



Membrane product manuals

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Jiangdu economic development zone, Yangzhou city,
Jiangsu province, China.
Tel.:0514-86276799



Qicheng (Jiangsu) Purification Technology Co., Ltd.



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Company Profile

Qicheng (Jiangsu) Purification Technology Co., Ltd., located in Yangzhou City, Jiangsu Province, is a professional high-tech company, which is engaged in research and development, production, sales and after-sales service of separation membrane products. The company is committed to the innovation and application of water treatment technology and separation membrane materials, and provides comprehensive water treatment technology solutions to customers.

The company develops, produces and sells mainly industrial and household reverse osmosis membranes, nano-filtration membranes and ultra-filtration membranes. The company has first-class research and development team, modern laboratories, and signed technical development cooperation agreements with Tsinghua University, and made important breakthroughs in the field of research and development of high-performance low-pressure reverse osmosis membranes. At the same time, the company owns advanced production equipment and skilled technical workers, and strictly implement ISO 9001 standard quality management system in product production and quality control to ensure the quality of every product manufactured.

Qicheng brackish water desalination membrane components, ultra-low pressure membrane components, anti-pollution membrane components, seawater desalination membrane, nano-filtration membrane and ultra-filtration membrane have been widely used in municipal water supply, power plants, chemical plants, electronics factories, pharmaceutical factories, food and beverage and household water supply industries, improving the quality of industrial water, boosting the quality of industrial products and improving human survival environments, improving the quality of life of consumers. Qicheng membrane products sell well in nearly 30 provinces, municipalities and autonomous regions, and are exported to North America, Europe, the Middle East, Southeast Asian countries. They are widely recognized and preferred by users at home and abroad.

All employees of Qicheng Company are willing to continue upholding the tenet of "honesty, pragmatism and innovation" to provide better products and better service to customers both nationwide and overseas.



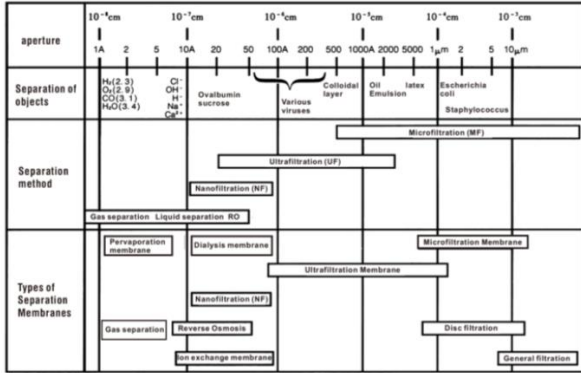
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Selection Guidelines and Performance Specifications

Naming Rules and Selection Guidelines for Membrane Components

1. Membrane Separation Atlas



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2. Classification of membrane products

- LP: Standard Brackish Water Reverse Osmosis Membrane Component
- FR: High Pollution Resistance Desalination Reverse Osmosis Membrane Component
- ULP: Ultra Low Pressure Desalination and Desalination Reverse Osmosis Membrane Component
- XLP: Extreme Low Pressure Desalination Freshwater Reverse Osmosis Membrane Component
- NF: Nanofiltration Membranes with 50%, 70% or 90% desalination rate
- HS: Anti-fouling High Salt Membrane Component
- UF: Industrial Ultrafiltration Membrane Component



