

FlowQuest 2000

Acoustic Current Profiler



- **2 MHz Operating Frequency**
- **Highly Robust Acoustic Doppler Technology**
- **Significantly Longer Range When Compared Against Similar Products**
- **Highly User Friendly And Cost Competitive**
- **Standard Depth 800 Meters**
- **Optional Depth 1500, 3000 or 6000 Meters**
- **Bottom Tracking Option For Vessel-Mounted Applications**
- **Optional Discharge Measurement Function**
- **Very Short Blank Distance**
- **Data Fusion Function To Interface To Multiple Third Party Sensors**
- **Integrated LinkQuest High Speed Acoustic Modem**
- **Integrated Relocation Transponder**
- **Low Power Consumption DSP Technology**
- **Light Weight and Compact**

FlowQuest 2000 system is a member of the FlowQuest Acoustic Current Profiler line manufactured by LinkQuest Inc., a company renowned for its innovation, capability and product quality. The FlowQuest 2000 current profiler is highly accurate with very short blank distance. It is small and light weight. The FlowQuest 2000 system is ideal for measuring currents and flows in oceans, harbors, lakes and rivers, and for measuring river and water channel discharge from very shallow to medium water depths.

LinkQuest Inc.

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FlowQuest 2000

Acoustic Current Profiler Specifications

Water Profiling Range and Depth

Frequency	2 MHz
Maximum Range	20 m
Maximum Cell size	1 m
Standard Depth	800 m
Optional Depth	1500, 3000 or 6000 m
Blank Distance	0.2 m (standard) 0.1 m (optional. 100 m depth rated)

Velocity Specifications

Accuracy	0.25% \pm 2.0 mm/s
Cell size	0.125 – 1 m
Maximum Water Velocity	20 knots
Number of Cells	170
Maximum Ping Rate	10/second

Power

Maximum Transmit	20 watts
Low Power Transmit	6 watts
Receiver Mode	0.9 watt
Sleep Mode	2.5 mwatts

Hardware

Transducer:	4 Beam Convex
Transducer Beam Angle:	22 degrees
Housing:	Anodized Aluminum
Communication:	RS232 (RS422 optional)
Internal Compact Flash Card:	1 Gbytes (standard) 2 or 4 Gbytes (optional)

Bottom Tracking Option

Maximum Altitude	30 m
Minimum Altitude	0.2 m
Accuracy	1% \pm 1 mm/s

Standard Sensors

Compass	Accuracy: \pm 2 °
Tilt(pitch and roll)	\pm 0.5 ° up to \pm 15 °
Temperature	Accuracy: \pm 0.4°C (standard) from -5°C to 45°C Accuracy: \pm 0.1°C (optional)

Software

FlowQuest Studio Windows software for real-time current monitoring and off-line data analysis and display.

Options

Discharge Measurement Function

Calculate the sectional discharge and the total discharge in real-time in rivers, estuaries, natural streams and constructed channels based on advanced algorithms, models and measurements of the water velocities, the ship's velocities, the depth and other related information.

Depth rating	100 m
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Maximum Range	20 m
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Minimum Range	0.45 m (velocity measurement based) 0.1 m (model extrapolation based)
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Data Fusion Function

Interface to and log data from up to 7 third-party instruments such as CTD, precision depth sensor, water quality monitoring instruments, nutrition and chemical analyzers through RS232 serial ports. Sample up to 4 analog inputs simultaneously.

High Speed Acoustic Modem

Seamlessly integrated with LinkQuest high speed underwater acoustic modem (up to 38400 baud) for real-time monitoring or periodic data collection.

Relocation Transponder

Relocate the instrument after it moves away from the original deployment site. The Windows Relocation software, integrating with a GPS, shows the new position of the FlowQuest profiler in longitude and latitude.

Weight and Dimension

	With One Battery Pack	Without Internal Battery
Weight In Air	8.9 kg	3.2 kg
Weight In Water	4.1 kg	1.4 kg
Length	70.0 cm	21.0 cm
Diameter	12.6 cm	12.6 cm

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