



Shanghai Sperta Environmental Technology Co., Ltd. is a high-tech enterprise specializing in producing MBR membranes and a system design and proprietary service provider. The company is registered and located in Shanghai, and the factory address is in Jiangsu Province, China.

We are CE, ISO9001 certified. With more than 100 employees distributed in different producing lines, from fiber production to casting and MBR packaging, Shanghai Sperta Environmental Technology Company is a top-class MBR production center in China.

We have the core technology for producing MBR membrane components. And a high production capacity - maximum daily production capacity of 300 pieces of MBR membrane. We aim to build a high-quality brand of MBR production and sales network all over the world.

Certificates



SHANGHAI SPERTA ENVIRONMENTAL TECHNOLOGY CO., LTD.

Why Choose SPERTA

"SPERTA" means "expert" in Esperanto. We have seen that there are many MBR membrane factories and wholesalers internationally today. However, their level of craftsmanship is still stuck in a few years ago. In fact, the technology of MBR Membrane production has been upgraded in recent years, and we - SPERTA hope our advanced technology can inject fresh blood into this market.

✓ Factory Supply

Our factory has 3 production lines dedicated to the production of MBR Membrane.

✓ Great support

Team Sperta you interface with are experienced and certified in their English language skills.

✓ Design on Demand

You provide the project information and Sperta generally will give you a solution.

✓ Quality Standards

We have a very professional quality audit process after the production is completed.



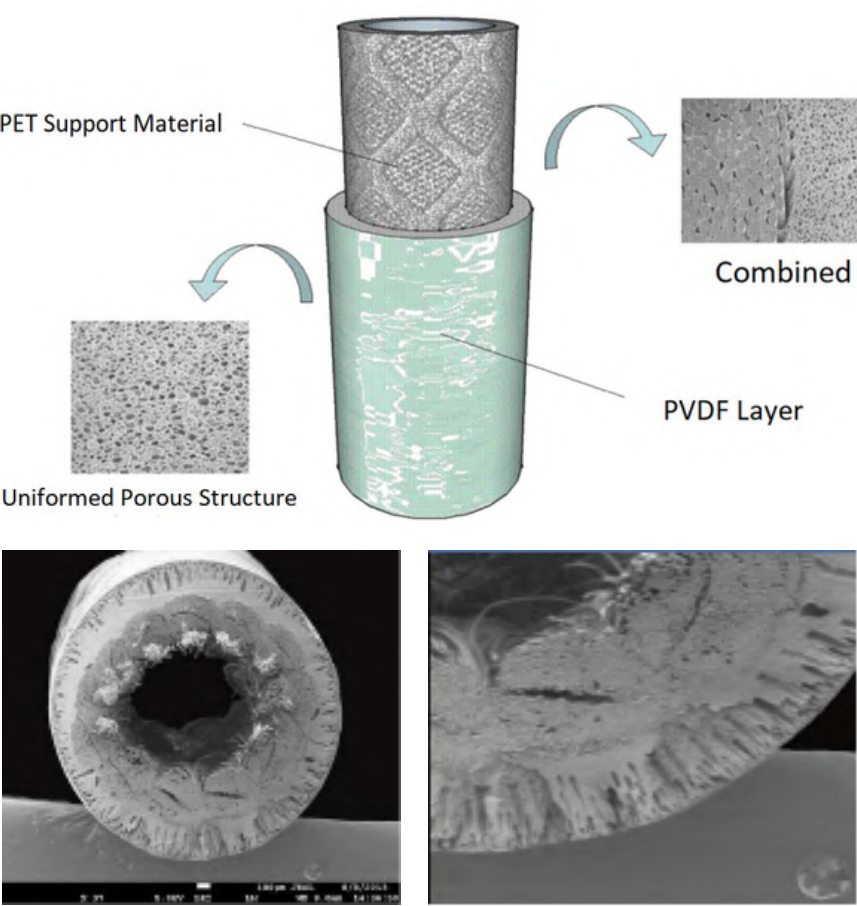
SPERTA MBR Market Network



SHANGHAI SPERTA ENVIRONMENTAL TECHNOLOGY CO., LTD.

Hollow Fiber Technology

SPERTA hollow fiber MBR membrane is made of Reinforced PVDF. After years of research and development, we successfully developed this high-performance hydrophilic PVDF product. This fiber is produced in terms of Thermally Induced Phase Separation (TIPS). With the PET inner-support material, it has a higher intensity (the tensile strength is $\geq 20.0\text{MPa}$), stronger anti-peeling condition (peeling strength $\geq 1.0\text{MPa}$), higher porosity ($\geq 60\%$), and larger flux ($\geq 200\text{L/m}^2\cdot\text{h}-0.01\text{MPa}$).



