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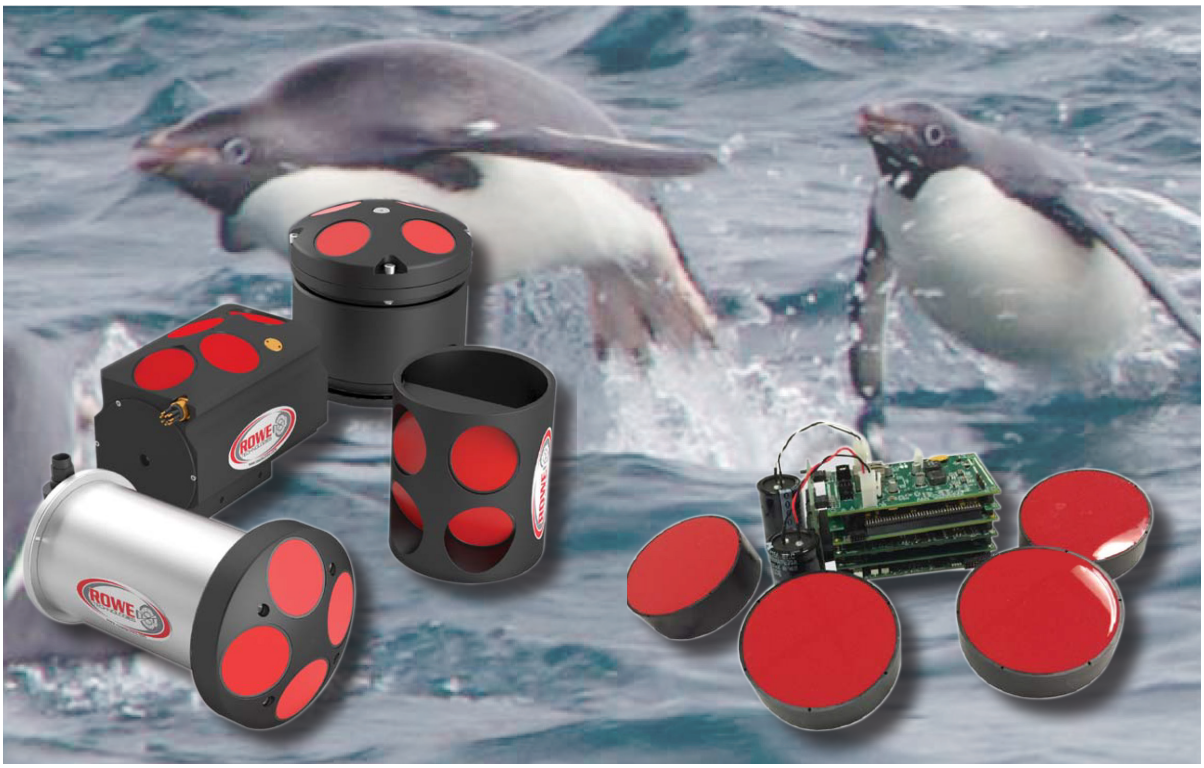
Tecnologie per le Scienze della Terra e del Mare

45° 27' 39.384" N
9° 07' 30.145" E

SeaPILOT DVL and OEM
Doppler Velocity Log



SeaPILOT DVL
300 kHz / 600 kHz / 1200 kHz

The SeaPILOT 300 kHz, 600 kHz, and 1200 kHz models are Rowe Technology's most versatile DVLs. They use Rowe's acoustic Doppler Piston (DP) technology and are well-suited for navigation applications **in shallow water or in deep water, down to 6000M**. The SeaPILOT's compact size, extended range, and precision make it an ideal solution for ROVs, AUVs, and other submersible platforms.

SeaPILOT comes in 3 different frequencies (300 kHz, 600 kHz, and 1200 kHz), all configured with Doppler Piston transducers, and available in different depth package options.

SeaPILOT OEM
300 kHz / 600 kHz Direct

The SeaPILOT OEM 300 kHz and 600 kHz models are available as an OEM configuration. They offer the same outstanding performance as the standard DVL package, but meet custom packaging requirements as found in small AUVs and submersibles.
SeaPILOT OEM consists of an electronics board stack and four Doppler Piston transducers.

Doppler Piston transducers are manufactured as separate elements and are not potted into the AUV housing. This facilitates easy installation and repair (6-inch AUV housing shown with machined "pockets" for the transducers).

