

Workhorse H-ADCP

300-kHz LONG-RANGE HORIZONTAL ADCP

NOW WITH DIRECTIONAL WAVES MEASUREMENT CAPABILITY!

1° beamwidths for unmatched long-range data

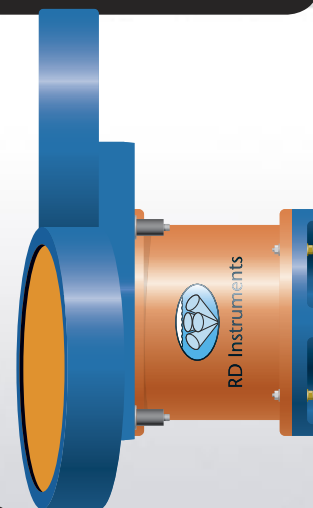
RD Instruments, the leader in Doppler profiling technology, has developed the 300-kHz long-range **Horizontal Acoustic Doppler Current Profiler (H-ADCP)**. The H-ADCP is an acoustic monitoring system that “looks” out horizontally from its mounting structure to measure near-surface water currents and multi-directional waves.

This revolutionary tool uses patented **BroadBand signal processing** to obtain an optimal combination of range, resolution and data quality, which simply cannot be replicated using NarrowBand products. The unit measures currents at 128 individual points at up to 200 meters horizontal range, offering a clear illustration of the complete flow structure.

The Workhorse H-ADCP allows your personnel to easily and effectively monitor real-time currents, as well as wave height and direction, providing vital information for both operational decision-making, and navigational safety.

The 300-kHz H-ADCP is ideal for use:

- **On offshore platforms** for the collection of surface-current and multi-directional wave data.
- **Installed in large rivers, ports, and harbors** for monitoring current and multi-directional waves affecting vessel maneuvering and safety.



The Workhorse H-ADCP provides:

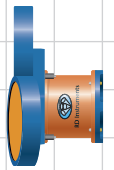
- **Increased Range:** 300-kHz frequency and narrow <math><1^\circ</math> beam work together to ensure an extended profiling range of 200 meters or more.
- **Increased Data:** Acoustic Doppler technology provides users with the capability to measure from 1 to 128 points, providing exponentially more data than a single point instrument.
- **Real-Time Data:** Easily installed, the H-ADCP provides unobtrusive real-time data—for real-time decision-making.
- **Robust Construction:** Designed so that no calibration is ever required and constructed to allow installations in the most hostile environments.
- **Ease of Operation:** Pre-configured for simple operation, the H-ADCP ensures optimum performance with a minimal learning curve.
- **Wave monitoring capability:** The H-ADCP can also be upgraded to measure wave height and direction, providing a complete monitoring solution.



RD Instruments
Acoustic Doppler Solutions

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Technical Specifications

Range

Typical max. range 200m

Profile Parameters

Velocity accuracy $\pm 0.5\%$ of water velocity relative to H-ADCP $\pm 0.5\text{cm/sec}$

Velocity resolution 0.1cm/s

Velocity range $\pm 5\text{m/s}$ (default); $\pm 10\text{m/s}$ (maximum)

Number of depth cells 1–128

Transducer and Hardware

Beam width $< 1^\circ$

Beam angle 20°

Configuration 3-beam, convex

Communications Serial port is switch-selectable for RS-232 or RS-422, ASCII or binary output at 1200–115,200 baud

Standard Sensors

Temperature (mounted on transducer):

Range: -5° to 45°C

Precision: $\pm 0.4^\circ\text{C}$

Resolution: 0.01°

Compass (fluxgate type, includes built-in field calibration feature):

Accuracy: $\pm 2^\circ$

Precision: $\pm 0.5^\circ$

Resolution: 0.01°

Maximum tilt: $\pm 15^\circ$

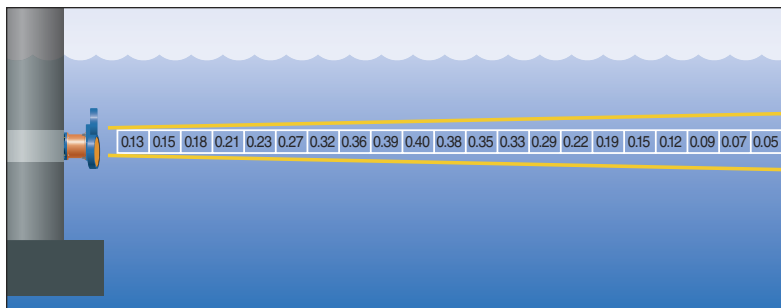
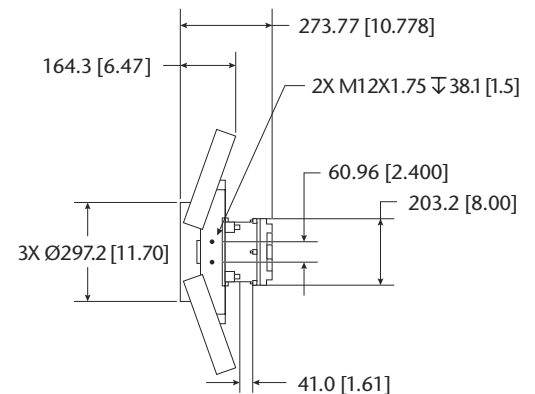
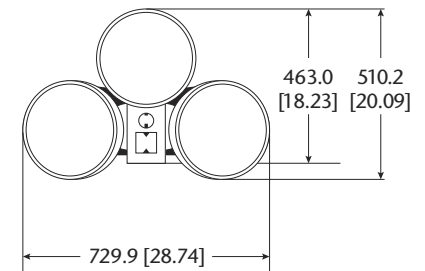
Note: @ 60° magnetic dip angle. 0.5G total field

Upgrades Available

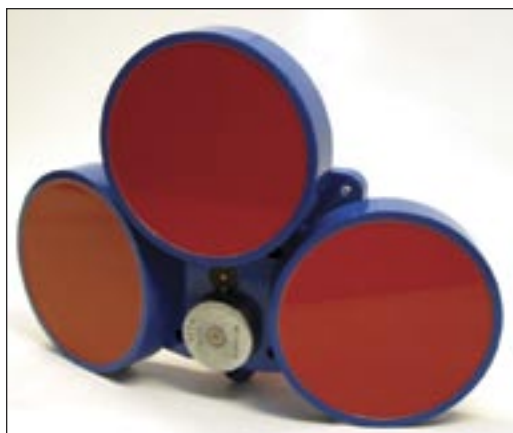
- Memory: 2 PCMCIA slots, total 2GB
- Pressure sensor

Dimensions

all in mm [inches]



H-ADCP looks horizontally across a water body, measuring currents and directional waves at numerous locations.



RD Instruments

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RD Instruments

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