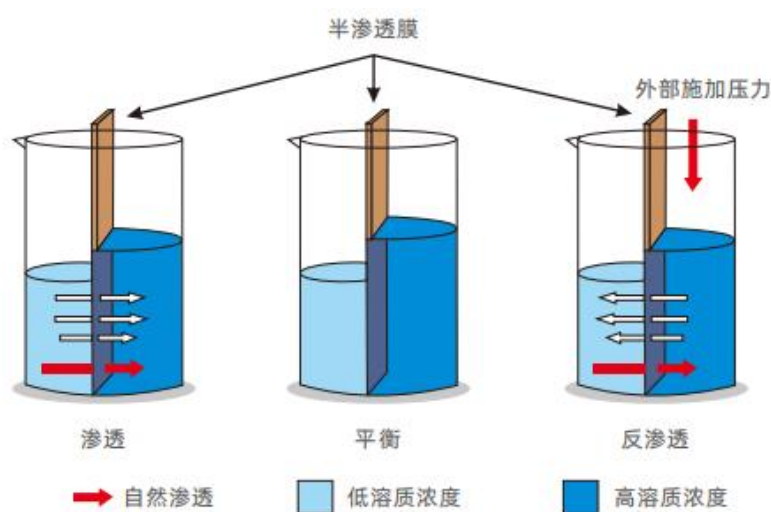


## 01 Reverse Osmosis Technology Introduction

### Osmosis and Reverse Osmosis

Osmosis is a natural process in which water (the solvent) spontaneously passes through a semipermeable membrane from a solution of lower concentration to a solution of higher concentration, ultimately achieving a dynamic equilibrium of solute concentration on both sides of the membrane.



Reverse osmosis is a process where water flows in the opposite direction of natural osmosis—from the concentrated solution to the dilute solution. This process must be achieved by applying external pressure. The osmotic pressure on both sides of the semi-permeable membrane, the internal resistance of the membrane itself, and the resistance formed on the membrane surface and inside its pores due to fouling during operation collectively hinder the reverse flow of water. Therefore, the applied pressure in reverse osmosis must significantly exceed the osmotic pressure difference of the solution itself.

### Reverse Osmosis Membrane(RO/NF)

Reverse osmosis systems must rely on reverse osmosis membranes (i.e., the semi-permeable membranes mentioned above) to achieve the separation of solutes and solvents. Reverse osmosis membranes allow the solvent to pass through while retaining other solutes. Currently, the vast majority of reverse osmosis membranes are multi-layer composite polymer structures with a polyamide-based separation layer. These membranes provide excellent separation performance and durability under conventional feed water

conditions.

## 02 Membrane Element Product Series

### RO Membrane Elements

Product name 品名	Applications 应用场景	Model number 元件型号
Extremely Low-Pressure RO Membrane Elements 极低压 RO 膜元件	<b>Energy-Saving Type:</b> Suitable for the purification of surface water, such as municipal tap water and river water. 节能型, 适用于市政自来水、江河水等地表水的净化	XLP8040/4040
Ultra-Low-Pressure (ULP) RO Membrane Elements 超低压 RO 膜元件	<b>Desalination Type:</b> For the desalination and purification of municipal tap water, river water, and other surface water sources. 脱盐型, 市政自来水、江河水等地表水的脱盐与净化	ULP8040/4040
Low-Pressure (LP) RO Membrane Elements 低压 RO 膜元件	<b>Brackish Water Type:</b> Designed for municipal water desalination, electronics-grade ultrapure water production, boiler feed water treatment, and reclaimed water reuse. 苦咸水型, 市政水的脱盐、电子超纯水制备、锅炉补给水处理、中水再生	LP8040/4040
Medium/High-Pressure RO Membranes 中高压 RO 膜元件	<b>Brackish Water Type:</b> Applicable to pure water production, brackish water desalination, groundwater desalination, as well as reclaimed water reuse and advanced treatment. 苦咸水型, 纯水生产、苦咸水淡化、地下水脱盐、中水回用和深度处理	BW8040/4040
Fouling-Resistant RO Membrane Elements 抗污染 RO 膜元件	<b>Fouling-Resistant Coating:</b> Used for the advanced purification of municipal water, industrial wastewater, and slightly polluted surface water or groundwater. 抗污染涂层, 应用于市政水、工业废水、微污染的地表水及地下水等深度净化	FR8040

