

Bio²Bloc System

Modular Nitrification/Denitrification



US Pat No. 6348147

FBC Technologies' Bio²Bloc system is designed to bring the proven benefits of fixed-film treatment to any aerobic-based system. Expand the treatment efficiency and capacity of any lagoon, tank, package plants or activated sludge system with Bio²Bloc technology.

Installed in over 30 treatment plants in the United States and the United Kingdom, the Bio²Bloc system has been in service since 1999. Recognized as a dependable method of removing ammonia, the system is designed for installation with no downtime to operations.

The Bio²Bloc system is modular, and is configured to meet your exact nitrification/denitrification requirements. Unit construction is also very flexible. ...units have been constructed in volumes ranging from as little as 40 cf to as large as 320 cf. (average units range from 60 to 80 cf volume, each).

Unlike an RBC or trickling filter, the aerated media beds in a Bio²Bloc are permanently immersed in water, and aerated by an efficient fine bubble diffusion system. When the media bed becomes laden with an overgrowth of biomass, the Bio²Bloc's dual diffusion system can be used to quickly backflush each unit by the simple manipulation of air system control valves on the shore.

Energy requirements for the system are minimal. Each Bio²Bloc requires 15 SCFM for normal operation in the nitrification mode. In denitrification, the diffusers are not operated, and mixing equipment is activated to circulate water and nitrate through the media beds. The system can be toggled off and on from an aerobic to anoxic...and back to aerobic modes to accomplish TKN removal objectives.



Flotation Compartment filled with Dow® Buoyancy Billets and Sealed for long service life



Bio²Bloc units **FLOAT** into place. System is moored between cables from shore to shore.

Specifications (for 60 cf unit example)

Dimensions: 5'L x 4'W x 4'D
Air Req't: 15 SCFM per unit
Installation Weight: 1,800 lbs.
Constr. Material: SS 304
Biomass Surface Area: 3900 Sq.Ft.