

E.A. Aerotor Plant



Extended Aeration/Complete Mix Process



LAKESIDE

EQUIPMENT CORPORATION

Water Purification Since 1928



The Lakeside E.A. Aerotor Plant

The E.A. Aerotor Plant provides a simple, efficient, economical method to treat municipal and industrial wastes. The E.A. Aerotor Plant's compact structure makes it particularly suitable for small communities, housing developments, trailer parks, schools and industrial applications, and is available for sites with an average flow rate between 0.01 and 0.5 mgd.

Unlike typical small package plants, the E.A. Aerotor Plant incorporates all components of a large scale, extended aeration/complete mix process in conjunction with final clarification. The E.A. Aerotor Plant is constructed in a concentric common wall design. The outer loop utilizes the Closed Loop Reactor (CLR) process for extended aeration, while the inner area incorporates the Spiraflo Clarifier for final settling.

Plant Design

The E.A. Aerotor Plant is custom-designed to provide optimum performance at the lowest possible cost with the CLR and Spiraflo tailored to meet specific requirements at each installation. To save space and reduce installation costs, the equipment is set in a common wall design. Concrete tank construction is ideal for in-ground E.A. Aerotor Plant installation to minimize maintenance costs because sand blasting or repainting is not required. The plant is also available with fabricated steel construction or a combination of steel and concrete.

Denitrification can be achieved by adding a Lakeside mixer to provide complete mixing during the anoxic phase. The CLR tank can be designed with two concentric channels for stand-by capacity, allowing efficient treatment for large seasonal flow variations and promoting biological nutrient removal (BNR) with varying oxygen input. Each aeration channel can independently discharge to the clarifier and is controlled by its own adjustable weir.



Lakeside uses standard parts for equipment construction, making replacement and service convenient.

Dual Channel E.A. Aerotor Plant

The E.A. Aerotor treats a broad range of organic and hydraulic loads and with its common wall design, the E.A. Aerotor has a small footprint.

Plant Operation

The E.A. Aerotor Plant provides the same treatment results as stand-alone Closed Loop Reactor Processes. Activated sludge can reside in the reactor basin up to 24 hours in the extended aeration process, followed by continuous clarification using the Spiraflo Clarifier.

Treating a broad range of organic and hydraulic loads, the E.A. Aerotor removes as much as 96% BOD and SS and provides as much as 99% nitrification.

Magna Rotors

A vital component of the CLR process is the horizontal, bladed rotor aerator. Lakeside's Magna Rotor Aerator provides oxygen and mixing to the basin with reliable operation and high efficiency.

- Complete mixing for aeration basins
- Greater O₂ transfer than any other mechanical surface aerator
- Shaft mounted drives allow flexibility for speed changes and easy access for maintenance and operator convenience

Controls

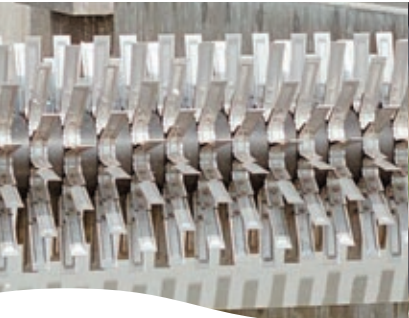
The E.A. Aerotor Plant reduces labor and maintenance costs with all operation and control equipment easily accessible from the access bridge. Controls for the Closed Loop Reactor and Spiraflo Clarifier are easy to use. Operators can control the amount of dissolved oxygen in the reactor basin by adjusting the reactor weir. The rate of return sludge to the reactor basin is adjusted by simply changing the air lift pump.

Submersible Mixers

By adding a Lakeside mixer to the CLR process, denitrification capabilities are enhanced while maintaining liquid velocity. Mixers can also reduce power costs in unusually low flow start-up conditions where oxygen requirements are well below mixing needs.



