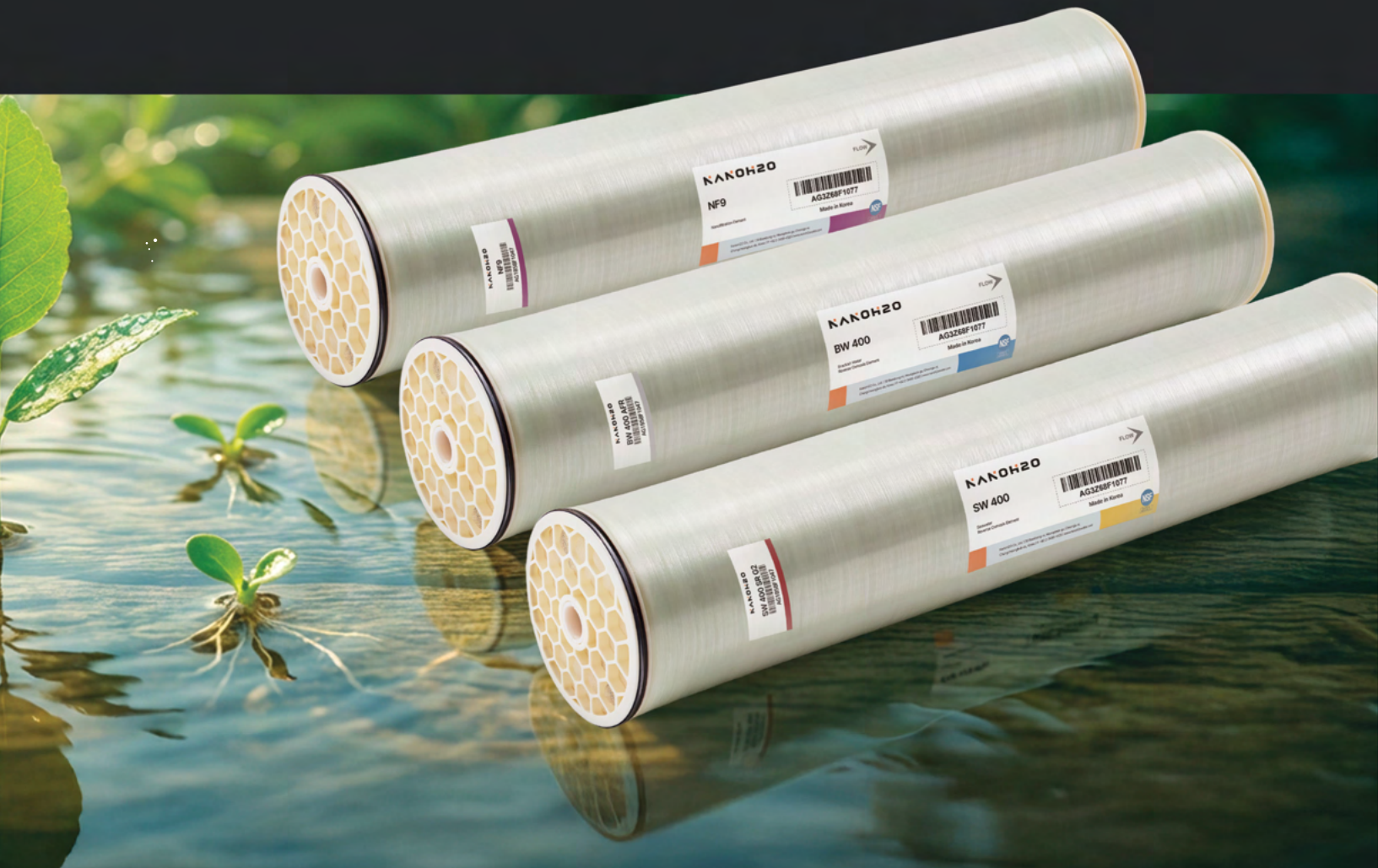


# NanoH2O™ RO/NF Membranes

Breakthrough Thin-Film Nanocomposite (TFN) Technology  
for Industry's Leading Performance



**NANO H2O**



# Turning Water into New Possibilities

## The Future of Water Starts Here

NanoH2O is redefining the future of water. As a global leader in advanced water technologies — covering RO, UF, NF membranes and IX resins — we unlock the infinite potential of water to address the most urgent challenges facing humanity. We deliver solutions capable of removing even the smallest impurities, helping to solve global water scarcity and produce the purest water to support industrial advancement.

