Membrane Element BW-365/400、BW-365FR/400FR、BW-4040

Description

E-MEM BW(Brackish Water)&FR(Fouling Resistant) membrane can separate salts from water and are produced with an advanced technology that ensures precision, consistency, and reliability. It is mainly used for industrial water such as pure water manufacture of various scales, boiler supply water, etc. It is also used for the treatment of high concentration saline wastewater and the reuse of brackish water.

Offering proven performance, Membrane Element BW-365/400、BW-365FR/400FR、BW-4040

1 With years of proven performance.

2 High performance and long element life.

3 BW type can offer the most effective cleaning performance durability.

4 BW type delivers high quality permeate water while minimizing unit cost.

Product Type

Spiral-wound element with polyamide thin-film composite membrane

Product Specifications

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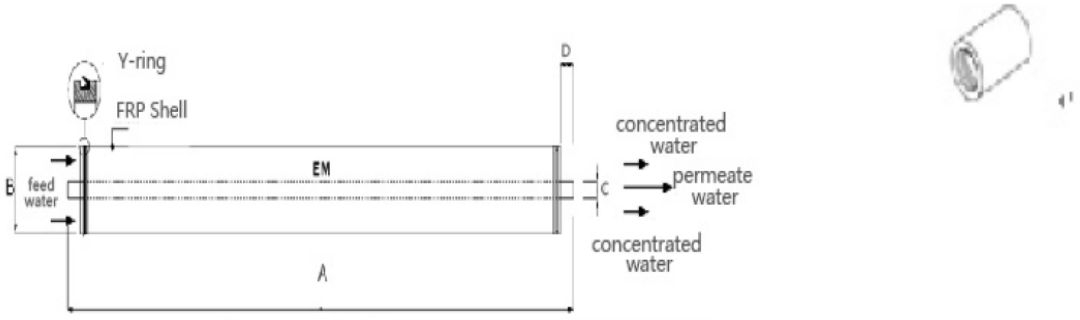
E-MEM® Element	Active Area ft^2 （m^2）	Feed spacer Thickness（mil）	Permeate Flow GPD （m^3/d）	Salt Rejection （%）
BW-365	365 (34)	34	9500 (36.1)	99.5
BW-400	400 (37)	28	10500 (39.7)	99.5
BW-365FR	365 (34)	34	9500 (36.1)	99.3
BW-400FR	400 (37)	34	10500 (39.7)	99.3
BW-4040	90.4 (8.4)	28	2400 (9.1)	99.5

1. Permeate flow and salt (NaCl) rejection based on the following standard test conditions: 2,000 ppm NaCl, 225 psi (15.5 bar), 77 ℉ (25 ℃), pH 7.5, 15% recovery.
2. Flow rates for individual elements may vary but will be no more than 15% below the value shown.
3. Stabilized salt rejection is generally achieved within 24-48 hours of continuous use; depending upon feed water characteristics and operating conditions.
4. Sales specifications may vary as design revisions take place.
5. Active area guaranteed ±3%.

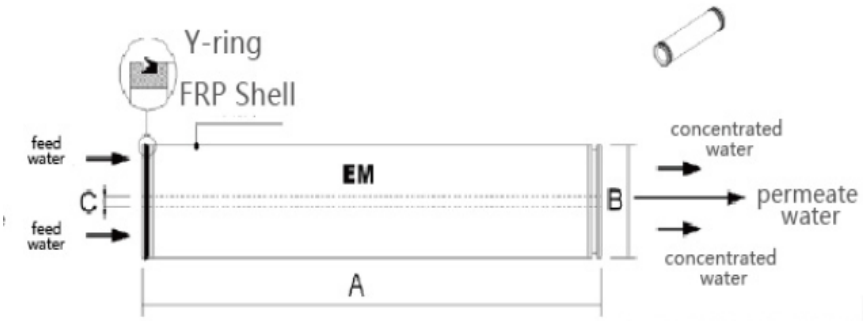
Element Dimensions



E-MEM® Element	A	B	C	D
	In. （mm）	In.（mm）	In.（mm）	In.（mm）
BW-4040	40.0 (1016)	3.9 (100)	1.05 (26.7)	0.75 (19.1)

1. Refer to the design guidelines for E-MEM when designing multi-component systems. 1 inch=25.4 mm

2. The components are fitted with pressure vessels with nominal inner diameter of 4 inches (102 mm).



E-MEM® Element	A	B	C
	In. （mm）	In.（mm）	In.（mm）
BW-365/365FR /400/400FR	40.0 (1016)	7.9 (200)	1.126 (28.6)

1. Refer to the design guidelines for E-MEM when designing multi-component systems. 1 inch=25.4 mm

2. The components are fitted with pressure vessels with nominal inner diameter of 8 inches (203 mm).

Operating limit

Maximum operating temperature	113℉（45℃）
Maximum operating pressure	600 psi（41 bar）
Maximum pressure drop	15 psi（1.0 bar）
pH range, continuous operation	3-10 [a]
pH range, short-term cleaning (30 minutes)	2-12 [b]
Maximum Influent SDI	5
Free chlorine tolerance	<0.1 ppm [c]

a When pH > 10, the maximum allowable temperature for continuous operation is 95 ℉ (35℃).

b For more information, please refer to the "Cleaning Steps" in the E-MEM Guidance Manual.

c Under certain conditions, the presence of free chlorine and other oxidants will lead to premature failure of membranes. Therefore, it is recommended that the inlet water be pretreated to remove residual free chlorine before water comes into contact with membranes.

Other information

Before using or storing, check these additional information for important information：

• Guidelines for the Use of E-MEM® RO Membrane Elements
• System operation: initial start-up
• Operation, custody and storage

Operation guide

When the membrane system is ready to be put into operation, it is necessary to start the reverse osmosis water treatment system correctly in order to prevent the damage of membrane components caused by water supply overflow or hydraulic impact. Following the correct start-up sequence helps to ensure that the system operating parameter conform to the design specifications, so that the water quality and quantity of the system can achieve the established design objectives.

Before the initial start-up procedure of the membrane system, the pre-processing system debugging, the filling of membrane components, the calibration of instruments and other system checks should be completed.

In order to prevent potential membrane damage during start-up, shutdown, cleaning or other processes, any sudden pressure or cross-flow changes in the coiled components should be avoided. During the start-up process, we recommend that the following process be used to gradually put into operation from the static state:

• Feed water pressure should gradually increase in the time range of 30 to 60 seconds.
• The value of cross-flow velocity rising to design should gradually reach within 15-20 seconds.
• The product water should be released within the first hour.
• Once the membrane element is wetted, it should always remain wet.
• Limited warranty will be cancelled if the user fails to strictly comply with the operating restrictions and responsibilities stipulated in this Code.
• When the system shuts down for a long time, the membrane elements should be put into the protective fluid. Prevent microbial growth.
• Users should be responsible for the effects of incompatible chemicals and lubricants on membrane components.
• Back pressure should be avoided at all times.

Warranty Statement

When the use and operation parameters of the product are refused or not provided to E-MEM, the buyer waives all other terms and conditions of quality assurance except that the terms of material, manufacturing and initial performance assurance are still valid.

Essential insurance clause excludes any indirect, joint and several, special, punitive and punitive liability for damages.

Important hints

The use of E-MEM products does not guarantee the removal of cysts and pathogens in water. The effective removal rate of cysts and pathogens depends on the design and operation of the whole system.