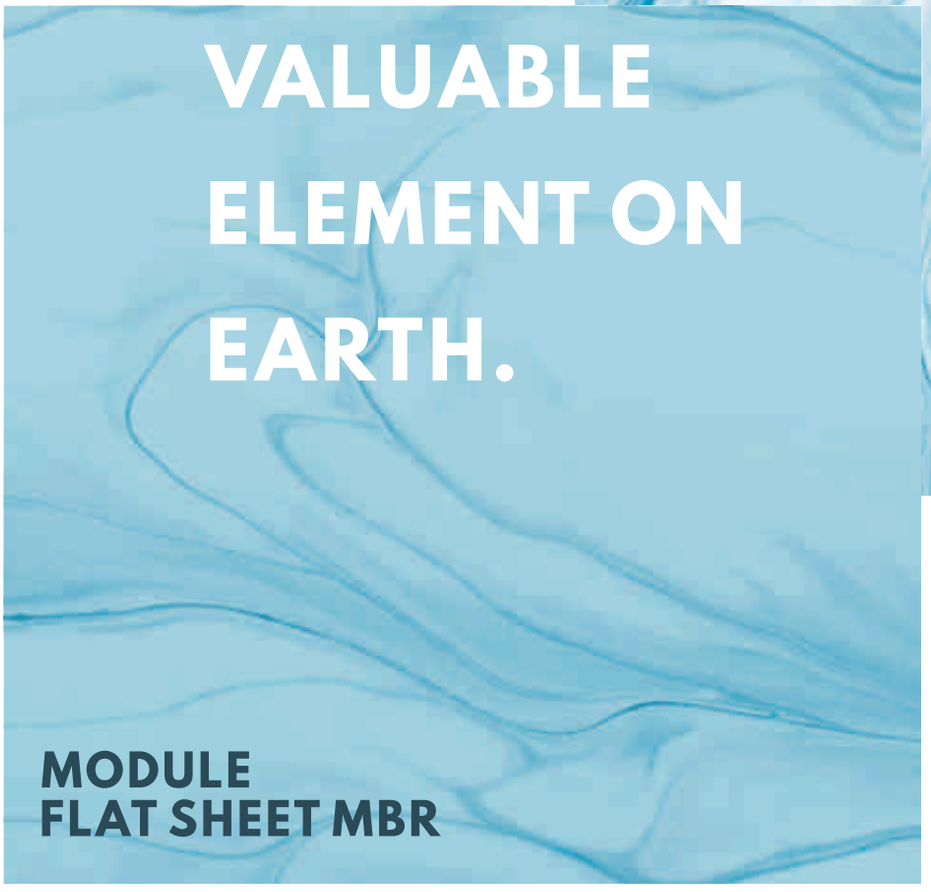
EMAIL: INFO1@IMEMFLO.COM

BROCHURE

“PROTECT THE MOST VALUABLE ELEMENT ON EARTH.”



MODULE
FLAT SHEET MBR

WEBSITE: WWW.IMEMFLO.COM

imemflo
Recycling 4 Generations

ATB

Designed and Developed in Germany

CONTENT TABLE

CONTENT TABLE

1

ABOUT US

Imemflo is a high-technology company involved in the R&D and industrial manufacturing of novel, specialised filtration membranes. imemflo in collaboration with their German partner ATB water GmbH, developed an advanced HF & FS Membrane bio reactor technology suitable for wastewater treatment.

Imemflo high quality MBR modules and complementary water/waste water treatment products to help our customers improve their end-water quality and plant performance. The main objective on which imemflo strives is to build a leadership in the membrane market.

Imemflo has always focused on membrane research and development to meet customer's stringent filtration needs and has now come up with two basic types as flat sheet [FSMBR] and hollow fibre module [HFMBR].

We have been getting feedback from many steady customers worldwide, and to meet their specific requirements, we not only supply membrane products, but also the membrane process design and system consultancy with service. To give a non-stop assistance and know-how, our key employees have more than a decade experience in membrane production and applications.

