



# Aquadopp Profiler 1 MHz Z-Cell - Legacy



**This version of the Aquadopp Profiler Z-Cell is no longer available.**

Please see the [Aquadopp Profiler Z-Cell Generation 2](#).

This version of the Aquadopp remains functional and supported. Please visit our [support center](#) if you require assistance.

## Highlights

## Applications

## Technical specifications

Water velocity measurements	
Maximum profiling range	12-25 m
Cell size	0.3-4 m
Minimum blanking	0.20 m when profiling; 0 m when Z-Cell enabled
Maximum number of cells	96
Measurement cell position	N/A
Default position (along beam)	N/A
Velocity range	$\pm 10$ m/s
Accuracy	$\pm 1\%$ of measured value $\pm 0.5$ cm/s
Velocity precision	Consult instrument software
Maximum sampling rate (output)	1 Hz
Internal sampling rate	6 Hz

Z-Cell Properties- FOR Z-CELL 2	
Distance to measurement volume	0.05 - 2.5 m
Cell size	0.2 - 1.5 m
Velocity range (Horizontal)	$\pm 5$ m/s
Transducer acoustic frequency	2 MHz
Number of beams	2

Echo intensity (along slanted beams)	
Sampling	Same as velocity
Resolution	0.45 dB

## Echo intensity (along slanted beams)

Dynamic range	90 dB
Transducer acoustic frequency	1 MHz
Number of beams	3
Beam width	3.4°

## HR option (Z-Cell will be disabled)

Maximum profiling range	6 m
Cell size	20-300 mm
Minimum blanking	0.2 m
Maximum number of cells	128
Range/Velocity limitations	Product of profiling range and velocity should not exceed 1.0 m <sup>2</sup> /s
Accuracy	±1% of measured value ±0.5 cm/s
Max. sampling rate	1 Hz (continuous mode), 8 Hz (burst mode)"

## Sensors

Temperature:	Thermistor embedded in head
Temp. range	-4 to +40 °C
Temp. accuracy/resolution	0.1 °C/0.01 °C
Temp. time response	10 min
Compass:	Magnetometer
Accuracy/resolution	2°/0.1° for tilt < 20°
Tilt:	Liquid level
Accuracy/resolution	0.2°/0.1°
Maximum tilt	30°
Up or Down	Automatic detect
Pressure:	Piezoresistive
Range	0-100 m (inquire for options)
Accuracy/precision	0.5% FS / 0.005% of full scale

## Data recording

Capacity	9 MB, can add 4/16 GB
Data record	9*Ncells + 32 bytes
Diagnostics record	N/A
Wave record	Nsamples * 24 + 60 bytes
Mode	Stop when full (default) or wrap mode

## Real-time clock

Accuracy	±1 min/year
Backup in absence of power	4 weeks

## Data communications

I/O	RS-232 or RS-422
Communication baud rate	300-115200 Bd
Recorder download baud rate	600/1200 kBd for both RS-232 and RS-422
User control	Handled via "Aquadopp" software, ActiveX®function calls, or direct commands with binary or ASCII data output

## Software

Functions	Deployment planning, instrument configuration, data retrieval and conversion (for Windows®).
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## Power

DC input	9-15 V DC
Maximum peak current	3 A
Avg. power consumption	0.05 W
Sleep current	< 100 µA
Transmit power	0.3-20 W, 3 adjustable levels

## Batteries

Battery capacity	50 Wh (alkaline or Li-ion), 165 Wh (lithium), Single or dual
New battery voltage	13.5 V DC (alkaline)

## Environmental

Operating temperature	-5 to +40 °C
Storage temperature	-20 to +60 °C
Shock and vibration	IEC 721-3-7
EMC approval	IEC 61000
Depth rating	300 m

## Connectors

Bulkhead	MCBH-8-FS
Cable	PMCIL-8-MP on 10 m polyurethane cable

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## Weight

Weight in air	2.2 kg
Weight in water	0.2 kg