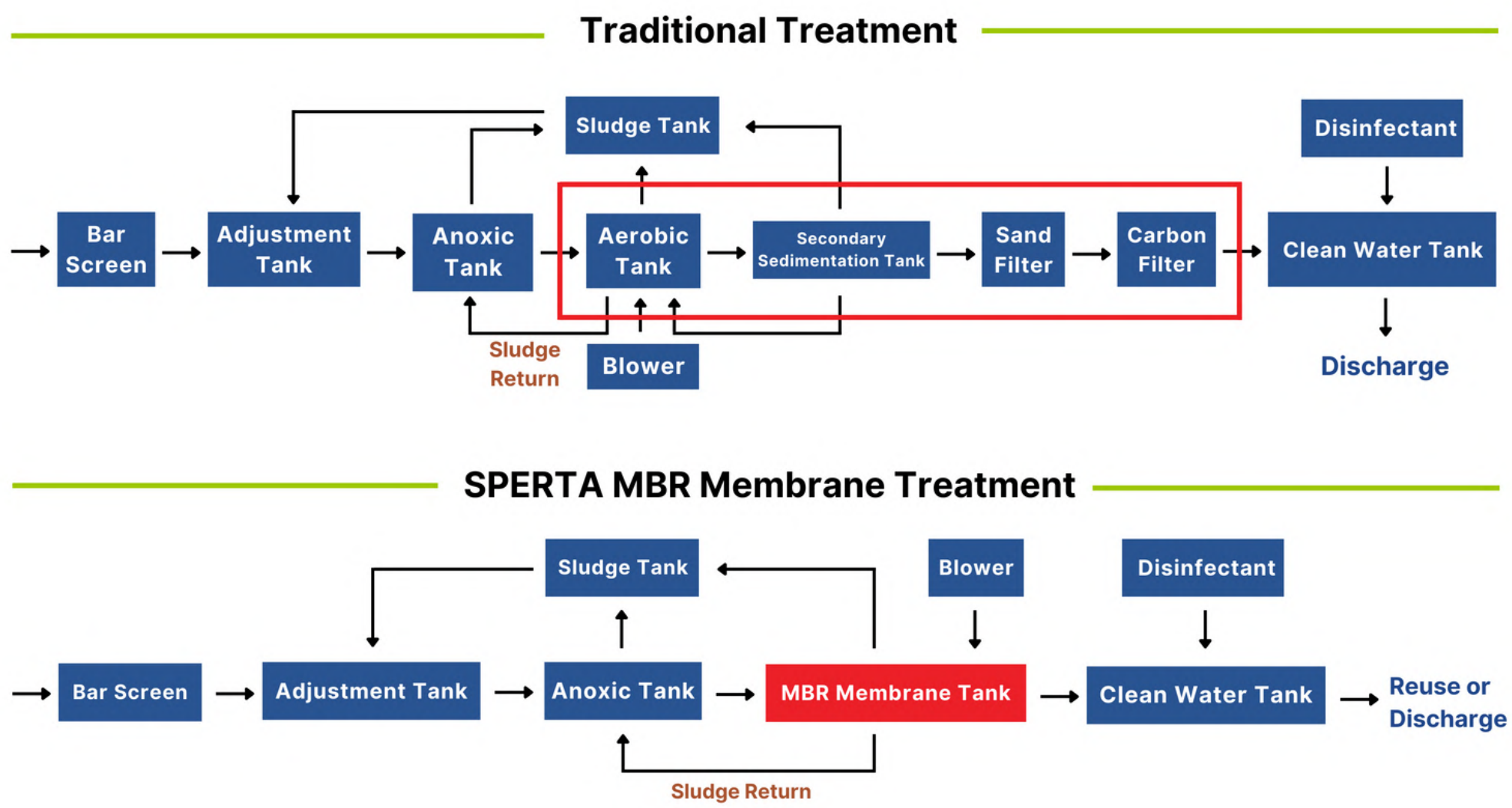
MBR Membrane Technology

MBR Membrane is an advanced wastewater treatment process that uses a membrane to remove biological pollutants from the water. The membrane allows only clean water to pass through while the pollutants are trapped and removed from the wastewater. MBR Membrane is an efficient and environmentally-friendly way to treat wastewater and improve water quality.

MBR Membrane Working Principle

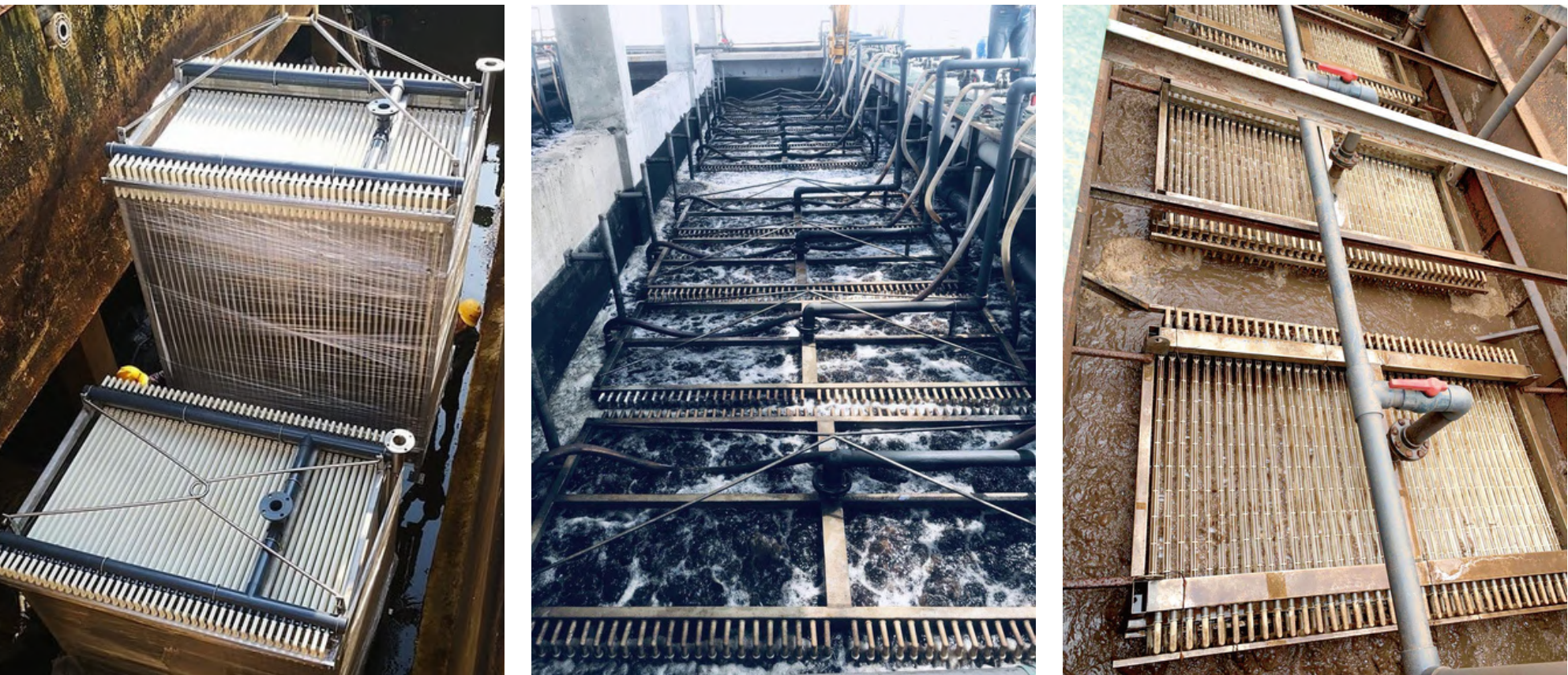
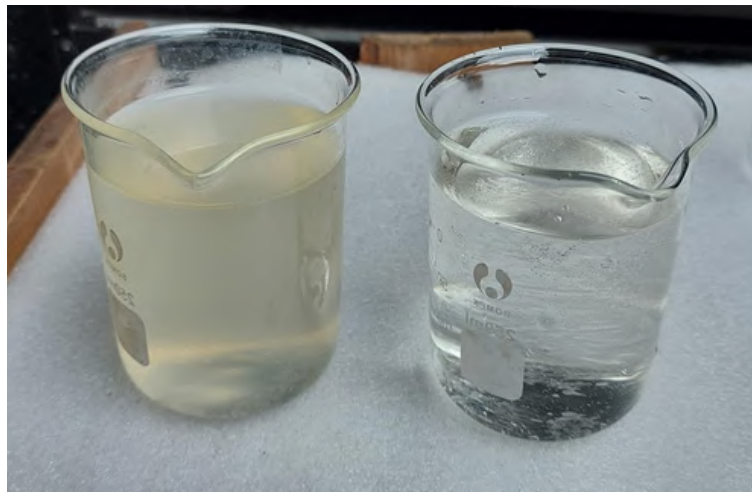


