



## MIDAS BathyPack



The MIDAS BathyPack is one of Valeport's premier MIDAS products, using state of the art sensors to generate precision Sound Velocity and Density profiles for highly accurate depth and height data. The simple top-end PC software, BathyLog, also allows all profile data to be used to monitor and correct multiple miniPS pressure sensors, giving you the complete picture with one integrated sensor suite.

### Sensors

#### Conductivity

Robust, accurate inductive cell. Digital sampling technique means no more field calibrations.

Range: 0 - 80 mS/cm  
Accuracy:  $\pm 0.01$  mS/cm  
Resolution: 0.002 mS/cm

#### Temperature

Fast response PRT with guard.

Range: -5 to +35 °C  
Accuracy:  $\pm 0.005$  °C  
Resolution: 0.002 °C

#### Pressure

Revolutionary temperature compensated piezo-resistive sensor; all the performance of a resonant quartz sensor but with long term stability and better durability. No more oil!

Range: 10, 30, 100, 300 or 600Bar  
Accuracy:  $\pm 0.01\%$  range  
Resolution: 0.001% range

#### Sound Velocity

Valeport's digital time of flight sensor - the most accurate SV sensor in the world.

Range: 1375 - 1900 m/s  
Accuracy:  $\pm 0.02$  m/s  
Resolution: 0.001 m/s

#### Altimeter

BathyPack accepts a variety of industry standard devices. Typical specification:

Frequency: 500kHz  
Range: 0 - 50 m (6000m depth rating)  
Resolution: 1mm

#### Calculations

Density: EOS-80 Equation of State of Seawater  
Salinity: PSS78 Practical Salinity Scale  
Depth: UNESCO Pressure/Depth Relationship or Simplified "Mean Density" Correction

### Data Acquisition

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



### Communications

The instrument will operate by direct communications with PC before and after deployment. It also operates in real time, with a choice of communication protocols for a variety of cable lengths, all fitted as standard and selected by pin choice on the output connector:

#### Standard

RS232 Up to 200m cable, direct to serial port via USB adaptor  
RS485 Up to 1000m cable, addressable half duplex comms

Baud Rate: 2400 - 115200  
Protocol: 8 data bits, 1 stop bit, No parity, No flow control

#### Electrical

External Power: 12 - 30VDC  
Power: Nominal 4W max  
Connector: Subconn MCBH10F

#### Physical

Materials: Titanium housing, polyurethane, composite and polycarbonate sensor components  
Depth Rating: 6000m (may be limited by pressure sensor)  
Instrument Size: 88mm $\varnothing$  x 425mm long  
Weight: 6kg  
Shipping: 74 x 35 x 27cm, 13kg

#### Software

System is supplied with BathyLog Windows based PC software, for instrument setup and data display. BathyLog is licence free.

#### Ordering

0608002 MIDAS BathyPack in titanium housing with BathyLog software, 0.5m altimeter input pigtail, 3m interface lead, manual and transit case.

#### Specify:

Required pressure range  
Altimeter requirements

#### Associated Products

0760001 miniPS Pressure Sensor

Datasheet Reference: MIDAS BathyPack version 2A, Feb 2011