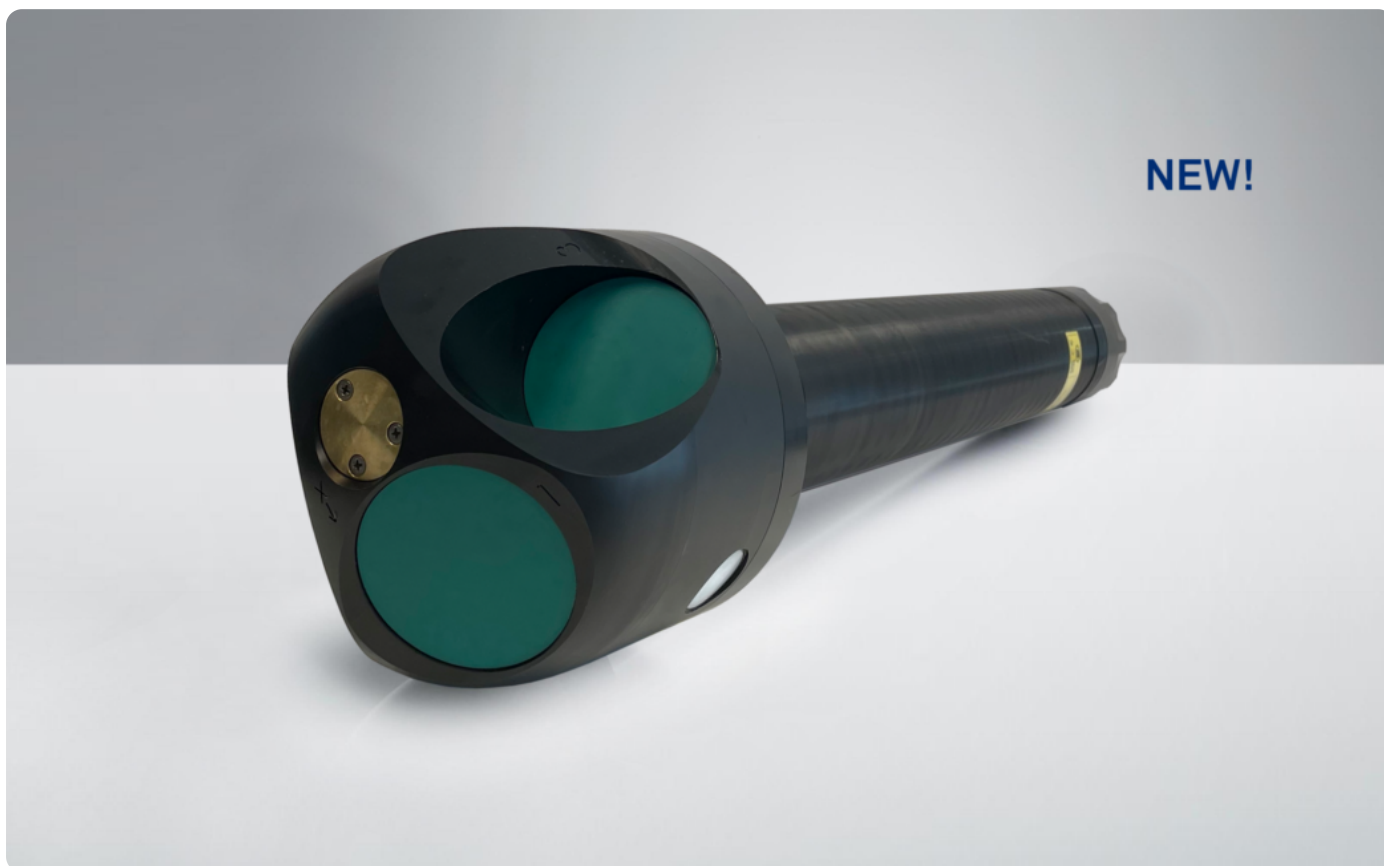


## Aquadopp Profiler 2 - 400 kHz



**Avec une portée de mesure jusqu'à 90 m. Idéal pour les applications nécessitant le courant moyen.**

The Aquadopp Profiler is a highly versatile Acoustic Doppler Current Profiler (ADCP) available in four profiling range options, from  $< 1$  m to  $> 85$  m. Designed for simple yet powerful operation, this current profiler is packed with features used by engineers and researchers to enable accurate and effective hydrodynamic data collection in a variety of environmental conditions.

