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.
**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.
- Global interface chassis to reduce cabling costs.

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### Specifications

<table>
<thead>
<tr>
<th>Single Frequency (nominal):</th>
<th>72 kHz</th>
<th>72 kHz</th>
<th>72 kHz</th>
<th>72 kHz</th>
<th>72 kHz</th>
<th>72 kHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piston Ceramic Size OD:</td>
<td>9.5 cm</td>
<td>9.5 cm</td>
<td>9.5 cm</td>
<td>9.5 cm</td>
<td>9.5 cm</td>
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<tr>
<td>Beam widths (2 way):</td>
<td>8.0º</td>
<td>8.0º</td>
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<tr>
<td>Beam Spacing:</td>
<td>3 cm</td>
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<td>3 cm</td>
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</table>

**Doppler Array Transducer Size OD:**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>OD (Nominal)</th>
<th>Frequency</th>
<th>OD (Nominal)</th>
<th>Frequency</th>
<th>OD (Nominal)</th>
<th>Frequency</th>
<th>OD (Nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>72 kHz</td>
<td>15.6&quot;</td>
<td>72 kHz</td>
<td>15.6&quot;</td>
<td>72 kHz</td>
<td>15.6&quot;</td>
<td>72 kHz</td>
<td>15.6&quot;</td>
</tr>
</tbody>
</table>

**Beam Spacing:**

- User selectable at 15º and 30º for each measurement

<table>
<thead>
<tr>
<th>Velocity Range</th>
<th>Resolution</th>
<th>Number of Cells</th>
<th>Cell Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>±20 m/s, ±5 m/s typical</td>
<td>100 cells</td>
<td>up to 300</td>
<td>16 m typical (16 cm minimum)</td>
</tr>
</tbody>
</table>

**Current Profiling:**

- Maximum Range:
  - 150 kHz: 473 m
  - 72 kHz: 330 m

- Long-Term Accuracy (High Accuracy):
  - ±1.0%, ±2 mm/s

- Long-Term Accuracy (Low Accuracy):
  - ±0.7%, ±0.2 mm/s

**Single-Ping Precision:**

- BB: ± 1 cm/sec for 30º beams; ± 2 cm/sec for 15º beams

**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

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**Sensors:**

- Compass: Range/Accuracy/Resolution: ±0.3º RMS / ±0.1º
- Altitude: Range/Accuracy/Resolution: ±1-meter RMS / ±0.1-meter
- Water Temp: Range/Accuracy/Resolution: ±0.5°C, ±0.1°C
- Pressure: Range/Accuracy: ±0.01% of Full Scale

**Materials Options:**

- Acetal / Aluminum / Titanium

**Input Power:**

- Voltage Range (Ext DC Input): 20 - 36 VDC
- Average Power: 50 W / 4 Amps for Profiling and 150 W / 25 Amps for Bottom Tracking

**Output Data:**

- Communication: RS485, RS422, 100BaseT Ethernet (self-contained only)
- Internal Recording: 32 GByte
- Depth Rating: 500 m, 1600 m, 3000 m and 6000 m

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