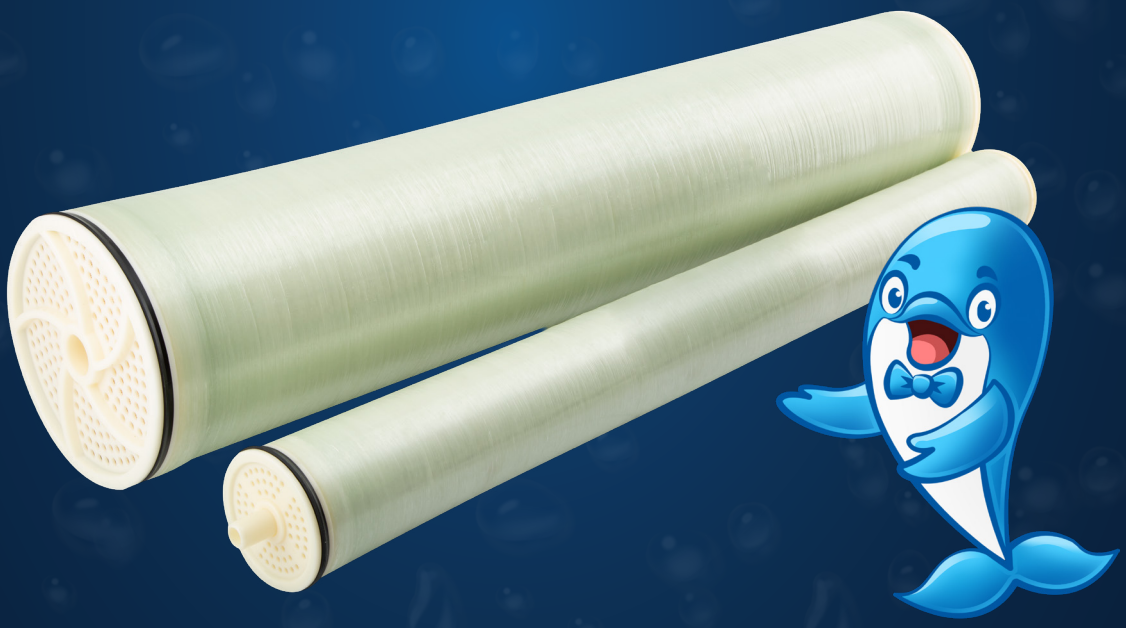
MEMBRANE

2022

EDITION FOR
ABCO CATALOG



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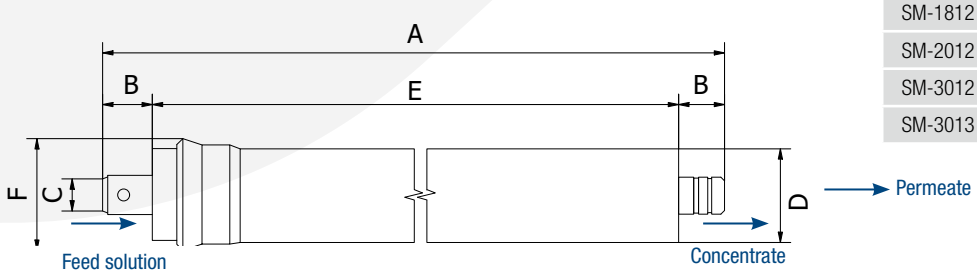
HOUSEHOLD RO MEMBRANE

