

# X-FLOW RX300 0.83UFC

## ULTRAFILTRATION MEMBRANE

### MEMBRANE ELEMENT DATASHEET

1" RX300 0.83UFC 0.83mm  
 ARTICLE CODE : 1051BL895A

### GENERAL INFORMATION

RX300 0.83UFC is an ultrafiltration pilot module, used for production of process and potable water. Typical applications are the filtration of surface water, potable water and WWTP effluent. Mode of operation is feed-and-bleed with a minor crossflow or dead-end mode with regular backwash (permeate only) and chemically enhanced backwash.

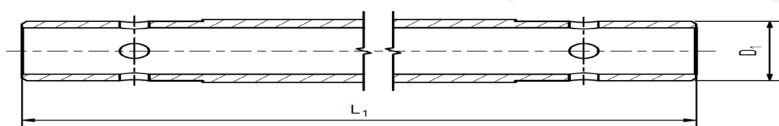
### MEMBRANE CHARACTERISTICS

#### Materials of Construction

|          |          |
|----------|----------|
| Housing  | PSF      |
| Potting  | EP resin |
| Membrane | PES/PVP  |

### ELEMENT SPECIFICATIONS

| Hydraulic membrane diameter [mm/mil] | Membrane area [m <sup>2</sup> /ft <sup>2</sup> ] | Element length L <sub>0</sub> [mm/Inch] | Element outer diameter [mm/Inch] |
|--------------------------------------|--------------------------------------------------|-----------------------------------------|----------------------------------|
| 0.83 [32.7]                          | 0.08 [0.86]                                      | 300 [11.8]                              | 23.9 [0.94]                      |



### OPERATING SPECIFICATIONS

| Max. system pressure  | Max. trans-membrane pressure | Max. backflush pressure   | Max. temp. |
|-----------------------|------------------------------|---------------------------|------------|
| [kPa/psi]             | [kPa/psi]                    | [kPa/psi]                 | [°C/°F]    |
| at 20 °C<br>800 [116] | at 0-30 °C<br>300 [43]       | at 0-30 °C<br>300 [43]    | 60 [140]   |
| at 40 °C<br>600 [86]  | at 30-60 °C<br>200 [29]      | at 30-60 °C<br>150 [21.5] |            |
| at 60 °C<br>400 [58]  |                              |                           |            |

- Final maximum operating limits are determined by the lowest values of the membrane and element pressure and temperature specifications

### PROCESS CHARACTERISTICS (WATER 20 °C)

| Membrane diameter | Flow rate (*)           | Pressure-drop across module at 1 m/s | Pressure-drop across module at 2 m/s |
|-------------------|-------------------------|--------------------------------------|--------------------------------------|
| [mm/mil]          | [m <sup>3</sup> /h/gpm] | [kPa/psi]                            | [kPa/psi]                            |
| 0.83 [32.7]       | 0.27 x v [1.19 x v]     | 11 [1.6]                             | 24 [3.5]                             |

(\*) superficial velocity (v) in m/s [ft/s]

- 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 60 °C process temperature. Bring the module or element back to ambient operating temperature slowly (typical value 1 °C/min). Failure to adhere to this guideline can result in irreparable damage

### ADVANCED FILTRATION

RX300 0.83UFC

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#### STORAGE

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New membrane modules can be stored as supplied in the original packaging. The membrane elements contain an aqueous preservation solution of glycerine (20wt%) and sodium metabisulfite (1wt%).

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.

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

Shelf life is a maximum of 6 months for unused modules in unopened packaging under correct storage conditions after transfer of ownership for X-Flow BV to the Client. After the maximum period of 6 months all warranties are null and void unless otherwise agreed in writing between the parties.

After use, the UF membrane modules need to be stored wet at all times. To avoid biological growth during shutdowns or storage, wet membranes could be treated with a compatible biocide. The membrane is compatible with many common disinfecting agents or biocidal preservatives.

Typically for short-term shutdowns (1 – 7 days), a daily backwash with UF permeate quality water for 30 seconds at 240 l/h, should be adequate for bacteria control. Before start of the shutdown period, the modules must be cleaned by a standard Chemical Enhanced Backwash (CEB).

In case of long-term storage (> 7 days), membranes should be disinfected. The membranes should be cleaned using a CEB before the disinfection step is carried out. For disinfection, a 0,5% sodium metabisulfite solution can be used. In both short and long term storage situations, the modules should remain filled with storage solution.



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