Dairy PT Series

FACT SHEET

Ultrafiltration – Superior Protein Retention

Description and Use

The Dairy PT Series of polyethersulfone ultrafiltration membrane elements are characterized by a 5,000 molecular weight cut-off. These elements are typically used for protein concentration up to 30% solids from milk, whey and gelatin, when protein retention is key. The elements feature a Durasan* patented outerwrap, a selection of feed spacers, and polysulfone parts.

The Dairy PT 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 PT3838C30	30 (0.76)	69 (6.4)	Cage	1207675
DAIRY PT3838C50	50 (1.27)	55 (5.1)	Cage	1207336
DAIRY PT6338C30	30 (0.76)	217 (20.2)	Cage	1226552
DAIRY PT6338C50	50 (1.27)	168 (15.6)	Cage	1226522
DAIRY PT6338C65	65 (1.65)	129 (12.0)	Cage	1222964
DAIRY PT8038C30	30 (0.76)	345 (32.0)	Cage	1240081
DIARY PT8038C50	50 (1.27)	263 (24.4)	Cage	1230690
DAIRY PT8038C65	65 (1.65)	202 (18.8)	Cage	1230833

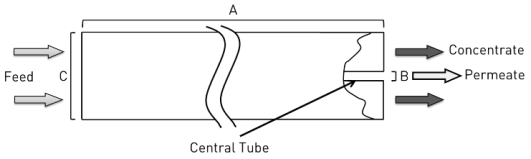

Figure 1: Element Dimensions Diagram

Table 2: Dimensions and Weight

Model	Dimensions, inches (cm)			Boxed Weight lbs (kg)
	A	B	C	
DAIRY PT3838	38.0 (96.5)	0.833 (2.12)	3.79 (9.6)	7 (3.2)
DAIRY PT6338	38.0 (96.5)	1.138 (2.89)	6.34 (16.1)	18 (8.2)
DAIRY PT8038	38.0 (96.5)	1.125 (2.86)	7.91 (20.1)	35 (16)

Table 3: Operating Parameters

Typical Operating Pressure	80-135 psi (555 – 931 kPa)
Typical Operating Flux	5 – 20 GFD (8 – 34 LMH)
Maximum Operating Pressure	200psi (1,379kPa)
Maximum Temperature	122°F (50°C)
Clean Water Flux (CWF) (1)	47 GFD (80 LMH) @ 30psi & 50°C
Operating pH Range	2.0-10.0
Maximum Pressure Drop	Over an element: 15psi (103kPa) Per housing: 60psi (414kPa)
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 catalyzer presence as iron or other metals. With oxidizers as chlorine or hydrogen peroxide, they accelerate membrane degradation.

Veolia Water Technologies
Please contact us via:
www.veoliawatertechnologies.com