

Advanced Aeration Solutions:

Expertise in Diffuser System Design Since 1973

Aeration Systems

- **Projects**

- Retrofit Existing
- New Facilities

- **Basin Types:**

- Round
- Square
- Rectangular
- Orbal Channel
- SBR
- Oxidation Ditch

- **Diffusers**

- Fixed Grid
- Retrievable

- **System Design**

- OxyProcess
- Blowers & Controls
- Access Bridges
- Redundancy
- Stainless Steel & Hot Dipped Galv

New WWTP • Retrofit Fixed Grid • Retrofit concentric ring • Retrofit Rotor Oxidation Ditch • BNR Performance for TN and TP

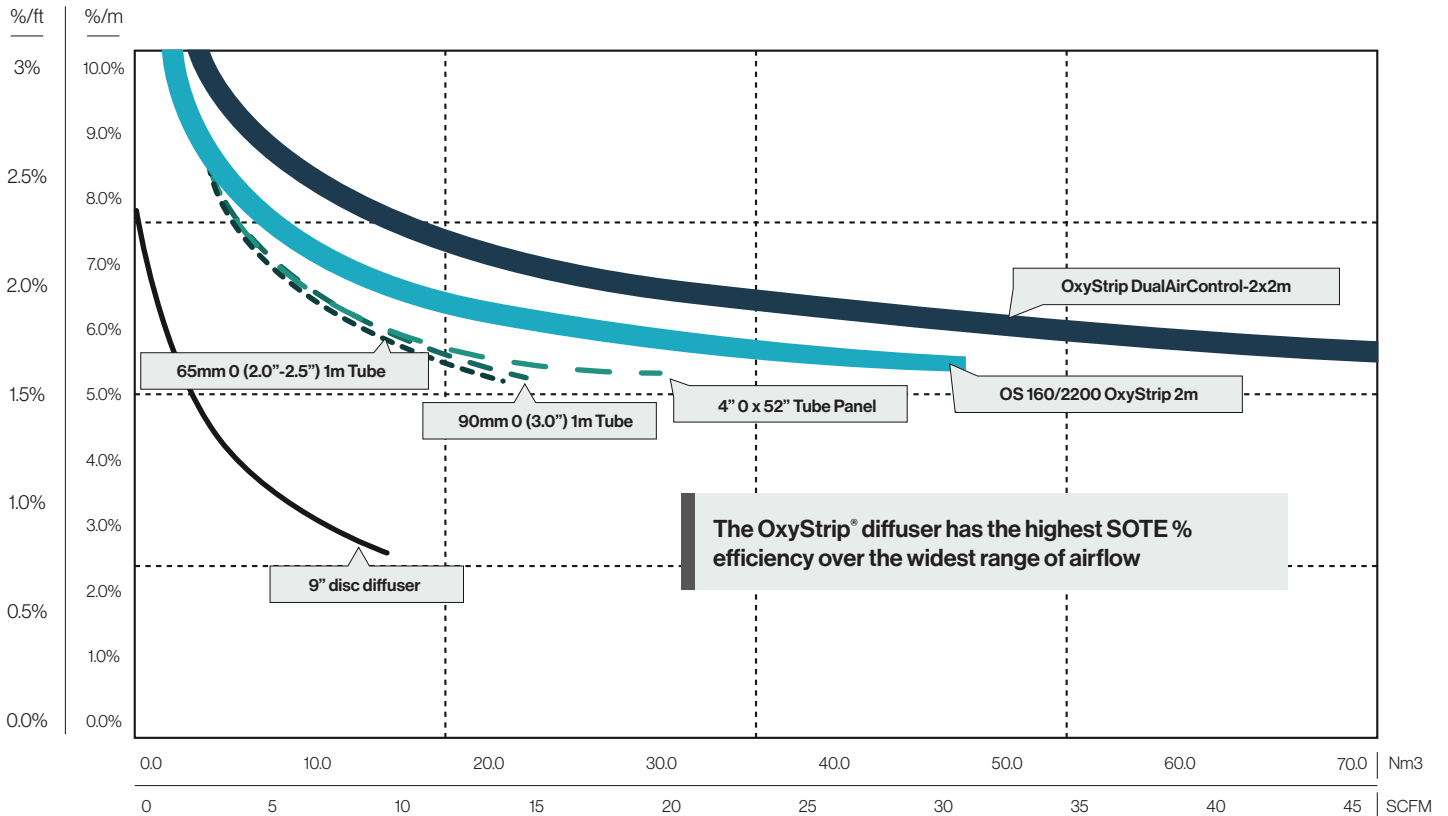
OxyStripTM - OxyTubeTM - OxyDiscTM

Retrievable and Fixed Grid Fine-Bubble Membrane Diffusers

Strip, Tube, and Disc Fine-Bubble Membrane Diffusers

Our three main diffuser categories all offer floor coverage, providing aeration as well as mixing to the tank. The patented designs offer a wide variety of waste water treatment solutions, making them ideal for new and retrofit projects.

SOTE% Performance benchmark by airflow range & diffuser type



SOTE curves for reference only and benchmark SOTE test comparing JAEGER Oxy^{***}™ diffusers to select competitors' models are available on special request. SOTE is subject to tank geometry, diffuser insertion depth, diffuser density and other factors.

Diffuser Benchmarks	JAEGER - OxyStrip™	JAEGER - OxyTube™	JAEGER - OxyDisc™
Diffuser Type	Strip	Tube	Disc
Membrane Material	EPDM / Silicone / PU	EPDM / Silicone / PU	EPDM / Silicone
Efficiency SOTE %	Best	Better	Good
