

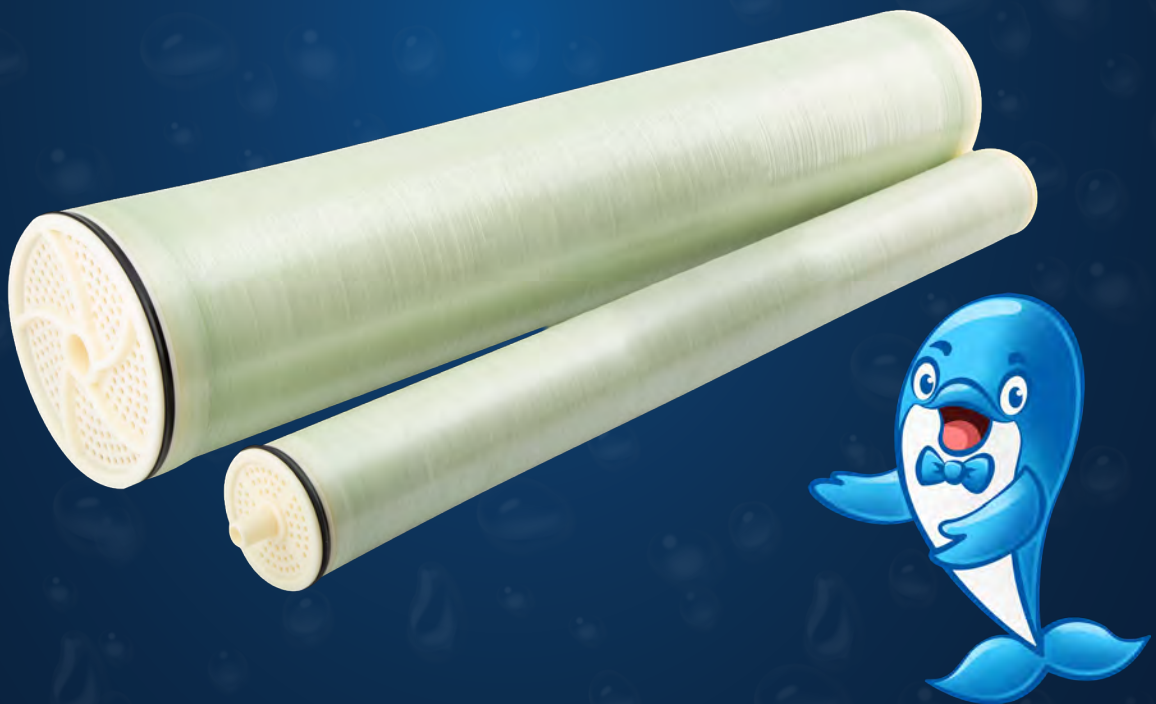
MEMBRANE

Snowate

Hengshui Snowate Environmental
Technology Co., Ltd.

2022

EDITION FOR
SNOWATE CATALOG

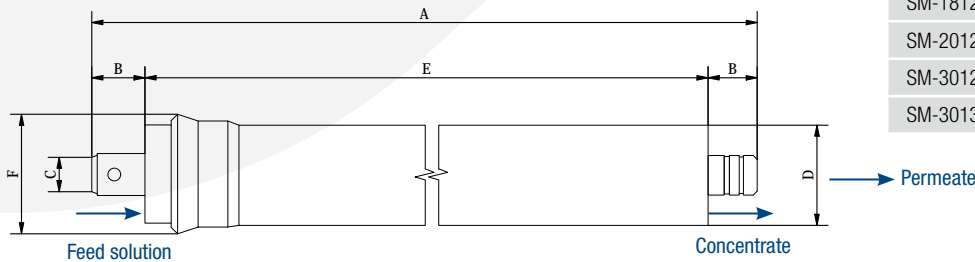


HOUSEHOLD RO MEMBRANE

Household RO membrane elements can Keep high water flux with ultra-low pressure, can be used for processing of household tap water.



