X-FLOW R-100
MICROFILTRATION MEMBRANE

MEMBRANE ELEMENT DATASHEET

6" R-100 MODULE RVS & R-100 INSERT RVS
ARTICLE CODE MODULE HOUSING AND INSERT: 1.5 MF, 1832BB422A - 3.0 MF, 1832BB622A

GENERAL INFORMATION

R-100 is a stainless steel module used for the filtration and/or clarification of aqueous solutions and beverages such as wine, juice or cider.
Mode of operation is feed and bleed in crossflow mode with regular backwash.

CONNECTION SPECIFICATIONS

- Feed side, Flange: DIN 2633, 150NW
- Permeate side, Coupling: DIN 11851, 65 NW

MATERIALS OF CONSTRUCTION

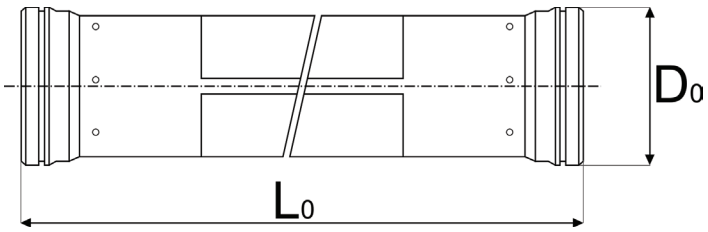
Housing	Stainless steel AISI 316/316L
Potting	Epoxy, food grade
O-ring	Viton or EPDM
Membrane	PES/PVP

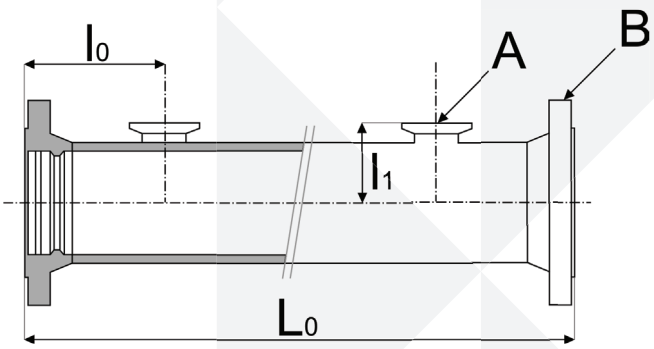
INSERT SPECIFICATIONS

Hydraulic Membrane Diameter [mm]	Membrane area [m²]	Insert length L_0 [mm]	Insert outer diameter D_0 [mm]
1.5	9.3	1022	160.6
3.0	5.0	1022	160.6

MODULE SPECIFICATIONS

Module length L_0: 1040 mm
Permeate port protrusion l_1:112 mm
Permeate port lateral recess l_0: 125 mm
Feed connector, DIN 2633 B: 150 NW
Thread, male, DIN11851 A: 65 * 1/6"





Membrane element contains:

Housing	1x	15005
O-ring	2	17029
Shut ring	2x	18013
Quad ring	2x	17023

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OPERATING SPECIFICATIONS

Max. system pressure	Max. trans-membrane pressure	Max. backflush pressure	Max. temp.
[kPa]	[kPa]	[kPa]	[°C]
at 20 °C 1000	at 0-50 °C 300	at 0-30 °C 200	65
at 65 °C 600	at 50-65 °C 200	at 30-40 °C 150	
		at 40-65 °C 100	

PROCESS CHARACTERISTICS*

Membrane Diameter	Crossflow flow rate (*)	Pressure-drop across module at 1 m/s	Pressure-drop across module at 2 m/s
[mm]	[m^3/h]	[kPa]	[kPa]
1.5	13.7 x v	14	56
3.0	14.8 x v	7	24

* Water, 20 °C

Superficial velocity (v) in m/s

- Final maximum operating limits are determined by the lowest values of the membrane and element pressure and temperature specifications
- Backwash water should be free of particulates and should be of permeate quality or better
- Backwash pumps should preferably be made of non-corroding materials, e.g. plastic or stainless steel. If compressed air is used to pressurize the backwash water, do not allow a two-phase air/water mixture to enter the element
- To avoid mechanical damage, do not subject the membrane module or element to sudden temperature changes, particularly decreasings. Do not exceed 65 °C process temperature. Bring the module or element back to ambient operating temperature slowly (typical value 2-3 °C/min). Failure to adhere to this guideline can result in irreparable damage

STORAGE

New membrane modules can be stored as supplied.

Membrane modules should be stored in a dry, normally ventilated place, away from sources of heat, ignition and direct sunlight. Store between 0 and 40 °C at a relative humidity between 20 and 80 %.

The membrane modules should not be subjected to any freezing temperatures.

After use, MF membranes can be dried. After drying the membrane can be spontaneously re-wetted without the use of any wetting agents.

To avoid biological growth during shutdowns or storage, wet membranes should be treated with a compatible biocide. The membrane is compatible with many common disinfecting agents or biocidal preservatives.

For short-term shutdowns, a daily flush with permeate quality water containing up to 2.0 ppm free available chlorine for 30 to 60 minutes may be adequate for bacteria control.

In case of long-term storage, membranes should be cleaned before the disinfection step is carried out. For disinfection, a 1% sodium metabisulfite solution can be used.

PENTAIR

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