SG Series

Industrial Brackish Water RO Elements

The S-Series family of proprietary thin-film reverse osmosis membrane elements is characterized by high sodium chloride rejection and a smooth, fouling-resistant membrane surface.

SG Brackish Water Elements are used for brackish water desalination and process stream concentration.

The SG elements feature either a patented cage or fiberglass outer wrap and 30mil or 50mil spacer.

Table 1: Element Specification

Membrane	S-Series, Thin-film membrane (TFM*)

Model	Average permeate flow gpd (m^3/day)[1,2]	Average NaCl rejection[1,2]	Minimum NaCl rejection[1,2]
SG2540F1072	590 (2.2)	98.5%	97%
SG2540F1073	370 (1.4)	98.5%	97%
SG4040F1020, Stinger	2,100 (7.9)	98.5%	97%
SG4040F1117	1,500 (5.7)	98.5%	97%
SG4040C1024	2,200 (8.3)	98.5%	97%
SG4040C1025	1,500 (5.6)	98.5%	97%
SG8040F1001	8,400 (31.8)	98.5%	97%
SG8040F1002	5,900 (22.3)	98.5%	97%
SG8040C1065	8,600 (32.6)	98.5%	97%

[1] Average salt rejection after 24 hours operation.
Individual flow rate may vary ±25%.
[2] Testing conditions: 2,000ppm NaCl solution at 225psi (1,551kPa) operating pressure, 77°F (25°C), pH 6.5 and 15% recovery.

Model	Spacer mil (mm)	Active area ft^2 (m^2)	Outer wrap	Part number
SG2540F1072	30 (0.76)	27 (2.5)	Fiberglass	1207546
SG2540F1073	50 (1.27)	17 (1.6)	Fiberglass	1207547
SG4040F1020, Stinger	30 (0.76)	95 (8.8)	Fiberglass	3049994
SG4040F1117	50 (1.27)	67 (6.2)	Fiberglass	1207589
SG4040C1024	30 (0.76)	100 (9.3)	Cage	1207577
SG4040C1025	50 (1.27)	67 (6.2)	Cage	1207578
SG8040F1001	30 (0.76)	380 (35.3)	Fiberglass	1207614
SG8040F1002	50 (1.27)	268 (24.9)	Fiberglass	1207615
SG8040C1065	30 (0.76)	390 (36.2)	Cage	1207607

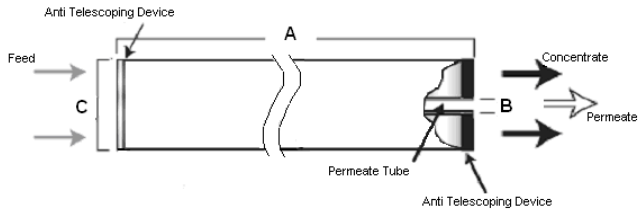


Figure 1a: Element Dimensions Diagram (Female)

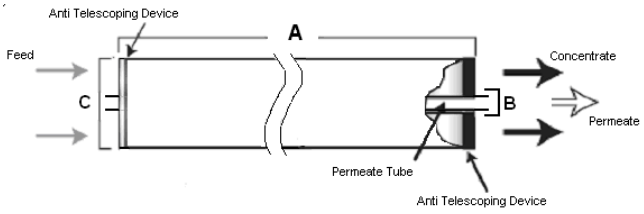


Figure 1b: Element Dimensions Diagram (Male, Stinger)

Table 2: Dimensions and Weight

Model[1]	Dimensions, inches (cm)			Boxed
	A	B[2]	C[3]	Weight lbs (kg)
SG2540F1072	40.0 (101.6)	0.75 (1.90) OD	2.4 (6.1)	4 (1.8)
SG2540F1073	40.0 (101.6)	0.75 (1.90) OD	2.4 (6.1)	4 (1.8)
SG4040F1020, Stinger	40.0 (101.6)	0.75 (1.90) OD	3.9 (9.9)	9 (4.1)
SG4040F1117	40.0 (101.6)	0.625 (1.59)	3.9 (9.9)	9 (4.1)
SG4040C1024	40.0 (101.6)	0.625 (1.59)	3.9 (9.9)	9 (4.1)
SG4040C1025	40.0 (101.6)	0.625 (1.59)	3.9 (9.9)	9 (4.1)
SG8040F1001	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	29 (13.2)
SG8040F1002	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	29 (13.2)
SG8040C1065	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	29 (13.2)

[1]These elements are dried then bagged before shipping.
[2]Internal diameter unless specified OD (outside diameter).
[3]The element diameter (dimension C) is designed for optimum performance in GE pressure vessels. Other pressure vessel dimension and tolerance may result in excessive bypass and loss of capacity

Table 3: Operating and CIP Parameters

Typical Operating Flux	5 – 20 GFD (8 – 34 LMH)
Maximum Operating Pressure	600psi (4,137kPa) if T < 95°F (35°C) 435psi (3,000kPa) if T > 95°F (35°C)
Maximum Temperature	Continuous Operation: 122°F (50°C) Clean-In-Place (CIP): 122°F (50°C)
pH Range	Optimum Rejection: 5.5-7.0, Continuous Operation: 2.0-10.0, Clean-In-Place (CIP): 1.0-10.5
Maximum Pressure Drop	Over an element 15psi (103kPa) per housing: 60psi (414kPa)
Chlorine Tolerance	500+ ppm hours, dechlorination recommended
Feedwater	NTU < 1 SDI < 5