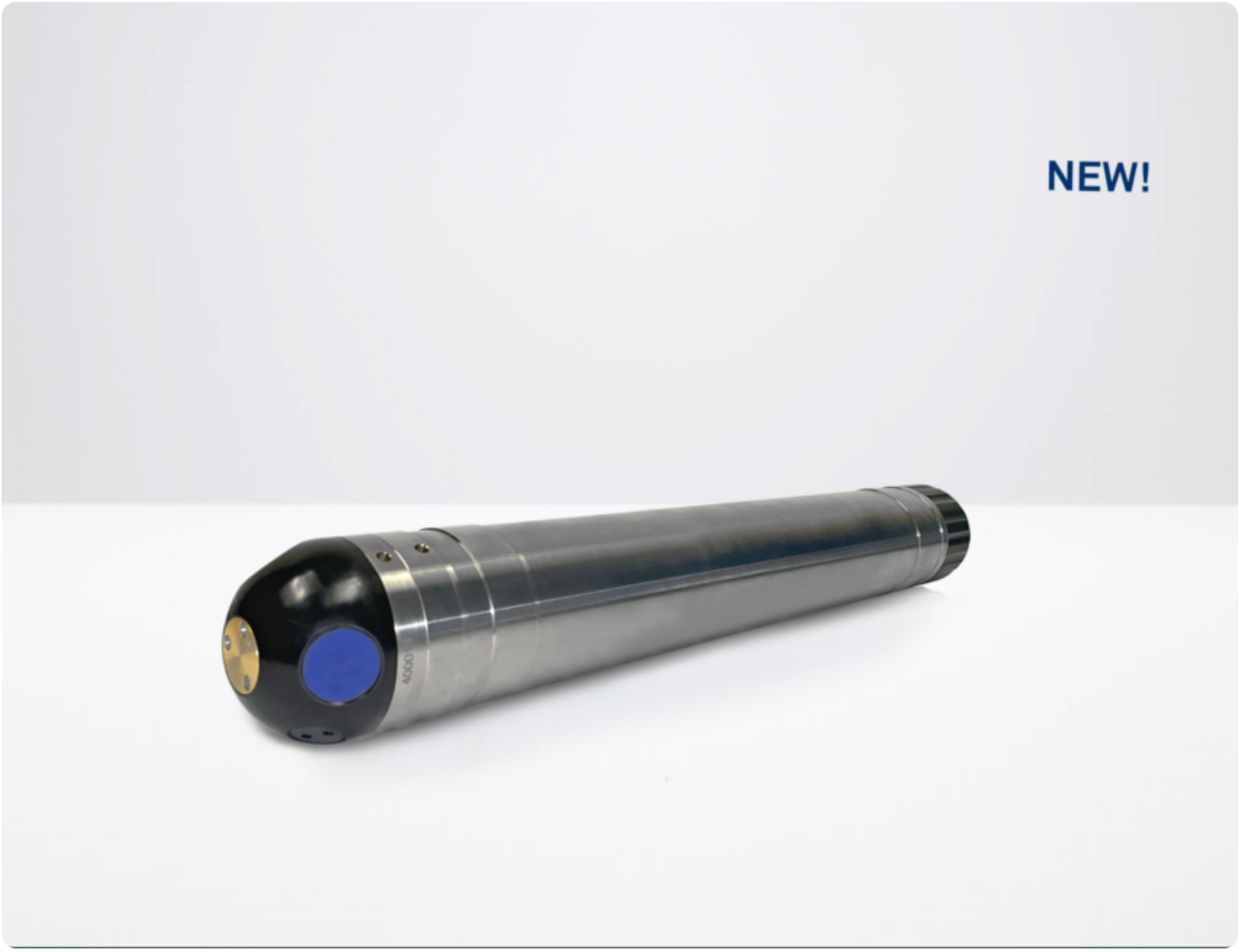
Aquadopp 2 - 6000 m



Courantomètre ponctuel grands fonds conçu pour les longs déploiements avec corps en titane

With all the 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.

Raw magnetometer data can be stored for post calibration of compass when used without the inductive modem option.

Highlights

- Full ocean-depth single-point current meter
- Titanium housing
- Diagnostics mode for mooring performance evaluation

Applications

- Studies of deep-water currents
- Studies of tidal currents
- Attached to mooring lines
- Measurements of unaffected currents from physical structures
- In conjunction with riser monitoring systems
- Alternative to conventional current meters with errors due to fouling
- Combination of currents and high-accuracy CTD data
- Near-bed current measurements from landers
- Deep ocean mining support

Technical specifications

→ Water velocity measurements	
Cell size	0.75 m
Maximum number of cells	1
Distance to measurement	1.0-6.0 m (user-selectable)
Velocity range	±1 m/s, ±2.5 m/s, ±5 m/s
Accuracy	±1% of measured value ±0.5 cm/s
Horizontal velocity precision (consult instrument SW)	Typ. 1 cm/s
Maximum sampling rate (output)	2 Hz
Internal sampling rate	4 Hz
→ Echo intensity	
Sampling	Same as velocity
Resolution	0.5 dB
Dynamic range	90 dB
Transducer acoustic frequency	2 MHz
Number of beams	3
Beam width	1.7°
→ 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	3D
Up or Down	Automatic detect
Pressure:	Piezoresistive
Range	6000 m
Accuracy/precision	0.25% 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
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
Absolut maximum DC input	26 VDC
Maximum peak current	4.5 A
Power consumption	Consult Nortek Deployment Software
Sleep current	< 40 uA
Transmit power	0.45-45 W, adjustable over 20 dB
→ Batteries	
Internal battery capacity	1-3 x 50 Wh (Alkaline); 1-3 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)
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 approval	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