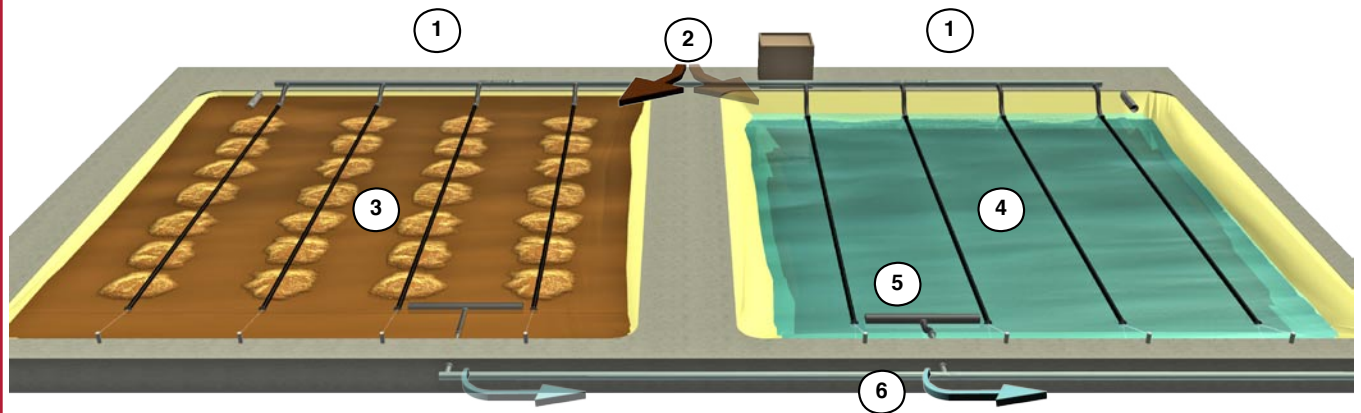


PRODUCT SPECIFICATION SHEET

EDI ATLAS-SBR™ System

Innovative SBR Technology for Advanced Treatment Lagoon Performance

- Full nitrification, less than 2 mg/L even in cold climates
- High BOD and TSS reduction; less than 30 mg/L
- High process stability with low food to biomass ratio and long sludge age
- Continuous inflow and equalized intermittent discharge
- Maximum biological solids recovery with isolated settling, and decanting cycles
- Low maintenance decanter with simple design
- Ideally suited for facilities with multiple lagoon reactors
- Install in new or existing lagoons
- System simplicity; minimum operator interface, self-regulating “equilibrium” solids management system
- Solids digestion and long term storage in partial mix aeration zone
- No return or waste sludge pumps
- Minimum operating costs
- Low maintenance requirements



1. ATLAS SBR Lagoons
2. Influent
3. Floating Lateral Aeration System with Aeration in Active Mode
4. Reactor in Settle / Decant Mode
5. Decanter in Operation
6. Decanter Draw Off to Downstream Lagoons



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YEARS
1975-2005

PRODUCT SPECIFICATION SHEET

The ATLAS-SBR (Sequencing Batch Reactor) system integrates conventional sequencing batch reactor technology with EDI's "equilibrium" solids management program to improve the performance capabilities of lagoon-based wastewater treatment systems. Conventional lagoon treatment systems that are experiencing any of the following conditions will benefit from the application of the ATLAS-SBR system:

- Hydraulic or organic overload
- Inadequate BOD or TSS reduction
- Poor ammonia conversion
- High effluent total nitrogen
- Reduced cold weather performance

Biological processes are limited in their ability to treat wastewater by the mass of microorganisms that can be retained and suspended in the biological reactor. The ATLAS-SBR system effectively increases the mass of microorganisms in the system by operating the complete mix reactor(s) in a sequential aerate, settle, and decant mode. The control of biomass allows for a shorter hydraulic residence time, long sludge age and low food to microorganism ratio for high process stability and maximum cold weather performance. Hydraulically isolated complete mix reactors are required to manage the continuous inflow and intermittent discharge from the sequencing reactors.

The synthesis of organic materials in the wastewater results in a net production of biological solids. A long sludge age is used to reduce the mass of biological solids that are produced and minimize downstream solids management requirements. Biological solids that are not retained in the complete mix reactors are carried with the discharge to downstream partial mix

reactors for additional stabilization and storage. A non-aerated, quiescent zone is provided for final effluent polishing prior to discharge.

The ATLAS-SBR system requires aeration to address the oxygen demand and mixing requirements of the process. When combined with an EDI high efficiency FlexAir™ diffused aeration system and patented BioMizer™ mixing technology, the ATLAS-SBR system is one of the more energy efficient, wastewater treatment processes available in the industry.

The ALTAS-SBR system is also effective in reducing total nitrogen. By operating the complete mix zone at a low dissolved oxygen concentration, co-current nitrification / denitrification is achieved. Operating under this optimized condition also provides additional benefits including alkalinity and oxygen recovery and increased field oxygen transfer efficiency. The system may also be configured with anoxic biological selectors for added process performance and control.

When the highest level of effluent quality is required, the ATLAS-SBR system may be augmented with the BioReef™ system for effluent polishing and the BioShade™ system for algae control. These supplemental technologies may be incorporated at any time to improve the performance and viability of lagoon-based systems.

The ATLAS-SBR system is one of many efficient, low cost, lagoon-based technologies available from EDI. For detailed information on how to improve the performance of lagoon-based systems, contact EDI or a local EDI representative.

Patents applied for.



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