

Floating Lateral Systems

Bulletin Brief

Floating lateral systems can be employed in many applications and have many benefits. Benefits include ease of installation, such as installation without having to drain a basin. This allows the system to continue to operate and units can be installed over uneven floors, eliminating the need for dredging. Other benefits of a floating lateral system include easy access and often time's lowest cost for installation.

Lagoon and earthen basin type aeration basins are particularly well suited for application of floating lateral and floating diffuser components.

Technical Presentation

Floating diffused aeration systems are finding more acceptance throughout the world in municipal and industrial bio treatment systems and aeration mixing applications. The floating diffuser concept is very simple:

1. Diffuser air supply piping is designed to float on the liquid surface.
2. Diffuser units are hung a constant distance below the floating air piping system. This provides uniform pressure to all diffuser units for proper air distribution
3. The floating air lateral (piping) system provides buoyancy and structural support for the diffuser units to maintain them at their proper position.
4. Diffuser units can be suspended above the floor or can sit on the floor depending on the application.
5. Diffuser units that are suspended are particularly attractive as they allow installation into existing basins, which are filled with water and/or sludge. Wet installation is a particular benefit of a floating diffuser system.
6. Systems that have significant sludge deposits or uneven floors can make effective use of the floating diffuser systems. These diffusers installed at a fixed distance below the liquid surface produce uniform pressure throughout the system and allow proper air distribution even if the floor of the basin has a major variation in elevation or structural capacity.
7. The floating aeration system allows 100% access to all components without dewatering the basin and without taking the process out of service. Only a floating lateral system allows this flexibility of installation and/or operation.

8. Floating aeration systems generally involve lowest installed cost for aeration systems into lagoons or low intensity aeration or mixing applications.

Please review information on floating lateral systems and contact EDI for engineering support and technical assistance in developing optimized solutions for your lagoon and low F/M aeration mixing systems. Lagoon and earthen basin type aeration basins are particularly well suited for application of floating lateral and floating diffuser components.

For specific information on proper design and evaluation of your existing system contact Environmental Dynamics, Inc. at 573-474-9456.