Dairy PW Series

FACT SHEET

Ultrafiltration – Protein Concentration

The Dairy PW Series family of polyethersulfone ultrafiltration membrane elements are characterized by a 20,000 molecular weight cut-off. Dairy PW Elements are typically used for protein concentrate up to 20% either from milk and sweet whey (not suitable for acid whey). These elements feature a Durasan* Cage patented outer wrap, a selection of feed spacers, and polysulfone parts.

The Dairy PW elements comply with:

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

Table 1: Element Specification

Membrane	P-Series, Polyethersulfone

Model	Spacer mil (mm)	Active area ft^2 (m^2)	Outer Wrap	Part Number
DAIRY PW3838C30	30 (0.76)	69 (6.4)	Cage	1228024
DAIRY PW3838C50	50 (1.27)	55 (5.1)	Cage	1229303
DAIRY PW6338C30	30 (0.76)	217 (20.2)	Cage	1207392
DAIRY PW6338C50	50 (1.27)	168 (15.6)	Cage	1207393
DAIRY PW6338C65	65 (1.65)	129 (12.0)	Cage	1223985
DAIRY PW8038C30	30 (0.76)	345 (32.0)	Cage	1230789
DAIRY PW8038C50	50 (1.27)	263 (24.4)	Cage	1230680

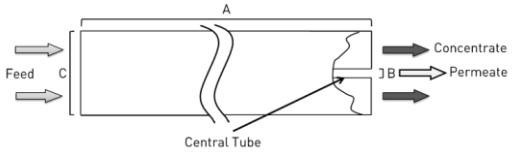

Figure 1: Element Dimensions Diagram

Table 2: Dimensions and Weight

Model	Dimensions, inches (cm)			Boxed Weight lbs (kg)
	A	B	C	
DAIRY PW3838	38.0 (96.5)	0.833 (2.12)	3.79 (9.6)	7 (3.2)
DAIRY PW5838	38.0 (96.5)	1.138 (2.89)	5.71 (14.5)	18 (8.2)
DAIRY PW6338	38.0 (96.5)	1.138 (2.89)	6.34 (16.1)	18 (8.2)
DAIRY PW8038	38.0 (96.5)	1.125 (2.86)	7.91 (20.1)	35 (16)

Table 3: Operating Parameters

Typical Operating Pressure	80-135 psig (555 – 931 kPa)
Typical Operating Flux	10-25GFD (15-40LMH)
Clean Water Flux (CWF) (1)	59GFD (100LMH) @ 30psi and 50°C
Maximum Operating Pressure	200 psig (1,379 kPa)
Maximum Temperature	Continuous operation: 122°F (50°C)
Operating pH Range	2.0-10.0
Maximum Pressure Drop	Over an element: 12 psig (83 kPa) Per housing: 50 psig (345 kPa)
Chlorine Tolerance	5,000+ ppm-days

(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 ± 25%.

Table 4: CIP and Disinfection Parameters

Temperature	pH Minimum	pH Maximum
< 50°C (122°F)	1.5	11.5
< 45°C (113°F)	1.5	11.5
< 35°C (95°F)	1	11.5
< 25°C (77°F)	1	12

Recommended chlorine concentration and contact time at a maximum temperature of 50°C (120°F) is 180 ppm for 20 min MAXIMUM during chlorine caustic cycle.

pH must be stabilized at 10.5 - 11.0 before chlorine addition.

Membrane element surface must be free of catalyser presence as iron or other metals. With oxidizers as chlorine or hydrogen peroxide, they accelerate membrane degradation.

Veolia Water Technologies
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