



rapidSV - Sound Velocity Profiler



The rapidSV profiler has been developed for the fast collection of Sound Velocity Profiles, without compromising the quality of the data.

The world's most accurate Sound Velocity sensor with virtually instantaneous response time, data acquisition rates of up to 32Hz housed in a low drag housing result in the highest quality profiles at drop rates over 5 m/s.

The rapidSV is designed to operate autonomously and optionally in conjunction with the Teledyne OceanScience rapidCAST underway profiling winch to deliver the highest quality SV casts, while the vessel is underway. Casts to a depth of 500m are possible with the vessel travelling at 8 knots

Specifications

The rapidSV Profiler is fitted with Valeport's digital time of flight sound velocity sensor, strain gauge pressure transducer and optional PRT temperature sensor.

Sound Velocity

Range:	1375 - 1900m/s
Resolution:	0.001m/s
Accuracy:	±0.02m/s

Pressure

Range:	200 Bar (max)
Resolution:	0.001% range
Accuracy:	±0.01% range

Temperature (optional)

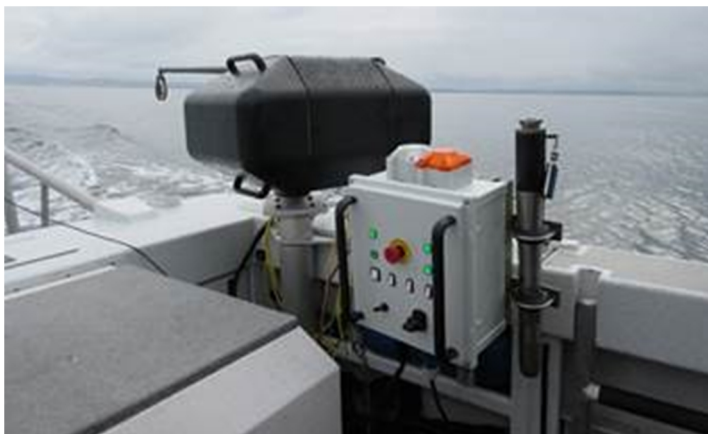
Range:	-5°C to +35°C
Resolution:	0.001°C
Accuracy:	±0.01°C

Data Acquisition

Sample Rate: dependent on configuration

Rate	SVP	SVP & Temp	Depth Resolution
16Hz	•	•	~40cm
32Hz	•		~20cm

The optional temperature sensor gives valuable information about the physical structure of the ocean column with the trade off, of reducing the maximum data acquisition rate to 16 Hz.



rapidSV with Teledyne rapidCAST Underway Profiling Winch



Communications

Integral Bluetooth for configuration & data recovery

Memory

The rapidSV Profiler is fitted with a solid-state, non-volatile Flash memory, capable of storing over 10 million lines of data.

Electrical

Battery	1x C cell, 1.5V alkaline or 3.6V lithium
Battery Life	approximately 25 hours operation (alkaline) approximately 80 hours operation (lithium)

Physical

Materials	Titanium/PEEK housing Inconel nose piece Titanium & composite sensor components
Depth Rating	2000m
Instrument Size	Sensor Body Ø50mm x Length 515mm
Weight	4.5kg (in air)

Software

System is supplied with rapidSV LOG software, for instrument setup, data download and display.

rapidSV LOG is licence free.

Ordering

0660021-XX	rapidSV Profiler in Titanium Manual and transit case
0660021-XX-TS	rapidSV Profiler with Temperature in Titanium Manual and transit case

Note: **XX** denotes pressure transducer range.
Select from 100 or 200 Bar

Supplied with:

- Integral Bluetooth communications
- 2 x switch keys
- C cell battery
- Bluetooth dongle
- External Bluetooth antenna with 10m cable
- Tool kit
- rapidSV LOG software
- Operating manual and system transit case