



Smith & Loveless Inc.

Above All Others.™

Model R OXIGEST®

**Pre-Engineered Biological
Wastewater Treatment System**



Model R OXIGEST® Benefits

- Flexible Application
- Adaptable for Large Capacities
- Adaptable for High Strength Waste
- Can be Designed for Water Reuse
- Flexible Clarifier Design: Both half-bridge and full-bridge designs are available
- Field Erection Support
- Start-up: All OXIGEST® systems come with a system start-up by a Smith & Loveless Field Service Engineer.

S&L Advantages

- Proven Technology
- Process Expertise
- Ease of Operation & Maintenance
- Field Erection Capabilities
- Engineering Support
- Single-source Supplier
- Custom Designs

Design Benefits

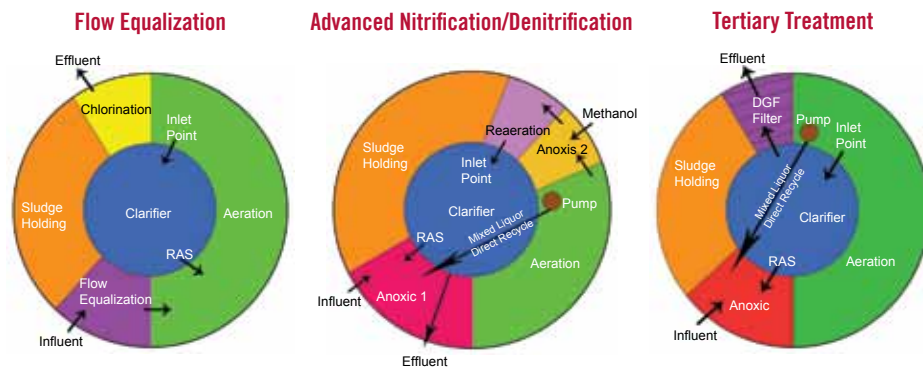
Proven in hundreds of installations, the S&L Model R OXIGEST® Treatment System provides stable operation and flexible process options for wastewater applications. Its precursor was originally developed by the engineers at Smith & Loveless for treatment of domestic wastes, but after nearly four decades of continued development and evolution, the OXIGEST® is designed to be a high-performance, custom-designed aerobic system that meets specific requirements.



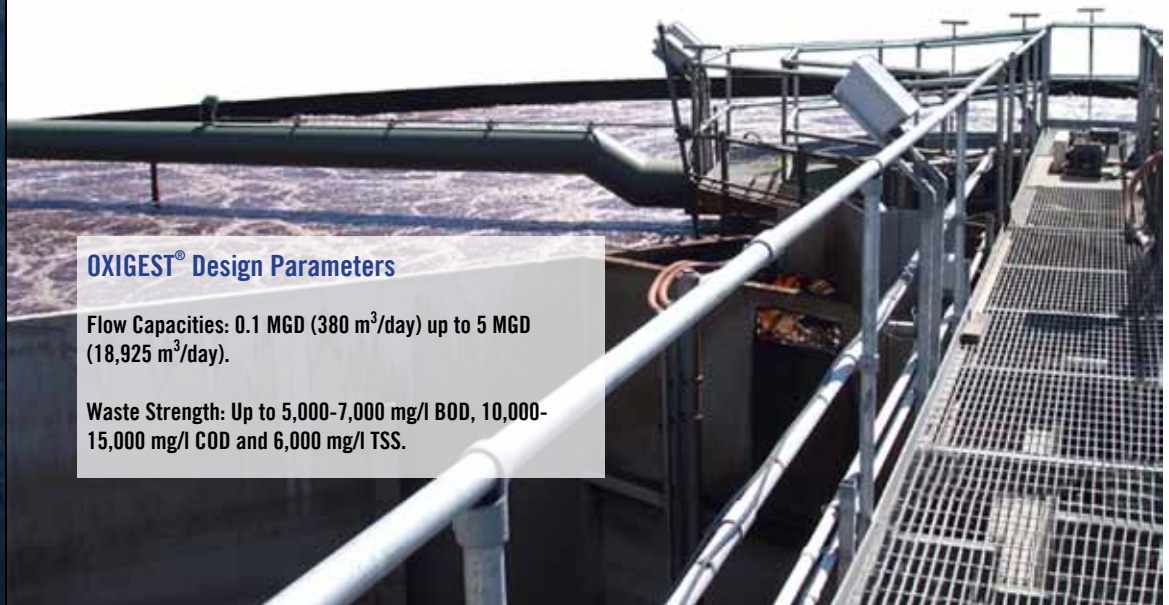
A Model R OXIGEST® system installed in California

The OXIGEST® smart-tank design encompasses complete aeration, clarification and advanced treatment in concentric tankage while allowing these unit processes to be individually separated and controlled. From design and engineering to a total turnkey field installation, Smith & Loveless' expertise comes with every OXIGEST®, every step of the way.

Design Flexibility



The Model R OXIGEST® system offers flexible treatment for a variety of process options. Each pre-engineered Model R OXIGEST® is custom-built for your specific needs, and can be utilized in a wide variety of process variations, including grit removal, flow equalization, nitrification, denitrification, re-aeration, chlorination, dechlorination, sludge storage, or other specialized treatments. A few popular OXIGEST® process variations are illustrated above.



OXIGEST® Design Parameters

Flow Capacities: 0.1 MGD (380 m³/day) up to 5 MGD (18,925 m³/day).

