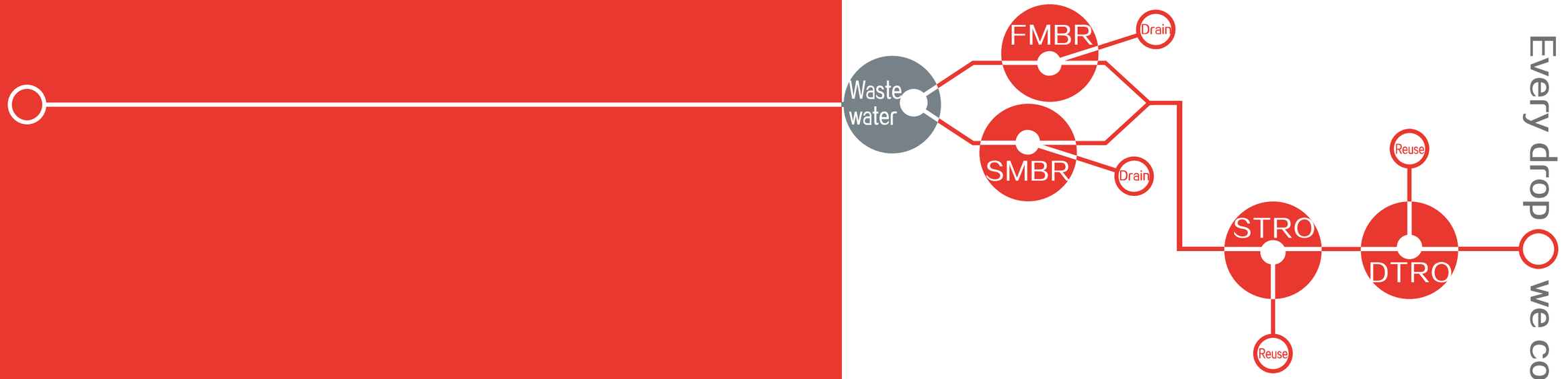

SUN
RisingSun Membrane

Products specification may be updated continually,
please contact us for any inquiry.

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SUN
RisingSun Membrane

MEMBRANE PRODUCTS

SUN

RisingSun Membrane

Our products enhance your brand

Flat sheet MBR / FMBR

Spiral wound MBR / SMBR

Spacer Tube RO/NF STRO / STNF

Disc Tube RO/NF DTRO / DTNF

Flat sheet membrane

SUN
RisingSun Membrane

Company profile

RisingSun Membrane with location in Beijing China is a very professional membrane products' manufacturer for Microfiltration, Ultrafiltration, Nanofiltration, Reverse Osmosis, and Tubular Anode Cell. We are and will be always focusing on membrane R&D to meet customers' strict filtration needs. We can supply spiral-wound, flat, disc & tubular type. Till now, our membrane products have been widely used for wastewater, biotech fermentation, pharmaceuticals intermediates, dye and e-coat process etc.

We cooperate with so many steady customers worldwide. To meet customers' requirements, we are not only supply membrane products, but also membrane process design, system consultant service. Our key employees have more than a decade experience in membrane production and applications.

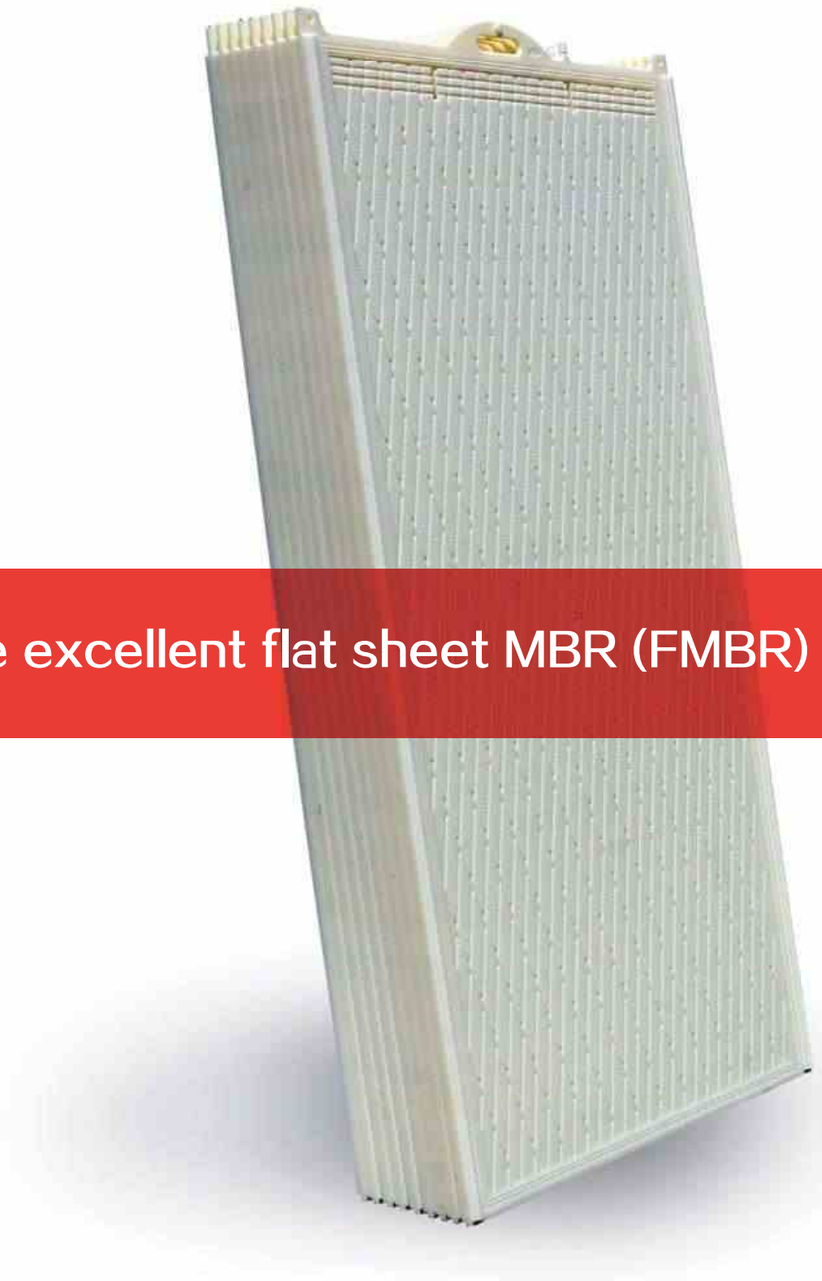
By means of introducing automatic production equipment, advanced membrane technology and raw material, carry out ISO 9001:2008 management, we can deliver more efficient membrane products for you.

We devote to

Supply integrated solution of membrane products for wastewater treatment.
Supply membrane products and process for liquid separation, concentration and clarification.

We positioning in

A professional manufacturer of membrane products used for waste water treatment.
A professional manufacturer of specialty membranes.
Offer specialty and common membrane R & D for membrane application companies.
Become a customer's unique product reserve base.



