

Current Profiling Solutions

PROVEN, CAPABLE AND VERSATILE ACOUSTIC DOPPLER SYSTEMS

xylem
Let's Solve Water

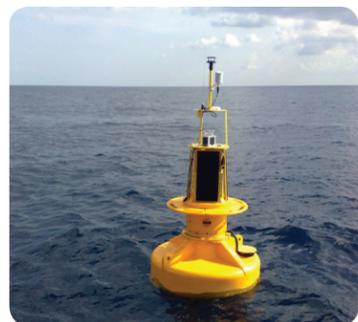
	Max Profiling Range	Minimum Cell Size	Minimum Blanking Distance	Max. no. of Cells	Velocity Range	Max. Depth	Moving Boat Current Surveys	Waves	Pressure	Vertical Beam	Mooring Line Applications	Dynamic Cell or Profile	Water Quality Parameters
250 kHz ADP	180m	2.0m	1.5m	100	10m/s	500m	No	non-directional	optional	No	Yes	No	Turb, Cond
250 kHz SL-ADP	180m	2.0m	1.5m	100	10m/s	500m	No	non-directional	optional	No	No	No	Turb, Cond
500 kHz ADP	120m	1.0m	1.0m	100	10m/s	500m	Yes	directional, non-directional	optional	No	Yes	No	Turb, Cond
500 kHz SL-ADP	120m	1.0m	1.0m	100	10m/s	500m	No	non-directional	optional	No	No	No	Turb, Cond
500 kHz SonTek-SL	120m	1.5m	1.5m	10 + 1	6m/s	20m	No	non-directional	standard	Yes	No	Yes	No
600 kHz SeaguardII DCP	BB 70m NB 80m	0.5m	1.0m	75 + 50 + 25	BB 4m/s NB 10m/s	300m, 3000m, 4500m, 6000m	No	non-directional	optional	No	Yes	Yes	Multi-Parameter
750 kHz Argonaut-XR	40	0.80m	0.80m	10 + 1	6m/s	200m	No	non-directional	standard	No	No	Yes	Cond
1.0 MHz ADP	35m	0.40m	0.7m	100	10m/s	500m	Yes	directional, non-directional	optional	No	Yes	No	Turb, Cond
1.5 MHz Mini-ADP	25m	0.25m	0.40m	100	10m/s	500m	Yes	directional, non-directional	optional	No	Yes	No	Turb, Cond
1.5 MHz SonTek-SL 3G	20m	0.16m	0.20m	128 + 1	7m/s	30m	No	No	standard	Yes	No	Yes	No
1.5 MHz Argonaut-XR	20.0m	0.40m	0.50m	10 + 1	6m/s	30m	No	non-directional	standard	No	No	Yes	Cond
3.0 MHz Argonaut-XR	6.0m	0.20m	0.20m	10 + 1	6m/s	10m	No	non-directional	standard	No	No	Yes	Cond
HydroSurveyor 3.0 MHz/1.0 MHz/500 kHz	40m	0.02m	0.06m	128	10 m/s	No	Yes	No	No	Yes	No	Yes	No

Turb=Turbidity Cond=Conductivity NB=Narrow Band BB=Broadband

High performance and accuracy is the trademark of Xylem's wide range of multi-purpose oceanographic profiling systems. The development of new and exciting instruments is driven by a skilled team of engineers with backgrounds in almost every aspect of oceanographic data collection and research. These developments have led to revolutionary changes in the methods and variety of oceanographic data that can be collected.

Xylem profilers are not only highly accurate and versatile, but are easy to install and maintain as well. Our instruments are built to handle harsh environmental conditions and have been designed for practical system installation.

Here are examples of the deployments used most in the oceanographic data collection community:



Buoy Deployment

Valued for ease of deployment and servicing, buoys offer several advantages over other architecture for long-term data collection:

- Solar power capability
- Real-time data acquisition and telemetry
- Met sensor integration
- Near-surface velocity profiles



Bottom Mounted

When buoy deployment is not practical, select bottom-mounted profilers for applications where considerations include:

- Rough sea conditions
- Long-term sea floor studies
- Vandalism concerns
- Need for wave data



Moving Boat Applications

Mounting an ADCP on a moving vessel is the best way to measure vertical current profiles across a large area. Boat-mounting can provide:

- Flexibility to collect data at any location
- Bathymetry and velocity profiling in a single instrument
- Both bottom track and GPS navigation



Side-Looking Installation

Side-looking systems were specifically designed for horizontal measurement applications, and can be easily installed on the side of any wharf, bridge abutment, piling or any other vertical structure. Typical applications include:

- Vessel traffic systems
- Channel flow
- Ship berthing
- Tides and current monitoring



Mooring Systems

Mooring deployments offer the ultimate flexibility in profiling at specific depths in the water column. Other advantages include:

- Up or downward profiling - or both at the same time!
- Flexibility to add additional sensors or ADCPs
- Alleviate vandalism concerns

Coastal OPEN OCEAN Ports Harbors



The **Aanderaa DCPS** current sensor and **SeaGuardII DCP** complete self-recording instrument feature innovative development of the acoustic profiling capacity and an exceptional ability to collect high quality current information on moving and tilting moorings. They integrate unique real time features to meet your application needs. The SeaGuard series is based on the SeaGuard data logger platform and the Broadband Doppler Current Sensor.



The SonTek **Acoustic Doppler Profiler (ADP®)** is a high-performance, 3-axis (3D) water current profiler that is accurate, reliable, and easy to use. The ADP uses state-of-the-art transducers and electronics designed to reduce side-lobe interference problems that plague other current profilers. This allows the ADP to make the very near-boundary (surface or bottom) current measurements critical to shallow water applications. The 1.5-MHz profiler is available as a Mini-ADP featuring a compact transducer head designed for applications where small size is critical.



Designed specifically for side mounting on bridges, canal walls, offshore platforms etc., the **SonTek-SL and SL ADP's** make installation easy. These side-looking systems from Xylem have earned worldwide acceptance as a long-term monitoring solution. Now, with two new (3G) models turbo-charged by our proprietary **SmartPulseHD®**, the SonTek-SL features accessories, mounting options, software, and a variety of integration formats to ensure it fits your application.



The SonTek **Argonaut®-XR** offers exceptional value for near shore deployments or for near-bottom velocity profiles in depths up to 200 m. Designed specifically for bottom mounting, the XR features a main measurement cell that can be configured to dynamically adjust its size or location as the water level changes ("Auto-Tide"), independent of the velocity profile. Its small size, rugged build, and flexible system architecture make the XR attractive for both real-time operation and autonomous deployments.



The SonTek **HydroSurveyor-M9** is a system designed to collect bathymetric, water column velocity profile, and acoustic bottom tracking data as part of a hydrographic survey. The two key components of the system are the HydroSurveyor Acoustic Doppler Profiler (ADP®) platform, and the powerful, yet user-friendly, data collection software. Now comes standard with HYPACK and conveniently integrates with the **CastAway®-CTD**.



Xylem provides solutions for environmental research used in oceanographic, hydrographic, river, lake and climate research markets. As part of the Xylem family, **SonTek** and **Aanderaa** deliver the most technologically advanced self-contained and integrated remote underwater observation systems, environmental monitoring buoys, telemetry, water quality and velocity sensors in the world. Our employees bring a broad range of applications expertise with a strong focus on finding local solutions to the world's most challenging water problems.

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