

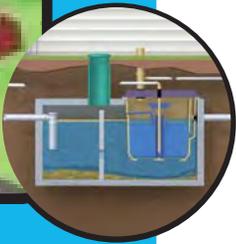
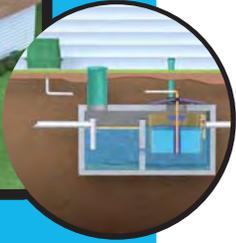
FITT[®]-ee wastewater treatment systems



Energy-Efficient Residential Systems

BIO MICROBICS[®]

BETTER WATER. BETTER WORLD.[®]



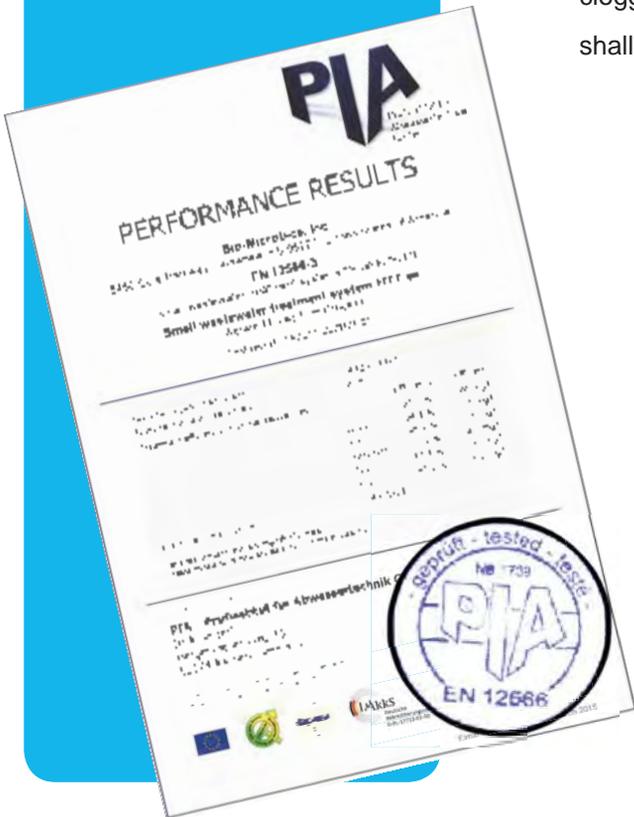
Energy-Efficient Residential Systems

RetroFITT®-ee Septic System Enhancement MicroFITT®-ee Wastewater Treatment System

The FITT®-ee are energy-efficient FAST® systems ideal for new construction and remediation, most residential systems are shipped the same day as ordered and ready to install. Unobtrusive and dependable, these certified systems cause no harm to the environment.

The clean effluent prevents biomat formation and leachfield clogging. This onsite technology is very compatible with shallow drip, pressure distribution, or conventional leachfield.

- Proven, robust technology
- Meets & exceeds most treatment level requirements
- Affordable, energy efficient, and lower cost operation
- Minimal Site Impact
- Designed to fit your site constraint and regulatory requirements



Mighty Mike

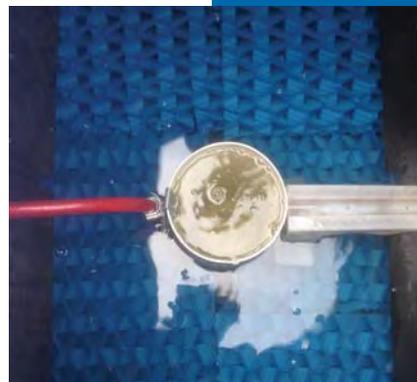
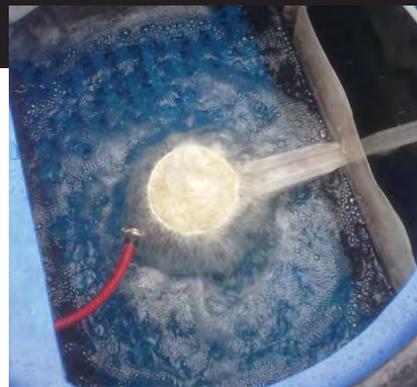
Mighty Tough on Cleaning!