Process Comparison



Outlet Water Quality Comparison

Index	Traditional Treatment	SPERTA MBR Treatment
COD (mg/L)	<100	<30
BOD (mg/L)	<30	<8
TSS (mg/L)	<30	<1 (near zero)
Turbidity (NTU)	<2-5	<1
Bacterial (MPN/L)	1,000 - 10,000	<100



SPERTA-I Hollow Fiber MBR Membrane Element

SPERTA-I MBR membrane has a high resistance to pollutants. The structure of this type of MBR is simple but unique. It produces water with the side-stream method - on one side of the membrane is sealed, and on the other is a union connector. Due to its' height being easy to adjust(customize), it is perfect for new projects in tight spaces.



SPERTA-II Hollow Fiber MBR Membrane Element

SPERTA-II MBR membrane has stainless steel tubes on each side. They act as the membrane's supporting material and water collection pipes. Compared with other styles of the MBR Membrane, SPERTA-II is easier, more convenient to assemble on the cassette, and easier to disassemble for further maintenance and replacement. It is the ideal choice for bigger projects.



SPERTA-I Specification List

Model	MBR-020-I-30	MBR-020-I-20	MBR-015-I-20	MBR-015-I-15	MBR-010-I-125	MBR-010-I-10
Effective area(m²)	30	20	20	15	12.5	10
Size: H*L*W(mm)	2000*535*46	2000*535*46	1500*535*46	1500*535*46	1000*535*46	1000*535*46
Pore Size (µm)	0.03	0.2	0.03	0.2	0.03	0.2
Fiber Diameter (mm)	2.0 ± 0.025	2.5 ± 0.025	2.0 ± 0.025	2.5 ± 0.025	2.0 ± 0.025	2.5 ± 0.025
Flux rate (L/m²·hr)	10~30					
Membrane Material	Reinforced PVDF + ABS					
Connector Material	ABS					
Fiber Tensile (N)	200					
Bubble Point (Mpa)	>0.05					

SPERTA-II Specification List

Model	SP-MBR-II-40	SP-MBR-II-25	SP-MBR-II-20	SP-MBR-II-15	SP-MBR-II-10	SP-MBR-II-06
Effective area(m²)	40	25	20	15	10	6
Size: H*L*W(mm)	2000*1250*30	1500*1250*30	1300*1250*30	1500*680*30	1300*680*30	1125*480*25
Flux rate (L/m²·hr)	10~30					
Membrane Material	PVDF + ABS					
Supporting Material	SUS 304					
Pore Size (µm)	0.03					
Fiber Diameter (mm)	2.0 ± 0.025					
Bubble Point (Mpa)	>0.05					

Product Photos



Product Photos



SPERTA-500D

MBR Membrane Element

Sperta 500D MBR membrane is the alternative replacement for the 500D membrane in the market. It has a higher flux rate which makes it an ideal solution for high-flow applications. The membrane is also resistant to chemicals, making it a great choice for domestic and industrial wastewater treatment plants.



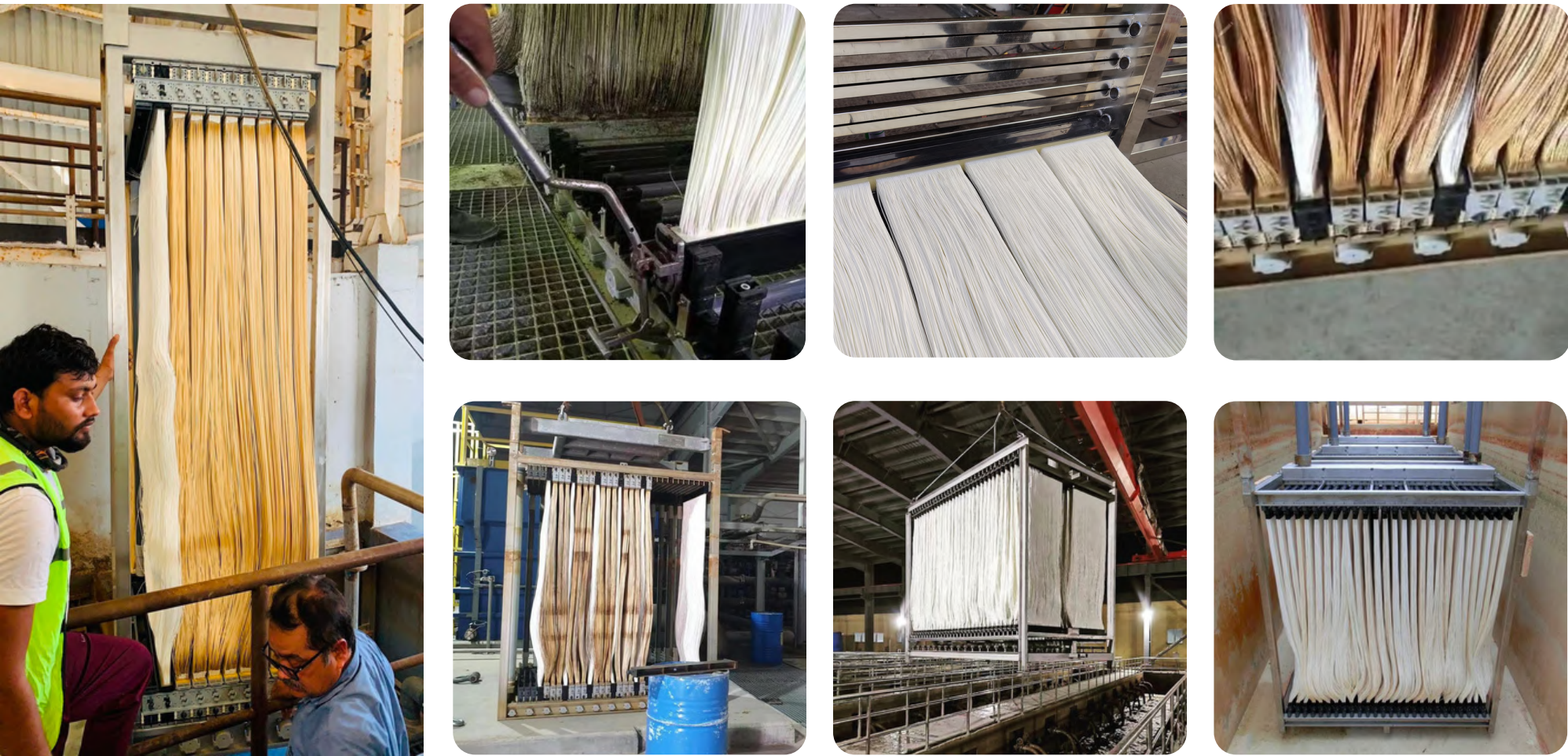
SPERTA 500D MBR Element Specification List