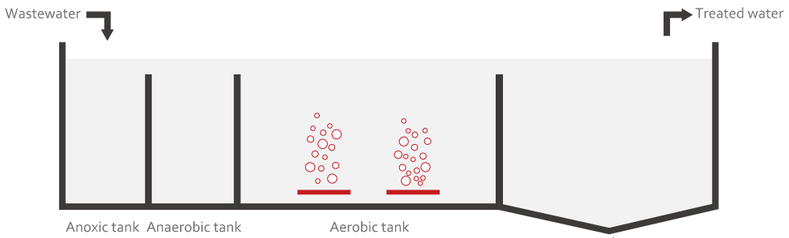
More excellent flat sheet MBR (FMBR)

Flat sheet MBR (FMBR)

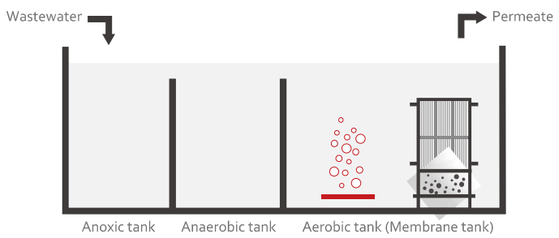
MBR Introduction

Membrane bioreactor (MBR) is the combination of a membrane process like microfiltration or ultrafiltration with a biological wastewater treatment process and the activated sludge process. It is now widely used for municipal and industrial wastewater treatment. This bioreactor possesses the advantages of membrane filtration and biological treatment technology. Membrane modules, which can replace the secondary sedimentation tank, are used to separate mud and water. The MBR process has obvious advantages compared with the traditional wastewater treatment technology.

Traditional wastewater treatment process



MBR Process



MBR Advantages

Effluent high quality (low turbidity, low TSS) for regulatory or reuse purposes.
Not reliant on input water MLSS.
Longer activated sludge age and lower sludge disposal costs.
Smaller footprint.
Easy operation.

Flat sheet MBR (FMBR)

The difference between the MBR and Continuous Aeration System (CAS)

The water quality comparison of MBR and CAS

Description	Input water	Output water		
	Typical municipal wastewater	MBR		CAS
TURBIDITY (NTU)	-	Membrane filtration process	< 1	5-20
SDI	-		< 3	> 5
TSS(mg/L)	100-300		< 1	10-30
BOD_5(mg/L)	300	Biological process	< 5	< 30
COD(mg/L)	600		< 30	< 100
NH_3-N(mg/L)	30		< 0.5	5-10
TN(mg/L)	40		< 15	> 25
TP(mg/L)	10-20		< 0.5	5-8

Note: The removal rate of BOD and COD is related with the biological treatment process.
The removal rate of NH_3-N is different based on the degree of nitrification.
The removal rate of TN is different based on the degree of denitrification.
The removal of the phosphorus might need the chemical method.

The other comparisons of MBR and CAS

Description	MBR	CAS
Water quality	Directly reusable, higher than national standard	Meet national standard
Footprint	About 1/3-1/2 $m^2/(m^3.d-1)$	About $1m^2/(m^3.d-1)$
Construction investment	RMB2000-2600/(m^3.d−1)	RMB1500-2000/(m^3.d-1)
Operation cost	RMB0.7-1.0 /m^3	< 0.7RMB/m^3 (Direct water discharge) < 1.0RMB/m^3 (Reclaimed water discharge)
Excess sludge	1/3-1/5 of CAS	Volume big, high processing cost
Operations management	Few devices, simple flow process, easy to automatically control, stable operation and remote control feasible	Many devices, complicate flow process, easy to break down and high operation cost
Water application	Reclaimed water and water for industrial use	Emission on standard

Flat sheet MBR (FMBR)

SUN® Flat sheet MBR benefits

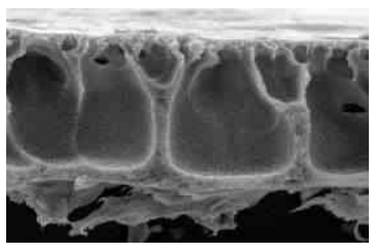
SUN® flat sheet membrane is made of PVDF, which has better chemical stability, fouling resistance and mechanical strength. With advanced membrane fabrication technology, we control the membrane pore size around 0.1 um to get a higher water flux and water quality. The mortise and tenon structure is used in the support plate to get a more stable spacing without side panels. The support plate can be installed from top and installed from one side without the limits of the construction site conditions.

The mortise and tenon structure

SUN® support plate

Laser engraving diamond flow path, coupled with special umbrella support structure, make the suction pressure distribution much better without diverting nonwoven fabrics. This structure reduces the risk of fouling and improves the water flow rate.

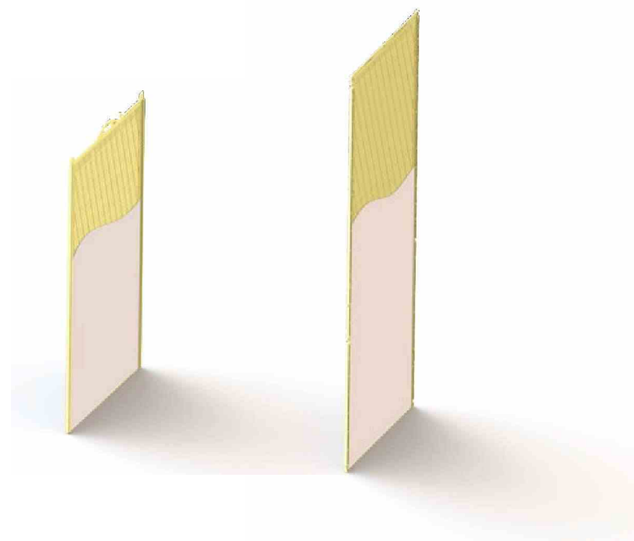
SUN® PVDF membrane electron micrograph



SUN® support plate flow channel for FMBR160

Flat sheet MBR (FMBR)

SUN® Flat sheet MBR element



Items	Standard type	Long type
Model	FMBR80	FMBR160
Size (L×W×T) (mm)	1020×510×14	1810x 512x14
Membrane effective area (m²)	0.8	1.6
Weight (kg)	3	5
Permeate flux［l /(pc·d)］	320-550	640-1100
Membrane material	PVDF	PVDF
Membrane pore size(μm)	0.1	0.1
Plate material	ABS	ABS
Air flow rate［l /(min·pc)］	≥10	≥12
pH	3 ~ 12	3 ~ 12
Output turbidity (NTU)	< 1.0	< 1.0
Output SS (mg/l)	≤5	≤5
Chemical cleaning	~ 5,000mg/l NaClO	~ 5,000mg/l NaClO

Note: For different water quality, there will be a different water flow rate. So the user should fully test the membrane module.
This parameter is tested at 25℃,-10KPa suction vacuum conditions based on municipal wastewater.