Imemflo devote to supply membrane products for liquid separation, concentration and

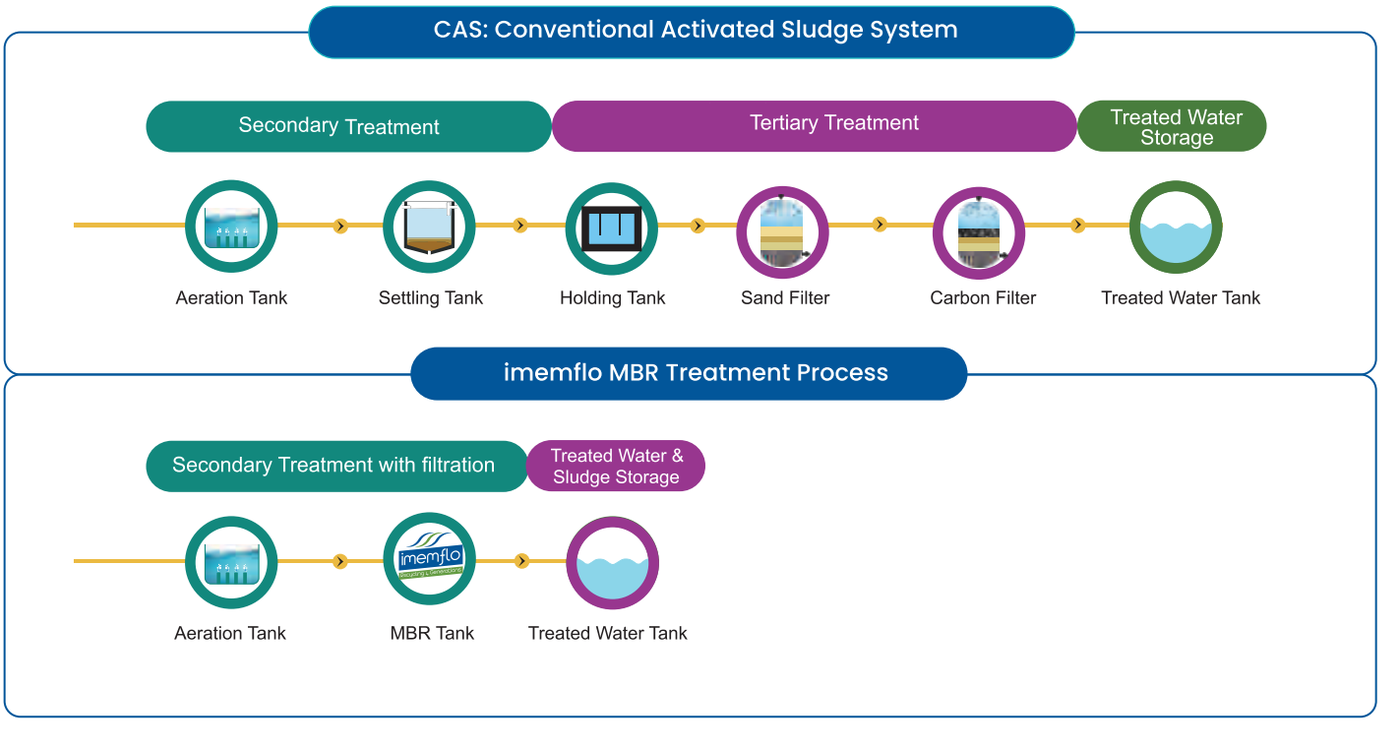
Clarification with guaranteed consistent membrane quality and also to deliver more efficient membrane process for a greater success for you in your markets.

We respect quality and are driven by quality standards. Each MBR module is engraved with unique identification code to facilitate tracking of the product quality with 100% integrity test on every product with stringent standards which has established our products as reputed and high quality in the water field.

2

TECHNOLOGY OVERVIEW OF MEMBRANE BIOREACTOR (MBR)

Membrane bioreactor [MBR] is the combination of a membrane process like microfiltration & ultrafiltration with the biological wastewater treatment process and 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 bio-mass and water. The MBR process has remarkable advantages compared to the tradition wastewater treatment technology.