Model	SPERTA 500D (440)	SPERTA 500D (370)	SPERTA 500D (340)	SPERTA 500D (300)
Effective area m ² (ft ²)	40.9 (440)	34.4 (370)	31.6 (340)	27.9 (300)
Size: H*L*W(mm)	2,198*844*49	2,198*844*49	2,198*844*49	1,835*844*49
Flux rate (L/m ² ·hr)	10~30			
Membrane Material	Reinforced PVDF + ABS			
Pore Size (μm)	0.04			
Fiber Diameter (mm)	2.0 ± 0.025			

SPERTA 500D Cassette Dimensions

Product	MBR Model	MBR Element Qty (PCs)	Length (mm)	Width (mm)	Height (mm)	Aeration Type	Frame Material
SP-48M	SPERTA 500D (370)	48	2,116	1,744	2,561	Drilled Pipes	SUS 304
	SPERTA 500D (340)	48	2,116	1,744	2,561		
SP-16M	SPERTA 500D (370)	16	1,744	738	2,561		
	SPERTA 500D (340)	16	1,744	738	2,561		
SP-16Ms	SPERTA 500D (300)	16	1,744	738	2,112		

Product Photos



SPERTA Hollow Fiber MBR Membrane Module

MBR membrane module is a submerged membrane bio-reactor for wastewater treatment. Wastewater flows into the tank, and the MBR membrane module separates solid waste from the liquid. The treated water is then discharged from the tank, and the solid waste is collected at the bottom for disposal. MBR membrane modules are an efficient and cost-effective way to treat wastewater, and they are perfect for municipal or industrial applications.