Parameters



SM Residential RO Membrane Unit: mm

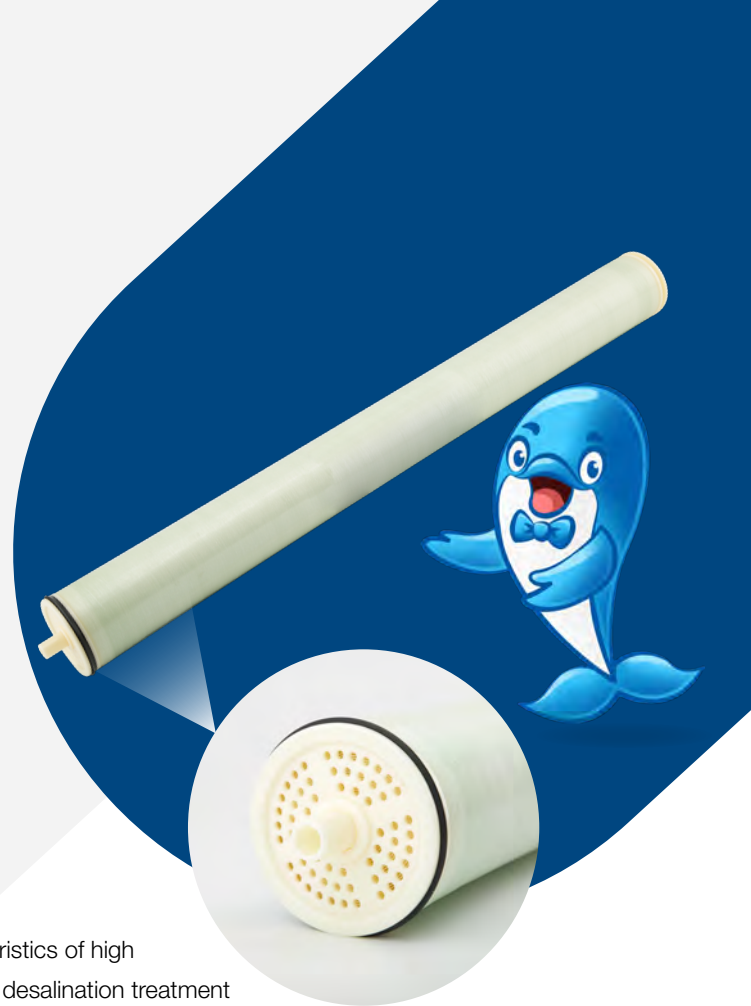
Standard	A	B	C	D	E	F
SM-1812	298	20.0	17	45.0	258	53.5
SM-2012	298	20.0	17	48.0	258	55.5
SM-3012	298	20.0	17	76.2	258	81.5
SM-3013	330	20.0	17	76.2	290	81.5

	SM-1812-50	SM-1812-75	SM-2012-100 / 125	SM-3012-200/300	SM-3013-400
Effective membrane area ft ² (m ²)	5.0 (0.46)	5.0 (0.46)	6.0 (0.56) / 7.4 (0.69)	10 (0.92) / 14 (1.3)	16 (1.48)
Operating pressure psi (Mpa)	65 (0.45)	65 (0.45)	65 (0.45)	65 (0.45)	65 (0.45)
Average yield GPD (m ³ /d)	50 (0.19)	75 (0.28)	100 (0.38) / 125 (0.47)	200 (0.76) / 300 (1.14)	400 (1.51)
Salt rejection (%)	96.0	96.0	96.0	96.0	96.0
Recovery rate (%)	15	15	15	15	15
Max.operating pressure psi (Mpa)	300 (2.1)	300 (2.1)	300 (2.1)	300 (2.1)	300 (2.1)
Max.inflow temperature (°C)	45	45	45	45	45
Max.inflow SDI	5	5	5	5	5
Max.water flow GPM (m ³ /h)	2 (0.46)	2 (0.46)	2 (0.46)	2 (0.46)	2 (0.46)
Free chlorine concentration	<0.1	<0.1	<0.1	<0.1	<0.1
Continuous running water pH range	3-10	3-10	3-10	3-10	3-10
Chemical cleaning water pH range	2-11	2-11	2-11	2-11	2-11
Max.single membrane element pressure drop	15 (0.1)	15(0.1)	15(0.1)	15(0.1)	15(0.1)

