

**Back Into The Future
With Advanced
Turbine Technology**

From

SAM

Submersible Aerator Mixer



- * **Fine Bubble Efficiency**
- * **Better Mixing**
- * **Variable Power Control**
- * **Programable Operation**
- * **Automatic Speed Control**
- * **Oxygen Control**
- * **Lower Operating Cost**
- * **Less Maintenance**
- * **Heavy Duty Construction**
- * **Longer Life**

Exclusively by AquaTec, Inc.
Providing Wastewater Treatment Systems for 26 Years



Why You Should Consider SAM Advanced Turbine Impeller Design For Your Wastewater Aeration and Mixing Process Requirements

The advantages of turbine aeration at the bottom of the reactor tank is well established. However, until now, the efficiency and control of the reactor as a whole has not been easily attainable. The AquaTec, Inc. SAM Advanced Turbine Aerator-Mixer has overcome those old problems. The SAM Turbine is here to set the standards in a new era of aeration and mixing performance. Consider the advantages you get with SAM Turbine design:

- Install or remove the SAM Turbine with or without liquid in the tank. No need to dewater.
- The variation of liquid level does not affect the operation of the SAM Turbine.
- Minimum routine maintenance is performed conveniently outside the tank.
- There are no “in place” diffusers or pipes to plug up, remove, clean or replace.
- Air (oxygen) is dispersed uniformly near the bottom of the tank for maximum efficiency.
- Operate with or without air...for aerobic or anoxic cycles for control of filamentous bacteria and ammonia nitrogen reduction.
- Minimal heat loss, and no surface spray as with surface aerators. No winter ice build up.
- The SAM Turbine automatically senses the air flow and changes impeller speed to maximize the pumping (mixing) component.

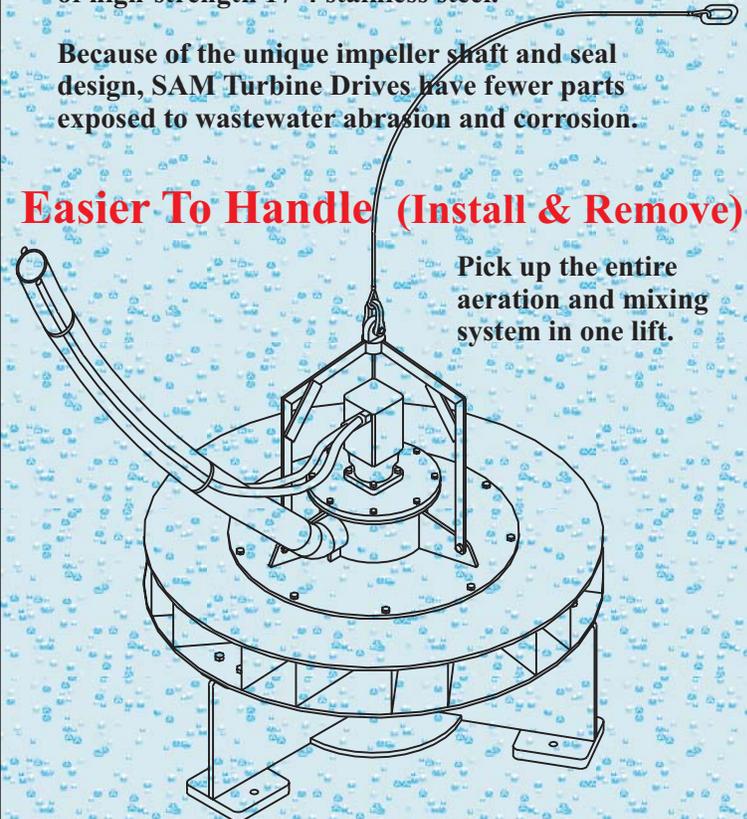
Rugged Drive (Power Module)

No scheduled maintenance is needed on the SAM Turbine Drive. The impeller shaft is made of high-strength 17-4 stainless steel.

Because of the unique impeller shaft and seal design, SAM Turbine Drives have fewer parts exposed to wastewater abrasion and corrosion.

Easier To Handle (Install & Remove)

Pick up the entire aeration and mixing system in one lift.



Anti-Vortex Intake Flow Control

The flow-control design of the SAM intake prevents re-circulation of the discharge and improves oxygen transfer and mixing dynamics.

