



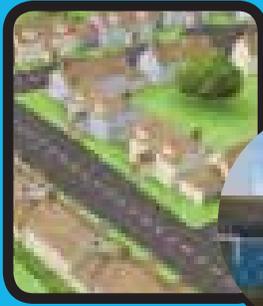
FAST wastewater
treatment
systems
with S.F.B.



Residential • Community • Commercial

BIO **MICROBICS**[®]

BETTER WATER. BETTER WORLD.[®]



Innovative Ideas, Proven Products

With an immediate adoption of clean waste processing technologies and development of better infrastructure to protect water resources around the world, Bio-Microbics FAST[®] technologies provide solutions for septic system rejuvenation to small municipal wastewater treatment systems. We strive for excellence in environmental protection and ensure that all our water solutions – are made with the environment in mind.

- **Microbial growth even in low/average/peak usage**
- **Increases settleability and eliminates sludge bulking**
- **Easy to maintain and extraordinarily reliable**
- **Exceeds minimum Nitrogen Reduction Standards**
- **Lessen the impact of harmful bacteria and viruses**
- **Takes all aspects of the treatment into consideration**

Unobtrusive and dependable, the FAST[®] system handles smaller, variable flows generated from onsite applications. The clean effluent prevents biomat formation and leachfield clogging. This septic technology is very compatible with shallow drip, direct discharge, pressure distribution, spray irrigation, and conventional leachfield.

The Bio-Microbics FAST[®] systems provide significantly improved nitrification/denitrification performance over traditional systems and exceeding typical effluent requirements for wastewater recycling opportunities or reducing the size of the leach field with less aesthetic disturbance of property value or system components. Offering versatility and consistent high performance, the FAST[®] are also a favorite on marine vessels and offshore platforms of all types to produce high-quality effluent, specifically designed for extreme environments.



***Mighty Tough
on Cleaning!***

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





FAST[®] wastewater treatment systems

with SFR[®]

Bio-Microbics FAST[®] wastewater treatment systems provide alternative options for properties residing outside the reach of municipal (public) treatment plants. Engineered to fit most typical residential and commercial applications, FAST[®] systems can be used for new construction or retrofit in existing tanks; including those in nitrogen sensitive areas or limitations with distance to groundwater and/or smaller dispersal field size requirements.

Scientifically-proven, advanced, self-contained wastewater treatment systems, the process contains no internal in-sewage moving parts. The Bio-Microbics FAST[®] systems use only active naturally occurring microorganisms to transform sewage wastewater to be cleaner than natural surface fresh water sources and protects family health, dwellings, property values and fresh water sources.

RESIDENTIAL

- Single-family homes
- Multi-Family Properties
- Clustered Subdivisions
- Housing Developments
- Recreational Facilities
- Apartment Complexes
- Military Facilities
- Communities/Villages
- Small Municipalities

COMMERCIAL

- Restaurants
- Schools/Universities
- RV & Mobile Home Parks
- Office Parks
- Resort Areas/Hotels
- Highway Rest Areas
- Country Club/Golf Courses
- Shopping Centers
- Grocery stores
- Food/Beverage Facilities
- Wineries & Breweries

MARINE/OFFSHORE

- Tug & Work Boats
- Luxury Yachts
- Commercial Vessels
- School/Research Boats
- Offshore Vessels
- Tankers
- Container Ships
- Aircraft Carriers
- Cruise Ships
- Offshore Oil Platforms

...and more!