## Highlights

- ✓ Up to 90 m current profiling range
- ✓ Ideal for mean current measurements
- ✓ Easy to operate and deploy

## Applications

- ✓ Mean flow measurements with high focus on ease of use and simplicity
- ✓ Measurements in flow regimes with strong variations in flow speeds
- ✓ Studies of tidal currents
- ✓ Measurements of combinations of waves and currents
- ✓ Mounted on surface buoys
- ✓ Suitable for wave buoys

## Technical specifications

### → Water velocity measurements

Nominal profiling range*	90 m
Cell size	1-8 m
Maximum number of cells	200
Minimum blanking	1 m
Velocity range (along beam)	±1 m/s, ±2.5 m/s, ±5 m/s
Accuracy	±1% of measured value ±0.5 cm/s
Velocity range (horizontal)	±2.3 m/s, ±5.75 m/s, ±11.5 m/s
Horizontal velocity precision**	Typ. 1cm/s
Maximum sampling rate (output)	1 Hz
Wave measurement	PUV (optional)

- Depending on scattering conditions

\*\* Consult instrument SW

### → Echo intensity

Sampling	Same as velocity
Resolution	0.5 dB
Dynamic range	90 dB
Transducer acoustic frequency	400 kHz
Number of beams	3
Beam width	1.9° (3.8° total)

### → Sensors

Temperature:

Temp. range	-4 to +40 °C
Temp. accuracy/resolution	0.1 °C/0.01 °C
Temp. time response	<1 min

Compass: Solid State Magnetometer

Accuracy/resolution <2° for tilt <30°/0.01°

Tilt: Solid State Accelerometer

Accuracy/resolution 0.2° for tilt <30°/0.01°

Maximum tilt Full 3D

Up or Down Automatic detect

Pressure: Piezoresistive

Range 30m/100m/500m

Accuracy/precision 0.5% FS / 0.005% of full scale

### → Data recording

Capacity	16 GB
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### → Real-time clock

Accuracy  $\pm 1$  min/year

Backup in absence of power 4 weeks

### → Data communications

I/O RS-422 (Inquire for RS-232)

Communication baud rate 9600 Baud-1.2 Mbaud (default 115200 Baud)

User control Nortek Deployment Software or direct ASCII commands, with binary or ASCII data output

### → Software

Operating system Agnostic

Functions Deployment planning, instrument configuration, data retrieval and conversion. Online data display.

### → Power

DC input 9-24 VDC

Absolute maximum DC input 26 VDC

Maximum peak current 4.5 A

Power consumption Consult Nortek Deployment Software

Sleep current < 10  $\mu$ A

Transmit power Adjustable

### → Batteries

Internal Battery Capacity 1-3x 50 Wh (Alkaline), 2-3x 165 Wh (Lithium), 1-3x 76 Wh (Li-Ion)

Battery weight 430 g per 50 Wh (Alkaline), 380 g per 165 Wh (Lithium), 300 g per 76 Wh (Li-Ion)

New battery voltage 13.5 VDC

### → Environmental

Operating temperature -5 to +40 °C

Storage temperature -20 to +60 °C

Shock and vibration Shock: IEC 60068-2-27, Vibration: IEC 60068-2-64

EMC EN IEC 61000-6-2:2019, EN IEC 61000-6-4:2019

Depth rating 500 m

### → Connectors

Bulkhead (Impulse) MCBH-8-FS Brass

Cable PMCIL-8-MP on 5 m (default) polyurethane cable

### → Materials

POM, Naval Brass, Titanium Gr. 5, Epoxy

### → Dimensions (see drawings for details)

Maximum diameter 75 mm

Maximum length 685 mm

## → Weight

Weight in air (without batteries) 3700 g

Weight in water (without batteries) 50 g

## → Head Configurations

S4VP Shallow water, 400 kHz, Vertical orientation, Profiler