



December 22, 2010

Ms. Allison Blodig  
BioMicrobics, Inc.  
8450 Cole Parkway  
Shawnee, KS 66227

Dear Ms. Blodig,

Per your request, we have reviewed the designs of the RetroFAST Models 0.150, 0.250 and 0.375 for new construction (does not apply to the RetroFAST models for remediation), comparing them with the NSF Certified MicroFAST Model 0.5. This review is completed because the hydraulic design capacities of the RetroFAST Models are outside the scope of NSF Standards. Our review focused on media volume, tank volumes (hydraulic retention times and sludge storage) and aeration (oxygen availability for organic stabilization and mixing). Drawings and design data provided by BioMicrobics for the RetroFAST Models 0.150, 0.250 and 0.375 are attached.

### Media Volume

The capacity of the MicroFAST process to treat organic contaminants is related to the volume of media in the system. The design media volume is based on organic loading per cubic foot of the media. As shown in the following table, the media volumes for the three RetroFAST models meet the proportionally required volumes, when compared with the MicroFAST 0.5 system.

Model	Hydraulic Capacity (gpd)	Media Dimensions	Media Volume (ft <sup>3</sup> )	Required Proportional Volume (ft <sup>3</sup> )
MicroFAST 0.5	500	24"×48"×24"	16.0	-
RetroFAST 0.375	375	39"×24"×24"	13.0	12.0
RetroFAST 0.250	250	24"×24"×24"	8.0	8.0
RetroFAST 0.150	150	19"×19"×24"	5.0	2.4

### Tank Volumes

While treatment in the MicroFAST and RetroFAST processes is mostly provided within the media, sufficient tank volumes are important to provide for solids removal and storage, and to provide hydraulic retention to allow for circulation of the wastewater through the media. The minimum tank volumes specified by Bio-Microbics for the MicroFAST 0.5 and the RetroFAST systems, shown in the following table, were used in this comparison. The treatment zone volume, where the media is located, is the more important of the two compartment volumes, as the settling zone volume will mostly impact the frequency of pump out.

As shown in the table below, the treatment zone volumes for the RetroFAST systems are greater than proportionality would dictate, and provide longer hydraulic retention times than the MicroFAST 0.5. Likewise, except for the RetroFAST 0.150, the settling zone volumes are also greater than proportionally required. The small difference from proportionality of the Model 0.150 would not be expected to have a significant impact on treatment performance.

Model Number	Minimum Settling Zone		Minimum Treatment Zone		Minimum Total Tank		Water Depth Under Media (in)
	Volume (gal)	HRT* (hrs)	Volume (gal)	HRT* (hrs)	Volume (gal)	HRT* (hrs)	
MicroFAST 0.5	350	16.8	450	21.6	800	38.4	10
RetroFAST 0.375	300 (262)**	19.2	450 (338)**	28.8	750 (600)**	48.0	10
RetroFAST 0.250	300 (175)**	28.8	300 (225)**	28.8	500 (400)**	57.6	10
RetroFAST 0.150	100 (105)**	16.0	300 (135)**	48.0	400 (240)**	64.0	10

\* Hydraulic retention time at design flow.

\*\* First number is minimum volume provided; number in ( ) indicates volume for proportionality based on MicroFAST 0.5.

Aeration

Aeration in these systems provide for both oxygen transfer to meet waste loading requirements and mixing within the system, utilizing an air-lift design to circulate wastewater through the media. The air volume per unit volume of treatment zone (CFM/ft<sup>3</sup>) was calculated to determine the adequacy of the blowers for the RetroFAST systems, when compared with the MicroFAST 0.5. The blowers for the RetroFAST systems provide unit air volumes comparable to the MicroFAST 0.5.

Based on the comparisons described above, we would expect that the RetroFAST Models 0.150, 0.250 and 0.375 would provide treatment comparable to the MicroFAST 0.5 for residential strength wastewater. Please let me know if you have any questions regarding this information.

