

dairy AP series

food & beverage processing

The A-Series family of proprietary thin film reverse osmosis membrane elements is characterized by high flux and relatively high sodium chloride rejection. Dairy AP elements are selected when small size organics (<150D) need to permeate through the membrane while retaining salts and larger organics, in a low-pressure operation.

The Dairy AP elements feature a Durasan* Cage patented outerwrap, standard feedspacers and polysulfone parts. These elements comply with the USDA guidelines for the sanitary design and fabrication of dairy processing equipment or applicable 3A sanitary standards. Applications include whey and milk protein concentration, lactose recovery as well as wine and beer de-alcoholization.

The Dairy AP elements comply with:

- FDA Regulations relevant sections of 21CFR
- EU Framework 1935/2004/EC

Table 1: Element Specification

Membrane	A-Series, Thin Film Membrane (TFM*)
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Model	Spacer mil (mm)	Active area ft² (m²)	Part number
Dairy AP3838C30	30 (0.76)	75 (7.0)	3159915
Dairy AP3838C50	50 (1.27)	58 (5.4)	3159918
Dairy AP8038C30	30 (0.76)	372 (34.6)	3156577
Dairy AP8038C50	50 (1.27)	282 (26.2)	3156578

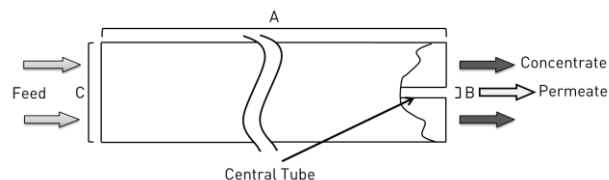


Figure 1: Element Dimensions Diagram

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Table 2: Dimensions and Weight

Model	Dimensions, inches (cm)			Boxed
	A	B	C	Weight lbs (kg)
AP3838C	38.00 (96.5)	0.833 (2.12)	3.8 (9.6)	9 (4.0)
AP8038C	38.00 (96.5)	1.125 (2.86)	7.91 (20.1)	35 (16.0)

Table 3: Operating parameters

Typical Operating Pressure	100-400psi (689-2,758kPa)
Typical Operating Flux	5-20 GFD (8-34 LMH)
pH Range	2.0-11.0
Maximum Operating Pressure	600psi (4,137kPa)
Maximum Permeate Pressure (1)	60 psi (413 kPa)
Maximum Temperature	122°F (50°C)
Maximum Pressure Drop	Over an element: 15psi (103kPa) Per housing: 60psi (414kPa)
Chlorine Tolerance	1000ppm-hours dechlorination recommended

(1) 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