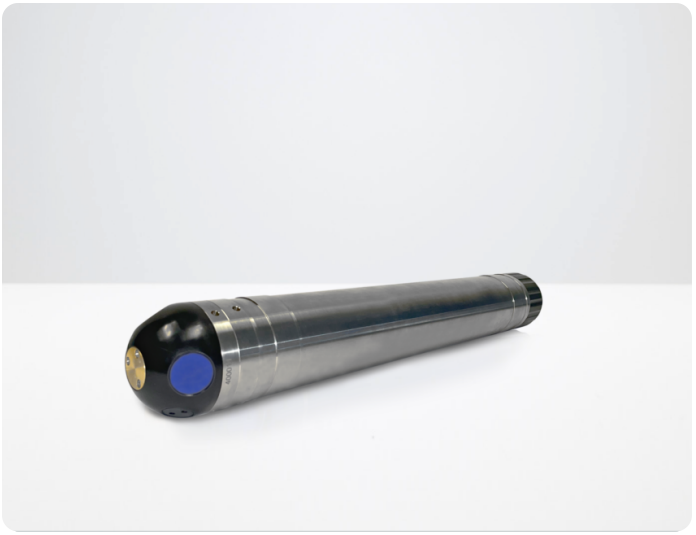
Aquadopp

6000 m, Generation 2

High-performance full ocean depth, single-point current meter with titanium housing



With all the robust and easy-to-use features and capabilities of the standard Aquadopp, the deepwater Aquadopp 6000 m current meter has been used and proven by oceanographers around the world for almost 20 years. Thanks to innovative data diagnostic features for challenging environments, it provides exceptionally high-quality 3D currents in a form factor that is easy to install in any type of mooring line configuration, or simply attached to a bottom or surface platform.

The 6000 m Aquadopp now offers 6% broadband measurements and “hibernation mode” between measurements, enabling precise data collection with lower power consumption. The upgraded deepwater Aquadopp design also offers increased internal battery storage, extending potential deployment duration.

See the details of the Generation 2 Aquadopp updates in the release notes here.

Download our guide to Aquadopp ADCPs here.

Highlights

- Single-point current meter
- Titanium housing for long-term deployments at full ocean depth
- Ideal for deep water moorings
- LED blinks when pinging for peace of mind during deployment

Applications

- Studies of deep-water currents
- Attached to mooring lines
- Combined with riser monitoring systems
- Near-bed current measurements from landers

Technical specifications

Water velocity measurements	
Cell size	0.75 m
Maximum number of cells	1
Blanking distance	0.1-5.0 m (user-selectable)
Velocity range (along beam)	User-selectable 1.0 to 5.0 m/s
Accuracy	±1% of measured value ±0.5 cm/s

Water velocity measurements

Horizontal velocity precision (consult instrument SW)	Typ. 1 cm/s
Maximum sampling rate (output)	1 Hz

Echo intensity

Sampling	Same as velocity
Resolution	0.5 dB
Dynamic range	70 dB
Transducer acoustic frequency	2 MHz
Number of beams	3 (see GA drawing for angles)
Beam width	0.85° (1.7° 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	6000 m
Accuracy/precision	0.5% FS / 0.005% of full scale

Digital inputs

No. of channels	1
Digital input format	MicroCat CTD

Data recording

Capacity	16 GB

Real-time clock

Accuracy	±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	Cross platform

Software

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

Power

DC input	9-24 VDC
Absolut maximum DC input	26 VDC
Maximum peak current	4.5 A
Power consumption	Consult Nortek Deployment Software
Sleep current	< 40 uA
Transmit power	Adjustable

Batteries

Internal battery capacity	1-3 x 50 Wh (Alkaline); 2-3 x 165 Wh (Lithium); 1-3 x 76 Wh (Li-ion)
Battery weight	430g per 50 Wh (Alkaline); 380g per 165 Wh (Lithium); 300g per 76 Wh (Li-ion)

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	6000m

Connectors

Bulkhead (Impulse)	MCBH-8-FS titanium
Cable	PMCIL-8-MP on 5m (default) polyurethane cable

Materials

Standard model	Titanium Gr. 5, POM, Naval Brass, epoxy

Dimensions (see drawings for details)

Maximum housing diameter	84 mm
Maximum length	623 mm

Weight

Weight in air (without batteries)	7600 g
Weight in water (without batteries)	4350 g

Arrangements

D2VC	Deep water, 2Mhz, Vertical orientation, Current meter