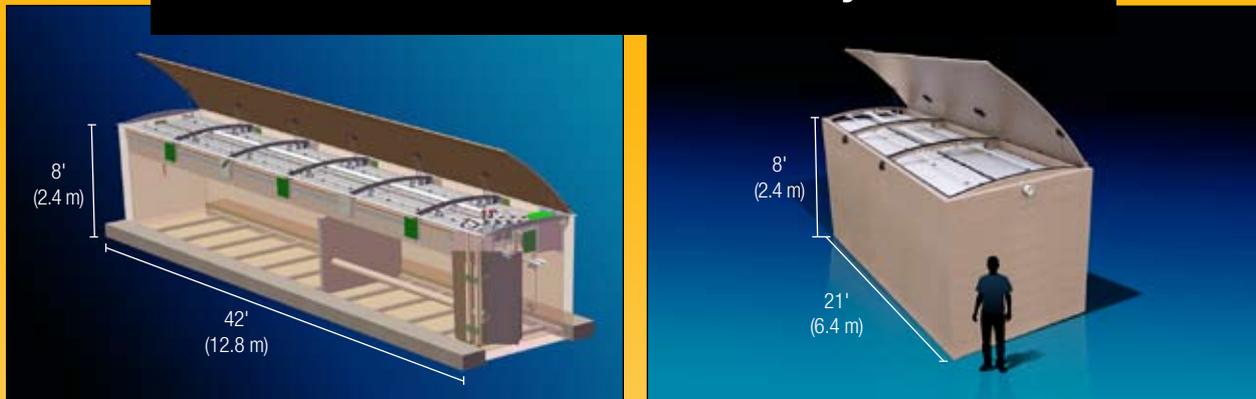


AdvanTex AX-Max™

Modular, Fully-Plumbed Wastewater Treatment System



(Left) A full-sized 42-ft (12.8-m) long AdvanTex AX-Max™ unit can be configured as a treatment system capable of handling a weekly peak design flow of up to 15,000 gpd (56,780 L) when receiving primary treated effluent from septic tank(s) or from an effluent sewer. (Right) Smaller units are available for smaller flows.

Get energy-efficient wastewater treatment. **Anywhere.**

Orengo Systems® — developers of the AdvanTex® line of high-performing textile treatment systems — is introducing the AdvanTex AX-Max™ for commercial, residential, and municipal applications.

The AX-Max is a complete, fully-plumbed AdvanTex Wastewater Treatment Plant for decentralized applications. It's the ideal treatment solution for small communities with flows up to 100,000 gpd, strict treatment limits, and part-time operators. However, because the AX-Max can be installed in multi-tank arrays, it can also handle flows up to 1 MGD (3.8 million liters per day).

The AX-Max is built inside an insulated fiberglass tank that is durable, lightweight, and watertight. Tanks range from 14' to 42' (4.3-12.8 m) in length and they're easy to ship and set.

The AX-Max can be installed below-ground or above, singly or in multi-tank arrays. Single or multi-tank arrays can be completely enclosed in a building for enhanced operator comfort.

Like all AdvanTex Treatment Systems, the AX-Max is a recirculating textile filter that is easy to operate and produces outstanding effluent quality, while using very little electricity: only 1-2 kWh per 1000 treated gallons (3785 L). It can treat blackwater and graywater to re-use levels for surface discharge, subsurface dispersal, or various reuse alternatives.

A 3-D model and process description are on the back.

For more information, contact Orengo Systems®, Inc., **800-348-9843** or **+1 (541) 459-4449**.

Applications:

- Commercial, residential, municipal

Technology:

- Recirculating packed bed filter

Effluent Quality:

- cBOD/TSS (low-to-moderate loading): ~5 mg/L
- cBOD/TSS (higher loading): 10-25 mg/L

Ammonia Reduction:*

- NH₃-N (standard configuration): typically 3 mg/L or better
- NH₃-N (alternate configuration): typically 1 mg/L or better Summer, 3 mg/L or better Winter

Total Nitrogen Reduction:*

- TN (standard configuration): typically 60-70%
- TN (alternate configuration): 90% or better

Control System:

- Timer-controlled pumps
- Remote telemetry control panel



This full-sized AX-Max wastewater treatment system was recently installed at a 50-site campground in the LaPine, Oregon State Park.

* Note: Influent affects nitrification/denitrification and requires monitoring of alkalinity, oxygen, temperature, toxic inhibitors, etc.

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AdvanTex[®] AX-Max[™]

