



OmniMax-A[™] & OmniMax-D[™] MBBR Treatment Systems

Ideal for ...

- Year-round treatment consistency
- Cold climates and unpredictable weather
- High-flow applications
- Variable and seasonal flows
- High-strength waste streams
- Long-term durability
- Expansion and integration



ENERGY-EFFICIENT SOLUTIONS for high-flow,
high-strength, and nitrogen-sensitive wastewater

OmniMax-A & OmniMax-D Treatment Systems

Why OmniMax?



EFFICIENT

Uses less energy than other, high-intensity systems with suspended-growth processes



SCALABLE

Easy sizing for new installations, retrofits, or future expansions



ADAPTABLE

Suitable for above-grade, at-grade, permanent, and mobile installations



STREAMLINED

Compact design easily installs in a small footprint



TRUSTED

Backed by Orenco's decades of expertise

Advanced Treatment Low Energy Costs

OmniMax-A

Aerating MBBR Treatment for High-Strength Waste

Orenco's OmniMax-A is a secondary treatment MBBR that uses aeration to treat high-flow or high-strength wastewater (over 25,000 gpd or 95 m³/day). It reliably reduces BOD, TSS, TKN, and ammonia to meet strict treatment requirements without producing high levels of activated sludge. The system allows maintenance without media removal and provides year-round process control.

Key Features and Benefits

- Insulated, enclosed vessel for stable temperatures, consistent year-round treatment, and improved energy efficiency
- Watertight construction that helps prevent infiltration, inflow, algae growth, and evaporation
- Fine-bubble aeration provides 3–4 times more oxygen transfer vs coarse bubble designs
- Modular, scalable design for flexibility and seasonal, weekly, or daily swings in flow
- Simplified maintenance with removable diffusers and aeration lines that are accessible without removing media or shutting down the system
- Seamless integration with AdvanTex® AX-Max™ and other treatment processes



Accessible internal components simplify service and maintenance, reducing downtime and O&M costs.



OmniMax-A uses aeration and biofilm media in motion to maximize contact, efficiently breaking down pollutants and reducing activated sludge.

OmniMax-A & OmniMax-D Treatment Systems



OmniMax-D integrates effortlessly with Orenco AdvanTex systems to deliver enhanced, adaptable performance in a small footprint. Its biofilm-based process provides reliable, high-capacity denitrification for a wide range of installations.

OmniMax-D

Advanced Denitrification for Stringent Nitrogen Limits

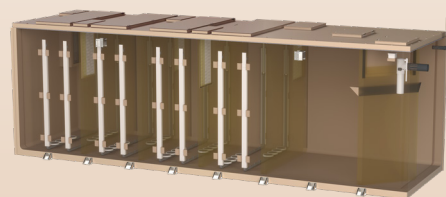
Orenco's OmniMax-D is a denitrifying MBBR that supports up to 85% total nitrogen reduction and can meet discharge limits as low as 10 mg/L TN, depending on configuration. Biofilm carriers are suspended in an insulated vessel with pneumatic mixing to promote efficient nitrate removal. This modular system delivers high efficiency while simplifying installation, operation, and maintenance. (To consistently achieve TN of less than 10 mg/L, include carbon supplementation.) The modular system delivers high efficiency while simplifying installation, operation, and maintenance.

Key Features and Benefits

- Foam-core fiberglass construction for temperature stability and watertight performance
- Efficient pneumatic mixing keeps carriers suspended without excessive energy use
- Accessible maintenance with serviceable lids and easy access to components
- Compatible with carbon feed for optimized denitrification
- Modular vessel options for flexible installation and layout
- Proven materials and design for long-term durability and reliable nitrate reduction
- Integrated electrical controls and DuraFiber® utility buildings streamline installation and increase overall reliability

Why Choose an MBBR?

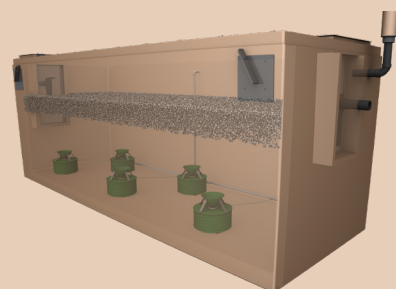
- Minimal operation and maintenance needs
- Low life-cycle costs for a strong return on investment
- Technology built to grow with you and meet regulatory changes
- Peace of mind through consistent, reliable performance



OmniMax-A

APPLICATIONS

- Municipal, commercial, and industrial wastewater facilities
- High-strength waste pretreatment (e.g., restaurants and commercial facilities)
- Nitrification and denitrification for $\text{NH}_3\text{-N}$ and TN reduction
- New installations, upgrades and retrofits, or expansions in permanent or mobile locations



OmniMax-D

APPLICATIONS

- Pre-anoxic, post-anoxic, or combined denitrification
- Sites requiring stringent total nitrogen limits
- Existing systems needing nitrogen upgrades
- Permanent, mobile, above-grade, or at-grade installation
- A wide range of climates

OmniMax-A & OmniMax-D Treatment Systems

No Guesswork

With Orenco Systems, you don't have to guess. We've thought through all the problems, so you don't have to. Our time-tested systems protect your investment by ensuring you don't face costly repairs, fines for noncompliance, or unnecessary complications.

At Orenco, we provide simple solutions that last. Whether you're in the early planning stages or need ongoing support following your installation, we're here to ensure that your system runs smoothly, year after year.

WHY CHOOSE ORENCO?

- Over 40 years in the wastewater business
- Expert staff to guide you through every decision
- Comprehensive support from design to long-term maintenance
- A reputation for excellence and reliability



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The OmniMax Advantage

Orenco's OmniMax-A and OmniMax-D moving bed biofilm reactor (MBBR) systems help owners and operators meet stringent treatment requirements, minimize energy consumption, and streamline operation and maintenance, while ensuring lasting performance and flexibility.

- **OmniMax-A**
supports high-performance
secondary treatment and nitrification.
- **OmniMax-D**
delivers advanced denitrification
for stringent nitrogen control.

Proven worldwide, Orenco MBBR systems reduce BOD, TSS, ammonia, and total nitrogen for demanding municipal, commercial, and industrial applications. Our durable, insulated, watertight construction ensures reliable, year-round treatment in harsh climates, while the low-profile design minimizes odors and blends seamlessly with any site.

OmniMax-A and OmniMax-D can be used independently or in combination. They integrate effortlessly with Orenco AdvanTex AX-Max systems to deliver enhanced, adaptable performance.

Together, these MBBR systems provide a flexible, operator-friendly design that is the energy-efficient answer to today's toughest wastewater challenges.



Orenco Controls™ and Orenco Composites™ (divisions of Orenco Systems) supplied the electrical control panels and DuraFiber utility buildings for this project.



Angel of the Winds RV Park uses AdvanTex AX-Max and OmniMax-D systems to deliver advanced wastewater treatment and nutrient removal.



For More Information
Visit **ORENCO.COM** or call **(800) 348-9843**.