

FlowQuest 150

Long-range Acoustic Current Profiler



- Range Up To 500 Meters
- 150 kHz 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
- Data Fusion Function To Interface To Multiple Third Party Sensors
- Integrated LinkQuest High Speed Acoustic Modem
- Integrated Relocation Transponder
- Low Power Consumption DSP Technology

FlowQuest 150 is a long-range Acoustic Current Profiler manufactured by LinkQuest Inc., a company renowned for its innovation, capability and product quality. The FlowQuest 150 current profiler is ideal for measuring currents and flows in deep oceans. With its capability for significantly longer range, standard deepwater depth rating and seamless integration with third-party sensors and LinkQuest acoustic modems, the FlowQuest system is not just a current profiler. It also serves as a focal point for your underwater deployments.

LinkQuest Inc.

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FlowQuest 150

Acoustic Current Profiler Specifications

Water Profiling Range and Depth

Frequency	150 kHz
Maximum Range	500 m
Maximum Cell size	16 m
Standard Depth	800 m
Optional Depth	1500, 3000 or 6000 m
Maximum Transmit	400 watts
Blank Distance	2.8 m

Velocity Specifications

Accuracy	$\pm 1\% \pm 5$ mm/s
Cell size	2 – 16 m
Maximum Water Velocity	20 knots
Number of Cells	170
Maximum Ping Rate	2/second

Hardware

Transducer: 4 Beam Convex

Transducer Beam Angle: 22 degrees

Housing: Anodized Aluminum

Communication: RS422 or RS232

Internal Compact Flash Card: 1 Gbytes (standard)
2 or 4 Gbytes (optional)

Weight and Dimension

Frequency	150 kHz
Transducer Assembly Diameter	40 cm
Housing Diameter	20 cm
Overall Length	25 cm
Weight In Air	22.7 kg
Weight In Water	13.6 kg

(Based on a unit with no internal battery pack. Length and weight change with internal battery packs.)

Standard Sensors

Temperature:

Accuracy: $\pm 0.4^\circ\text{C}$ Range: -5°C to 45°C

Tilt:

Accuracy: $\pm 0.5^\circ$ Range: -15° to 15°

Compass:

Accuracy: $\pm 2^\circ$ Maximum Tilt: $\pm 15^\circ$

Software

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

Options

Bottom Tracking

Frequency	150 kHz
Maximum Altitude	600 m
Minimum Altitude	1.6 m
Accuracy	$\pm 0.8\% \pm 4$ mm/s

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 16 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.

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