

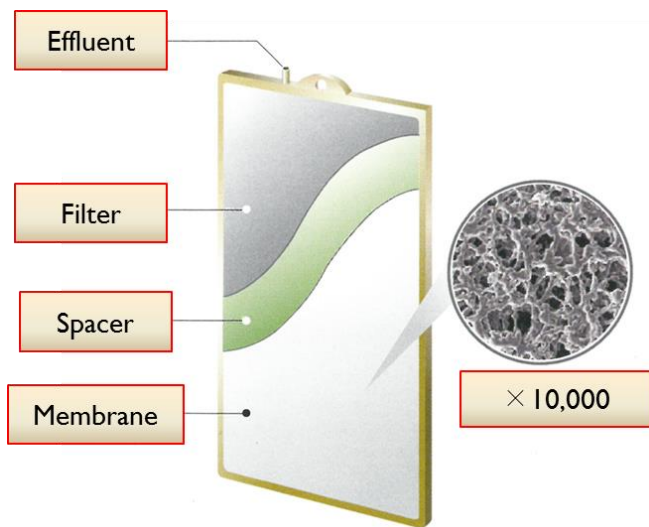


FLAT SHEET MEMBRANE BIO-REACTOR DC TECH KOREA

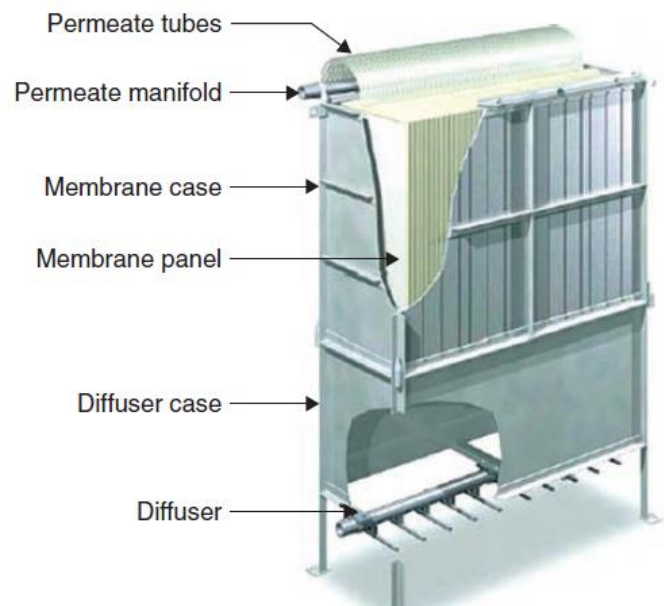
Membrane Bioreactor (MBR) is the combination of a membrane process with a biological wastewater treatment process, the activated sludge process. It is now widely used for wastewater treatment.

MBR processes can produce effluent of high quality enough to be discharged to coastal, surface or brackish waterways or to be reclaimed for urban irrigation. Other advantages of MBR over conventional processes include small footprint, easy retrofit and upgrade of old wastewater treatment plants.

Structure of membrane element



Parts of membrane module



FEATURE

Space saving

- ✓ No sedimentation pond and a filtration machine
- ✓ High-load operation is permitted.
- ✓ Membrane volume efficiency is high.

Energy saving

- ✓ Element structure developed independently makes membrane separation possible at low pressure.
- ✓ Filtrations by suction or gravity reduce running cost.

Simple maintenance and control

- ✓ Use of the precision filtration membranes provides stable water quality.
- ✓ Membrane surface is washed by aeration washing to maintain the rated
- ✓ Filtration performance for an extended period of time.

High concentration operation is possible

- ✓ Higher conc. operation is possible than hollow fiber membrane
- ✓ Concentrate the sludge is possible.

Particulars	Unit	Membrane element			YCW-type
		TC 10A05	TC 05A05	TC 03A02	YCW-20
Effective membrane area	m ²	0.8	0.4	0.1	20
External dimension (W x H x T)	mm	490×1000×6	490×490×6	240×340×6	1156×1142×D124
Nominal pore size	μm	0.4			
Standard filtration flux	m/day	0.3 ÷ 1.0			
Material		Membrane: Chlorinated Polyvinyl Chloride (C-PVC) Spacer: Polypropylene and Polyester (PP, PE) Reinforcing frame: PVC, ABS			
Operating temperature range	°C	0 - 55	0 ÷ 40		
Operating pressure range	Pa	-4.9×10 ⁴ ÷ 0			
Applicable pH range		3 ÷ 10			

Model	Element		External dimension a x b x c (mm)
	Number	Membrane area (m ²)	
TC10A05-50	50	40	950 × 750 × 1520
TC10A05-75	75	60	1300 × 750 × 2047
TC10A05-100	100	80	1650 × 750 × 2047
TC10A05-125	125	100	2000 × 750 × 2047
TC10A05-150	150	120	2350 × 750 × 2047
TC10A05-200	200	160	3100 × 750 × 2047

* Element: TC10A05

* The volume of treated water depends on the condition of its use.

* For improvements, the external dimension may be changed without prior notice.

Flat sheet MBR involves immersing a membrane element in water in the tank and filtering it by suction and gravity. On the membrane surface, suspension particles form a dynamic filter layer. Furthermore, the aeration cleaning from the bottom of the tank prevents membrane blockage and thus allows for long operation in high-concentration wastewater.

Membrane modules in tank



Membrane elements