Sincerely,



Thomas Stevens  
 Technical Manager

cc: Sharon Steiner  
 File

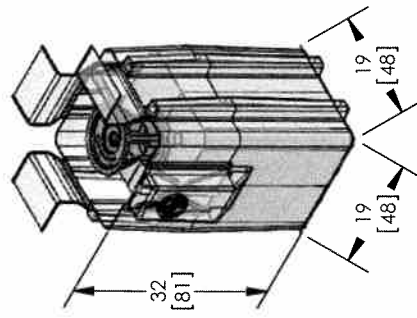
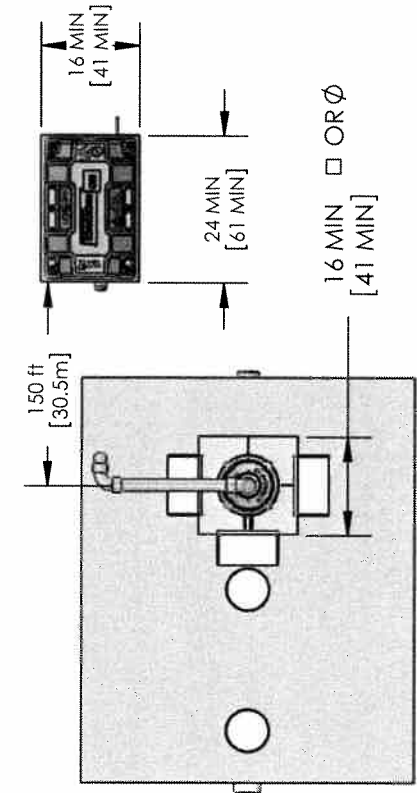
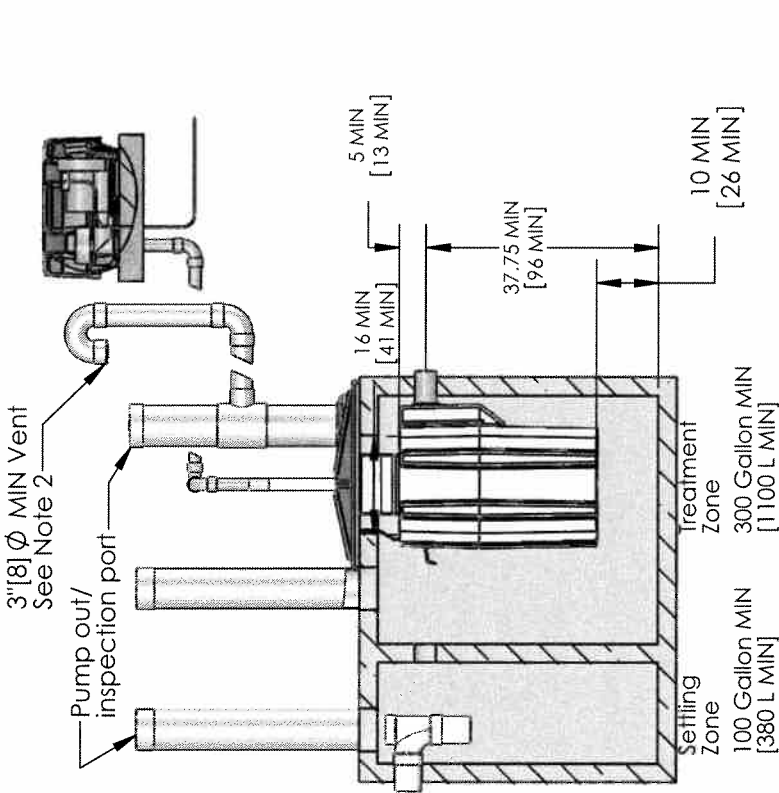
**NOTES**


- Blower piping to FAST® may not exceed 100 FT [30.5m] total length and use 4 elbows maximum. For distances greater than 100 FT [30.5m] - consult factory. Blower must be located above flood/standing water levels on a solid surface or concrete base 24" X 18" X 1" [61X45.7X2.6c] minimum.
- Vent to be located above finish grade or higher to avoid infiltration. Cap with vent grate w/at least 7.1 sq in. [45.8 sq. cm] open surface area. Secure with stainless steel screws.

or

- Run vent to desired location and cover opening with vent grate w/at least 7.1 sq in. [45.8 sq. cm] of open surface area. Secure with stainless steel screws. Vent piping must not allow excess moisture build up or back pressure. All appurtenances to FAST® (e.g. tank pump outs, etc.) must conform to all country, state, province, and local plumbing and electrical codes. The blower control system is provided by Bio-Microbics, Inc.
- Optional blower control system by Bio-Microbics, Inc.
- Fast® module must be secured by bolting through straps, then lid is bolted to the tank.

- No more than 4 FT [1.2 m] of fill may be placed over unit lid.
- All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
- Tank, anchors, piping, conduit, blower housing pad and vents are provided by others.
- All piping and ancillary equipment installed after FAST® must not impede or restrict free flow of effluent.
- Effluent hole will accept a 3" SCH 40 PVC pipe which can be then inserted into the existing 4" Discharge pipe in the septic tank. The RetroFAST® provides vigorous aeration in a septic tank which reverses the clogging process in a drain field.