Flat sheet MBR (FMBR)

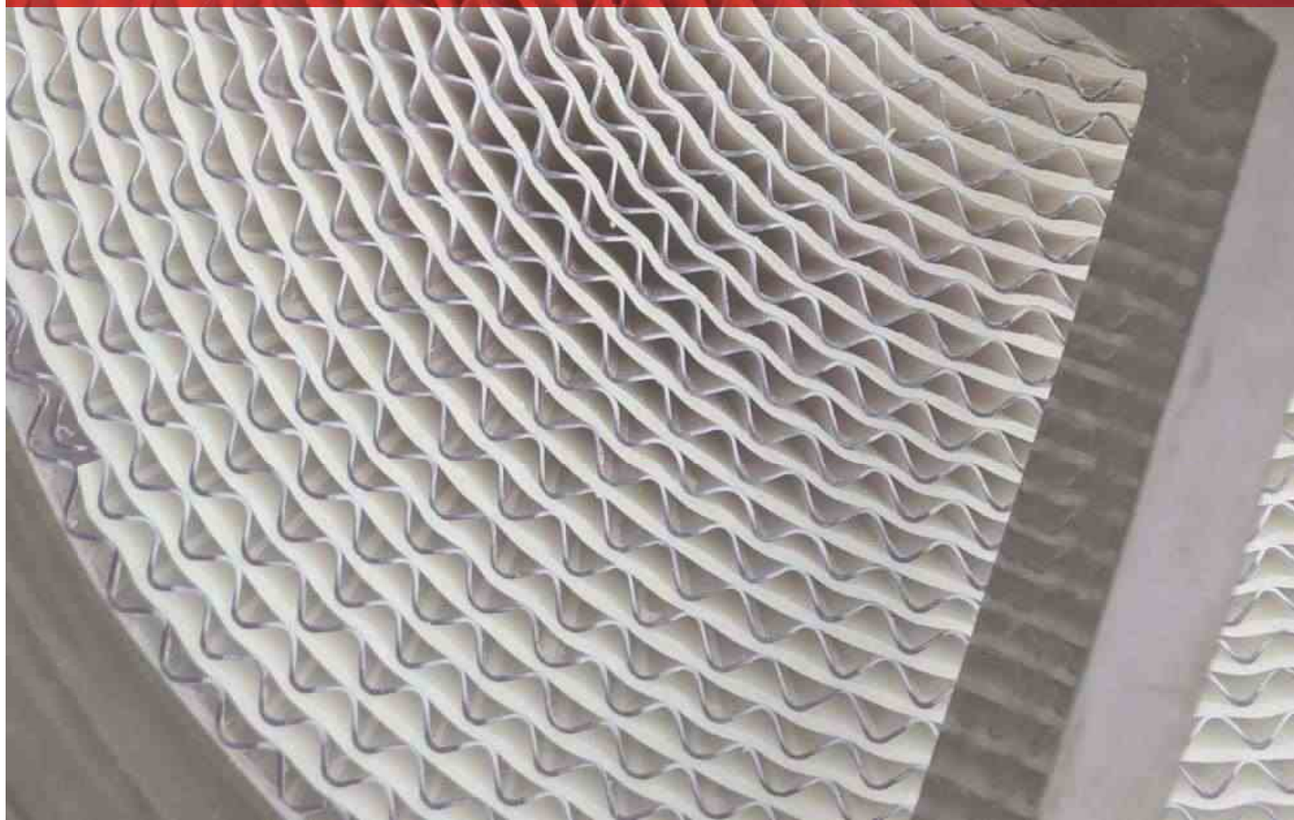
SUN® Flat sheet MBR module

Items	FMBR80			
Model	FMBR80-50	FMBR80-125	FMBR80-250-2	FMBR80-250-4
Permeate flux(m³/d)	16-26	38-65	150-260	300-520
Plate qty. (pc)	50	125	500	1000
Membrane effective area (m²)	40	100	400	800
Size (mm)(L×W×H)	820×600×1680	1885×600×1680	3720×600×2750	3720×600×4900
Air flow rate (L/min)	500	1250	3500	3500
Weight (kg)	120	230	900	1700

Items	FMBR160			
Model	FMBR160-50	FMBR160-125	FMBR160-125-2	FMBR160-150-2
Permeate flux(m³/d)	32-50	75-130	150-260	180-310
Plate qty. (pc)	50	125	250	300
Membrane effective area (m²)	80	200	400	480
Size (mm)(L×W×H)	830×620×2550	1880×620×2550	1880×620×4500	2230×620×4500
Air flow rate (L/min)	600	1500	1750	2100
Weight (kg)	400	900	1700	2000

Note: We can provide a single membrane element and any size frame to meet customer's different requests.
Such as: FMBR80-175, FMBR80-200, FMBR80-200-2 (double deck), FMBR80-200-4 (four deck), FMBR160-200, FMBR160-200-2 (double deck) etc.

More innovative spiral wound MBR (SMBR)



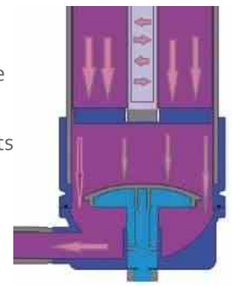
Spiral wound MBR (SMBR)

SMBR Introduction

SMBR is a submerged backwashable spiral membrane, which is used in the field of industrial wastewater and other processes. SMBR is an innovative product which can implement washing flow from the permeate carrier side with certain pressure. The open flow channels enable aggressive air scouring where bubbles "scrub" the membrane surface to clean. Submerged systems rely on centrifugal pumps to generate a slight vacuum pressure pulling water through the membrane barrier layer. At the same time, its backwashing frequency is the same as hollow fiber membrane.

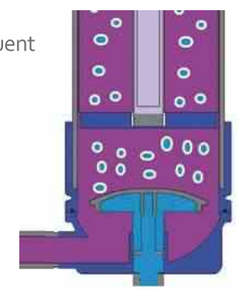
Features

Air scour can decrease the pollutant deposition on membrane surface
Open flow channels allows a lower pretreatment requirements
Both submerged and split-type are acceptable with small footprint
Frequent backwashing is allowable
The equipment investments and energy costs are lower



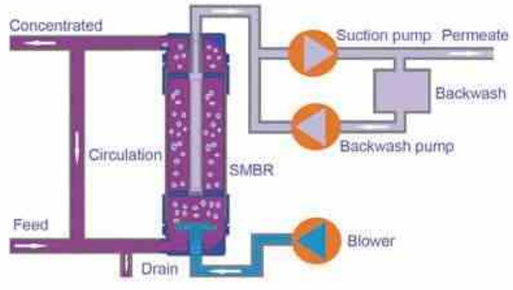
Applications

Industrial wastewater reuse
RO pretreatment
Landfill leachate pretreatment
Domestic wastewater reuse
Secondary sedimentation effluent
Removal of heavy metals
Process water
Recycled water



Spiral wound MBR (SMBR)