Seawater Desalination 海水淡化	<b>High-Salinity Type:</b> Suitable for the desalination or further concentration of seawater, brine, high-salinity industrial wastewater, reclaimed water, and RO/NF concentrate with a TDS $\geq 10,000$ mg/L. 适用于 TDS $\geq 10000$ mg/L 的海水、卤水、高盐工业污水、再生水、RO/NF 处理后浓缩水等的除盐或再浓缩	SW8040/4040
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### NF Membrane Elements

Product name 品名	Applications 应用场景	Model number 元件型号
N40 Low-Salt-Rejection NF Membrane Element N40 低脱盐纳滤膜元件	Suitable for desalination and purification of municipal water, decoloration, desalination, concentration, and refinement of process streams. 适用于市政水的脱盐净化、物料的脱色、降盐、浓缩和精制。	N40-8040/4040
N70 Medium-Salt-Rejection NF Membrane Element N70 中脱盐纳滤膜元件	Applied in zero liquid discharge (ZLD) and salt fractionation/resource recovery from high-salinity wastewater, as well as concentration and separation of process streams. 应用于高盐废水零排放和分盐资源化，及物料的浓缩、分离等。	N70-8040/4040
N90 High-Salt-Rejection NF Membrane Element N90 高脱盐纳滤膜元件	Suitable for municipal water softening, desalination, reclaimed water reuse, and separation/concentration of process streams. 适用于市政水软化、除盐、中水回用、物料分离及浓缩等。	N90-8040/4040
NTX Nitrate-Removal NF Membrane Element NTX 脱硝纳滤膜元件	Suitable for ZLD and resource recovery from high-salinity industrial wastewater (e.g., chlor-alkali, textile dyeing, petrochemical, coal chemical). 适用于氯碱、印染、石化、煤化工等高盐工业废水零排放及资源化。	NTX8040/4040
N_HP High-Pressure	Designed for ZLD and resource recovery	N70HP8040

Salt-Fractionation NF Membrane Element N_HP 高压分盐纳滤膜 元件	from high-salinity industrial wastewater. 适用于高盐工业废水零排放及资源化。	NTXHP8040
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### 03 Product Selection Guide

#### Model Description

#### RO Membrane Element Nomenclature

BW -	80	40 -	400
Element Type RO Membrane	Element Diameter Unit: inch	Element Length Unit: inch	Effective Element Area Unit: ft <sup>2</sup>

#### NF Membrane Element Nomenclature

N70-	80	40	/34i
Element Type NF Membrane	Element Diameter Unit: inch	Element Length Unit: inch	Brine Spacer Thickness Unit: mil

Optimization of the membrane element's structural design and spiral-winding technology enables superior hydrodynamic conditions during operation, resulting in enhanced performance. Validated through extensive engineering applications, Membrane Industry has developed spiral-wound element products with a more user-focused design.

- Optimized spacer thickness and structure create superior hydrodynamic conditions, enhancing the fouling resistance of the membrane element;
- High packing density of membrane leaves combined with uniform sealing technology promotes higher permeate flow and salt rejection rates;
- Increasing the number of membrane leaves reduces the permeate flow path length, thereby improving permeation efficiency;
- A fully automated, mechanized spiral-winding process ensures consistent product quality and stable performance;
- Dry membrane elements offer greater convenience for transportation and long-term storage.



**Product Overview of RO Membrane Elements**

Category 类别	Model 规格型号	Effective Area 有效面积 ft <sup>2</sup> /m <sup>3</sup>	Stable Salt Rejection 稳定脱盐率 %	Standard Permeate Flow 标准产水量 GPD/m <sup>3</sup> /d
Extremely Low-Pressure	XLP-8040-440	440/40.8	98.5	9500/36.0
Energy-Saving Type	XLP8040-400	400/37.2	98.5	8450/32.0
极低压节能型	XLP-4040	98/9.1	98.5	2050/7.8
Extra-Low Pressure	ULP-8040-440	400/40.8	99.2	11880/45.0
Desalination Type	ULP-8040-400	400/37.2	99.2	10500/40.0
超低压脱盐型	ULP-4040	98/9.1	99.2	2500/9.6
Low-Pressure Brackish	LP-8040-440	440/40.8	99.5	11880/45.0
Water Type	LP-8040-400	400/37.2	99.5	10500/40.0

