



WTS-LV - Dual Filter Model

Application:

The Dual Filter Large Volume Water Transfer System (WTS-LVDF) is a large volume, high capacity single-event sampler that collects suspended and dissolved particulate samples *in situ*. The WTS-LV-DF collects samples onto dual, 142mm membrane filters that perform parallel filtration. Each filter holder position is independently metered. Collection targets include chlorophyll maximum, particulate trace metals, phytoplankton and other suspended particulate.

Features:

Different flow rates and filter porosity support a range of specimen collection. Dual 142mm filter holders perform parallel filtration. 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 and pressure transducer.

Deployment:

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

Pump options:

LV04	Flow rate	1-4 liters/min
	Max volume	7,000 liters
	Filter type	Nuclepore or other membrane filters
LV08	Flow rate	4-8 liters/min
	Max volume	12,000 liters
	Filter type	GFF, QM-A or other membrane to mesh filters

- Number of samples: Single event sampler with dual filter holders.
- 30Ah high capacity battery pack.
- Ambient water is drawn through a modular filter holder onto dual 142mm membranes without passing through the pump.
- Separately metered modular 142mm vertical intake filter holders for parallel filtration.
- Independent mechanical flow meters record total volume pumped per deployment and total through each filter holder.
- Flow rates from 2 to 8 liters per minute depending on pump used.
- Dynamic pump speed algorithm adjusts to protect the sample as material accumulates on the filter.
- 2-pin trigger allows the synchronous deployment of multiple samplers.
- For more information about this sampler see, see the WTS-LV pages at mclanelabs.com.

WTS-LV Dual Filter Sampler Specifications

**DIMENSIONS
(DUAL FILTER MODEL):**

Length: 79 cm (31.25 in)
Width: 38 cm (15 in)
Height: 74.9 cm (29.5 in)
w/debubbler 90.1 cm (35.5 in)

WEIGHT (APPROX):

In air: approx. 78 kg
In water: approx. 43 kg

COLLECTOR:

Number of samples: Single event sampler/dual filter holder
Filter holder material: 142mm diameter, HDPE/Acrylic

CONTROLLER:

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

OPERATIONS:

Maximum depth: 5,000m
Battery: 30Ahr battery pack
Operating temperature: 0° to 35° C

FRAME:

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