RO MEMBRANES VWSRO-XTLE-2521
Extra Low Energy Element

Type
Configuration: Spiral Wound
Membrane Polymer: Composite Polyamide/Polysulphone

Test Conditions
500 ppm NaCl solution, 7 bar (100 psi), 25°C, pH 6 – 7, Permeate Recovery 10%.

Operating Limits*
Maximum Applied Pressure: 21 bar (300 psig)
Maximum Free Chlorine Concentration: < 0.1 ppm
Maximum Operating Temperature: 45°C
Feedwater pH Range: 3.0 – 10.0
Cleaning pH Range: 1.0 - 12.0
Maximum Feedwater Turbidity: 1.0 NTU
Maximum Feedwater Fouling Index (SDI): 5
Maximum Element Recovery: 20%
Maximum Pressure Drop Per Element: 0.7 bar (10 psi)

*Operating limits are for information only, actual operating conditions should be optimised to ensure best performance and membrane life.

Notice: Minimum permeate flow for individual elements 15 % below listed flow. All membrane elements are supplied with a brine seal and o-rings. Elements are vacuum sealed in a polyethylene bag containing less than 1.0% sodium metabisulphite and 10% propylene glycol solution and then packaged in a cardboard box.

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Visit our website: www.veoliawatertechnologies.com/vwsro_membranes/en/
RO MEMBRANES VWSRO-XTLE-4021
Extra Low Energy Element

Part Number | Nominal Area m² | Permeate Flow Rate m³/d (usgpd) | Minimum Salt Rejection (%) |
--- | --- | --- | --- |
MBROYN0700 | 3 | 3.6 (960) | 98 |

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Maximum Feed Flow m³/hr (usgpm)</th>
<th>Dimensions meters (m)</th>
<th>Weight. kg (lbs)</th>
<th>Permeate tube length inches (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBROYN0700</td>
<td>2.7 (12)</td>
<td>21 (533)</td>
<td>3.95 (100)</td>
<td>0.75 (19.1)</td>
</tr>
</tbody>
</table>

**Type**

**Configuration:** Spiral Wound

**Membrane Polymer:** Composite Polyamide/Polysulphone

**Test Conditions**

500 ppm NaCl solution, 7 bar (100 psi), 25°C, pH 6 – 7, Permeate Recovery 10%.

**Operating Limits***

- Maximum Applied Pressure: 21 bar (300 psig)
- Maximum Free Chlorine Concentration: < 0.1 ppm
- Maximum Operating Temperature: 45°C
- Feedwater pH Range: 3.0 – 10.0
- Cleaning pH Range: 1.0 – 12.0
- Maximum Feedwater Turbidity: 1.0 NTU
- Maximum Feedwater Fouling Index (SDI): 5
- Maximum Element Recovery: 20%
- Maximum Pressure Drop Per Element: 0.7 bar (10 psi)

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Notice: Minimum permeate flow for individual elements 15 % below listed flow. All membrane elements are supplied with a brine seal and o-rings. Elements are vacuum sealed in a polyethylene bag containing less than 1.0% sodium metabisulphite and 10% propylene glycol solution and then packaged in a cardboard box.

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### RO MEMBRANES VWSRO-XTLE-4040
Extra Low Energy Element

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Nominal Area m²</th>
<th>Permeate Flow Rate m³/d (usgpd)</th>
<th>Salt Rejection (%)</th>
<th>Minimum</th>
<th>Nominal</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBROYN0704</td>
<td>7.9</td>
<td>9.5 (2500)</td>
<td>99</td>
<td>99.2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Maximum Feed Flow m³/hr (usgpm)</th>
<th>Dimensions meters (m)</th>
<th>Weight. kg (lbs)</th>
<th>Permeate tube length inches (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBROYN0704</td>
<td>3.6 (16)</td>
<td>40 (1016)</td>
<td>3.95 (100)</td>
<td>0.75 (19.1)</td>
</tr>
</tbody>
</table>

#### Type
- **Configuration:** Spiral Wound
- **Membrane Polymer:** Composite Polyamide/Polysulphone

#### Test Conditions
500 ppm NaCl solution, 7 bar (100 psi), 25°C, pH 6 – 7, Permeate Recovery 15%.

#### Operating Limits*
- **Maximum Applied Pressure:** 42 bar (600 psig)
- **Maximum Free Chlorine Concentration:** < 0.1 ppm
- **Maximum Operating Temperature:** 45°C
- **Feedwater pH Range:** 3.0 – 10.0
- **Cleaning pH Range:** 2.0 - 12.0
- **Maximum Feedwater Turbidity:** 1.0 NTU
- **Maximum Feedwater Fouling Index (SDI):** 5
- **Maximum Element Recovery:** 20%
- **Maximum Pressure Drop Per Element:** 0.7 bar (10 psi)

*Operating limits are for information only, actual operating conditions should be optimised to ensure best performance and membrane life.