低压苦咸水型	LP-4040	95/8.8	99.5	2400/9.1
Medium/High-Pressure Brackish Water Type	BW-8040-440	440/40.8	99.6	11880/45.0
	BW-8040-400	400/37.2	99.6	10500/40.0
中高压苦咸水型	BWHP-8040-380	380/35.5	99.6	9500/36.0
	BW-4040	95/8.8	99.6	2400/9.1
Gen-2 Enhanced Anti-Fouling Type	LFRII-8040-400	400/37.2	99.5	10000/38.0
二代加强抗污染型	BFRII-8040-400	400/37.2	99.6	10000/38.0
Seawater Desalination Type 海水淡化型	SW-8040-400	400/37.2	99.7	7600/28.8
	SW-8040-380	380/35.3	99.7	6850/26.0
	SW-4040	92/8.5	99.7	1700/6.5

### Product Overview of NF Membrane Elements

Category 类别	Model 规格型号	Effective Area 有效面积 ft <sup>2</sup> /m <sup>3</sup>	Stable Salt Rejection 稳定脱盐率%		Standard Permeate Flow 标准产水量 GPD/m <sup>3</sup> /d
			MgSO <sub>4</sub>	NaCl	
Low-Salt-Rejection NF 低脱盐纳滤	N40-8040/28i	440/40.8	96.0	20-55	11100/42.0
	N40-8040/34i	400/37.2	96.0	20-55	10000/38.0
	N40-8040/36i	380/35.3	96.0	20-55	9250/35.0
	N40-4040	98/9.1	96.0	20-55	2400/9.2
Medium-Salt-Rejection NF 中脱盐纳滤	N70-8040/28i	440/40.8	98.0	50-85	11100/42.0
	N70-8040/34i	400/37.2	98.0	50-85	10000/38.0
	N70-4040	95/8.8	98.0	50-85	2350/9.0
High-Salt-Rejection NF 高脱盐纳滤	N90-8040/28i	440/40.8	99.2	85-95	11100/42.0
	N90-8040/34i	400/37.2	99.2	85-95	10000/38.0
	N90-4040	98/9.1	99.2	85-95	2350/9.0
Nitrate-Selective NF 脱硝型纳滤	NTX-8040/28i	440/40.8	99.0	50-85	10000/38.0
	NTX-8040/34i	400/37.2	99.0	50-85	9000/34.0

	NTX-4040	95/8.8	99.0	50-85	2250/8.5
High-Pressure	N70HP-8040/34i	370/34.3	98.0	50-85	9000/34.0
Salt-Fractionation NF					
高压分盐纳滤	NTXHP-8040/34i	370/34.3	99.0	50-85	7900/30.0

#### 04 Product Performance Parameters

##### Performance and Operating Parameters of Extremely Low Pressure (ELP) & Extra Low Pressure (XLP) RO Membrane Elements

Type 类型	Model 型号		XLP-8040-440	XLP-8040-400	XLP-4040	
	Dimension 规格尺寸		8inch (英寸)		4inch (英寸)	
	Membrane Material 膜材质		Aromatic Polyamide 芳香聚酰胺			
Performance 性能	Active Membrane Area	m <sup>2</sup>	40.8	37.2	9.1	
	有效膜面积	Ft <sup>2</sup>	440	400	98	
	Feed Spacer Thickness	mil	28	34	28	
	进水隔网厚度	mm	0.711	0.864	0.711	
	Salt Rejection 脱盐率 %	Nominal 稳定		98.5		
		Minimum 最低		98.0		
	Permeate Flow 产水量	m <sup>3</sup> /d		36.0	32.0	7.8
GPD		9500	8450	2050		
Test Conditions 测试条件	NaCl Solution Concentration		250±10			
	NaCl 溶液浓度 (mg/L)					
	Pressure 压力 psi(MPa)		80 (0.55)			
	Temperature 温度 °C		25.0±1.0			
	Single Element Recovery 单支膜元件回收率 %		15±1			
Test Solution 测试液 pH		7-8				
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)		600(4.1)			
	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)		75(17.0)	16(3.6)		
	Maximum Feed Temperature 最高进水温度 °C		45			
	Continuous Operating pH Range 连续运行进水 pH 范围		3-10			
	Chemical Cleaning pH Range 化学清洗 pH 范围		2-12			
	Maximum Feed Turbidity 最大进水浊度 NTU		1.0			
	Maximum Feed 最大进水 SDI 15		5			
	Maximum Feed Chlorine 最大进水余氯浓度 mg/L		0.1			
Maximum Pressure Drop 最大压降 psi(MPa)		15(0.1)				

