



# SeaWATCH

## Self-Contained ADCP

75KHZ / 300KHZ / 600KHZ / 1200KHZ

The Rowe Technologies *SeaWATCH* family of self-contained Acoustic Doppler Current Profilers (ADCPs) represent the industry state of the art in acoustic Doppler technology. The compact form factor, powerful electronics and robust signal processing, provide a versatile platform capable of producing precise current profile measurements over extended ranges.

Each unit in the family leverage a core, common set of electronics in a flexible form factor. This combined with multiple packaging options, provides for a cost-effective and extremely capable instrument to address a wide variety of oceanographic applications, from shallow water to full-ocean depth.

The *SeaWATCH* ADCP's are well suited for a variety of coastal and offshore oceanographic applications including meteorological and wave data acquisition, environmental management, coastal engineering site assessment, and oil/gas exploration and drilling. Systems are easily deployed on buoys, moorings, or sea-floor structures.



1200 KHz

600 KHz / 300 KHz

### Product Features

- *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*
- *User selectable signal processing options optimize acquisition parameters for precise, high accuracy measurements*
- *Low power, energy efficient operation facilitates long term deployments*
- *RTI's Windows™-based Pulse Software included for data display and export.*

### Product Options

- *Wave data acquisition for computation of first order wave statistics*
- *Configuration to support direct-reading and self-contained applications in the same package.*
- *External battery pressure case options available*

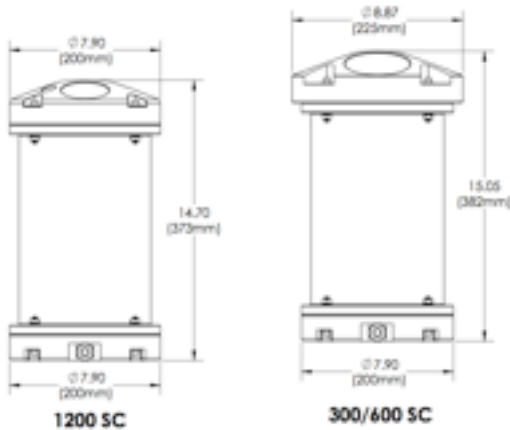


300KHz SC ADCP (rated for 6000m)  
with Extended Range Option

# ADCP Specifications

Specification subject to change without notice

Single Frequency (nominal)	1200 kHz	600 KHz	300 KHz	75KHz
<b>Transducer Type</b>	Doppler Piston			
<b>Beams</b>	Four beams Inclined 20° in 90° azimuth increments			Four beams Inclined 30°
<b>Velocity Range</b>	±20 m/sec Max; ±5 m/sec Typical			
<b>Resolution</b>	0.01 cm/sec			
<b>Number of Cells</b>	up to 200			
<b>Cell Size</b>	2.0 cm minimum			16m typical (16 cm min)
<b>Current Profiling:</b>				
Range:				
Narrow Band	0.2m - 30m	0.4m - 75m	0.6m - 150m	850m
Broad Band	0.2m - 20m	0.4m - 50m	0.6m - 100m	530m
Long-Term Accuracy (High Accuracy)	± 0.25%, ±2 mm/s		± 0.7%, ±2 mm/s	±1.0%, ±5 mm/s
Long-Term Accuracy (Low Accuracy)	±1.0%, ±2 mm/s			±1.0%, ±5 mm/s
BB Single-Ping Precision	3.5 cm/s @ 1m cell depth; ±5 m/sec max velocity	3.5 cm/s @ 2m cell depth; ±5 m/sec max velocity	3.5 cm/s @ 4m cell depth; ±5 m/sec max velocity	3.5 cm/s @ 24m cell depth; ±5 m/sec max velocity
NB Single-Ping Precision	20 cm/s @1m cell depth; ±5 m/sec max velocity	20 cm/s @2m cell depth; ±5 m/sec max velocity	20 cm/s @4m cell depth; ±5 m/sec max velocity	20 cm/s @24m cell depth; ±5 m/sec max velocity
Data Output Rate	1-2 Hz typical; 10 Hz max	1-2 Hz typical; 10 Hz max	1-2 Hz typical; 10 Hz max	1 Hz max
<b>Bottom Tracking</b>				
Range:				
	0.2m- 50m	0.4m- 130m	0.6m- 300m	1300m
Velocity Accuracy (High Accuracy)	± 0.25%, ±2 mm/s		± 0.70%, ±2 mm/s	± 1.0%, ±5 mm/s
Single-Ping Precision	±0.4 cm/sec @ 3 m/sec	±0.5 cm/sec @ 3 m/sec	±0.6 cm/sec @ 3 m/sec	< 1 cm/sec
Resolution	0.01 cm/sec			
<b>Sensors</b>				
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/Res	-5C-70C / ± 0.15C / 0.001C			
Pressure: Range/Accuracy	Selectable / ±0.10% Range			
<b>Materials Options</b>	Plastic/Aluminum			
<b>Input Power:</b>				
Voltage Range (Ext DC Input)	11 - 36 VDC	11 - 36 VDC	11 - 36 VDC	20 - 30 VDC
Power/Peak Current	4W typical	7W typical	11W typical	100W typical
<b>Output Data:</b>				
Communications	RS485, RS232, 100BaseT Ethernet			
Internal Recording	8 GByte			
<b>Environmental</b>				
Temperature	-5°C to 45°C (Operating), -30°C to 60°C (Storage)			
Depth Rating	50m (1200KHz only), 300 m, 1000m, 3000m, and 6000m			3000m, 6000m



6000m rated 1200KHz  
Self Contained ADCP



Deep water (6000m) Extended Range  
300KHz ADCPs ready for deployment