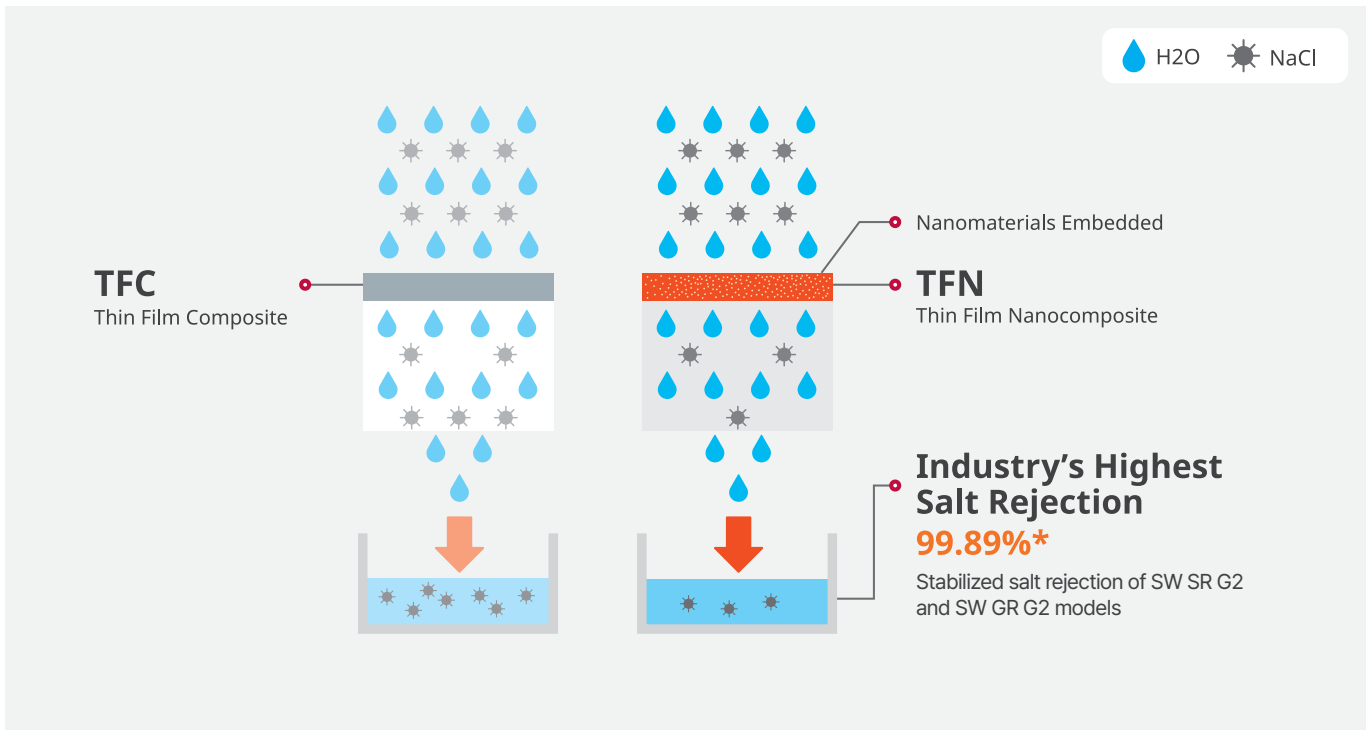
## A New Era in Water Innovation

In December 2025, NanoH2O begins a bold new chapter as an independent company, evolving from LG Water Solutions. This transformation reflects our commitment to agility, innovation, and customer-centric excellence. Clear, refreshing, and fluid — we adapt like water to meet global challenges and create meaningful impact for communities, industries, and the planet.