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	258	81.5

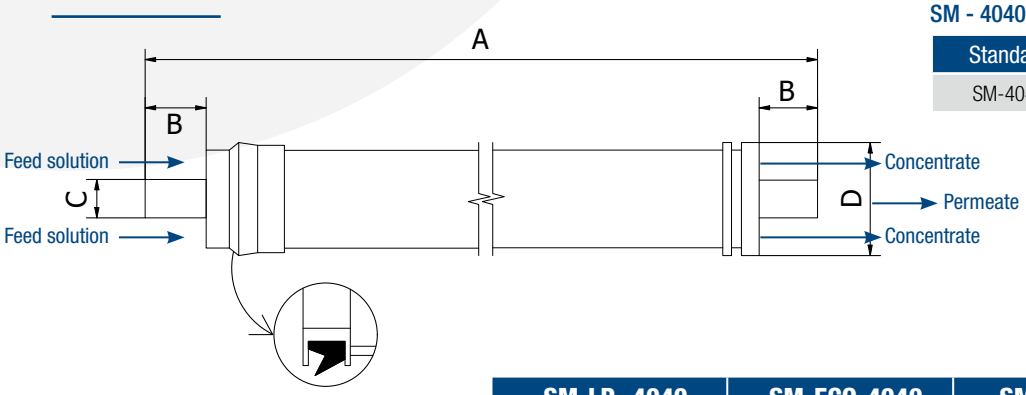
	SM-1812-50	SM-1812-75	SM-2012-100 / 125	SM-3012-200/300	SM-3013-400
Effective membrane area ft^2 (m^2)	5.0 (0.46)	5.0 (0.46)	6.0 (0.56) / 7.4 (0.69)	10 (0.92) / 14 (1.3)	16 (1.48)
Operating pressure psi (Mpa)	65 (0.45)	65 (0.45)	65 (0.45)	65 (0.45)	65 (0.45)
Average yield GPD (m^3/d)	75 (0.28)	75 (0.28)	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

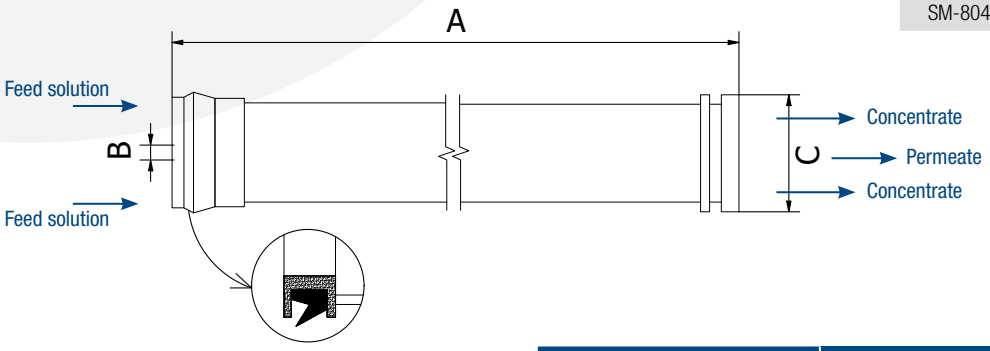
SM-LP membrane elements series can achieve the desired permeate water and high desalination rate under low pressure operation conditions. It is suitable for desalination treatment of surface water, groundwater, tap water and municipal water with salt content less than 2000 ppm

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)

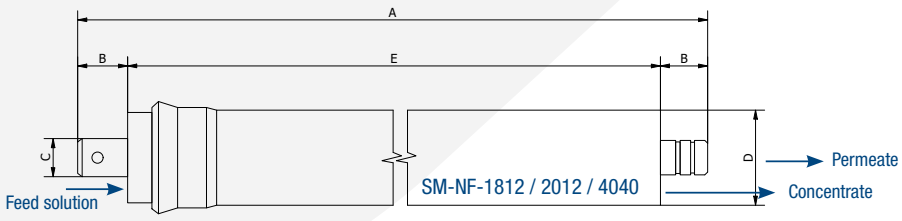


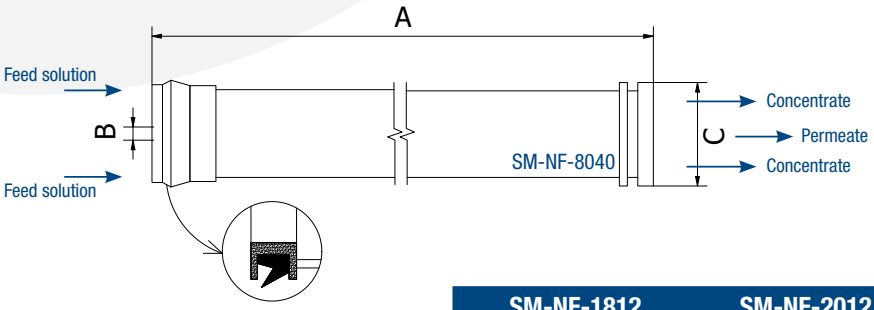
	SM-LP-8040	SM-BW-8040	SM-ECO-8040
Effective membrane area ft^2 (m^2)	400 (37)	400 (37)	400 (37)
Operating pressure psi (Mpa)	150 (1.05)	255 (1.55)	150 (1.05)
Average yield GPD (m^3/d)	12000 (45)	11000 (41)	11500 (43)
Salt rejection (%)	99.5	99.5	99.7
Recovery rate (%)	15	15	15
Max.operating pressure 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	<D.1	<D.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



