

PharmaRO-HR

PharmaRO-HR Heat Sanitizable, High Rejection RO Composite Membrane Elements are designed specifically for High Performance in USP (WFI) and other high purity water systems. Elements with Sanitary, Full-fit outer-wraps eliminate “dead flow” areas for maximum bacteria control. PharmaRO-HR components conform to FDA regulation CFR Titel 21.

Products:

Membrane Type	Description	Element Performance* Permeate Flow and Rejection			System Performance**	
		GPD (m ³ /day)		%Re j	Applied Pressure Psig (MPa)	Permeate TDS, PPM
		8040	4040			
PharmaRO-HR	Heat Sanitizable, High Rejection Composite	8800 (33.3) PharmaRO-HR-8	2200 (8.4) PharmaRO-HR-4	99.7	180 (1.24)	6.6
PharmaRo-HR2	Heat Sanitizable, High Flux, High Rejection Composite	14,000 (53) PharmaRO-HR2-8	3000 (11.4) PharmaRO-HR2-4	99.6	129 (0.89)	12.5

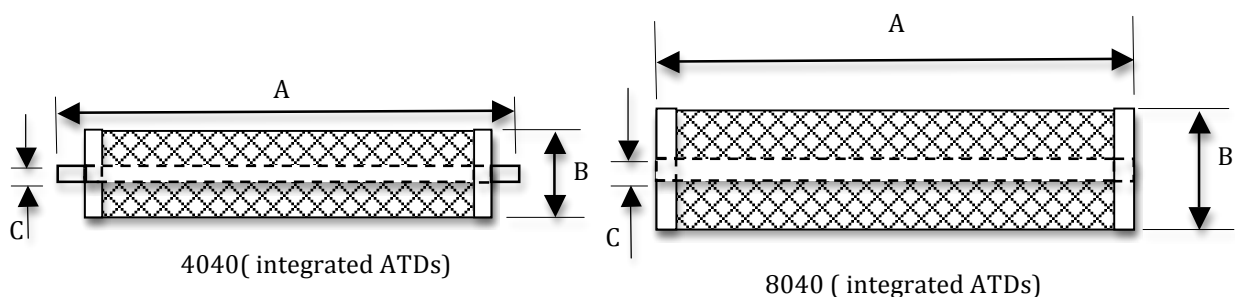
* Element Performance is at 1.55 MPa, 1500 mg/L NaCl, 15% Recovery, 25°C

** Applied Pressure and Permeate TDS are projected values for a 2:2:1 array system operating at 26 LMH average flux with 500 mg/L TDS feed (NaCl), 80% Recovery, pH7, 25 °C

Type	Configuration: Membrane Polymer:	Sanitary (Full-Fit) Spiral Wound Composite Polyamide
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Application Data*	Maximum Applied Pressure:	41 bar
	Maximum Chlorine Concentration:	<0.1
	Maximum Operating Temperature:	45 °C
	Sanitizing Temperature / Pressure max.:	85/0.17 (C/MPa)
	Operating pH Range:	3 – 10
	Cleaning pH Range:	2 – 11
	Maximum Pressure Drop for a vessel:	0.41 MPa

* The limitations shown here are for general use. The valves may be more conservative for specific projects to ensure the best performance and longest life of the membranes



Size	A (cm)	B (cm)	C (cm)	Area (m ²)
4040	102	10.1	1.9	8.3
8040	102	20.1	2.9	35.2

Notice: Elements are enclosed in a sealed polyethylene bag containing less than 1.0% sodium meta-bisulfite solution and then packaged in a reinforced cardboard box. All PharmaRO-HR elements are heat set at the factory with a one hour vacuum rinse at 85 °C. Elements include interconnector assembly, ATDs and one brine seal.

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