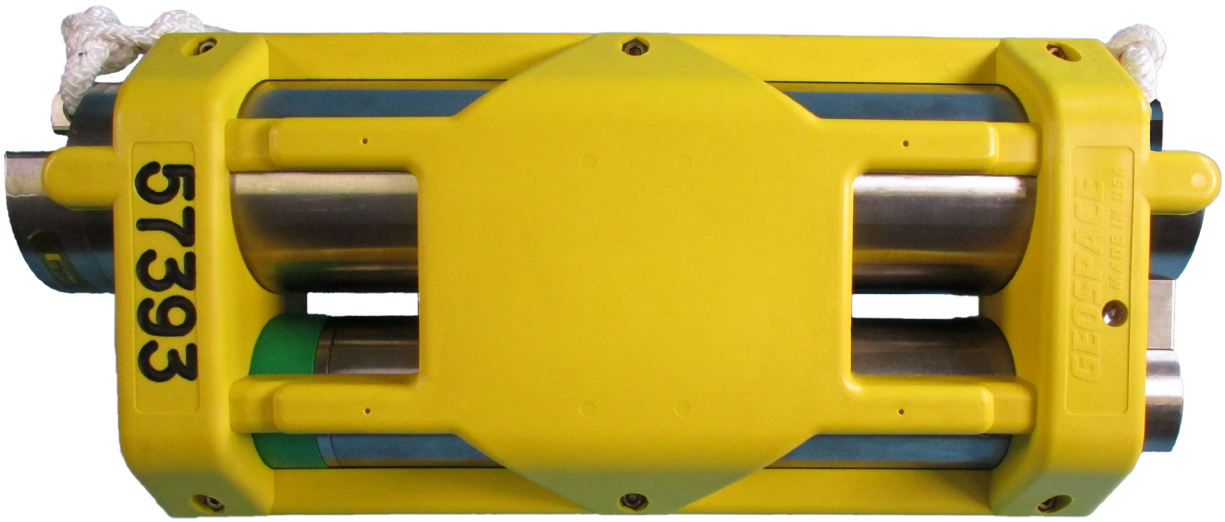
GEOSPACE® Technologies

AQUANAUT™

OCEAN BOTTOM RECORDER



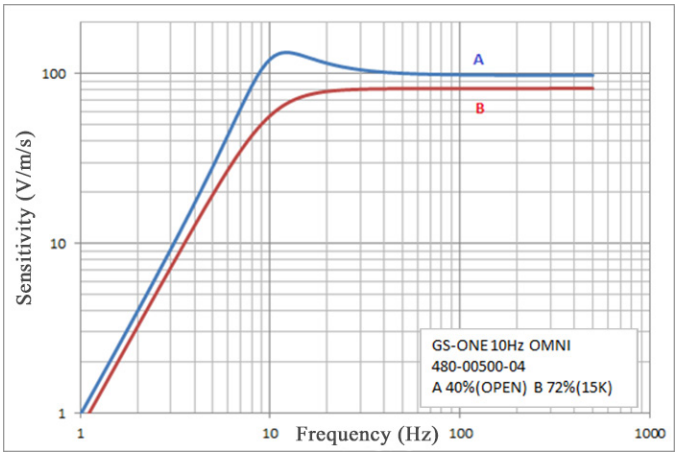
- Continuous cable-free 4C autonomous recording
- Battery module: 200 days operation
- Built-in full resolution test generator
- Solid-state flash memory: 32 GB per channel
- CSAC clock
- Internal Heading Sensor
  - 3 Component Magnetic Sensor
  - ± 5º Accuracy
  - Measurements written to header every 2,000 samples

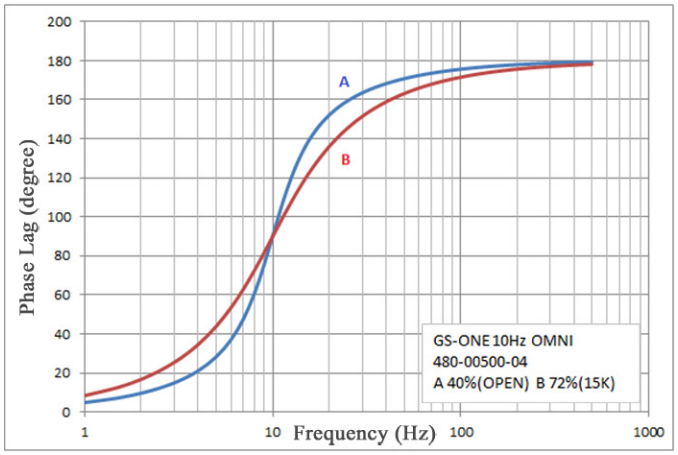
GS-ONE Omni

10 Hz Geophone

PHYSICAL SPECIFICATIONS		
Moving Mass	13.2 g	0.466 oz
Maximum coil excursion p-p	6.10 mm	0.240 in.
Minimum coil excursion p-p	0.89 mm	0.035 in.
Diameter	30.5 mm	1.2 in.
Height	43.2 mm	1.7 in.
Weight	125 g	4.40 oz
Operating and Storage Temperature Range	–40°C to +100°C	–40°F to +212°F

