

LIXOR
SPECIALIZED Aeration System

ABC
SPECIALTY CLEAR-2-20



NitriFAST



Other Treatment Systems & Accessories

BIO MICROBICS

BETTER WATER. BETTER WORLD.®



Aeration Systems

Lixor® System, a low-cost, non-clogging, Venturi-type aeration device for a variety of wastewater applications, such as pre-aeration, supplemental aeration, aerating a sludge holding tank, and mixing.



Biological Nutrient Removal Solutions

NitriFAST® Systems, an affordable, efficient, attached growth nitrification system. Primarily used as a second stage nitrification process when very low effluent ammonia is required.



ABC®-N, an economical, effective, and robust attached growth denitrification system. ABC-N is primarily designed as a post-denitrification device when very low total nitrogen removal is required.



ABC®-C, a high rate, simple, and effective solids separation device. ABC-C is a tertiary clarifier used to provide very low TSS levels.

ABC®-P, designed as a phosphorous precipitation and secondary clarification device for commercial or residential wastewater flows.

OTHER SYSTEMS & PRODUCTS AVAILABLE TO SUIT YOUR PARTICULAR NEEDS:

Wastewater Treatment Systems

- **BetroFAST®** Septic System Enhancement
- **MicroFAST®** Wastewater Treatment System
- **NitriFAST®** Wastewater Treatment System
- **HighStrengthFAST®** Treatment System
- **MyFAST®** Wastewater Treatment System
- **RollsAIR® & RollsAIR® HS-STP®**

Horizontal Tricking Filter Technology

- **SeptiTech® STAAR™ Residential**
- **SeptiTech® STAAR™ Commercial**

Greywater Treatment Technology

- **Recover® Residential**
- **BioBarrier® Residential & Commercial Greywater**

Membrane BioReactors (MBRs)

- **BioBarrier® MBR**
- **BioBarrier® HSMBR®**

Stormwater Treatment Solutions

- **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**

Water Treatment Solutions

- **SciCHLOR®** Hypochlorite Generators
- **SciBRINE®** BrineMakers
- **Mighty Mike® CPT Tablets**
- **Mighty Mike® Industrial Descaler**

Environmentally-Friendly Cleaning Solutions

- **Mighty Mike® All Purpose Cleaner**
- **Mighty Mike® Laundry Detergent**
- **Mighty Mike® U&F-BOOST® Tablets**
- **Mighty Mike® FOGHog® Tablets**
- **MightyMike® Bond-SORB® Odor Eliminator**

Grease Management Solutions

FOGHog® Fat-Oil-Grease Traps - Passive interceptors to separate fats, oils, and grease (FOG) laden waste from the sinks of food processing, food preparation, or other sources.

Mighty Mike

Mighty Tough on Cleaning!

Use Mighty Mike® environmentally-friendly Tablets & Cleaners to effectively clean without damage or leaving residues!

Call 1-866-652-4539 or email solutions@sciencofast.com





Fats, oils and greases (FOG) from restaurants, pubs, lounges, resorts, lodges and club houses are best managed at the source before entering either the city sewer system or an onsite wastewater treatment system.

Bio-Microbics is the industry standard of wastewater and stormwater treatment to provide innovative and proven products for the decentralized markets. Engineered to fit most applications, these systems allow for higher quality of treatment, to enhance your system(s) performance, and help reduce costs associated with maintenance.



Why use a Grease Trap?

Restaurant grease trap regulations have become a top priority in recent years as attempts to ensure environmental standards are met. Depending on the type of food establishment, Fats, Oils and Grease (FOG) are poured down drains for disposal. These substances solidify in plumbing parts and can disrupt flow and treatment processes. The goal of a grease trap or interceptor is to reduce the discharge of oil and grease, thus minimize the potential harm to treatment plants, and/or possible business interruptions from "back ups" in the facility.

Capturing Fats, Oils, & Grease with FOGHog®

Typically installed under the counter, FOGHog® allows time for the warm liquid grease to separate, cool to solid form, and collect for removal, prior to it entering a treatment system. Made of 100% corrosion-resistant polyethylene and allows for components to remove easily for cleaning, the FOGHog® retains floatable substances, including: fats, oils, grease, soaps (lanolin) and waxes.

