

Orenco s y s t e m s

PROTECTING THE WORLD'S WATER

7/26/2012 #1

Orenco Systems[®] – History & Background

Founded in 1981

Orenco

- Headquartered in Sutherlin, OR
- 3 Separate Divisions-Orenco Water, Controls & Composites
- Pioneers in Textile Packed Bed Filter Wastewater Treatment Technology
- Continual R&D Focus on Treatment & Materials Technology Targeting Next Level Nitrogen & Phosphorus Removal







Our Solutions ...







AdvanTex® Wastewater Treatment Systems SUSTAINABLE SOLUTIONS

- Advanced Secondary Treatment of Commercial, Residential and Municipal Wastewater
- Recirculating Packed Bed Filtration Technology
 Categorized as Non-Submerged "Fixed Film" Treatment
- More Than 10,000 Units Installed in the Northeast Since 2000 Consistently Delivering 18 mg/I TN
- Major Advantages Include:

JH1

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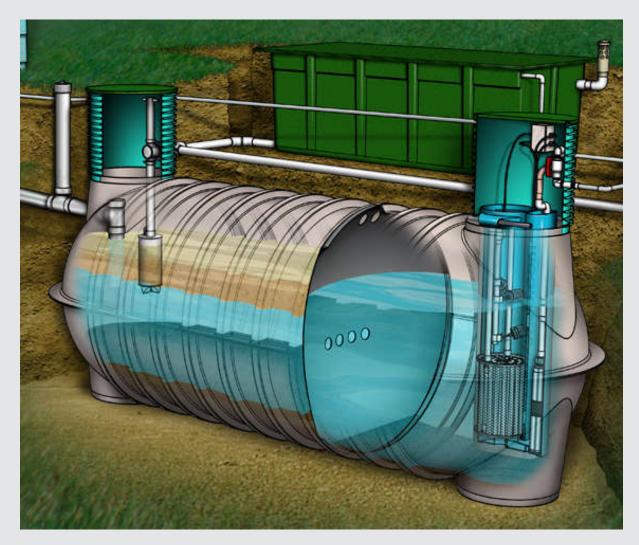
- Dependable, sustainable treatment
- Simple operation with easily adjustable controls
- Untreated effluent cannot pass through to final dispersal
- Low energy consumption (less than 3kW / 1000 treated gallons);
- Low maintenance with minimal spare parts required
- Strong Dealer and Service Provider network in place
- Quiet and visually appealing
- Superior long-term cost of ownership savings!
- Backed by 40 years of industry experience







ADVANTEX AX20 MODE 3



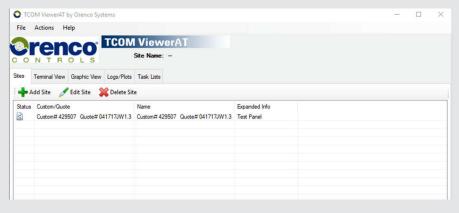


Orenco Controls Local Monitoring

0				BT-VCO	М				
VeriComm [®] monitoring system									
				Connect					
(Points	Alarms	Logs	Visual	Maint	Setup	Remote		
Settings	Points	Alarms	Logs	Visual	Maint	Setup	Remote	<< >>	
# Point		Alarms	Logs	Visual	Maint		0	<< >>	
# Point		Alarms	Logs	Visual			0		
		Alarms	Logs	Visual			0		

- TCOM™
 - Commercial systems
 - Local and remote connection
 - POTS or IP

- Vericomm[®]
 - Residential systems
 - Local connection

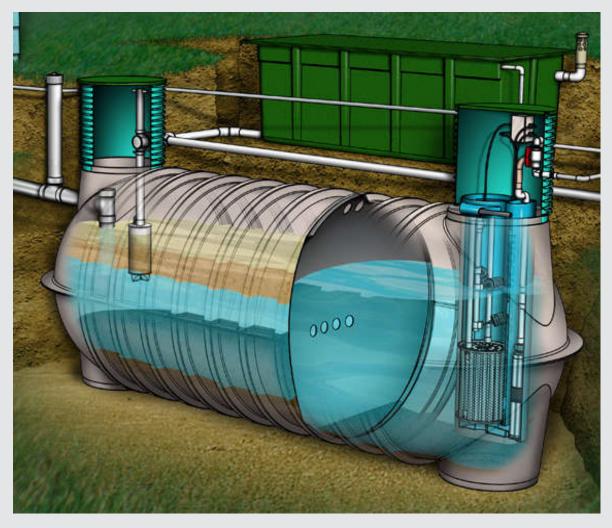


Routine Maintenance Focuses On ...

Control panel

Orenco

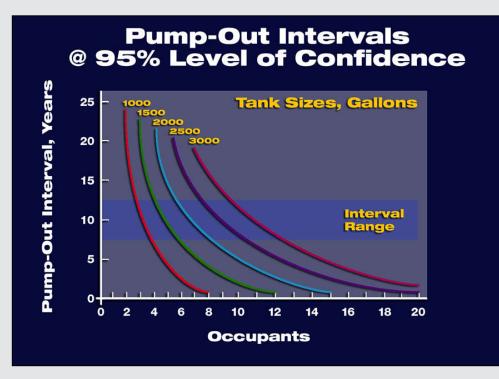
- Pump system
- Processing tank
- Textile filter
- Miscellaneous





Pumpout Interval (In Years)

- Don't pump the tank unnecessarily
- Excessive pumping ...
 - Hinders digestion of solids
 - Increases maintenance costs

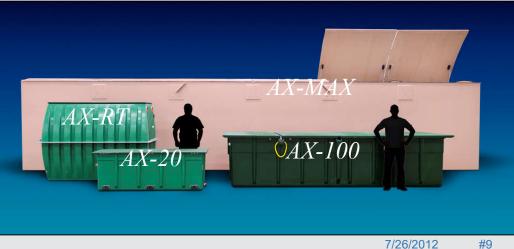


AdvanTex[®] Treatment System Cost 20 Yrs

- 4-Bedroom home, AX20 system installed ≈ \$14,500
 - Design flow of 440 gpd

renco

- Annual O&M w/sampling ≈ \$2,000
- Annual O&M w/o sampling ≈ \$300
- Tank Pump-outs 2 @ \$375 ≈ \$750
- Annual electric cost (.23¢/kwh) ≈ \$148
- Cost of ownership (2022 dollars) ≈ \$27,610
- Cost per kilo of nitrogen removed ≈ \$48.20





AdvanTex[®]

The Sustainable Solution for I/A OWTS Nitrogen Removal

Contact Jim Healy for design support

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7/26/2012 #10