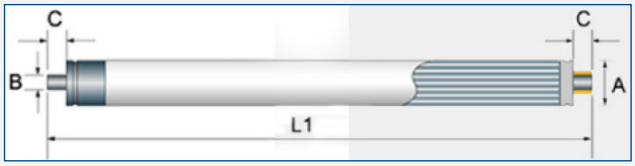


SM Residential NF Membrane Unit: mm

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)	44 (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 CaCl2 30-50 >60	Nacl CaCl2 60-70 >60	Nacl MgS04 40-60 >96	Nacl MgS04 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)

SM8060 4046 4040
MEMBRANE



SM4040

SM4046

SM8060B

Unit: mm

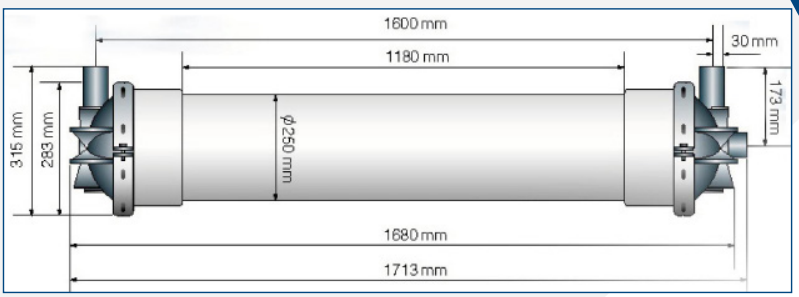
Standard	A	B	C	L1	L2
SM-4040	101	19	27	1016	-
SM-4046	169	113	112.5	965	1155
SM-8060B	302	237	183.5	1020	1415

	SM8060	SM4046	SM4040
Design flux ① (L/m²/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 (m²)	25	4.5	4
Max. inflow pressure (MPa)	0.3	0.3	0.3
Max. transmembrane pressure (MPa)	<0.2	<0.2	<0.2
Optimal operating pressure (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/m²/h)	100-200	100-200	100-200

① According to water conditions ②③ Refers to the test water turbidity <20NTU

SM1060

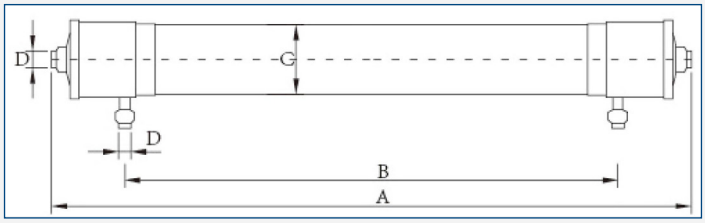
PAN PES PS PVC PVDF



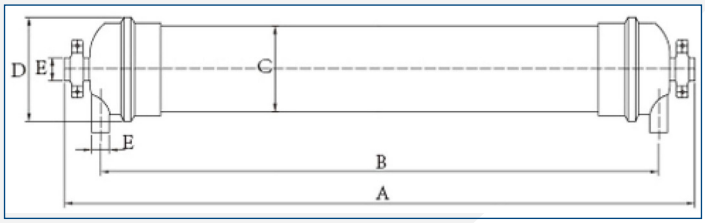
	SM1060	SMW1060
Design flux ① (L/m²/h)	60-200	40-80
Produced water pollution index ② (SDI_{15})	<3	<3
Permeate turbidity ③ (NTU)	<<1	<<1
E. coli removal rate (log)	>6	>6
Virus removal rate (log)	>4	>6
Filter type	dead-end or cross-flow filtration	dead-end or cross-flow filtration
Membrane materials and 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	
Effective membrane area (m²)	50	75
Max. inflow pressure (MPa)	0.3	0.3
Optimal operating pressure (MPa)	0.01-0.1	0.01-0.1
Max. operating temp. (°C)	40	50
	40	50
Backwash pressure(Mpa)	2-13	2-13
Backwash flow(L /m²/h)	<0.2	<0.2

