

Superior Quality Leads to Repeat Customers



Brackish Water Reverse Osmosis (RO) Membranes

Overview

LG Chem's NanoH₂O™ brackish water RO membranes serve various municipal and industrial applications and have been operating in the major utilities around the world. LG BWRO membranes, all incorporated with innovative Thin Film Nanocomposite (TFN) technology, are offered in industry standard configurations and can easily fit into existing and new RO plants.



LG BW R | High Rejection Membranes

Well suited for high salinity feed water and high quality permeate requirements



LG BW ES and UES | Energy-Saving Membranes

Well suited for low salinity feed water and energy-saving



LG BW AFR | Anti-Fouling Membranes

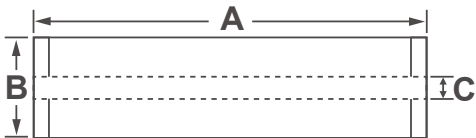
Well suited for feed water under harsh conditions

Product Specifications

8-inch spiral wound membranes

Product	Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil	Test Conditions
LG BW 400 R	400 (37)	10,500 (39.7)	99.6	99.5	34	1
LG BW 440 R	440 (41)	11,550 (43.7)	99.6	99.5	28	1
LG BW 400 ES	400 (37)	10,500 (39.7)	99.6	99.5	34	2
LG BW 440 ES	440 (41)	11,550 (43.7)	99.6	99.5	28	2
LG BW 400 AFR	400 (37)	10,500 (39.7)	99.6	99.5	34	1

Test Conditions 1 : 2,000 ppm NaCl at 25°C (77°F), 225 psi (15.5 bar), pH 7, Recovery 15%. Permeate flows for individual elements may vary +/-15%.
 Test Conditions 2 : 2,000 ppm NaCl at 25°C (77°F), 150 psi (10.3 bar), pH 7, Recovery 15%. Permeate flows for individual elements may vary +/-15%.



A mm (in.)	B [O.D.] mm (in.)	C [I.D.] mm (in.)	Weight kg (lbs.)
1,016 (40)	200 (7.9)	28.6 (1.125)	16 (35)

Operating Specifications

Max. Applied pressure	600 psi (41 bar)
Max. Chlorine concentration	< 0.1 ppm
Max. Operating temperature	45°C (113°F)
pH Range, Continuous (Cleaning)	2-11 (2-12)
Max. Feedwater turbidity	1.0 NTU
Max. Feedwater SDI (15 mins)	5.0
Max. Feed flow (8-inch)	75 gpm (17 m ³ /h)
Max. Feed flow (2.5-inch, 4-inch)	16 gpm (3.6 m ³ /h)
Max. Pressure drop (ΔP) for each element	15 psi (1.0 bar)

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2.5-inch and 4-inch spiral wound membranes

LG BW R

Product	Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil
LG BW 4040 R	85 (7.9)	2,500 (9.5)	99.6	99.3	28
LG BW 4021 R	34 (3.2)	1,000 (3.8)	99.6	99.3	28
LG BW 2540 R*	26 (2.5)	750 (2.8)	99.6	99.3	22
LG BW 2521 R	9 (0.9)	345 (1.3)	99.6	99.3	28

Test Conditions : 2,000 ppm NaCl at 25°C (77°F), 225 psi (15.5 bar), pH 7, Recovery 15% (4040 R, 2540 R), 8% (4021 R, 2521 R)
 Permeate flows for individual elements may vary +/-20%.

*The product is under development, and figures in the table are subject to change.

LG BW ES

Product	Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil
LG BW 4040 ES	85 (7.9)	2,500 (9.5)	99.5	99.2	28
LG BW 4021 ES	34 (3.2)	1,000 (3.8)	99.5	99.2	28
LG BW 2540 ES*	26 (2.5)	750 (2.8)	99.5	99.2	22
LG BW 2521 ES	9 (0.9)	345 (1.3)	99.5	99.2	28

Test Conditions : 2,000 ppm NaCl at 25°C (77°F), 150 psi (10.3 bar), pH 7, Recovery 15% (4040 ES, 2540 ES), 8% (4021 ES, 2521 ES)
 Permeate flows for individual elements may vary +/-20%.

*The product is under development, and figures in the table are subject to change.

LG BW UES

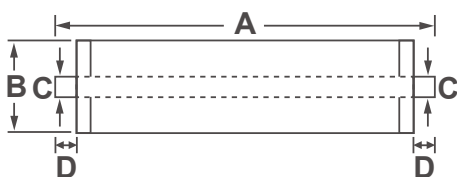
Product	Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil
LG BW 4040 UES	85 (7.9)	2,700 (10.2)	99.0	98.0	28
LG BW 4021 UES	34 (3.2)	1,000 (3.8)	99.0	98.0	28
LG BW 2540 UES	21 (2.0)	800 (3.0)	99.0	98.0	28
LG BW 2521 UES	9 (0.9)	345 (1.3)	99.0	98.0	28

Test Conditions : 500 ppm NaCl at 25°C (77°F), 100 psi (6.9 bar), pH 7, Recovery 15% (4040 UES, 2540 UES), 8% (4021 UES, 2521 UES)
 Permeate flows for individual elements will vary with no less than 85% of the specified datasheet flow.

LG BW AFR

Product	Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil
LG BW 4040 AFR	75 (7.0)	2,300 (8.7)	99.6	99.3	34

Test Conditions : 2,000 ppm NaCl at 25°C (77°F), 225 psi (15.5 bar), pH 7, Recovery 15%.
 Permeate flows for individual elements may vary +/-20%.



Product	A mm (in.)	B [O.D.] mm (in.)	C [O.D.] mm (in.)	D mm (in.)	Weight kg (lbs.)
LG BW 4040	1,016 (40)	100 (3.9)	19 (0.75)	29 (1.1)	4.0 (8.8)
LG BW 4021	533 (21)	100 (3.9)	19 (0.75)	29 (1.1)	2.3 (5.1)
LG BW 2540	1,016 (40)	60 (2.4)	19 (0.75)	32 (1.3)	2.0 (4.4)
LG BW 2521	533 (21)	60 (2.4)	19 (0.75)	32 (1.3)	1.0 (2.2)