

WASTEWATER TECHNOLOGIES

Reclaiming Clean Water

High Performance BioMBBR™

BioMBBR™ MBBR / IFAS Biological Treatment System

Innovative, reliable and cost effective, the BioMBBR™ MBBR /IFAS System from Wastewater Technologies, LLC is a fixed-film process using thousands of patented designed biomass carriers to create a large protected surface area for biofilm growth. As a leader in fixed-film wastewater processes for more than 20 years, Wastewater Technology designs the BioMBBR™ plants with the potential to increase the media loading to meet changing influent conditions. This design philosophy is very beneficial to new projects where wastestreams are not fully characterized at time of design.

Flexible Answers. Improved Biological Treatment Efficiency.

The Wastewater is led to the BioMBBR™ treatment reactor where biofilm, growing within the internal structures of the biomass carriers, degrade the pollutants. Excess biofilm sloughs off the biocarrier in a natural way. The fixed-film biomass is attached to carriers designed to remain in the aeration basin even under hydraulic upset conditions. An aeration grid located at the bottom of the reactor supplies oxygen to the biofilm along with the mixing energy required to keep the biocarriers suspended and completely mix within the reactor. Treated water flows from reactor through a grid or a sieve, which retains the MBBR™ biocarriers in the reactor.

Combining the two processes, MBBR and IFAS, allows for the efficient treatment of any wastestream thus achieve the required effluent permits. The flexibility of the BioMBBR™ process allows for treatment to meet typical 20/20 mg/l BOD₅/TSS down to enhanced nutrient removal (ENR) limits. Combining the process with Wastewater Technologies BioDRUM™, BioDISC™ or Membrane systems allows for attainment of even stricter discharge limits.

BioMBBR™ Benefits:

- Improved oxygen transfer and reduced operating cost
- Reduced maintenance, elimination of plugging, reduced cost
- Allows for expansion/upgrade without additional tankage; reduced cost
- Nitrogen removal without increased hydraulic retention time

1. CONTROL PANEL
2. INFLUENT SCREEN
3. EQUALIZATION TANK
4. DENITRIFICATION TANK
5. BioMBBR™ TANK
6. BioMBBR™ MEDIA
7. SLUDGE HOLDING TANK
8. POST DENITRIFICATION TANK (Background)
9. RE-AERATION TANK
10. SECONDARY CLARIFIER
11. UV DISINFECTION
12. EFFLUENT

