

EFFICIENT SOLUTION FOR EFFLUENT TREATMENT

DIFFUSED AIR AERATION SYSTEM



BIOSIS
Saneamento Ambiental

BIOSIS

We are one of the leading Brazilian companies in equipment, engineering, and services for water and wastewater treatment. For over 15 years, we have been providing customized solutions for both industry and the public sector, focusing on effectiveness and efficiency.

PRODUCTS AND SERVICES



AERATION SYSTEM



REVITALIZATION



SPARE PARTS



SLUDGE REMOVER



STATIC MIXER



FILTRATION SYSTEM

OUR CLIENTS



BIOSIS AROUND BRAZIL



CHALLENGES OF DIFFUSED AIR AERATION SYSTEMS THAT BIOSIS CAN HELP SOLVE

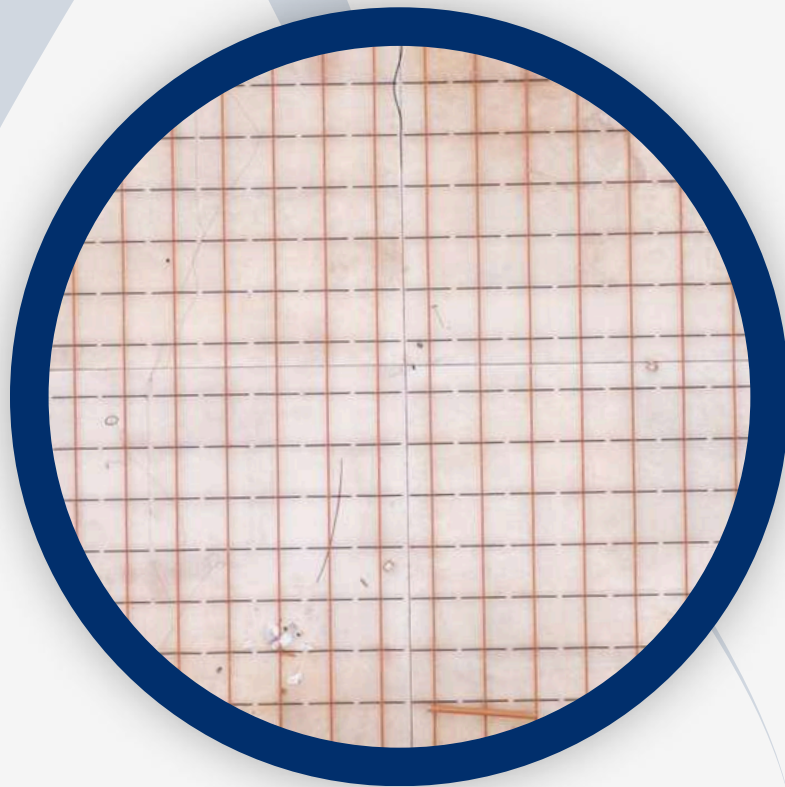
Recurrences in the WWTP (Wastewater Treatment Plant)

- Constantly increasing operational costs
- Appearance of dead zones, odors, and consequent degradation
- Progressive loss of oxygenation efficiency
- Discharge non-compliance with environmental regulations

Main Causes

- Degradation and obsolescence of aeration system components over their lifespan, leading to obstructions;
- Incompatibility of membranes with new raw materials that appear in the process;
- Low frequency of maintenance or lack of a recurring maintenance plan;
- Lack of technical assistance or spare parts supply from the aeration system manufacturer;
- Component replacement and maintenance performed with generic, non-specialized labor.

CUSTOMIZED AERATION SOLUTIONS



Fixed System

Better installation and maintenance cost.