SMBR Introduction



Comparison of SMBR and Hollow fiber membrane

Identical

Frequent backwashing
Lower feed requirement
High recycle rate

Difference

SMBR has lower energy costs
SMBR has no risks of filament break
SMBR has open channels to prevent solid deposition

Spiral wound MBR (SMBR)

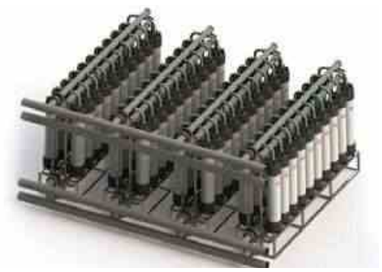
SMBR-10040 Specifications

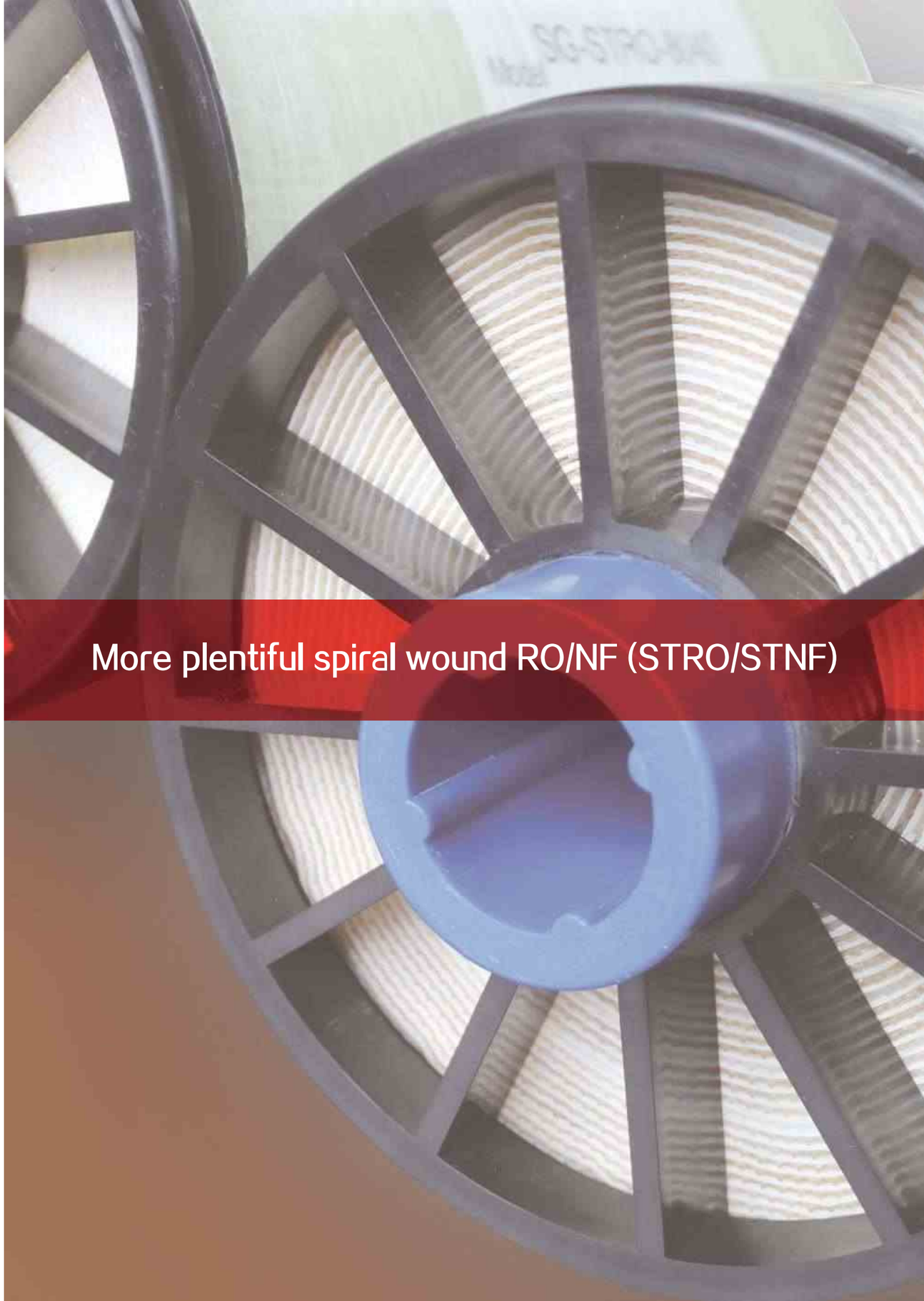
SMBR-10040 Membrane element

Items		Completed with vessel & caps	Membrane body only
			
Model		SP-SMBR-10040	SG-SMBR-10040
Membrane effective area(m²)		23	23
Diameter (mm)		250	250
Membrane material		PVDF/PES	PVDF/PES
Membrane pore size(μm)		0.1	0.1
TMP range (bar)		0.1-0.7	0.1-0.7
Configuration		Split-type	Submerged
Operation Pressure	Positive(bar)	1.0	0.5
	Negative(bar)	0.7	0.7
Permeate flux (l/h)		400-1000	400-1000
pH (continuous)		2-11	2-11
pH (cleaning)		2-11.5	2-11.5
Air flow rate [l /(min·pc)]		100	100

SMBR-10040 Membrane module

Items	SP-SMBR-20	SP-SMBR-80	SP-SMBR-160
Element qty. (pc)	20	80	160
Membrane effective area(m²)	460	1840	3680
Permeate flux(m³/h)	8-18	32-70	50-130
Size (mm)	3000×850×1900	3000×5800×1900	6060×2450×2600
Weight (kg)	700	2800	6000
Pipe material	PVC/SUS	PVC/SUS	PVC/SUS
Feed flux(m³/h)	10-22	38-80	60-150
Air flow rate[l /(min·module)]	2000	8000	16000

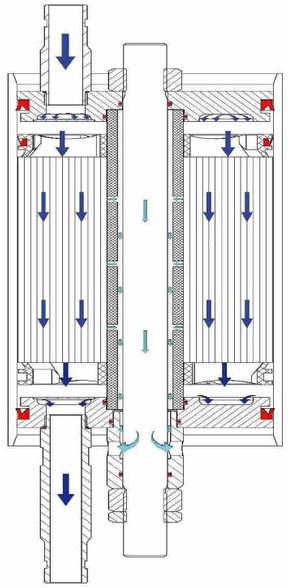




Spacer Tube RO/NF (STRO/STNF)

STRO/STNF Introduction

With the development of membrane technology industry, there are more and more special requirements to the performance of membrane products, such as lower feed water quality, higher pressure to increase concentration ratio, longer cleaning cycle and service life. As a result, the open channel type high pressure membrane arises at the historic moment.

