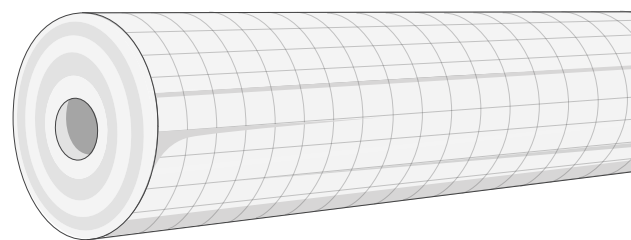


Evolution

1812 Test Elements



Faster, Simpler, Lower-Cost Cleaning

ZwitterCo Evolution sanitary anti-fouling membranes are powered by zwitterions, using a proprietary zwitterionic chemistry that features an extremely hydrophilic surface to repel organic foulants. This breakthrough membrane material prevents irreversible adhesion of proteins, fats, and other organic compounds.

Main Benefits

Reduce cleaning costs by over 50%

Save over 40% in cleaning related water usage

Reduce cleaning time by 1 hour or more per day

Ideal Applications

Initial Product Testing

Separation Validation

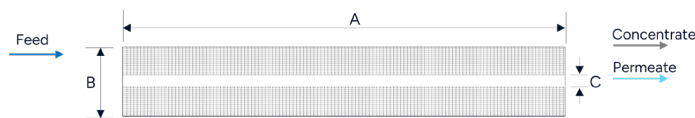
Product Specifications

Element Size	1812
Membrane Area - ft ² (m ²)	3 (0.3)
Feed Spacer – mil	46

Evolution

1812 Test Elements

Dimensions in. (mm)		
	Size	1812
A	Element Length in (mm)	12 (305)
B	Element Diameter in (mm)	1.8 (46)
C	Permeate Tube Diameter in (mm)	0.625 (15.9)



Operating Specifications			
Membrane Type	Evolution SF	Evolution PCM	Evolution RO
Max Operating Pressure - psi (bar)	580 (40)	300 (20)	600 (41)
Max Pressure Drop (per element) – psi (bar)	15 (1)	15 (1)	15 (1)
Max Operating Temp - °C (°F)	55 (131)	55 (131)	40 (104)
Max Cleaning Temp - °C (°F)	50 (122)	50 (122)	40 (104)
pH Range: Continuous Operation	2-11	2-11	2-10
pH Range: Cleaning	1-12	1-12	1-12
Typical Chlorine During Cleaning at pH10.8-11.5 and <50°C (122°F) - ppm	150 -180	150-180	n/a*

*Removal of free chlorine and other oxidizing agents to prevent damage to membranes is required. Oxidizing agents, such as free chlorine, in contact with ZwitterCo Evolution RO may result in shortened operating life or membrane failure. Such oxidation damage is excluded from the warranty.

Operating Information

1. ZwitterCo Evolution 1812 test 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 Evolution membrane technical manuals. 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.