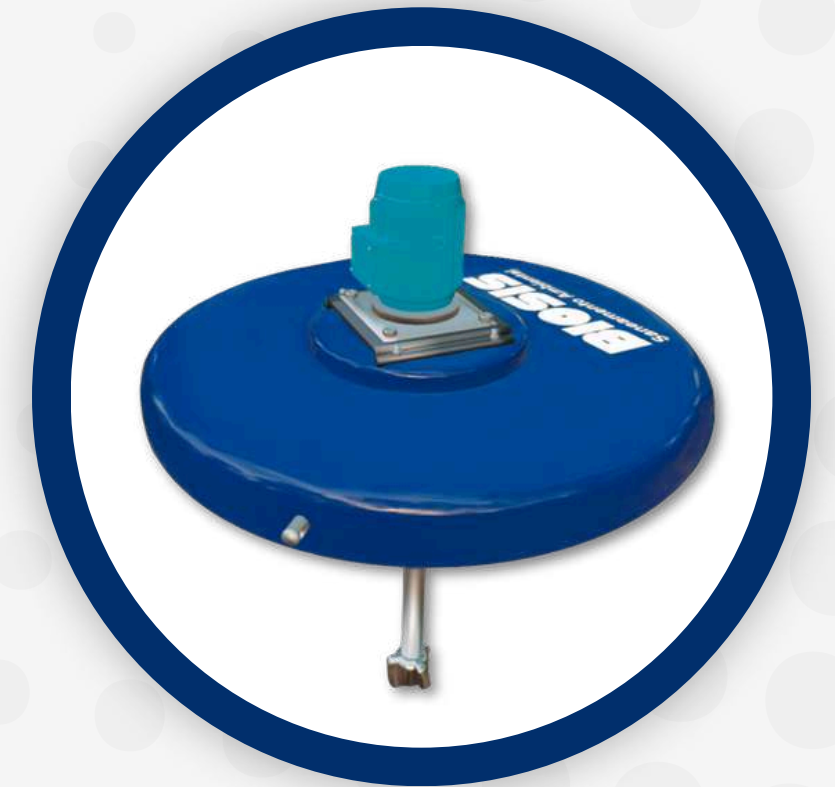
Floating System

Practicality for tanks with irregular bottoms or large lagoons.



Skid System (Removable)

Flexibility for reactors that cannot be stopped.

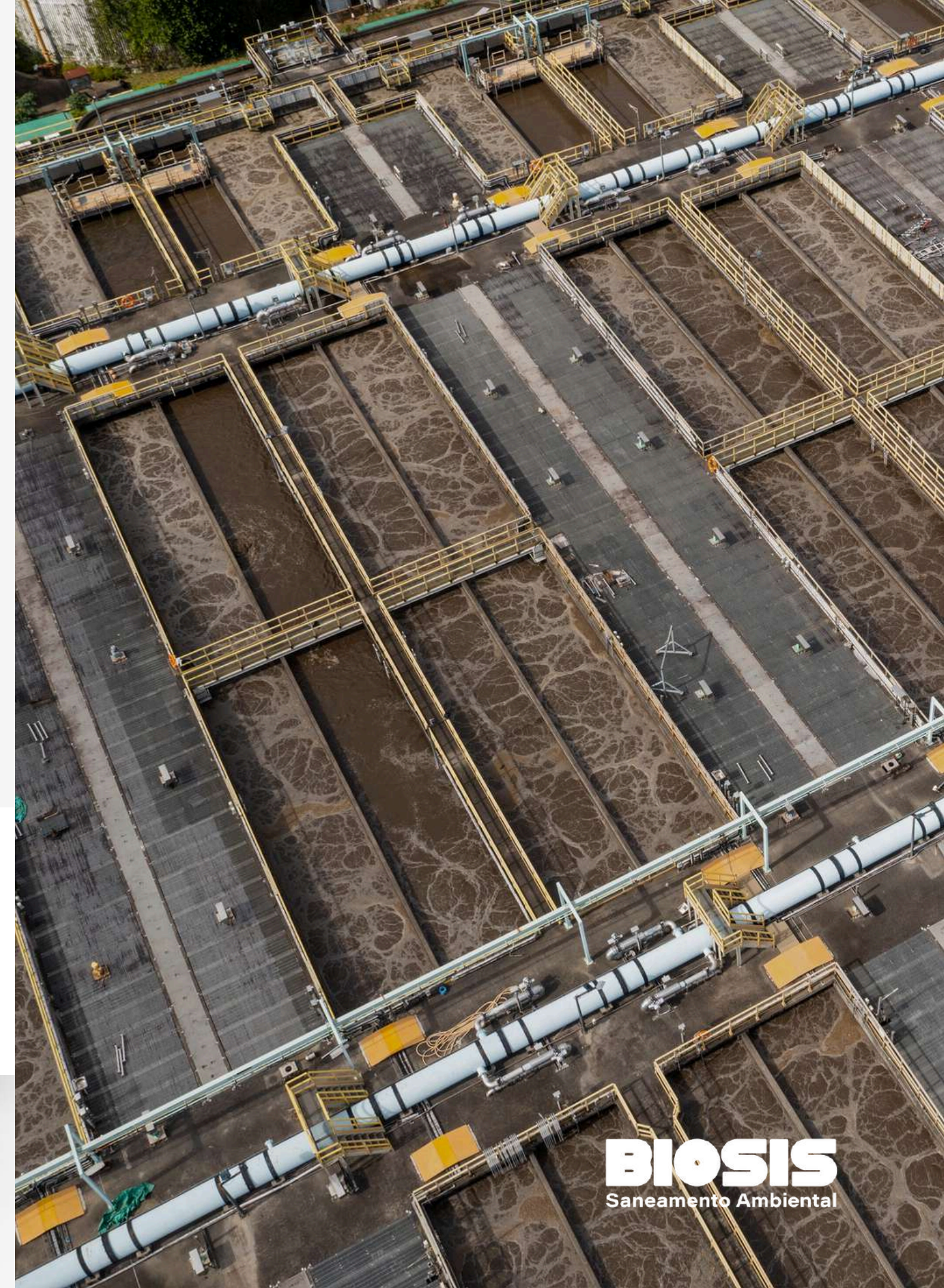


Mechanical Aerator

Superior performance with an accessible investment.

