# NE4040-90

NF element with high monovalent ion rejection

- High Removal of TOC, nitrate
- Low Energy Consumption
- Wide pH Tolerance Range of 1-12

## SPECIFICATIONS

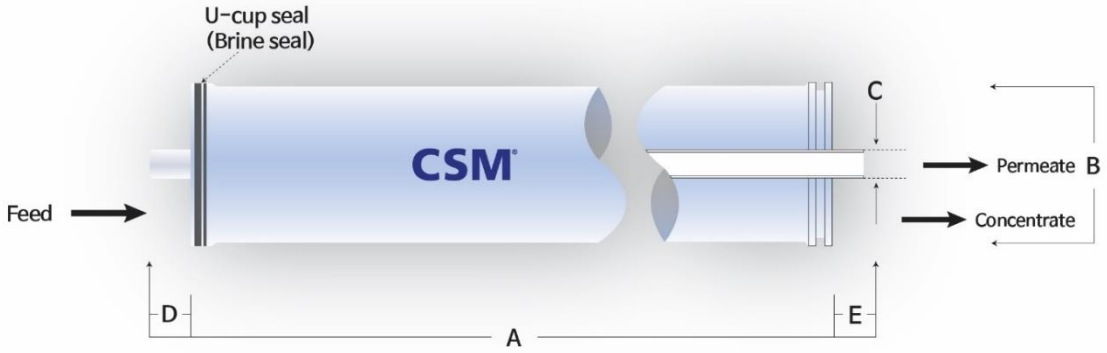
### General Features

| | |
|---|---|
| **Permeate Flow Rate** | 1,700 GPD (6.4 $m^3$/day) |
| **NaCl Rejection** | 90 – 97% |
| **Effective Membrane Area** | 85 $ft^2$ (7.9 $m^2$) |
| **Membrane Type** | Thin-Film Composite |
| **Membrane Material** | Polyamide (PA) |
| **Element Configuration** | Spiral-Wound, FRP Wrapping |

**Test Conditions:** 2,000 mg/L NaCl solution at 75 psig (0.52 MPa) applied pressure; 15% recovery; 77°F(25°C); pH 6.5–7.0; Permeate flow rate for each element may vary +25 / -25%.

### Dimensions and Weight

| Model Name | A | B | C | D/E | Part Number | |
|---|---|---|---|---|---|---|
| | | | | | Inter-Connector | Brine Seal |
| NE4040-90 | 40.0 inch (1,016 mm) | 3.9 inch (99.0 mm) | 0.75 inch (19.1 mm) | 1.05 inch (26.7 mm) | SWA01050 | SWA01046 |




1. Each membrane element supplied with one interconnector (coupler) and four O-rings.
2. All NE4040 elements fit nominal 4.0 inch (101.6 mm) I.D. pressure vessels.

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## APPLICATION DATA

### Operating Limits

| | |
|---|---|
| **Max. Pressure Drop / Element** | 15 psi (0.10 MPa) |
| **Max. Pressure Drop / 240" Vessel** | 60 psi (0.41 MPa) |
| **Max. Operating Pressure** | 600 psi (4.14 MPa) |
| **Max. Feed Flow Rate** | 18 gpm (4.09 $m^3$/hr) |
| **Min. Concentrate Flow Rate** | 4 gpm (0.91 $m^3$/hr) |
| **Max. Operating Temperature** | 113°F (45°C) |
| **Operating pH Range** | 3.0 – 10.0 |
| **CIP pH Range** | 1.0 – 12.0 |
| **Max. Turbidity** | 1.0 NTU |
| **Max. SDI (15 min)** | 5.0 |
| **Max. Chlorine Concentration** | < 0.1 mg/L |

## GENERAL HANDLING PROCEDURES

- Elements contained in the boxes must be kept dry at room temperature (7–32°C; 40–95°F) and should not be stored in direct sunlight.
- Permeate from the first hour of operation should be discarded.
- Keep elements moist at all times after initial wetting.
- Salt rejection would be stabilized within 48 hours of continuous operation depending on feedwater and operating conditions, but may take over a week for dry elements.
- Avoid excessive pressure and flow spikes.
- Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty.
- Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty.
- The element shell is FRP(Fiber Reinforced Plastic). Be aware of glass fiber strands and use safety equipment.

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