EASILY INSTALLS IN COMMERCIAL KITCHENS WHERE FOOD IS PREPARED:

- Restaurants • Cafeterias • Bakeries
- Resorts • Hotels • Motels • Diners
- Delicatessens • University Commons
- Fast Food Establishments
- Butcher Shops • Soap factories
- ...and more!

Maintenance of grease traps and interceptors should be performed on a regular basis and grease should always be disposed of properly.

FOGHog® Specifications

Model	Flow Rate	Certified Grease Capacity	Module Dimensions H x W x L
FH-20	20 GPM (76 LPM)	40 lbs. (18 kg)	15 1/2" (40 cm) x 32" (81 cm) x 21 1/4" (55 cm)
FH-50	50 GPM (189 LPM)	100 lbs. (45 kg)	23 1/8" (60.5 cm) x 34" (88 cm) x 27" (69 cm)
FH-75	75 GPM (284 LPM)	150 lbs. (68 kg)	20 1/4" (51 cm) x 31" (79 cm) x 41 1/2" (105 cm)
FH-100	100 GPM (379 LPM)	200 lbs. (91 kg)	27" (69 cm) x 31" (79 cm) x 41 1/2" (105 cm)

Please refer to Product Drawings for Additional Information and Technical Specifications



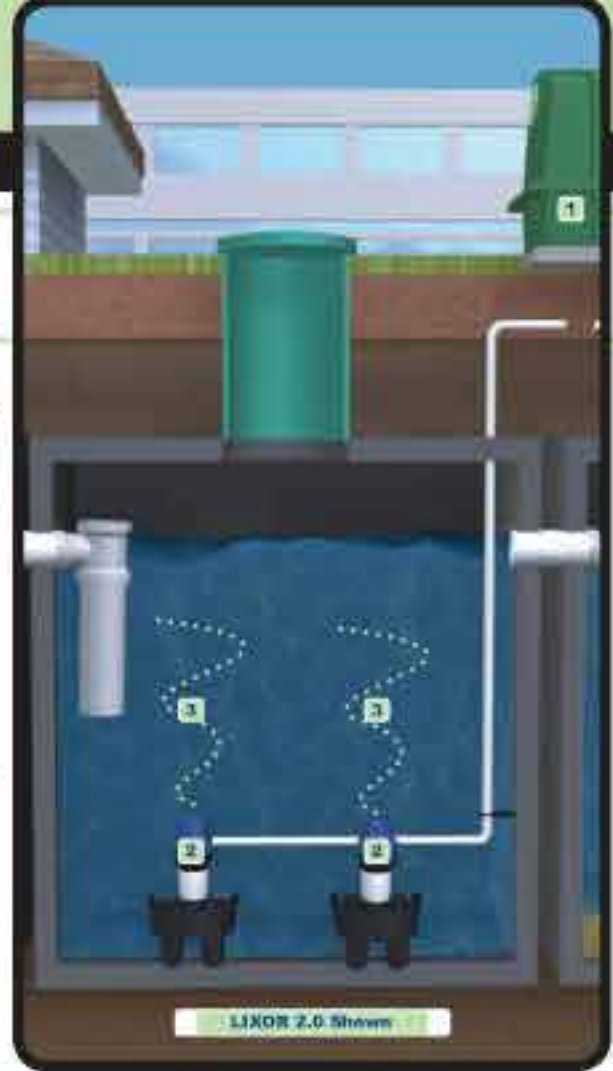
The Lixor® is a submerged aeration system that mixes and aerates the wastewater, creating the environment for aerobic bacteria and other microorganisms to quickly biodegrade and digest incoming organic matter. The unique features of Lixor are:

- Low Maintenance
- Highly Effective
- Non-Clogging, Venuri-Style Design
- Low Cost Aeration System

Installed in new or existing tanks, multiple Lixor's may be used to help achieve desired treatment goals.

How Does it Work?

- 1 Equipped with an above-ground, regenerative blower - the system's only moving part, a continuous large volume of air is piped down to the submerged LIXOR® device(s).
- 2 The velocity of air and water increase substantially inside the LIXOR's venturi chamber creating a vacuum that pulls in surrounding liquid and breaks the incoming air stream into smaller size bubbles.
- 3 The result is a turbulent plume of water and bubbles that travel up through the water, transferring oxygen for biological activity and creating horizontal and vertical mixing patterns.