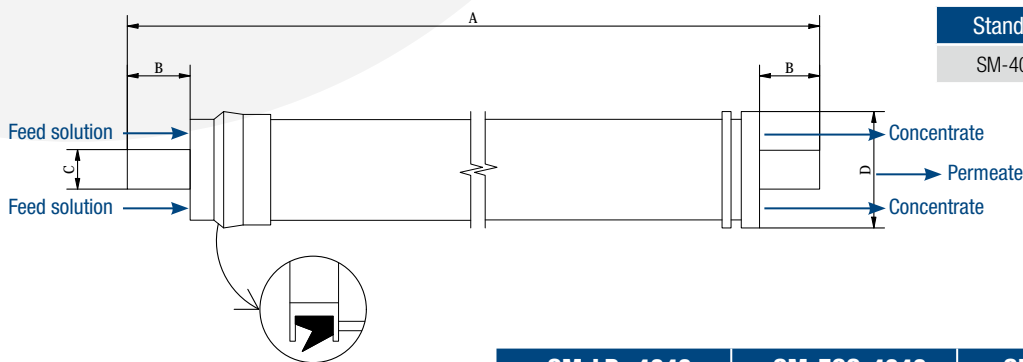
INDUSTRIAL RO MEMBRANE

SM-LP/SM-XLP membrane elements series can achieve the desired permeate water and high desalination rate under low/extreme-low pressure operation conditions. It is suitable for desalination treatment of surface water, groundwater, tap water and municipal water with salt content less than 2000 ppm

SM-BW membrane elements series can achieve the desired permeate water and high desalination rate under high pressure operation conditions. BW membrane element series have the characteristics of high water production and good desalination performance. It is suitable for desalination treatment of surface water, groundwater, tap water and municipal water with salt content less than 10,000 ppm.



Parameters



SM - 4040

Unit: mm

Standard	A	B	C	D
SM-4040	1016.0	26.7	19.1	100.1

	SM-LP -4040	SM-ECO-4040	SM-BW-4040	SM-XLP-4040
Effective membrane area ft ² (m ²)	78 (7.2)	85 (7.9)	78 (7.2)	78 (7.2)
Operating pressure psi (Mpa)	150 (1.05)	75 (0.51)	225 (1.55)	100 (0.69)
Average yield GPD (m ³ /d)	2500 (9.5)	2100 (7.9)	2500 (9.5)	2800 (10.6)
Salt rejection (%)	99.0	98.0	99.5	99.0
Recovery rate (%)	15	15	15	15
Max.operating pressure psi (Mpa)	600 (4.2)	600 (4.2)	600 (4.2)	600 (4.2)
Max.inflow temperature (°C)	45	45	45	45
Max.inflow SDI	5	5	5	5
Max.water flow GPM (m ³ /h)	14 (3.2)	14 (3.2)	14 (3.2)	14 (3.2)
Free chlorine concentration	<0.1	<0.1	<0.1	<0.1
Continuous running water pH range	3-10	3-10	3-10	3-10
Chemical cleaning water pH range	2-11	2-11	2-11	2-11
Max.single membrane element pressure drop	15 (0.1)	15 (0.1)	15 (0.1)	15 (0.1)

INDUSTRIAL RO MEMBRANE

SM-LP membrane elements series can achieve the desired permeate water and high desalination rate under low pressure operation conditions. It is suitable for desalination treatment of surface water, groundwater, tap water and municipal water with salt content less than 2000 ppm

SM-BW membrane elements series can achieve the desired permeate water and high desalination rate under high pressure operation conditions. BW membrane element series have the characteristics of high water production and good desalination performance. It is suitable for desalination treatment of surface water, groundwater, tap water and municipal water with salt content less than 10,000 ppm.

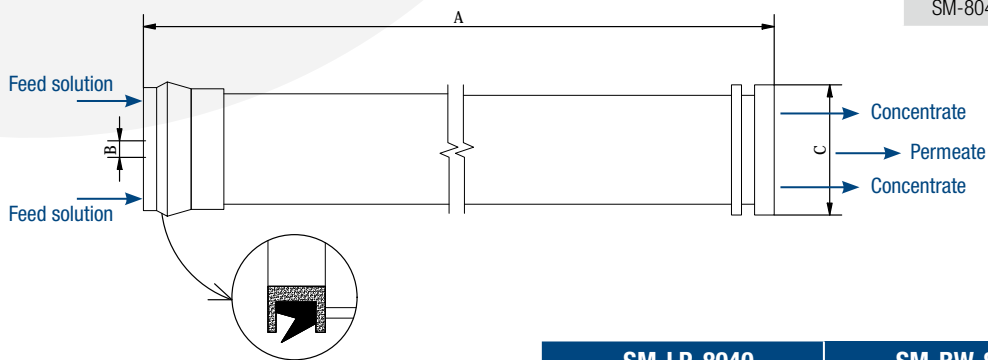


Parameters

SM - 8040

Unit: mm

Standard	A	B	C
SM-8040	1016.0 (40.0)	29.0 (1.1)	201 (7.9)



