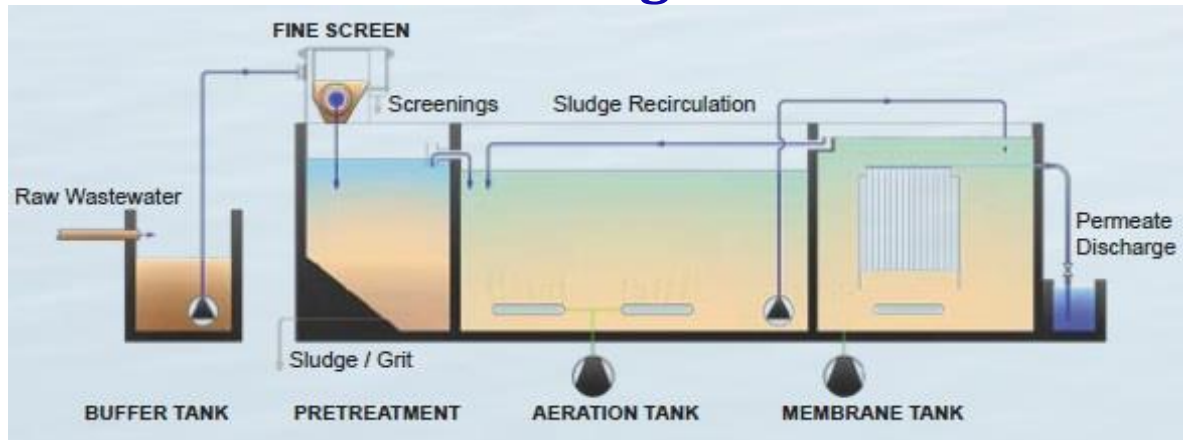


## MBR Package Plant



**A membrane bioreactor (MBR) is a wastewater treatment process combining membrane filtration with biological treatment. This innovative technology offers several advantages over the conventionally activated sludge process. Among these advantages are higher biomass concentration, elimination of the settling unit and improved effluent quality.**

It transforms sewage to clear and high quality water. The small footprint of the treatment technology enables the systems to be integrated in natural, picturesque surroundings and to treat wastewater for irrigation use.

Membrane system has the core technology inside the MBR which consists of polypropylene plates with a polymeric membrane on each side. The membrane is welded on rigid frame. The module reduces virus & bacteria by 99.9999%.

Filter plates are continuously aerated through bubble diffusers to keep them clean. The membranes don't need regular chemical cleaning except one or two maintenance cleanings per year.

We are developing compact package systems for MBR plants, so that up to 1000 m<sup>3</sup>/day can be filtered in one 40-foot ISO container. The inside tanks are made of stainless steel sheets.

### TREATMENT PROCESS

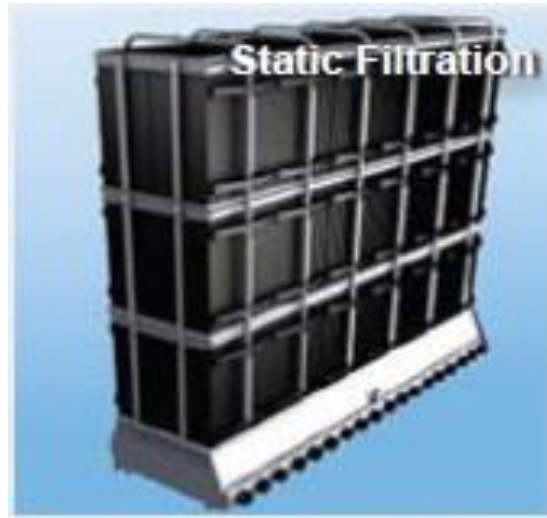
#### **1. Pretreatment :**



#### **2. Dynamic Filtration :**



### 3. Static Filtration :



### 4. Aeration :



### 5. Treated Water :





### **FEATURES :**

- Fast delivery and start-up due to the mobile concept
- Throughputs from 1 m<sup>3</sup>/day to 1000 m<sup>3</sup>/day
- Higher throughputs possible through modular arrangement of units
- German quality equipment in stainless steel housing
- Compact design
- High packing density
- Effluent with irrigation water qualities (no microorganisms, no smell)
- Very good price-performance ratio
- Low maintenance and minimum operation requirements
- Minimum construction work on site and easy to relocate

### **APPLICATIONS :**

- Municipal wastewater
- Educational institutions and healthcare applications
- Hotels, labour and refugee camps, parks and military bases
- Building complexes (Offices, Shopping Centers, Small Townships)
- Industrial wastewater, e.g. food and beverage applications

### **SCOPE :**

- Raw wastewater pump stations
- Pretreatment
- Biological treatment systems
- Membrane filtration units
- Permeate storage tank
- Sludge treatment
- Odour control system
- Mobile power generator