



MUNICIPAL WASTEWATER
DIFFUSED AERATION



**LOWEST
HIGHEST
LONGEST...
BEST.**

LOWEST cost of ownership

HIGHEST oxygen transfer efficiency

LONGEST lasting membrane diffuser

Your BEST Option for Process
Aeration



**YOUR BEST
OPTION**

For new construction
or Aerobic retrofit
treatment Systems

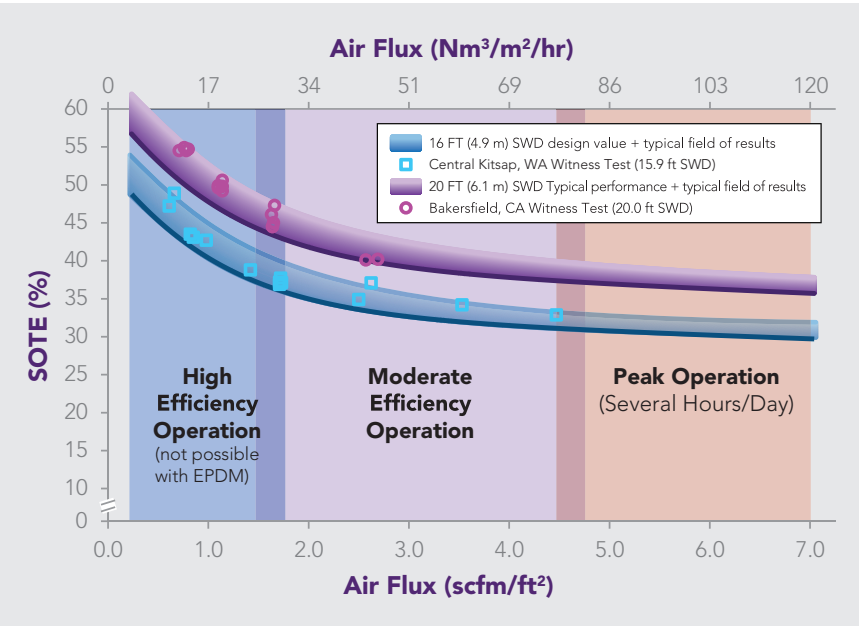
**AEROSTRIP®
SYSTEMS**

AEROSTRIP® SYSTEMS:
DITCH THE DISC

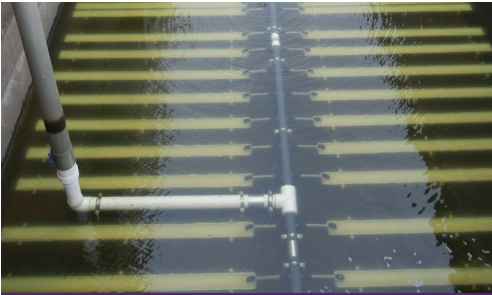
The AEROSTRIP® fine pore diffuser system provides the highest oxygen transfer and lowest energy demand possible for aeration of wastewater. Since 1996 with over 1,500 AEROSTRIP system installations, this efficiency comes with proven reliability, low maintenance, and long-term performance.

AEROSTRIP diffusers are manufactured with a proprietary polyurethane membrane using a check valve perforation technique. When air is turned off (for example, in SBRs and in swing zones) pores close, and no air is released and no backflow of mixed liquor occurs. As air is turned on, pores open simultaneously along the length of the diffuser, allowing for small bubble formation at very low air flux rates under conditions that all other diffusers would clog.

At the factory, each individual AEROSTRIP diffuser—yes, each one—is tested for trans-membrane pressure and is inspected under air flow in a submerged condition. This quality program remains unparalleled in our industry today.



| | |
|---|--|
| Membrane Expected Life | 12-20 years |
| Flux Range: | 0.3 – 7.0 scfm/ft2 (5 - 120 Nm3/m2/hr) |
| Standard Oxygen Transfer Efficiency (SOTE): | Up to 60% for 20 ft (6 m) Sidewater Depth (SWD) |
| Standard Aeration Efficiency (SAE): | >8 lbs O2/HP-hr (>5 kg O2/kW-hr) |
| High Efficiency Dynamic Wet Pressure (DWP) | 10 – 20 in H2O (250 -500 mm H2O) 0.36 – 0.72 psi (25 – 50 mbar) |



TYPE T - TIMELESS

| | |
|------------|-----------------------|
| Body | AISI 316 Ti Stainless |
| Membrane | Polyurethane |
| Connection | Threaded |
| Height | 0.8 in (2 cm) |
| Width | 6 - 7 in (15-18 cm) |
| Length | 1.6 -13.1ft (0.5-4m) |



