

Teledyne Oceanscience Launches Compact Sound Velocity Profiling System



US-based Teledyne Oceanscience has announced the launch of rapidCAST, an automated sound velocity (SV) profiling system for moving vessels. With the capability to automatically cast and recover a high-quality SV probe to 500 metres at 8 knots without an operator on deck, rapidCAST offers many of the benefits previously only available from large towed profilers. Simultaneously, it offers surveyors the convenience and cost savings of a small and portable unit that is easy to mobilise.

Using an active line payout system with precise line tension control, the effects of vessel speed and heave are eliminated to allow the freefall SV probe to maintain extremely consistent drop behaviour between casts. This innovative freefall profiling method allows the operator to precisely target the desired cast depth and be sure that the profile will be

collected safely. By avoiding the need for a large conducting cable to transmit the probe depth back to the winch controller, the rapidCAST is able to offer profiling depth capability with a small spool and deployment system.

The rapidCAST uses the latest Valeport rapidSV profiler with Bluetooth wireless telemetry to automatically upload each SV profile to the survey PC on the completion of each cast, without the need for the probe to be recovered onboard. As the probe nears the ship, the Bluetooth antenna is activated and the data uploaded with the probe immediately ready for the next cast.

Using the [Underway SV profiler](#) that was launched in 2009, users had to make a compromise with an essentially manually-operated system. rapidCAST strips away the compromises to offer advanced automated profiling, while still offering the convenience, mobilisation benefits and efficiency savings afforded by a compact system.

After testing the rapidCAST prototype, the Canadian Hydrographic Service was the first to install a rapidCAST system on a survey vessel, the CCGS *Frederick G. Creed*, for surveys in the Gulf of St-Lawrence and off the east coast of Canada. A CTD profiler option is expected later in 2015.

A [video of rapidCAST in action and more information about this profiling system](#) is available online.

- [Valeport on Geo-Matching.com](#)
- [Teledyne OceanScience on Geo-Matching.com](#)

Image: Teledyne OceanScience rapidCAST installed with probe.