3

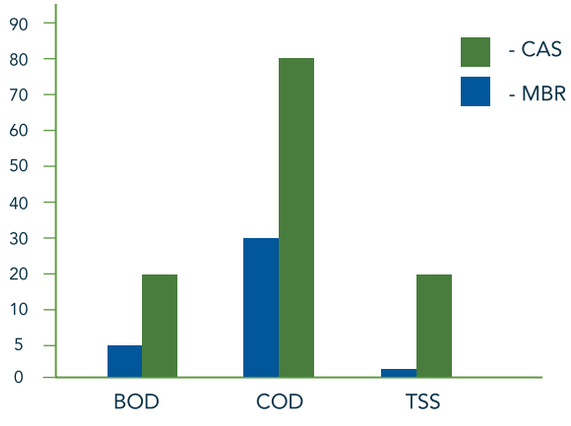
WHY MBR BASED WASTE WATER TREATMENT PLANTS ?

The MBR (Membrane Bio Reactor) System is unique and has many advantages over conventional technologies for treatment of industrial wastewater. These key features are incorporated into our technology and offer the following:

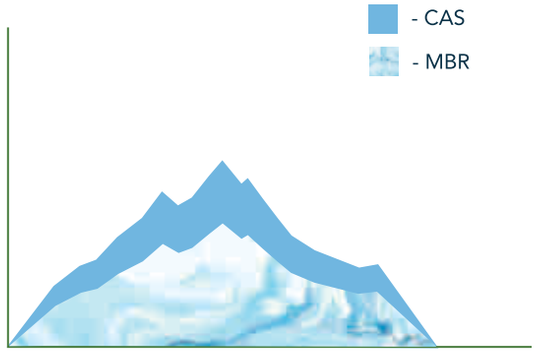
Reduced footprint

*Ease of operation (**I-memtroll**)*

Consistent and superior effluent quality

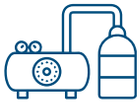


Reduced Sludge Production



APPLICATIONS

Cooling Tower



Boiler Feed

Utilities

Toilet Flushes

Gardening & Irrigation

RO Feed

4

IMEMFLO FSMBR

imemflo 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.

Single Deck Flatsheet Module

Double Deck Flatsheet Module

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.

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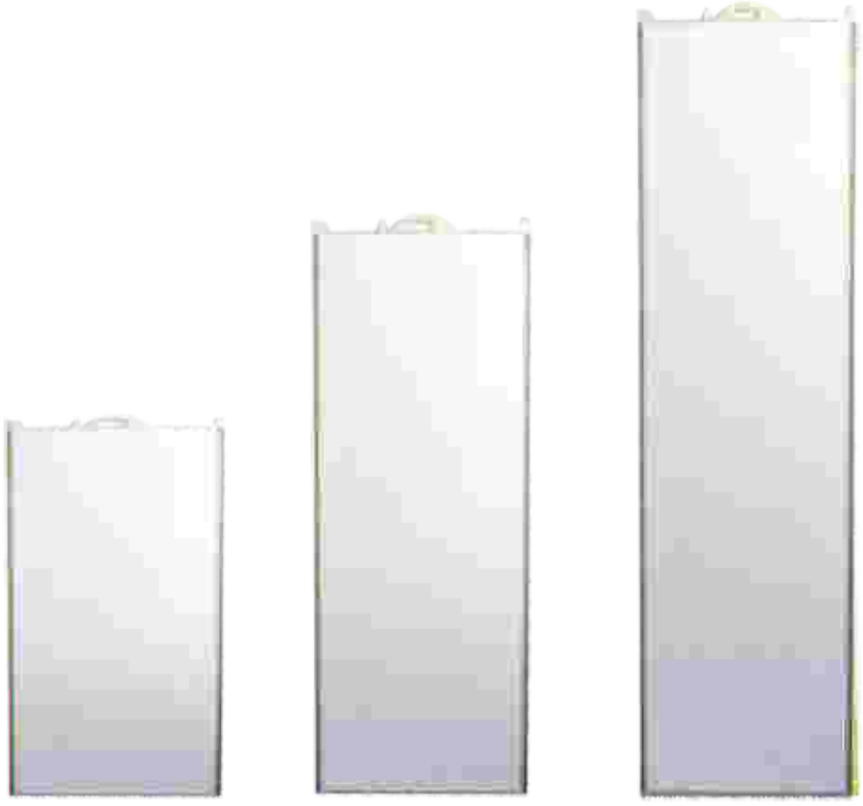
FLAT SHEET MBR MODULE & DETAILS



