



# ClarAtor<sup>®</sup> Clarifier Technology

## Headache-Free Clarifier with No Moving Parts



*The ClarAtor clarifier equipment is installed into concrete tankage, utilizing common-wall aeration basin construction, helping to lower capital and construction costs.*

ClarAtor clarifier technology is the latest in patented clarifier innovation. It features no moving parts below the water, a uniform distribution of the influent and collection of the effluent, and the unique ability to regulate the effluent flow rate. It is applicable to municipal and industrial biological wastewater treatment plants.

This secondary clarifier can be used for a wide range of flows (including infiltration and inflow problems), can perform nutrient removal with the patented

SEQUOX process, and can be applicable for retrofitting rectangular clarifiers.

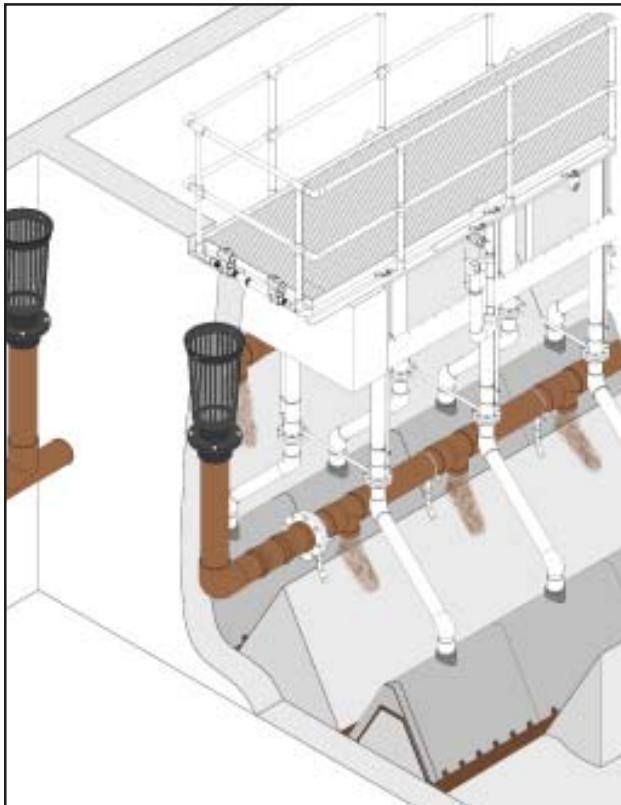
The clarifier equipment is installed into concrete tankage, using common-wall aeration basin construction. The equipment consists of stainless steel, fiberglass and PVC piping components, grating and aluminum handrails. The only operator attention required is periodic cleaning of the walkways and effluent discharge weirs. Because no mechanical equipment is below water, mechanical

### ClarAtor Clarifier

- No moving parts below the water surface
- No motors, gears or electrical components
- Stainless steel and fiberglass fabrication
- No field welding or painting
- Uniform influent distribution
- Unique ability to regulate effluent flow rate provides in-basin surge storage
- Rapid and positive sludge withdrawal
- Minimal maintenance
- Applicable over a wide range of flows

maintenance is virtually eliminated.

Influent to the clarifier is drawn from the surface of the aeration basin through inlet screens and distributed uniformly across the lower portion of the clarifier.



*The ClarAstor's unique effluent regulation system allows more flow to enter the plant than is exiting, creating in-basin surge storage.*

## SEQUOX Process

Combining the ClarAstor Clarifier with the patented SEQUOX Process offers the ability to handle up to 4:1 sustained peak flows with no loss of solids. Other SEQUOX advantages include:

- Biological nutrient removal
- Continuous clarification with sequencing aeration
- Operator friendly, low-mechanical process
- Reduced energy requirements
- Superior effluent quality

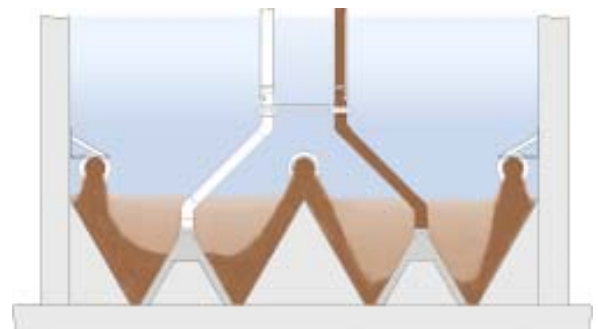
Settling occurs under ideal conditions because moving sludge scrapers are eliminated. The uniform distribution and collection reduce the possibility of hydraulic short circuiting.

Settled solids are rapidly removed from the bottom of the clarifier via stationary hydraulic suction hoods evenly spaced across the floor of the clarifier. Airlifts attached to the tops of these hydraulic hoods provide the suction lift required for rapid sludge removal. The airlifts operate by an automatic timer to regulate the return rate. The return activated sludge is discharged back to the selector/aeration tank via a trough on the ClarAstor.

Submerged weirs evenly withdraw effluent from across the clarifier surface and discharge through a patented effluent

flow regulation system. This unique system makes the ClarAstor technology the only clarifier on the market able to regulate the effluent flow rate on the downstream end and absorb the excess flow within the basins or in sideline surge tanks. This results in capping the upward velocity in the clarifier, producing a better quality effluent. In addition, this flow regulation system allows for peak flows of up to 4:1 to be handled in a SEQUOX-HF plant. As a result, solids washout due to peak flow is minimized.

*The hydraulic suction hood assemblies have ports along the bottom of the clarifier to allow solids removal via airlifts evenly spaced along the length of the suction hoods.*



With no moving parts and common-wall construction, a complete treatment plant fits in a rectangular configuration, greatly reducing yard piping, electrical runs, transfer pump stations and treatment footprint. The result can be a significant savings in capital and construction costs.

The simple design of the ClarAstor minimizes maintenance requirements and allows for minimal operator attention.