**Performance and Operating Parameters of Extremely Low Pressure (ELP) & Ultra Low Pressure (ULP) RO Membrane Elements**

Type 类型	Model 型号		ULP-8040-440	ULP-8040-400	ULP-4040	
	Dimension 规格尺寸		8inch 英寸		4inch 英寸	
	Membrane Material 膜材质		Aromatic Polyamide 芳香聚酰胺			
Performance 性能	Active Membrane Area	m <sup>2</sup>	40.8	37.2	9.1	
	有效膜面积	Ft <sup>2</sup>	440	400	98	
	Feed Spacer Thickness	mil	28	34	28	
	进水隔网厚度	mm	0.711	0.864	0.711	
	Salt Rejection 脱盐率 %	Nominal 稳定		99.2		
		Minimum 最低		98.8		
Permeate Flow 产水量	m <sup>3</sup> /d		45.0	40.0	9.6	
	GPD		11880	10500	2500	
Test Condition 测试条件	NaCl Solution Concentration		500±20			
	NaCl 溶液浓度 (mg/L)					
	Pressure 压力 psi(MPa)		100 (0.70)			
	Temperature 温度 °C		25.0±1.0			
	Single Element Recovery 单支膜元件回收率 %		15±1			
Test Solution 测试液 pH		7-8				
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)		600(4.1)			
	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)		75(17.0)		16(3.6)	
	Maximum Feed Temperature 最高进水温度 °C		45			
	Continuous Operating pH Range 连续运行进水 pH 范围		3-10			
	Chemical Cleaning pH Range 化学清洗 pH 范围		2-12			
	Maximum Feed Turbidity 最大进水浊度 NTU		1.0			
	Maximum Feed 最大进水 SDI15		5			
	Maximum Feed Chlorine 最大进水余氯浓度 mg/L		0.1			
Maximum Pressure Drop 最大压降 psi(MPa)		15(0.1)				

**Performance and Operating Parameters of Low Pressure (LP) RO Membrane Elements**

Type 类型	Model 型号		LP-8040-440	LP-8040-400	LP-4040
	Dimension 规格尺寸		8inch 英寸		4inch 英寸

Membrane Material 膜材质		Aromatic Polyamide 芳香聚酰胺			
Performance 性能	Active Membrane Area 有效膜面积	m <sup>2</sup> Ft <sup>2</sup>	40.8 440	37.2 400	8.8 95
	Feed Spacer Thickness 进水隔网厚度	mil mm	28 0.711	34 0.864	34 0.864
	Salt Rejection 脱盐率%	Nominal 稳定	99.5		
		Minimum 最低	99.2		
	Permeate Flow 产水量	m <sup>3</sup> /d	45.0	40.0	9.1
		GPD	11880	10500	2400
Test Conditions 测试条件	NaCl Solution Concentration NaCl 溶液浓度 (mg/L)		1500±50		
	Pressure 压力 psi(MPa)		150 (1.03)		
	Temperature 温度 °C		25.0±1.0		
	Single Element Recovery 单支膜元件回收率 %		15±1		
	Test Solution 测试液 pH		7-8		
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)		600(4.1)		
	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)		75(17.0)		16(3.6)
	Maximum Feed Temperature 最高进水温度 °C		45		
	Continuous Operating pH Range 连续运行进水 pH 范围		3-10		
	Chemical Cleaning pH Range 化学清洗 pH 范围		2-12		
	Maximum Feed Turbidity 最大进水浊度 NTU		1.0		
	Maximum Feed 最大进水 SDI 15		5		
	Maximum Feed Chlorine 最大进水余氯浓度 mg/L		0.1		
Maximum Pressure Drop 最大压降 psi(MPa)		15(0.1)			