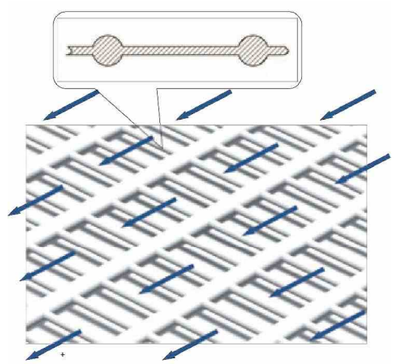


Features

High strength and high pressure integral design
Open feed spacer enables low flow resistance and low concentration polarization
Spiral wound structure with more membrane area

Applications

Industrial wastewater
High salts wastewater
Spiral wound RO/NF concentrates

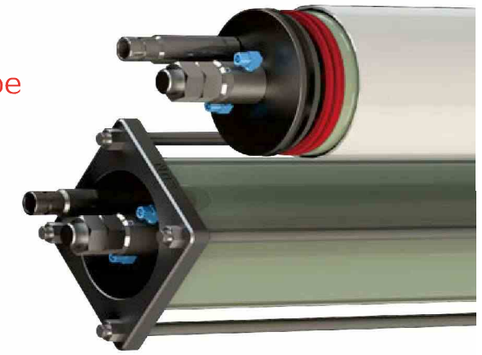


Spacer Tube RO/NF (STRO/STNF)

STRO/STNF Introduction

ST membrane module type

High pressure type
Super high pressure type



Comparison of different membrane construction

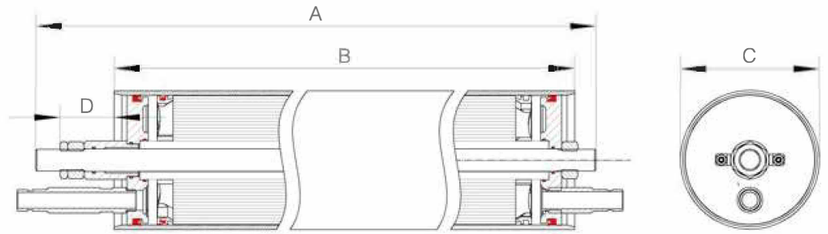
	DT	ST	SPIRAL
Construction	Disc tube	Special spiral	General spiral
Feed spacer construction	Open	Trapezoid open	Diamond
Feed spacer thickness (mm)	1.5	0.8-1.2	0.4-0.8
Membrane area (m^2)	0.45-9.4	25-29	25-41
Operation pressure (bar)	75-160	75-120	15-41
Pretreatment request	★★	★★★	★★★★★
Anti-pollution capacity	★★★★★	★★★★	★★

Spacer Tube RO/NF (STRO/STNF)

STRO/STNF High pressure membrane element specification

Type	STRO		STNF
Model	STRO3-8035	STRO5-8042	STNF2-8042
Membrane sheet type	RO3	RO5	NF2
Effective membrane area (m²)	25	27	27
Construction *	Spiral Wound Element with GRP Outerwrap,Brine Seal		
Feed flux range (m³/h)	5.5-12		5.5-12
Recommend flux (m³/h)	10		10
Permeate flux ** (m³/d)	23	24	25
Stable rejection ** (%)	98.5	99.5	98.0
Minimum rejection (%)	97.5	99.0	96.0
Feed spacer	Special open type (Trapezoid)		
Element Dry Weight(kgs)	18	20	20
Max. element pressure drop (bar)	1.0		1.0
Max. operation pressure (bar)	90		90
Max. operation temperature (℃)	45		45
pH continuous operation	3-11		3-11
pH CIP	2-12		2-12
Chlorine tolerance (ppm)	≤0.1		≤0.1

* Brine seal to be installed in flow direction on the low pressure side/element outlet side.
** RO3 test condition: 2,000mg/l NaCl solution at 15.5bar applied pressure, 15% recovery, 25℃; RO5 test condition: 32,000mg/l NaCl solution at 55bar applied pressure, 8% recovery, 25℃; NF2 test condition: 2,000mg/l $MgSO_4$ solution at 7bar, 15% recovery, 25℃. There may have about ±15% change for individual module flow rate.
Performance specifications shown above are nominal values. Individual module permeate flow rate may vary based on inlet water condition.
Note: We could offer any membrane sheet to make ST membrane module, for example, STRO4-8035, STRO5-8035, STRO1-8042, STNF1-8042, etc.



Model	8035	8042
Total tie rod length A (mm)	1140	1355
Vessel length B (mm)	1000	1200
Vessel to top of frame D (mm)	85	85
Inlet & outlet connections (inch)	1 inch Victaulic	1 inch Victaulic
Permeate connection (mm)	2xG3/8"-90° elbow for 9mm hose	2xG3/8"-90° elbow for 9mm hose

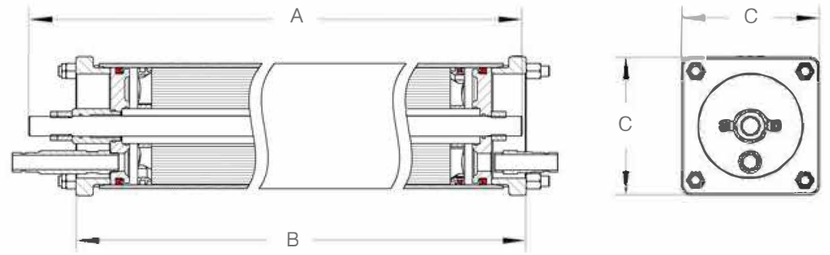
Operation Pressure (bar)	75	90
Membrane module diameter C (mm)	216	220

Spacer Tube RO/NF (STRO/STNF)

STRO-H Super high pressure membrane element specification

Type	STRO-H	
Model	STRO5-8042-H	STRO6-8042-H
Membrane sheet type	RO5	RO6
Effective membrane area (m²)	27	
Construction *	Spiral Wound Element with GRP Outerwrap,Brine Seal	
Feed flux range (m³/h)	5.5-12	
Recommend flux (m³/h)	10	
Permeate flux ** (m³/d)	24	20
Stable rejection ** (%)	99.5	99.6
Minimum rejection (%)	99.0	99.0
Feed spacer	Special open type (Trapezoid)	
Element Dry Weight(kgs)	20	
Max. element pressure drop (bar)	1.0	
Max. operation pressure (bar)	120	
Max. operation temperature (℃)	45	
pH continuous operation	3-11	
pH CIP	2-12	
Chlorine tolerance (ppm)	≤0.1	

* Brine seal to be installed in flow direction on the low pressure side/element outlet side.
** RO5, RO6 test condition: 32,000mg/l NaCl solution at 55bar applied pressure, 8% recovery, 25℃, pH=8; There may have about ±15% change for individual module flow rate. Performance specifications shown above are nominal values. Individual module permeate flow rate may vary based on inlet water condition.
*** Liquid temperature should less than 30℃ at 120bar pressure.
Note: We could offer any membrane sheet to make ST membrane module, for example, STRO4-8042-H, etc.