Use Mighty Mike® environmentally-friendly Products!
Call 1-866-652-4539 or email solutions@sciencofast.com

FITT[®]-ee wastewater treatment systems

The energy-efficient Fixed Integrated Treatment Technology (FITT[®]-ee) design produces a robust, biological treatment system that combines and integrates several proven wastewater treatment processes in one. Just like the Bio-Microbics FAST[®] Systems, the FITT[®]-ee wastewater treatment systems create an optimized treatment environment using submerged, fixed-film media for exceptional microbial growth with energy-efficient aeration system. The engineered airlift provides constant aeration and mixing throughout the media for maximum biomass activities. This method of operation also allows the system to withstand periods of high and low input loads; including those in nitrogen sensitive areas, limitations with distance to groundwater sources, and/or smaller dispersal field size requirements. Used for new construction or retrofit in existing tanks, the FITT-ee systems are engineered to fit most typical small flow residential and commercial applications.



Innovative Ideas, Proven Products

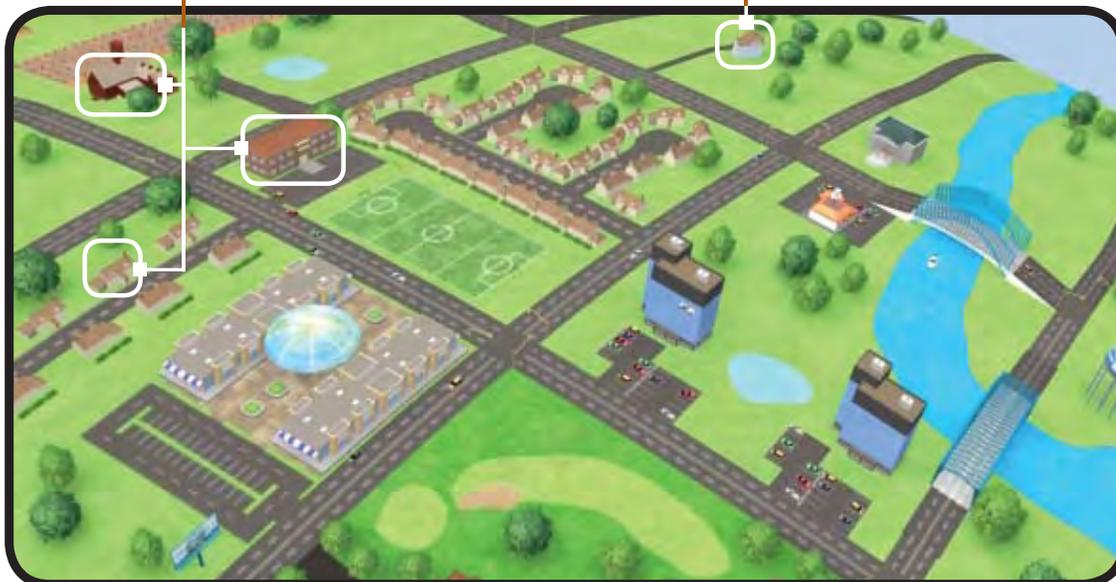
- Exceptional microbial growth during low/average/peak usage
- Increases sludge settleability and eliminates sludge bulking
- Easy to maintain and extraordinarily reliable
- Exceeds minimum Nitrogen Reduction Standards
- Lessen the impact of harmful bacteria and viruses

MicroFITT[®]-ee wastewater treatment systems

Versatile and robust, these systems are designed for individual homes, larger residential, and other domestic-strength flow applications.

RetroFITT[®]-ee wastewater treatment systems

A simple upgrade to deliver high levels of treatment to enhance/renovate a septic system; also see our S.O.S.-Save Our Septic[®] Warranty Program.