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Notice: Minimum permeate flow for individual elements 15% below listed flow. All membrane elements are supplied with a brine seal and o-rings. Elements are vacuum sealed in a polyethylene bag containing less than 1.0% sodium metabisulphite and 10% propylene glycol solution and then packaged in a cardboard box.

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Veolia/VWSRO/XTLE-4040/AQF104_EN_V1.4/sep2014

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Part Number Nominal Area m² | Permeate Flow Rate m³/d (usgpd) | Salt Rejection (%) | Minimum | Nominal |
--- | --- | --- | --- | --- |
MBROYN0704 | 7.9 | 9.5 (2500) | 99 | 99.2 |

Part Number Maximum Feed Flow m³/hr (usgpm) | Dimensions meters (m) | Weight. kg (lbs) | Permeate tube length inches (mm) |
--- | --- | --- | --- |
MBROYN0704 | 3.6 (16) | 40 (1016) | 3.95 (100) | 0.75 (19.1) | 3.6 (8) | 1.05 (26.7) |
RO MEMBRANES VWSRO-LERA-8040
Low Energy Regular Area Element

Type
Configuration:    Spiral Wound
Membrane Polymer:    Composite Polyamide/Polysulphone

Test Conditions
1500 ppm NaCl solution, 10.5 bar (150 psi), 25°C, pH 6 – 7,
Permeate Recovery 15%.

Operating Limits*
Maximum Applied Pressure:   42 bar (600 psig)
Maximum Free Chlorine Concentration:  < 0.1 ppm
Maximum Operating Temperature:  45°C
Feedwater pH Range:  3.0 – 10.0
Cleaning pH Range:  1.0 - 12.0
Maximum Feedwater Turbidity:  1.0 NTU
Maximum Feedwater Fouling Index (SDI):  5
Maximum Element Recovery:   20%
Maximum Pressure Drop Per Element: 0.7 bar (10 psi)

*Operating limits are for information only, actual operating conditions should be optimised to ensure best performance and membrane life.

Notice: Minimum permeate flow for individual elements 15 % below listed flow. All membrane elements are supplied with a brine seal and o-rings. Elements are vacuum sealed in a polyethylene bag containing less than 1.0% sodium metabisulphite and 10% propylene glycol solution and then packaged in a cardboard box.

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Visit our website: www.veoliawatertechnologies.com/vwsro_membranes/en/
**Type**

**Configuration:** Spiral Wound

**Membrane Polymer:** Composite Polyamide/Polysulphone

**Test Conditions**

1500 ppm NaCl solution, 10.5 bar (150 psi), 25°C, pH 6 – 7, Permeate Recovery 15%.

**Operating Limits***

- **Maximum Applied Pressure:** 42 bar (600 psig)
- **Maximum Free Chlorine Concentration:** < 0.1 ppm
- **Maximum Operating Temperature:** 45°C
- **Feedwater pH Range:** 3.0 – 10.0
- **Cleaning pH Range:** 1.0 - 12.0
- **Maximum Feedwater Turbidity:** 1.0 NTU
- **Maximum Feedwater Fouling Index (SDI):** 5
- **Maximum Element Recovery:** 20%
- **Maximum Pressure Drop Per Element:** 0.7 bar (10 psi)

*Operating limits are for information only, actual operating conditions should be optimised to ensure best performance and membrane life.

Notice: Minimum permeate flow for individual elements 15 % below listed flow. All membrane elements are supplied with a brine seal and o-rings. Elements are vacuum sealed in a polyethylene bag containing less than 1.0% sodium metabisulphite and 10% propylene glycol solution and then packaged in a cardboard box.

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Veolia/VWSRO-LEHA-4040/A201808_EN_V1.3./Sept2014
**RO MEMBRANES VWSRO-SRHA-8040**

Standard Rejection High Area Element

**Type**

**Configuration:** Spiral Wound

**Membrane Polymer:** Composite Polyamide/Polysulphone

**Test Conditions**

1500 ppm NaCl solution, 10.5 bar (150 psi), 25°C, pH 6 – 7, Permeate Recovery 15%.