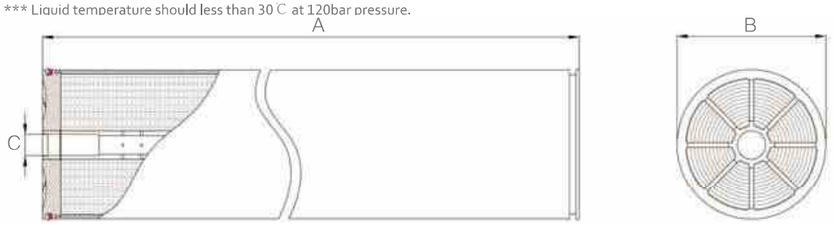
Model	STRO-8042-H
Total tie rod length A (mm)	1305
Flange interval B (mm)	1230
Flange width C (mm)	240
Inlet & outlet connections (inch)	1 inch Victaulic
Permeate connection (mm)	2 x G3/8"-90° elbow for 9mm hose

Spacer Tube RO/NF (STRO/STNF)

STRO-E Economy membrane element specification

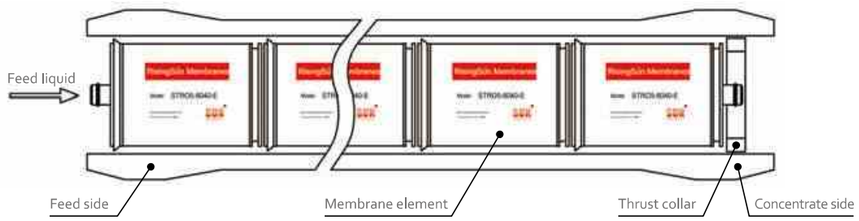
Type	STRO		
Model	STRO3-8040-E	STRO5-8040-E	STRO6-8040-E
Membrane sheet type	RO3	RO5	RO6
Effective membrane area (m²)	27		
Feed flux range (m³/h)	5.5-12		
Recommend flux (m³/h)	10		
Permeate flux ** (m³/d)	25	24	20
Stable rejection ** (%)	98.5	99.5	99.6
Minimum rejection (%)	97.5	99.0	99.0
Feed spacer	Special open type （Trapezoid）		
Max. element pressure drop (bar)	1.0		
Max. operation pressure (bar)	90	120***	120***
Max. operation temperature (℃)	45		
pH continuous operation	3-11		
pH CIP	2-12		
Chlorine tolerance (ppm)	≤0.1		

Brine seal to be installed in flow direction on the low pressure side/element outlet side.
** RO3 test condition: 2,000mg/l NaCl solution at 15.5bar applied pressure, 15% recovery, 25℃; RO5, RO6 test condition: 32,000mg/l NaCl solution at 55bar applied pressure, 8% recovery, 25℃, pH=8; There may have about ±15% change for individual module flow rate. Performance specifications shown above are nominal values. Individual module permeate flow rate may vary based on inlet water condition.
*** Liquid temperature should less than 30℃ at 120bar pressure.



	A (mm)	B (mm)	C (mm)
STRO-E	1016	201	29 ID

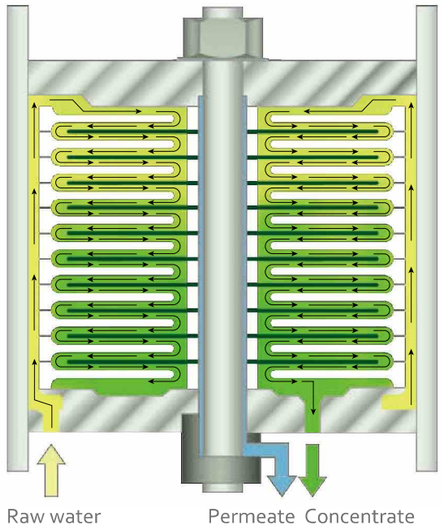
STRO-E using diagram



Disc Tube RO/NF (DTRO/DTNF)

DTRO/DTNF Introduction

Our Disc Tube membrane module includes DTRO and DTNF by using different kinds of membrane sheet. The Disc Tube module consists of membrane stacks, which are housed in an 8inch high pressure vessel and assembled on a center tie rod and using stainless steel end flanges.



Features

High strength design, up to 160bar operation pressure
Open channel configuration enables low flow resistance and low concentration polarization
Open channel reduced risks of clogging and crystallization
High salt rejection and high recovery rates (up to 90%-95%)

Application fields

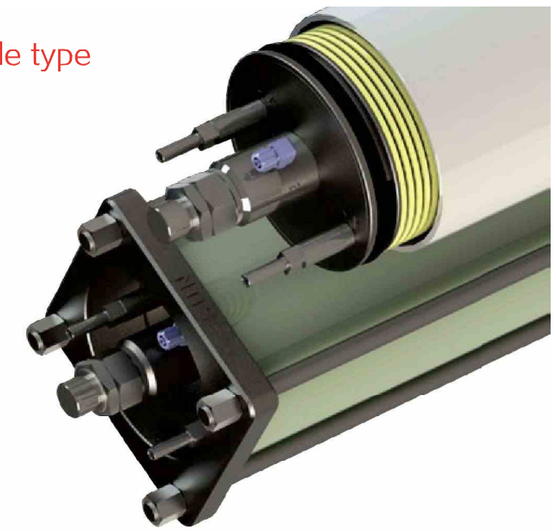
Landfill leachate
High concentration of industrial waste water
Spiral wound RO/NF concentrates
Industrial high salts water

Disc Tube RO/NF (DTRO/DTNF)

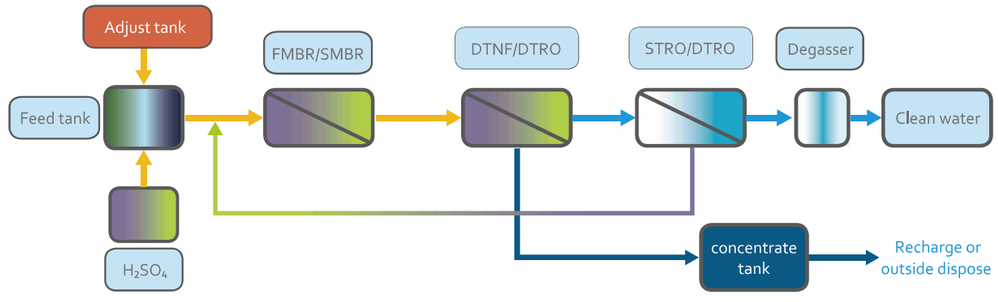
DTRO/DTNF Introduction

DT membrane module type

General type
High Pressure type



A typical process diagram

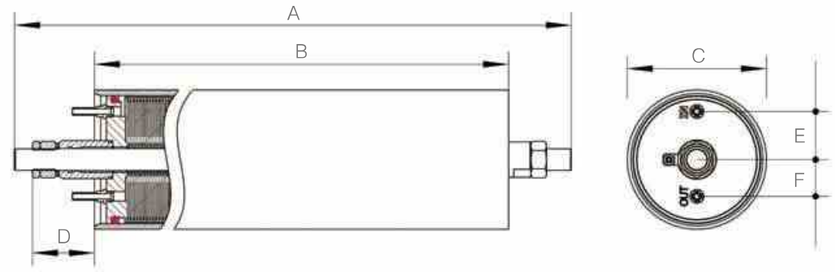


Disc Tube RO/NF (DTRO/DTNF)