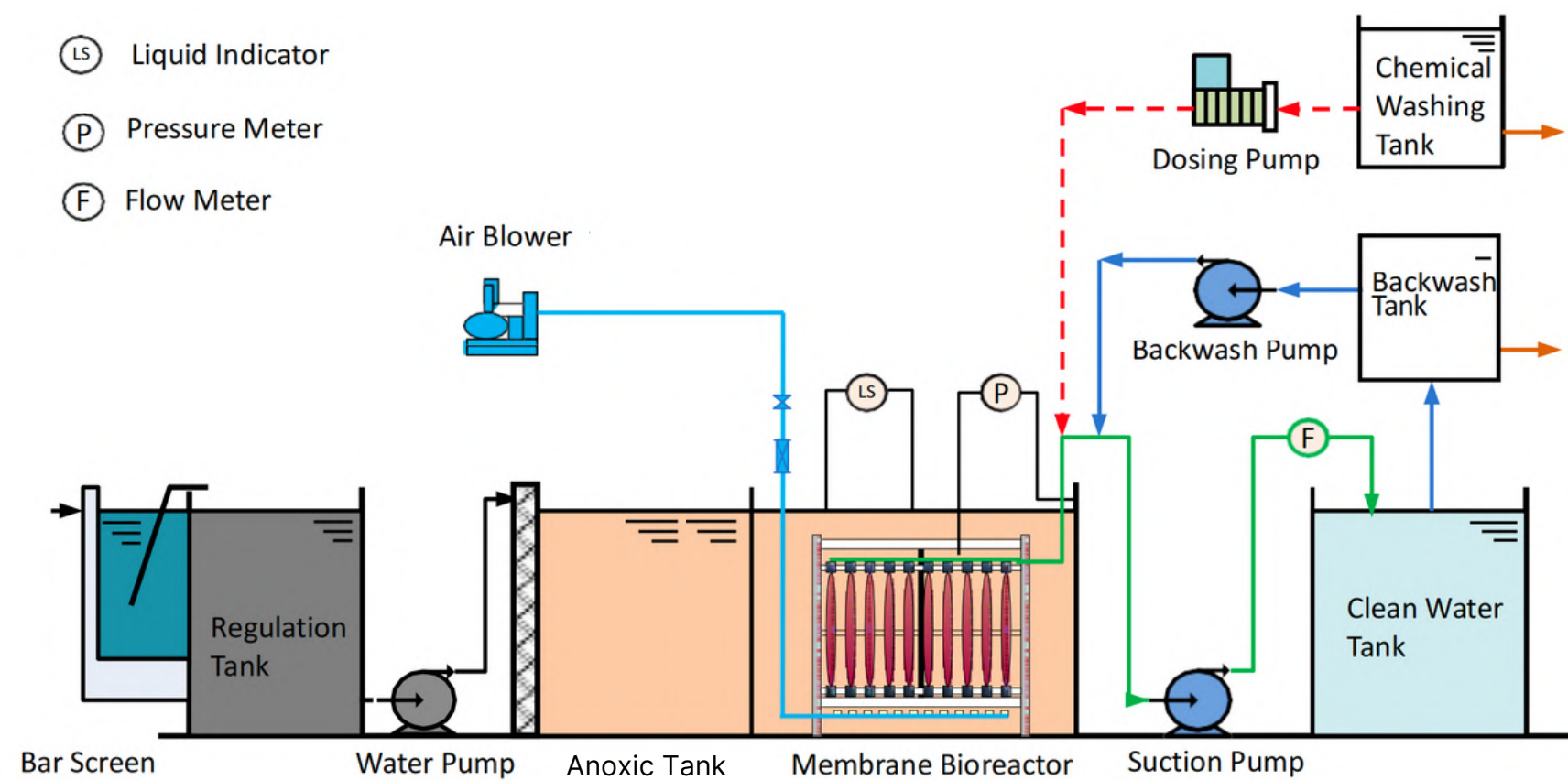


MBR Module Specification List

Capacity	Model	Effective area(m ²)	Length (mm)	Width (mm)	Height (mm)	MBR Element Qty (PCs)	Frame Material
10m ³ /day	MBR-II-060-10	36	470	645	1500	6	SUS 304
15m ³ /day	MBR-II-10-15	50	425	985	1750	5	
20m ³ /day	MBR-II-06-20	72	740	645	1500	12	
30m ³ /day	MBR-II-10-30	100	650	985	1750	10	
50m ³ /day	MBR-II-15-50	165	700	985	2100	11	
80m ³ /day	MBR-II-20-80	280	830	1550	1750	14	
100m ³ /day	MBR-II-20-100	340	965	1550	1750	17	
150m ³ /day	MBR-II-20-150	500	1100	1550	1750	25	
250m ³ /day	MBR-II-25-250	850	1730	1550	2100	34	
480m ³ /day	MBR-II-40-480	1600	2000	1550	2600	40	

*SPERTA can customize the Module's size according to the different capacities of the projects.

Standard Operation Process



MBR Operation Condition

Water Temp	10 ~ 45 (°C)
PH	2 ~ 12
MLSS	6,000 ~ 12,000 (mg/L)
Pressure	-0.01 ~ -0.03 (MPa)
Max. TMP	0.05 (MPa)
Design Flux	10~30 L/m ² ·hr
Aeration Volume	15 times the flux

Effluent Water Quality

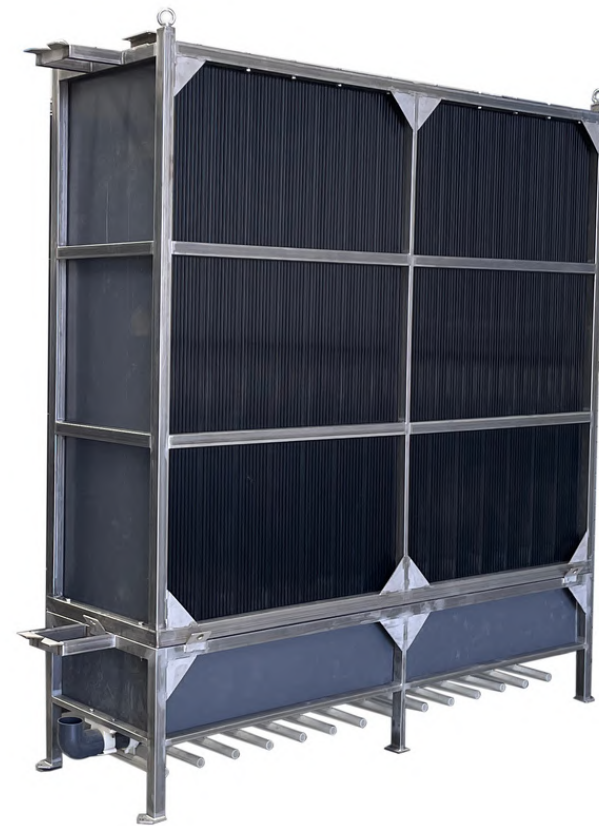
COD	<30 (mg/L)
BOD	<8 (mg/L)
TSS (mg/L)	<1 Near zero (mg/L)
TN (mg/L)	<5 (mg/L)
TP (mg/L)	<0.1 (mg/L)
FOG	<5 (mg/L)
Turbidity	<1 (NTU)

Photos for reference



SPERTA Flat Sheet MBR Membrane Module

SPERTA Flat sheet MBR membrane is a high-performance wastewater treatment membrane that uses a flat sheet design. This innovative design allows for more efficient cleaning and higher performance than traditional treatment methods. SPERTA flat sheet MBR membrane is perfect for municipalities, industrial plants, and other large-scale wastewater treatment applications.

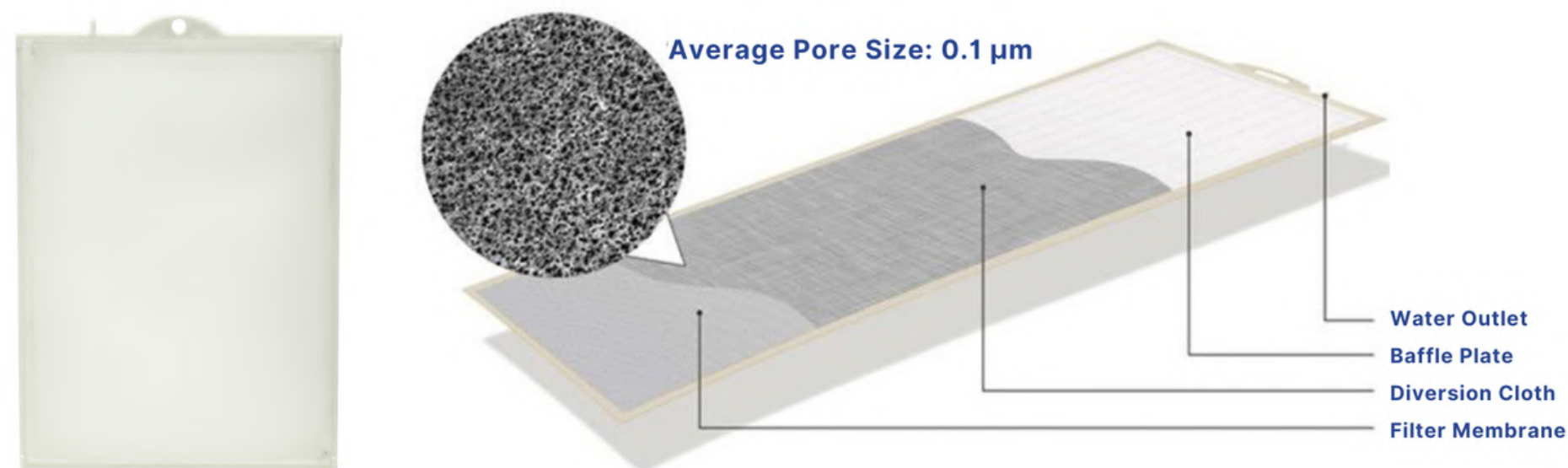


Flat Sheet MBR Module Specification List

Module Type	Effective area(m ²)	Length (mm)	Width (mm)	Height (mm)	Frame Material	Aeration Pipe Material	Collection Pipe Material
SP-FF-25	20	442	600	1,526	SUS 304	ABS+SUS304	UPVC or ABS
SP-FF-50	40	792					
SP-FS-75	60	1,142					
SP-FS-100	80	1,492					
SP-FS-125	100	1,842					
SP-FS-150	120	2,201					
SP-FS-200	160	2,921					

*SPERTA can customize the Module's size according to the different capacities of the projects.

