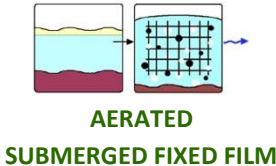


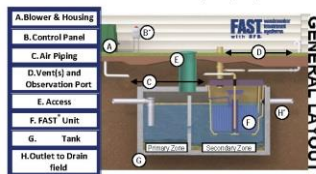
*Firm:* Bio-Microbics Inc.  
[www.biomicrobics.com](http://www.biomicrobics.com)

*System:* **MicroFAST (Fixed Activated Sludge Treatment)**

*Category:*



*Process:* Wastewater first enters a chamber for primary treatment and sedimentation. The effluent then travels by gravity to a chamber with submerged media. Blown air facilitates a robust circulation that distributes aerated wastewater over the submerged media. Bacteria in the aeration zone become "fixed" or attached to the stationary media and process the wastewater. Using an embedded patented process, nitrified effluent passes through the media liner to the anaerobic portion of the treatment tank, where denitrification occurs. Treated effluent exits by gravity to the dispersal system.



*System:* Incorporates the septic chamber in a two-chamber tank design, which is usually locally sourced. System does not replace the discharge components.

*Flow Range:* 500-1,500 gpd

*Tests:* NSF/ANSI 245 for denitrification;  
Pending: Suffolk County Pilot 2

*Cost:* Manufacturer's Suggested retail price is between \$3,331 and \$7,449, not including installation.

*Energy:* 5 kWh/day (MAX), estimated costs range from \$14 to \$27 per month

*Tanks:* Concrete or polyethylene, sourced locally

*Venting:* Direct, can be remote or subsurface with perforated pipe

*Footprint:* 18 SF

*Depth:* 4.6 ft, needing roughly 7-8 feet to groundwater if keeping a 2' clearance. Concrete tanks could be lower.

**Bio-Microbics Inc.**  
8450 Cole Parkway  
Shawnee  
Kansas 66227

*Telephone:*  
1 800 753 3278  
913 422 0707

*Life Cycle:* Blower: ~7-10 years (Cost: \$500)

*Warranty:* 2 years after installation, 3 years after shipped

*Maintenance:* Annually; pump-outs as needed.

*Notes:* A design option with different sizing and media is capable of handling heavy organic loads.

The system is appropriate for seasonal use, as no equipment removal or special care is required for the shutdown.

Additional treatment modules are available for screening (SaniTEE). Further treatment can be customized.

*Installations:* Roughly 40 - 50,000 have been installed worldwide, including ME and WA, with 445 installed in Massachusetts.

*Treatment:* 70+% nitrogen reduction

*Advantages:*

- Relatively inexpensive
- Simple system
- During a power outage, can function as a simple septic system
- Ability to adjust designs to handle heavy organic loads and/or increase treatment levels
- Can use a H2O tank for vehicular loading

*Disadvantages:*

- Seasonal recovery slower
- Blower noise
- Energy use is moderately high