

ISO 9001 Certified

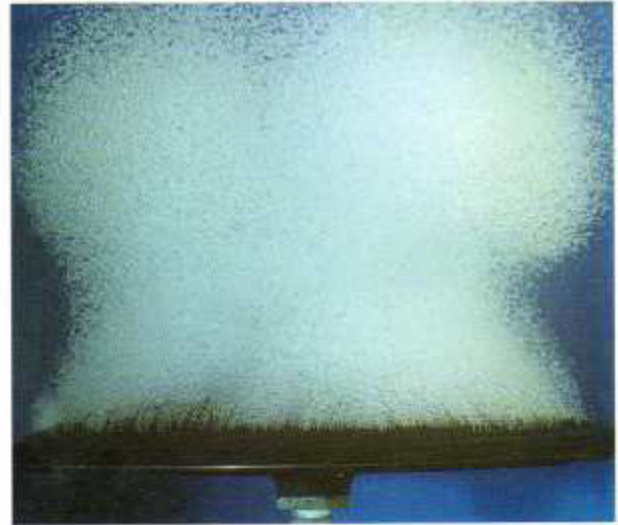
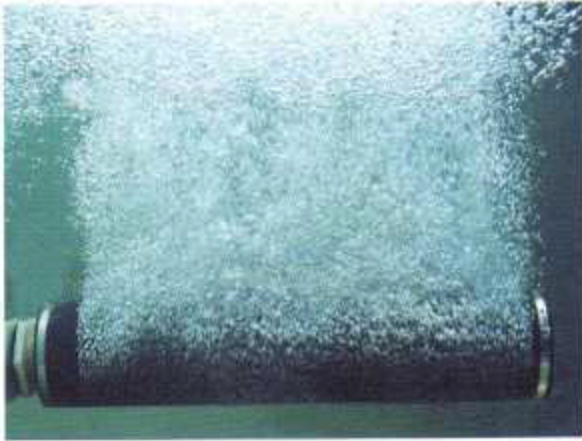
Our product management
certified by ISO 9001
is a solid basis and
guarantees the customer
a reliable technique with the
highest quality standard



High performance air diffuser for water & wastewater treatment aeration



Ecologix fine bubble membrane diffusers were developed for aeration systems in which the fine air bubble is required



The Ecologix membrane was designed to diffuse the air bubbles through its "I" shaped perforations over the membrane surface, which increase the oxygen supply and the efficiency of activation for the water and wastewater treatment.

The possibility of intermittent operation is a special feature along with high oxygen utilization and a greater range of airflow regulation. When airflow is applied, the membrane's apertures consistently produce 1~3mm fine bubbles that increase the bubble surface contact area with wastewater. This greatly increases the oxygen transfer efficiency. The membrane retracts when the air supply is shut off, which not only seals the "I" apertures but also presses the non-return check valve/not perforated section on the support device to seal its air supply bore. Due to this double sealing mechanism, no water & wastewater can enter the diffusers and the air piping system.



Ecologix is a company committed to excellence in engineering and manufacturing of membrane air diffusers. In developing and controlling the membrane product from compounding through extrusion or molding and perforations, Ecologix has the ability to offer higher efficiency products that require less energy in operation.



Ecologix's EPDM tubing extrusion and plastic injection



With low maintenance and longevity in mind, all products manufactured by Ecologix are developed for the quality of the membrane and support devices because it is a decisive factor for both the operation life and the economics of aeration systems.

The membranes have been used and operated in municipal wastewater treatment plants as well as industrial plants, e.g. chemical plants, Pulp & Paper, tannery, beverage industries, canneries, dairies, slaughterhouses, textile industries, cattle farms and fish pond, etc.



Ecologix fine bubble diffusers are excellent alternative choices with minimal maintenance and stable uniform fine bubbles. It provides higher oxygen transfer efficiency, and reduces energy consumption up to 50% as it compared to coarse bubble diffuser, surface aerator, induced air jet aerator and other mechanical aeration systems.



Ecologix offers the most complete line of fine and coarse bubble membrane, ceramic and stainless steel air diffusers for water, wastewater treatment plants and fishpond oxygenation. Our broad selection guarantees you'll find the right diffuser for your application

Ecologix's designed clamp-on saddle and mounting kit are the ideal compliments for stainless steel, PVC and other thermoplastic air piping materials. These labor saving fittings feature use friendly designs which greatly reduce the installation costs also make retrofit and repair jobs easier.



Ecologix diffusers have been tested through more than 1,000,000 cycle expansions and contraction. The diffusers without a change in the ability of the perforations to produce fine bubbles.

Materials

Membrane- The disc and tubing membranes are available in EPDM, Santoprene™, Polyurethane, Viton™ and other engineered materials.

The membrane was specially developed to meet the needs of today's wastewater market. The rubber resin used includes an UV inhibitor as well as a composition that is resistant to aggressive chemical attack, weathering and aging. With this unique material developed by Ecologix, we can supply diffusers for a wide range of applications from municipal to industrial wastewater plants and fish pond oxygenation.

Support devices- The support devices are manufactured of glass-filled reinforced Nylon, PP or ABS. This provides without the requirement for acid dosing.