For Residential, Commercial, Municipal, and Mobile Applications

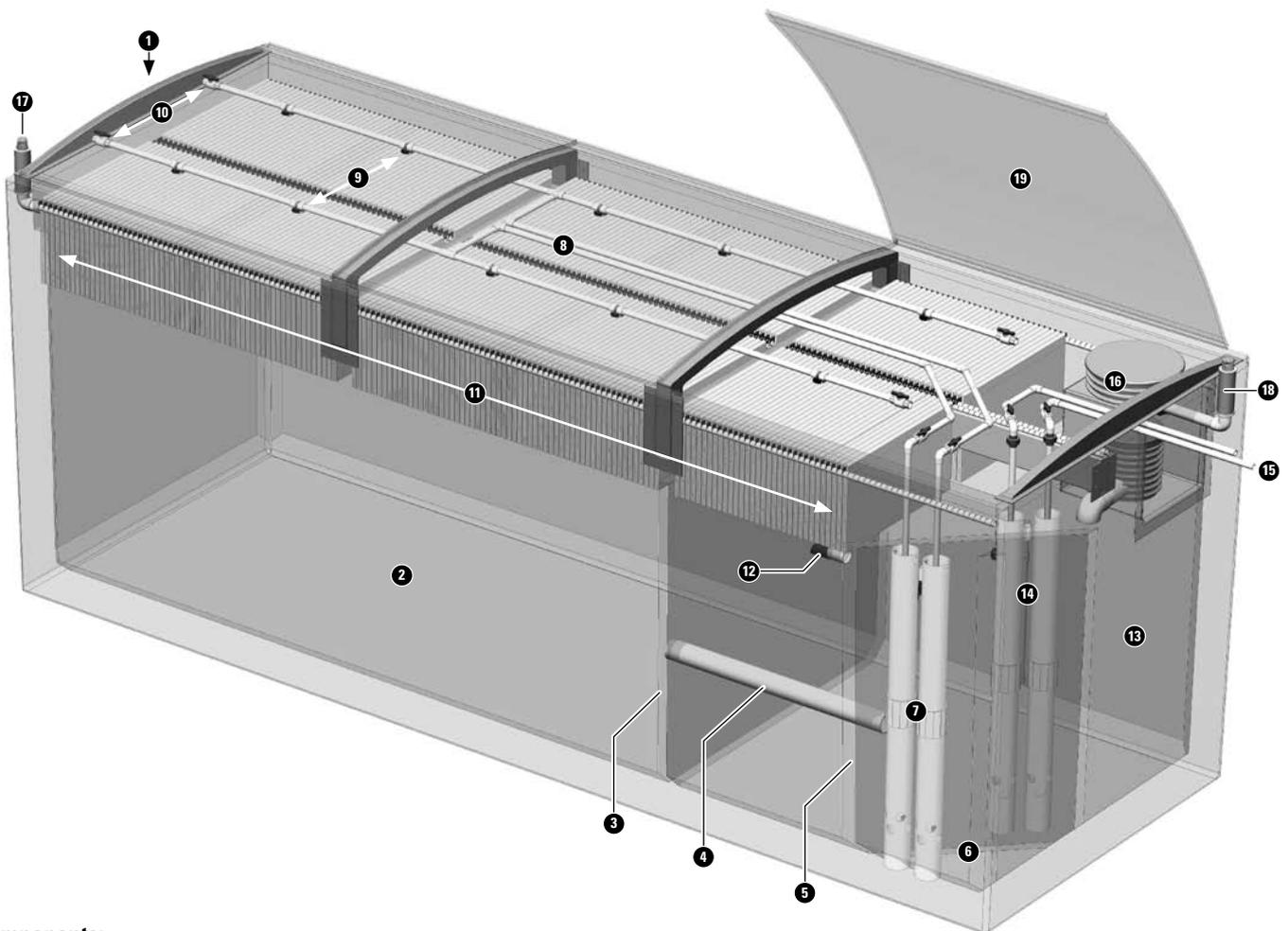
Standard System Description

The AdvanTex AX-Max[™] Treatment System is a multiple-pass, packed-bed, aerobic wastewater treatment technology specifically designed and engineered for long-term processing of domestic-strength wastewater to “better than secondary” treatment standards. It features the same outstanding textile filter performance as other AdvanTex treatment systems, but in a fully pre-engineered, complete package. Because it has a streamlined system configuration and few components, the AX-Max requires little operation and maintenance. AX-Max systems are ideally suited for most municipal applications or residential developments. Figure 1 shows an optional layout of an AX-Max configured as an advanced secondary treatment facility (primary treatment and dispersal not shown).

The 4,500 gallon (17034 L) AX-Max module has three chambers: a “recirc-blend” chamber, a “recirc-pump” chamber, and a “recirc-filtrate” chamber. Wastewater flows 25 feet (7.6 m) through a 4-inch (10.16 cm) PVC pipe into the 3000 gallon (11356 L) recirc-blend chamber, which also acts as a surge tank. There, the influent blends with filtrate dripping down from the hanging textile media. A pump in the recirc-pump chamber draws this blended influent through a one-way transfer line and sends 100 gallons (379 L) per hour to a manifold above the textile media, which distributes the effluent for further treatment. As effluent percolates through the media, microorganisms remove impurities. With each dose, a portion of the effluent drips into the 1,500 gallon (5678 L) recirc-filtrate chamber prior to final dispersal.

A baffle divides the flow between the recirc-blend and recirc-filtrate chambers, and a recirculation-return valve controls the liquid levels. No wastewater passes into the second chamber without first flowing through the media.

Figure 1. AdvanTex AX-Max Treatment Unit, cutaway view (multiple sizes available)



Components:

- | | | | |
|------------------------------|---------------------------|-------------------------------|------------------------|
| 1 Inlet, not shown | 6 Recirc-pump chamber | 11 AdvanTex textile media | 16 Vent fan assembly |
| 2 Recirc-blend chamber | 7 Recirc pumping assembly | 12 Recirc-return valve | 17 Air inlet |
| 3 Tank baffle | 8 Distribution manifold | 13 Recirc-filtrate chamber | 18 Air outlet |
| 4 Recirc-transfer line | 9 Spray nozzles | 14 Discharge pumping assembly | 19 Hinged lid, typical |
| 5 Recirc-pump chamber baffle | 10 Lateral ball valves | 15 Outlet, discharge | |