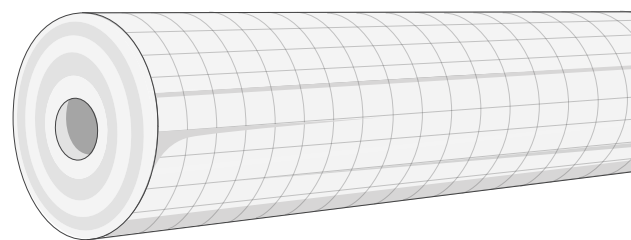


# Evolution

## Protein Concentration Membrane (PCM)



### *Faster, Simpler, Lower-Cost Cleaning*

ZwitterCo Evolution PCM sanitary anti-fouling membranes are powered by zwitterions, using a proprietary zwitterionic chemistry that provides precise size-based selectivity and features an extremely hydrophilic surface to repel organic foulants. This breakthrough membrane material prevents irreversible adhesion of proteins, fats, and other organic compounds. Surperfiltration membranes combine the best features of ultrafiltration and nanofiltration membranes, offering high organic rejection with extremely low salt rejection.

## Main Benefits

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Reduce cleaning costs by over 50%

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Save over 40% in cleaning related water usage

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Reduce cleaning time by 1 hour or more per day

## Ideal Applications

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Whey and milk protein concentration

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Plant protein concentration

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Gelatin concentration

## Product Specifications

Element Size	Membrane Area		
	30 mil spacer ft <sup>2</sup> (m <sup>2</sup> )	46 mil spacer ft <sup>2</sup> (m <sup>2</sup> )	65 mil spacer ft <sup>2</sup> (m <sup>2</sup> )
8038	370 (34.3)	290 (26.9)	225 (20.9)
7838	350 (32.5)	275 (25.5)	220 (20.4)
6438	240 (22.3)	190 (17.6)	140 (13)
6338	240 (22.3)	190 (17.6)	140 (13)
3838	75 (6.9)	59 (5.4)	47 (4.3)

Contact ZwitterCo if your application requires a different configuration not listed.



Dimensions in. (mm)						
	Size	8038	7838	6438	6338	3838
A	Element Length in (mm)	38 (965)	38 (965)	38 (965)	38 (965)	38 (965)
B	Element Diameter in (mm)	7.9 (201)	7.7. (197)	6.4 (161)	6.3 (159)	3.8 (96)
C	Permeate Tube Diameter in (mm)	1.138 (28.9)	1.138 (28.9)	1.138 (28.9)	1.138 (28.9)	0.83 (21.1)

Operating Specifications	
Max Operating Pressure - psi (bar)	300 (20)
Max Pressure Drop (per element) – psi (bar)	15 (1)
Max Pressure Drop (per vessel) – psi (bar)	60 (4)
Max Operating Temp - °C (°F)	55 (131)
Max Cleaning Temp - °C (°F)	50 (122)
pH Range: Continuous Operation	2-11
pH Range: Cleaning	1-12
Max Chlorine During Cleaning at pH10.8-11.5 and <122°F (50°C)	150 - 180 ppm

## Operating Information

1. ZwitterCo Evolution PCM elements are shipped wet, preserved with 1% food-grade sodium metabisulfite, and vacuum-sealed in oxygen-minimizing bags. Each element is boxed individually. Elements must be stored in original packaging in a cool, shaded environment (23°F to 95°F / -5°C to 35°C). Freezing during transit does not damage the elements, but they must be fully thawed before use.
2. Operational guidelines and chemical compatibility must be followed as specified in ZwitterCo PCM technical manual. For optimal performance and system design, refer to the latest technical resources, design tools, or consult a ZwitterCo application specialist. Deviation from stated conditions or use of incompatible chemicals may impact membrane performance and may void the Limited Warranty.