



WTS-LV - Standard Model

Application:

The Standard Large Volume Water Transfer System (WTS-LV) is a large volume single-event sampler that collects suspended and dissolved particulate samples *in situ* onto a 142mm membrane filter. Collection targets include chlorophyll maximum, particulate trace metals, and phytoplankton. Three models are available including the Standard WTS-LV, the High Capacity WTS-LV, and the Bore-Hole WTS-LV.

Features:

- Number of samples: Single event sampler.
- 10Ah alkaline battery pack.
- Ambient water is drawn through a modular filter holder onto a 142mm membrane filter without passing through the pump.
- Flow rates from 2 to 30 liters per minute.
- Dynamic pump speed algorithm adjusts to protect the sample as material accumulates on the filter.
- Optional filter holders can accommodate a 293 mm filter or a 3-tier filter.
- Available 2-pin trigger allows the synchronous deployment of multiple samplers.
- Mechanical flow meter confirms total volume pumped per deployment.
- For more information about this sampler see, see the WTS-LV pages at mclanelabs.com.

Different flow rates and filter porosity support a range of specimen collection. Up to 15,000 liters of seawater can be pumped and filtered by a single battery pack using the standard model. Adaptive sampling option configures and controls pump firmware during deployment. Non-volatile memory stores critical deployment data.

Sample schedule options:

Flow is regulated by user-defined values for total volume, flow rate, and sample collection time. Sampling can be programmed to start at a scheduled time or begin with a countdown delay.

Customized hardware and software:

Customizable hardware and software includes options to add an external temperature sensor, pressure transducer or fluorometer.

Deployment:

Specially designed cable clamps facilitate fast and easy attachment to an oceanographic wire for deployment.

Pump options:

LV04	Flow rate	1-4 liters/min
	Max volume	2,500 liters (10Ahr battery)
	Filter type	Nuclepore or other membrane filters
LV08	Flow rate	4-8 liters/min
	Max volume	5,000 liters (10Ahr battery)
	Filter type	GFF, QM-A or other membrane to mesh filters
LV30	Flow rate	15-30 liters/min
	Max volume	12,000 liters (10Ahr battery)
	Filter type	Large opening mesh filters

WTS-LV Standard Sampler Specifications

**DIMENSIONS
(STANDARD MODEL):**

Length: 64 cm (25 in)

Width: 36 cm (14 in)

Height: 69 cm (27 in)

WEIGHT (APPROX):

In air: ~51 kg

In water: ~34 kg

COLLECTOR:

Number of samples: Single event sampler

Filter holder material: Black Acetal/142mm diameter

Cartridge: Cartridge or pleated filter

CONTROLLER:

Housing material: Aluminum, 6061-T6 hard coat anodized

Power supply: Battery holder uses 24 alkaline
commercially available "D" cell batteries

Communications: Serial (RS-232)

OPERATIONS:

Maximum depth: 5,500m

Battery endurance: 10Ahr battery pumps ~15,000 liters of
seawater

Operating temperature: 0° to 50° C

FRAME:

Material: Strong back with wire clamps /Type 316
electro polished stainless steel weldment