

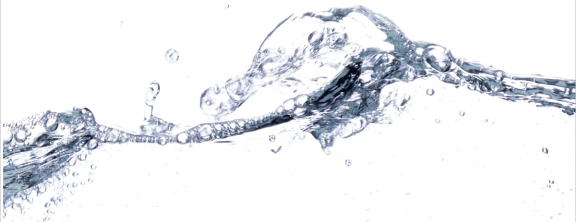
ROSUN

# MBR

## MEMBRANE BIOREACTOR

Chengdu Rosun Disinfection Pharmaceutical Co., Ltd.

*Makes the rivers and earth cleaner Helps billions of people be healthier*



Domestic  
Sewage



Hospital  
Sewage



Laundry  
wastewater



Landfill  
leachate



Printing & Dyeing  
wastewater

## Company Profile

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Chengdu Rosun Disinfection Pharmaceutical Co., Ltd. was established in 2002, and has been committed to high-end environmental disinfection products and water treatment chemicals, and dosing equipment R&D, production and sales, while providing environmental protection engineering design, construction, chemicals supply, equipment supply, professional maintenance. Products related to drinking water disinfection of residents, domestic sewage treatment, hospital sewage treatment, industrial circulating water treatment, swimming pool and high-end disinfection care six product areas.

ROSUN has an independent R&D center and high-quality scientific research personnel. In the past 16 years, ROSUN gets totally 159 intellectual property, and has obtained the awards of National High-tech Technology Enterprise; Outstanding Innovation Award in Scientific and Technological Achievements of Enterprises and Eleventh Five-Year Plan Promotion Project of National Ministry of Construction.

The company has sales network all over the country. The products are exported to Russia, Thailand, Malaysia, Indonesia, Philippines, Pakistan, Morocco and other countries. It has become the first cross-sector enterprise in China that involves in disinfection and environmental protection.



## Marketing Network

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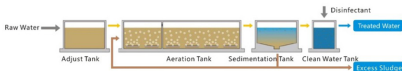
# Membrane Bioreactor MBR Technology

MBR (Membrane Bioreactor) is a membrane separation technology combining with conventional activated sludge(CAS) process. Microorganisms and macro solute will be intercepted by the membrane, so it replaces the secondary sedimentation tank by completing separation. A large number of microorganisms are intercepted, which can increase quantity of micro flora, improve the wastewater treatment capacity and efficiency, so that the effluent quality and volume load have been greatly improved, and the water can be used as reclaimed water or discharged under standards.

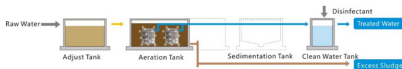
MBR is the most advantaged technology of the Reclaimed Water Reuse, Energy Conservation and Emission Reduction, Upgrading and Scale Expansion.

## Comparison

**Traditional Technology** Effluent Quality :  $COD \leq 60$  ,  $BOD_5 \leq 20$  ,  $SS \leq 20$  ,  $NH_3-N \leq 15$  ,  $pH 6.0-9.0$



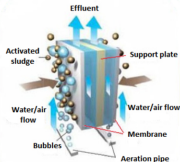
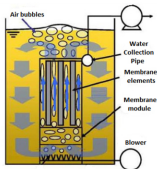
**MBR Technology** Effluent Quality :  $COD \leq 40$  ,  $BOD_5 \leq 10$  ,  $SS = 0$  ,  $NH_3-N \leq 5$  ,  $pH 6.0-9.0$



## Work Principle

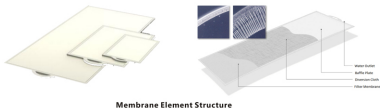
The pollutant in waste water will firstly biodegradation in bioreactor, at the same time, because of the function of the pressure difference, the water and some small molecule solute which smaller than the aperture of the membrane in the mixed liquid will pass the membrane, and then become the treated water.

Microorganisms and macro solute will be intercepted by the membrane, so it replaced the sedimentation tank by complete its water treatment and separate function.



## PVDF Flat Sheet Membrane

Use the PVDF as main material, Rosun flat sheet membrane with good chemical stability, fouling resistance and mechanical strength, it has different types according to its efficacy area.