Standard Operation Process



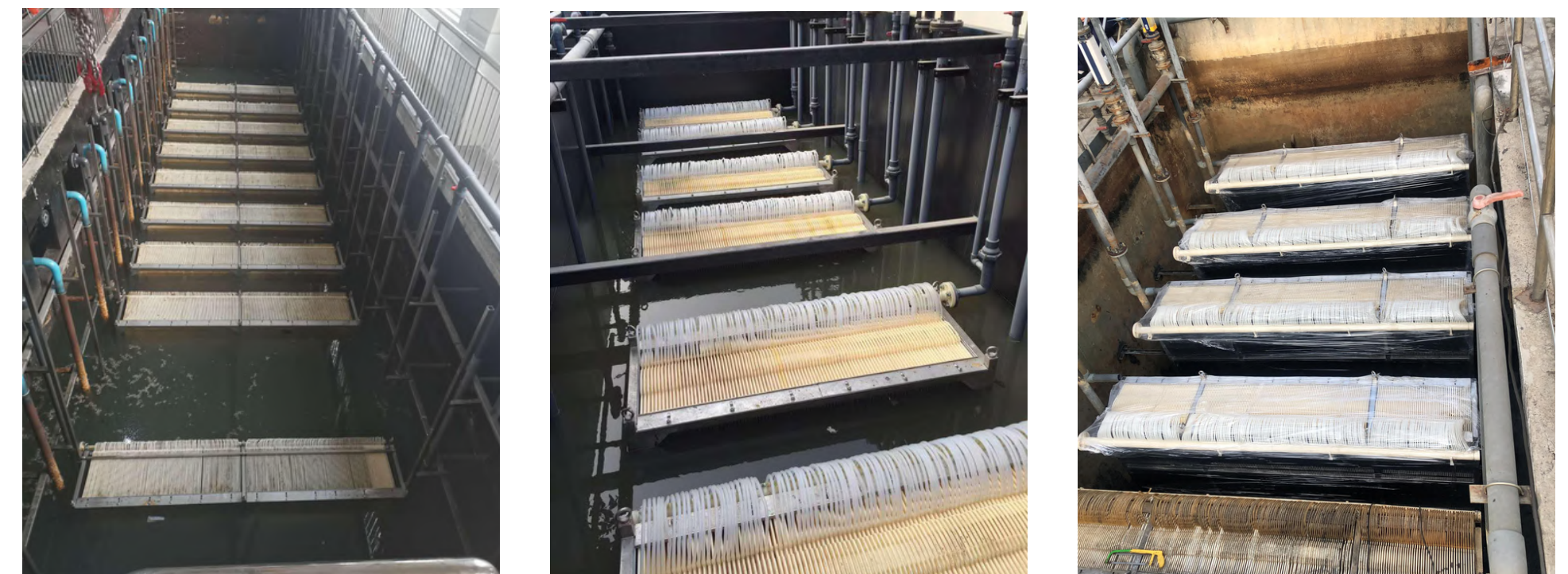
Photos for reference



Flat Sheet MBR Element Specification List

Model	FS-MBR-025	FS-MBR-80	FS-MBR-100	FS-MBR-150
Effective area (m ²)	0.25	0.8	1	1.5
Size: H*L*W(mm)	495*365*7.5	1030*490*7.5	1190*518*7.5	1780*490*7.5
Flux rate (L/m ² -day)	300~500			
Membrane Material	PVDF + PET			
Outer frame Material	ABS			
Pore Size (μ m)	0.1			
Weight (kg)	0.8	3.2	3.6	5.8

