

AEROSTRIP®

fine bubble diffusers by AQUACONSULT

longevity efficiency



unique polyurethane
membrane



ultra fine bubbles for
the highest efficiency



up to 20 years
lifespan

"AEROSTRIP® diffusers have an extraordinarily long life cycle and maintain their top performance during years of operation. We possess decades of experience and first-class quality management – which gives confidence to our clients all over the world."

Gerald Glaninger, Director



Advantages at a Glance _____



The Diffuser with the Finest Bubbles _____



Extruded Polyurethane Membrane _____



30 Years of Research & Development _____



20 Years Lifespan _____



Low Operation Expenditures _____



Worldwide Distribution Network _____



THE SUCCESS FORMULA OF AEROSTRIP®



Advantages at a Glance

The AEROSTRIP® fine bubble diffuser was created with the aim of achieving the lowest energy demand. The reference list covers over 20 years, including municipal and industrial wastewater treatment plants all over the globe.

AEROSTRIP® Key Facts

- ▶ Fine bubble diffuser with extremely low energy consumption
- ▶ Up to 20 years lifetime for progressive sustainability
- ▶ Efficient oxygen transfer for optimal wastewater treatment
- ▶ Successfully used by more than 2,500 systems since 1995
- ▶ Development from pioneer to global leader
- ▶ Low-maintenance and reliable in use

AEROSTRIP® Advantages

- ▶ Oxygen transfer efficiency (SOTE) up to 60%
- ▶ Standard aeration efficiency (SAE) from 4 - 6 kgO₂/kWh
- ▶ Wide range of application from 5 - 150 Nm³/h/m² diffuser area
- ▶ Optimal perforation for every application
- ▶ Lowest flow resistance due to flat design and installation on the pool floor
- ▶ Low maintenance effort
- ▶ Membrane lifetime up to 20 years
- ▶ Low costs due to high efficiency

These exceptional properties have been confirmed through a series of trials run by independent parties. Copies of these reports and plant-specific measurement results are available upon request.¹

"For conventional short sludge retention time treatment plants (SRT one to six days), this (twelve years AEROSTRIP®) system performed better than all previously tested fine pore diffuser systems installed, and even better than most new ones."

Dr. M. K. Stenstrom, UCLA

¹ Kindly contact your local distribution agent.

AEROSTRIP® – FOR HIGHEST EFFICIENCY



The Diffuser with the Finest Bubbles

Premium quality material, tried and tested design, and research-based engineering all combine to create the AEROSTRIP® fine bubble diffuser, resulting in a highly efficient product.

The low profile allows the extremely durable membranes to be installed directly on the floor of an aerated tank, resulting in unbeatable full blow-in depth.

The product design offers a modular and flexible solution, leading to a high-yield surface dedicated to aeration, independent of the geometry and sizes of the tanks.

During operation, the highest possible safety is guaranteed when supplying air to diffusers arranged in small groups. The modules with AEROSTRIP® are ideal for these applications.

TYPE T – Timeless

The ingenuity of AEROSTRIP® is displayed in the ideal height of 20 mm. The Type T is built to last due to the mechanical properties of our stainless steel. Unmatchable in its efficiency. A safe investment for a safe future!

Material

Body	Stainless Steel 316Ti / 316L
Membrane	Polyurethane
Air inlet	Stainless steel 316Ti / 316L 1" male
Peripheral strips	outer: Stainless steel 316Ti / 316L inner: PVC

Length	1.0 – 4.0 m in 0.5 m steps Individual lengths upon request
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Height	2 cm
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Details	www.aerostrip.at
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Module TYPE E





TYPE Q - Quality

The technology of AEROSTRIP® combines a plastic body with a long-lasting and cost-effective product while maintaining high-quality standards. An economical option meant to last for decades.

