

Series- H- Water Softening- NF Membrane Elements

Product Information

DS-51 *HL* nanofiltration elements are used for water softening, color removal, and reduction of THM potential. They feature a fiberglass outerwrap and standard feed spacers.

The proprietary DS-51 thin-film nanofiltration membrane is characterized by an approximate molecular weight cut-off of 150-300 daltons for uncharged organic molecules. Divalent and multivalent anions are preferentially rejected by the membrane while monovalent ion rejection is dependent upon feed concentration and composition.

Membrane Specifications - DS-51

Membrane: Proprietary nanofiltration thin-film membrane (TFM®).

Applications: Water softening, color removal, and reduction of THM potential.

Rejection characteristics: Divalent and multivalent anions are preferentially rejected by the membrane while monovalent ion rejection is dependent upon feed concentration and composition. The membrane is characterized by a molecular weight cutoff of 150-300 daltons for uncharged organic molecules.

Recommended pH: 3.0-9.0 operating range and 1.0-10.0 cleaning range for standard construction elements.

Free chlorine tolerance: <0.1ppm

Maximum operating temperature: 122°F (50°C) with standard element construction.

Maximum cleaning temperature: 113°F (45°C)

Element Series Designation: HL

Element Specifications

Model	GPD (m ³ /d)	Avg MgSO ₄ Rejection	Active Area ft ² (m ²)
HL4040F	2,600 (9.83)	98%	90 (8.36)
HL8040F	10,100 (38.18)	98%	350 (32.52)

Specifications are based on a 2,000 mg/L MgSO₄ solution at 100 psig (690 kPa) net pressure, 77°F (25°C), and 10% recovery. Individual element flux may vary ± 20%.

Operating and Design Parameters

Membrane: Thin film membrane (TFM)

Typical operating pressure: 70-300 psig (483-2,069 kPa)

Maximum pressure: 400 psig (2,758 kPa)

Maximum temperature: 122°F (50°C)

Recommended pH: Operating range 3-9, cleaning range 1-10

Feed NTU: <1

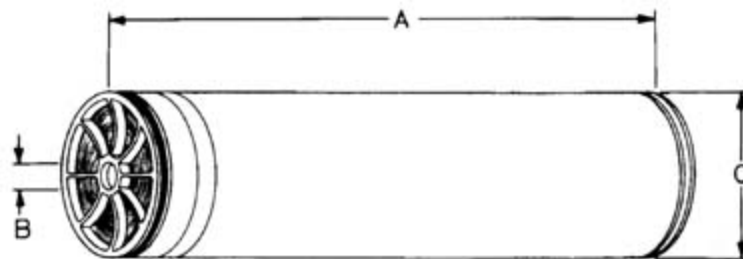
Feed SDI: <5

Maximum cleaning temperature: 113°F (45°C)

Free chlorine tolerance: <0.1 ppm

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

Element Dimensions and Weight



Model	Dimensions, inches (cm)			Dry boxed weight lbs. (kg)
	A	B	C	
HL4040F	40.00 (101.6)	0.625 (1.59)	3.88 (9.86)	12 (5.45)
HL8040F	40.00 (101.6)	1.125 (2.86)	7.88 (20.02)	32 (14.53)

Length includes ATD's. All elements are shipped dry.