

# ULP21-4021

## Ultra Low Pressure Membrane Elements - ULP Series

### Product Presentation

ULP Series Membrane Element can work with ultra-low pressure to reach a water flux and rejection rate that can rival its common low-pressure counterpart. It can operate with 2/3 pressure of LP Series.

### Application

- © Drinking water production, such as: packaged water, direct drinking water, food processing water, etc.
- © Purified water production, such as: pharmaceutical water, medical water, electronics 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 |
|------------|--------------------------|--------------------------------------|--|---------------------------|
| ULP21-4021 | 99.0                     | 950(3.6)                             | 36(3.3)  | 28                        |

- 1、Operating pressure 150 psi (1.03 MPa)    1500 mg/L NaCl solution    Temperature at 25℃    pH 7.0 ± 0.5    Recovery rate at 8%
- 2、Each membrane element may have ±20% variation of permeate flow.

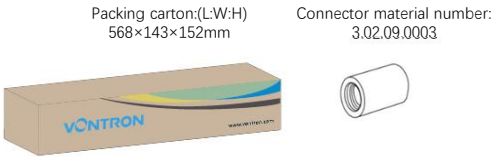
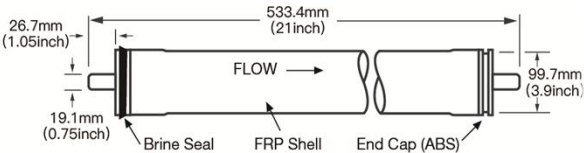
### Operating Conditions & Limits

|  |           |
|--|-----------|
| 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    | 3-10      |
| Allowed pH range for chemical cleaning         | 2-12      |
| 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



Product performance may vary under different conditions, and the information in this document is for reference only and is not to be relied upon as a guarantee of performance in actual applications. It is the responsibility of the user to determine whether the products and information in this document are suitable for the settings in which they are used and to ensure that the products are used in a manner consistent with applicable laws and regulations. Vontron assumes no obligation or responsibility for the information in this document and is not responsible for any consequences arising from the use and maintenance of the products by the user not in accordance with the conditions provided in this sample. Due to technical progress and product replacement, product information may change at any time without prior notice. Please pay attention to the latest product information.