Material

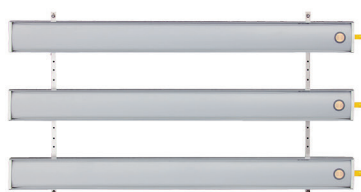
Body	PVC
Membrane	Polyurethane
Air connection	PVC/pipe OD 32 mm
Frontal clips	PVC

Length	1.0–4.0 m in 0.5 m steps Individual lengths upon request
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Height	5 cm
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Details	www.aerostrip.at
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Module TYPE G



"Efficiency and aging analysis of AEROSTRIP® presented at a conference of the Japan Sewage Works Association in 2012 revealed 38% less power usage compared to ceramic type diffusers, while OTE and membrane strength remained virtually unchanged after ten years of operation. Several treatment plants have been running longer than ten years without any replacement. We believe that AEROSTRIP® has a great future due to the high OTE demands in Japan."

T. Kurahashi, Sanki Engineering Co., Ltd., Japan

PASSION PAYS FOR ITSELF

30 Years of Research & Development



The use of a 100% polyurethane membrane in combination with the strip-shaped diffuser was a revolution in aeration technique. This pioneering event was the cornerstone for the global success story of the AEROSTRIP® fine bubble diffuser family.

The advanced perforation style allows for pores of varying shape and size, which directly influence the diffuser's pressure loss. During perforation, the machine receives immediate feedback if there is a drop in pressure. This ensures that every single membrane has the same resistance (pressure drop) to the airflow. The advantage: the membrane properties can be adapted to the specific on-site requirements.

FREQUENTLY COPIED – NEVER EQUALLED



Extruded Polyurethane Membrane

400,000 pores per m² of membrane surface generate an ultra-fine bubble pattern, behaving like check valves when closed.

With an average bubble size of 1 mm (smaller than the accepted definition of a fine bubble), the air is diffused into smaller volumes with the highest interfacial surface. A reduction in air demand leads to lower energy costs and optimal oxygen transfer. Additionally, the interaction between the polyurethane high-energy surface membrane and effluent allows the formation of the smallest bubbles, according to the laws of physics for fluids, two to three times smaller than the market norm.

The combination of design, material, and perforation technology leads to arguably the most efficient and longest-lasting membrane available for fine bubble aeration.

"Our polyurethane membrane is characterized by exceptional mechanical strength, surpassing that of EPDM or silicone by multiples even at a material thickness of only 0.6 mm. This significant difference, despite being only one-third of the industry standard, emphasizes our leading position in the industry and fills us with confidence as we look towards the future."

Andreas Weghofer, BSc, Head of Membrane Production

AEROSTRIP® – THE CHOICE! CONVENIENT & ENVIRONMENTAL



20 Years Lifespan

For the AEROSTRIP® membrane, extruded polyurethane is used exclusively. Unlike EPDM, it has neither fillers nor plasticizers. Whereas membranes made from black rubber usually lose elasticity, causing the system's efficiency to decrease, the membrane properties of polyurethane remain unchanged thanks to their composition. This fact is demonstrated by a lifespan of up to 15 years, in some cases even 20.

AEROSTRIP® IN REAL WORLD TESTS



Reduced Operation Expenditures

PLASTIC or STAINLESS STEEL BODY

The AEROSTRIP® fine bubble diffuser can be manufactured with a body of plastic or stainless steel. These high-quality materials assure resistance against all substances mentioned in the German technical recommendation DWA-M 115-2, as accepted in the biological stage of a wastewater treatment plant.

ENERGY BILL

Considering all economy-related factors, the energy-saving ability creates a potential for return on investment (ROI) within two to five years.

DURABILITY

The product quality is confirmed through permanent in-house testing of all components against stress, fatigue, temperature, tolerances, tensile forces, and situations encountered in real life during operation in the plant. Preventive maintenance and service every five years will keep the efficiency levels within the designed ranges. Replacing the membranes after the expected lifespan may double the life of the diffuser system with AEROSTRIP®.

EASE OF MAINTENANCE

On demand, AEROSTRIP® fine bubble diffusers may be mounted directly to the floor, avoiding sedimentation of suspended solids and creation of dead spots underneath the diffusers. The 0.6 mm thickness of the membrane does not allow any room for deposits inside the pores.

AEROSTRIP® DESIGN-TOOL

A reliable tool for the design and sizing of the aeration system is available on request – including a process guarantee for oxygen transfer.