① According to water conditions ②③ Refers to the test water turbidity <20NTU

SMW0860 W0660 MEMBRANE



SMW0660



SMW0860

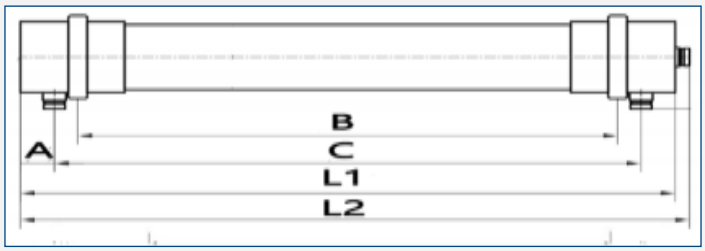
Unit: mm

Standard	A	B	C	D	E
SMW0660	1800	1386	ϕ160	DN32&DN25	-
SMW0860	1884	1720	ϕ200	ϕ244	DN50

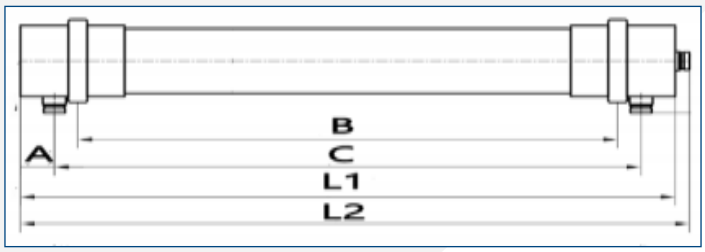
	SMW-0660	SMW-0860
Design flux ① (L/m²/h)	40-80	40-80
Produced water pollution index ② (SDI_{15})	<3	<3
Permeate turbidity ③ (NTU)	<0.1	<0.1
E. coli removal rate (log)	>6	>6
Virus removal rate (log)	>6	>6
Filter type	dead-end or cross-flow filtration	dead-end or cross-flow filtration
Membrane materials 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	
Fiber inner/ outer diameter (mm)	0.8/1.4, 0.7/1.3	
Effective membrane area (m²)	40	50
Max. inflow pressure (MPa)	0.25	0.3
Max. transmembrane pressure (MPa)	0.15	0.15
Optimal operating pressure (MPa)	0.01-0.1	0.01-0.1
Max. operating temp. (°C)	45	45
pH range	2-11	2-1 1
Max.backwash pressure (MPa)	0.25	0.25

① According to water conditions ②③ Refers to the test water turbidity <20NTU

Hollow Fiber UF MEMBRANE



SMW-0860



SMW-0880

Unit: mm

Standard	A	B	C	L1	L2
SMW-0860	95	1500	1630	1820	1860
SMW-0880	95	2000	2130	2320	2360

	SMW-0860	SMW-0880
Design flux (L/m^2/h)	40-120	40-120
Produced water pollution index (SDI$_{15}$)	2-11	2-11
Outflow turbidity (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	PVDF outside-in
Shell and seal materials	UPVC/ ABS, epoxy resins/ polyurethane	UPVC/ ABS, epoxy resins/ polyurethane
Molecular weight cutoff (dalton)	6000-150000	
Filament inner/ outer diameter (mm)	0.8/1.4, 0.7/1.3	
Effective membrane area (m^2)	51	77
Max. inflow pressure (MPa)	0.6	0.6
Max. transmembrane pressure (MPa)	0.15	0.15
Optimal operating pressure (MPa)	0.01-0.1	0.01-0.1
Max. operating temp. (°C)	45	45
Inflow pH range	2-11	2-1 1
Max.backwash pressure (MPa)	0.25	0.25

Note: ① The use of this product does not provide a warranty on the removal of viruses and E. coli in water, because the effective removal of viruses and E. coli depends on the design, operation and normal maintenance of the entire filtration system.

② Due to different laws and government regulations, users have the responsibility to determine whether the product and product information in this document is suitable for the customer. Therefore, the seller does not assume any responsibility or obligation for the information in the document, nor does it provide any guarantee.

Water treatment

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Abco-Manufacturer of water and sewage treatment devices