

# FR11-4040

## Fouling Resistant RO Membrane Elements - FR Series

### Product Presentation

FR Series RO Membrane Element utilizes specialized manufacture technique that can improve the hydrophilicity, electric charge and roughness of its surface, thus reducing the breeding and adsorption of pollutants and microbes on membrane surface.

### Application

- ◎ Pure water production from surface water, for example: lake water, river water, etc.
- ◎ Desalination of Reclaimed water, for example: Reclaimed water, industrial wastewater, RO concentrated water, etc.

### Product Performance

Model	Stable Rejection Rate(%)	Permeate Flow GPD(m <sup>3</sup> /d)	Active Membrane Area ft <sup>2</sup> (m <sup>2</sup> )	Feed Spacer Thickness mil
FR11-4040	99.5	2200(8.3)	90(8.4)	34

- 1、Operating pressure 225 psi (1.55 MPa)    2000 mg/L NaCl solution    Temperature at 25℃    pH 7.0 ± 0.5    Recovery rate at 15%
- 2、Each membrane element may have ±15% variation of permeate flow.

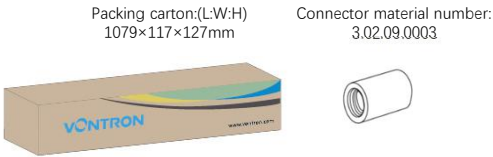
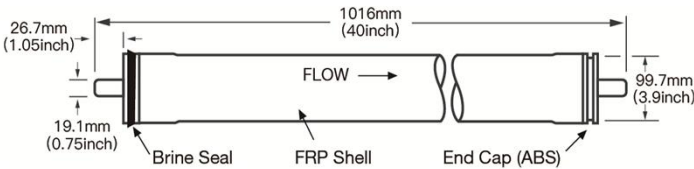
### Operating Conditions & Limits

Maximum operating pressure    psi(MPa)	600(4.14)
Maximum feedwater temperature    °C	45
Maximum inlet flow rate m3/h	3.6
Maximum concentration of free chlorine    mg/L	0.1
Maximum pressure drop per element    psi(MPa)	15(0.1)
Allowed pH range for feedwater in operation	2-11
Allowed pH range for chemical cleaning	1-13
Maximum feedwater flow    SDI15	5

### Important information

- Before the membrane element leaves the factory, The dry membrane element has no preservation solution, The wet membrane element has 1.0% sodium bisulfite (in winter, add 10% of propylene glycol antifreeze) as the preservation solution for storage treatment and use vacuum packaging.
- Dry membrane elements should always be maintained wet after Soaking; when wet membrane elements are not used for a long time, preservation solution is needed to soak the elements.
- When the membrane element is used for the first time, it is recommended to flush it first for 15-25 minutes at low pressure (not suitable for soaking or soaking overnight), and then flush it for 60-90 minutes at high pressure (the water flow should not be less than 50% of the system design water flow).
- The permeate water and concentrated water within the first hour of the initial operation of the membrane element should all be discharged.
- The operating limits and operational guidelines given in this technical information are part of the limitations of the three-year warranty on the membrane element.
- The addition of any chemicals that may affect the membrane element during storage and operation is prohibited, and Vontron Technology will not be liable for any consequences arising from the use of such chemicals.
- Please refer to the Product Manual for details on installation, commissioning, storage, and transportation of membrane elements.

### Dimensions and Packaging



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