

DEERFOS MEMBRANES

The "DEERFOS MEMBRANES" name Is Synonymous With Trust.
Trust Built On Consistent Quality Reliability Products,
Technical Advancements And Excellent Customer Services.



DEERFOS MEMBRANES

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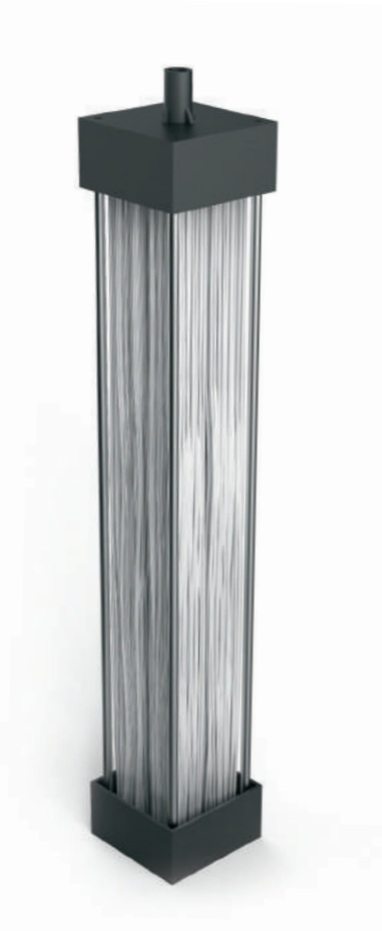
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DEERFOS MEMBARNES Submerged module

The DEERFOS MEMBRANES' submerged product is developed as high strength uniform membranes entirely by our own technology which fully removes finer solid particles, germs, intestinal parasites. We are producing high-quality membranes through the specialized manufacturing process and the stringent control procedures.

DEERFOS Submerged Module Element

Items	DFS-10	DFS-15	DFS-20
Effective Area	10 m²	15 m²	20 m²
Membrane Configuration	Hollow fiber		
Membrane Material	PVDF		
Membrane Nominal Pore size	0.2 μm		
Membrane Fiber OD / ID	2.3 mm / 0.9 mm		
Tensile strength	>30 kgf/fil.		
Design Flux	0.3 ~ 0.8 m³/m²·day		
Module Housing Material	ABS		
Module Potting Material	Epoxy + Urethane		
Operation			
Operating TMP	0.05 ~ 0.4 bar		
MLSS	3,000 ~ 12,000		
pH	1 ~ 12		
Operating Temperature	1 ~ 40 °C		



Advantages of DFM Submerged module

High Flux

Performing high flux by hydrophilization

Durability

Reinforced composite membrane which has supports.

Minimized footprint

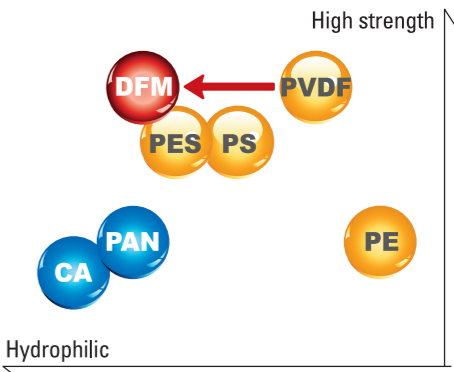
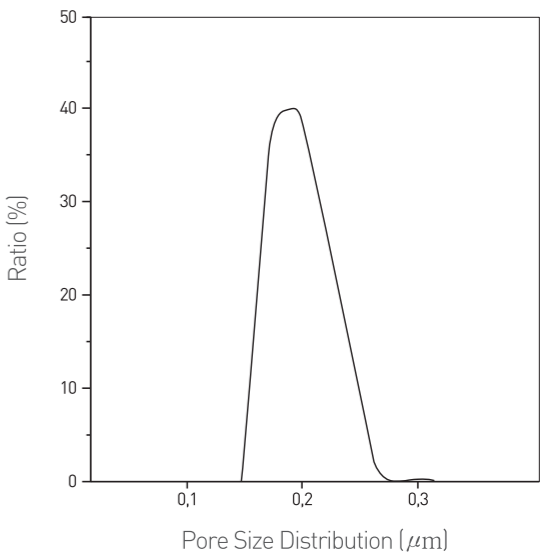
Providing flexible & compact design with block-typed modules

