

WINE CROSS-FLOW MICROFILTRATION UNITS WFU

BASIC DESCRIPTION

The microfiltration units series WFU are in the first place designed for removal of turbidity and microbial stabilisation of wine, but it is possible to use it for filtration of other beverages or fermentation broth. The units contain two, four, or six membrane modules depending on target capacity of wine production. Modules are available with pore size of 0.45 possibly 0.2 μm with stainless steel housing. The liquid can be driven by gentle positive displacement or conventional centrifugal pump.

The unit is equipped with programmed control unit with easy operation via touch screen. The system allows to change the mode of operation - automatic / manual (marking WFU-x FA), set limit and processing values of flow, pressure and temperature. In the automatic mode of operation the unit makes itself backwash, chemical cleaning (CIP) and batch ending in case of need. We also offer a unit with two modules in version with a semi-automatic control – backwash is made automatically, but chemical cleaning is necessary to manage personal. Further it is possible to display the chart of filtrate flow trend in time. The unit ensures easy sanitation of whole system.



AUTOMATIC UNIT SPECIFICATION

Parameter	Value		
Configuration of membrane module	Cross-flow		
Membrane material	Polypropylene		
Modules available	45/9	20/10	20/15
Filter area of one module (m^2)	9.1	9.7	15
Pore size (μm)	0.45	0.2	0.2
Maximal pressure difference across the membrane	2 bar		
Maximal working pressure and temperature	40 °C, 1.5 bar 20 °C, 2.5 bar		
Protective prefilter	100 μm		
pH range during operation	2 – 10		
pH range during short time cleaning (CIP)	2 – 12		
Unit	WFU-2	WFU-4	WFU-6
Number of membrane modules	2	4	6
Filtrate flow (l/h)	500 – 2 000	1 000 – 4 000	1 500 – 6 000
Positive displacement pumps			
Rated input (filtration / cleaning) (kW) *	4 / 11,5	8.3 / 23.3	11.7 / 26.7
Centrifugal pump			
Rated input (filtration / cleaning) (kW)	1.9 / 9.4	3.6 / 18.6	4.9 / 19.9
Voltage	3 x 400 V		

*Semiautomatic unit parameters for WFU-2 is 4/4 kW