Ptech

ENERGY - WATER - SEWAGE TREATMENT TECHNOLOGY

Datasheet

MBR

Membrane Bio Reactor

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Description

MBR units with the production of Ptech GmbH are up-to-date and technological products with high efficiency in treatment. Membrane Bioreactor (MBR) is widely used as an efficient compact technology for municipal and industrial wastewater treatment. The process is typically a combination of biological treatment method (aeration) of suspended solids, known as activated sludge, and the use of membrane filtration cartridges, typically low-pressure microfiltration (MF) or ultrafiltration (UF) membranes. Membranes are used to perform the solid-liquid separation function of oxygen-rich wastewater. There are two general types of MBR systems: vacuum (or gravity-operated) and pressure-operated systems. An "MBR System" must be a complete and integrated membrane unit (subsystems) with the necessary components to ensure that the process operates as intended.Pre-Treatment, Anoxic unit, Aerobic unit, Compact Membrane Filtration Unit, and Disinfection unit are the five areas that an MBR system typically consists of.

High-Quality Treated Wastewater

This can be stated that the permeability of the membrane, in another term the pore size (<0.5 um), results in treated wastewater with much higher clarity and reduced pathogen concentration compared to other alternative processes.

The MBR process provides treated and disinfected water of high quality with sufficiency to be discharged at sensitive discharge zones or to be recovered for processes such as urban irrigation, city sewage lines, or toilet reservoirs. Additionally, the outlet water quality is better, so that in other words it is of high enough quality to be directly fed into the reverse osmosis process.

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Preferred Industries

- *Industrial and Municipal*
- *Food and Beverage*
- *Petroleum Industry*
- *Pharmaceutical Industry*
- *Pulp and Paper Industry*
- *Textile Industry*
- *Landfill Field Leachate*
- *Ship Waste*

Advantages

- *Generally 30-50% smaller and occupies less space than traditional activated sludge facility with secondary or tetriary filtration.*
- *It is a modular process that provides exceptional treatment quality capable of meeting the strictest water quality requirement, flexibility with increased capacity and ease of configuration.*
- *It requires robust and reliable operation with low disinfection needs.*
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