Chemical resistance

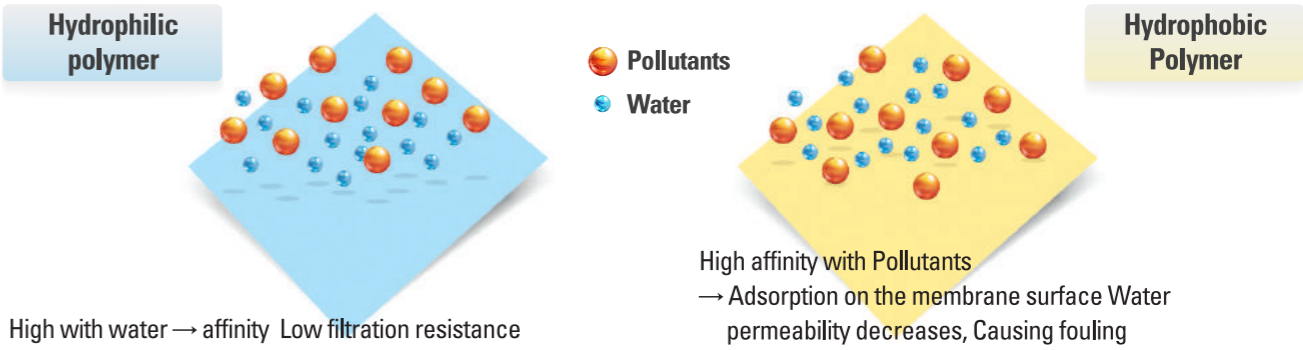
Offering high chemical resistance through PVDF membrane

Effective aeration structure

Reducing membrane fouling by air diffusers which are in lower part & central part



Improved antifouling and water permeability through enhanced hydrophilic

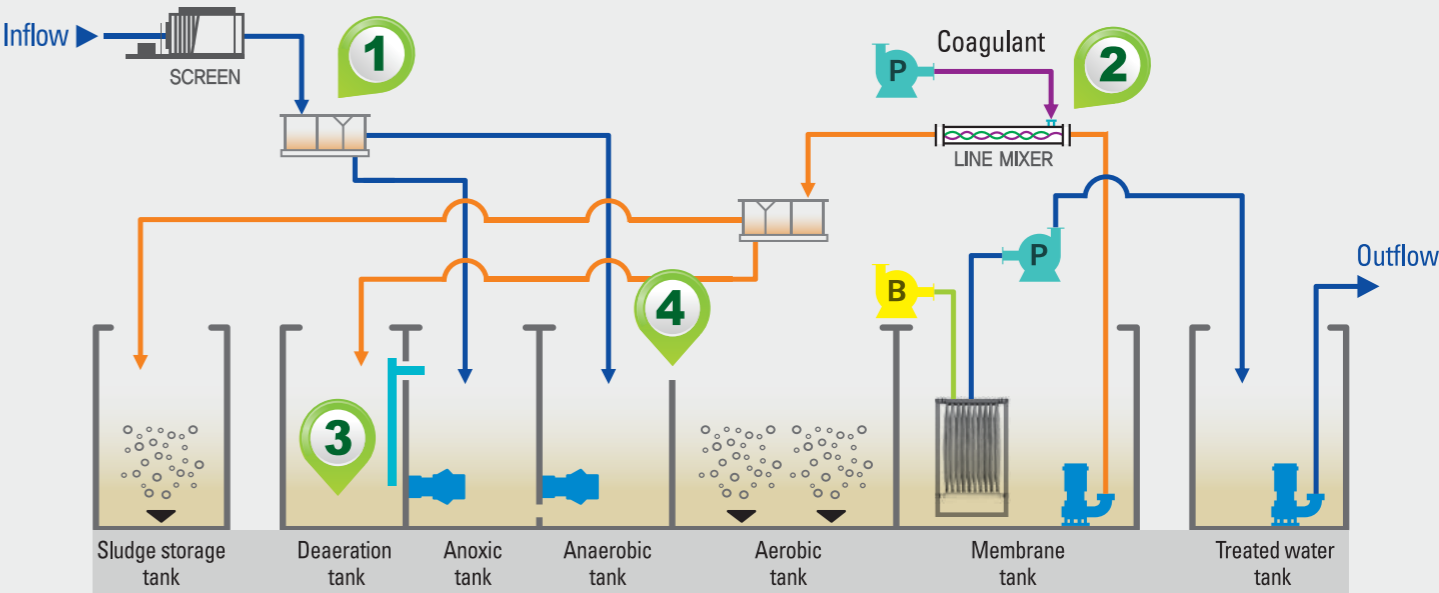


Material	Disadvantages
Hydrophobic Polymers (PVDF, PS/PES, PP, PE)	Antifouling weakness
Hydrophilic polymers (CA, CTA, PAN)	Durability weakness



Submerged module Specifications

- **Sewage treatment field**
 - Municipal wastewater treatment
 - Individual Sewage Treatment
 - Septic tanks combined with membrane
- **Industrial wastewater treatment field**
 - Organic wastewater treatment
 - Livestock, manure wastewater treatment
 - Electronic, leachate wastewater treatment
- **Water reuse field**
 - Rainwater reue facilities
 - Wastewater reuse facilities
 - Waste Water reclamation and reusing system