3. Performance summary and Selection Guide for membrane components

3.1 Brief Table of Performance for Industrial Reverse Osmosis Membranes

Membrane components classification	Membrane Component Model	Stable desalination rate (%)	Minimum desalination rate (%)	Average yield water GPD (m ³ /d)	Operating Pressure and Applicable Scope	Test conditions		
						Test pressure (psi)	Test solution concentration NaCl (ppm)	Recovery rate (%)
Brackish Water Membrane Component	QC-LP-8040-365	99.5	99.3	9500(35.9)	Low pressure operation, suitable for brackish water or high concentration brackish water	225 (1.55)	2000	15
	QC-LP-8040-400	99.5	99.3	10500(39.7)				
	QC-LP-4040	99.5	99.3	2400(9.1)				
	QC-LP-8040-365FR	99.3	99	9000(34.1)				
	QC-LP-8040-400FR	99.3	99	9500(35.9)				
	QC-LP-4040FR	99.3	99	2200(8.3)				
Ultra-low pressure Membrane Component	QC-ULP-8040-400	99.2	99	10000(37.9)	Ultra-low pressure operation, suitable for low salinity water source	150 (1.03)	1500	15
	QC-ULP-8040-440	99.2	99	11000(41.6)				
	QC-ULP-4040	99.2	99	2400(9.1)				
	QC-ULP-4021	99	98.5	1000(3.8)				8
	QC-ULP-2540	99	98.5	750 (2.8)				
	QC-ULP-2521	99	98.5	300(1.13)				
Extreme Low Pressure Membrane Component	QC-XLP-8040-400	99	98.5	9500(35.9)	Extremely low pressure operation, suitable for low salinity water source and second-level reverse osmosis system	100 (0.69)	500	15
	QC-XLP-8040-440	99	98.5	10500(39.7)				
	QC-XLP-4040	99	98.5	2400(9.1)				
	QC-XLP-4021	99	98.5	1000(3.8)				
	QC-XLP-2540	99	98.5	750 (2.8)				
	QC-XLP-2521	99	98.5	300 (1.13)				
Anti-fouling High Salt Membrane Component	QC-FRHS-8040	98.5	98	7300 (27.6)	Medium pressure operation, suitable for water sources with high salinity and the TDS below 20000 ppm.	320 (2.21)	12000	10
	QC-FRHS-4040	98.5	98	1800 (6.8)				

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3. Performance summary and Selection Guide for membrane components

3.2 Brief Table of Performance of Domestic and Commercial Membrane Components

Membrane components classification	Membrane Component Model	Stable desalination rate (%)	Average yield water GPD (m ³ /d)	Operating Pressure and Applicable Scope	Test conditions		
					Test pressure (psi)	Test solution concentration NaCl (ppm)	Recovery rate (%)
Household Reverse Osmosis Membrane Components	QC-1812-50	97	50(0.19)	Extremely low pressure operation, suitable for household water purifier and commercial water purifier	65(0.45)	250	35
	QC-1510-50	97	50(0.19)				
	QC-1812-75	97	75(0.28)				
	QC-1510-75	97	75(0.28)				
	QC-1812-90	96	90(0.34)				
	QC-2012-100	96	100(0.38)				
	QC-2012-125	96	125(0.47)				
	QC-2012-130	96	130(0.5)				
	QC-2012-150	96	150(0.57)				
	QC-2012-200	96	200(0.76)				
Commercial Reverse Osmosis Membrane Components	QC-2812-200	97	200(0.76)		75(0.52)	250	35
	QC-3012-300	97	300(1.14)				
	QC-3012-400	97	400(1.52)				
	QC-3013-400	96	400(1.52)				
	QC-3013-600	96	600(2.00)				
	QC-3213-600	96	600(2.00)				
	QC-3213-800	97	800(3.0)				
	QC-3413-800	97	800(3.0)				
	QC-3413-1000	97	1000(3.8)		90(0.63)	250	35

Qicen LP Series 4/8 inch Reverse Osmosis Membrane Components for Brackish Water Desalination



Performance characteristics:

LP series reverse osmosis membrane components are polyamide composite membranes developed by Qicheng Company for desalination of brackish water. They have the characteristics of low pressure operation, high water yield and good desalination performance. It is suitable for desalination treatment of surface water, groundwater and tap water with salinity less than 5000 ppm. Among them, 8 inch desalination membrane is mainly used for desalination and purification of large and medium-sized chemical, pharmaceutical, food, power plant, process water for electronic plant, boiler supply water, and municipal water. 4 inch desalination membrane is mainly used in small-scale pharmaceutical, food, electronic factory process water, ultra-pure water, etc. It can also be used in desalination purification treatment in schools, communities and other water supply stations.

Performance specification

Product Model	Effective membrane area ft ² (m ²)	Inlet channel width (mil)	Water yield gpd(m ³ /d)	Stable rejection rate %	Minimum rejection rate %
QC-LP-8040-365	365 (33.9)	31	9500 (35.9)	99.5	99.3
QC-LP-8040-400	400 (37.2)	31	10500 (39.7)	99.5	99.3
QC-LP-4040	85 (7.9)	28	2400 (9.1)	99.5	99.3

1. The above test values are based on the following test conditions: 2000 ppm NaCl, at 225psi (1.55 MPa) 25°C, PH7.5, 15% recovery.
2. The average water yield was measured, and the error of water yield of single membrane was within (+10%).



