

Water Technologies & Solutions fact sheet

Polisher RO*

permeate & condensate polishing

The Polisher RO family of proprietary thin film reverse osmosis membrane elements is characterized by high flux and excellent sodium chloride rejection. The membrane has an average rejection of 99.5% on 2,000 ppm NaCl at 25°C (77°F) and 225psi operating pressure.

The Polisher RO elements provide high rejection of dissolved solids and low molecular weight organic constituents at operating pressures up to 600psi. Typically used in food-related processing that requires stringent sanitary procedures, the RO Polisher is used to treat evaporator condensate (cow water), and RO/NF permeate in order to recover process water for the plant.

The Polisher RO element features a Durasan* Cage patented outer wrap, standard feed spacer, and polysulfone parts.

The Polisher RO elements comply with:

- FDA Regulations relevant sections of 21CFR
- EU Framework 1935/2004/EC
- Halal & Kosher certification

Table 1: Element Specification

Membrane Thin	Thin Film Membrane (TFM*)			
Model	Spacer mil (mm)	Active area ft² (m²)	Part number	
POLISHER R08040C30	30 (0.76)	374 (34.7)	1206650	
Anti Telescoping Device	A	JB S	Concentrate	

Figure 1: Element Dimensions Diagram

Table 2: Dimensions and Weight

	Dimensi	Dimensions, inches (cm)		
Model	A	В	С	Weight lbs. (kg)
POLISHER RO8040C30	40.00 (101.6)	1.125 (2.86)	7.91 (20.1)	35 (16)

Table 3: Operating parameters

Typical Operating Pressure	200-500psi (1,379-3,447kPa)		
Pressure			
Typical Operating Flux	15-20 GFD (25-34 LMH)		
Maximum Operating Pressure	600psi (4,137kPa)		
Maximum Permeate Pressure (2)	60 psi (413 kPa)		
Maximum Temperature	122°F (50°C)		
pH Range	2.0-11.0		
Recommended Pressure Drop	Over an element: 12psi (83kPa)		
Maximum Pressure Drop	Over an element: 15psi (103kPa) Per housing: 60psi (414kPa)		
Chlorine Tolerance	1000ppm-hours dechlorination recommended		

(1) Clean water flux (CWF) is the rate of water permeability through the membrane after cleaning (CIP) at reproducible temperature and pressure. It is important to monitor CWF after each cleaning cycle to determine if the system is being cleaned effectively. CWF can vary $\pm 25\%$.

(2) Permeate pressure should never exceed the concentrate pressure.

Table 4: CIP limits for RO elements

Temperature	pH minimum	pH maximum
50°C (122°F)	2.0	11.5
45°C (113°F)	1.5	11.5
35°C (95°F)	1.5	11.5
25°C (77°F)	1.0	12.0

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Central Tube Anti Telescoping Device

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