

OCEANOGRAPHIE

XBT/XSV

Expendable Conductivity/Temperature/Depth Profiling System

- XBT provides a quick and inexpensive means of collecting temperature data.
- XSV obtains accurate sound velocity profiles.



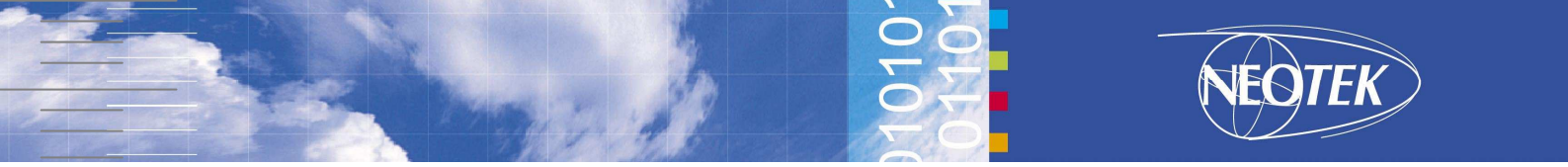
Technical specifications			
Expendable Bathythermograph			
Application	Maximum Depth	Rated Ship Speed	Vertical Resolution
T-5 Deep ocean applications.	1830 m 6000 ft	6 knots	65 cm
Fast Deep™ Provides maximum depth capabilities at the highest possible ship speed of any XBT.	1000 m 3280 ft	20 knots	65 cm
T-6 Oceanographic applications.	460m 1500 ft	15 knots	65 cm
T-7 Increased depth for oceanographic applications.	760 m 2500 ft	15 knots	65 cm
Deep BLue Increase launch speed for oceanographic applications.	760 m 2500 ft	20 knots	65 cm
T-10 Commercial fisheries applications.	200 m 600 ft	10 knots	65 cm

Expendable Sound Velocimeter (XSV)			
XSV-01 Application where salinity varies; Oceanographic applications.	850 m 2790 ft	15 knots	32 cm
XSV-02 Increased depth for Application where salinity varies; Oceanographic applications.	2000 m 6560 ft	8 knots	32 cm

The XBT is capable of temperature accuracies of +0.1°C. The XSV obtains real time sound velocity data accurate to +0.25 meters/second at depths up to 2000 meters.

System Depth Accuracy: 4.6 meters or 2% of depth, whichever is larger (for XSV).

*All probes may be used at speeds above rated maximum, however there will be proportional reduction in depth capability. All probes are shipped 12 to a case which is constructed of weather-resistant biodegradable material. Shipping weight varies from 25 lbs. to 43 lbs. depending on probe type. Dimension of the case vary from 17"x14"x18" (2.3 cu. ft.) to 17"x14"x19" (2.6 cu. ft.).



Expendable Bathythermograph Expendable Sound Velocimeter (XBT/XSV)

A standard XBT/XSV system consists of an expendable probe, a data processing/recording system, and a launcher. An electrical connection between the probe and the processor/ recorder is made when the canister containing the probe is placed within the launcher and the launcher breech door is closed. Following launch, wire dereels from the probe as it descends vertically through the water. Simultaneously, wire dereels from a spool within the probe canister, compensating for any movement of the ship and allowing the probe to freefall from the sea surface unaffected by ship motion or sea state. The XBT/XSV system uses a sea water ground. As soon as an electrode within the nose of the expendable probe makes contact with the water, the circuit is complete and temperature or sound velocity data can be telemetered to the ship-board data processing equipment. Data are recorded and displayed in real time as the probe falls. The nose of each expendable probe is precision weighted and the unit spin-stabilized to assure a predictable rate of descent. From this rate of descent, probe depth is determined to an accuracy of +2%.

When the probe reaches its rated depth (*a function of ship speed and the quantity of wire contained within the shipboard spool*) the profile is completed and the system is ready for another launch.

Launchers

Launchers are available in three models. Each is compatible with XBTs, XSVs and shipboard data processing systems.

LM-2A

Deck-Mounted
The LM-2A is easily installed on the deck of any vessel.



LM-3A

Hand-Held
portability, allows more flexibility in selecting launcher position and reduces interference with other equipment.



LM-4A

Thru-Hull
Employs the same basic assembly as the LM-2A, however, the LM-4A is installed below deck for improved safety and increased convenience under heavy weather conditions.