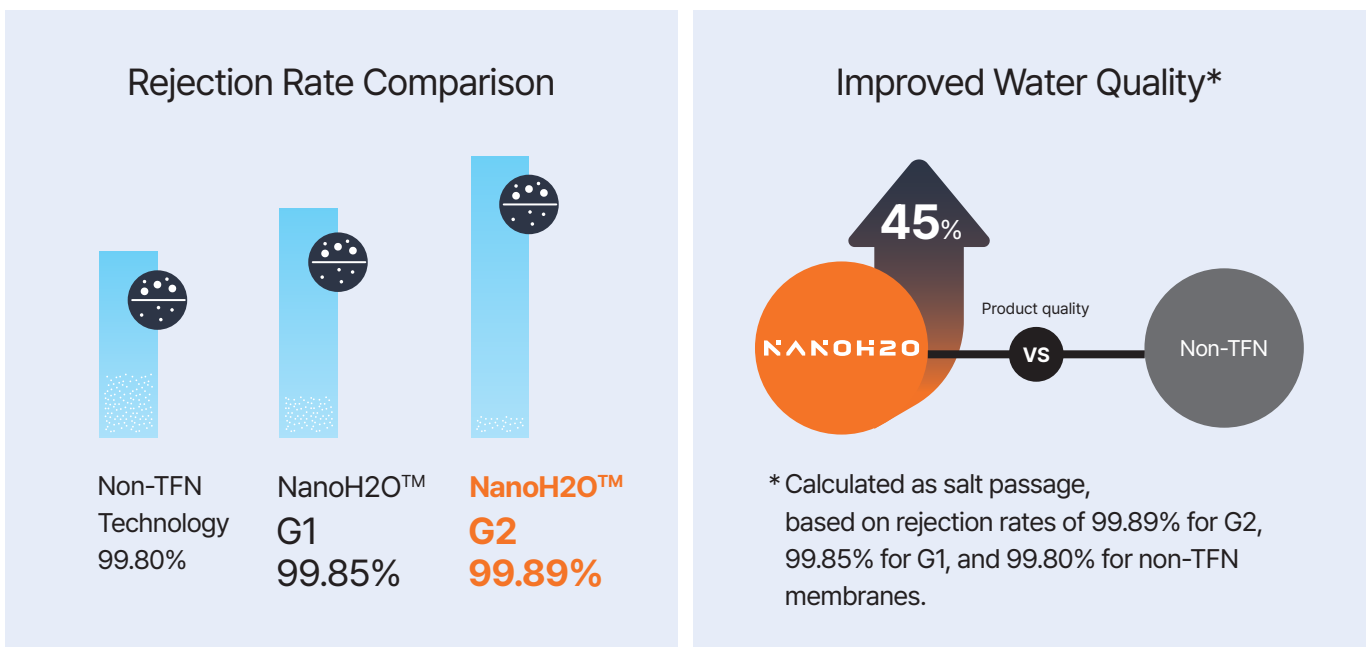
**NANO H2O**

# Thin Film Nanocomposite (TFN) Technology

Thin Film Nanocomposite (TFN) technology improves membrane performance by embedding benign nanomaterials on the membrane surface. This innovative approach increases flux in RO membranes by up to 20% without compromising salt rejection.



## Unmatched Performance Industry's Highest Salt Rejection RO



# NanoH2O™ SWRO Membranes

Seawater Reverse Osmosis (SWRO) Membranes

**Global no 1**  
Seawater RO

Unmatched Performance  
Unprecedented Growth



NanoH2O™ seawater RO membranes deliver the industry's highest salt rejection and 20% more flow than the membranes based on conventional technologies. Our seawater RO membranes significantly reduce the cost of desalination while delivering superior water quality.

