# DuraSlick* NF Series

*FACT SHEET*

## Low fouling NF elements

DuraSlick NF is a family series of membrane elements engineered for use with fouling-prone brackish water applications and industrial effluent treatment before reuse or discharge. DuraSlick NF is designed to utilize an innovative three-layer membrane, of which a proprietary middle layer creates extreme smoothness, and provide a high rejection of salts.

Independent studies have demonstrated that DuraSlick NF elements are superior to standard polyamide spiral wound membrane elements for salt removal in fouling environment. DuraSlick NF elements retrofit existing systems to obtain stable permeate flux, reduced overall energy usage, increased membrane service life and an extension of operating time between required cleanings, which in turn reduces expenditures on required chemicals.

**Table 1: Element Specification**

| | |
|---|---|
| **Membrane** | Thin-film membrane (TFM*) |

| Model | Average permeate flow gpd ($m^3$/day) (1,2) | Average $MgSO_4$ rejection (1,2) | Minimum $MgSO_4$ rejection (1,2) |
|---|---|---|---|
| DuraSlick NF2540 | 600 (2.3) | 98.0% | 96.0% |
| DuraSlick NF4040 | 2,400 (9.1) | 98.0% | 96.0% |
| DuraSlick NF8040 | 8,600 (32.6) | 98.0% | 96.0% |

(1) Average salt rejection after 24 hours operation. Individual flow rate may vary ±25%.

(2) Testing conditions: 2,000 ppm $MgSO_4$ solution at 110 psi (760 kPa) operating pressure, 77°F (25°C), pH 7.5 and 15% recovery.

| Model | Spacer mil (mm) | Active area $ft^2$ ($m^2$) | Outer wrap | Part number |
|---|---|---|---|---|
| DuraSlick NF2540 | 30 (0.76) | 28 (2.6) | Fiberglass | 1234385 |
| DuraSlick NF4040 | 30 (0.76) | 85 (7.9) | Fiberglass | 1234307 |
| DuraSlick NF8040 | 30 (0.76) | 370 (34.4) | Fiberglass | 1234182 |

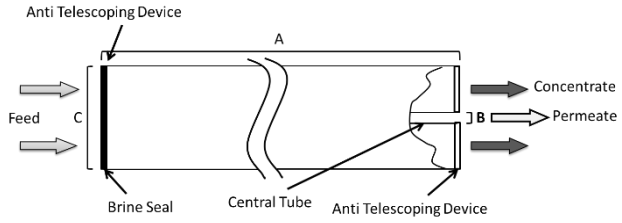


**Figure 1: Element Dimensions Diagram – 8040**

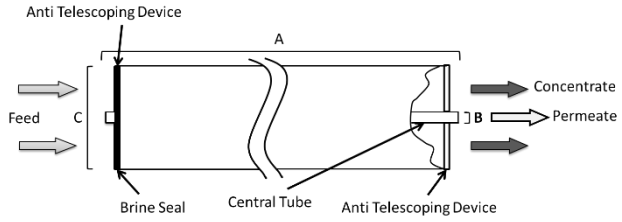


**Figure 2: Element Dimensions Diagram – 2540 & 4040**

### Table 2: Dimensions and Weight

| Model | Fig. | Dimensions, inches (cm) | | | Boxed |
|---|---|---|---|---|---|
| | | A | B | C | Weight lbs (kg) |
| DuraSlick NF2540 | 2 | 40.0 (101.6) | 0.75 (1.9) | 2.4 (6.1) | 7 (3) |
| DuraSlick NF4040 | 2 | 40.0 (101.6) | 0.75 (1.9) | 3.9 (9.9) | 11 (5) |
| DuraSlick NF8040 | 1 | 40.0 (101.6) | 1.125 (2.86) | 7.9 (20.0) | 35 (16) |

### Table 3: Operating and CIP parameters

| | |
|---|---|
| **Typical Operating Pressure** | 100psi (690 kPa) |
| **Typical Operating Flux** | 10-15GFD (15-25LMH) |
| **Maximum Operating Pressure** | 600psi (4,137 kPa) |
| **Maximum Temperature** | Continuous Operation: 122°F (50°C)<br>Clean-In-Place: 104°F (40°C) |
| **pH Range** | Continuous Operation: 3.0 – 9.0<br>Clean-In-Place (CIP): 2.0 – 11.0 (1) |
| **Maximum Pressure Drop** | Over an element: 12psi (83 kPa)<br>Per housing: 50psi (345 kPa) |
| **Chlorine Tolerance** | 500 ppm-hrs,<br>dechlorination recommended |
| **Feedwater** | NTU < 1<br>$SDI_{15}$ < 5 |

(1) Please refer to Cleaning Guidelines Technical Bulletin TB1194EN

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