GENERAL FITT®-ee PRODUCT INFORMATION

	Approximate Treatment Capacity*	Module Dimensions** (L x W x H) [-18" (45.7cm) dia. opening required]	Weight***	
	People per Module		Pounds	Metric
RetroFITT®-ee 0.150	1 to 3	22" (55 cm) x 24" (61 cm) x 32" (81 cm)	74 lbs	34 kg
RetroFITT® 0.250	1 to 4	27" (67 cm) x 30" (76 cm) x 34" (85 cm)	125 lbs	57 kg
RetroFITT® 0.375	1 to 5	39" (98 cm) x 30" (76 cm) x 34" (85 cm)	156 lbs	71 kg
	Approximate Treatment Capacity*	Module Dimensions** (L x W x H)	Weight***	
	People per Module		Pounds	Metric
MicroFITT® 0.5	1 to 8	59" (150 cm) x 30" (76 cm) x 56" (130 cm)	165 lbs	75 kg
MicroFITT® 0.625	1 to 10	60" (152 cm) x 43" (109 cm) x 55" (130 cm)	185 lbs	84 kg
MicroFITT® 0.75	1 to 11	60" (152 cm) x 43" (109 cm) x 55" (130 cm)	200 lbs	91 kg
MicroFITT® 0.9	1 to 14	59" (150 cm) x 48" (122 cm) x 57" (145 cm)	215 lbs	98 kg
MicroFITT® 1.5	6 to 21	82" (208 cm) x 55" (140 cm) x 58" (147 cm)	456 lbs	207 kg

*Treatment capacity/People per module: Individual FITT®-ee modules are rated based on biological (BOD), hydraulic and other project-specific considerations. Actual capacity may vary with local conditions and performance goals. Please note that only residential applications or those applications requiring treatment for only sanitary wastewater may be designed from the volume and number of people per module.

**Module dimensions/weight provided only for shipping specifications. Please see design specifications for recommended exterior tankage sizing. Treatment modules shall be installed inside tanks that are locally approved and manufactured using watertight materials.

Electrical Options: Electrical components are available to meet all worldwide electrical specifications (volt/phase/frequency).

BENEFITS OF FITT®-ee:

FITT®-ee technology promotes aerobic microbes to degrade the incoming organics. The system self-regulates the desired food to mass (F/M) ratio thereby requiring no operational adjustments; and, produces a high density sludge (>2% solids by volume) which occupies less volume and increases the time between sludge pumpouts.

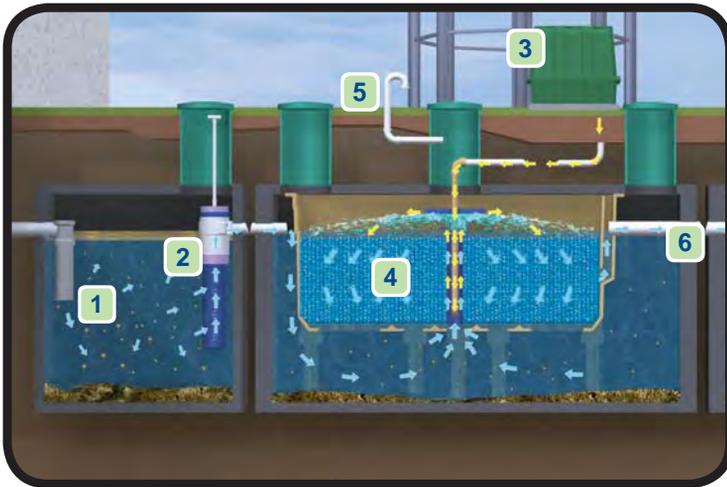
The 100% media submergence and anchored biomass also allows to quickly adapt to incoming loading conditions with a very low loss of bacteria in the effluent.

The design creates several maintenance advantages over other systems. The combination of a recirculating airlift and properly-sized submerged media prevent clogs and "plugging up" situations. With no service of parts inside the treatment tank, the remotely mounted, energy-efficient, above ground blower is the only moving part.