## Next Generation Series

### SW SR G2, SW GR G2, SW R G2

Next generation membranes with industry's highest salt rejection of up to 99.89%

## 1st Generation Series

### SW SR, SW GR, SW R

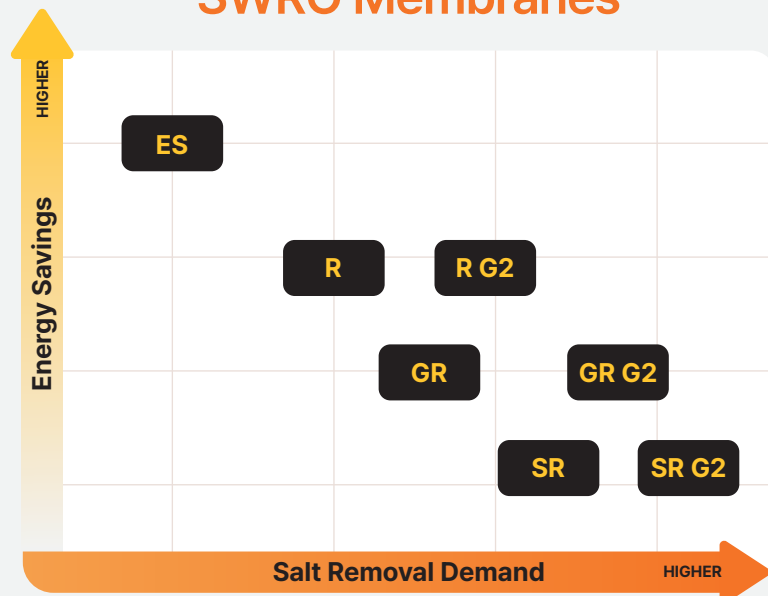
High rejection membrane ideal for high feed TDS and high permeate quality requirements

### SW ES

Energy saving membranes ideal for low-feed TDS and low-temperature seawater applications



## NANO H2O SWRO Membranes



- 1 The positioning of each product does not represent absolute value differences between products across the performance features shown (e.g., energy savings, salt removal demand) and is for illustrative purposes only.
- 2 The positioning of each product may vary depending on the operating conditions.

## NanoH2O™ SW G2 Membranes

With the industry's highest salt rejection, NanoH2O™ SW G2 membranes can deliver

- Improved permeate quality without increasing operating pressure
- Reduced energy cost without sacrificing permeate quality
- Reduced capital and operational costs for multi-pass SWRO systems

Model	Active Membrane Area, ft <sup>2</sup> (m <sup>2</sup> )	Permeate Flow Rate, GPD (m <sup>3</sup> /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Boron Rejection, %	Feed Spacer, mil
SW 440 SR G2	440 (41)	6,600 (25.0)	99.89	99.75	93	28
SW 400 SR G2	400 (37)	6,000 (22.7)	99.89	99.75	93	34
SW 440 GR G2	440 (41)	8,250 (31.2)	99.89	99.75	93	28
SW 400 GR G2	400 (37)	7,500 (28.4)	99.89	99.75	93	34
SW 440 R G2	440 (41)	9,900 (37.5)	99.88	99.75	93	28
SW 400 R G2	400 (37)	9,000 (34.1)	99.88	99.75	93	34

Test Conditions : 32,000 ppm NaCl, 5 ppm Boron at 25°C (77°F), 800 psi (55 bar), pH 8, Recovery 8%

## NanoH2O™ SW G1 Membranes

Model	Active Membrane Area, ft <sup>2</sup> (m <sup>2</sup> )	Permeate Flow Rate, GPD (m <sup>3</sup> /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Boron Rejection, %	Feed Spacer, mil
SW 440 SR	440 (41)	6,600 (25.0)	99.85	99.7	93	28
SW 400 SR	400 (37)	6,000 (22.7)	99.85	99.7	93	34
SW 440 GR	440 (41)	8,250 (31.2)	99.85	99.7	93	28
SW 400 GR	400 (37)	7,500 (28.4)	99.85	99.7	93	34
SW 440 R	440 (41)	9,900 (37.5)	99.85	99.7	93	28
SW 400 R	400 (37)	9,000 (34.1)	99.85	99.7	93	34
SW 440 ES*	440 (41)	7,480 (28.3)	99.60	99.3	81	28
SW 440 ES	440 (41)	15,070 (57.0)	99.80	99.6	89	28
SW 400 ES*	400 (37)	6,800 (25.7)	99.60	99.3	81	34
SW 400 ES	400 (37)	13,700 (51.9)	99.80	99.6	89	34

Test Conditions : 32,000 ppm NaCl, 5 ppm Boron at 25°C (77°F), 800 psi (55 bar), pH 8, Recovery 8%

\*Specifications when test conditions performed at 600 psi (4.1 MPa)

# NanoH2O™ BWRO Membranes

Brackish Water Reverse Osmosis (BWRO) Membranes



NanoH2O™ brackish water RO membranes are gaining traction with major utilities and industrial end-users worldwide. The TFN technology, coupled with intrinsic anti-fouling properties, delivers reliable performance and reduced operational downtime, leading to a lower total cost of plant ownership.