DTRO/DTNF High pressure membrane module specification

Type	DTRO		DTNF
Model	SP-DTRO3-8042	SP-DTRO5-8042	SP-DTNF-8042
Membrane sheet model	RO3	RO5	NF2
Membrane cushion qty.	209	209	209
Membrane area (m²)	>9.4	>9.4	>9.4
Feed flux range (L/H)	500-1200	500-1200	500-1200
Permeate flux ** (L/H)	420	400	450
Stable rejection ** (%)	98.5	99.5	98
Min. rejection (%)	97.5	99	96
Hydraulic disc material	ABS	ABS	ABS
Vessel material	FRP	FRP	FRP
Operation pressure (bar)	75	90	90
Max. element pressure drop (bar)	9	9	9
Max. operation temperature (℃)	40	40	40
Chlorine tolerance (ppm)	<0.1	<0.1	<0.1
pH continuous operation	3-11	3-11	3-11
Chemical cleaning pH@40℃	2-12	2-12	2-12

** RO3 test condition: 2,000mg/l NaCl solution at 15.5bar applied pressure, 25℃; RO5 test condition: 32,000mg/l NaCl solution at 55bar applied pressure, 25℃; NF2 test condition: 2,000mg/l MgSO4 solution at 7bar, 25℃. Permeate flux and stable rejection may vary based on inlet water condition. There may have about ±20% change for individual module permeate flux.



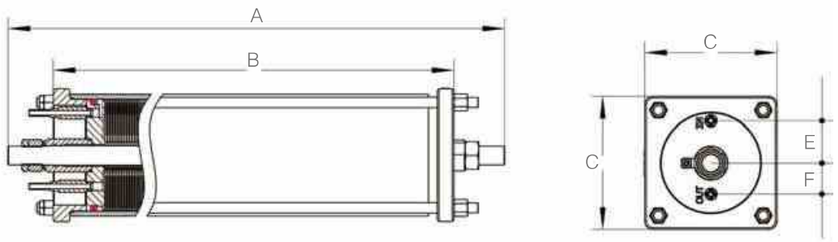
Operation Pressure (bar)	75	90
Total module length A (mm)	1400	1400
Vessel length B (mm)	1150	1150
Module diameter C (mm)	216	220
Vessel to top of frame D (mm)	98	98
Inlet to flange center distance E (mm)	76	76
Outlet to flange center distance F (mm)	56	56
Inlet & outlet connections diameter (mm)	12	12
Permeate connection (mm)	1 x G3/8"-90° elbow for 9mm hose	

Disc Tube RO/NF (DTRO/DTNF)

DTRO-H Super high pressure membrane module specification

Type	DTRO-H	
Model	SP-DTRO5-8042-H	SP-DTRO6-8042-H
Membrane sheet model	RO5	RO6
Membrane cushion qty.	209	209
Membrane area (m²)	>9.4	>9.4
Feed flux range (L/H)	500-1200	500-1200
Permeate flux ** (L/H)	400	320
Stable rejection ** (%)	99.5	99.6
Min. rejection (%)	99	99
Hydraulic disc material	ABS	ABS
Vessel material	FRP	FRP
Operation pressure (bar)	120	160
Max. element pressure drop (bar)	9	9
Max. operation temperature (℃)	40	40
Chlorine tolerance (ppm)	<0.1	<0.1
pH continuous operation	3-11	3-11
Chemical cleaning pH@40℃	2-12	2-12

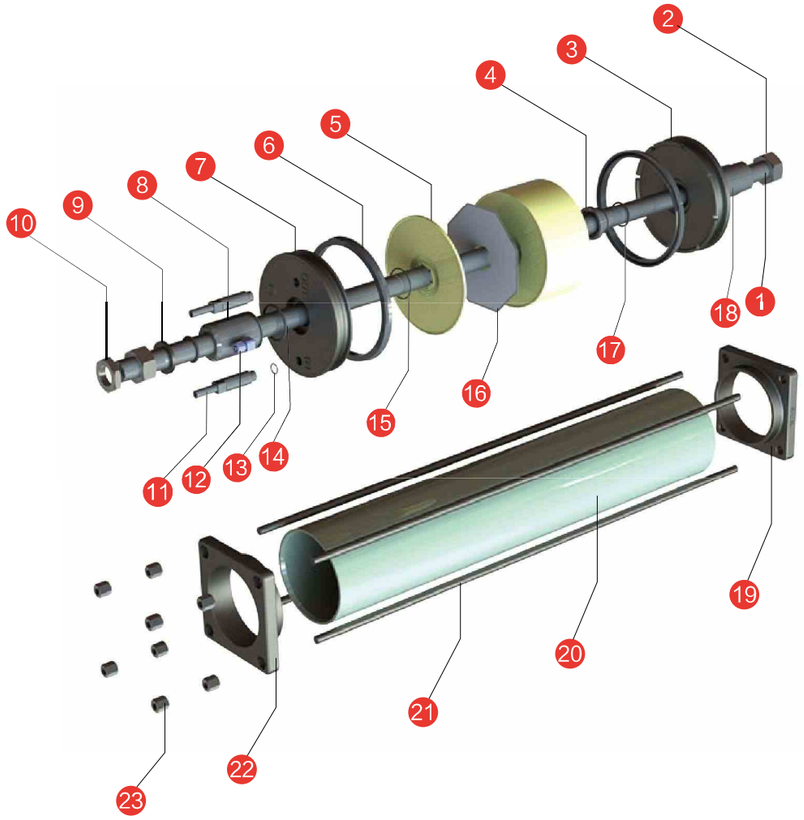
** RO5, RO6 test condition: 32,000mg/l NaCl solution at 55bar applied pressure, 25℃; Permeate flux and stable rejection may vary based on inlet water condition. There may have about ±20% change for individual module permeate flux.



