



BioMOD™ EGSB

Expanded Granular Sludge Bed

Aquatech's EGSB (Expanded Granular Sludge Bed) technology offers an elegant, cost-effective method of anaerobic wastewater treatment to a broad range of industries due to its ultra-high sludge (COD) handling capability (up to 45,000 kg/day) and methane biofuel production rate (up to 660 m³/hr). Additionally, BioMOD™ EGSB's proprietary multi-settler reactor design enables uniquely high sludge retention capability, resulting in energy-neutral or energy-positive process conditions and lowered cost of operation, post-treatment and discharge.

www.aquatech.com



BioMOD™ EGSB

Robust. Modular. Efficient.

Aging infrastructure and rising demand for high capacity biological water treatment have created a push towards increasingly efficient, compact and affordable solutions. Systems meeting these demands must also be easy to install, and accommodate a wide range of feed water conditions. Therefore, modular systems are essential for enabling companies to manage their wastewater with maximum savings and efficiency. Aquatech's BioMOD EGSB is one such solution consistently delivering all of these benefits due to its scalable design, rapid production and advanced configuration.

Anaerobic digesters are increasingly being adopted by industrial end-users due to their ability to treat both suspended & soluble COD with methane biofuel as byproduct. BioMOD EGSB achieves such performance by maximizing contact efficiency through use of optimized sludge settler design & high-intensity mixing of biomass with a recirculating COD stream. Overall, this technology delivers unique value to clients through its small footprint, maximized sludge retention and high-purity biofuel production.

Package Features

- Various models are available to accommodate a range of flows and COD loads
- Reactors operate in either series or parallel for flexibility in effluent quality and flow rate, respectively
- Large height to diameter ratio suitable for sites with limited space
- Preassembled reactor and associated equipment are transported to site within a single container
- BioMOD EGSB can be seamlessly integrated with pre- and post-treatment



Typical Applications

Breweries
Dairy Processing
Wineries / Distilleries
Food Manufacturing
Pulp & Paper
Pharmaceutical
Chemical
Municipal

BioMOD™ EGSB

Operational Benefits

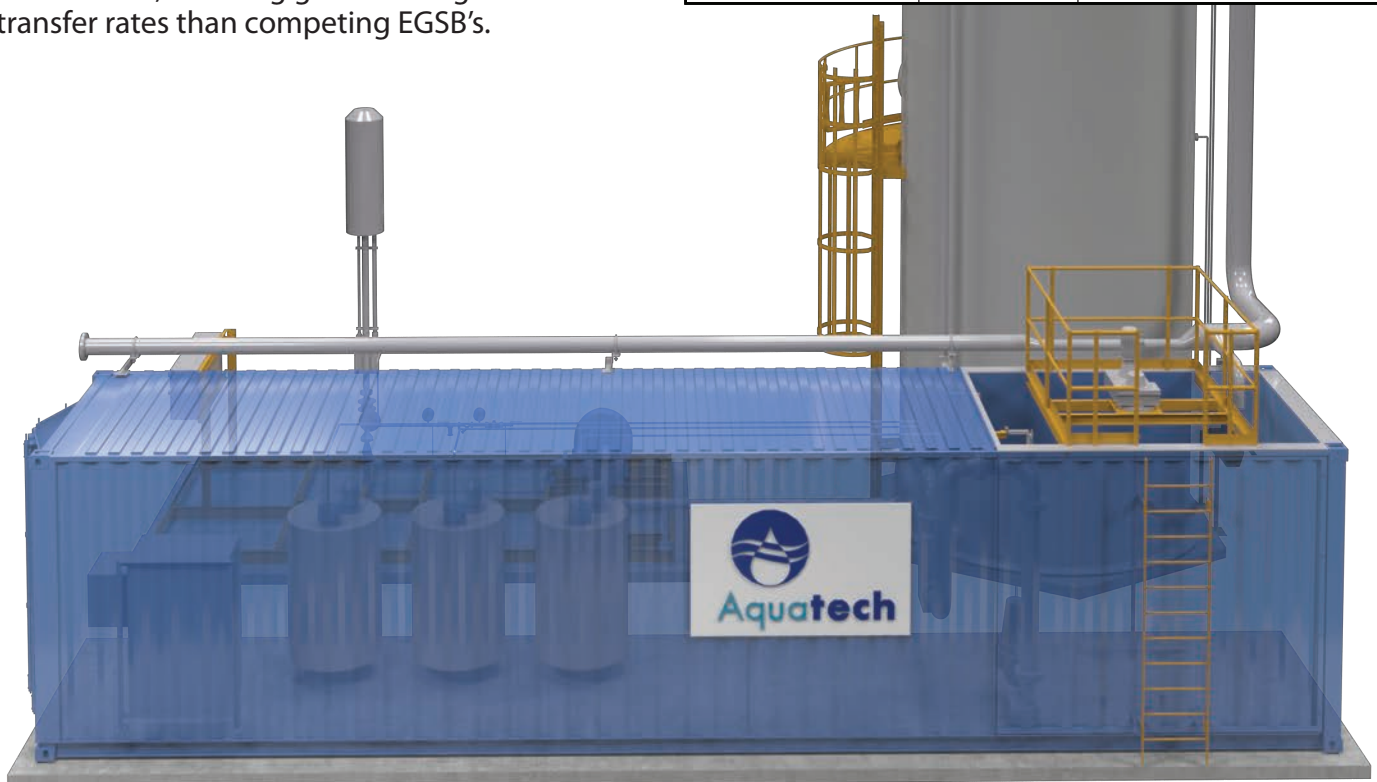
- Capable of handling COD loading of 25-30 kg/m³/day (or 45,000 kg/day), on par with industry leading sludge bed reactors.
- The settlers have been constructed with regards to reactor zone to optimize sludge settling rates.
- Low retention time required even when handling ultra-high COD load.
- Consistently low suspended solids of <50 mg/L.
- Highly efficient operation with no carryover of granular sludge bed.
- High methane generation up to 0.31 m³/kg COD (or 660 m³/hr) suitable for reuse as energy-rich biofuel.
- System works at high up-flow velocities of 1.5-8.2 m/hr, enabling greater sludge mass transfer rates than competing EGSB's.

BioMOD™ EGSB Configurations

Parameter	Unit	EQ3010	EQ3425	EQ3436	EQ3450	EQ3475
Load	kg COD/day	1000	2500	3600	5000	7500
Height	Meters	7.20	12.00	12.00	12.00	12.00
Diameter	Meters	3.00	3.40	3.40	3.40	3.40
Reactors	#	1	1	2	3	4
Biogas Production	m ³ /hr	15.00	36.50	52.50	72.90	109.40

Outlet Characteristics

Parameter	Unit	Value
Purity of Biogas	% Methane	65 - 70
COD Removal	% Efficiency	80 - 90



BioMOD™ EGSB

The Aquatech Advantage

- Reduced life cycle costs due to energy-positive potential with minimal chemical consumption
- Airtight design prevents odor emissions, making it suitable for facilities near developed areas
- Consistent product quality regardless of COD concentration & hydraulic load variance
- Superior reactor design and sludge retention due to extensive operational experience with sludge settling technology
- Enhanced automation enabling ease of operation
- Optional integration with direct solar energy
- Optional downstream filters

