

Seasoft* Series

NF Elements for Sulfates and Hardness Removal from Seawater

NF Applications for Seawater

NF has the unique ability to selectively reject ions:

- Rejection of anions with more than one negative charge
- Rejection of cations depending on shape and size
- Rejection of organic if molecular weight is >200-300 Daltons
- At least 80% of water hardness is removed with low operating pressure and high flux.

Seasoft* HR/HF Elements:

Fouling-Resistance Seasoft elements prevent:

- Scale formation by removal of hardness and sulfates
- Fouling by removal of turbidity and bacteria on down stream equipment.

Seasoft* HR for Applications Requiring:

- High Hardness Rejection 95%+
- High Sulfate Rejection 99%+
- Sodium Chloride Rejection 20-30%

Seasoft* HF for Applications Requiring:

- High Flux at Low Pressure
- High Hardness Rejection 95%+
- High Sulfate Rejection 99%+
- High Sodium Chloride Passage

Table 1: Element Specification

Membrane	Thin-film membrane (TFM*)		
	Model	Average permeate flow gpd (m3/day)^{1,2}	Minimum MgSO4 rejection^{1,2}
	Seasoft 8040 HR	7,800 (29.5)	98%
	Seasoft 8040 HF	9,300 (35.2)	96%

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

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

Model	Active area ft ² (m ²)	Outer wrap	Part number
Seasoft 8040 HR	387 (36.0)	Fiberglass	1233954
Seasoft 8040 HF	387 (36.0)	Fiberglass	1233938

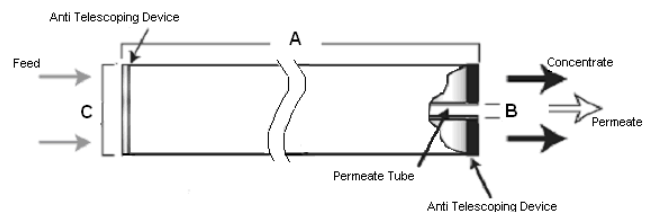


Figure 1: Element Dimensions Diagram

Table 2: Dimensions and Weight

Model ¹	Dimensions, inches (cm)			Boxed Weight lbs (kg)
	A	B ²	C ³	
Seasoft 8040 HR	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	29 (13.2)
Seasoft 8040 HF	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	29 (13.2)

¹ These elements are dried and bagged before shipping.

² Internal diameter.

³ The 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.

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Table 3: Operating and CIP parameters

Typical Operating Pressure	70-400psig (483-2,758kPa)
Typical Operating Flux	10-15GFD (15-25LMH)
Maximum Operating Pressure	600psig (4,140kPa)
Maximum Temperature	Continuous Operation: 122°F (50°C) Clean-In-Place (CIP): 104°F (40°C)
pH Range	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-hours, dechlorination recommended
Feedwater	NTU < 1 SDI < 5