## Premium

### MaxRO R

Highest Rejection BWRO Membrane with the Industry's First 36 mil Ultra-Low dP (ULD) Spacer

## Advanced

### BW R G2

Highest Rejection, High Durability with Low dP Spacer

### BW AFR G2

Anti-Fouling, Superior Rejection, with Low dP Spacer

### BW ES G2

Superior Flow, High Durability with Low dP Spacer

### BW MOST

Industry's Highest Flow BWRO Membrane for the MOST Energy Savings

## Enhanced

### BW R Dura

Superior Rejection and High Durability

### BW ES L

Energy Saving with Low dP Spacer

## Standard

### BW R

High Rejection

### BW ES

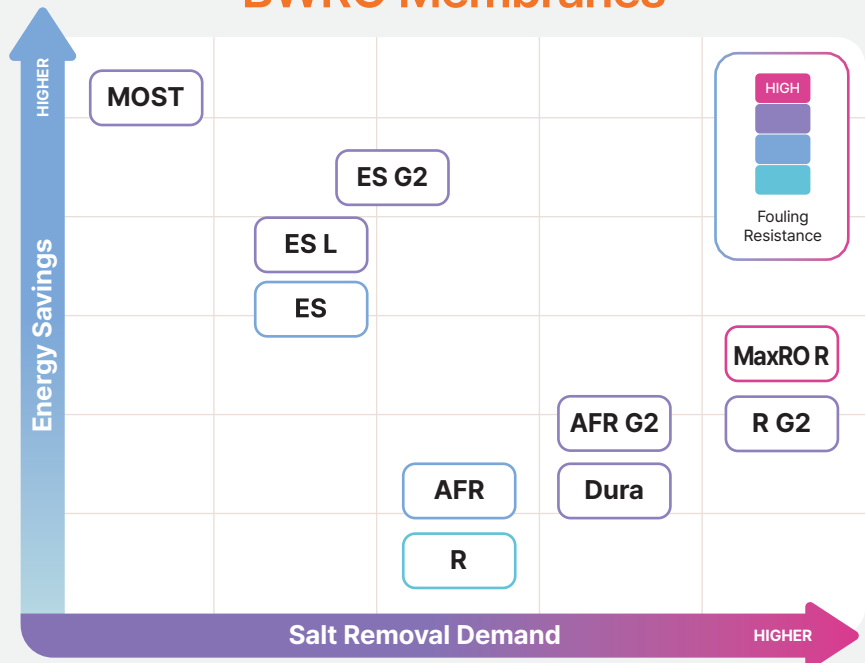
Energy Saving

### BW AFR

Anti-Fouling, High Rejection



## NANO H2O BWRO Membranes

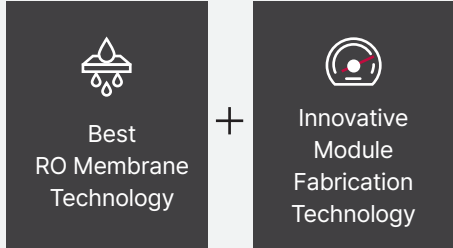


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2 The positioning of each product may vary depending on the operating conditions.

# Setting a New Benchmark in BWRO Performance

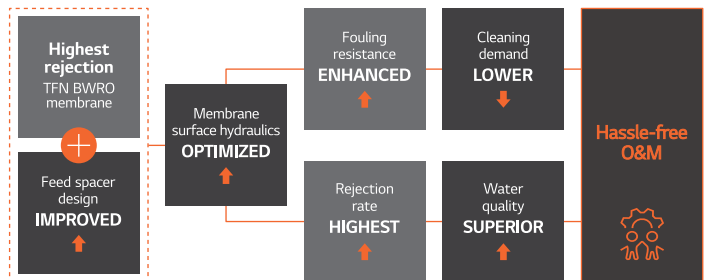
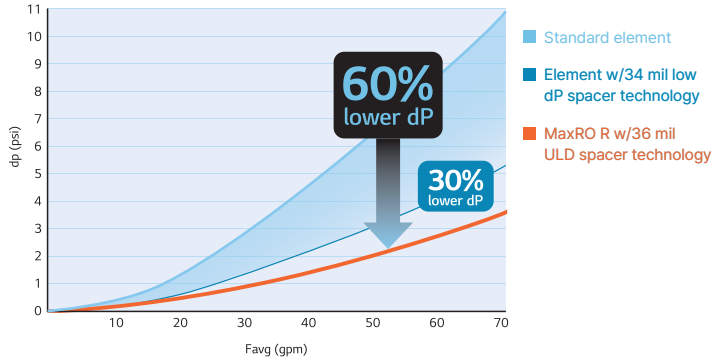
## MaxRO