Standard Operation Process

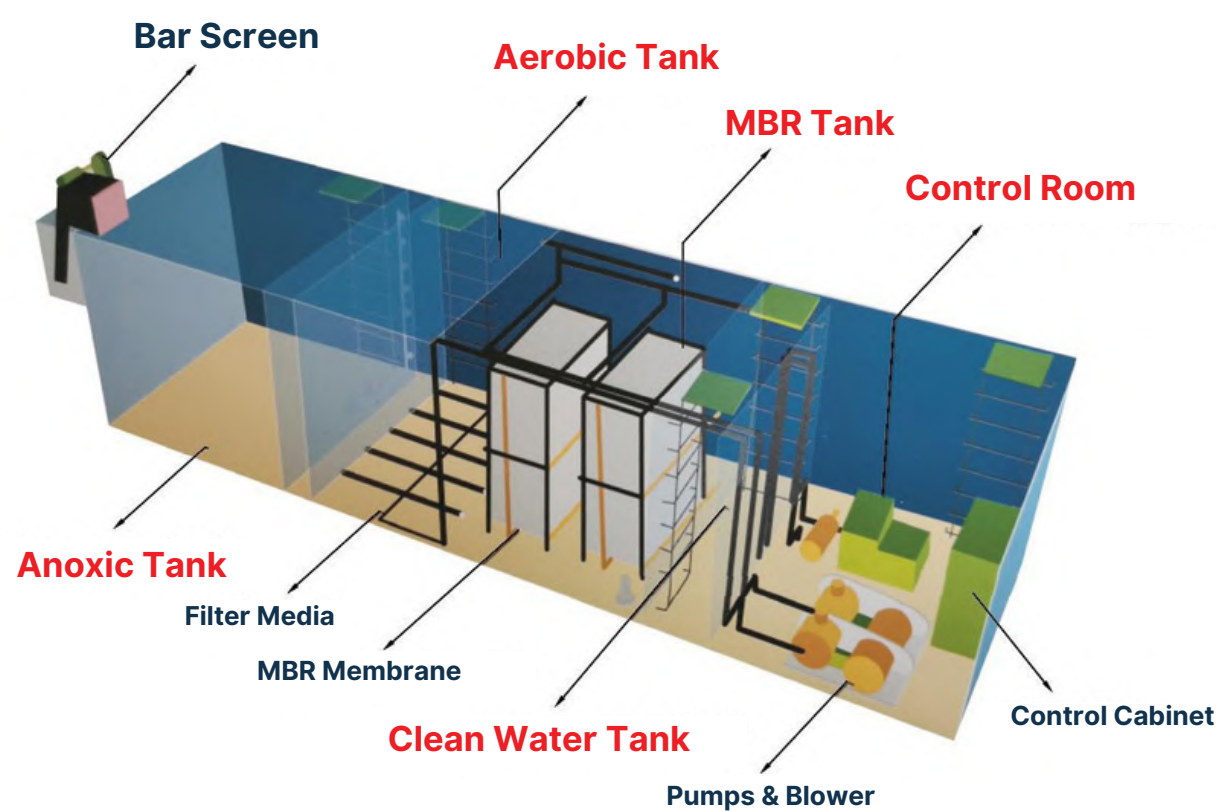


SPERTA Plug & Play Packaged MBR System

SPERTA packaged MBR system (plug & play) is a compact wastewater treatment system designed to provide reliable and consistent performance while occupying minimal space. The system utilizes a membrane bio-reactor (MBR) module to treat the wastewater, allowing for high levels of treatment while keeping the footprint small.



Standard Operation Process



Main Equipment	Qty
Lifting Pump	1 PC
Bio-filter	1 SET
RAS Pump	1 PC
MBR Membrane Module	1 SET
Suction Pump	2 PCs
Backwash Pump	1 PC
Air Blower	2 PCs
Dosing Device	2 SETs
PLC	1 SET

System Operation Condition

Water Temp	10 ~ 45 (°C)
PH	2 ~ 12
MLSS	6,000 ~ 12,000 (mg/L)
Pressure	-0.01 ~ -0.03 (MPa)
Max. TMP	0.05 (MPa)
Design Flux	10~30 L/m ² ·hr
Aeration Volume	15 times the flux

Effluent Water Quality

COD	<30 (mg/L)
BOD	<8 (mg/L)
TSS (mg/L)	<1 Near zero (mg/L)
TN (mg/L)	<5 (mg/L)
TP (mg/L)	<0.1 (mg/L)
FOG	<5 (mg/L)
Turbidity	<1 (NTU)

Package System Specification List

Capacity	Model	Equipment Size(m)	Equipment Qty (Set)	Power Consumption (kw/hr)	Package Material
10m ³ /day	MBR-S-10	3.5*1.5*2.2	1	0.87	"Q235-A" Carbon Steel Thickness 8-10mm
20m ³ /day	MBR-S-20	4.5*1.5*2.2	1	1.05	
30m ³ /day	MBR-S-30	4.8*1.8*2.2	1	1.25	
40m ³ /day	MBR-S-40	6.0*1.8*2.2	1	2.24	
50m ³ /day	MBR-S-50	6*2.0*2.2	1	2.6	
60m ³ /day	MBR-S-60	8.2*2.0*2.2	1	2.6	
80m ³ /day	MBR-S-80	10*2.0*2.2	1	3.7	
100m ³ /day	MBR-S-100	11.5*2.0*2.5	1	3.7	
120m ³ /day	MBR-S-120	12.5*2.0*2.5	1	5.5	
150m ³ /day	MBR-S-100	12*2.0*2.2	2	5.5	
200m ³ /day	MBR-S-120	12*2.0*2.2	2	5.5	

*For bigger capacity projects, please contact SPERTA's sales representative for the customized proposal.

Photos For reference



Case Reference - Municipal Wastewater



Location: Jiangsu, China

Index	Inlet Water	Required Outlet	Actual Outlet
CODCr (mg/L)	≤450	≤50	40
BOD5 (mg/L)	≤280	≤10	8
SS (mg/L)	≤280	≤10	2.5
NH3-N	≤60	≤15	3
TP	≤8	≤0.5	0.4
TN	≤80	≤15	8

Capacity: 4,800 m3/d



Location: Henan, China

Index	Inlet Water	Required Outlet	Actual Outlet
CODCr (mg/L)	≤400	≤50	37
BOD5 (mg/L)	≤250	≤10	7
SS (mg/L)	≤250	≤10	2.5
NH3-N	≤50	≤5	3
TP	≤6	≤0.5	0.2
TN	≤60	≤15	7

Capacity: 150 m3/d



Location: Xi'an, China

Index	Inlet Water	Required Outlet	Actual Outlet
CODCr (mg/L)	≤380	≤50	34
BOD5 (mg/L)	≤220	≤10	7
Turbidity (NTU)	/	≤5	0.5
NH3-N	≤35	≤5	3
TP (mg/L)	≤4	≤0.5	0.3
TN (mg/L)	≤55	≤15	8

Capacity: 3,250 m3/d

Case Reference - Industrial Wastewater



Location: Shanghai, China

Index	Influent Condition	Designed Effluent	Actual Effluent
CODCr (mg/L)	≤400	≤50	37
BOD5 (mg/L)	≤120	≤25	17
SS (mg/L)	≤250	≤10	2.5
Chroma (degrees)	≤200	≤20	10
Turbidity (NTU)	≤30	≤5	0.6

Capacity: 600 m3/d



Location: Shandong, China

Index	Influent Condition	Designed Effluent	Actual Effluent
CODCr (mg/L)	750-3500	≤100	50-80
NH3-N (mg/L)	25-47	≤20	0.5-7.2
TN (mg/L)	40-100	≤30	6-22
TP (mg/L)	1.4-2.8	≤1	0.4-0.9

Capacity: 1,000 m3/d



Location: Zhejiang, China

Index	Influent Condition	Designed Effluent	Actual Effluent
CODCr (mg/L)	≤209	≤50	16
BOD5 (mg/L)	≤93.5	≤25	5.4
SS (mg/L)	≤40	≤10	1.3
Chroma (degrees)	≤9	≤20	3
Turbidity (NTU)	≤16	≤5	0.8