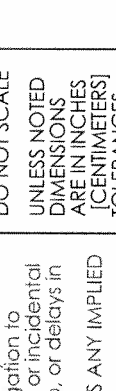

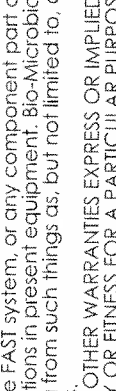

DO NOT SCALE UNLESS NOTED DIMENSIONS ARE IN INCHES (CENTIMETERS) TOLERANCES ± 0.02 IN/IN [± 0.05 CM/CM]	WEIGHT	lb	32
	SIZE	A	
	DRAWING NUMBER	RetroFAST®.150 New Construction	
	NAME	DATE	
	DRAWN	CTC	5/5/2008
CHECKED	PF	5/27/2008	REVISED Wednesday, May 27, 2009
RETROFAST 0.150		SHEET 2 OF 3	
INI-01-G			

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Specifications for RetroFAST 0.150 Wastewater Treatment System

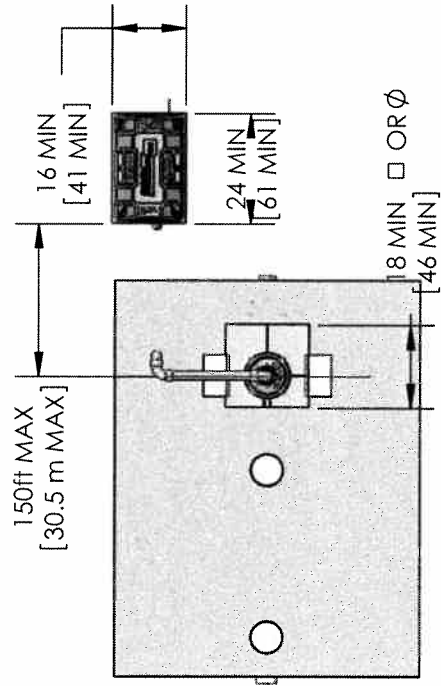
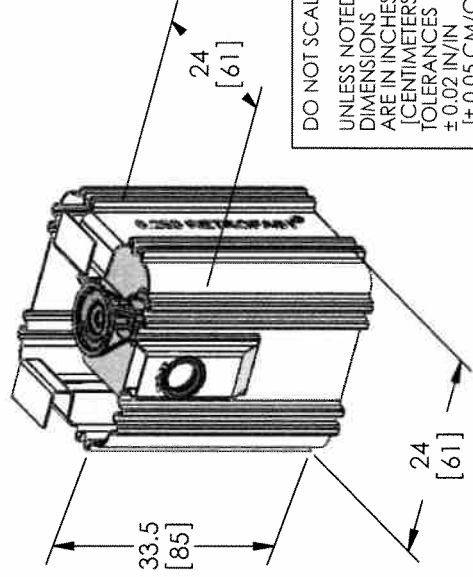
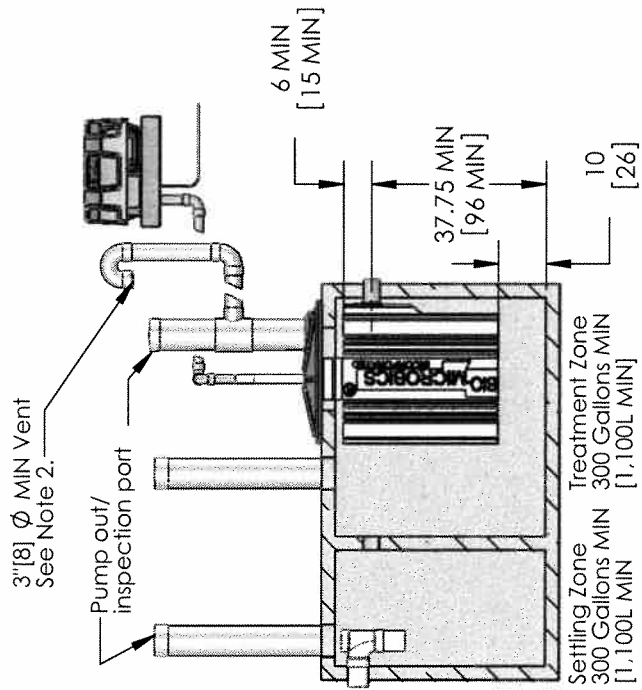
1. GENERAL  
The contractor shall furnish and install (1) RetroFAST 0.150 treatment system as manufactured by Bio-Microbics, Inc. The treatment system shall be complete with all needed equipment as shown on the drawings and specified herein.
- The principal items of equipment shall include FAST System insert, insert lid, blower assembly, and blower housing. The RetroFAST 0.150 unit shall be situated within tank that exceeds the minimum dimensions and a 16" (41cm) tank opening. Tank(s) must conform to local, state, and all other applicable codes. The contractor shall provide coordination between the FAST system and tank supplier with regard to fabrication of the tank, installation of the FAST unit and delivery to the job site.
2. OPERATING CONDITIONS  
The RetroFAST 0.150 treatment system shall be capable of treating the wastewater produced by typical family activities (bath, laundry, kitchen, etc.) ranging from (1) one to (3) three persons and not to exceed 150 US Gallons per day (568 LPD).
3. MEDIA  
The FAST media shall be manufactured of rigid PVC, polyethylene, or polypropylene and it shall be supported by the polyethylene insert. The media shall be fixed in position and contain no moving or wearing parts and shall not corrode. The media shall be designed and installed to ensure that sloughed solids descend through the media to the bottom of the septic tank.
4. BLOWER  
The RetroFAST 0.150 unit shall come equipped with a regenerative type blower capable of delivering 9-24 CFM [15-41 m3/hr]. The blower assembly shall include an inlet filter with metal filter element.
5. REMOTE MOUNTED BLOWER  
The blower shall be mounted remote, up to 100 feet (30.25 M) maximum, from the RetroFAST unit on a contractor supplied concrete base. The blower elevation must be higher than the normal flood level. A two-piece, rectangular housing shall be provided with tamper-proof screws. The discharge air line from the blower to the RetroFAST shall be provided and installed by the contractor.
6. ELECTRICAL  
The electrical source should be within 150 feet (45.7 meters) of the blower consult local codes for longer wiring distances. All wiring must conform to all applicable codes (IEC, NEC, etc.). Wiring distances must prevent significant voltage loss. Input power on 60Hz electrical system is 110/220 VAC, single phase, 2.3/1.0 Amps. Input power on 50Hz electrical systems 127/230 VAC, single phase 0.253 kw/hr. All conduit and wiring shall be supplied by contractor.
7. INSTALLATION AND OPERATING INSTRUCTIONS  
