

Duraslick* Series

Low Fouling NF/RO Elements

Duraslick* is a family series of membrane elements engineered for use with fouling-prone brackish water applications. Duraslick* 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* elements are superior to standard polyamide spiral wound membrane elements for desalination of difficult feed water sources. Duraslick* elements retrofit existing systems to obtain lower fouling, 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. Duraslick* HS elements are specially designed for comparatively higher suspended solids levels.

Table 1: Element Specification

Membrane	Thin-film membrane (TFM*)
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Model	Average permeate flow gpd (m3/day) ^{1,2}	Average NaCl rejection ^{1,2}	Minimum NaCl rejection ^{1,2}
Duraslick RO 2540	550 (2.1)	98.6%	97.0%
Duraslick RO 4040	1,800 (6.8)	98.6%	97.0%
Duraslick RO 4040 HS	1,700 (6.4)	98.6%	97.0%
Duraslick RO 8040	7,700 (29.1)	98.6%	97.0%
Duraslick RO 8040 HS	7,400 (28.0)	98.6%	97.0%

¹ Average salt rejection after 24 hours operation. Individual flow rate may vary +25%/-25%.

² Testing conditions: 800ppm NaCl solution at 225psig (1,551 kPa) operating pressure, 77°F, pH7.5 and 15% recovery.

Model	Average permeate flow gpd (m3/day) ^{1,2}	Average MgSO4 rejection ^{1,2}	Minimum MgSO4 rejection ^{1,2}
Duraslick NF 2540	600 (2.3)	98.6%	96.0%
Duraslick NF 4040	1,900 (7.2)	98.6%	96.0%
Duraslick NF 4040 HS	1,800 (6.8)	98.6%	96.0%
Duraslick NF 8040	8,600 (32.6)	98.6%	96.0%
Duraslick NF 8040 HS	8,200 (31.0)	98.6%	96.0%

¹ Average salt rejection after 24 hours operation. Individual flow rate may vary +25%/-25%.

² Testing conditions: 2,000ppm MgSO₄ solution at 110psi (760kPa) operating pressure, 77°F, pH7.5 and 15% recovery.

Model	Spacer mil (mm)	Active area ft ² (m ²)	Outer wrap	Part number
Duraslick RO 2540	30 (0.76)	24 (2.2)	Fiberglass	1231055
Duraslick RO 4040	30 (0.76)	80 (7.4)	Fiberglass	1231048
Duraslick RO 4040 HS	35 (0.89)	75 (7.0)	Fiberglass	1234386
Duraslick RO 8040	30 (0.76)	355 (33.0)	Fiberglass	1231014
Duraslick RO 8040 HS	35 (0.89)	340 (31.6)	Fiberglass	1234403
Duraslick NF 2540	30 (0.76)	24 (2.2)	Fiberglass	1234385
Duraslick NF 4040	30 (0.76)	80 (7.4)	Fiberglass	1234307
Duraslick NF 4040 HS	35 (0.89)	75 (7.0)	Fiberglass	1234405
Duraslick NF 8040	30 (0.76)	355 (33.0)	Fiberglass	1234182
Duraslick NF 8040 HS	35 (0.89)	340 (31.6)	Fiberglass	1234183

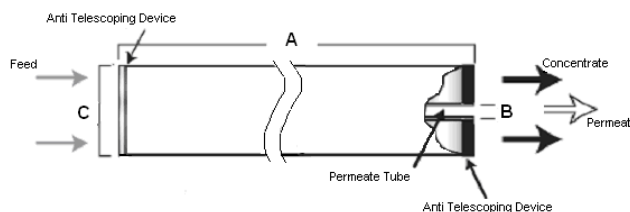


Figure 1: Element Dimensions Diagram - Female

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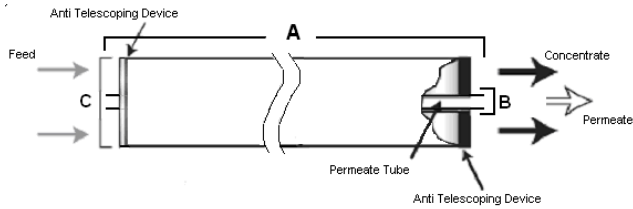


Figure 2: Element Dimensions Diagram - Male

Table 2: Dimensions and Weight

Model ¹	Dimensions, inches (cm)			Boxed Weight lbs (kg)
	A	B ²	C ³	
Duraslick RO 2540	40.0 (101.6)	0.75 (1.9) OD	2.4 (6.1)	4 (1.8)
Duraslick RO 4040	40.0 (101.6)	0.75 (1.9) OD	3.9 (9.9)	9 (4.1)
Duraslick RO 4040 HS	40.0 (101.6)	0.75 (1.9) OD	3.9 (9.9)	9 (4.1)
Duraslick RO 8040	40.0 (101.6)	1.125 (2.86)	7.9 (20.0)	29 (13.2)
Duraslick RO 8040 HS	40.0 (101.6)	1.125 (2.86)	7.9 (20.0)	29 (13.2)
Duraslick NF 2540	40.0 (101.6)	0.75 (1.9) OD	2.4 (6.1)	4 (1.8)
Duraslick NF 4040	40.0 (101.6)	0.75 (1.9) OD	3.9 (9.9)	9 (4.1)
Duraslick NF 4040 HS	40.0 (101.6)	0.75 (1.9) OD	3.9 (9.9)	9 (4.1)
Duraslick NF 8040	40.0 (101.6)	1.125 (2.86)	7.9 (20.0)	29 (13.2)
Duraslick NF 8040 HS	40.0 (101.6)	1.125 (2.86)	7.9 (20.0)	29 (13.2)

¹These elements are dried and bagged before shipping.

²Internal diameter.

³The element diameter (dimension C) is designed for optimum performance in GE Water & Process Technologies pressure vessels. Others pressure vessel dimension and tolerance may result in excessive bypass and loss of capacity.

Table 3: Operating and CIP parameters

Typical Operating Pressure	Duraslick RO: 200psi (1,379 kPa) Duraslick NF: 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) Duraslick RO Clean-In-Place: 122°F (50°C) Duraslick NF Clean-In-Place: 104°F (40°C)
pH Range	Duraslick RO: Continuous Operation: 4.0 – 10.0 Clean-In-Place (CIP): 2.0 – 10.5 Duraslick NF: Continuous Operation: 3.0 – 9.0 Clean-In-Place (CIP): 2.0 – 10.5
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 < 5