Waste Strength: Up to 5,000-7,000 mg/l BOD, 10,000-15,000 mg/l COD and 6,000 mg/l TSS.

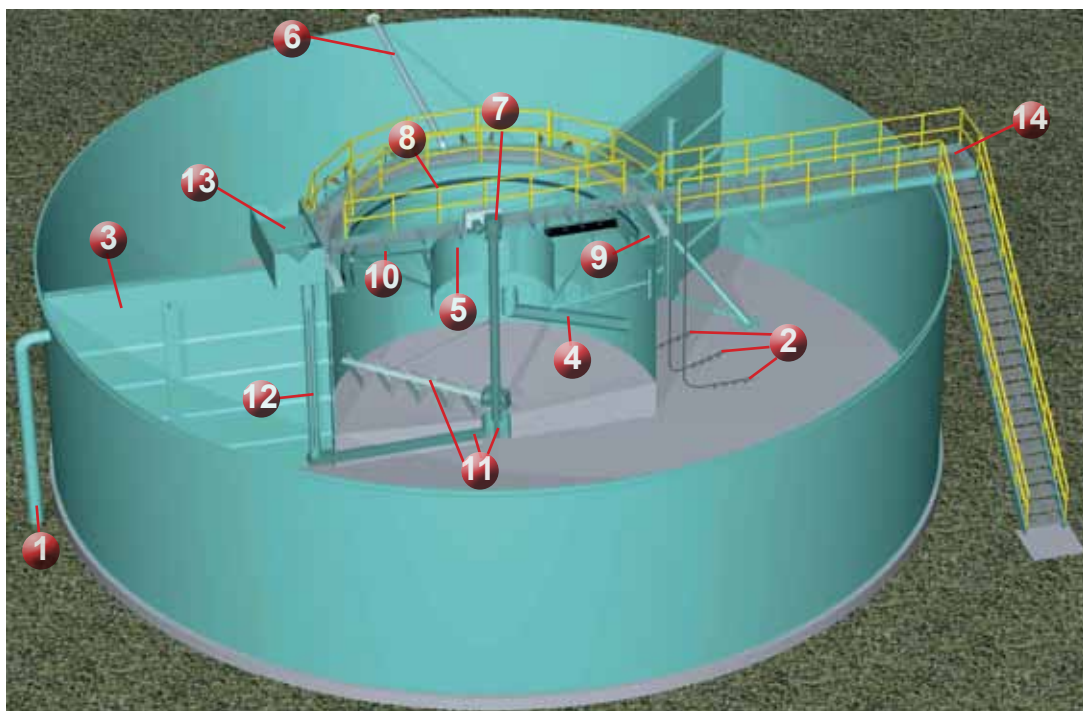
Visit us on the web or call us today to learn more about our pumping and treatment solutions!

Design Features



Industrial & Municipal Applications

- Manufacturing
- Dairy Production
- Food & Beverage
- Wineries/Breweries
- Agriculture
- Biofuels / Ethanol
- Chemical / Petrochemical
- Power Generation
- Oil / Gas / Refineries
- Federal / Military
- Superfund / Groundwater Cleanup
- Small Municipalities
- Private Developments



1 Influent Pipe

Carries wastewater directly into the Model R **OXIGEST**®.

2 Air Diffuser

Coarse bubble and fine bubble diffusers are both available. Both types of diffusers are engineered for maximum efficiency without clogging. Air is supplied by remotely located centrifugal or positive displacement blowers.

3 Partition Walls

Allows for dividing of the annular tank section into treatment zones such as aeration, sludge holding, anoxic and others as required for the process treatment.

4 Clarifier Inlet Piping

The aerobically treated wastewater enters the clarifier through this pipe.

5 Stilling Well

Reduces the velocity of the influent, promoting settling of solids and clarification.

6 Air Supply Connection

The main air supply for the diffusers and airlift pumps.

7 Drive Unit

Specially developed for this type of clarifier. The heavy-duty drive provides more than adequate torque and includes over-torque protection.

8 V-Notch Weirs

The effluent V-Notch Weirs are adjustable.

9 Effluent Trough

Collects the treated effluent from the clarifier.

10 Skimmer System

Consists of a skimmer arm, anti-rotation arm, scum baffle and an air lift removal system. The skimming arm forms a "V" with the anti-rotation arm, forcing all surface material toward the scum baffle where it is removed by the air lift.

11 Sludge Collection Unit

Consists of a dual-arm scraper assembly, torque tube and sludge collection well. The scrapers move the sludge toward the center sludge well twice on each rotation of the mechanism.

12 Return Sludge Airlift

Includes a control valve and flow rate adjustment.

13 RAS/WAS Return Sludge Distribution Splitter Box

Settled sludge from the clarifier is returned back to the biological process. The sludge can also be wasted to sludge holding or aerobic digestion.

14 Stairway, Bridge & Clarifier Service Walkway

Designed to make the drive unit and other equipment completely accessible for faster, safer and lower-cost maintenance.



Model R OXIGEST®



Model R OXIGEST® systems are installed all over the world for a variety of industrial and municipal applications. The system offers flexible process treatment options for all kinds of wastewater streams.

Smith & Loveless Inc. knows wastewater treatment systems. Backed by 65 years of engineering, manufacturing, erecting and servicing thousands of pre-engineered biological treatment systems, we understand your preferences for performance, minimal operational costs, and long-term durability. We're proud of the knowledge and experience we bring to the table to help solve your wastewater needs. With Model R OXIGEST®, you receive the finest in system innovation backed by the value-added experience of Smith & Loveless.



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