

Pre-engineered Biological Wastewater Treatment System

The Modular FAST® is a biological, fixed-film treatment system specially designed to accommodate the constant fluctuations encountered by small-flow and on-site applications -- from peak flows caused by infiltration to low flow periods. Such flow fluctuations demand a wastewater treatment system that can adapt quickly like the patented Modular FAST® by Smith & Loveless.

Benefits of Modular FAST®

- High-quality effluent extends leach field life.
- May reduce leach field size requirements.
- Handles wide flow variations. Fixed-film FAST® media prevents biomass washout.
- Aesthetically pleasing design allows the system to be completely below grade, if desired.
- Less expensive than standard pre-fabricated package treatment systems.
- The system requires minimal operator attention and no return activated sludge.
- Achieves nitrification and denitrification when appropriately configured.

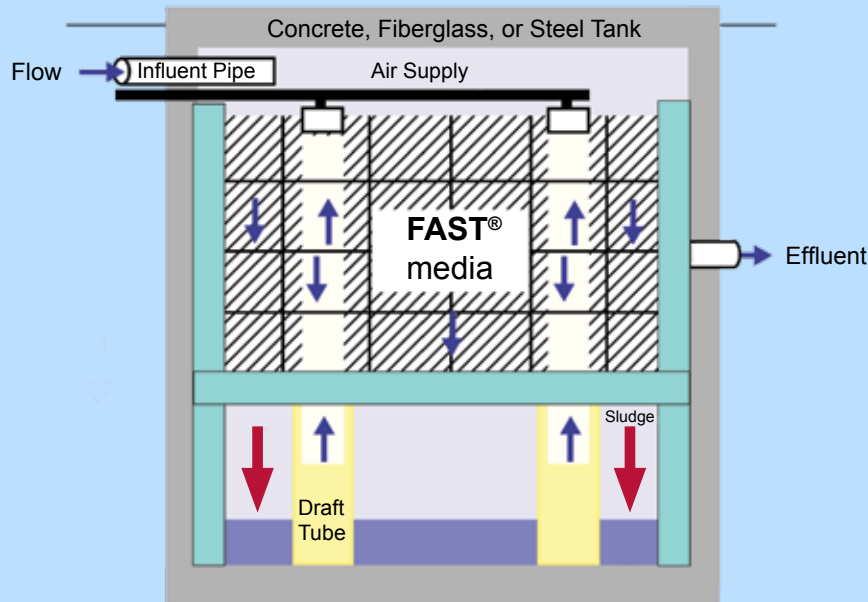
Actual Data Figures Rounded Off	BOD		TSS		Removal %		Nitrogen (% Removal Out)
	IN	OUT	IN	OUT	BOD	TSS	
High School 12,000 GPD	186	3	74	12	98	84	0.5 NH ₃ -N
Conv. Shop 2,000 GPD	716	23	900	18	97	98	18 (84%) Total N
Hotel 15,000 GPD	622	17	101	19	97	81	6.9 (83%) Total N
Restaurant 6,000 GPD	4271	75	4727	106	98	97	36 (71%) Total N

Because of the wide range of process wastewater applications, contact us directly at (800) 898-9122 or via e-mail at answers@smithandloveless.com

How It Works

With three treatment steps in one tank, the Modular FAST® is ideal for on-site treatment applications. Influent enters the system and is circulated through the submerged media in the aeration tank. Bacteria are then attached to the media. This prevents hydraulic peaks from washing the bacteria out while providing a higher surface area-to-volume ratio. A zone underneath the media exists for the sludge to settle and collect for further digestion in an anaerobic environment. The Modular FAST®'s advance treatment levels allow for a variety of discharge arrangements: including drip irrigation, trench systems, wetlands, spray irrigation and other subsurface disposal methods.

How it Works - FAST®: 3 Processes in One Tank



1 Aeration

The air supply and draft tube creates a high rate, complete mix of the wastewater throughout the FAST® media.

2 Clarification

Rapid settling of sloughed solids from the aeration zone, keep sludge away from the media.

3 Anaerobic Digestion

Anaerobic conditions enable higher life forms to further digest settled sludge, reducing the sludge blanket until removal.

Municipal Applications

- Schools and Universities
- Housing Developments
- Office Parks
- Resorts and Hotels
- Botanical Gardens
- Shopping Centers
- Restaurants
- Golf Courses
- Parks/Campgrounds
- Municipalities

Retrofit Applications

- Increased Flow Capacity
- Nitrification/Denitrification
- Combination of Increased Capacity and Nitrification



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Industrial Applications

- Food and Beverage
- Wineries
- Groundwater Cleanup
- Petrochemical/Chemical
- Aerobic Polishing
- Pharmaceutical