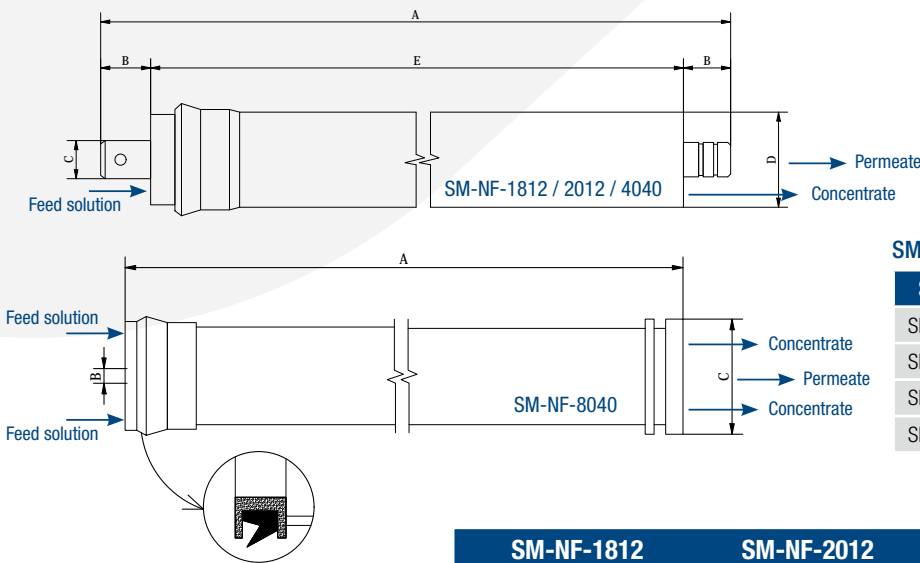
	SM-LP-8040	SM-BW-8040	SM-ECO-8040
Effective membrane area ft ² (m ²)	400 (37)	400 (37)	400 (37)
Operating pressure psi (Mpa)	150 (1.05)	255 (1.55)	150 (1.05)
Average yield GPD (m ³ /d)	12000 (45)	11000 (41)	11500 (43)
Salt rejection (%)	99.5	99.5	99.7
Recovery rate (%)	15	15	15
Max.operating pressure psi (Mpa)	600 (4.2)	600 (4.2)	600 (4.2)
Max.inflow temperature (°C)	45	45	45
Max.inflow SDI	5	5	5
Max.water flow GPM (m ³ /h)	80 (18)	80 (18)	80 (18)
Free chlorine concentration	<0.1	<0.1	<0.1
Continuous running water pH range	3-10	3-10	3-10
Chemical cleaning water pH range	2-11	2-11	2-11
Max.single membrane element pressure drop	15 (0.1)	15 (0.1)	15 (0.1)

HOUSEHOLD NF MEMBRANE

SM-NF Series of nanofiltration membrane elements can achieve high permeate water and excellent desalination performance. It shows excellent ability to remove pesticides, viruses and bacteria. It has high ability to remove natural organic substances and medium ability to remove total hardness.



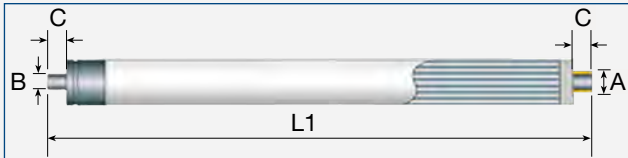
Parameters



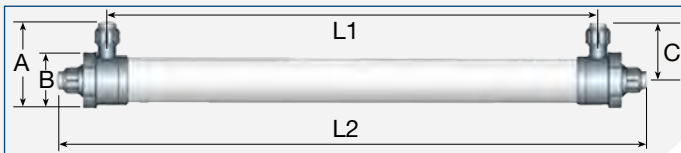
SM Residential NF Membrane					Unit: mm
Standard	A	B	C	D	E
SM-NF-1812	298	21.0	17	44.5	256
SM-NF-2012	298	21.0	17	48.2	256
SM-NF-4040	1016	26.7	19.1	99.7	962.6
SM-NF-8040	1016	28.6	201.9	-	-