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Qicen ULP Series 2.5/4/8 inch Low Pressure Desalination Reverse Osmosis Membrane Components



Performance characteristics:

ULP series low-pressure desalination reverse osmosis membrane components are polyamide composite membranes developed by Qicheng Company for surface water groundwater. They have the characteristics of low pressure operation, high water yield and good desalination performance. It can achieve the same high water flux and high desalination rate under lower operating pressure than conventional low-pressure membrane. Its operating pressure is around two thirds of the operating pressure of conventional low-pressure composite membrane, and the desalination rate can reach 99.5%. It can be used to treat surface water, groundwater and tap water with salinity less than 2000 ppm. Among them, 8 inch desalination membrane is mainly used for desalination and purification of large and medium-sized chemical, pharmaceutical, food, power plant, process water for electronic plant, boiler supply water, and municipal water. 4 inch desalination membrane is mainly used in small-scale pharmaceutical, food, electronic factory process water, ultra-pure water, etc. It can also be used in desalination purification treatment in schools, communities and other water supply stations. Among them, 2.5 inch desalination membrane is mainly used in small commercial water purifiers, hospitals and laboratory water purifiers.



Performance specification

Product Model	Effective membrane area ft ² (m ²)	Inlet channel width (mil)	Water yield gpd(m ³ /d)	Stable rejection rate %	Minimum rejection rate %
QC-ULP-8040-400	400 (37.2)	31	10000 (39.7)	99.3	99.0
QC-ULP-8040-440	440(37.2)	31	11000 (39.7)	99.3	99.0
QC-ULP-4040	85 (7.9)	31	2400 (9.1)	99.2	99.0
QC-ULP-4021	36 (3.3)	31	1000 (3.78)	99.0	98.5
QC-ULP-2521	14 (1.3)	28	300(1.13)	99.0	98.5
QC-ULP-2540	28 (2.6)	28	750(2.84)	99.0	98.5

1. The above test values are based on the following test conditions: 1500 ppm NaCl, at 150psi (1.03 MPa) 25°C, PH7.5, 15% recovery.
2. The average water yield was measured, and the error of water yield of single membrane was within (+10%).

Qicen HS Series 4/8 inch Anti-fouling High Salt Reverse Osmosis Membrane Components



Performance characteristics:

HS series reverse osmosis membrane components are polyamide composite membranes developed by Qicheng Company for desalination of high salt water. They have the characteristics of low pressure operation, high water yield and good desalination performance. Due to the use of special technology to treat the membrane surface and increase the hydrophilicity of the membrane surface, the deposition of pollutants and salts on the membrane surface is reduced, and the anti-pollution effect is achieved. It is suitable for desalination treatment of industrial wastewater high salt water, recycled water and other water sources with less than 20000 ppm salt content. Among them, 8 inch membrane is mainly used in large and medium-sized industrial reclaimation of recycled water, municipal wastewater and other water sources containing a small amount of organic pollutants or high salinity. The 4-inch membrane is especially suitable for the treatment of small-scale industrial recycled water, industrial wastewater, municipal wastewater and other water sources containing a small amount of organic pollutants or high salinity.



Performance specification

Product Model	Effective membrane area ft ² (m ²)	Inlet channel width (mil)	Water yield gpd(m ³ /d)	Stable rejection rate %	Minimum rejection rate %
QC-FRHS-8040	320 (29.8)	38	7300 (27.6)	98	97
QC-FRHS-4040	75 (7.0)	38	1,800(6.8)	98	97

1. The above test values are based on the following test conditions: 12000 ppm NaCl, at 320psi (2.2 MPa) 25°C, PH7.5, 10% recovery.
2. The average water yield was measured, and the error of water yield of single membrane was within (+10%).

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Qicen XLP Series 4/8 inch Extreme Low Pressure Desalination Reverse Osmosis Membrane Components



Performance characteristics:

XLP series extreme low pressure desalination reverse osmosis membrane components are polyamide composite membranes developed by Qicheng Company for surface water groundwater. They have the characteristics of low pressure operation, high water yield and good desalination performance. It can achieve high water flux and high desalination rate under extreme low operating pressure, only 0.69MPa. It can be used to treat surface water, groundwater and tap water with salinity less than 500 ppm, especially suitable for the second-level desalination of the reverse osmosis system. Among them, 8 inch desalination membrane is mainly used for desalination and purification of municipal water, and for process water and boiler supply water of large and medium-sized chemical, pharmaceutical, food, power plant, electronic plant industries. 4 inch desalination membrane is mainly used in small-scale pharmaceutical, food, electronic factory process water, ultra-pure water, etc. It can also be used in schools, communities and other water supply stations desalination purification treatment.