Retrievable Design Solutions	Yes, universal	Yes, limited	No
Turndown Capabilities	9:1 or 16:1*	3:1	2:1
Recommended Flux Rate (scfm/diffuser)	2.5 - 22.0	3.0 - 8.0	1.0 - 2.5
Flux Rate Design (scfm/diffuser) (Nm ³ /h / diffuser)	2.0 - 22.0 / 2m strip 3.0 - 35.0 / strip	3.0 - 8.0 / 1m tube 5.0 - 13.0 / tube	0.75 - 2.5 / typical 9" disc 1.2 - 3.9 / disc
Diffuser Equivalent [2m OxyStrip standard]	1:1	5:1	9:1
Headloss (psig)	< 0.8	0.9	1.1
Internal Check Valve [prevent sludge]	Yes, dual	Yes	Yes
Active Area per Diffuser	3.44 sq ft / 2 meter	140 sq ft	0.38 sq ft
Expected Life (years)	12 - 15	8 - 11	7 - 10

Figures subject to specific process design, waste water composition, and actual plant loading conditions. Please contact us for more information. *9:1 Regular OxyStrip™ configuration. Turndown of 16:1 achieved with DualAir™ system design

EPDM = black rubber type Silicone = white rubber type PU = white Polyurethane type

JAEGER - OxyStrip™

The OxyStrip™ advances membrane technology to lower O&M cost and easier to maintenance while increasing efficiency vs tube and disc diffusers

Sensitive System Design:

- Higher SOTE % performance than other diffuser types
- Up to 90% fewer diffuser connections than disc diffusers
- Two internal check valves restrict sludge from air piping
- Fatigue Free Design- presents stretched membrane failure
- On/off cycles design for OxyProcess and energy savings
- DO and ORP Control for BNR and O2 Control
- expected life of 15+ years, multiple material design

