

# xylem

Environmental Solutions

## Argonaut-ADV<sup>®</sup>

ULTRA-PRECISE 3-D VELOCITY MEASUREMENT



The **Argonaut-ADV** takes SonTek's renowned ADV technology and makes it practical and affordable for deployments in lakes, streams or along the coast. Also, its low velocity/shallow water capability make it the ultimate solution for marsh and wetland studies. And, the boundary detection feature can aid in sediment transport monitoring.

The unique Auto-velocity range scaling feature eliminates the need to pre-set the velocity range - it's all done automatically by the instrument. A built-in recorder, SDI-12 interface, and battery enable you to either deploy the Argonaut-ADV for autonomous operation or connect it to a data logger for real-time data reporting.

### Features Include:

- Low velocity with resolution of 0.0001 m/s
- Shallow water (down to 2-3 cm with 2-D probe option)
- High battery capacity for long deployments
- RS-232 and SDI-12 output standard
- Distance-to-boundary monitoring



Quick access to video and training resources at:  
[SonTek.com/Videos](http://SonTek.com/Videos)



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## Specifications

<b>Maximum sample rate</b>	1 Hz
<b>Sample volume distance</b>	10cm
<b>Sample volume size</b>	0.25cc
<b>Maximum velocity</b>	4.5 m/s
<b>Acoustic altimetry limit</b>	30cm
<b>Auto-velocity range</b>	Yes
<b>Maximum depth</b>	60m
<b>Sensor geometries</b>	3D down, 2D side
<b>Stem configuration</b>	15 cm stem
<b>Recorder Size</b>	4MB
<b>Pressure Sensor</b>	Piezoresistive strain gauge (0.1% accuracy)
<b>Operating Temperature</b>	-5 to 40 °C
<b>Storage Temperature</b>	-10 to 50 °C

<b>Temperature</b>	
Accuracy	+/- 0.1 °C
Resolution	0.01 °C
<b>Velocity</b>	
Accuracy	+/- 1% of measured velocity, +/- 0.25cm/s
Resolution	0.01 cm/s
<b>Compass/Tilt</b>	
Heading Accuracy	+/- 2°
Heading Resolution	0.1°
Tilt Accuracy	+/- 1°
Tilt Resolution	0.1°
<b>Power</b>	
Input Voltage	7-15 VDC
Power Consumption	0.2-0.5W
Battery Pack Capacity	200 WH (internal, standard) 500 WH (external, optional)

## Standard Features

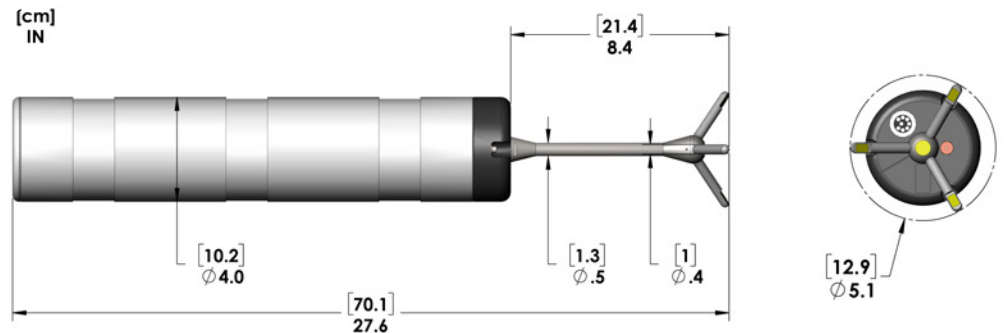
- SonTek Auto-velocity range capability
- Distance to boundary (acoustic altimetry)
- 3-D down looking probe
- RS-232/SDI-12 output
- Temperature sensor
- Internal 4 MB recorder
- Internal battery pack
- Solid state compass/tilt sensor
- ViewArgonaut Windows software for data analysis, processing and exporting
- Remote sampling volume of 0.25 cc located 10 cm from center transducer

## Optional Features

- 2-D side-looking ADV probe for shallow water (as little as 2-3 cm) deployments
- High Capacity External battery
- RS-422 output
- Pressure sensor

## Applications

- Springs & Shallow Streams
- Wetlands & Marshes
- Bedform Monitoring
- Coastal & Lake Studies
- Aquaculture & Fisheries



Auto-velocity range scaling feature eliminates the need to pre-set the velocity range.



A flume built for a study on nutrient uptake shelters. Three ADVs study the movement of water and sediment through Louisiana's Caernarvon Diversion. Pulse-coherent technology offers highly accurate readings even in extremely shallow or slow-moving water.

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Sound Principles.  
Good Advice.



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