Advantages of DF-MBR

- 1 Dividable influent flow**
Influent flow is divided into anoxic tank and aerobic tank according to quality of the raw water. So, This process will maximize the effect of the T-N and T- P removal.
- 2 Coagulant dosed into return line**
This process will maximize the sludge thickening and the effect of the T-P removal.
- 3 Efficient DO control**
Deaeration tank will improve oxygen degassing effect, reduce the stress of the micro-organism, and maximize the effect of the –T-N removal.
- 4 Efficiently organized reactor**
It flows from deaeration tank to aerobic tank through anoxic tank without pressure maximize the process not to be needing internal recycle.(Reduction of CAPEX and OPEX)

Efficiency

Description	Inflow	Permeate water		
	Average	Water criteria	Average	Efficiency (%)
BOD	200.0	< 10	< 5.0	98.5
COD	250.0	< 40	< 10.0	96.0
SS	200.0	< 10	< 1.0	98.5
T-N	40.0	< 20	< 18.0	55.0
T-P	6.0	< 2	< 1.5	75.0
E-coli	200,000	< 3,000	< 1.0	100.0



DFS module Specification

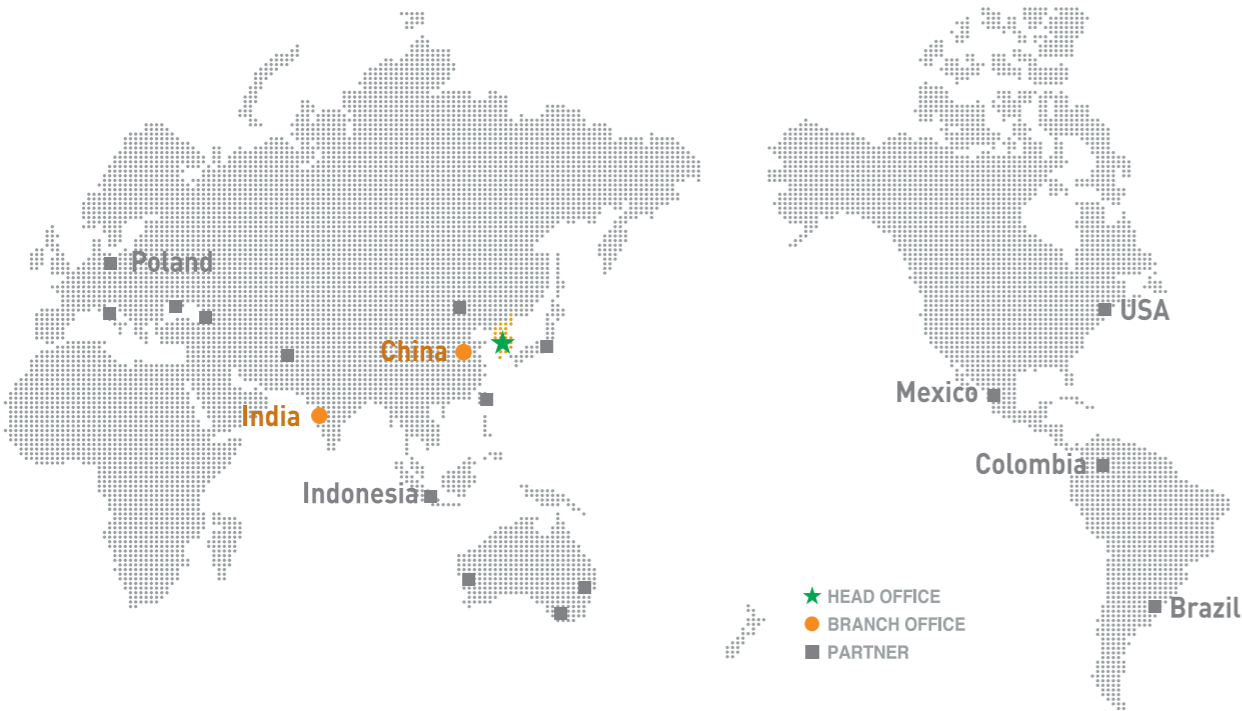
Design flux (m/day)	Model	Specification		
		Length(mm)	Width(mm)	Height((mm)
10	DFS -10 2F	516	428	1200
20	DFS -10 4F	516	656	1200
30	DFS -10 6F	516	884	1200
40	DFS -10 8F	516	1112	1200
60	DFS -15 8F	536	1132	1700
75	DFS -15 10F	536	1360	1700
80	DFS -20 8F	556	1152	2200
100	DFS -20 10F	556	1380	2200

※ Standard of sewage water
(Design flux can vary depending on feed water or system design basis.)

Application of Domestic and Oversea branch

Certification

DEERFOS MEMBRANES, located in Cheong-Ju, South Korea, is working together with two membrane manufacturers and many partners all over the world.



DEERFOS MEMBRANES
Cheong-ju



DEERFOS MEMBRANES
HANGZHOU



KAICO DEER
INDIA