Items	Short type	Standard type	Long type
Model	FSMBR 05	FSMBR 08	FSMBR 16
Size(L×W×T)(mm)	640x510x13	1020×510×14	1810x 512x14
Membrane effective area (m^2)	0.5	0.8	1.6
Weight(kg)	1	1.3	5
Permeate flux [l/(pc·d)]	200-340	320-550	640-1100
Membrane material	PVDF	PVDF	PVDF
Membrane pore size(μm)	0.1	0.1	0.1
Plate material	ABS	ABS	ABS
Air flow rate [l/(min·pc)]	≥8	≥ 10	≥ 12
PH	3～12	3～12	3～12
Output turbidity(NTU)	＜1.0	＜1.0	＜1.0
Output SS(mg/L)	≤5	≤5	≤5
Chemical cleaning	～5,000mg/l NaClO	～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.

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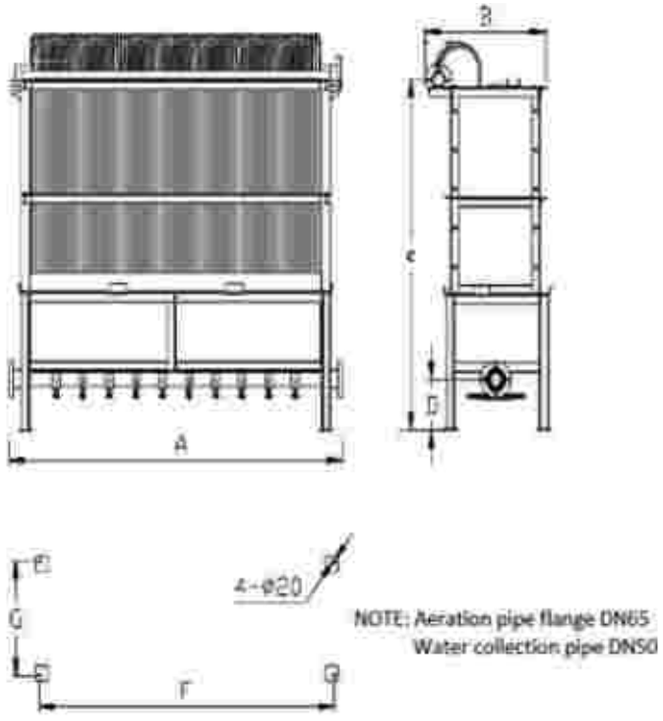
IMEMFLO FSMBR 05

imemflo FMBR PVDF Series, is a high-flux Flat Sheet MBR membrane delivering excellent permeability, fouling resistance, stability and elimination effectiveness.
Structured with PVDF (permanently hydrophilic polyvinyl difluoride) has the advantage of dry storage. FMBR PVDF Series membranes can be used for a wide variety of treatment applications such as industrial and domestic wastewaters.

- Permanently hydrophilic
- High flux & low fouling
- High MLSS concentration
- High chlorine resistance