Installation Benefits

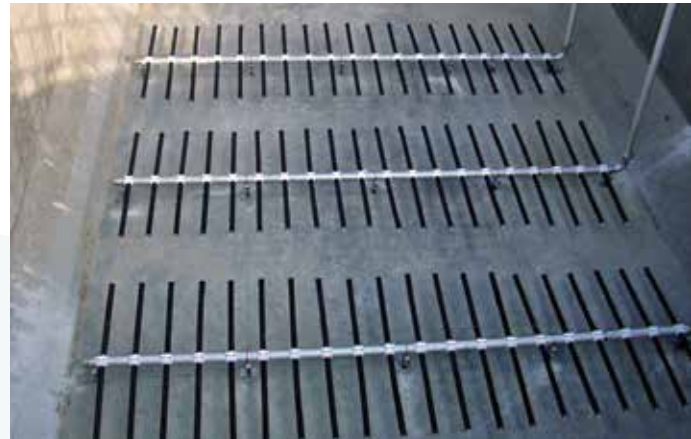
- 18" +/- lower than tube or disc installed diffusers
- Flex hose eliminates air piping vibration diffuser failures
- More rigid installation for longer life



JAEGER - OxyTube™

The OxyTube™ offers increased membrane surface area and a vast reduction of lateral air piping compared to disc diffusers.

- Predominantly fixed grid installations
 - Direct anchoring to air piping, supported by a clamshell attachment
- Piping: PVC and/or stainless steel (for fixed grid)
- Check valve & Fatigue-Free Design™



JAEGER - OxyDisc™

As the original manufacturer of EPDM fine-bubble disc diffusers, the JAEGER OxyDisc™ diffuser design concept is the market standard.

OxyDisc™ ECO-10:

The industries most versatile & efficient disc design

- 10" disc diffuser with balancing orifice technology

- Standard 9" disc is default in industry
- We invented and still produce the original 9" EPDM membrane
 - Offer direct replacement membrane inserts for competitor disc diffusers
- For fixed floor grids only
- Piping: PVC and/or stainless steel
- Internal check valve



JAEGER - AERATION™ Innovative and Efficient System Design

Retrofit or New systems Disc or Tube systems to use Jaeger Aeration membranes. Direct replacement of existing or upgrade to OxyStrip diffuser for additional benefits and lower O&M costs. Regardless of the existing design, our design creativity will provide a more reliable and lower O&M installation vs the existing products.



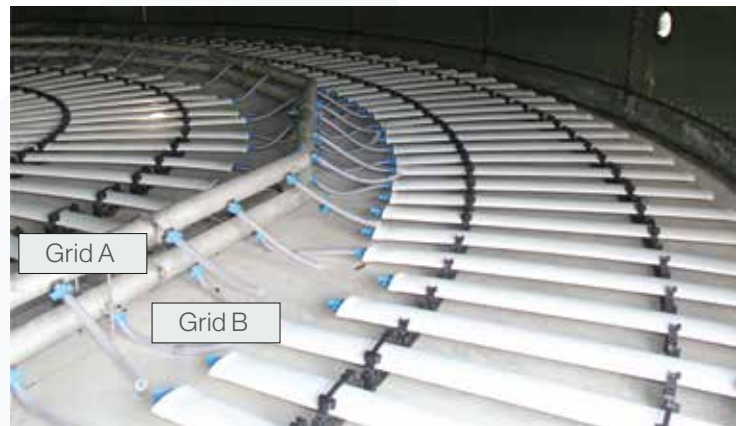
JAEGER - Dual-Air-Control™

- +Increased turndown to 16:1 for optimum O₂ Control
- +Manages variable loading to precise blower energy management
- +Provides mixing and oxygen control with the air control valves
- +Utilizes flex connector to maintain diffusers at same elevation for s
- +Single blower system managing blower pressure

Tank Options:

- Any tank configuration dimensions
- Round
- Square - Rectangular
- Optional Mixing if required for extreme loading cases

The OxyStrip™ diffuser design allows for an alternating air-hose coupling pattern, allowing one set of blowers to be turned down/off independently of the other, while maintaining consistent aeration patterns.