Capacity: 700 m3/d

Case Reference

Oversea Projects



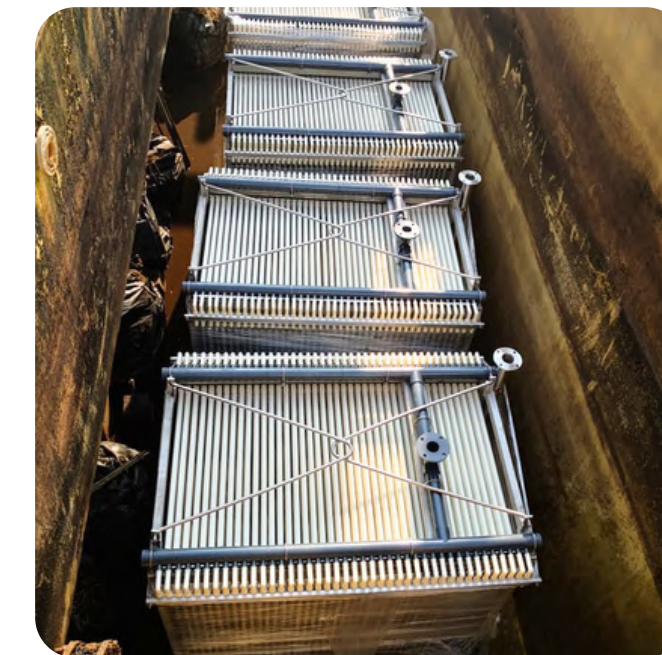
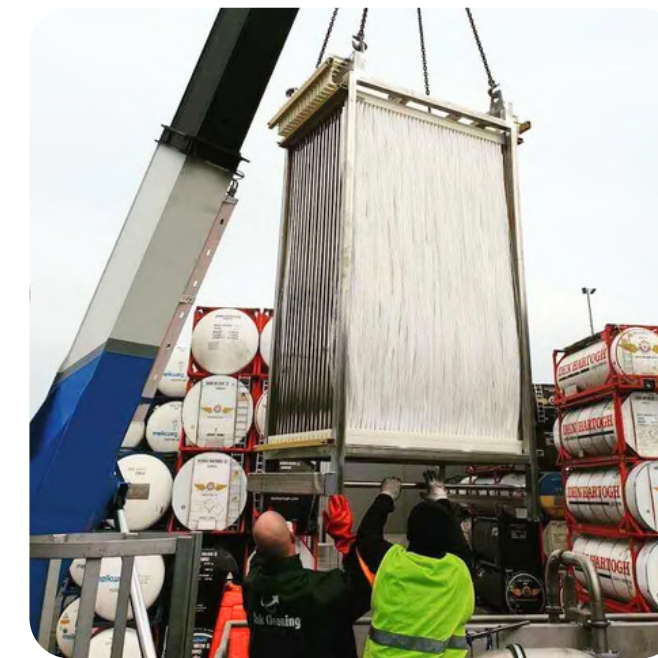
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Location: Jiangsu, China



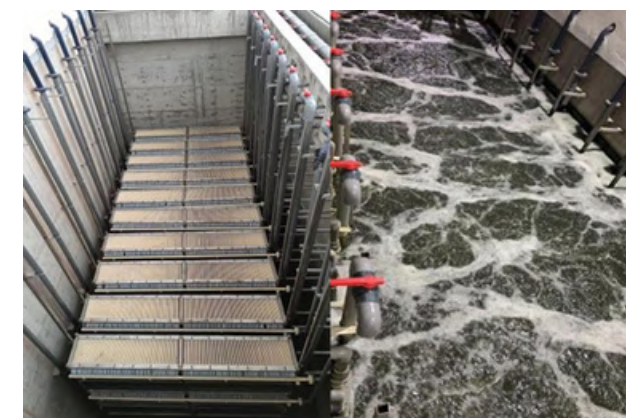
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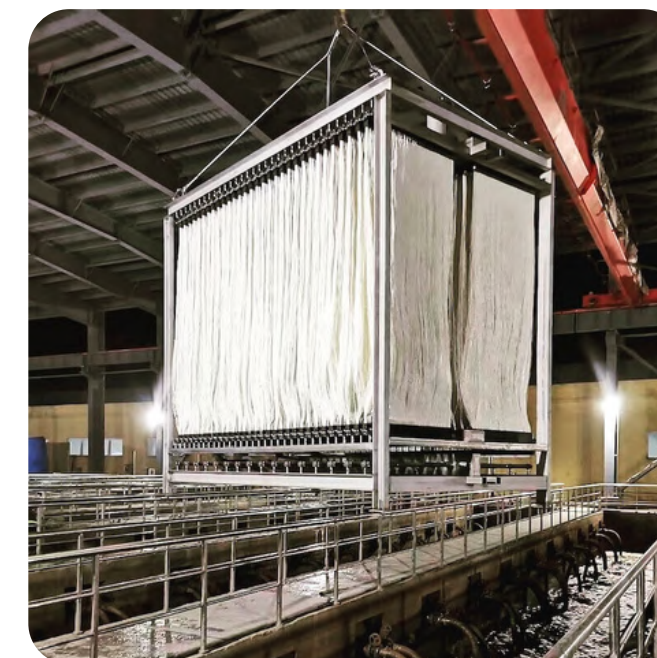
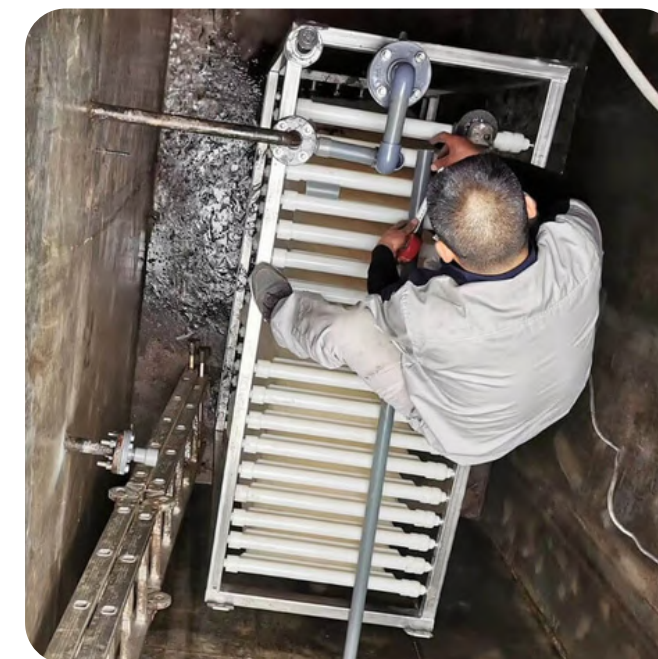
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Location: Anhui, China



Location: Anhui, China



Location: Sichuan, China



Location: Hubei, China



Location: Shanghai, China

