

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 slightly open, revealing a yellow interior. A cable is attached to the side of the base. The device is centered in the background of a light grey rectangular area.

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®) |
|-----------|---|

→ Power

| | |
|----------|-----------|
| DC input | 9-18 V DC |
|----------|-----------|

→ 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 |
|----------------|---|

→ 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