Operation Pressure (bar)	120	160
Total module length A (mm)	1400	
Two flanges distance B (mm)	1225	
Flange width C (mm)	240	
Inlet to flange center distance E (mm)	76	
Outlet to flange center distance F (mm)	56	
Inlet & outlet connections diameter (mm)	12	
Permeate connection (mm)	1 x G3/8"-90° elbow for 9mm hose	

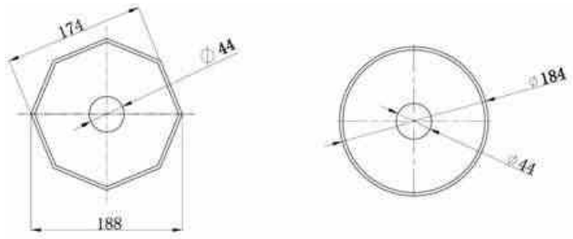
Disc Tube RO/NF (DTRO/DTNF)

DTRO/DTNF membrane module structure



Item	Name	Item	Name	Item	Name	Item	Name
1	Tie rod	7	End flange	13	O-ring 14-2	19	Reinforced top flange
2	Thick nut	8	Screwing tie rod	14	O-ring 52-4	20	Membrane vessel
3	Top flange	9	Tie rod gasket	15	O-ring 48-2	21	Reinforced rod
4	Distance fitting	10	Thin nut	16	Membrane cushion	22	Reinforced end flange
5	Hydraulic disc	11	Inlet/Outlet connection	17	O-ring 39-3	23	Reinforced nut
6	Lip seal	12	Permeate connector	18	Screwing tie rod		

DTRO membrane cushion dimensions



More options for membrane sheet

Flat sheet membrane

We offer UF, MF, NF, RO flat sheet membrane with various MWCO and chemical, and Ion Exchange Membrane sheet. All membrane derived from USA. High chemical stability, high separation efficiency, long service life, less membrane pollution.

Membrane materials

Polyether sulfone (PES)
Polysulfone (PS)
Polyvinylidene fluoride (PVDF)
Polyacrylonitrile (PAN)
Polyamide (PA)
Cellulose (CA)
Regenerated cellulose (RC)

Benefits

High thermal and chemical resistance
Precise MWCO
High flux capacity
Fouling resistant
Long service life
Acid/caustic resistant
High temperature resistant

RO membrane	Stable Rejection (%)	Flux rate (LMH)	Replacement reference	Typical applications
RO1	99.5	45	BW30	Water treatment; Specific liquid concentration; Sea water desalination; Wastewater treatment; etc.
RO2	99.2	55	LE	
RO3	99.5	50	XFR	
RO4	99.4	42	SW30	
RO5	99.7	47	SW30ULE	
RO6	99.8	30	SW30HR	

RO1, RO3 test condition: 2,000ppm NaCl, 225psi(1.55MPa), 25℃;
RO2 test condition: 2,000ppm NaCl, 150psi(1.03MPa), 25℃;
RO4, RO5, RO6 test condition: 32,000ppm NaCl, 800psi(5.5MPa), 25℃.

NF membrane	Stable Rejection (%)	Flux rate (LMH)	Replacement reference		Typical applications
NF1	≥99.0	43	NF90		Soft water; Acid and caustic recovery; Precious-metals recovery; Dye concentration, desalination; Whey desalination; Antibiotic concentration; Polysaccharide desalination; BOD/COD removal; etc.
NF2	≥99.0	42	NF		
NF3	≥97.0	55	NF270		
NF4	92.0-95.0	50	GE	DL	
NF5	≥98.5	38	GE	DK	
NF6	≥90.0	18	SelRO MPS-34		
NF7	85.0-95.0	60	XN45		
NF8	60.0-85.0	65	UA60		

NF1-NF3 test condition: 2,000ppm MgSO4, 70psi(0.48MPa), 25℃;
NF4, NF5, NF7, NF8 test condition: 2,000ppm MgSO4, 110psi(0.76MPa), 25℃;
NF6 test condition: 2,000ppm NaSO4, 142psi(1.0MPa), 25℃.



Flat sheet membrane

UF membrane	Membrane material	MWCO (Dalton)	Flux rate (LMH) @ 25℃,0.35MPa	Replacement reference		Typical applications
UA001	PA	1,000	60*	GE	GE	Color removal; Chondroitin sulfate concentration; Antibiotics, protein & polypeptide concentration; Enzyme concentration; WPC / WPI; Purification of antibiotics & vaccines; Recovery of whey protein, gelatin, enzyme; Electrocoat paint recovery; Cell harvesting or biomass; Beverage clarification; Pretreatment for RO/NF; etc.
UA003		3,500	65*		GK	
UE001	PES	1,000	15**	"MICRODYN	NP030	
UE003		3,000	75**	NADIR"	NP010	
UE005		5,000	100	KOCH	HFK-328	
				GE	PT	
UE008		8,000	130	GE	GM	
UE010		10,000	150	KOCH	HFK-131	
				GE	PW	
				UP010		
UE020		20,000	200	UP020		
				PE020		
UE030		30,000	240	UH030		
UE050		50,000	260	UH050		
US020	PS	20,000	280	PS20		
US050		50,000	350	US100		
UF050	PVDF	50,000	400	KOCH	HFM-100	
UF100		100,000	500		HFM-300	
UN010	PAN	10,000	150	PA50		
UN050		50,000	400	PA200		
UN100		100,000	450	PA400		
UR030	RC	30,000	250	ALFA LAVAL RC70PP		
UR100		100,000	350			
UC005	RC	5,000	150	STARIOUS	14529	
UC010		10,000	200		14539	
UC050		50,000	350		14549	

* Test condition: 110psi(0.76MPa), 25℃; ** Test condition: 142psi(1.0MPa), 25℃;
Note: pH rang @25℃: (1)PES 0-14; (2)PS 1-14; (3)PVDF,PAN 1-12; (4)RC 3-8; (5)CA 3-8.

MF membrane	Membrane material	Pore size (μm)	Flux rate (LMH) @ 25℃,0.35MPa	Replacement reference		Typical applications
ME005	PES	0.05	>280	MICRODYN NADIR MP005		MBR industry; Biotech/Pharmaceutical; Microbial removal; Protein separation; Antibiotic clarification; Enzyme clarification; Pretreatment for RO/NF; etc.
ME010		0.10	>320	KOCH MFK-603		
MF010	PVDF	0.10	>500	TORAY	MBR	
MF022		0.22	>1000	KUBOTA		
MF045		0.45	>1500			

Ion exchange membrane	Membrane character	Funcational group	exchange capacity(meq/g)	Replacement reference		Typical applications
AE1	Anion Exchange	Quaternary Ammonium	1.0±0.1	MI	AMI-7001	The anode & cathode electrocoating process; EDI, etc.
AE2			0.9	LANXESS	IONAC MA-3475	
AE3			1.0	SYBRON	IONAC MA-7500	
CE1	Cation Exchange	Sulfonic Acids	1.6±0.1	MI	CMI-7000	
CE2			1.4	LANXESS SYBRON	IONAC MC-3470	

1. The above data may vary but will be no more than 15% below the value shown; Products specifications may vary as design revisions take place.
2. The standard width of membrane sheet is 40inch, sample is available.

Intellectual properties

RisingSun Membrane speed up the progress through continuous investment in membrane technology research and development to improve the performance of the current products and develop new products for emerging industries. At present, we have obtained a wide range of intellectual property rights and some membrane industrial certifications.

Trademark

RisingSun Membrane
SUN (picture)

On site application pictures

FMBR for municipal sewage

FMBR for industrial wastewater

SMBR for alkali wastewater

SMBR container for industrial wastewater

STRO for high salt water

DTRO for leachate wastewater

FMBR container for domestic wastewater

SMBR for industrial wastewater