LIXOR® Specifications

Max. BOD loading per tank volume: 6.7 ppd/kgal (0.80Kg/d/m³)

Model	Minimum Water Depth	Maximum Water Depth	Maximum Air Release Depth	Max. Tank Volume	Rotative Position Tank/Hour	Max BOD Loading Pounds per Day (kg/d/m³)
Lixor® 0.5	4 ft. (122 cm)	5.5 ft. (168 cm)	4.5 ft. (137 cm)	2000 gal. (7.5 m³)	10	6 (2.7)
Lixor® 1.0	5 ft. (152 cm)	7 ft. (213 cm)	6 ft. (183 cm)	3000 gal. (11.3 m³)	10	14 (6.3)
Lixor® 2.0	5 ft. (152 cm)	9 ft. (274 cm)	8 ft. (244 cm)	6000 gal. (22.7 m³)	10	30 (13.6)
Lixor® 3.0	5 ft. (152 cm)	9 ft. (274 cm)	8 ft. (244 cm)	9000 gal. (34 m³)	10	44 (20)
Lixor® 4.0	5 ft. (152 cm)	9 ft. (274 cm)	8 ft. (244 cm)	12000 gal. (45.4 m³)	10	58 (26.3)
Lixor® 4.0XD	5 ft. (152 cm)	12 ft. (366 cm)	11 ft. (335 cm)	12000 gal. (45.4 m³)	10	58 (26.3)
Lixor® 6.0	5 ft. (152 cm)	9 ft. (274 cm)	8 ft. (244 cm)	15000 gal. (56.7 m³)	10	90 (40.8)
Lixor® 6.0XD	5 ft. (152 cm)	12 ft. (366 cm)	11 ft. (335 cm)	15000 gal. (56.7 m³)	10	90 (40.8)
Lixor® 8.0	5 ft. (152 cm)	9 ft. (274 cm)	8 ft. (244 cm)	24000 gal. (90 m³)	10	120 (54.4)
Lixor® 8.0XD	5 ft. (152 cm)	12 ft. (366 cm)	11 ft. (335 cm)	24000 gal. (90 m³)	10	120 (54.4)

* ppd/kgal: 1 pound per day per 1000 gallons = 0.12 kilograms per day per cubic meters.

In the interest of technological progress, all LIXOR® submerged aeration systems are subject to design and/or materials change without notice.

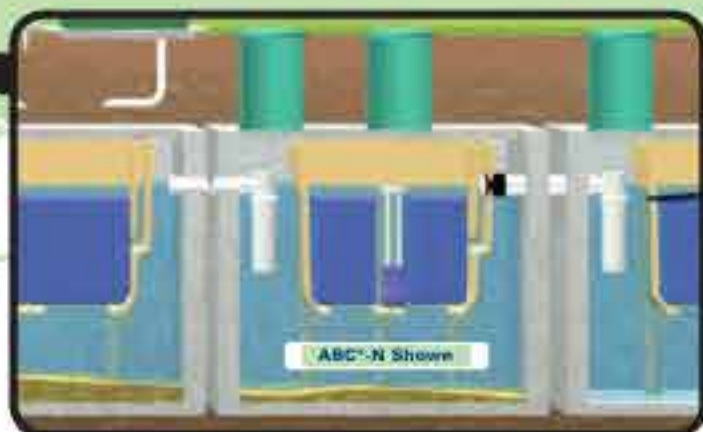
ABC

SPECIALTY CLARIFIERS

ABC® tertiary treatment devices

The ABC® (Anoxic Biofilter Clarification) family of products are used as tertiary treatment systems to remove nitrogen (ABC-N), phosphorus (ABC-P), and solids (ABC-C) and for applications requiring exceptional effluent quality.

They are available in various convenient sizes suitable for the decentralized market. These devices are easily installed in readily available concrete, fiberglass, plastic or steel tanks.



