HYDRACoRe10 and 50 LD 4040 Series

Hydranautics' HYDRACoRe products are chemical and oxidant-resistant, sulfonated polyethersulfone nanofiltration elements. Potential applications include removal of color and large molecular weight organics from industrial, food and beverage, and municipal feedwaters.

Specified Performance*

Model	Feed Spacer inch (cm)	Area, ft^2 (m^2)	Permeate Flow	NaCl Rejection			Test Pressure
			gpd (m^3/d)	Average	Min	Max	psi (MPa)
HYDRACoRe10-LD-4040	0.034 (0.086)	80 (7.4)	3,000 (11.4)	20%	5%	30%	50 (0.34)
HYDRACoRe50-LD-4040	0.034 (0.086)	80 (7.4)	3,150 (11.9)	55%	40%	65%	140 (0.97)

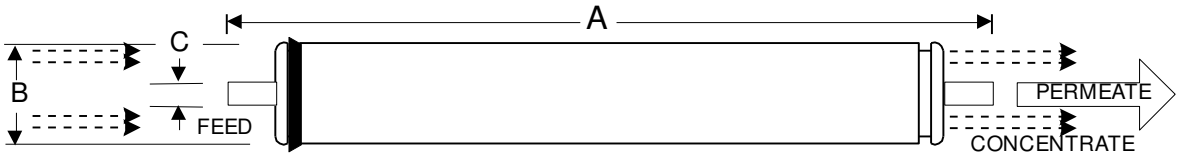
Test Conditions:
2000 ppm NaCl solution
77 °F (25 °C) Operating Temperature
20% Permeate Recovery
6.5 +/- 0.5 pH Range

*The Specified Performance is based on data taken after approximately 30 minutes of operation. Actual testing of elements may be done at conditions which vary from these exact values; in which case, the performance is normalized back to these standard conditions. Permeate flow for individual elements may vary from the stated value with a range of -25% to "no upper limit".

General Product Description**

Configuration:	Spiral wound with FRP hard shell
Membrane Polymer:	Sulfonated Polyethersulfone
Molecular Weight Cut-off HYDRACoRe10:	3000 Dalton
Molecular Weight Cut-off HYDRACoRe50:	1000 Dalton

Packaging: All membrane elements are supplied with a brine seal, interconnector, and O-rings. Elements are enclosed in a sealed polyethylene bag containing less than 1.0% sodium meta-bisulfite solution, and then packaged in a cardboard box.



Core tube extension = 1.05" (26.7 mm)

Element Details**

A, inches (mm)	B, inches (mm)	C, inches (mm)	Weight, lbs. (kg)
40.0 (1016)	3.95 (100.3)	0.75 (19.1)	8 (3.6)

**Values listed are indicative, not specified. For more detailed specifications, see our Technical Service Bulletin documents or contact Hydranautics Technical Department. Element weight values are as shipped from factory. Elements that are used and then gravity drained may still contain at least an additional 2 lbs. (1 kg) of liquid.

Product Use and Restrictions^

Maximum Applied Pressure:	600 psig (4.14 MPa)
Maximum Continuous Chlorine Concentration[1]:	10 ppm
Maximum Chlorine Concentration for Cleaning[1]:	100 ppm
Maximum Operating Temperature:	113 °F (45°C)
Operating pH Range:	2-11
Cleaning pH Range:	1-12
(For cleaning temperatures <35°C)	
Maximum Feedwater Turbidity:	1.0 NTU
Maximum Feedwater SDI (15 mins):	5.0
Maximum Pressure Drop per element:	15 psi (0.10 MPa)

[1] Transition metals (Fe, Mn) should not be present in the water or on the membrane as these can accelerate detrimental reactions between the membrane and the oxidant.
^ The limitations shown here are for general use. For specific projects, operating at more conservative values may ensure the best performance and longest life of the membrane. See Hydranautics Technical Bulletins for more detail on operation limits, cleaning pH, and cleaning temperatures.

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