MicroFAST[®] wastewater treatment systems

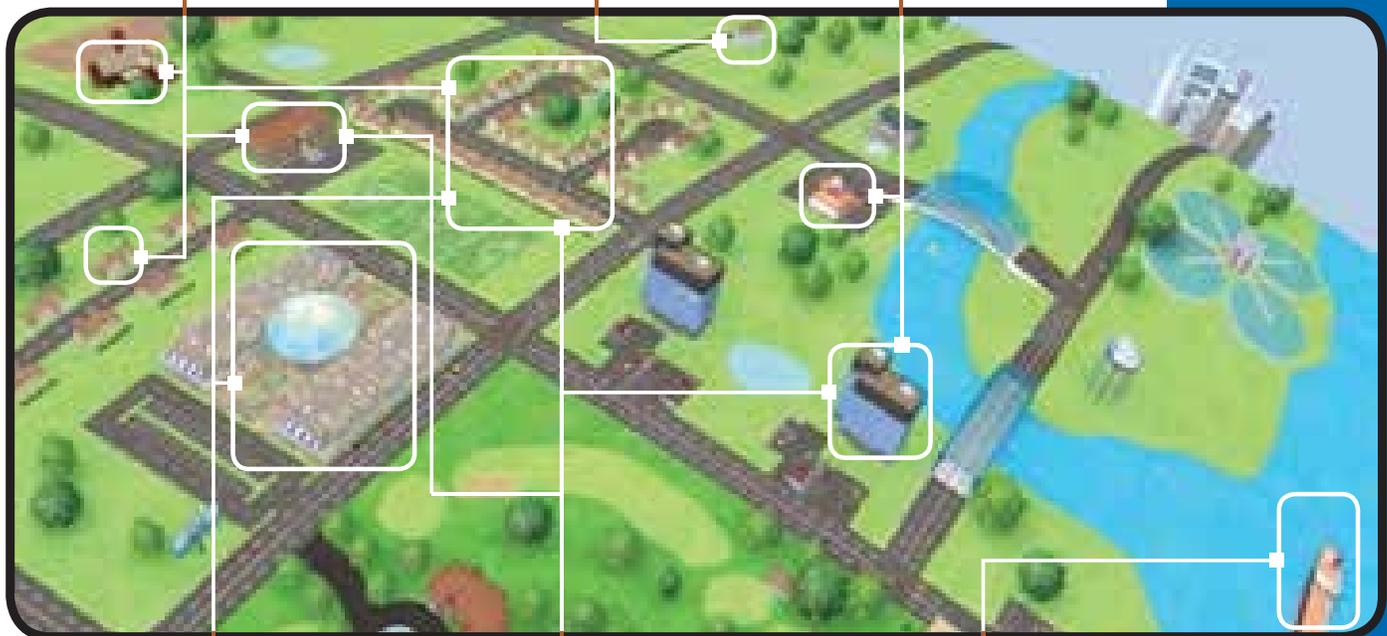
Versatile and robust, these systems are designed for individual homes, clustered subdivisions, and other domestic-strength flow applications.

RetroFAST[®] wastewater treatment systems

Ideal for existing tanks or upgrading the septic system to enhance/renovate a drain field; see our S.O.S.-Save Our Septic[®] Warranty Program.

HighStrengthFAST[®] wastewater treatment systems

Meeting the unique challenges of high-strength commercial applications or properties with a higher loading with robust, low-maintenance treatment systems.



Mg FAST[®] wastewater treatment systems

Ideal for small communities or commercial properties, the MyFAST[®] maintains consistent high performance, low maintenance, and sludge management all in one tank.

NitriFAST[®]

For use with a MicroFAST[®] system to provide second stage nitrification to achieve even higher levels of nitrogen reduction.

Marine FAST[®]

Certified Type II Marine Sanitation Devices (MSDs) for virtually every type of vessel or offshore structure.

