

VOYAGER SERIES

Voyager TK5-2M

Acoustic Doppler Current Profiler (ADCP)

Portable discharge measurement for streams, small rivers, and canals

KEY FEATURES

- ✓ 5 acoustic beams
- ✓ Velocity Operating Frequency: 2 MHz
- ✓ WayWise™ adaptive sampling
 - Automatically selects the acoustic processing mode and cell size from measured water depth and flow velocity
- ✓ Maximum Profiling Range (Distance): 16 m
- ✓ Seamless integration with HyFlow data analysis software

VELOCITY SPECIFICATIONS

Velocity Profiling Range	±20 m/s
Velocity Accuracy	0.25% of water velocity relative to ADCP, ± 2.0 mm/s
Maximum Velocity	±10.28 m/s (max 20 m/s)
Maximum Profiling Range (Distance)	16 m
Cell Size	0.025 m (water depth < 0.8 m) 0.125–1 m (water depth > 0.8 m)
Blanking Distance	0.05 m
Number of Cells	Auto, 256 maximum
Minimum Measurement Depth	0.2 m
Operation Mode	Broadband / Narrowband / Pulse-coherent (selects mode and cell size by water depth and velocity)
Data output rate	Up to 50 Hz acoustic sampling

BOTTOM TRACK SPECIFICATIONS

Profiling Range	16 m max (20 m independent beam); 0.1 m min
Accuracy	1% ± 1 mm/s
Velocity Range	±20 m/s
Resolution	1 mm/s

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DEPTH SPECIFICATIONS

Profiling Range	16 m max (20 m independent beam); 0.1 m min
Accuracy	±1%
Resolution	0.001 m

STANDARD SENSOR SPECIFICATIONS

	Temperature	Tilt	Compass
Range	-5°C to 45°C	±15°	0 - 360°
Accuracy	±0.01°C	±0.5°	±2°

TRANSDUCER & HARDWARE SPECIFICATIONS

Number of Acoustic Beams	5
Beam Configuration	Velocity beams at 22°, 1.4° beamwidth
Internal Memory	None

PHYSICAL SPECIFICATIONS

Operating Temperature	-10°C to 70°C
Weight in Air	1.0 kg
Weight in Water	0.6 kg
Dimensions	63.5 mm diameter × 220 mm length
Housing Material	Anodized aluminum
Float Option	Optional compact monohull float (1.2 × 0.57 × 0.35 m), car-trunk portable

POWER & COMMUNICATION SPECIFICATIONS

Maximum Transmit Power	20 W
Low-power Transmit	3 W
Receiver Mode Power	3.8 W with 24V DC
Input Voltage	12–24V, recommended 24V DC
Communications	RS232 or RS422; GPS, RTK supported

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APPLICATIONS

- ✓ Portable discharge measurement on wadeable streams, small rivers, and canals
- ✓ Storm-event and high-flow discharge measurement
- ✓ Cross-section transects spanning shallow margins and mid-depth river channels
- ✓ Rating-curve development and verification gaugings
- ✓ Irrigation canal and artificial channel measurement
- ✓ Periodic field verification of fixed monitoring instruments and index-velocity ratings
- ✓ Bank- and bridge-operated tethered measurements at sites unsafe or impractical to occupy
- ✓ GNSS-referenced discharge measurement in moving-bed conditions
- ✓ Channel cross-section and monitoring-site reconnaissance surveys

HYFLOW SOFTWARE ECOSYSTEM

Every Voyager system integrates seamlessly with HyFlow software, delivering a complete workflow from field data collection to processed discharge results.

- ✓ Cross-platform ADCP data analysis software (Windows and Linux)
- ✓ Discharge computation and measurement review on the desktop
- ✓ Structured data exports for reporting and archival

On Roadmap (not yet available)

- Edge computing for real-time processing and automated gauging
- Cloud platform for data visualization, storage, and automated analytics
- Unified data platform — eliminate data silos across deployments