

Bio²Bloc[®]

Floating Attached Growth Bio-Reactor



Bio²Bloc was developed for aerobic wastewater retention tanks, basins or lagoons that can benefit from fixed-film treatment. The Bio²Bloc system has been in service since 1999 in municipal and industrial WWTPs. The system has performed successfully in removing BOD and ammonia where alternatives would have been too expensive or would have taken too long to implement.

Bio²Bloc provides a rich and stable environment to bolster existing microorganisms. However, unlike an RBC, the aerated media beds are in constant contact with the wastewater and are completely aerated by a highly efficient aeration system. Each Bio²Bloc module is filled with thousands of pieces of bio-media where, during normal operation, a healthy biomass is formed by a supply of wastewater and air produced by the fine bubble membrane diffusers located on the bottom of each bio-chamber.



As with any fixed-film biological contactor, the units will tend to become overgrown with organisms after a period of time. When this happens the patented Bio²Bloc has a separate coarse-bubble system, valved from the shore, to slough the media bed and clear the chamber for renewed growth.

- Marine-grade aluminium construction for long service life
- High efficiency diffuser design
- In-situ cleaning of bio-media
- Wet installation into existing treatment systems
- Excellent cold weather ammonia removal efficiency
- Individual units serviceable without interrupting treatment
- Ideal for upgrade of activated sludge systems, SBR's, tanks or lagoons

Gurney Environmental Ltd.

EAIS House Oldmedow Road Hardwick Industrial Estate
King's Lynn Norfolk PE30 4JJ UK

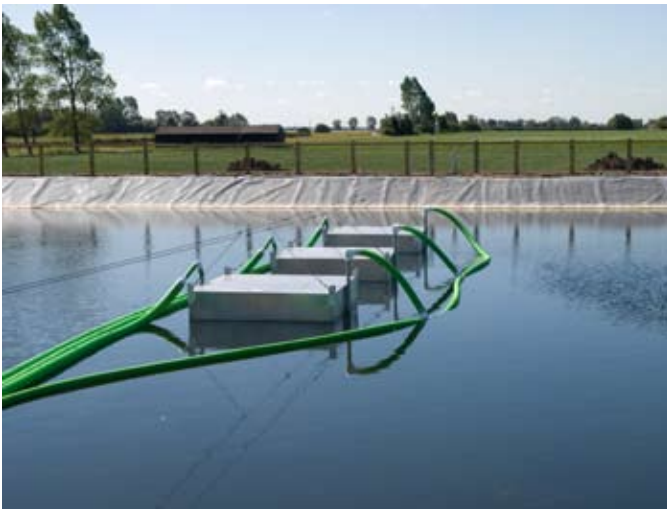
T: +44-(0)1553-776202 • F: +44-(0)1553-776335

E: info@GurneyEnvironmental.com • W: www.GurneyEnvironmental.com



Bio²Bloc[®]

Floating Attached Growth Bio-Reactor



Each Bio²Bloc module is designed to be deployed individually or in series to remove varying pollutant loads. They diffuse a high level of dissolved oxygen into surrounding wastewater through the media bed.

The system is designed to individual application specifications and is easily installed using a light-duty HIAB truck or small crane and floated into position.

Low-Temperature Nitrification

Bio²Blocs have been successfully used to maintain nitrification in cold northern climates by creating the stable, oxygen-rich, and immobilised microenvironment favoured by the nitrifying bacteria.

The Bio²Bloc system can be sized to eliminate as much ammonia as required to meet effluent requirements. Successful performance of Bio²Bloc systems have been achieved through complete winter seasons at WWTPs in upstate New York and northern Pennsylvania in the United States.



Specifications

Specifications are for each Bio²Bloc module. Multiple configurations available Data provided below is for an average unit.

	Bio ² Bloc B4	Bio ² Bloc B9
Dry Weight	550 kg	1,200 kg
Construction Materials	MGA	MGA
Depth	1.2 m	2.75 m
Length	1.52 m	1.83 m
Width	1.22 m	1.83 m
Float Depth	0.3 m	0.3 m
No of Fine Bubble Diffusers	2	4
No of Coarse Bubble Diffusers	2	2