GENERAL FAST® PRODUCT INFORMATION

RetroFAST®	Maximum Treatment Capacity*		Module Dimensions*** (L x W x H) [-18" (45.7cm) dia. opening required]	Weight***	
	Volume/Module**	People per Module**		Pounds	Metric
RetroFAST® 0.150	150 GPD (567 LPD)	1 to 3	22" (55 cm) x 24" (61 cm) x 32" (81 cm)	74 lbs	34 kg
RetroFAST® 0.250	250 GPD (947 LPD)	1 to 4	27" (67 cm) x 30" (76 cm) x 34" (85 cm)	125 lbs	57 kg
RetroFAST® 0.375	375 GPD (1420 LPD)	1 to 5	39" (98 cm) x 30" (76 cm) x 34" (85 cm)	156 lbs	71 kg

MicroFAST®	Maximum Treatment Capacity*		Module Dimensions*** (L x W x H)	Weight***	
	Volume/Module**	People per Module**		Pounds	Metric
MicroFAST® 0.5	500 GPD (1893 LPD)	1 to 8	59" (150 cm) x 30" (76 cm) x 56" (130 cm)	165 lbs	75 kg
MicroFAST® 0.625	625 GPD (2366 LPD)	1 to 10	60" (152 cm) x 43" (109 cm) x 55" (130 cm)	185 lbs	84 kg
MicroFAST® 0.75	750 GPD (2839 LPD)	1 to 11	60" (152 cm) x 43" (109 cm) x 55" (130 cm)	200 lbs	91 kg
MicroFAST® 0.9	900 GPD (3407 LPD)	1 to 14	59" (150 cm) x 48" (122 cm) x 57" (145 cm)	215 lbs	98 kg
MicroFAST® 1.5	1500 GPD (5678 LPD)	6 to 21	82" (208 cm) x 55" (140 cm) x 58" (147 cm)	456 lbs	207 kg
MicroFAST® 3.0	3000 GPD (11356 LPD)	10 to 42	71" (180 cm) x 59" (150 cm) x 81" (206 cm)	725 lbs	329 kg
MicroFAST® 4.5	4500 GPD (17034 LPD)	18 to 63	145" (368 cm) x 73" (185 cm) x 51" (130 cm)	1600 lbs	726 kg
MicroFAST® 9.0	9000 GPD (34068 LPD)	30 to 126	145" (368 cm) x 73" (185 cm) x 76" (193 cm)	2300 lbs	1044 kg

Larger Applications >9000 GPD Multiple FAST® treatment modules can be used in parallel and/or series for additional flow or desired treatment levels.

HighStrengthFAST®	Maximum Treatment Capacity*		Module Dimensions*** (L x W x H)	Weight***	
	Volume/Module**	People per Module**		Pounds	Metric
HighStrengthFAST® 1.0	~900 GPD (3407 LPD)	Consult Factory	59" (150 cm) x 48" (135 cm) x 57" (130 cm)	227 lbs	103 kg
HighStrengthFAST® 1.5	~1500 GPD (5678 LPD)		82" (208 cm) x 55" (140 cm) x 58" (147 cm)	456 lbs	207 kg
HighStrengthFAST® 3.0	~3000 GPD (11356 LPD)		71" (180 cm) x 59" (150 cm) x 81" (206 cm)	725 lbs	329 kg
HighStrengthFAST® 4.5	~4500 GPD (17034 LPD)		145" (368 cm) x 73" (185 cm) x 51" (130 cm)	1600 lbs	726 kg
HighStrengthFAST® 9.0	~9000 GPD (34068 LPD)		145" (368 cm) x 73" (185 cm) x 76" (193 cm)	2300 lbs	1044 kg

Larger Applications >9000 GPD Multiple FAST® treatment modules can be used in parallel and/or series for additional flow or desired treatment levels.

