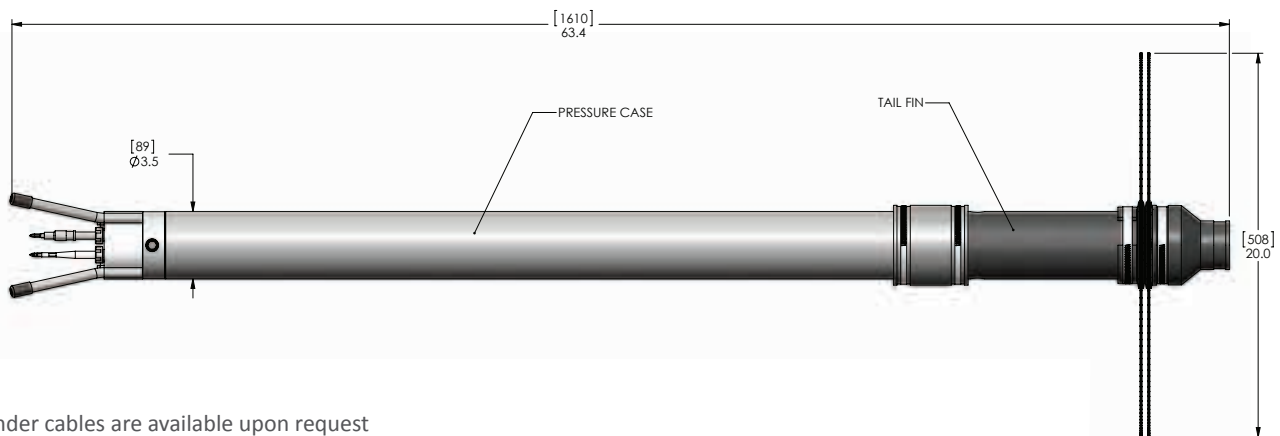
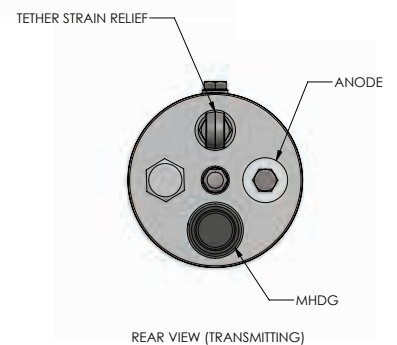
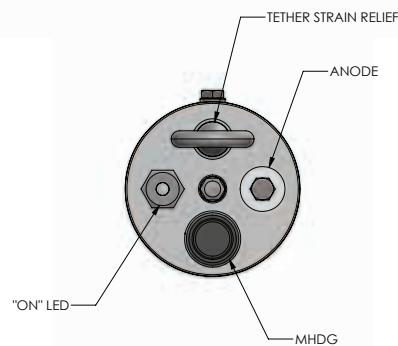
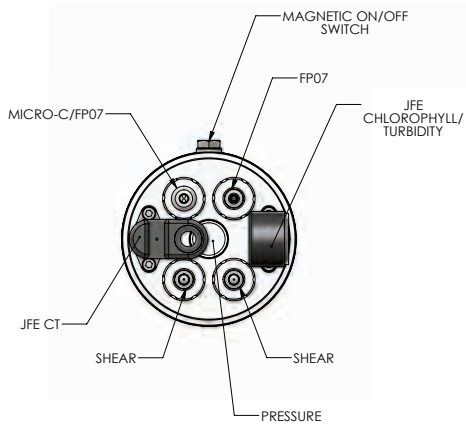
Sensor Arrangement



Height of Sensors



Front and Rear Bulkhead



Extender cables are available upon request
Please contact us for pricing

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PID-02E-IR PORTABLE STAINLESS STEEL ELECTRIC WINCH

Suitable for Rockland Scientific VMP-250-TE.

It is small, light, and can hold 1,000m of 3/16" of line. DC motor, powered by a 208-230 VAC, 50/60 Hz , 1.49 kW. Alternatively, you can power the motor from 12 or 24 VDC (battery) via an sinewave inverter (which is included).

Operational Characteristics:

Line speed at core: 0 to ~63.7 m/min (209 ft/min)

Line speed at maximum drum: 0 to ~85.8 m/min (281.4 ft/min)

Rated line pull at core: 110 lbs (50 kg)

Rated line pull at maximum drum: 100 lbs (45 kg)

Max rated payload capacity: 46 lbs (21 kg)



Notes: The line payout speed should be fast enough if the VMP is trimmed to descend at ~0.5m/s and there are no strong currents. Faster pay-out speeds can be achieved by uncoupling the drum from the gear box using the built-in dog clutch and free wheeling the drum (i.e., paying out the line by hand). Due to the gearing on the gearbox, the gearbox will pull the load but will not hold the load.