- **Natural Process** - utilizes the advantages of a fixed film system without pumped recirculation or the drying of the bacterial growth on the media.
- **Certified to EN-12566-3** - meets most worldwide standards.
- **Self-Regulating** - Operation does not depend upon the skill of an operator.
- **Simple/rugged** - handles surges, overloads, and light loads.



FITT[®]-ee wastewater treatment systems



How Does the FITT[®]-ee System Work?

Systems may be located in the same position relative to the house and water supply as any conventional septic system.

- 1 Wastewater enters the treatment system. Natural separation and settling processes occur in the primary settling zone.
- 2 In the primary settling zone, an optional SaniTEE[®] device can be used to prevent large solids from entering the treatment zone.
- 3 A remote, energy-efficient, above-ground blower introduces air (oxygen) into the treatment module to facilitate a robust circulation of wastewater through the media's channeled flow path.
- 4 Bacteria in the aeration zone become "fixed" or attached to the stationary media. This is where the abundant, diverse, self-regulating population of microbes consistently metabolize the incoming waste.
- 5 Numerous options exist for proper venting: DIRECT VENT, REMOTE VENT, or a BIOFILTER (this method may require design by a qualified engineer).
- 6 Clear, treated water is ready for standard or innovative dispersal.

Wastewater Treatment Systems

- RetroFAST[®] Septic System Enhancement
- MicroFAST[®] Wastewater Treatment System
- NitriFAST[®] Wastewater Treatment System
- HighStrengthFAST[®] Treatment System
- MyFAST[®] Wastewater Treatment System
- RollsAIR[™] & RollsAIR[™] HS-STP[®]

Horizontal Trickling Filter Technology

- SeptiTech[®] STAAR[™] Residential
- SeptiTech[®] STAAR[™] Commercial

Membrane BioReactors (MBRs)

- BioBarrier[®] MBR
- BioBarrier[®] HSMBR[®]

Stormwater Treatment Solutions

- BioSTORM[®] System
- StormTEE[®] Litter Control

Marine Sanitation Technology

- MarineFAST[®] LX-Series
- MarineFAST[®] M-&MX-Series
- MarineFAST[®] DV-Series

Influent/Effluent Screening Solutions

- BioSTEP[®] Screened Pumping Systems
- MyTEE[®] Grit Control Screen
- SaniTEE[®] Wastewater Screen

Other Management Solutions

- Lixor[®] Submerged Aeration Systems
- FOGHog[®] Traps & Tablets
- ABC[®] -N Clarifiers & Devices

Water Treatment Solutions

- SciCHLOR[®] Hypochlorite Generators
- SciBRINE[®] BrineMakers
- Mighty Mike[®] CPT Tablets

Environmentally-Friendly Cleaning Solutions

- Mighty Mike[®] All Purpose Cleaner
- Mighty Mike[®] Laundry Detergent
- Mighty Mike[®] Marine Multi-Purpose Cleaner
- Mighty Mike[®] Marine Liquid Descaler
- Mighty Mike[®] Industrial Descaler

With over 50,000 installations in more than 60 countries, our Fixed Integrated Treatment Technologies (FITT®) are the result of decades of experience, research & development, and real world operating history.