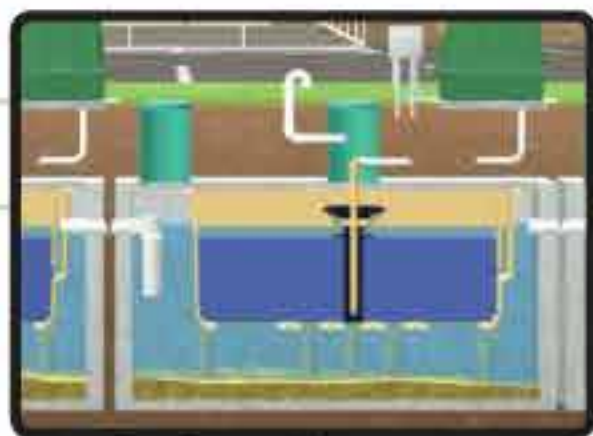
ABC® Device Sizes

ABC® -C, -N, or -P Application Modules	Minimum Tank Volume
ABC® 0.5	450 GAL (1703 L)
ABC® 1.0	750 GAL (2839 L)
ABC® 2.0	1125 GAL (4259 L)
ABC® 3.0	2250 GAL (8517 L)
ABC® 4.5	4219 GAL (15970 L)
ABC® 9.0	8438 GAL (31941 L)

NitriFAST

wastewater treatment systems

The fundamental design of NitriFAST® is based on the same Fixed Integrated Treatment Technology (FITT®) as MicroFAST® and HighStrengthFAST®. The NitriFAST® is primarily used as a secondary nitrification device when very low ammonia and/or total nitrogen is required.



In the interest of technological progress, FAST wastewater treatment systems are subject to design and/or material changes without notice.

NitriFAST Specifications

Application Modules	Maximum Treatment Capacity*	Module Dimensions*** (L x W x H)	Weight***	
			Pounds	Kilograms
NitriFAST® 0.5	500 GPD (1893 LPD)	59" (150 cm) x 30" (76 cm) x 56" (142 cm)	165 lbs	75 kg
NitriFAST® 0.75	750 GPD (2839 LPD)	60" (152 cm) x 43" (109 cm) x 55" (130 cm)	200 lbs	91 kg
NitriFAST® 0.9	900 GPD (3407 LPD)	59" (150 cm) x 48" (122 cm) x 57" (145 cm)	215 lbs	98 kg
NitriFAST® 1.5	1500 GPD (5678 LPD)	82" (208 cm) x 55" (140 cm) x 58" (147 cm)	456 lbs	207 kg
NitriFAST® 3.0	3000 GPD (11356 LPD)	71" (180 cm) x 59" (150 cm) x 81" (206 cm)	725 lbs	329 kg
NitriFAST® 4.5	4500 GPD (17034 LPD)	145" (368 cm) x 73" (185 cm) x 51" (130 cm)	1600 lbs	726 kg
NitriFAST® 9.0	9000 GPD (34068 LPD)	145" (368 cm) x 73" (185 cm) x 76" (193 cm)	2300 lbs	1044 kg

Large Applications-9000 GPD

Multiple FAST® treatment modules can be used in parallel and/or series for additional flow or desired treatment levels

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", WESRF Leaders Innovation Forum for Technology (LIFT) Scan Program - a growing collection of vetted, innovative technologies that will drastically improve wastewater treatment operations. – BioBarrier® HMBR®
- 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 (CGL) Maritime Certification – Canadian Coast Guard
- CANBIO 3680-600 (B-N) 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
- IAPWO (International Association of Plumbing and Mechanical Officials) Research & Testing Inc. – Reclaimed Water Conservation System for Flushing Toilets (Standards CSA B125.1-2006 & 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. 1-08, 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®-M 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 – Aparata Techniczna (Technology Approval) za Instytut Ochrony Środowiska (Institute of Environmental Protection)
- Romania – Avizează Favorabil – Consiliu Tehnic Permanent Pentru Construcții – Ministerul Dezvolării Regionale și Turismului
- Russia – Technology Approval – Федеральная служба по надзору в сфере защиты прав потребителей и благополучия человека (Federal Service of Environmental Protection)
- Russia – СPT Соответствие в 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.S. Coast Guard – 33CFR150, MPEC 150(55) – FAST® Technology Approval for Type II MBD (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. 0308WQPC-SWP – SeptiTech®, Report No. 0304WQPC-SWP

...and MORE!

BIO MICROBICS

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