Frame:

Dimensions: 40" L x 22" W x 27" H

Weight: 230 lbs (Winch Only, does not include extra options)

Motor:

Leeson(WG) 2 HP S56C 1750RPM 90VDC

Powered by a 208-230 VAC, 50/60 Hz , 1.49 kW.

12/24VDC Sinewave Inverter is supplied to power the winch

Drum Capacity:

1000m of 3/16" rope with 1.4" free flange

Notes: We will install a Dyneema double braided line with a breaking strength of 4300 lbs and a rated working load of 860 lbs. The line has a specific gravity of 1.39, which ensures that the line will sink with the profiler.

Other features:

1" Frame tubing

Thermoplastic bearing housing with 440C Stainless Steel Bearing Insert

Manually-operated disc brake Drum anti-rotation pin lock Removable 1:1 back-up handle

Reusable plywood shipping crate on palette (International shipping approved)

Validator II

PRODUCT CODE: 447



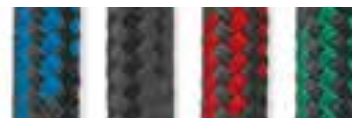
A 100% Vectran®-fiber core gives Validator II both very high strength and exceptionally low creep in static-load applications. The 24-strand polyester cover protects the core from abrasion and handles easily while performing well on winches and in stoppers.

APPLICATIONS

- > Halyard
- > Control Line
- > Mainsheet
- > Jib/Genoa Sheet
- > Spinnaker Guy

FEATURES AND BENEFITS

- > Excellent abrasion resistance
- > Extremely low stretch
- > High strength
- > Negligible creep
- > Firm construction
- > Wire rope replacement



COLOR: Gray with black, blue, green, or red tracers and matching core

SPECIFICATIONS

FIBER: Vectran® / Polyester

SPECIFIC GRAVITY: 1.39

SPLICE/CLASS: Double Braid Class II

ELASTIC ELONGATION PERCENTAGE:

At % of break strength

10%.....0.59%

20%.....0.78%

30%.....0.98%

DIAM. (inch)	CIRC. (inch)	WEIGHT PER 100 FT. (lbs)	AVG. STRENGTH (lbs)	MIN. STRENGTH (lbs)	DIAM. (mm)	CIRC. (mm)	WEIGHT PER 100 M (kg)	AVG. STRENGTH (kg)	MIN. STRENGTH (kg)
3/16"	9/16"	1.4	3,300	2,800	5	15	2.1	1,500	1,300
1/4"	3/4"	2.2	5,000	4,300	6	18	3.3	2,300	1,900
5/16"	1"	3.7	7,000	6,000	8	24	5.5	3,200	2,700
3/8"	1 1/8"	5.0	11,000	9,400	9	27	7.4	5,000	4,200
7/16"	1 1/4"	7.0	15,200	12,900	11	33	10.4	6,900	5,900
1/2"	1 1/2"	9.0	20,000	17,000	12	36	13.4	9,100	7,700
9/16"	1 3/4"	12.0	26,000	22,100	14	42	17.9	11,800	10,000
5/8"	2"	14.4	30,000	25,500	16	48	21.4	13,600	11,600
3/4"	2 1/4"	20.3	45,000	38,300	18	54	30.2	20,400	17,400
7/8"	2 3/4"	27.0	63,000	53,600	22	66	40.2	28,600	24,300
1"	3"	35.0	80,000	68,000	24	72	52.1	36,300	30,800
1 1/8"	3 1/2"	44.0	100,000	85,000	28	84	65.5	45,400	38,600
1 1/4"	3 3/4"	52.0	123,000	105,000	30	90	77.4	55,800	47,400
1 5/16"	4"	58.0	135,000	115,000	32	96	86.3	61,200	52,100
1 3/8"	4 1/8"	63.2	148,000	126,000	34	100	94.0	67,100	57,100
1 7/16"	4 1/4"	67.7	160,000	136,000	35	104	101	72,600	61,700
1 1/2"	4 1/2"	74.5	174,000	148,000	36	108	111	78,900	67,100

Specifications are for spliced strengths.

