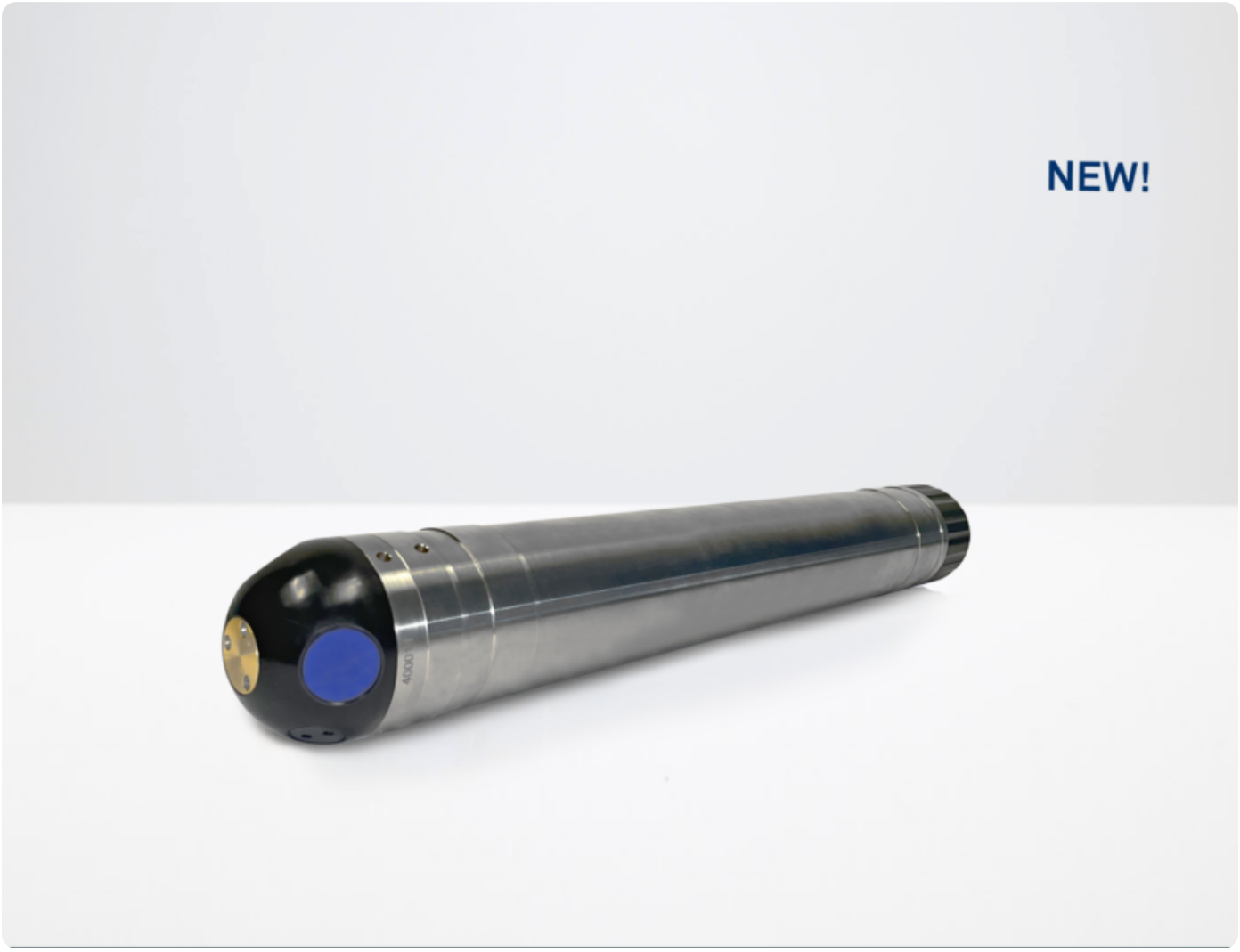
Aquadopp 2.0 - 6000 m



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

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.

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.

Highlights

- Single-point current meter capable of measuring at full ocean depth
- Titanium housing
- Diagnostics mode for mooring performance evaluation
- 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
Distance to measurement	1.0-6.0 m (user-selectable)
Velocity range	±1 m/s, ±2.5 m/s, ±5 m/s
Velocity range (horizontal)	±2.3 m/s, ±5.75 m/s, ±11.5 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)	1 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	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	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	< 10 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	
Weight in water (without batteries)	4350 g
→ Arrangements	
D2VC	Deep water, 2Mhz, Vertical orientation, Current meter