CHAIN OF BENEFITS

- ✔ **Oxygen Transfer Efficiency:**
Increases the oxidation efficiency of pollutants.
- ✔ **Greater Energy Efficiency:**
Optimized use of the reactor's electrical resources.
- ✔ **Better Odor Control:**
Effective solution to minimize unpleasant odors.
- ✔ **Custom Projects:**
Aeration systems custom installed according to the needs of each reactor, industrial segment, and current regulatory body standards.



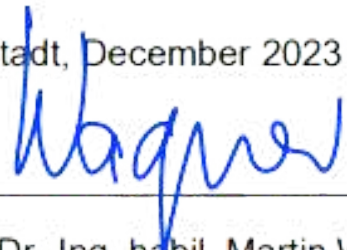
AERATION TECHNOLOGIES

Diffuser		Bubble Type	Measurements	System Type
Circular Diffuser		Fine	12" and 9"	Fixed
Tubular Diffuser		Fine	90x1000mm and 90x500mm	Fixed, Removable, and Floating
Circular Diffuser		Coarse	5"	Fixed
Bio Air Max (Stainless Steel)		Coarse	300 and 600mm	Fixed and Removable

MEMBRANES WITH INTERNATIONAL CERTIFICATION

Report by:

Darmstadt, December 2023



Prof. Dr.-Ing. habil. Martin Wagner



Jana Trippel, M. Sc.



Prof. Dr.-Ing. Markus Engelhart



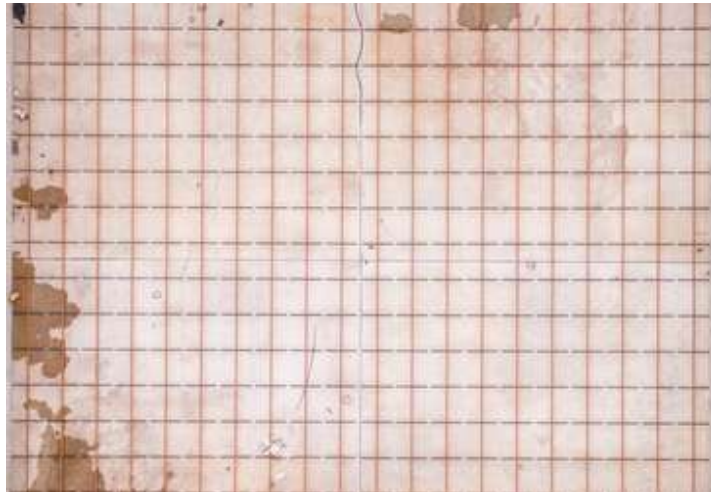
Nicolas Kaltwasser, M. Sc.

The membranes from **BIOSIS Saneamento Ambiental** were approved in rigorous tests conducted by the **IWAR Institute of the Technical University of Darmstadt**, in Germany.



SUCCESS STORIES

Fixed System



Client: Azevedo & Travassos
Location: Mogi das Cruzes - SP

Floating System



Client: Petrobras
Location: Cubatão - SP

Skid System



Client: Coca-Cola
Location: Jacarepaguá - RJ



Client: Ambev
Location: Sete Lagoas - MG



Client: Gelco
Location: Franca – SP



Client: Klabin
Location: Piracicaba - SP



HIGH-SPEED SURFACE MECHANICAL AERATOR **BIO AERATOR HS®**

Efficient and cost-effective oxygenation for your biological reactor

Bio Aerator HS® Features	
Motor power range	3hp to 50hp
Shaft	Stainless Steel
Float	Fiber with PU
Propeller	Polypropylene
Oxygen transfer rate	1.2kgO2/hph or 1.6kgO2/kWh

- ✓ **Customization:** Personalized solutions for your treatment needs.
- ✓ **Immediate Use:** Eliminates the need for reactor modifications.
- ✓ **Cost-Benefit:** Superior performance with an accessible investment.
- ✓ **Efficient Oxygenation:** Enhance the growth of microorganisms.
- ✓ **Safety and Sustainability:** Designed to reduce aerosol emissions.

PROJECT CYCLE



INITIAL ASSESSMENT:

- Consultative survey;
- Identification of challenges;
- Data structuring.

DEVELOPMENT:

- Sizing;
- Customized and efficient project;
- Economic viability.

MANUFACTURING:

- Shorter manufacturing time;
- Alignment with the client;
- Certified Raw Material.

IMPLEMENTATION:

- Installation by specialists;
- Operator training.

AFTER-SALES:

- Established warranty;
- Support for questions;
- Emergency service.

OPERATIONAL CONTINUITY



Preventive or Corrective
Maintenance Contract



Supply of Spare Parts



BIOSIS CAN HELP TRANSFORM YOUR EFFLUENT TREATMENT PROCESSES

CONTACT US

Business Hours

Monday to Friday: 8:00 AM – 5:00 PM

WhatsApp:

Chat with a Consultant



E-mail:

comercial@biosis.eco.br

ADDRESS

Av. Gen. Valdomiro de Lima, 647B -

Jabaquara

São Paulo – SP

ZIP 04344-070

CONTACT

Phone: +55 (11) 2613-8928

Sales: +55 (11) 99173-7043

Filters: +55 (11) 95060-3812

Email: biosis@biosis.eco.br

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