MyFAST®	Maximum Treatment Capacity*		AMS ZONE	BMS ZONE	OPTIONAL MyTEE® SCREENING DEVICE	
	Volume	People Served	Optional Lixor® system	Optional Package	Minimum Tank Volume	Units
MyFAST® 1.0	10000 GPD (38 m³/d)	up to 200+	-----	-----	5000 gallon [19 m³]	2
MyFAST® 2.0	20000 GPD (76 m³/d)	up to 400+	3.0XD	Lixor® 2.0	5000 gallon [19 m³]	2
MyFAST® 3.0	30000 GPD (114 m³/d)	up to 500+	3.0XD	Lixor® 2.0	5000 gallon [19 m³]	2
MyFAST® 4.0	40000 GPD (150 m³/d)	up to 600+	4.0XD	Lixor® 2.0	5000 gallon [19 m³]	2
MyFAST® 6.0	60000 GPD (225 m³/d)	up to 900+	6.0XD	Lixor® 3.0	7500 gallon [28 m³]	3
MyFAST® 8.0	80000 GPD (300 m³/d)	up to 1200+	(2) 4.0XD	Lixor® 4.0	10000 gallon [38 m³]	4
MyFAST® 12.0*	120000 GPD (450 m³/d)	up to 1900+	(2) 6.0XD	Lixor® 6.0	(2) 7500 gallon [28 m³]	6
MyFAST® 16.0*	160000 GPD (600 m³/d)	up to 2500+	(4) 4.0XD	Lixor® 8.0	(2) 10000 gallon [38 m³]	8

Larger Applications >160000 GPD, consult factory. Multiple FAST® treatment modules can be used in parallel and/or series for additional flow or desired treatment levels.

*Treatment capacity: Individual FAST® module capacities are rated based on biological (BOD), hydraulic and other project-specific considerations. All rated capacities are given as guidelines for suggested use. Actual capacity may vary with local conditions and performance goals.

**Volume/People per module: 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. Actual capacity may vary with local conditions and performance goals.

***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).

FAST[®] wastewater treatment systems



How Does the FAST[®] System Work?

- 1** Wastewater enters the treatment system
- 2** Natural separation and settling processes occur in the primary settling zone.
- 3** In the primary settling zone for most large residential and commercial applications, a SaniTEE[®] device is used to prevent large solids from entering the treatment zone.
- 4** A remote, above-ground blower introduces air (oxygen) into the treatment module to facilitate a robust circulation of wastewater through the media's channeled flow path.
- 5** 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.
- 6** Clear, odorless, treated water is ready for standard or innovative dispersal.



Membrane BioReactor Systems

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

Extended Aeration Technology

- RollIsAIR[®] & RollIsAIR[®] HS-STP[®]

Horizontal Trickling Filter Technology

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

Greywater Treatment Technology

- Recover[®] Residential
- BioBarrier[®] Residential & Commercial Greywater

Stormwater Treatment Solutions

- BioSTORM[®] Stormwater System
- StormTEE[®] Litter Control Screen
- d-Rain Joint[™] Rainwater Filtration

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[®] Industrial Descaler
- Mighty Mike[®] Bond-SORB[®] Odor Eliminator

With over 60,000 installations in more than 70 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

- 2017 Top 10 Green Building Products, BuildingGreen, Inc.– d-Rain Joint™ Device
- 2016 LIFT's "Passport to Innovation", WE&RF Leaders Innovation Forum for Technology (LIFT) Scan Program - a growing collection of vetted, innovative technologies that will drastically improve wastewater treatment operations. – BioBarrier® HSMBR®
- 2016 President's "E Star" Award & 2012 President's "E" Award for Excellence in Exports, granted by President of the United States, presented by US Dept of Commerce
- 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.
- 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 (GGL) Maritime Certification – Canadian Coast Guard
- CAN/BNQ 3680-600 (B-IV) Onsite Wastewater Technologies - BioBarrier® MBR
- 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
- IAPMO (International Association of Plumbing and Mechanical Officials) Research & Testing Inc. – Reclaimed Water Conservation System for Flushing Toilets (Standards CSA B128.1-2006 & CSA B128.2-2006) – Recover® Technology
- 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 Dezvoltarii Regionale Si Turismului
- Russia – Technology Approval – Федеральная Служба По Надзору В Сфере Защиты Прав Потребителей И Благополучия Человка (Federal Service of Environmental Protection)
- Russia – CPT Свидетельство о Российских Стандартах (Certification of Russian Standards) – BioSTORM® – All sizes
- Russia – PMPC (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.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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