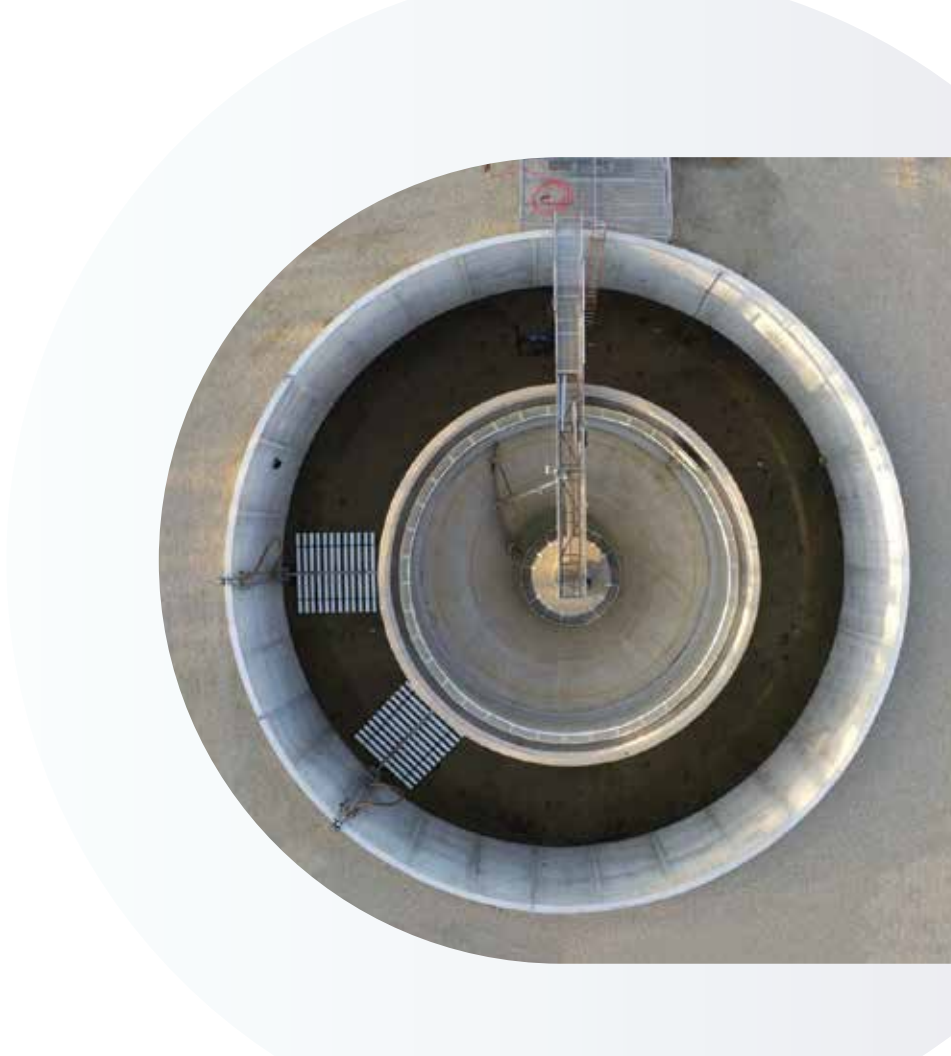
Retrievable Rack Systems

OxyLift Diffuser racks for maximum oxygen per sq ft of membrane area

Wall mount or Bridge mounted diffuser retrievable design

Integral Air supply piping for redundancy in aeration system

Separate mixing HP for improved energy efficiency and process control with OxyProcess DO and ORP control



Retrofit facilities:

- Concentric Ring
- Rotor ditch conversion
- Single Aeration Basin

JAEGER-OxyPOD™

Enhanced Aeration Performance

OxyPOD™ Aeration Systems for Oxygen-Deficient Tanks & Lagoons

Our OxyPOD™ supplementary aeration solutions are ideal for maximizing system uptime and maintaining low O&M costs. A flexible and inexpensive approach to enhance aeration processes:

- Retrofit of oxygen-deficient systems
- Facilities w/out system redundancy
- Disaster recovery
- Odor control
- Emergency aeration

Drop-in / submerged / self-weighted racks for concrete tanks, mechanical carousel plants, & oxidation ditches

Suspended solutions (off of floating laterals) for lagoon applications.