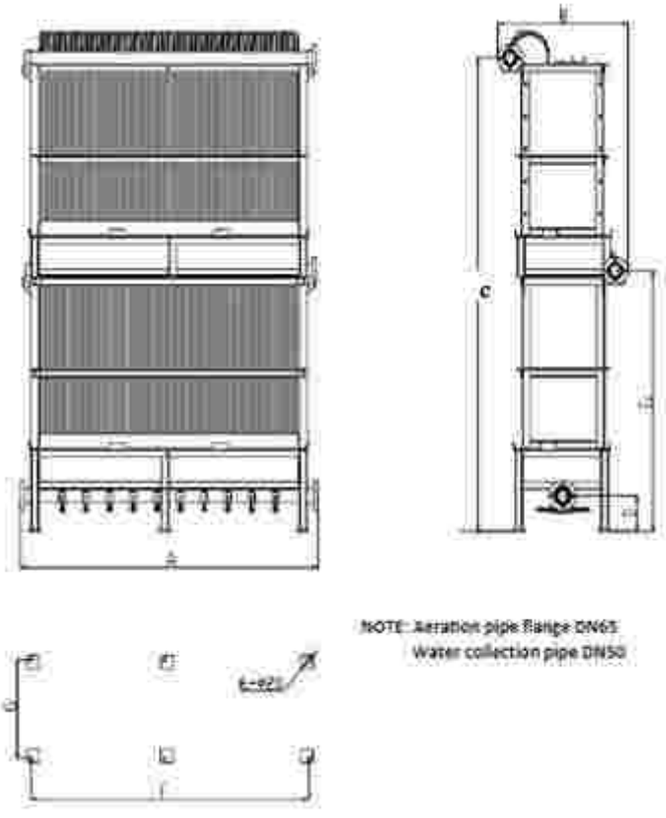
Product specification		
		0.5 M2
Model		FSMBR 05
Effective membrane area	M2	0.5
hight	MM	640
width	MM	510
thickness	MM	13
Dry weight	Kg	1
Nomincal pore size	µm	0.1
Membrane Material		PVDF
Plate material		ABS
Air requirement	M3/Hr/Plate	≥0.48
Product performances		
Storage		Dry Storage
Design Flux	LMH	15-34 LMH
MLSS	PPM	7000 -18000
Operation Specification		
Operating Temperature	°c	5 -40 C
DO Concentration	PPM	>1
pH Range		06-09 ph
Operating Trans. Pressure	Mbar	50-200
Operating mode(permeate/relaxation)	Min	08-02 Min
Max press drop	Mbar	350

FSMBR 05



Model No.	No. of Cassettes	Membrane area(m2)	A (mm) Length	B (mm) width	C Standard height (mm)	Air Flowrate (l/min)
FSMBR 05-25	25	12.5	435	600	1300	125
FSMBR 05-50	50	25	750	600	1300	250
FSMBR 05-75	75	37.5	1065	600	1300	375
FSMBR 05-100	100	50	1380	600	1300	500
FSMBR 05-125	125	62.5	1695	600	1300	625
FSMBR 05-150	150	75	2090	600	1300	750
FSMBR 05-175	175	87.5	2405	600	1300	875
FSMBR 05-200	200	100	2720	600	1300	1000
FSMBR 05-225	225	112.5	3035	600	1300	1125
FSMBR 05-250	250	125	3350	600	1300	1250

FSMBR 05



Model no.	No. of Cassettes In one deck	Total cassettes	Membrane area(m2)	A (mm) Length	B (mm) width	C Standard height (mm)	Air Flowrate (l/min)
FSMBR 05 - 25 - 2	25	50	25	435	600	2000	200
FSMBR 05 - 50 - 2	50	100	50	750	600	2000	400
FSMBR 05 - 75 - 2	75	150	75	1065	600	2000	600
FSMBR 05 - 100 - 2	100	200	100	1380	600	2000	800
FSMBR 05 - 125 - 2	125	250	125	1695	600	2000	1000
FSMBR 05 - 150 - 2	150	300	150	2010	600	2000	1200
FSMBR 05 - 175 - 2	175	350	175	2325	600	2000	1400
FSMBR 05 - 200 - 2	200	400	200	2640	600	2000	1600
FSMBR 05 - 225 - 2	225	450	225	2955	600	2000	1800
FSMBR 05 - 250 - 2	250	500	250	3270	600	2000	2000