	SM-NF-1812	SM-NF-2012	SM-NF-4040	SM-NF-8040
Effective membrane area ft ² (m ²)	4.4 (0.41)	5.0 (0.46)	80 (7.4)	400 (37.2)
Operating pressure psi (Mpa)	30 (0.2)	30 (0.2)	70 (0.5)	70 (0.5)
Average yield GPD (m ³ /d)	60 (0.2)	100 (0.38)	2400 (9.1)	12000 (45.5)
Salt rejection (%)	NaCl CaCl ₂ 30-50 >60	NaCl CaCl ₂ 60-70 >60	NaCl MgSO ₄ 40-60 >96	NaCl MgSO ₄ 40-60 >96
Recovery rate (%)	15	15	15	15
Max. operating pressure psi (Mpa)	600 (4.2)	600 (4.2)	600 (4.2)	600 (4.2)
Max. inflow temperature (°C)	45	45	45	45
Max. inflow SDI	5	5	5	5
Max. water flow GPM (m ³ /h)	14 (3.2)	14 (3.2)	14 (3.2)	14 (3.2)
Free chlorine concentration	<0.1	<0.1	<0.1	<0.1
Continuous running water pH range	3-10	3-10	3-10	3-10
Chemical cleaning water pH range	2-11	2-11	2-11	2-11
Max. single membrane element pressure drop	15 (0.1)	15 (0.1)	15 (0.1)	15 (0.1)

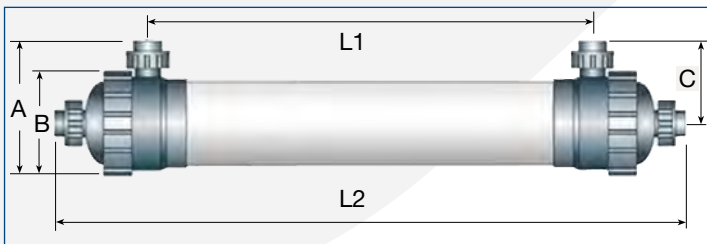
SW-UF8060 4046 4040 MEMBRANE



SW-UF4040



SW-UF4046



SW-UF8060B



Unit: mm

Standard	A	B	C	L1	L2
SW-UF4040	101	19	27	1016	-
SW-UF4046	169	113	112.5	965	1155
SW-UF8060B	302	237	183.5	1020	1415

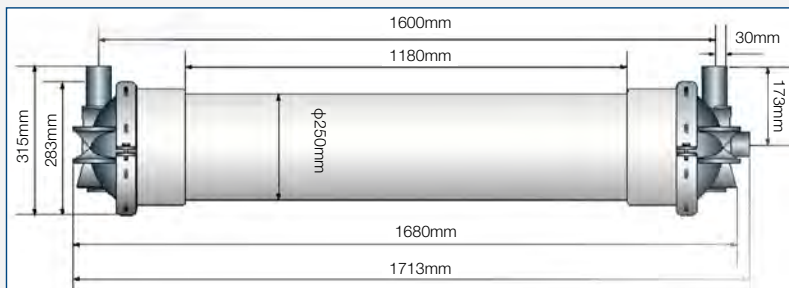
	SW-UF8060	SW-UF4046	SW-UF4040
Design flux ^① (L/m ² /h)	40-120	40-120	40-120
Produced water pollution index ^② (SDI ₁₅)	<3	<3	<3
Permeate turbidity ^③ (NTU)	<<1	<<1	<<1
E. coli removal rate (log)	>6	>6	>6
Virus removal rate (log)	>4	>4	>4
Filter type	dead-end or cross-flow filtration	dead-end or cross-flow filtration	dead-end or cross-flow filtration
Membrane materials and types	PES, PS, PVC, PAN inside out pressure	PES, PS, PVC, PAN inside out pressure	PES, PS, PVC, PAN inside out pressure
Shell and seal materials	PVC, epoxy resins	PVC, epoxy resins	PVC, epoxy resins
Molecular weight cutoff (dalton)	100,000	100,000	100,000
Fiber inner/ outer diameter (mm)	1.0/1.6	1.0/1.6	1.0/1.6
Effective membrane area (m ²)	25	4.5	4
Max. inflow pressure (MPa)	0.3	0.3	0.3
Max. transmembrane pressure drop (MPa)	<0.2	<0.2	<0.2
Optimal operating pressure drop(MPa)	0.01-0.1	0.01-0.1	0.01-0.1
Max. operating temperature (°C)	40	40	40
PH range	PES/PS 2-12, PVC/PAN 3-9	PES/PS 2-12, PVC/PAN 3-9	PES/PS 2-12, PVC/PAN 3-9
Backwash pressure (MPa)	<0.2	<0.2	<0.2
Backwash flow (L/m ² /h)	100-200	100-200	100-200