**Performance and Operating Parameters of Medium/High Pressure RO & BW-Type Membrane Elements**

Type 类型	Model 型号		BW-8040-440	BW-8040-400	BWHP-8040-380	BW-4040
	Dimension 规格尺寸		8inch 英寸			4inch 英寸
Membrane Material 膜材质		Aromatic Polyamide 芳香聚酰胺				
Performance 性能	Active Membrane Area 有效膜面积	m <sup>2</sup> Ft <sup>2</sup>	40.8 440	37.2 400	35.3 380	8.8 95
	Feed Spacer Thickness	mil	28	34	34	34

	进水隔网厚度	mm	0.711	0.864	0.864	0.864
	Salt Rejection 脱盐率%	Nominal 稳定	99.6			
		Minimum 最低	99.4			
	Permeate Flow 产水量	m <sup>3</sup> /d	45.0	40.0	36.0	9.1
GPD		11880	10500	9500	2400	
Test Conditions 测试条件	NaCl Solution Concentration NaCl 溶液浓度 (mg/L)		2000±50			
	Pressure 压力 psi(MPa)		1.55(225)			
	Temperature 温度 °C		25.0±1.0			
	Single Element Recovery 单支膜元件回收率 %		15±1			
	Test Solution 测试液 pH		7-8			
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)		600(4.1)	1000(6.9)	600(4.1)	
	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)		75(17.0)			16(3.6)
	Maximum Feed Temperature 最高进水温度 °C		45			
	Continuous Operating pH Range 连续运行进水 pH 范围		3-10			
	Chemical Cleaning pH Range 化学清洗 pH 范围		2-12			
	Maximum Feed Turbidity 最大进水浊度 NTU		1.0			
	Maximum Feed 最大进水 SDI 15		5			
	Maximum Feed Chlorine 最大进水余氯浓度 mg/L		0.1			
Maximum Pressure Drop 最大压降 psi(MPa)		15(0.1)				

### Performance and Operating Parameters of Fouling-Resistant (FR) RO Membrane Elements

Type 类型	Model 型号		LFRII-8040-400	BFRII-8040-400	
	Dimension 规格尺寸		8inch 英寸		
	Membrane Material 膜材质		Aromatic Polyamide 芳香聚酰胺		
Performance 性能	Active Membrane Area	m <sup>2</sup>	37.2	37.2	
	有效膜面积	Ft <sup>2</sup>	400	400	
	Feed Spacer Thickness	mil	34	34	
	进水隔网厚度	mm	0.864	0.864	
	Salt Rejection 脱盐率%	Nominal 稳定		99.55	99.65
		Minimum 最低		99.2	99.4
Permeate Flow 产水量	m <sup>3</sup> /d		38.0		

	GPD	10000	
Test Conditions 测试条件	NaCl Solution Concentration NaCl 溶液浓度 (mg/L)	1500±50	2000±50
	Pressure 压力 psi(MPa)	150 (1.03)	225(1.55)
	Temperature 温度 °C	25.0±1.0	
	Single Element Recovery 单支膜元件回收率 %	15±1	
	Test Solution 测试液 pH	7-8	
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)	600(4.1)	
	Maximum Feed Flow 最大进水流量 gpm(m³/h)	75(17.0)	
	Maximum Feed Temperature 最高进水温度 °C	45	
	Continuous Operating pH Range 连续运行进水 pH 范围	3-10	
	Chemical Cleaning pH Range 化学清洗 pH 范围	2-12	
	Maximum Feed Turbidity 最大进水浊度 NTU	1.0	
	Maximum Feed 最大进水 SDI 15	5	
	Maximum Feed Chlorine 最大进水余氯浓度 mg/L	0.1	
Maximum Pressure Drop 最大压降 psi(MPa)	15(0.1)		