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Applications

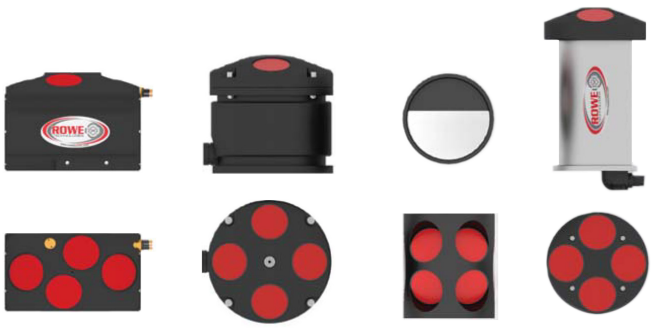
- Subsea and surface vessel navigation.
- Closed-loop control for vessel station-keeping.
- velocity-aiding of inertial navigation systems.
- Towed vehicle along/across-track velocity measurements.

Product Features DVL/OEM

- Multi-use configuration – 3-axis current profile and bottom track or water track velocity measurements.
- User-programmable acoustic transmission – broad band, narrow band, and pulse-to-pulse coherent technologies.
- Simple to integrate with your navigation system – flexible ASCII command interface and several high speed serial data interface options are available.
- Sensors for heading, pitch, roll, and water temperature are included.

Product Features OEM

- User-selectable signal processing options optimize acquisition parameters for precise, high accuracy measurements.
- External and internal triggering functions facilitate time multiplexing with other acoustic sources.
- Additional serial interfaces available for integrating vehicle navigation data.



Technical specifications DVL/OEM

Single Frequency (nominal)	**300KHz**	**600kHz**	**600kHz**	**1200KHz**
Piston Ceramic Size	3 in	3 in	2 in	2 in
Beam widths [2 way]	2.70°	2.00°	2.00°	1.01°
Beam Spacing		4 beams inclined 20°		
Velocity Range		+/- 20 m/s Max; +/- 5 m/s Typical		
Resolution		0.01 cm/s		
Number of Cells		up to 200		
Cell Size		2.0 cm minimum		
Current Profiling				
Maximum Range				
Narrow Band	150 m	75 m	70 m	30 m
Broad Band	100 m	50 m	45 m	20 m
Long-Term Accuracy (High Accuracy Option):	± 0.70%,± 2mm/s	± 0.25%, ± 2mm/s	± 0.50%, ± 2mm/s	± 0.25%, ± 2mm/s
Long-Term Accuracy (Low Accuracy Option)		+/-1.0%, +/-2 mm/s		
BB Single-Ping Precision	3.5 cm/s @ 4 m cell depth	3.5 cm/s @ 2 m cell depth		3.5 cm/s @ 1 m cell depth
NB Single-Ping Precision	20 cm/s @ 4 m cell depth	20 cm/s @ 2 m cell depth		20 cm/s @ 1 m cell depth
Data Output Rate		1-2 Hz typical; 10 Hz max		
Bottom Tracking				
Maximum Range	300 m	130 m	120 m	50 m
Maximum Bottom Track Speed		15 m/s		
Long-Term Accuracy (High Accuracy)	± 0.70%, ± 2 mm/s	± 0.25%, ± 2 mm/s	± 0.50%, ± 2 mm/s	± 0.25%, ± 2 mm/s
Long-Term Accuracy (Low Accuracy)		+/-1.0%, +/-2 mm/s		
Single-Ping Precision	± 0.6 cm/sec @ 3 m/sec	± 0.5 cm/sec @ 3 m/sec	± 0.5 cm/sec @ 3 m/sec	± 0.4 cm/sec @ 3 m/sec
Sensors				
Compass Range/Accuracy/Resolution		0-360° / 1°RMS / 0.01°		
Pitch/Roll Range/Accuracy/Resolution		Roll +/- 180° / Pitch +/- 90° / <1°RMS /0.01°		
Water Temp Range/Accuracy/Resolution		-5° - 70° C / +/- 0.15°C		
Pressure Range/Accuracy		Selectable / +/- 10% Range		
Materials Options		Acetal / Aluminum / Titanium		
Input Power				
Voltage Range (Ext DC Input):		12 - 36 VDC		
Average Power (5% duty cycle) / Peak Current	23 W typical	30 W typical	30 W typical	23 W typical
Output Data				
Communications		RS-485, RS232, 100Base T /Ethernet (self-contained only)		
Internal Recording		32 GByte		
Environmental				
Temperature		-5° to 45° C (Operating), -30°C to 60° C (Storage)		
Depth Rating		50m, 300m, 3000m, and 6000m (600 kHz)		

Specifications may be subject to change at any time in the future. ** In Development

ROWE TECHNOLOGIES

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