① According to water conditions

②③ Refers to the test water turbidity <20NTU

SW-UF1060

PAN PES PS PVC PVDF

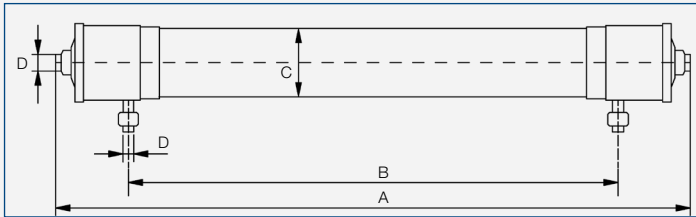


	SW-UF1060	SW-UFW1060
Design flux ^① (L/m ² /h)	60-200	40-80
Produced water pollution index ^② (SDI ₁₅)	<3	<3
Permeate turbidity ^③ (NTU)	<<1	<<1
E. coli removal rate (log)	>6	>6
Virus removal rate (log)	>4	>6
Filter type	dead-end or cross-flow filtration	dead-end or cross-flow filtration
Membrane materials and types	PES PS PVC PAN inside	PVDF inside
Shell and seal materials	PVC/epoxy resins	PVC/epoxy resins
Fiber inner/ outer diameter (mm)	1.0/1.6	1.0/1.6
Effective membrane area (m ²)	50	50
Max. transmembrane pressure drop (MPa)	0.3	0.3
Optimal operating pressure drop(MPa)	0.01-0.1	0.01-0.1
Max. operating temp. (°C)	40	50
PH range	2-13	2-13
Backwash pressure(Mpa)	<0.2	<0.2
Backwash flow(L /m ² /h)	100-200	100-200

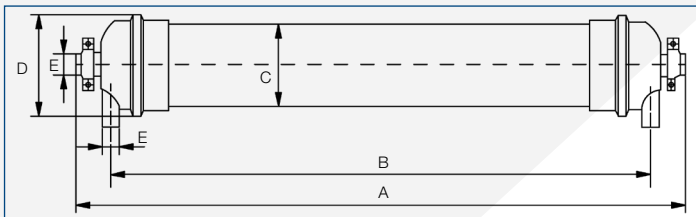
① According to water conditions

②③ Refers to the test water turbidity <20NTU

SW-UFW0860 W0660 MEMBRANE



SW-UFW0660



SW-UFW0860

Unit: mm

Standard	A	B	C	D	E
SW-UFW0660	1800	1386	φ160	DN32&DN25	-
SW-UFW0860	1884	1720	φ200	φ244	DN50

	SW-UFW-0660	SW-UFW-0860
Design flux ^① (L/m ² /h)	40-80	40-80
Produced water pollution index ^② (SDI ₁₅)	<3	<3
Permeate turbidity ^③ (NTU)	<0.1	<0.1
E. coli removal rate (log)	>6	>6
Virus removal rate (log)	>6	>6
Filter type	dead-end or cross-flow filtration	dead-end or cross-flow filtration
Membrane materials and types	PVDF outside in pressure	PVDF outside in pressure
Shell and seal materials	UPVC/ ABS, epoxy resins/ polyurethane	UPVC/ ABS, epoxy resins/ polyurethane
Molecular weight cutoff (dalton)	6000-150000	6000-150000
Fiber inner/ outer diameter (mm)	0.8/1.4, 0.7/1.3	0.8/1.4, 0.7/1.3
Effective membrane area (m ²)	40	50
Max. inflow pressure (MPa)	0.25	0.3
Max. transmembrane pressure drop (MPa)	0.15	0.15
Optimal operating pressure drop(MPa)	0.01-0.1	0.01-0.1
Max. operating temp. (°C)	45	45
pH range	2-11	2-11
Max.backwash pressure (MPa)	0.25	0.25

① According to water conditions

②③ Refers to the test water turbidity <20NTU

Snowate



Ms Snow Zhao
snow@snowate.com
snow@membranehousing.org
Mobile: +86-15030811699
(WhatsApp, WeChat, Skype, Viber)