### Performance and Operating Parameters of Seawater Reverse Osmosis (SWRO) Membrane Elements

Type 类型	Model 型号		SW-8040-400	SW-8040-380	SW-4040	
	Dimension 规格尺寸		8inch 英寸		4inch 英寸	
	Membrane Material 膜材质		Aromatic Polyamide 芳香聚酰胺			
Performance 性能	Active Membrane Area	m²	37.2	35.3	8.5	
	有效膜面积	Ft²	400	380	92	
	Feed Spacer Thickness	mil	28	34	28	
	进水隔网厚度	mm	0.711	0.864	0.711	
	Salt Rejection 脱盐率%	Nomina 稳定		99.7		
		Minimum 最低		99.6		
	Permeate Flow 产水量	m³/d		28.8	26.0	6.5
GPD		7600	6850	1700		
Test Conditions 测试条件	NaCl Solution Concentration NaCl 溶液浓度 (mg/L)		32000±100			
	Pressure 压力 psi(MPa)		800 (5.52)			
	Temperature 温度 °C		25.0±1.0			

	Single Element Recovery 单支膜元件回收率 %	8±1	
	Test Solution 测试液 pH	7-8	
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)	1000(6.9)	
	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)	75(17.0)	16(3.4)
	Maximum Feed Temperature 最高进水温度 °C	45	
	Continuous Operating pH Range 连续运行进水 pH 范围	3-10	
	Chemical Cleaning pH Range 化学清洗 pH 范围	2-12	
	Maximum Feed Turbidity 最大进水浊度 NTU	1.0	
	Maximum Feed 最大进水 SDI 15	5	
	Maximum Feed Chlorine 最大进水余氯浓度 mg/L	0.1	
	Maximum Pressure Drop 最大压降 psi(MPa)	15(0.1)	

**Performance and Operating Parameters of Low-Salt-Rejection Nanofiltration (NF) Membrane Elements (N40 Series)**

Type 类型	Model 型号		N40-8040/ 28i	N40-8040/ 34i	N40-8040/ 36i	N40-4040
	Dimension 规格尺寸		8inch 英寸			4inch 英寸
Membrane Material 膜材质		Poly(piperazine amide)聚哌嗪酰胺				
Performance 性能	Active Membrane Area 有效膜面积	m <sup>2</sup>	40.8	37.2	35.3	9.1
		Ft <sup>2</sup>	440	400	380	98
	Feed Spacer Thickness 进水隔网厚度	mil	28	34	36	28
		mm	0.711	0.864	0.914	0.711
	Salt Rejection 脱盐率%	NaCl	20-55			
		MgSO <sub>4</sub>	96.0(Minimum: 95.0%) (最低 95.0)			
	Permeate Flow 产水量	m <sup>3</sup> /d	42.0	38.0	35.0	9.2
		GPD	11100	10000	9250	2400
Test Conditions 测试条件	NaCl Solution Concentration NaCl 溶液浓度 (mg/L)		2000±50			
	MgSO <sub>4</sub> Solution Concentration MgSO <sub>4</sub> 溶液浓度 (mg/L)		2000±50			
	Pressure 压力 psi(MPa)		70 (0.50)			
	Temperature 温度 °C		25.0±1.0			
	Single Element Recovery 单支膜元件回收率 %		15±1			
	Test Solution 测试液 pH		7-8			
Operating	Maximum Feed Pressure 最高进水压力 psi(MPa)		600(4.1)			

Conditions 使用条件	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)	75(17.0)	16(3.6)
	Maximum Feed Temperature 最高进水温度 °C	40(Max. 35°C when pH > 10) (当 pH>10 时为 35)	
	Continuous Operating pH Range 连续运行进水 pH 范围	3-10	
	Chemical Cleaning pH Range 化学清洗 pH 范围	2-11	
	Maximum Feed Turbidity 最大进水浊度 NTU	1.0	
	Maximum Feed 最大进水 SDI 15	5	
	Maximum Feed Chlorine 最大进水余氯浓度 mg/L	0.1	
	Maximum Pressure Drop 最大压降 psi(MPa)	15(0.1)	

