



## WTS-LV - High Capacity Model

### Application:

The Upright Large Volume Water Transfer System (WTS-LV) is a large volume, high capacity single-event sampler that collects suspended and dissolved particulates *insitu* onto a 142mm membrane filter. Collection targets include chlorophyll maximum, particulate trace metals, and phytoplankton.

### Features:

Different flow rates and filter porosity support a range of specimen collection. Up to 45,000 liters of seawater can be pumped and filtered by a single battery pack using the high capacity 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:

- Number of samples: Single event sampler.
- 30Ah high capacity battery pack.
- Ambient water is drawn through a modular filter holder onto a 142mm membrane 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 3-tier filter.
- Standard 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](http://mclanelabs.com).

LV04	Flow rate	1-4 liters/min
	Max volume	7,500 liters (30Ahr battery)
	Filter type	Nuclepore or other membrane filters
LV08	Flow rate	4-8 liters/min
	Max volume	15,000 liters
	Filter type	GFF, QM-A or other membrane to mesh filters
LV30	Flow rate	15-30 liters/min
	Max volume	36,000 liters
	Filter type	Large opening mesh filters

# WTS-LV High Capacity Sampler Specifications

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**DIMENSIONS  
(UPRIGHT MODEL):**

Height: 91 cm ( 36 in)  
Width: 61 cm (24 in)  
Depth 33 cm (13 in)

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**WEIGHT (APPROX):**

In air: approximately 73.0 kg  
In water: approximately 45.2 kg

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**COLLECTOR:**

Number of samples: Single event sampler  
Filter holder material: Black Acetal/142mm diameter

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**CONTROLLER:**

Housing material: Aluminum, 6061-T6 hard coat anodized  
Power supply: 30 Ah high capacity battery pack  
Communications: Serial (RS-232)

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**OPERATIONS:**

Maximum depth: 5,000m  
Battery endurance: 30Ahr battery pack pumps approximately  
36,000 liters of seawater  
Operating temperature: 0° to 35°C

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**FRAME:**

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