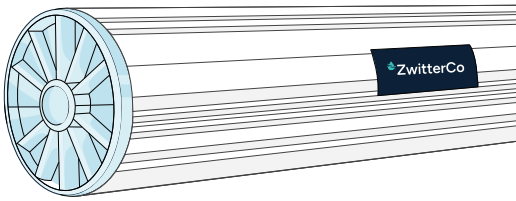
Elevation

Low Energy RO Membrane



ZwitterCo Elevation RO membranes are powered by ZwitterShield™ technology. ZwitterShield is an additive membrane technology using ZwitterCo's patented zwitterionic chemistry that may be bonded to proven membrane chemistries to equip them with a permanent barrier to irreversible organic fouling.

NSF

Certified to NSF/ANSI/CAN 61 & 372

Protection against irreversible fouling with ZwitterShield™

Main Benefits

- Reduce chemical costs by up to 90%
- More system uptime
- Faster cleaning cycles
- Most reliable, easiest & safest operations

Ideal Applications

- Industrial Wastewater
- High-Fouling Surface Water

Performance Specifications

Element Size	8040	4040	2540
Membrane Area - ft^2 (m^2)	400 (37.2)	80 (7.4)	27 (2.5)
Feed Spacer – mil	34		
Stabilized Salt Rejection - %	99.3		
Minimum Salt Rejection - %	99.0		
Permeate Flow - GPD (m^3/d)	10,800 (40.9)	2,250 (8.5)	900 (3.4)

The specifications outlined above are normalized performances based on the following test conditions: 1,500 ppm NaCl, 150 psi (10.3 bar), 25°C (77°F), pH 8, and 15% recovery. Flow rates will be no more than 15% below the values shown. Product specifications may change without notice as design revisions occur.

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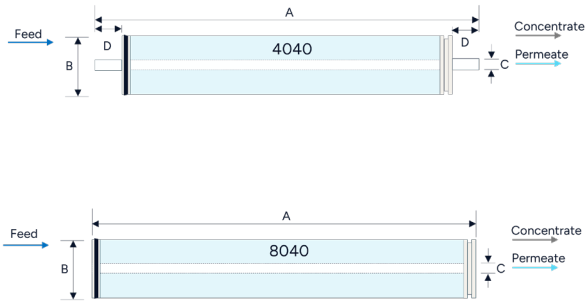
Dimensions in. (mm)				
Size		8040	4040	2540
A	Element Length in (mm)	40 (1016)	40 (1016)	40 (1016)
B	Element Diameter in (mm)	7.9 (201)	3.9 (99)	2.4 (61)
C	Permeate Tube Diameter in (mm)	1.125 (28.6)	0.75 (19)	0.75 (19)
D	Male Permeate Tube Length Past Scroll End in (mm)	-	1.05 (26.7)	1.2 (30.2)



Typical Feedwater Guidelines			
Parameter	Optimum Membrane Performance	Differentiated Membrane Performance	Maximum Allowable
Max Turbidity (NTU)	< 3	< 5	Consult ZwitterCo
Max SDI	3	5	
TOC (mg/l)	< 15 mg/l	< 50 mg/L	
BOD (mg/l)	< 25 mg/l	< 50 mg/L	
COD (mg/l)	< 50 mg/l	< 200 mg/L	
O&G (mg/l)	< 2.5 mg/l	< 10 mg/L	

ZwitterCo always recommends respecting the feedwater guidelines provided to ensure optimal membrane system operation. Should feedwaters exceed these guidelines, more frequent cleaning may become necessary.

Operating Specifications	
Max Operating Pressure - psi (bar)	600 (41)
Max Pressure Drop (per element) – psi (bar)	15 (1)
Max Pressure Drop (per vessel) – psi (bar)	60 (4)
Max Operating Temp - °C (°F)	45 (113)
pH Range: Continuous Operation	2-10
pH Range: Cleaning	1-12
Free Chlorine Tolerance – ppm*	< 0.1

Pre-treatment is recommended for the removal of free chlorine and other oxidizing agents to prevent damage to membranes. Oxidizing agents, such as free chlorine, in contact with ZwitterCo Elevation RO may result in shortened operating life or membrane failure. Such oxidation damage is excluded from the warranty.

Operating Information

1. ZwitterCo Elevation RO 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 technical guide for ZwitterCo Elevation RO elements. 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.

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