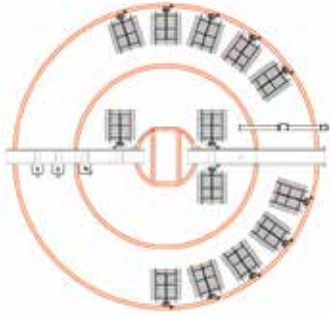


Suspended Floating Solutions

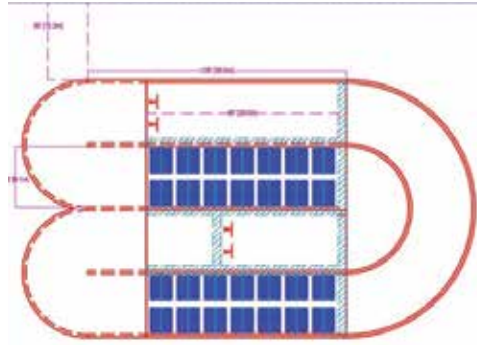
Drop-in / Submerged / Self-Weighted Racks

JAEGER-AERATION™ Configurations for Retrofit / System Upgrades:

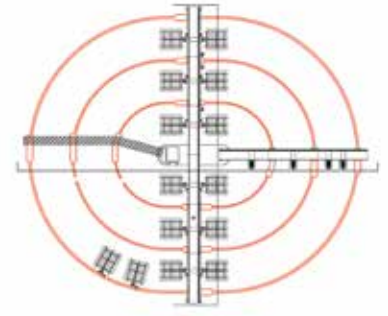
Our industry experience and continued innovation have resulted in exciting new applications within the system supply for complete biological nutrient, nitrogen, and phosphorus removal for new & existing facilities.



Concentric Ring WWTP



Vertical Turbine Retrofit Ditch



Supplemental Air OxyStrip POD

JAEGER-BioCube™

Biological Process Enhancement

Self-weighted / Fixed or Retrievable

- FFBR (Fixed Film Bio Reactors)
- IFAS (Integrated Fixed Film Activated Sludge)

Media Block Design

- Polypropelene Solvent Weld Blocks
- BOD Removal Opening
- Ammonia Removal Opening



The BioCube™ provides mixing and aeration, up to a 60% increase in BOD removal by volume. It provides enhanced ammonia removal / nitrification at a higher sludge age.

Diffuser Innovation and Supply Since 1973

A third-generation business originating in Germany, Jaeger AERATION LLC is the wastewater treatment industry pioneer of EPDM fine-bubble membrane diffusers. Jäger created the world's first fine-bubble rubber membrane diffuser in 1973 as a replacement for ceramic diffusers. The business has grown to international size and supply. Customers have benefited from the Jaeger wastewater diffuser option innovations, SOTE % performance improvements, lower operations O & M, diffuser life expectancy increases since the original disc diffusers. As the leader in diffuser technology, we continue to innovate our diffuser lines and WWT processes for our clients' products, providing improved efficiency and reduced costs to our end users and our OEM manufacturers for their clients.

Our JAEGER-Oxy...™ diffuser lines, integrated into our OxyMix™, BioCube™, and OxyLift™ technologies, offer unique municipal & industrial WWT solutions. The streamlined system design offers low-cost, creative options for new & retrofit facilities, with the benefit of decreased power consumption and low O & M. OxyProcess aeration consulting and drawing are provided for facility designs for TN and TP using our decades of experience and diffuser design.

More information available



For more information, please contact your regional sales representative or get in touch with us directly:

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The OxyStrip™ Diffuser employs multiple patented and patent-pending technologies, utility, product design features, registered TMs and / or WWT system process controls. It is engineered and manufactured by JAEGER AERATION LLC.