

POLYMER MICROFILTRATION SYSTEM

Pre-bottling microfiltration (which guarantees the biological cold stabilization of the product) is one of the most critical point in the production chain since it is the last phase before being placed on the market.

This process is commonly carried out using multi-stage cartridge filters.

The **M** line is the new patented pre-bottling microfiltration system for biological stabilization with a single filtering device.

Applications

The innovative polymer can process liquids with no filterability index without any clogging danger or damage.

The filter is suitable for:

- Pre-bottling microfiltration of beverages
- Other application







Saving of working times

Benefits

System highlights

CLEANING	The unit is sanitized with hot water, while regeneration is carried out with alkaline chemicals.
POLYMER	Specific configuration and geometry of the innovative filtering polymer enhances product peculiarities from an organoleptic point of view.
MODULAR DESIGN	Each model can be expanded by adding a filter element to obtain a higher hourly flow.
AUTOMATION	The plant is also available in a fully automatic version with the storage of processing data for traceability of the supply chain.
INTEGRATED CIP for BOTTLING	The integration of the cleaning CIP allows to have in a single block an automatic microfiltration system and a CIP unit for the bottling line

	M1
Filtrate rate	1500-2500 b/h
Dimensions	900x750x1700
Weight	120 Kg

	M2
Filtrate rate	3000-5000 b/h
Dimensions	900x750x1700 mm
Weight	160 Kg

Models

Filtrate rate Dimensions	M2 auto 3000-5000 b/h 1300x800x1700 mm			
Weight	270 kg			
			Filtrate rate	<mark>M3 auto</mark> 4500-7500 b/h
			Dimensions	1400x800x1700 mm
			Weight	300 kg
	M4 auto			
Filtrate rate	6000-10000 b/h			
Dimensions				
Weight	330 kg		L IC	

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CARTRIDGES MICROFILTRATION SYSTEM



The product to be filtered goes (from outside to inside) through the filtering cartridges installed in a stainless steel housing. The final filtration size is reached installing one or more filtering units in series.

Applications

In beverages, cartridge microfiltration systems are used as a pre-bottling filtering unit ensuring the product sterilization.

In industry these systems are used for polishing filtrations.



Type of cartridges:

• Connection: code 7 (226) or DOE (flat gasket)

Cartridges

- Material: PES, PP, Nylon
- Pore size: from 0,22 to 5 micron (or higher)

Features

FILTRATION STAGES	The systems can have several stages in series with cartridges of different pore size. Example: $1\mu - 0.65\mu - 0.45\mu$
ACCESSORIES	Microfiltration units with cartridges are equipped with components including butterfly valves, ball valves for venting and draining, pressure gauges for pressure control.
OPTIONAL	 Supporting skid Multi-By-pass with valves Automation of working phases by means of remotable touch screen PLC

HOUSINGS

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Models from 1 to 15 cartridges of 20" – 30" or 40" lenght
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Models				
1x30"	750 L/h			
1x40''	1000 L/h			
3x30"	2250 L/h			
3x40"	3000 L/h			
5x30"	3750 L/h			
5x40"	5000 L/h			
7x30"	5250 L/h			
7x40''	7000 L/h			
9x30"	6750 L/h			
9x40"	9000 L/h			
12x30"	9000 L/h			
12x40"	12000 L/h			
15x30"	11250 L/h			
15x40"	15000 L/h			



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- Systems used for polishing
- Single-stage or multi-stage in series; parallel vessels for doubling the flow rate.
- DOE cartridges (flat gasket) installed
- A pump for the cartridges' washing is required



MICROFILTRATION DEVICES

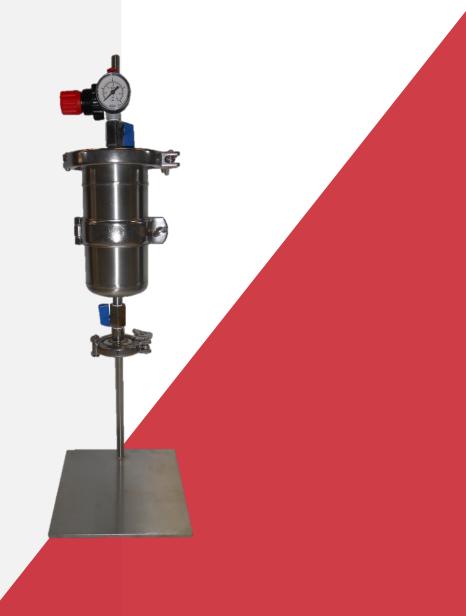


FILTERABILITY INDEX MEASURING DEVICE

PROCESSThe filterability index is a preliminary test that checks if the liquid to
be filtered will clog the microfiltration cartridges.
The filtration rate is calculated by means a membrane (diameter 25
mm at 0.65 micron) monitoring the volume of liquid filtered over a
certain period of time.

APPLICATION Beverages.

MODELIF model is a device for manually performing of the filterability index
upon liquids before bottling.
Compact dimensions allow it to be used in any working site and the
base has a height-adjustable support.



PROCESS The control unit performs an integrity test of the microfiltration cartridges by checking the pressure seal applied on the cartridge itself.

The software allows the setting of the pressure and stabilization time parameters for two different types of cartridge pore size.

When a positive test is done but with a lower pressure than the set one, operator can choose to repeat the test or modify the parameters.

At the end, data are stored in an internal memory and can be transferred to external devices (USB, etc.)