GLOBAL NETWORK



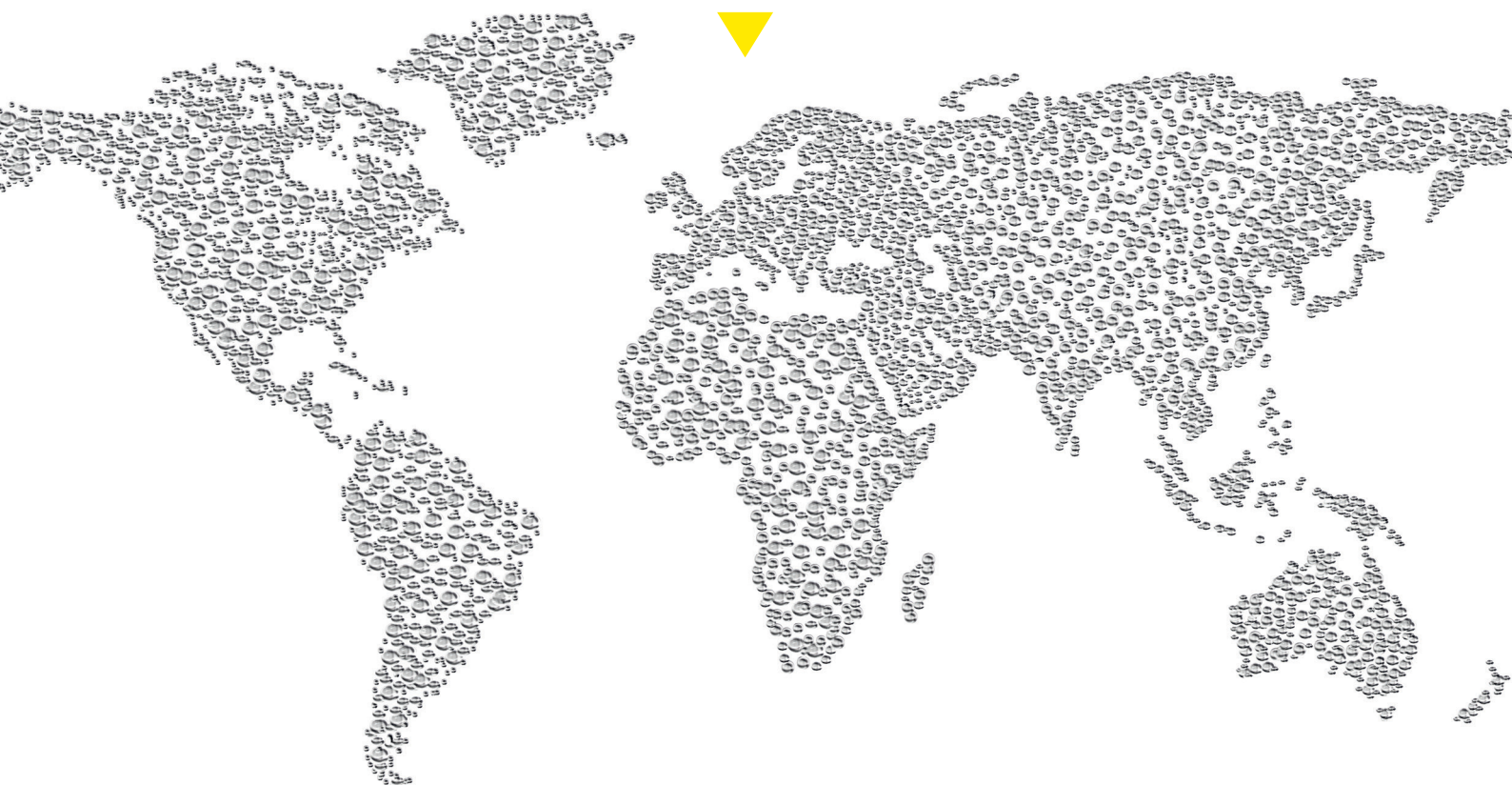
Worldwide Sales Network

AEROSTRIP® fine bubble diffusers are operating in more than 2,500 municipal and industrial wastewater treatment plants worldwide.³

Thanks to its high efficiency potential and growing demand, AEROSTRIP® is a success story, while writing history for generations to come.

3 as of 2024

more than 30 distribution partners
in more than 60 countries



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