POP-I Medium Speed Mixer



Magna Rotor



Spiraflo Clarifier

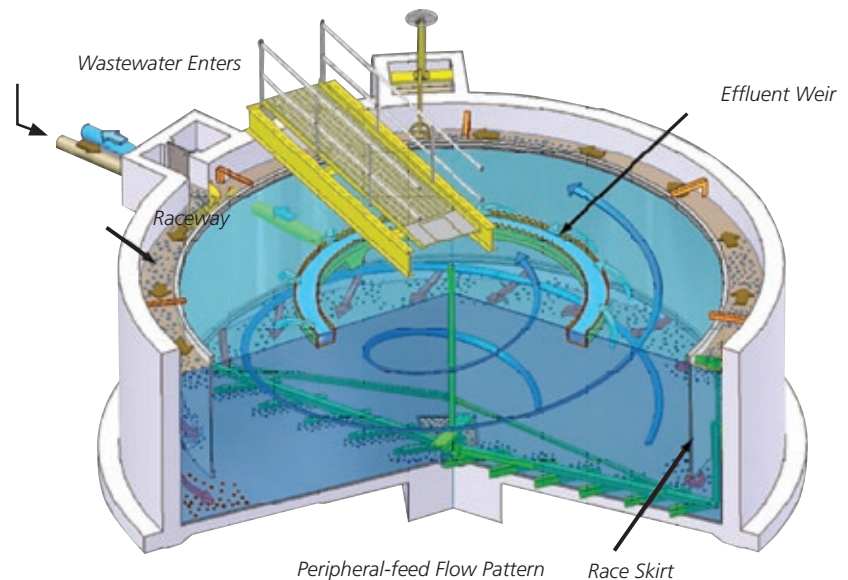


D.O. Control

Spiraflo Clarifier

The Lakeside Spiraflo Clarifier's peripheral-feed design provides the best hydraulic flow pattern and minimizes many problems associated with centerfeed hydraulics. Both full-scale and model testing conducted by independent laboratories have confirmed that the Spiraflo Clarifier performs two to four times better hydraulically than centerfeed clarifiers.

- Produces highest quality effluent
- Improves sludge collection and removal
- Promotes full utilization of tank volume
- Eliminates short-circuiting
- Handles peak flows effectively
- Retains suspended solids in the sludge blanket
- Eliminates sludge wall creep that is created by the waterfall effect in centerfeed clarifiers



Treatment equipment and process solutions from Lakeside Equipment Corporation

Lakeside offers a wide range of equipment and systems for virtually all stages of wastewater treatment from influent through final discharge. Each process and equipment item that we supply is manufactured with one goal: to reliably improve the quality of our water resources in the most cost-effective way. We have been doing just that since 1928.

Screw Pumps

- Open Screw Pumps
- Enclosed Screw Pumps

Raptor® Screening

- Fine Screen
- Micro Strainer
- Rotating Drum Screen
- Septage Acceptance Plant
- Septage Complete Plant
- Complete Plant
- Multi-Rake Bar Screen
- Wash Press

Screen and Trash Rakes

- Hydronic T Series
- Hydronic K Series
- Hydronic Multifunctional Series
- Hydronic H Series
- Catronic Series
- Monorail Series
- HY-TEC Screen
- CO-TEC Screen
- RO-TEC Screen

Grit Collection

- SpiraGrit
- Aeroductor
- In-Line Grit Collector
- Raptor® Grit Washer
- Grit Classifier
- H-PAC®

Clarification and Filtration

- Spiraflo Clarifier
- Spiravac Clarifier
- Full Surface Skimming
- MicroStar® Filter

Biological Treatment

- CLR Process
- Magna Rotor Aerators & Accessories
- Sequencing Batch Reactors
- Package Treatment Plants
- Submersible Mixers & Recirculation Pumps

Hauled Waste Receiving Systems

- Raptor® Septage Acceptance Plant
- Raptor® Septage Complete Plant

Package Headworks Systems

- Raptor® Complete Plant
- H-PAC®

Biological Treatment Systems

- CLR Process
- Package Treatment Plants
- Sequencing Batch Reactors



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