



# MIDAS CTD

The MIDAS CTD is an accurate, robust CTD Profiler. As well as using Valeport's high stability conductivity sensor, which maintains performance at extreme temperatures and pressures, the MIDAS CTD is fitted with a high accuracy 0.01% pressure sensor as standard. It also features our unique synchronised sampling technique to ensure that all sensors are sampled at exactly the same time for perfect profiles.

Titanium construction and a variety of communications methods make the MIDAS CTD ideal for real-time or autonomous profiling in virtually all conditions.

## DATA SHEET

### Product Details



MULTI-PARAMETER  
CTD



DATALOG  
X2 SOFTWARE

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## Sensors

The MIDAS CTD is fitted with Valeport's high stability conductivity sensor, a high accuracy temperature compensated piezoresistive pressure transducer, and a fast response PRT temperature sensor

### Conductivity

Range: 0 - 80 mS/cm  
Resolution: 0.002mS/cm  
Accuracy: ±0.01mS/cm

### Temperature

Range: -5°C to +35°C  
Resolution: 0.005°C  
Accuracy: ±0.01°C

### Pressure

Range: 10, 20, 30, 50, 100, 200, 300, 400 or 600 bar  
Resolution: 0.001% range  
Accuracy: ±0.01% range

## Communications

The instrument will operate autonomously, with setup and data extraction performed 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, 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

### Optional FSK

2 wire power & comms up to 6000m cable (cable dependent)  
Baud Rate: 2400 - 115200 (FSK fixed at 19200, USB 460800)  
Protocol: 8 data bits, 1 stop bit, No parity, No flow control

## Electrical

**Internal** 8 x C cells, 1.5V alkaline or 3.6V lithium

**External** 9 - 30V DC

**Power** 0.6W (sampling), <1mW (sleeping)

**Battery Life** <100 hours operation (alkaline)  
<250 hours operation (lithium)

**Connector** SubConn MCBH10F

## Software

System is supplied with DataLog X2 Windows-based PC software, for instrument setup, data extraction and display. Valeport DataLog X2 software is license free.

## Memory

The MIDAS CTD is fitted with 16Mb solid-state non-volatile FLASH memory. Total capacity depends on sampling mode; continuous & burst modes have a single time stamp at the start of the file, trip mode (profiling) stores a time stamp with each reading. A single line of CTD data uses 6 bytes, and a time stamp uses 7 bytes

**Continuous** >2,700,000 data points

**Profile** >1,200,000 data points (>100 profiles to 6000m)

## Data Acquisition

The MIDAS CTD uses the concept of distributed processing, where each sensor has its own microprocessor controlling sampling and calibration of readings. Each of these is then controlled by a central processor, which issues global commands and handles all the data. This means that all data is sampled at precisely the same instant, giving superior quality profile data.

## Sampling Modes

<b>Continuous</b>	Regular output from all sensors at 1, 2, 4 or 8Hz
<b>Burst</b>	Regular sampling pattern, an instrument takes a number of readings, then sleeps for a defined time
<b>Trip/Profile</b>	Data is output as a chosen parameter changes by a set value, usually Pressure for profiling
<b>Conditional</b>	Instrument sleeps until a selected parameter reaches a set value
<b>Delay</b>	Instrument sleeps until predefined start time

## Physical

<b>Materials</b>	Titanium housing Polyurethane & acetal sensor components Stainless steel (316) cage
<b>Depth Rating</b>	6000m (may be limited by pressure sensor)
<b>Instrument Size</b>	88mmØ x 665mm long
<b>Cage Size</b>	750 x 140 x 120mm
<b>Weight</b>	11.5kg (in air), 8.5kg (in water with cage)
<b>Shipping guide</b>	100 x 18 x 49cm   24kg

## Ordering

<b>0606001-XX</b>	MIDAS CTD, supplied with: <ul style="list-style-type: none"><li>• Deployment cage</li><li>• SubConn switch plug</li><li>• 3m communications lead</li><li>• USB adaptor</li><li>• DataLog X2 software</li><li>• Manual, tool kit and transit case</li></ul>
<b>0606001-XX-FSK</b>	MIDAS CTD with FSK modem adaptor, supplied with: <ul style="list-style-type: none"><li>• Deployment cage</li><li>• SubConn switch plug</li><li>• 3m communications lead</li><li>• USB adaptor</li><li>• DataLog X2 software</li><li>• Manual, tool kit and transit case</li><li>• 0400EA5 FSK modem adaptor</li></ul>

**Note** **XX** denotes transducer range.  
Select from 10, 20, 30, 50, 100, 200, 300, 400 or 600bar

## Options

<b>0400002</b>	16 Mbyte memory upgrade (max 64 Mbyte)
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## Datasheet Reference: MIDAS CTD | April 2020

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