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IMEMFLO FSMBR 08

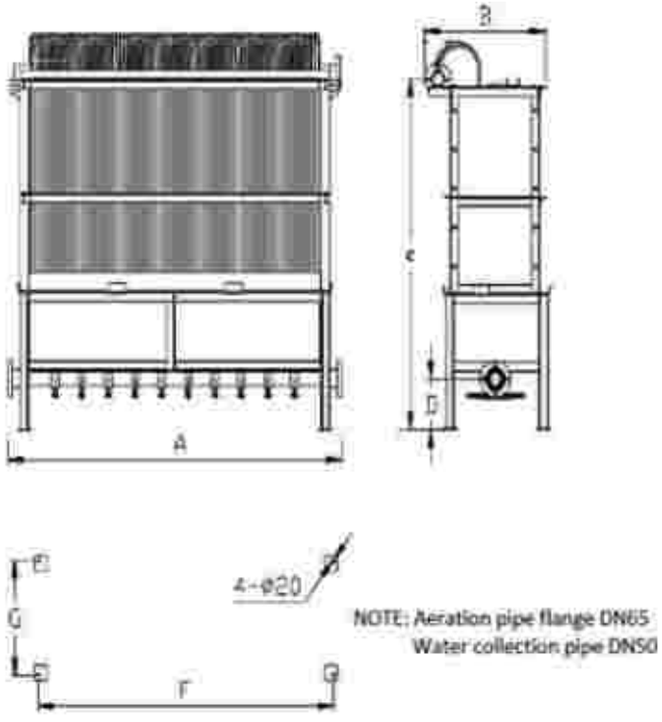
imemflo FMBR PVDF Series, is a high-flux Flat Sheet MBR membrane delivering excellent permeability, fouling resistance, stability and elimination effectiveness. Structured with PVDF (permanently hydrophilic polyvinyl difluoride) has the advantage of dry storage.

FMBR PVDF Series membranes can be used for a wide variety of treatment applications such as industrial and domestic wastewaters.

- Permanently hydrophilic
- High flux & low fouling
- High MLSS concentration
- High chlorine resistance

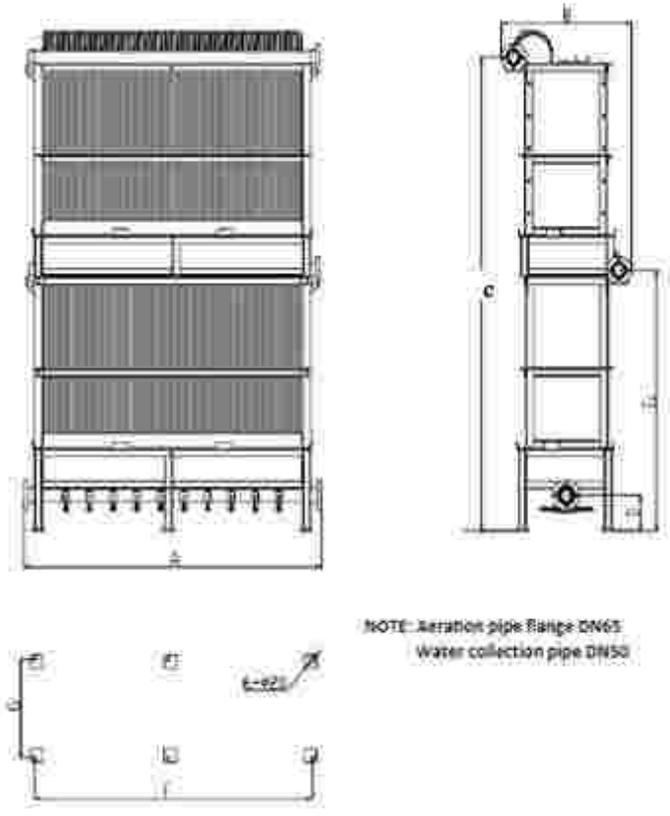
Product specification		
		0.8 M2
Model		FSMBR 08
Effective membrane area	M2	0.8
hight	MM	1020
width	MM	510
thickness	MM	14
Dry weight	Kg	1.3
Nomincal pore size	µm	0.1
Membrane Material		PVDF
Plate material		ABS
Air requirement	M3/Hr/Plate	≥0.6
Product performances		
Storage		Dry Storage
Design Flux	LMH	15-34 LMH
MLSS	PPM	7000 -18000
Operation Specification		
Operating Temperature	°c	5 -40 C
DO Concentration	PPM	>1
pH Range		06-09 ph
Operating Trans. Pressure	Mbar	50-200
Operating mode(permeate/relaxation)	Min	08-02 Min
Max press drop	Mbar	350