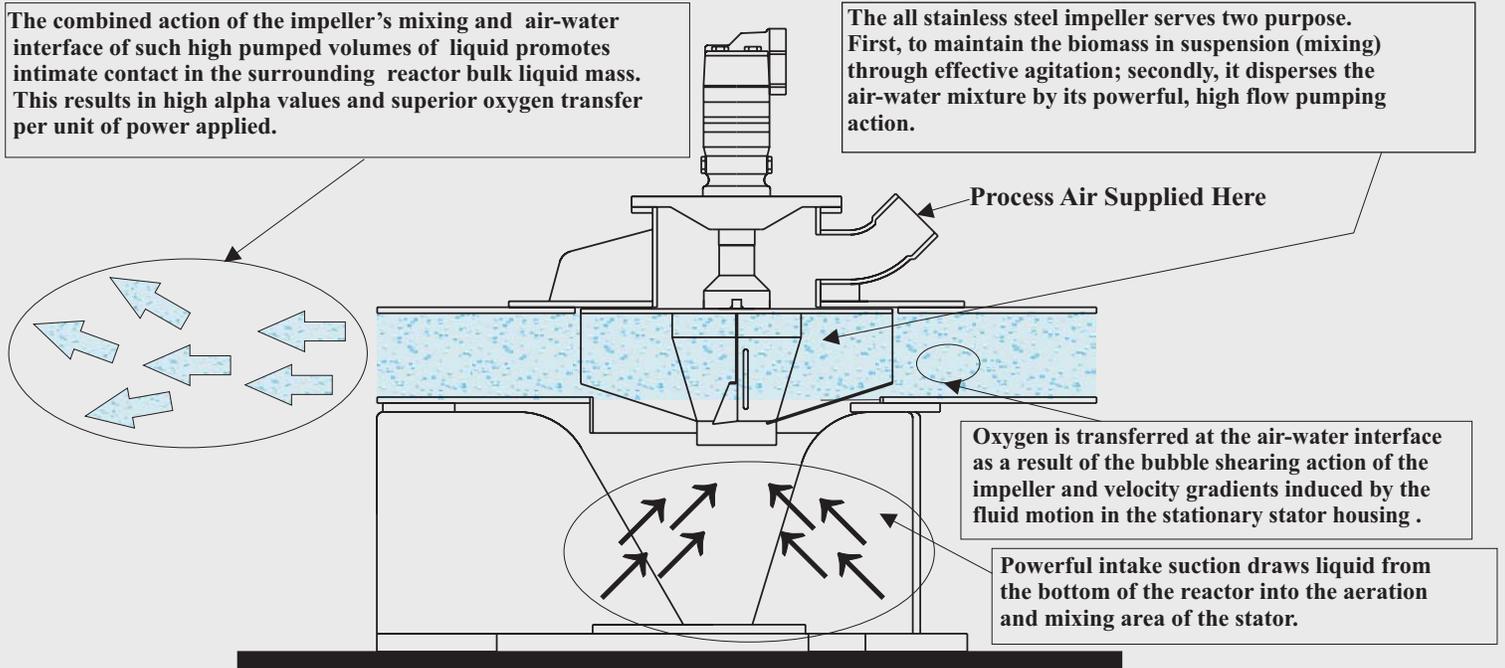
No need for tank baffles. SAM mixing and inter-mixing action provides uniform solids and biomass contact from top to bottom in the reactor.

Why SAM Aerator-Mixers Work So Well

SAM units are supplied pressurized air from a land mounted blower through an air hose under operator controlled conditions. The SAM aerator transfers oxygen efficiently by maximizing the dispersion of the bulk air into very fine bubbles, which is accomplished by the emission of air through the impeller...and its slowly rotating blades then instantly disperses the air-water mixture evenly into the bulk liquid mass in the reactor.

The combined action of the impeller's mixing and air-water interface of such high pumped volumes of liquid promotes intimate contact in the surrounding reactor bulk liquid mass. This results in high alpha values and superior oxygen transfer per unit of power applied.

The all stainless steel impeller serves two purpose. First, to maintain the biomass in suspension (mixing) through effective agitation; secondly, it disperses the air-water mixture by its powerful, high flow pumping action.



The SAM Submersible Aerator-Mixer Benefits

- Highest oxygen transfer rate available in Aerator-Mixer design
- Increased mixing and intermixing to distribute oxygen and solids
- Lower total system power cost
- Less potential for solids and biological/chemical clogging
- Nearly unlimited flexible application and operation utility
- Ideal for variable level and variable organic loading designs
- Quick installation and removal for inspection and maintenance
- State of the art seals and drives for continuous and intermittent duty
- Not affected by weather (i.e., winter ice and climate)
- No aerosol spray and foaming as with surface aeration
- No scheduled maintenance on underwater parts

AquaTec is Committed to Your Satisfaction...

Experience...

AquaTec, Inc. Since 1974, is an innovative and successful company specializing in developing energy efficient aerobic and anaerobic treatment systems. Our experience increases satisfaction for our customers.

Capability...

AquaTec is backed by a professional management staff which includes engineers, technicians, manufacturers and specialty contractors. We can assist you with selection of process, system design, equipment or even turnkey design construction if you desire.

Service...

AquaTec not only offers equipment and related applications technologies, but we can assist you with proper design and operation of your facility as well. Helping you perform effectively and efficiently is our objective.

Availability...

For information call (815) 654-1500, write AquaTec, Inc., 1235 Shappert Dr., Rockford Illinois, 61115; or, contact the representative below:

A Partial List of Clients Served By AquaTec:

A.E. Staley Manufacturing Company
American Maize, Inc.
Beatrice, Inc.
Dean Foods, Inc.
Formost Foods
Joan of Arc Company
Mobil Chemical Company
Ocean Spray Cranberry Company
U.S. Gypsum, Inc.

Abbott Labs
Amoco Chemical Company
Bergstrom Paper
Del Monte Corp.
Illinois Power Company
Kraft, Inc.
National Starch
Pet, Inc.
Waste Management, Inc.

Alto Dairy
ADM Corporation
Campbell Soup Company
E.J. Brach Candy company
James River Pulp & Paper
Libby, McNeil & Libby
Nekoosa Papers
The Quaker Oats Company

Represented By:



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