**Performance and Operating Parameters of Medium-Salt-Rejection Nanofiltration (NF) Membrane Elements (N70 Series)**

Type 类型	Model 型号		N70-8040/28i	N70-8040/34i	N70-4040	
	Dimension 规格尺寸		8inch 英寸		4inch 英寸	
	Membrane Material 膜材质		Poly(piperazine amide)聚哌嗪酰胺			
Performance 性能	Active Membrane Area	m <sup>2</sup>	40.8	37.2	8.8	
	有效膜面积	Ft <sup>2</sup>	440	400	95	
	Feed Spacer Thickness	mil	28	34	34	
	进水隔网厚度	mm	0.711	0.864	0.864	
	Salt Rejection 脱盐率%	NaCl		50-85		
		MgSO <sub>4</sub>		98.0(Minimum: 97.5%)(最低 97.5)		
	Permeate Flow 产水量	m <sup>3</sup> /d		42.0	38.0	9.0
GPD		11100	10000	2350		
Test Conditions 测试条件	NaCl Solution Concentration NaCl 溶液浓度 (mg/L)		2000±50			
	MgSO <sub>4</sub> Solution Concentration MgSO <sub>4</sub> 溶液浓度 (mg/L)		2000±50			
	Pressure 压力 psi(MPa)		110 (0.75)			
	Temperature 温度 °C		25.0±1.0			
	Single Element Recovery 单支膜元件回收率 %		15±1			
	Test Solution 测试液 pH		7-8			
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)		600(4.1)			
	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)		75(17.0)	16(3.6)		
	Maximum Feed Temperature 最高进水温度 °C		40(Max. 35°C when pH > 10) (当 pH>10 时为 35°C)			
	Continuous Operating pH Range 连续运行进水 pH 范围		3-10			

Chemical Cleaning pH Range 化学清洗 pH 范围	2-11
Maximum Feed Turbidity 最大进水浊度 NTU	1.0
Maximum Feed 最大进水 SDI 15	5
Maximum Feed Chlorine 最大进水余氯浓度 mg/L	0.1
Maximum Pressure Drop 最大压降 psi(MPa)	15(0.1)

**Performance and Operating Parameters of High-Salt-Rejection Nanofiltration (NF) Membrane Elements (N90 Series)**

Type 类型	Model 型号		N90-8040/28i	N90-8040/34i	N90-4040
	Dimension 规格尺寸		8inch 英寸		4inch 英寸
	Membrane Material 膜材质		Aromatic Polyamide 芳香聚酰胺		
Performance 性能	Active Membrane Area 有效膜面积	m <sup>2</sup> Ft <sup>2</sup>	40.8 440	37.2 400	9.1 98
	Feed Spacer Thickness 进水隔网厚度	mil mm	28 0.711	34 0.864	28 0.711
	Salt Rejection 脱盐率%	NaCl	85-95		
		MgSO <sub>4</sub>	99.2(Minimum: 98.5%)(最低 98.5)		
	Permeate Flow 产水量	m <sup>3</sup> /d	42.0	38.0	9.0
		GPD	11100	10000	2350
Test Conditions 测试条件	NaCl Solution Concentration NaCl 溶液浓度 (mg/L)		2000±50		
	MgSO <sub>4</sub> Solution Concentration MgSO <sub>4</sub> 溶液浓度 (mg/L)		2000±50		
	Pressure 压力 psi(MPa)		70 (0.5)		
	Temperature 温度 °C		25.0±1.0		
	Single Element Recovery 单支膜元件回收率 %		15±1		
	Test Solution 测试液 pH		7-8		
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)		600(4.1)		
	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)		75(17.0)		16(3.6)
	Maximum Feed Temperature 最高进水温度 °C		40(Max. 35°C when pH > 10) (当 pH>10 时为 35°C)		
	Continuous Operating pH Range 连续运行进水 pH 范围		3-10		
	Chemical Cleaning pH Range 化学清洗 pH 范围		2-12		
	Maximum Feed Turbidity 最大进水浊度 NTU		1.0		
	Maximum Feed 最大进水 SDI 15		5		

Maximum Feed Chlorine 最大进水余氯浓度 mg/L	0.1
Maximum Pressure Drop 最大压降 psi(MPa)	15(0.1)

