



SeaPILOT

DVL and OEM



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.

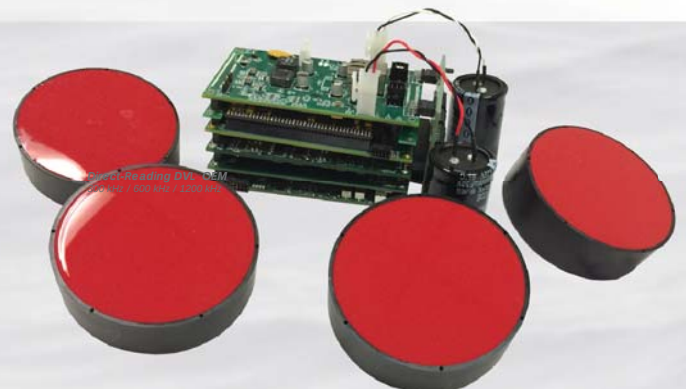


SeaPILOT OEM

300 kHz / 600 kHz

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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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.

Product Applications *DVL/OEM:*

- 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.



SeaPILOT *DVL/OEM* Specifications

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
Resolution:				
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, 300 m, 3000m, and 6000m (600 kHz)			

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

** In Development