ELECTRICAL SPECIFICATIONS	
All parameters are specified with 7.5kΩ load at 25°C in all tilt positions unless otherwise stated.	
Frequency	10 Hz
Spurious Frequency	150 Hz
Resistance with Shunt	2500 Ω
Open-Circuit Sensitivity	100 V/m/s (2.55 V/i/s)
Sensitivity at 70% Damping	85 V/m/s (2.15 V/i/s)
Total Damping	70%
Distortion at all tilt angles	<0.2% measured at 12 Hz with 0.1 in/s p-p



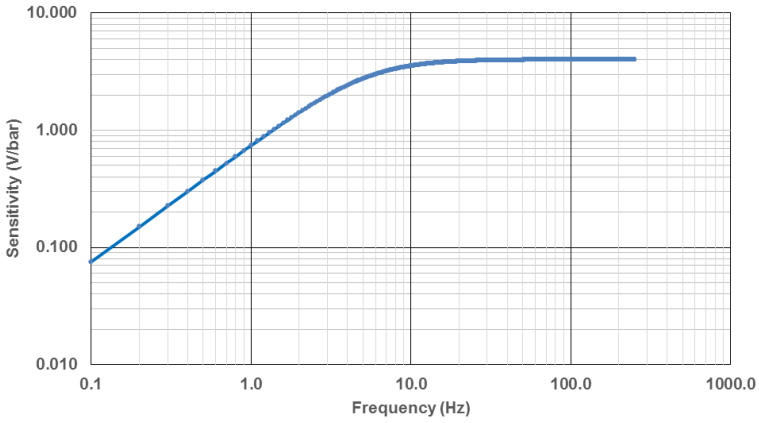


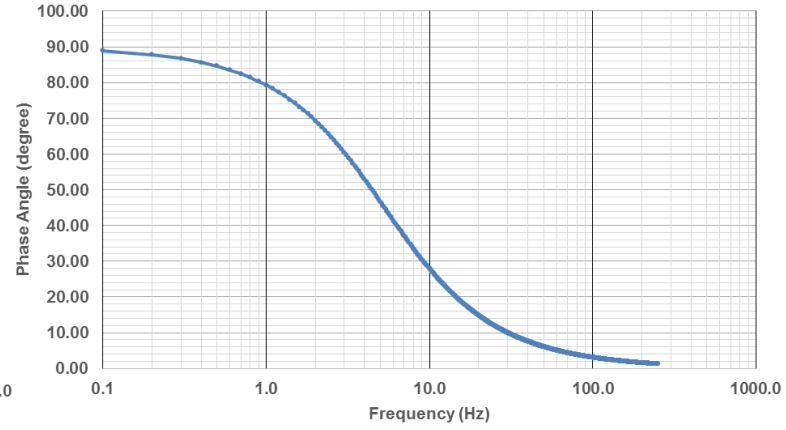
Deepender™ 5000-X
Hydrophone

PHYSICAL SPECIFICATIONS	
Maximum Operating Pressure	34.5 MPa (5,000 psi)
Maximum Working Depth	3450 m (11,319 ft.)
Operating Temperature Range[1]	–10 to +75°C (+14 to 167°F)
Outside Diameter	50.8 mm (2.0 in.)
Length	38.1 mm (1.5 in.)

ELECTRICAL SPECIFICATIONS	
Nominal Capacitance (at 25°C 1atm)	20.0 nanofarads
Voltage Sensitivity[2]	4.0 µV/µBar
Sensitivity (dBv ref 1µPa @ 25°C)	–181.9 dB re 1nC/µPa +/- 1.5 dB
Frequency Response (into 2 MΩ load)	3 –15,000 Hz

1. Safe to be used slightly below 0°C as long as water is not frozen. Do not let hydrophone be frozen in ice, as this will cause irreversible damage to the crystals.
2. Voltage Sensitivity is specified when connected to OBX.





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MECHANICAL SPECIFICATIONS (HOUSING)	METRIC	US
Length	500 mm	19.7 in.
Width	215 mm	8.48 in.
Height	111 mm	4.38 in.
Weight in Air	18.2 kg	40.2 lbs.
Weight in Seawater	10 kg	22.1 lbs.
Maximum Operating Pressure	34.5 MPa/345 Bar	5,000 psi
Maximum Operating Depth	3,450 M	11,316 ft.
Operating Temperature Range	–5°C to +60°C	+23°F to +140°F
Storage Temperature Range	–10°C to +60°C	+14°F to +140°F

ELECTRICAL SPECIFICATIONS	
Digitized 4C Recording Station:	4 Channel, 24 Bit A/D Digitizer 3C Orthogonal oriented GS-One OMNI 10 Hz Geophones 1 DEEPENDER Hydrophone
Digitization	24-bit Delta-Sigma
Sample Interval	0.5, 1, 2, 4 ms
Pre-amplifier Gains	0, 6, 12, 18, 24, 30, 36 dB
Maximum Input Signal	1.8 Vrms
Equivalent Input noise (@2ms sample interval)	0.12 µVrms
Gain Accuracy	Better than 1%
Anti-alias Filter	83% Nyquist
Instantaneous Dynamic Range	129 dB @ 2 ms sample interval
THD	<0.2%
Distance Between Digitizer & Farthest Sensor	<18 cm
Distance Between All Sensors	<13 cm
Flash Memory	32 GB per channel
Frequency Response	1 Hz – 825 Hz @ 1/2 ms sample interval
Battery Module	200 days operation

CLOCK SPECIFICATIONS				
Days	30	60	90	100
Max Uncorrected Drift	2 ms	8 ms	17 ms	21 ms
Corrected Drift	<.25 ms	<.5 ms	1 ms	1 ms

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