- MaxRO is a suite of RO membrane products engineered with the quintessence of NanoH2O's best RO membrane and innovative 36 mil ULD spacer technology.
- MaxRO R is for the most challenging membrane applications requiring high salt rejection, robust durability, and excellent fouling resistance.

### Key Features and Benefits

#### Differential Pressure Comparison



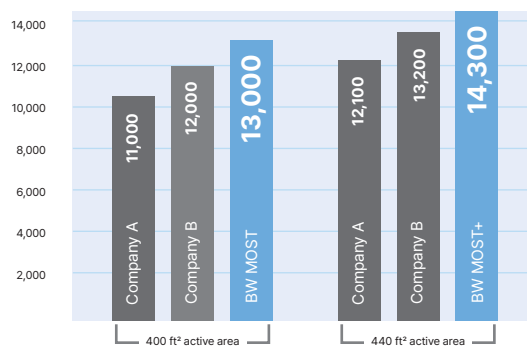
## MOST



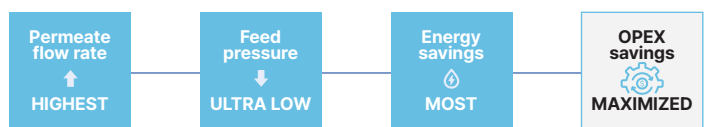
- BW MOST is a suite of RO membrane products that delivers unparalleled productivity and maximizes energy savings.
- BW MOST dramatically improves system productivity or reduces energy consumption for significant savings in the total cost of plant ownership.

### Key Features and Benefits

#### Differential Pressure Comparison



Test conditions  
500ppm NaCl, 100psi (6.9 bar) feed pressure, 15% recovery, pH7



# NanoH2O™ BWRO Membranes

Model	Active Membrane Area, ft <sup>2</sup> (m <sup>2</sup> )	Permeate Flow Rate, GPD (m <sup>3</sup> /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil	Operating Pressure, psi (bar)
<b>MaxRO:</b> Maximized Performance for the Most Challenging Applications						
MaxRO R	400 (37)	11,500 (43.5)	99.8	99.5	36, ultra low dP	225 (15.5)
<b>BW AFR G2:</b> BWRO Membrane with Intrinsic Anti-fouling Properties						
BW 400 AFR G2	400 (37)	11,500 (43.5)	99.7	99.6	34, low dP	225 (15.5)
BW 400 AFR	400 (37)	10,500 (39.7)	99.6	99.5	34	225 (15.5)
<b>BW R G2:</b> Highest Rejection BWRO Membrane						
BW 400 R G2	400 (37)	11,500 (43.5)	99.8	99.65	34, low dP	225 (15.5)
BW 440 R G2	440 (41)	12,650 (47.9)	99.8	99.65	28	225 (15.5)
<b>BW R Dura:</b> Enhanced Chemical Durability (Widest Cleaning pH Range)						
BW 400 R Dura	400 (37)	11,000 (41.6)	99.7	99.6	34, low dP	225 (15.5)
BW 440 R Dura	440 (41)	12,100 (45.8)	99.7	99.6	28	225 (15.5)
<b>BW R:</b> High Rejection Membrane with Reliable and Proven Performance						
BW 400 R	400 (37)	10,500 (39.7)	99.6	99.5	34	225 (15.5)
BW 440 R	440 (41)	11,550 (43.7)	99.6	99.5	28	225 (15.5)
Test Conditions : 2,000 ppm NaCl, 25°C (77°F), 225 psi (15.5 bar), pH 7, Recovery 15%						
<b>BW ES G2:</b> Next-generation Energy Saving BWRO Membrane with high productivity						
BW 400 ES G2	400 (37)	12,300 (46.6)	99.65	99.5	34, low dP	150 (10.3)
BW 440 ES G2	440 (41)	13,500 (51.1)	99.65	99.5	28, low dP	150 (10.3)
<b>BW ES L:</b> Enhanced Energy Saving BWRO Membrane with an Advanced 34 mil Low dP Feed Spacer						
BW 400 ES L	400 (37)	10,500 (39.7)	99.6	99.5	34, low dP	150 (10.3)
BW 440 ES L	440 (41)	11,550 (43.7)	99.6	99.5	28, low dP	150 (10.3)
<b>BW ES:</b> Energy Saving BWRO Membrane with Reliable and Proven Performance						
BW 400 ES	400 (37)	10,500 (39.7)	99.6	99.5	34	150 (10.3)
BW 440 ES	440 (41)	11,550 (43.7)	99.6	99.5	28	150 (10.3)
Test Conditions : 2,000 ppm NaCl, 25°C (77°F), 150 psi (10.3 bar), pH 7, Recovery 15%						
<b>MOST:</b> Maximized OPEX Saving Technology for the MOST Energy Savings						
BW MOST	400 (37)	13,200 (49.9)	98.5	97.0	34, low dP	125 (8.6)
BW MOST+	440 (41)	14,500 (54.9)	98.5	97.0	28, low dP	125 (8.6)
Test Conditions : 2,000 ppm NaCl, 25°C (77°F), 125 psi (8.6 bar), pH 7, Recovery 15%						

