



VLS CROSSFLOW GUIDE



VLS CROSSFLOW FILTER

BENEFITS:

Crossflow filtration offers clarity and microbiological stability in just one operation, thereby eliminating fossil powders and the problems connected with their use and disposal. The results achieved are due to the special capillary polyethersulphone (PES) Membrane, having an internal diameter of 1.5 mm. The tangential flow of product over the membrane provides a continuous cleaning of the membrane surface resulting in slower fouling.

The material, diameter and pore distribution have been especially designed for wine and grape juice filtration. TMF models are available in either semi-automatic (S) or fully automatic (A) execution.

KEY FEATURES:

- The Crossflow TMF 3-6-9 has a modular design that allows for additional 3 element loops to be added to the filter at a later date (up to a maximum of 9 filter elements).
- Feed pump with stainless steel pre-filter controlled by variable frequency drive. Recirculation pump.
- Capillary polyethersulphone (PES) filter membranes with a maximum pore size of 0.2 microns
- Pressure sensor with digital display at the inlet and outlet of the filter elements.
- Digital flow meter.
- Stainless steel tank for cleaning purposes, equipped with water filter.
- Electric board in stainless steel (IP65), with PLC for the control and setting of the filtration parameters (Flow rate, amount of product to be filtered, start/stop time).

In addition to the features above, the fully automatic (A) units include:

- PLC management is available for all phases of the filtration process with touch-screen color display for setting parameters and alarms. This includes filtration, draining, rinsing and CIP.
- Automatic dosing of CIP chemicals.
- Temperature probe.

VLS TMF AUTOMATIC CROSSFLOW

Key Features

- Polyether sulfone membrane elements
- Membrane elements designed and tested specifically for the filtration of red and white wines
- Filtering surface of each membrane module is equivalent to 10 square meters
- Filtration is carried out automatically once the operator inputs the filtration parameters (flow-rate, product type, quantity)
- Low power consumption, limited temperature increase
- Easy access to the machine components due to simplicity of design and construction
- Automatic dosing of CIP chemicals.

Equipment Details

- Stainless steel centrifugal feed and recycling pumps
- Pre-filter at inlet, sight glasses, sample valve, digital flow-meter, thermometer, pressure gauges
- PLC and digital key pad for automatic filter cycles
- All AISI 304 construction
- Element isolation valves (per element)
- Machine and software come prearranged for one expansion loop



MODEL

*THROUGHPUT

| | |
|---------|---------|
| TMF 3-A | 260 gph |
| TMF 6-A | 520 gph |
| TMF 9-A | 790 gph |

*Through-put is approximate and will vary depending on the amount of solids in the product.

*Price does not include shipping or commissioning.

*OPTIONS

Turbidity meter

Management by Modem

Included

Magnetic flow-meter/ totalizer

Included

Expansion loop - Complete 3 module skid with feed pump and membranes

*Price of options reflects factory installed upgrade. After market upgrade requires additional freight and installation charges.

VLSTMF SEMI-AUTOMATIC CROSSFLOW

Key Features

- Polyether sulfone membrane elements
- Membrane elements designed and tested specifically for the filtration of red and white wines
- Filtering surface of each membrane module is equivalent to 10 square meters,
- Low power consumption,
- Easy access to the machine components due to simplicity of design and construction

Equipment Details

- Stainless steel centrifugal feed and recycling pumps
- Pre-filter at inlet, sight glasses, sample valve, digital flow-meter, thermometer, pressure gauges
- Filter discharge by inert gas
- All AISI 304 construction
- Element isolation valves (per element)
- **CIP must be carried out manually**



| MODEL | *THROUGHPUT |
|---------|-------------|
| TMF 3-S | 260 gph |
| TMF 6-S | 520 gph |
| TMF 9-S | 790 gph |

*Through-put is approximate and will vary depend on the amount of solids in the product.

*Price does not include shipping or comissioning.

*OPTIONS

Turbidity meter

Management by Modem Included

Magnetic flow-meter/ totalizer Included

Expansion loop - Complete 3 module skid with feed pump and membranes

*Price of options reflects factory installed upgrade. After market upgrade requires additional freight and installation charges.

VLS TMF CROSSFLOW TECHNICAL DATA

| TECHNICAL DATA | | TMF 3 | TMF 6 | TMF 9 |
|--------------------------|----------------|----------------|----------------|----------------|
| Typical filtration rate | GPH | 260 | 520 | 790 |
| Membrane | N° | 3 | 6 | 9 |
| Total filtration surface | M ² | 30 | 60 | 90 |
| Maximum working temp | F | 158 | 158 | 158 |
| POWER | | | | |
| Total installed power | kW | 4 | 6.5 | 9 |
| Feed pump | kW | 1.85 | 1.85 | 1.85 |
| Recirculation pump | kW | 2.2 | 2.2 | 2.2 |
| Air demand | | - | - | - |
| Inlet/outlet connections | | 1 ½" Tri clamp | 1 ½" Tri clamp | 1 ½" Tri clamp |
| DIMENSIONS | | | | |
| Length | mm | 1,800 | 1,800 | 1,800 |
| Width | mm | 1,080 | 1,450 | 1,820 |
| Height | mm | 2,100 | 2,100 | 2,100 |
| Empty weight | lbs | 1,100 | 1,430 | 1,760 |