**Performance and Operating Parameters of Nitrate-Removal Nanofiltration (NF) Membrane Elements (NTX Series)**

Type 类型	Model 型号		NTX-8040/28i	NTX-8040/34i	NTX-4040
	Dimension 规格尺寸		8inch 英寸		4inch 英寸
Membrane Material 膜材质		Poly(piperazine amide)聚哌嗪酰胺			
Performance 性能	Active Membrane Area 有效膜面积	m <sup>2</sup> Ft <sup>2</sup>	40.8 440	37.2 400	8.8 95
	Feed Spacer Thickness 进水隔网厚度	mil mm	28 0.711	34 0.864	34 0.864
	Salt Rejection 脱盐率%	NaCl	50-85		
		MgSO <sub>4</sub>	99.0		
	Permeate Flow 产水量	m <sup>3</sup> /d GPD	38.0 10000	34.0 9000	8.5 2250
		NaCl Solution Concentration NaCl 溶液浓度 (mg/L)	2000±50		
	Test Conditions 测试条件	MgSO <sub>4</sub> Solution Concentration MgSO <sub>4</sub> 溶液浓度 (mg/L)	2000±50		
Pressure 压力 psi(MPa)		110 (0.75)			
Temperature 温度 °C		25.0±1.0			
Single Element Recovery 单支膜元件回收率 %		15±1			
Operating Conditions 使用条件	Test Solution 测试液 pH	7-8			
	Maximum Feed Pressure 最高进水压力 psi(MPa)	600(4.1)			
	Maximum Feed Flow 最大进水量 gpm(m <sup>3</sup> /h)	75(17.0)			16(3.6)
	Maximum Feed Temperature 最高进水温度 °C	40(Max. 35°C when pH > 10) (当 pH>10 时为 35°C)			
	Continuous Operating pH Range 连续运行进水 pH 范围	3-10			
	Chemical Cleaning pH Range 化学清洗 pH 范围	2-12			
	Maximum Feed Turbidity 最大进水浊度 NTU	1.0			
	Maximum Feed 最大进水 SDI15	5			
Maximum Feed Chlorine 最大进水余氯浓度 mg/L	0.1				
Maximum Pressure Drop 最大压降 psi(MPa)	15(0.1)				

**Performance and Operating Parameters of High-Pressure Salt-Fractionation Nanofiltration (NF) Membrane Elements (N\_HP Series)**

Type 类型	Model 型号		N70HP-8040/34i	NTXHP-8040/34i	
	Dimension 规格尺寸		8inch 英寸		
	Membrane Material 膜材质		Poly(piperazine amide)聚哌嗪酰胺		
Performance 性能	Active Membrane Area	m <sup>2</sup>	34.3		
	有效膜面积	Ft <sup>2</sup>	370		
	Feed Spacer Thickness	mil	34		
	进水隔网厚度	mm	0.864		
	Salt Rejection 脱盐率%		NaCl	50-85	
			MgSO <sub>4</sub>	98.0(Minimum: 97.5%) (最低 97.5)	99.0(Minimum: 98.5%) (最低 98.5)
	Permeate Flow 产水量		m <sup>3</sup> /d	34.0	30.0
		GPD	9000	7900	
Test Conditions 测试条件	NaCl Solution Concentration		2000±50		
	NaCl 溶液浓度 (mg/L)				
	MgSO <sub>4</sub> Solution Concentration		2000±50		
	MgSO <sub>4</sub> 溶液浓度 (mg/L)				
	Pressure 压力 psi(MPa)		110 (0.75)		
	Temperature 温度 °C		25.0±1.0		
	Single Element Recovery 单支膜元件回收率 %		15±1		
Test Solution 测试液 pH		7-8			
Operating Conditions 使用条件	Maximum Feed Pressure 最高进水压力 psi(MPa)		1000(6.9)		
	Maximum Feed Flow 最大进水流量 gpm(m <sup>3</sup> /h)		75(17.0)		
	Maximum Feed Temperature 最高进水温度 °C		40(Max. 35°C when pH > 10) (当 pH>10 时为 35°C)		
	Continuous Operating pH Range 连续运行进水 pH 范围		3-10		
	Chemical Cleaning pH Range 化学清洗 pH 范围		2-11		
	Maximum Feed Turbidity 最大进水浊度 NTU		1.0		
	Maximum Feed 最大进水 SDI 15		5		
	Maximum Feed Chlorine 最大进水余氯浓度 mg/L		0.1		
Maximum Pressure Drop 最大压降 psi(MPa)		15(0.1)			