

Reverse Osmosis Element Specifications S-Series, SG Brackish Water Durasan™

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

SG Brackish Water Durasan™ Elements are used for **brackish water desalination** or **process stream concentration** at 225 psig operating pressure (1,551 kPa). They feature the Durasan™ outerwrap and standard materials of construction. Other materials of construction and special feed spacers are available.

Element Specifications

<i>Model</i>	<i>GPD (m³/d)</i>	<i>NaCl Rejection Average/Minimum</i>	<i>Active Area ft² (m²)</i>
SG4025C	1,420 (5.37)		62 (5.76)
SG4040C	2,000 (7.57)	98.5%/97.0%	97 (9.01)
SG8040C	7,200 (27.22)		350 (32.52)

Specifications are based on a 2,000 mg/L NaCl solution at 225 psig operating pressure (1,551 kPa), 77°F (25°C), pH6.5, 15% recovery, after 24 hours. Individual element flux may vary ± 15%.

Operating and Design Parameters

- **Membrane:** Thin-film membrane (TFM®).
- **Typical operating pressure:** 200 psig (1,379 kPa).
- **Maximum pressure:** 600 psig (4,137 kPa).
- **Maximum temperature:** 122°F (50°C).
- **Recommended pH:** Optimum rejection at 5.5-7.0, operating range 2.0-11.0, cleaning range 1.0-11.5.
- **Feed NTU:** <1
- **Feed SDI:** <5
- **Chlorine tolerance:** 500 ppm hours, dechlorination recommended.
- **Permeate flow:** Maximum should not exceed specifications.

<i>Recommended per vessel in a system</i>	<i>Elements per pressure vessel</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Δ P - psig (kPa)	10 (69)	20 (138)	30 (207)	38 (262)	45 (310)	50 (345)
% Recovery	15	25	35	45	53	53

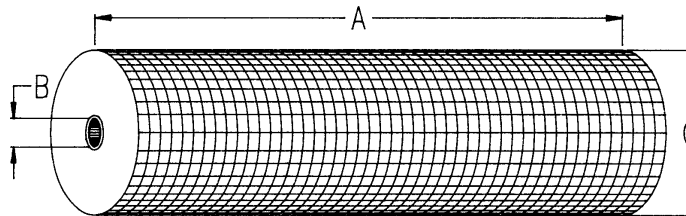
Reverse Osmosis Element Specifications S-Series, SG Brackish Water Durasan™

Element Performance

<i>Ion</i>	<i>Feed Concentration mg/L</i>	<i>% Rejection</i>
Sodium	68.0	98.0
Calcium	80.0	99.5
Magnesium	21.0	99.5
Potassium	4.1	97.0
Bicarbonate	132.0	98.1
Sulfate	163.0	99.5
Chloride	51.0	98.8
Silica	9.3	>98.0
TDS	528.0	98.7

Determined at 200 psig net pressure (1,379 kPa), 25% recovery, pH 7.8 on dechlorinated municipal feed water.

Element Dimensions and Weight



<i>Model</i>	<i>Dimensions, inches (cm)</i>			<i>Dry boxed weight lbs. (kg)</i>
	<i>A</i>	<i>B</i>	<i>C</i>	
SG4025C	25.00 (63.50)	0.625 (1.59)	3.98 (10.11)	8 (3.63)
SG4040C	40.00 (101.6)	0.625 (1.59)	3.98 (10.11)	12 (5.45)
SG8040C	40.00 (101.6)	1.187 (3.01)	7.95 (20.19)	32 (14.53)

Length includes ATD's (not shown). All elements are shipped dry.