FSMBR 08



Model no.	No. of Cassettes	Membrane area(m2)	A (mm) Length	B (mm) width	C Standard height (mm)	Air Flowrate (l/min)
FSMBR 08-25	25	20	617.5	600	1660	250
FSMBR 08-50	50	40	980	600	1660	500
FSMBR 08-75	75	60	1342.5	600	1660	750
FSMBR 08-100	100	80	1705	600	1660	1000
FSMBR 08-125	125	100	2067.5	600	1660	1250
FSMBR 08-150	150	120	2515	600	1660	1500
FSMBR 08-175	175	140	2877.5	600	1660	1750
FSMBR 08-200	200	160	3240	600	1660	2000
FSMBR 08-225	225	180	3602.5	600	1660	2250
FSMBR 08-250	250	200	3965	600	1660	2500

FSMBR 08



Model no.	Cassettes In one deck	Total cassettes	Membrane area (m2)	A (mm) Length	B (mm) width	C Standard height (mm)	Air Flowrate (l/min)
FSMBR 08-25-2	25	50	40	617.5	600	2750	350
FSMBR 08-50-2	50	100	80	980	600	2750	700
FSMBR 08-75-2	75	150	120	1342.5	600	2750	1050
FSMBR 08-100-2	100	200	160	1705	600	2750	1400
FSMBR 08-125-2	125	250	200	2067.5	600	2750	1750
FSMBR 08-150-2	150	300	240	2515	600	2750	2100
FSMBR 08-175-2	175	350	280	2877.5	600	2750	2450
FSMBR 08-200-2	200	400	320	3240	600	2750	2800
FSMBR 08-225-2	225	450	360	3602.5	600	2750	3150
FSMBR 08-250-2	250	500	400	3965	600	2750	3500

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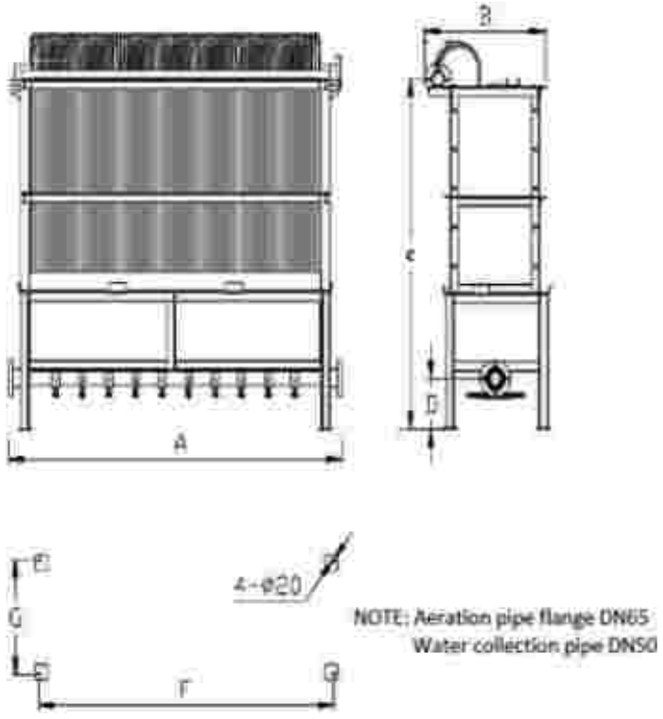
IMEMFLO FSMBR 16

imemflo FMBR PVDF Series, is a high-flux Flat Sheet MBR membrane delivering excellent permeability, fouling resistance, stability and elimination effectiveness.
Structured with PVDF (permanently hydrophilic polyvinyl difluoride) has the advantage of dry storage.
FMBR PVDF Series membranes can be used for a wide variety of treatment applications such as industrial and domestic wastewaters.

