GE Power & Water
Water & Process Technologies

Fact Sheet

SC Series

Industrial High Pressure 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.

SC High Pressure Brackish Water Elements are used for high-pressure brackish water desalination and for treatment of wastewater streams with a high osmotic pressure or a high level of solids.

The SC industrial elements feature a 30mil or 50mil spacer with standard materials or polysulfone materials.

Table 1: Element Specification

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

Model	Average permeate flow gpd (m3/day) [1,2]	Average NaCl rejection [1,2]	Minimum NaCl rejection [1,2]
SC2540F1457	550 (2.1)	99.0%	98.5%
SC2540F1091	370 (1.4)	99.0%	98.5%
SC4040F1032,STINGER	1,900 (7.2)	99.0%	98.5%
SC4040F1048,STINGER	1,400 (5.3)	99.0%	98.5%
SC4040C-30D	2,100 (7.9)	99.0%	98.5%
SC8040F1013	7,800 (29.5)	99.0%	98.5%
SC8040F1953	7,000 (26.5)	99.0%	98.5%
SC8040F1012	5,800 (22.0)	99.0%	98.5%

[1] Average salt rejection after 24h operation. Individual flow rate may vary ±25%.
[2] Testing conditions: 2,000ppm NaCl solution at 425psi (2,930kPa) operating pressure, 77°F, pH6.5 and 15% recovery.

Model	Spacer mil (mm)	Active area ft² (m²)	Outer wrap	Part number
SC2540F1457	30 (0.76)	25 (2.3)	Fiberglass	1207431
SC2540F1091	50 (1.27)	17 (1.6)	Fiberglass	1207427
SC4040F1032, STINGER	30 (0.76)	87 (8.1)	Fiberglass	3050577
SC4040F1048, STINGER	50 (1.27)	64 (6.0)	Fiberglass	3049999
SC4040C-30D	30 (0.76)	97 (9.0)	Cage	1238350
SC8040F1013	30 (0.76)	355 (33.0)	Fiberglass	1207451
SC8040F1953	30 (0.76)	320 (29.7)	Fiberglass	1221715
SC8040F1012	50 (1.27)	264 (24.5)	Fiberglass	1207450

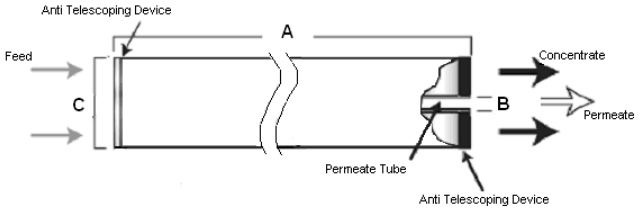


Figure 1a: Element Dimensions Diagram (Female)

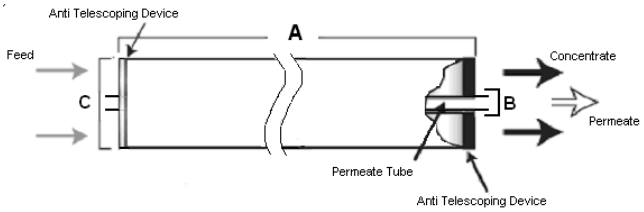


Figure 1b: Element Dimensions Diagram (Male,Stinger)

Table 2: Dimensions and Weight

Model[1]	Dimensions, inches (cm)			Boxed
	A	B[2]	C[3]	Weight lbs (kg)
SC2540F	40.0 (101.6)	0.75 (1.90) OD	2.4 (6.1)	4 (1.8)
SC4040F,STINGER	40.0 (101.6)	0.75 (1.90) OD	3.9 (9.9)	9 (4.1)
SC4040C	40.0 (101.6)	0.625 (1.59)	3.9 (9.9)	9 (4.1)
SC8040F	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

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For more information contact:
info@lenntech.com
www.lenntech.com
Tel. +31-15-2610900
Fax. +31-15-2610900

Table 3: Operating and CIP Parameters

Typical Operating Flux	5 - 20 GFD (8 – 34 LMH)
Maximum Operating Pressure	Element size 2540: 600psi (4,137kPa) if T<95°F (35°C) 435psi (3,000kPa) if T>95°F (35°C) Element size 4040 / 8040: 1,200psi (8,276kPa) if T<77°F (25°C) 580psi (4,000kPa) if T>77°F (25°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