VEOLIA

LENNTECH
WATER TREATMENT SOLUTIONS

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

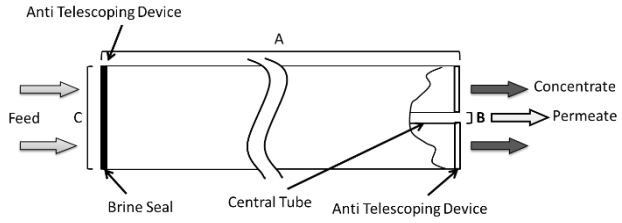

Figure 1: Element Dimensions Diagram – 8040

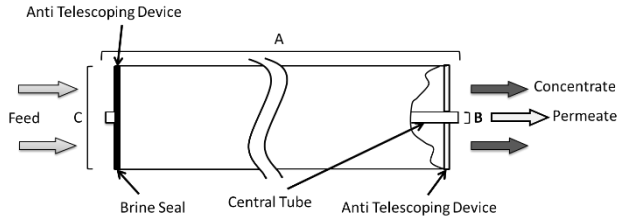

Figure 2: Element Dimensions Diagram – 2540 & 4040

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) Clean-In-Place: 104°F (40°C)
pH Range	Continuous Operation: 3.0 – 9.0 Clean-In-Place (CIP): 2.0 – 11.0 (1)
Maximum Pressure Drop	Over an element: 12psi (83 kPa) Per housing: 50psi (345 kPa)
Chlorine Tolerance	500 ppm-hrs, dechlorination recommended
Feedwater	NTU < 1 SDI_{15} < 5

(1) Please refer to Cleaning Guidelines Technical Bulletin TB1194EN

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