

2D Horizontal Profiler 400 kHz- Legacy - 300 m



**No longer available.
See new version.**

The image shows a 2D Horizontal Profiler, a cylindrical device with a white top section and a grey base. The top section is open, revealing two yellow, curved sensor heads. A cable is attached to the side of the base. The device is centered in a light grey, rounded rectangular frame.

This version of the 2D Horizontal Profiler is no longer available.

Please see the [2D Horizontal Profiler Generation 2](#).

This version of the 2D Horizontal Profiler remains functional and supported. Please visit our [support center](#) if you require assistance.

Highlights

Applications

Technical specifications

→ Water velocity measurements

Maximum profiling range	100-130 m
Cell size	1.0-8.0 m
Number of cells	Typical 20-40, max. 128
Velocity range	±10 m/s horizontal, ±5 m/s along beam
Accuracy	±1% of measured value ±0.5 cm/s
Velocity precision	Consult instrument software
Maximum output rate	1 Hz
Internal sampling rate	3 Hz

→ Echo intensity

Sampling	Same as velocity
Resolution	0.45 dB
Dynamic range	90 dB
Transducer acoustic frequency	400 kHz
Number of beams	2, slanted at 25°
Beam width	0.85° (1.7° total)
Beam width vertical beam	N/A

→ Wave measurement option (AST)

Maximum depth	N/A
Data types	N/A
Sampling rate velocity (output)	N/A
Sampling rate AST (output)	N/A
No. of samples per burst	N/A

→ Wave estimates

Range	N/A
Accuracy/resolution (Hs)	N/A
Accuracy/resolution (Dir)	N/A
Period range	N/A
Cut-off period (Hs)	N/A
Cut-off period (dir)	N/A

→ Sensors

Temperature:	Thermistor embedded in housing
Temp. range	-4 to +40 °C
Temp. accuracy/resolution	0.1 °C/0.01 °C
Temp. time response	< 5 min
Compass:	Magneto-resistive
Accuracy/resolution	2°/0.1° for tilt <15°

→ Sensors

Tilt:	Liquid level
Accuracy/resolution	0.2°/0.1°
Maximum tilt	30°
Up or Down	Automatic detect
Pressure:	Piezoresistive
Range	0-100 m
Accuracy	0.5% of full scale (optional 0.1% of full scale)
Resolution	0.005% of full scale

→ Analog inputs

No. of channels	2
Supply voltage to analog output devices	Three options selectable through firmware commands: 1) Battery voltage/500 mA, 2) +5 V/250 mA, 3) +12 V/100 mA
Voltage input	0-5 V
Resolution	16-bit A/D

→ Data recording

Capacity	9 MB, can add 4/16 GB
Profile record	Ncells*9 + 120 bytes
Wave record	N/A
Mode	Stop when full (default) or wrap mode

→ Real-time clock

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

→ Data communications

I/O	RS-232 or RS-422. Software supports most commercially available USB-RS-232 converters
Communication baud rate	300-115200 Bd
Recorder download baud rate	600/1200 kBd for both RS-232 and RS-422
User control	Handled via "AWAC" software, or ActiveX® controls.
Output formats	NMEA, Binary. Prolog provides same types also for processed wave and current data

→ Connectors

Bulkhead	MCBH-2-FS, MCBH-8-FS, optional Souriau M-series metal connector for online use
Cable	PMCIL-8-MP on 10 m polyurethane cable

→ Software

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

DC input	9-18 V DC
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→ Power

Maximum peak current	3 A
Avg. power consumption	Typical 1 W when sampling
Sleep current	< 100 μ A
Transmit power	1-30 W, 3 adjustable levels

→ Environmental

Operating temperature	-4 to +40 °C
Storage temperature	-20 to +60 °C
Shock and vibration	IEC 721-3-2
EMC approval	IEC 61000
Depth rating	300 m

→ Materials

Standard model	POM and polyurethane plastics with titanium fasteners
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→ Dimensions

Maximum diameter	306 mm
Maximum length	203 mm

→ Weight

Weight in air	8.8 kg
Weight in water	3.2 kg

→ Online cable

Polyurethane jacket, Shore D hardness, 13 mm in diameter, max 2 km. Inquire for longer cables