**Operating Limits**

- **Maximum Applied Pressure:** 42 bar (600 psig)
- **Maximum Free Chlorine Concentration:** < 0.1 ppm
- **Maximum Operating Temperature:** 45°C
- **Feedwater pH Range:** 3.0 – 10.0
- **Cleaning pH Range:** 1.0 - 12.0
- **Maximum Feedwater Turbidity:** 1.0 NTU
- **Maximum Feedwater Fouling Index (SDI):** 5
- **Maximum Element Recovery:** 20%
- **Maximum Pressure Drop Per Element:** 0.7 bar (10 psi)

*Operating limits are for information only, actual operating conditions should be optimised to ensure best performance and membrane life.

Notice: Minimum permeate flow for individual elements 15 % below listed flow. All membrane elements are supplied with a brine seal and o-rings. Elements are vacuum sealed in a polyethylene bag containing less than 1.0% sodium metabisulphite and 10% propylene glycol solution and then packaged in a cardboard box.

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Visit our website: www.veoliawatertechnologies.com/vwsro_membranes/en/
RO MEMBRANES VWSRO-HRRA-4040
High Rejection Regular Area Element

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Nominal Area m²</th>
<th>Permeate Flow Rate m³/d (usgpd)</th>
<th>Salt Rejection (%)</th>
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<tbody>
<tr>
<td>MBROYN0701</td>
<td>7.9</td>
<td>8.5 (2250)</td>
<td>99.6</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>99.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Maximum Feed Flow m³/hr (usgpm)</th>
<th>Dimensions inches (mm)</th>
<th>Weight. kg (lbs)</th>
<th>Permeate tube length inches (mm)</th>
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</thead>
<tbody>
<tr>
<td>MBROYN0701</td>
<td>3.6 (16)</td>
<td>A: 40 (1016) B: 3.95 (100) C: 0.75 (19.1)</td>
<td>3.6 (8)</td>
<td>1.05 (26.7)</td>
</tr>
</tbody>
</table>

**Type**

**Configuration:** Spiral Wound

**Membrane Polymer:** Composite Polyamide/Polysulphone

**Test Conditions**

1500 ppm NaCl solution, 15.5 bar, 25°C, pH 6 – 7, Permeate Recovery 15%.

**Operating Limits***

- Maximum Applied Pressure: 42 bar (600 psig)
- Maximum Free Chlorine Concentration: < 0.1 ppm
- Maximum Operating Temperature: 45°C
- Feedwater pH Range: 3.0 – 10.0
- Cleaning pH Range: 1.0 - 12.0
- Maximum Feedwater Turbidity: 1.0 NTU
- Maximum Feedwater Fouling Index (SDI): 5
- Maximum Element Recovery: 20%
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Veolia/VWSRO-HRRA-4040/AQF307_EN_V13/Sep2014

**WATER TECHNOLOGIES**
RO MEMBRANES VWSRO-HRRA-8040
High Rejection Regular Area Element

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Nominal Area m²</th>
<th>Permeate Flow Rate m³/d (usgpd)</th>
<th>Salt Rejection (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBROYR0752</td>
<td>37.1</td>
<td>41.6 (11000)</td>
<td>99.6</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>99.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Maximum Feed Flow m³/hr (usgpm)</th>
<th>Dimensions meters (m)</th>
<th>Weight kg (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBROYR0752</td>
<td>17 (75)</td>
<td>A: 40 (1016) B: 7.89 (200) C: 1.125 (28.6)</td>
<td>16.4 (36)</td>
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</tbody>
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**Type**

**Configuration:** Spiral Wound

**Membrane Polymer:** Composite Polyamide/Polysulphone

**Test Conditions**

1500 ppm NaCl solution, 15.5 bar (225 psi), 25°C, pH 6 – 7, Permeate Recovery 15%.

**Operating Limits***

- **Maximum Applied Pressure:** 42 bar (600 psig)
- **Maximum Free Chlorine Concentration:** < 0.1 ppm
- **Maximum Operating Temperature:** 45°C
- **Feedwater pH Range:** 3.0 – 10.0
- **Cleaning pH Range:** 1.0 - 12.5
- **Maximum Feedwater Turbidity:** 1.0 NTU
- **Maximum Feedwater Fouling Index (SDI):** 5
- **Maximum Element Recovery:** 20%
- **Maximum Pressure Drop Per Element:** 0.7 bar (10 psi)

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