Advantages

- Uniform fine bubble
- High oxygen transfer efficiency
- Back flow prevention
- Resistant to fouling
- Low energy consumption

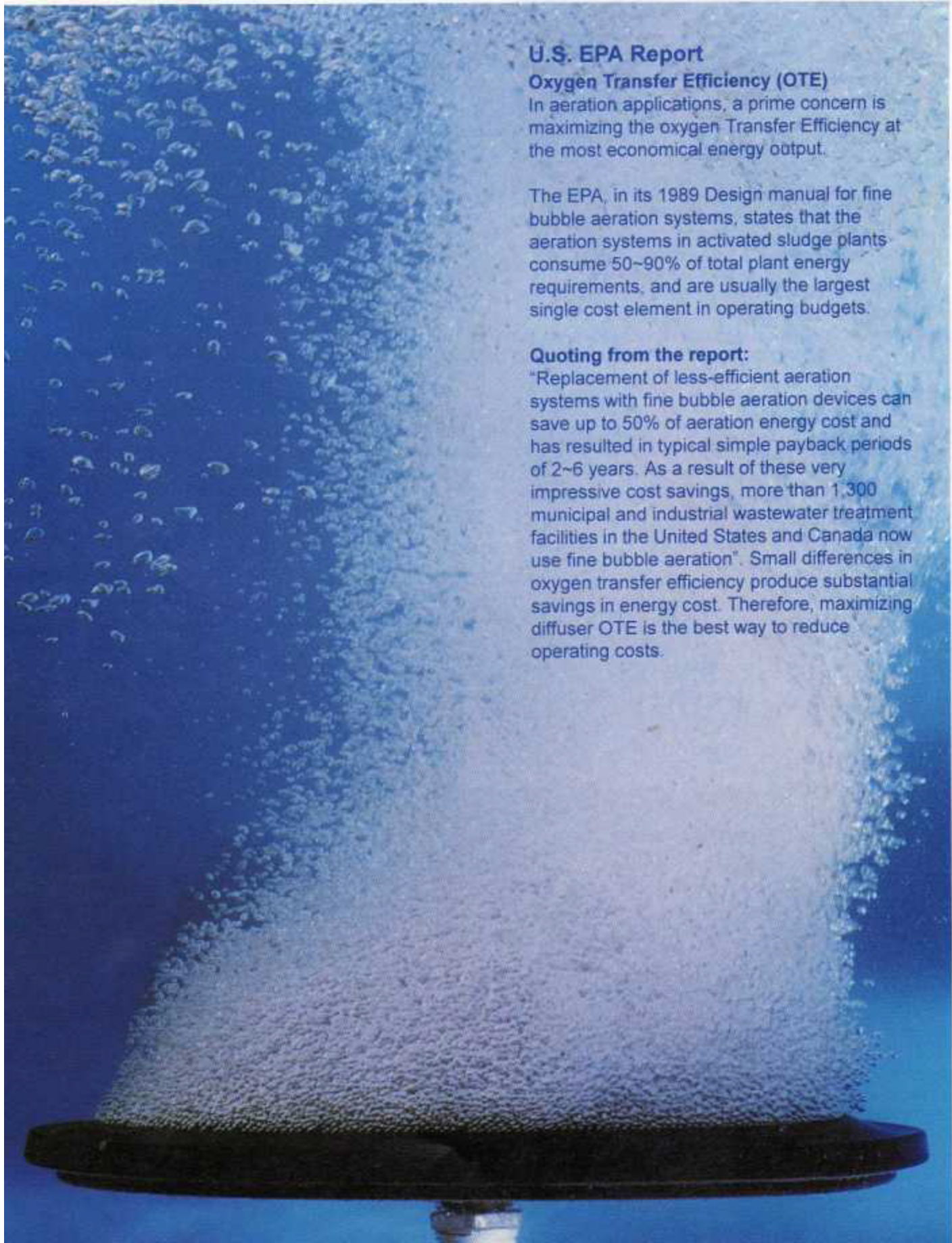
For both retrofit and new installations, Ecologix membrane diffusers lower your installation and operating costs by providing:

- ☑ Substantial savings in electric utility costs up to three (3) times less than conventional mechanical aerator and coarse bubble aerations
- ☑ Increased treatment capacity
- ☑ Minimal maintenance
- ☑ Unique mounting kit and clamp-on saddle allow great flexibility in the choice of air pipe material and size
- ☑ Economical and convenient membrane replacement

Applications

- Treatment of municipal or industrial wastewater
- Treatment of landfill leachate
- Aeration in Activated sludge, Bioreactor , SBR and Oxidation ditches
- Potable water treatment aeration
- Wastewater ozone diffusion
- Oxygenation for sludge stabilization
- Aeration of lagoon and fish ponds
- Aeration with CO₂ for neutralization





U.S. EPA Report

Oxygen Transfer Efficiency (OTE)

In aeration applications, a prime concern is maximizing the oxygen Transfer Efficiency at the most economical energy output.

The EPA, in its 1989 Design manual for fine bubble aeration systems, states that the aeration systems in activated sludge plants consume 50~90% of total plant energy requirements, and are usually the largest single cost element in operating budgets.

Quoting from the report:

"Replacement of less-efficient aeration systems with fine bubble aeration devices can save up to 50% of aeration energy cost and has resulted in typical simple payback periods of 2~6 years. As a result of these very impressive cost savings, more than 1,300 municipal and industrial wastewater treatment facilities in the United States and Canada now use fine bubble aeration". Small differences in oxygen transfer efficiency produce substantial savings in energy cost. Therefore, maximizing diffuser OTE is the best way to reduce operating costs.

• • • Complete Systems For water And wastewater Treatment Applications



Ecologix Disc/Tubular fine bubble membrane diffusers



Ecologix Ceramic diffusers



EcoLift™ - with Ecoflex disc and Hyotube tube diffuser



AirMix™ - Diffusion/Mixing Combination



Channel Screen Press



EcoSieve™ Self-Cleaning Rotary Screen (0.25~3.0mm)



Micron Drum Filter (15~400um)



Induced Air Flotation Unit (IAF)



MixTube™ SUS 304 coarse bubble diffuser



MixDisc™ coarse bubble diffuser