



RiverQ ADCP

Discrete Discharge Measurements 300kHz / 600kHz / 1200kHz

The Rowe Technologies Inc. **RiverQ** family of Acoustic Doppler Current profilers (ADCPs) represent the industry state of the art in acoustic Doppler technology. The compact form factor and powerful electronics, provide a versatile platform capable of producing precise bottom track and current profile measurements that computes instantaneous discharge.

As freshwater resources come under increasing pressure, management of water resources will become increasingly important. Rowe Technologies, Inc. **RiverQ** address concerns of end users by providing a robust and reliable tool for discharge measurement. 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, velocity and flow applications.

Rowe Technologies, Inc. provides flexible solutions ranging from the ADCP (for over-the-side applications) as well as an ADCP and trimaran (with integrated radios), and a completed solution for complex sites (ADCP, trimaran with radios, and DGPS). For large river mouths that exceed the trimaran limitations, a **USV** equipped with an ADCP provides autonomous access. Our **DP-Pro** software is easy to use and incorporates multiple languages with more languages added at user request. If you want to measure flow accurately and reliably, Rowe Technologies, Inc. has the solution for you.



300Kz / 600kHz

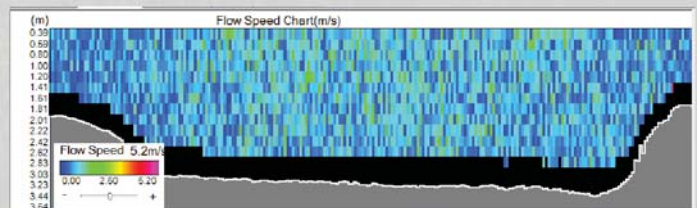
1200kHz



Trimaran with ADCP & integrated radios



USV with ADCP



Screen shot from **DP-Pro** software



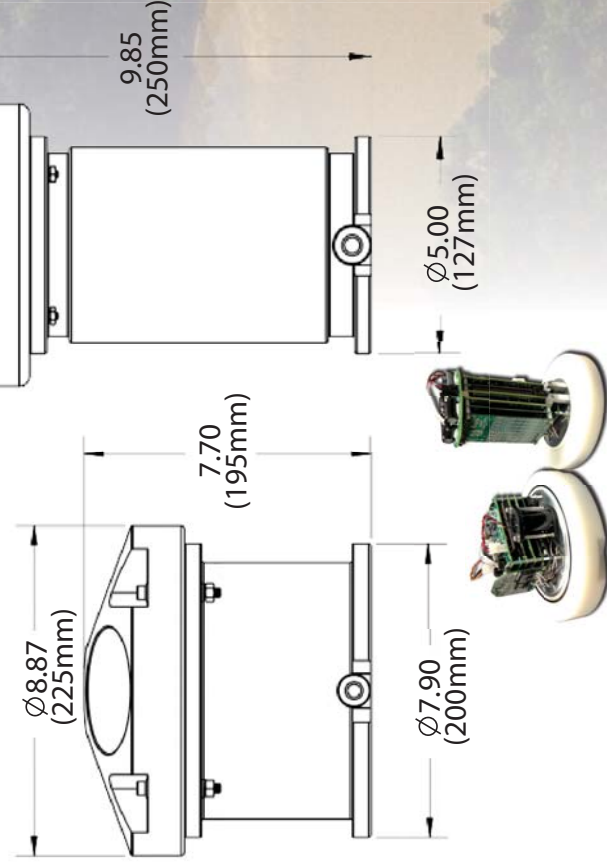
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Product Features:

- Highly accurate discharge measurements with the industry's most precise velocity measurements (0.01 cm/s)
- User Programmable acoustic transmission – Broad Band, Narrow Band, and Pulse-to-Pulse Coherent Technologies
- Sensors for heading, pitch, roll, water temp. and GPS (optional)
- Multi-language software, new languages added on request
- Tri-hull catamaran with integrated radios

Application Areas:

- Instantaneous/Discreet discharge measurements
- Bathymetric studies
- Current Profiling/Velocity mapping
- Water Resources management



Vertical or Horizontal Electronics Orientation

RiverQ

Specifications

Acoustic Frequency (nominal):	300 kHz	600 kHz	1200 kHz
Beam Angle and Spacing:	Four beams Inclined 20° in 90° azimuth increments (Janus)		
Current Profiling:	±20 m/sec Max; ±5 m/sec Typical		
Velocity Range:	0.01 cm/sec		
Velocity Resolution:	up to 200		
Number of Cells:	16 m / 4 cm		
Cell Size: Max/Min	8 m / 2 cm		
Ping Rate	up to 10 Hz		
Maximum Range; Narrow Band	150 m	90 m	40 m
Maximum Range; Broad Band	100 m	50 m	20 m
Long-Term Accuracy (High Accuracy Option)	± 0.70%, ±2 mm/s ± 0.50%, ±2 mm/s ± 0.50%, ±2 mm/s		
Long-Term Accuracy (Low Accuracy Option)	± 1.0%, ±2 mm/s		
BB Single-Ping Precision	3.5 cm/s @ 4m depth cell	3.5 cm/s @ 2m depth cell	3.5 cm/s @ 1m depth cell
NB Single-Ping Precision	20 cm/s @ 4m depth cell	20 cm/s @ 2m depth cell	20 cm/s @ 1m depth cell
Data Output Rate	1-2 Hz typical; 10 Hz max		
Bottom Tracking:			
Maximum Range:	300 m	120 m	50 m
Maximum Bottom Velocity	15 m/s		
Long-Term Accuracy (High Accuracy):	± 0.50%, ±2 mm.s ± 0.25%, ±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	±0.4 cm/sec @ 3 m/sec
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 to 70° C / ±0.15° C / 0.02° C		
Pressure: Range/Accuracy:	Selectable / ±0.10% Range		
Input Power:			
Voltage Range (Ext DC Input)	12 - 36 VDC		
Average Power (5% duty cycle) / Peak Current	8.6 W / 4 Amps	10 W / 4 Amps	8.6 W / 4 Amps
Output Data:			
Communications	RS485 (2400-230400 baud), RS232 (2400-921600 baud)		
Internal Recording	8 Gbyte		
Environmental Sensor			
Temperature	-5° C to 45° C (Operating), -30° C to 60° C (Storage)		
Specifications are subject to change without notice			