- Permanently hydrophilic
- High flux & low fouling
- High MLSS concentration
- High chlorine resistance

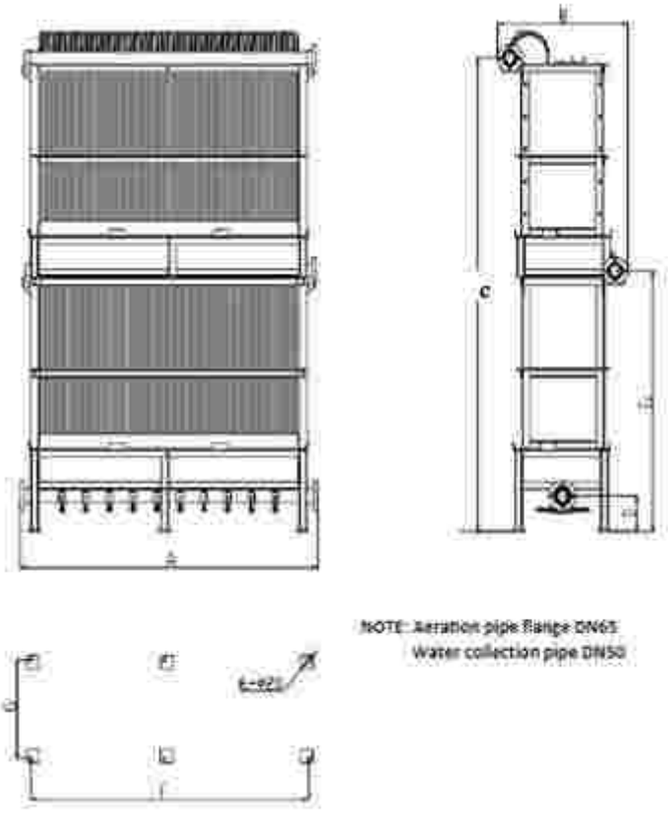
Product specification		
		1.6 M2
Model		FSMBR 16
Effective membrane area	M2	1.6
hight	MM	1810
width	MM	512
thickness	MM	14
Dry weight	Kg	5
Nomincal pore size	µm	0.1
Membrane Material		PVDF
Plate material		ABS
Air requirement	M3/Hr/Plate	≥0.72
Product performances		
Storage		Dry Storage
Design Flux	LMH	15-34 LMH
MLSS	PPM	7000 -18000
Operation Specification		
Operating Temperature	°c	5 -40 C
DO Concentration	PPM	>1
pH Range		06-09 ph
Operating Trans. Pressure	Mbar	50-200
Operating mode(permeate/relaxation)	Min	08-02 Min
Max press drop	Mbar	350

FSMBR 16



Model no.	No. of Cassettes	Membrane area(m2)	A (mm) Length	B (mm) width	C Standard height (mm)	Air Flowrate (l/min)
FSMBR 16-25	25	40	605	600	2500	300
FSMBR 16-50	50	80	955	600	2500	600
FSMBR 16-75	75	120	1305	600	2500	900
FSMBR 16-100	100	160	1655	600	2500	1200
FSMBR 16-125	125	200	2005	600	2500	1500
FSMBR 16-150	150	240	2440	600	2500	1800
FSMBR 16-175	175	280	2790	600	2500	2100
FSMBR 16-200	200	320	3140	600	2500	2400
FSMBR 16-225	225	360	3490	600	2500	2700
FSMBR 16-250	250	400	3840	600	2500	3000

FSMBR 16



Model no.	No. of Cassettes In one deck	Total cassettes	Membrane area (m2)	A (mm) Length	B (mm) width	C Standard height (mm)	Air Flowrate (l/min)
FSMBR 16-25-2	25	50	80	605	600	4400	350
FSMBR 16-50-2	50	100	160	955	600	4400	700
FSMBR 16-75-2	75	150	240	1305	600	4400	1050
FSMBR 16-100-2	100	200	320	1655	600	4400	1400
FSMBR 16-125-2	125	250	400	2005	600	4400	1750
FSMBR 16-150-2	150	300	480	2440	600	4400	2100
FSMBR 16-175-2	175	350	560	2790	600	4400	2450
FSMBR 16-200-2	200	400	640	3140	600	4400	2800
FSMBR 16-225-2	225	450	720	3490	600	4400	3150
FSMBR 16-250-2	250	500	800	3840	600	4400	3500

ATB

Designed and Developed in Germany

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