

# Nanofiltration Element Specifications D-Series, DK Standard Flux

The **D-Series** family of proprietary thin-film nanofiltration membrane elements are 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. Since monovalent ions pass through the membrane, they do not contribute to the osmotic pressure, thus enabling D-Series nanofiltration membrane systems to operate at feed pressures below those of RO systems.

**DK Standard Flux Elements** are used for **dye removal/concentration**, and **sodium chloride diafiltration**. They feature a fiberglass outerwrap and standard feed spacers. Other materials of construction and special feed spacers are available.

## Element Specifications

<i>Model</i>	<i>GPD (m<sup>3</sup>/d)</i>	<i>MgSO<sub>4</sub> Rejection</i>	<i>ActiveArea ft<sup>2</sup> (m<sup>2</sup>)</i>
DK4040F	2,000 (7.56)	98%	90 (8.36)
DK8040F	8,000 (30.24)		350 (32.52)

Specifications are based on a 2,000 mg/L MgSO<sub>4</sub> solution at 100 psig (690 kPa) net pressure, 77°F (25°C), 15% recovery, after 24 hours. Individual element flux may vary ± 25%.

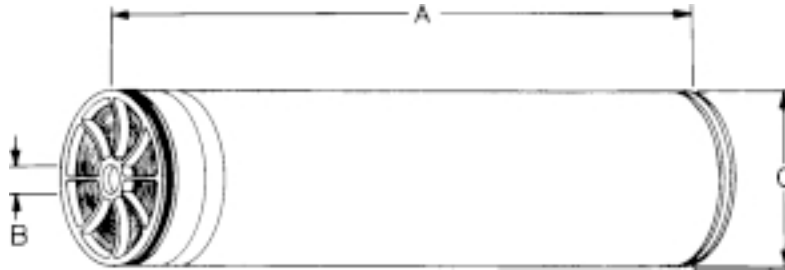
## Operating and Design Parameters

- **Membrane:** Thin-film membrane (TFM®)
- **Typical operating pressure:** 70-400 psig (483-2,758 kPa).
- **Maximum pressure:** 600 psig (4,137 kPa).
- **Maximum temperature:** 122°F (50°C).
- **Recommended pH:** Operating range 2-11 (pH<1 with special element construction), cleaning range 1-11.5.
- **Chlorine tolerance:** 1,000 ppm-hours, dechlorination recommended.

<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

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**Element Dimensions and Weight**



<b>Model</b>	<b>Dimensions, inches (cm)</b>			<b>Dry boxed weight lbs. (kg)</b>
	<b>A</b>	<b>B</b>	<b>C</b>	
DK4040F	40.00 (101.6)	0.625 (1.59)	3.88 (9.86)	12 (5.45)
DK8040F	40.00 (101.6)	1.187 (3.01)	7.88 (20.02)	32 (14.53)

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