Sea*TRAK* LF

Low Frequency
150 kHz / 72kHz

The Rowe Technologies ***SeaTRAK LF*** (Low Frequency) family of Vessel Mounted ADCP's represent the industry's state of the art in acoustic Doppler technology. The compact form factor and powerful electronics provide a versatile platform capable of producing precise bottom-referenced velocity, current profile measurements, and echo intensity measurement. ***SeaTRAK LF*** is available in a 72 kHz array transducer, 150 kHz array transducer or 150 kHz piston transducer.

Each unit in the family leverages a common core set of electronics in a flexible form factor. With a convenient hull-mounted design, and a versatile power and communications interface box, ***SeaTRAK LF*** provides a cost-effective, extremely capable instrument to address a wide variety of oceanographic on -- and off -- shelf survey applications and vehicle navigation. ***SeaTRAK LF*** can be fitted directly to the hull, or used in a moon pool for temporary missions.

SeaTRAK's user-selectable signal processing functions provide excellent temporal, spatial, and velocity resolution and precision. User programmability features provide capability that is particularly useful in variable depth and offshore applications. Multi-modes such as Broadband, Narrowband, Pulse Coherent, and Vessel Tracking provide many different data collection options. The ability to interleave up to 12 independent missions allows simultaneous collection of long range and high resolution data in a single data file. GPS position, speed and heading information can be directly integrated into the data field to ensure lifetime data integrity.

The ***SeaTRAK LF*** ADCP's are well-suited for a variety of coastal and continental shelf oceanographic applications such as current surveys, plume tracking, site surveys, and offshore engineering studies. Rowe systems are easily integrated into the shipboard environment for long term vessel operations.

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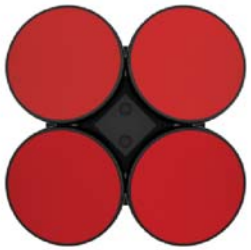
Product Features:

- Multi-Use Configurations: 3-Axis Current Profiles, Bottom Track or Water Track Velocity and Echo Intensity Profile, Broadband, Narrowband, Pulse to Pulse Coherent modes.
- Industry Standard Serial Data Interfaces: RS232, RS422, RS485 and/or Ethernet.
- User-Programmable Operation -- Signal processing options optimize acquisition parameters for precise high-accuracy measurements.
- Direct GPS Heading, Speed, Position integration into raw data.
- 3rd Generation ROWE Technologies Electronics.
- High Accuracy Velocities:
  ± 0.7% for 150 kHz.
  ± 1.0% for 75 kHz.
- Heading: Fluxgate +/- 1º Accuracy.
- Internal data storage eliminates need for dedicated computer.

Product Options:

- Array or piston transducer.
- Local interface chassis to reduce cabling costs.



150 kHz 7.95” OD Piston

72 kHz 15.6” OD Doppler Array

*** 3rd Generation ROWE Technologies Electronics**

SeaTRAK LF Specifications

Single Frequency (nominal):	*72 kHz*	*72 kHz*	*150 kHz*	*72 kHz*	*72 kHz*	*150 kHz*
Piston Ceramic Size OD:				28.96 cm / 11.4 in	24.13 cm / 9.5 in	16.5 cm / 6.5 in
Beam widths [2 way]:				3.2º	4.00°	2.66º
Beam Spacing:				Four beams Inclined 20° in 90 °azimuth increments		
Doppler Array Transducer Size OD:**	39.62 cm /15.6 in	23.11 cm / 9.1 in	16.5 cm / 6.5 in			
Beam widths [2 way]:	2.27	3.95	2.75			
Beam Spacing:	User selectable at 15° and 30° for each measurement					
Velocity Range:	±20 m/s Max; ±5 m/s Typical					
Resolution:	0.01cm/s					
Number of Cells:	up to 200					
Cell Size:	16 m typical (16 cm minimum)		8 m typical (8 cm minimum)	16 m typical (16 cm minimum)		8 m typical (8 cm minimum)
Current Profiling:						
Maximum Range:						
Narrowband:	810 m	710 m	480 m	750 m	710 m	472 m
Broadband:	530 m	455	330 m	485 m	455 m	330 m
Long-Term Accuracy (High Accuracy Option):	± 1.0%, ± 2 mm/s	± 1.0%, ± 2 mm/s	± 0.70%, ± 2 mm/s	± 1.0%, ± 2 mm/s	± 1.0%, ± 2 mm/s	± 0.70%, ± 2 mm/s
Long-Term Accuracy (Low Accuracy Option):	± 1.0%, ± 2 mm/s					
BB Single-Ping Precision:	5 cm/s @ 16 m cell depth	5 cm/s @ 16 m cell depth	5 cm/s @ 8 m cell depth;	5 cm/s @ 16 m cell depth	5 cm/s @ 16 m cell depth	5 cm/s @ 8 m cell depth;
NB Single-Ping Precision:	20 cm/s @16 m cell depth	20 cm/s @16 m cell depth	20 cm/s @8 m cell depth	20 cm/s @16 m cell depth	20 cm/s @16 m cell depth	20 cm/s @8 m cell depth
Data Output Rate:	0.7 Hz	0.7 Hz	1 Hz	0.7 Hz	0.7 Hz	1 Hz
Bottom Tracking:						
Maximum Range:	1100 m	1000 m	700 m	1000 m	900 m	700 m
Maximum Bottom Track Speed:	15 m/s					
Long-Term Accuracy (High Accuracy):	± 1.0%, ±2 mm/s					
Long-Term Accuracy (Low Accuracy):	± 1.0%, ±2 mm/s					
Single-Ping Precision:	< 1 cm/sec for 30° beams; < 2 cm/sec for 15° beams					
Resolution:	0.01 cm/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°C - 70°C / ±0.15°C					
Pressure: Range/Accuracy:	Selectable / ±0.10% Range					
Materials Options:	Acetal / Aluminum / Titanium					
Input Power:						
Voltage Range (Ext DC Input):	20 - 36 VDC					
Average Power (5% duty cycle) / Peak Current:	50 W / 6 Amps for Profiling and 150 W / 25 Amps for Bottom Tracking					
Output Data:						
Communications:	RS485, RS232, 100BaseT Ethernet (self-contained only)					
Internal Recording:	32 GByte					
Environmental:						
Temperature:	-5°C to 45°C (Operating), -30°C to 60°C (Storage)					
Depth Rating:	500 m, 1600 m, 3000 m and 6000 m					

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

*** In Development*