TYPE Q - QUALITY

| | |
|------------|------------------------|
| Body | PVC |
| Membrane | Polyurethane |
| Connection | Compression, PVC |
| Height | 1.8 in (4.5 cm) |
| Width | 7 in (18 cm) |
| Length | 1.6 -14.8ft (0.5-4.5m) |

CONSTRUCTION

BUILT TO LAST

PIPING

Conventional stainless steel drops to Schedule 40 PVC or stainless steel manifolds may be used for installation. Alternatively, high temperature-rated HDPE drops may be connected from the main air header down to a group of 4-6 diffusers. This latter option allows flexibility to operate (or not operate) small groups of individual diffusers by adjusting valves at the top of the tank. With either method, the floor-mounted AEROSTRIP diffuser is the lowest point of the system, and no condensate purge is required.

FLOOR MOUNTING

Floor mounting substantially improves mixing, eliminates grit accumulation dead zones, and provides additional contact time for each bubble. Sloped floors are no problem – the diffusers are mounted higher on the anchors at the lower points of the floor.

BEYOND THE CLEAN WATER TEST

AEROSTRIP polyurethane membranes have no additives: such additives leach into the wastewater over time causing EPDM membranes to become brittle. The AEROSTRIP polyurethane membrane remains elastic, and the perforations remain true to their original form over time.

LOWEST COST OF OWNERSHIP

With easy installation, long-term low energy usage, and unparalleled service life, AEROSTRIP systems are the lowest cost of ownership aeration system for wastewater. AEROSTRIP systems have been installed in numerous energy reduction projects throughout the United States.

ON LINE MAINTENANCE

Our check valve perforation technique allows us to perform a relax/flex cycle of the membrane which keeps the pores clean, allowing high efficiency to be maintained for many years.

SUCCESS STORIES

SINCE 1996, AEROSTRIP SYSTEMS HAVE BEEN INSTALLED IN OVER 1,500 TREATMENT PLANTS WORLDWIDE RANGING FROM LESS THAN 0.1 MGD TO OVER 100 MGD.



Rome, NY

In 2009, AEROSTRIP diffusers were installed in the Rome, NY plant as part of a nutrient removal and energy conservation project. The total suspended solids distribution was measured at various air flux rates. Due to the even distribution of air resulting from the check valve perforation technology and the floor mounting arrangement, good mixing occurred at flux rates half that of other fine pore diffusers.

"With AEROSTRIP Diffusers, we are able to adequately mix our Aeration Basins at 0.05 scfm per square foot of tank floor area. That gives us a lot of operational flexibility and also helps lower the electric bill."

- Richard Kenealy, Chief Operator, City of Rome New York WPCP
September 2012



Bremerton, WA

The first US AEROSTRIP installation started up in 2001 at the Bremerton, WA WWTP. In 2012 and 2013, the diffusers with the original membranes were independently tested using both the ASCE clean water test and the off gas process water method. The diffusers were found to be operating at 90% of their original efficiency after 12 years of continuous use.

"For conventional short sludge retention time treatment plants (SRT 1 to 6 days) this [12-year old AEROSTRIP] system performed better than all previously tested fine pore diffuser systems installed, and even better than most new ones"

- Dr. M.K. Stenstrom, Distinguished Professor, U.C.L.A.
December 2012

THE OVIVO DIFFERENCE

200+ YEARS OF HERITAGE • 100% FOCUSED ON WATER

PROCESS OPTIMIZATION CONTROL

Ovivo can provide your AEROSTRIP® installation fully equipped with the latest and most effective control system available. Whether your goal is basic aerobic treatment or full-scale biological nutrient removal, Ovivo can provide it.

OVIVO: AN ENGINEERING PROCESS POWERHOUSE

The Ovivo Aeration Process Team, which consists of decades of biological wastewater treatment plant design and innovation, has provided expertise and design assistance for wastewater treatment plants consisting of all shapes, sizes, and effluent permits.

APPLICATIONS

- Conventional Activated Sludge
- Oxidation Ditches
- Membrane Bioreactors (MBR's)
- Sequencing Batch Reactors (SBR's)
- Integrated Fixed-film Activated Sludge (IFAS)
- Municipal Applications
- Industrial Applications
- Retrofits



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ALL OF YOUR KNOWLEDGE,
ALL IN ONE PLACE.**

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