# NanoH2O™ Light Commercial RO Membranes

Model	Active Membrane Area, ft <sup>2</sup> (m <sup>2</sup> )	Permeate Flow Rate, GPD (m <sup>3</sup> /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Recovery, %	Operating Pressure, psi (bar)
<b>Seawater<sup>1</sup></b>						
SW 4040 R	80 (7.4)	1,950 (7.4)	99.7	99.5	8	800 (55)
<b>High Rejection<sup>2</sup></b>						
BW 4040 R	85 (7.9)	2,500 (9.5)	99.6	99.3	15	225 (15.5)
BW 4021 R	34 (3.2)	1,000 (3.8)	99.6	99.3	8	225 (15.5)
BW 2540 R	22 (2.0)	750 (2.8)	99.6	99.3	15	225 (15.5)
BW 2521 R	9 (0.9)	345 (1.3)	99.6	99.3	8	225 (15.5)
<b>Low Pressure / Energy Saving<sup>2</sup></b>						
BW 4040 ES	85 (7.9)	2,500 (9.5)	99.5	99.2	15	150 (10.3)
BW 4021 ES	34 (3.2)	1,000 (3.8)	99.5	99.2	8	150 (10.3)
BW 2540 ES	22 (2.0)	750 (2.8)	99.5	99.2	15	150 (10.3)
BW 2521 ES	9 (0.9)	345 (1.3)	99.5	99.2	8	150 (10.3)
<b>Ultra-Energy Saving<sup>3</sup></b>						
CW 4040 SF*	85 (7.9)	2,900 (11.0)	99.0	98.0	15	100 (6.9)
BW 4040 UES	85 (7.9)	2,700 (10.2)	99.0	98.0	15	100 (6.9)
BW 4021 UES	34 (3.2)	1,000 (3.8)	99.0	98.0	8	100 (6.9)
BW 2540 UES	21 (2.0)	800 (3.0)	99.0	98.0	15	100 (6.9)
BW 2521 UES	9 (0.9)	345 (1.3)	99.0	98.0	8	100 (6.9)

<sup>1</sup> Test Conditions : 32,000 ppm NaCl at 25°C (77°F), pH 8

<sup>2</sup> Test Conditions : 2,000 ppm NaCl at 25°C (77°F), pH 7

<sup>3</sup> Test Conditions : 500 ppm NaCl at 25°C (77°F), pH 7

\* Shipped Dry



# NanoH2O™ UHP Membranes



## Ultra-High Pressure (UHP) Membranes

### Powering the Future of High Recovery System

NanoH2O™ Ultra-High Pressure (UHP) RO membranes are engineered to deliver unmatched performance in the most demanding operational environments. Delivering exceptional salt rejection, the largest active surface area, and unmatched durability under extreme pressure, they set a new standard for efficiency and reliability. Designed to optimize ZLD and MLD systems, they help reduce energy costs, minimize waste, and enhance sustainability without compromise. Built for sustainability and strength, NanoH2O™ sets the benchmark for performance in challenging applications.