Awards, Technology Approvals, and Certifications

- **2015 Ingenuity Award Winner**, Ingenuity Central @ K-State Olathe, Ingenuity Central (IC) showcases innovative companies that exemplify the newest thinking driving our community & growing our economy.
- **2015 Innovation in Marine Environmental Technology Offshore Excellence Award**, based on environmental impact of marine sanitation devices and technology.
- **2014 "BEST of GreenBuild" Editor's Choice Award**, U.S. Builders Review, "Creating Better Water Treatment Solutions for a Better World..." article.
- **2012 President's "E" Award** for Excellence in Exports, granted by the President of the United States, presented by the U.S. Department of Commerce
- **2011 Technology Innovation Award** (Decentralized Commercial Outlets) – Frost & Sullivan – FAST® Technology
- **2011 New Product of the Year Award** – Recycling Category. Environmental Protection Magazine (EPonline.com) "The financial, environmental and social benefits of 'recycling' are indisputable." – BioBarrier® MBR Technology
- **2011 Kansas Governor's Exporter of the Year** – presented by the Governor of KS, KS Dept. of Commerce
- **2010 North American Technology Innovation Award** (Water/Wastewater) – Frost & Sullivan – FAST® Technology
- **2009 Technology Merit Business Achievement Award**, Water/Wastewater – Environmental Business Journal (EBJ) – BioBarrier® MBR Technology
- **2002 U.S. Export Achievement Certificate**, US Dept. of Commerce, US & Foreign Commercial Service
- **2000 U.S. EPA Environmental Technology Innovator Award** – U.S. EPA, Region 1 – SeptiTech® Technology
- Australian Dept of Transportation & Royal Australian Navy - Technology Approval
- Canadian Great Lakes (CGL) Maritime Certification – Canadian Coast Guard
- Canadian Standards Association (CSA) International Electrical Certification
- CE – European Electrical Systems (including a "Tropical Certification Rating")
- China Classification Society (CCS) 中国船级社 – FAST® Technology Approval
- EN 12566-3, Packaged and/or site assembled domestic wastewater treatment plants for up to 50 People, PIA GmbH tested - BioBarrier® MBR 0.5, 1.0, & 1.5 & FITT®-ee
- GreenSpec® (BuildingGreen.com Directory) listed...Provides unbiased information to improve environmental performance, and reduce the adverse impacts of buildings
- IMO (International Maritime Organization) MARPOL Annex IV (2010) – provides guidance for the Navigation and Vessel Inspection Circular (NVIC) No. 1-09, US EPA and other effluent standards as may be required – FAST® Technology
- Massachusetts Title 5 Innovative/Alternative System - Technologies Listed under "General Use Permit for Nitrogen Reduction", "Provisional Use," & "Remedial Use"
- NSF/ANSI Std 40, class 1 Certified – MicroFAST®, BioBarrier® MBR and SeptiTech® Systems up to 1500 GPD – Recognized in domestic and international trade by regulatory agencies at the local, state/province, and federal levels.
- NSF/ANSI Std 245 (Nitrogen Reduction) Certified – MicroFAST®, BioBarrier®-N MBR, BioBarrier® MBR and SeptiTech® Systems up to 1500 GPD
- NSF/ANSI Std 350 class R (Water Reuse) Certified – BioBarrier® MBR 0.5, 1.0, & 1.5
- Poland – Aprobata Techniczna (Technology Approval) ze Instytut Ochrony Srodowiska (Institute of Environmental Protection)
- România – Avizează Favorabil – Consiliul Tehnic Permanent Pentru Constructii – Ministerul Dezvoltării Regionale Si Turismului
- Russia – Technology Approval – Федеральная Служба По Надзору В Сфере Защиты Прав Потребителей И Благополучия Человка (Federal Service of Environmental Protection)
- Russia – СРТ Свидетельство о Российских Стандартах (Certification of Russian Standards) – BioSTORM® – All sizes
- Russia – РМРС (Russian Maritime Register of Shipping) МЕЖДУНАРОДНОЕ СВИДЕТЕЛЬСТВО О ПРЕДОТВРАЩЕНИИ ЗАГРЯЗНЕНИЯ СТОЧНЫМИ ВОДАМИ - International Sewage Pollution Prevention Certificate
- SASO (Saudi Arabian Standards Organization) Certified
- ETL (UL) – Listed to US electrical certification requirements
- U.K. – United Kingdom Department of Trade – FAST® Technology Approval
- U.S. Coast Guard – 33CFR159, MEPC.159(55) – FAST® Technology Approval for Type II MSD (Marine Sanitation Devices)
- U.S. EPA–ETV (Environmental Technology Verification) – validates the performance of technology that may improve the protection of the environment. – RetroFAST®, Report No. 03/08/WQPC-SWP – SeptiTech®, Report No. 02/04/WQPC-SWP

...and MORE!



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