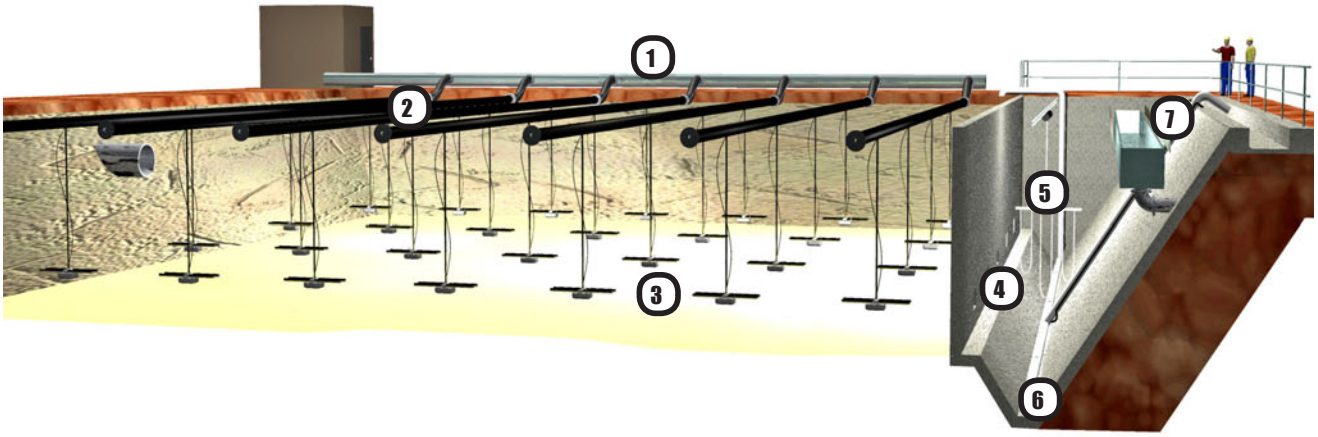
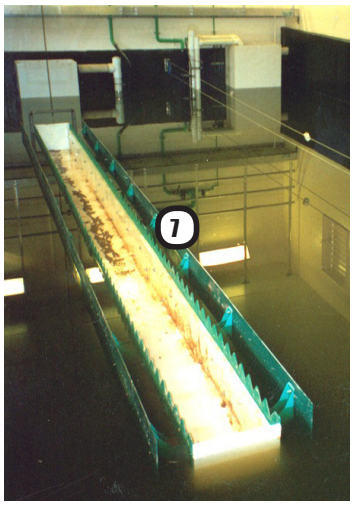
PRODUCT SPECIFICATION SHEET

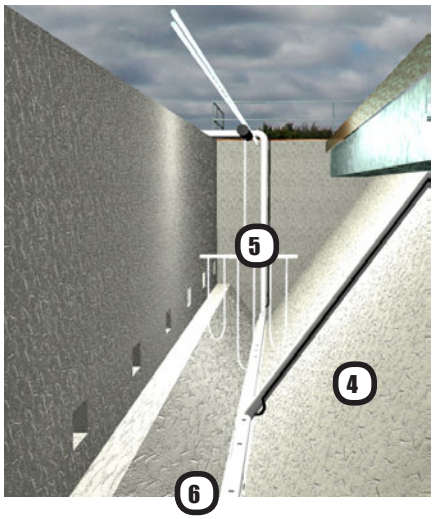
EDI ATLAS-IC™ (*Internal Clarifier System)*

Cost Effective Lagoon Extended Aeration System for Advanced Treatment Performance

- Full nitrification; less than 1.5 mg/L even in cold climates
- Maximum BOD and TSS reduction; less than 15 mg/L
- Low food to biomass (F/M) ratio for process stability and minimum biological solids production
- Economical internal clarifier for solids separation
- Flocculation rake for efficient solids recovery
- Simplified biomass control with RAS and WAS air lift pumps
- Fully maintainable without draining the reactor







1. Complete Mix Reactor
2. Floating Lateral Aeration System
3. FlexAir® Magnum™ High Efficency Diffusers
4. Internal Clarifier
5. Flocculation Rake
6. Sludge Collection Pipe
7. Effluent Weir

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The EDI ATLAS-IC™ (Internal Clarifier) system uses a simplified mechanical hopper bottom clarifier 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-IC 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-IC system effectively increases the inventory of microorganisms in the system by operating the lagoon in a complete mix, activated sludge mode with an economical internal, flocculating clarifier for solids recovery and return. The control of biomass allows for a short hydraulic residence time, long sludge age and low food to microorganism ratio for high process stability and maximum cold weather performance.

All biological processes produce biological solids as a result of the synthesis of substrate in the wastewater. The long sludge age of the ATLAS-IC system reduces the mass of biological solids that are produced and minimizes downstream solids management requirements.

The ATLAS-IC 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 BioMizer™ mixing technology, the ATLAS-IC system is one of the more energy efficient, wastewater treatment processes available in the industry.

The ALTAS-IC system can also be 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 recovery and reduced energy consumption. The system may also be configured with anoxic biological selectors for added process performance and control.

The ATLAS-IC 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.

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