Performance specification

Product Model	Effective membrane area ft ² (m ²)	Inlet channel width (mil)	Water yield gpd(m ³ /d)	Stable rejection rate %	Minimum rejection rate %
QC-XLP-8040-400	400 (37.2)	31	9500 (35.3)	99.0	98.5
QC-XLP-8040-440	440 (40.9)	28	10500 (39.7)	99.0	98.5
QC-XLP-4040	93.5(8.7)	31	2600(9.8)	99.0	98.5
QC-XLP-4021	36 (3.3)	28	1300(4.9)	98.5	98.0
QC-XLP-2540	28 (2.6)	28	750 (2.84)	99.0	98.5
QC-XLP-2521	14 (1.3)	28	300 (2.84)	99.0	98.5

1. The above test values are based on the following test conditions: 500 ppm NaCl, at 100psi (0.69 MPa) 25°C, PH7.5, 15% recovery.
2. The average water yield was measured, and the error of water yield of single membrane was within (+10%).



Qichen XLP Series 4/8 inch Nanofiltration Membrane Components



Performance characteristics:

NF series nanofiltration membrane components are developed by Qicheng Company to remove organic substances, microorganisms, viruses and most of the divalent and above metal ions in water, while retaining sodium, potassium, calcium, magnesium plasma and so on. Nanofiltration membrane separation process will make no destruction of biological activity without any chemical reaction, heating, or phase transition, so flavour and fragrance could be reserved. It is widely used in the preparation of drinking water and various separation and concentration and purification projects in food, medicine, bioengineering, pollution control and other industries.



Performance specification

Product Model	Effective membrane area ft ² (m ²)	Inlet channel width (mil)	Water yield gpd(m ³ /d)	NaCl Removal rate %	MgSO ₄ Removal rate %
NF50-8040	400 (37.2)	31	12000 (45.5)	40~60	≥96
NF70-8040	400 (37.2)	31	9000 (34.1)	60~80	≥96
NF90-8040	400 (37.2)	31	7500 (28.4)	80~95	≥96
NF50-4040	80 (7.4)	31	2400 (9.1)	40~60	≥96
NF70-4040	80 (7.4)	31	1750 (6.6)	60~80	≥96
NF90-4040	80 (7.4)	31	1400 (5.3)	80~95	≥96

1. The above test values are based on the following test conditions: 500 ppm NaCl, at 75psi (0.52 MPa) 25°C, PH7.5, 15% recovery.
2. The average water yield was measured, and the error of water yield of single membrane was within (±10%).

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Qichen Anti-fouling Series 4/8 inch Reverse Osmosis Membrane Components



Performance characteristics:

FR series reverse osmosis membrane components are polyamide composite membranes developed by Qicheng Company for desalination of high salt brackish water. They have the characteristics of low pressure operation, high water yield and good desalination performance. Due to the use of special technology to treat the membrane surface and increase the hydrophilicity of the membrane surface, the deposition of pollutants and salts on the membrane surface is reduced, and the anti-pollution effect is achieved. It is suitable for desalination treatment of surface water, ground water and municipal tap water with less than 5000 ppm salt content. Among them, 8 inch membrane is mainly used in municipal wastewater, large and medium-sized industrial reclamation of recycled water and other water sources containing a small amount of organic pollutants or high salinity. The 4-inch membrane is especially suitable for the treatment of small-scale industrial recycled water, industrial wastewater, municipal wastewater and other water sources containing a small amount of organic pollutants or high salinity.



Performance specification

Product Model	Effective membrane area ft ² (m ²)	Inlet channel width (mil)	Water yield gpd(m ³ /d)	Stable rejection rate %	Minimum rejection rate %
QC-LP-8040-365FR	365 (33.9)	34	9000 (34.1)	99.3	99.0
QC-LP-8040-400FR	400 (37.2)	34	9500 (35.9)	99.3	99.0
QC-LP-4040FR	85 (7.9)	34	2,200 (8.3)	99.3	99.0

1. The above test values are based on the following test conditions: 2000 ppm NaCl, at 225psi (1.55 MPa) 25°C, PH7.5, 15% recovery.
2. The average water yield was measured, and the error of water yield of single membrane was within (±10%).