Membrane Element Structure

## Advantages of Flat Sheet Membrane

### Advanced material:

The main material of the membrane is PVDF, which has excellent chemical stability, permeate flux, permeate quality, and fouling resistance.

### Better outlet water quality:

Pore size of Rosun flat sheet membrane is around 0.1 micron, and with advanced membrane technology increased the effective orifice area of the membrane surface then lead to excellent permeate flux and permeate quality. The output water can be reused directly.

### Higher activated sludge adaption:

Compared with the hollow fiber curtain membrane whose activated sludge adaption is only 4000-6000mg/L, Rosun flat sheet membrane can adapt 8000-15000mg/L activated sludge.

### Longer service life:

Compared with hollow fiber curtain membrane, Rosun flat sheet have a longer service life 3-6 years compared with 1-3 years service life of hollow fiber curtain membrane's.

### Less land space:

The MBR reactor tank can replace the function of secondary sedimentation tank with aerobic tank, it can save 30% of land space.

### Easy to operate and maintenance:

The flat sheet membrane can be just replaced each single damaged piece without change the holder when damage and replacement, replace just need 15 minutes.

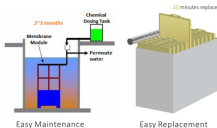


Rosun Flat Sheet Membrane



Hollow Fiber Membrane

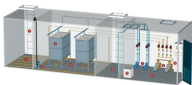
### Anti-fouling performance after 3 months



Easy Maintenance

Easy Replacement

## MBR Integrated System



Vertical type



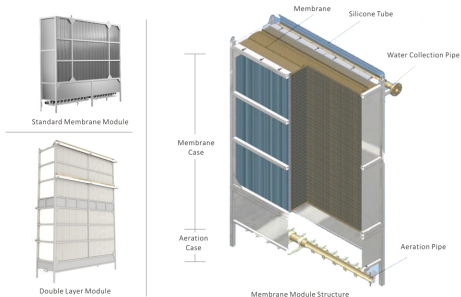
Semi-buried type

### Basic Components

1. Pre-Treatment Tank
2. Inner Ladder
3. Sludge Pump
4. Reaction Tank
5. MBR Membrane Module
6. Recycled Tank
7. Lift Pump
8. Air Distributor
9. PLC System
10. Disinfection Device
11. Control Room

## MBR Membrane Module

Rosun MBR membrane module is combined with membrane element box and the aeration box. The membrane outlet is combined by water collection tube in membrane element box, and each membrane element can be individually installed and unloaded for easy maintenance. For the upgrade of the traditional technology, just install the membrane module in aeration tank is ok.



## Flat Sheet Membrane Type

Type		RF-025	RF-080	RF-100	RF-150
Effective area(m <sup>2</sup> )		0.25	0.8	1.0	1.5
Size: H*W*T(mm)		495*365*7.5	1030*490*7.5	1190*518*7.5	1780*490*7.5
Production rate(L/pcs. day)		100~230	320~480	400~600	600~900
Material of components	Membrane	PVDF+PET			
	Outer frame	ABS			
Pore diameter (μm)		0.1			
Aeration rate ( L/min. pcs )		8	8	10	12
Weight(kg)		0.8	3.2	3.6	5.8
Effluent turbidity(NTU)		≤1			
Effluent SS (mg/L)		≤3			

## Membrane Module Type

Type	RF-080-100	RF-100-100	RF-150-100	RF-150-II-100
Effective area(m <sup>2</sup> )	80	100	150	300
Size: L*W*H(m)	1.7*0.7*1.6	1.7*0.7*1.8	1.7*0.7*2.4	1.7*0.7*4.4
Numbers of membrane (pcs)	100	100	100	200
Production rate(m <sup>3</sup> /day)	32~48	40~60	60~90	165~210
Weight(kg)	420	480	710	1300
Material of stand	304 stainless steel			
Material of aerator pipe	ABS or 304 stainless steel			
Material of collector pipe	UPVC or ABS			

## Application Cases



Domestic

Hospital

Landfill Leachate

Laundry



Printing & Dyeing

Steel Circulating Water

Electroplating

Tobacco

## CONTACT US

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Website



Alibaba Shop