



Bathy2

The Bathy2 is an enhancement of the MIDAS Bathypack offering Valeport's proven construction survey industry standard sensors to generate precision Sound Velocity and Density profiles for highly accurate depth and height data.

Key features include interchangeable pressure sensors to maximise accuracy for depth application, external input from a Digiquartz pressure transducer and separate output for INS or other use.

Vibration & Shock tested to ISO 13628-6:2006 (Q2 levels).

DATA SHEET

Product Details



MULTI-PARAMETER
CTD



SOUND
SPEED



VALEPORT
CONFIGURE SOFTWARE

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Sensors

Conductivity

Type	Valeport Inductive Cell
Range	0 - 80 mS/cm
Accuracy	±0.01 mS/cm
Resolution	0.002 mS/cm

Temperature

Type	Fast Response PRT with guard
Range	-5 – +35°C
Accuracy	±0.005°C
Resolution	0.002°C

Pressure

Type: High accuracy and interchangeable, temperature compensated piezo-resistive sensor. Delivers the performance previously only available from a resonant quartz sensor. It also brings the added advantages of long-term stability, allowing longer intervals between calibration, and a smaller and more robust construction; complex and vulnerable arrangements of diaphragms and oil filled capillaries & reservoirs are therefore no longer necessary

Range	10, 20, 30, 50, 100, 200, 300, 400 or 600 bar
Accuracy	+/-0.01% range
Resolution	0.001%

Sound Velocity

Valeport digital time of flight sensor

Range	1375 – 1900 m/s
Resolution	0.001 m/s
Accuracy	±0.02 m/s

Sensor Input Channels

Altimeter

Typical specification – Valeport VA500 Altimeter
Bathy2 will also accept third party altimeter inputs

Frequency	500 kHz
Range	0 - 100 m (6000 m depth rating)
Resolution	1 mm

Pressure

Paroscientific DigiQuartz (customer can use existing pressure sensor for data)

Data Sampling	2 Hz
Lookup Table	6000 points (1 m res. @ max depth)
Sampling Sequence	Synchronous

Datasheet Reference: Bathy2 | March 2024

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Calculations

Density	TEOS-10 Equation of State of Seawater
Salinity	PSS78 Practical Salinity Scale
Depth	UNESCO Pressure/Depth Relationship or Simplified "Mean Density" Correction

Communications & Standard

The instrument will operate by direct communication and in real-time to customer device.

Communications

Standard	RS232/RS485
Option	Ethernet, either fitted or not fitted in place of RS232/RS485
Baud Rate	2400 - 230400
Protocol	8 data bits, 1 stop bit, No parity, No flow control (Others supported too: None, Odd, Even Supported too - Default None)

Electrical

External Power	12-28 V DC
Current	Base system 195 mA Base system + DigiQuartz 225 mA Base system + Altimeter 320- 370 mA Base system + DigiQuartz + Altimeter 410 mA
Connectors	SubConn MCBH10F as standard for power in/comms plus MCBH4F for INS output, MCBH5F for DigiQuartz input and MCBH6F for Altimeter input.

Physical

Materials	Titanium housing, polyurethane composite and polycarbonate sensor components
Depth Rating	600 bar (may be limited by pressure sensor)
Instrument Size	Ø110 mm x 566 mm long
Weight	10 kg
Shipping	Supplied in foam lined transit case 63 cm x 43 cm x 20.5 cm, 18.5 kg weight

Software

Valeport Configure

Ordering

0608010-XX	Bathy2 for RS232/RS485 communication in titanium housing, fitted with 0.01% piezo-resistive, interchangeable pressure sensor option (10-600 bar), fast response PRT temperature sensor, pressure compensated conductivity cell and a 50 mm path length sound velocity sensor. Includes interfaces for Valeport VA500 altimeter and DigiQuartz pressure sensor and output for INS. Supplied with Valeport Configure software, 4 m interface lead, operating manual and system transit case. Note: Altimeter NOT included
0660011-XX	As above with ethernet communication
PTSA-XX	Interchangeable pressure transducers. Select from 10, 20, 30, 50, 100, 200, 300, 400 and 600 bar
0430003	VA500 Altimeter