 <p><b>Robust Mechanical Durability</b></p> <p>Unmatched strength under ultra-high pressure powered by NanoH2O™'s proprietary module design.</p>	 <p><b>Industry's Highest Salt Rejection</b></p> <p>Up to 99.85% salt rejection powered by NanoH2O™'s TFN Technology.</p>	 <p><b>Maximum Active Area</b></p> <p>380 ft² membrane area crafted with advanced manufacturing technology.</p>
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Model	Active Membrane Area, ft² (m²)	Permeate Flow Rate, GPD (m³/d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil
UHP RO	380 (35)	8,500 (32.2)	99.85	99.7	34, low dp

Test Conditions : 32,000 ppm NaCl, 800 psi (55.1 bar), 25°C (77°F), pH 8, Recovery 8%




# NanoH2O™ NF Membranes



## Nanofiltration (NF) Membranes

### Highly Selective Filtration for Smarter Water

NanoH2O™ Nanofiltration (NF) membranes are designed for highly selective filtration applications. They effectively remove target contaminants such as heavy metals, organic pollutants, and PFAS, while preserving essential components in the water. Crafted for low-pressure operation, NF membranes reduce energy consumption and operating costs without compromising performance. This energy-efficient design ensures sustainable water treatment for industrial and municipal applications. NanoH2O™ NF – the smart choice for clean water, energy efficiency, and sustainability.

 <p><b>Excellent Ion Selectivity</b></p> <p>Selectively removes harmful multivalent ions while retaining essential minerals for optimal water quality.</p>	 <p><b>Superior Contaminant Removal</b></p> <p>Effectively eliminates PFAS, nitrogen compounds, and other hazardous substances for safe and clean water.</p>	 <p><b>Energy Efficient Operation</b></p> <p>Lower pressure requirements reduce power consumption and operating cost.</p>
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Model	Active Membrane Area, ft² (m²)	Permeate Flow Rate, GPD (m³/d)	Minimum Salt Rejection, %	Feed Spacer, mil
NF9	400 (37)	10,000 (37.9)	98.7	34, low dp

Test Conditions : 2,000 ppm MgSO₄, 70 psi (4.8 bar), 25°C (77°F), pH 7, Recovery 15%

# Lineage of NanoH2O™ RO Membranes

A History Marked by Innovation  
and Excellence in Reverse Osmosis Technology

**Dec 2025** | LG Chem's Water Solutions business begins a new era as **NanoH2O Co., Ltd.**

**2025** Launched QuantumFlux™ UF/MBR and QuantumPure™ IX, expanding the company's technology offerings

**2024** Launched MaxRO R, highest rejection BWRO membrane with the industry's first 36 mil ultra-low dP feed spacer

**2023** Accumulated more than 5.5 mil. MLD of contracted capacity for large (over 100 MLD) SWRO projects

**2020** Recognized as the Breakthrough Water Technology of the Decade by Global Water Intelligence

**2017** Launched the industry's highest salt rejection SWRO G2 membranes with 99.89% rejection rate

**2016** Awarded Sohar Desalination Project in Oman (250 MLD), the company's first large SWRO project

**2015** State-of-the-art manufacturing facility opened in Cheongju, Korea

**2014** NanoH2O acquired by LG Chem and LG Water Solutions formed

**2005** NanoH2O founded at UCLA in Los Angeles, California



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The product performance is expressly conditioned on Buyer's storing, installing, operating, and maintaining Product in accordance with industry-accepted good practices and Seller's written instructions provided in the Seller's Technical Manual which may be viewed and downloaded at [www.nanoh2owater.com](http://www.nanoh2owater.com). The information and data contained herein are deemed to be accurate and reliable and are offered in good faith, but without guarantee of performance. NanoH2O assumes no liability for results obtained or damages incurred through the application of the information contained

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