All work must be done in accordance with local codes and regulations. Installation of the RetroFAST 0.150 shall be done in accordance with the written instructions provided by the manufacturer.
8. OPTIONAL ALARM PANEL  
The alarm system shall consist of a visual and audible alarm to indicate loss of power to the blower. A manual silence switch is included.
9. FLOW AND DOSING  
Wastewater treatment systems work best when influent flow is delivered as consistently as possible. FAST systems have been successfully designed, tested, and certified receiving gravity, demand-based influent flow. When influent flow is controlled (either by influent pump or other means) to the FAST system to help with highly variable flow conditions, then multiple feeding events should be used to help assure even flow, optimum performance, and reliability.
10. WARRANTY  
Bio-Microbics, Inc. warrants all new RetroFAST® models (RetroFAST 0.150, 0.250, and 0.375) against defects in materials and workmanship for a period of two years after installation or three years from date of shipment, which ever occurs first, subject to the following terms and conditions:  
During the warranty period, if any part is defective or fails to perform as specified when operating under conditions provided by Bio-Microbics, Inc., Bio-Microbics, Inc. will repair or replace at its discretion such defective parts free of charge. Defective parts maintained in accordance with the written instructions provided by Bio-Microbics, Inc., will be returned by owner to Bio-Microbics, Inc.'s factory postage paid, if so requested. The cost of labor and all other expenses resulting from replacement of the defective parts and from installation of parts furnished under this warranty and regular maintenance items such as filters or bulbs shall be borne by the owner. This warranty does not cover general system misuse, aerator components which have been damaged by flooding or any components that have been disassembled by unauthorized persons, improperly installed or damaged due to altered or improper wiring or overload protection. This warranty applies only to the treatment plant and does not include any of the house wiring, plumbing, drainage, septic tank or disposal system. Bio-Microbics, Inc. reserves the right to revise, change or modify the construction and/or design of the FAST system, or any component part or parts thereof, without incurring any obligation to make such changes or modifications in present equipment. Bio-Microbics, Inc. is not responsible for consequential or incidental damages of any nature resulting from such things as, but not limited to, defect in design, material, or workmanship, or delays in delivery, replacements or repairs.  
THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. BIO-MICROBICS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
NO REPRESENTATIVE OR PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY OR TO ASSUME FOR BIO-MICROBICS, INC., ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF ITS PRODUCTS. Contact your local distributor for parts and service.

		DO NOT SCALE	WEIGHT	RETROFAST 0.150
		UNLESS NOTED DIMENSIONS ARE IN INCHES (CENTIMETERS) TOLERANCES ± 0.02 IN/IN [± 0.05 CM/CM]	UNLESS NOTED DIMENSIONS ARE IN INCHES (CENTIMETERS) TOLERANCES ± 0.02 IN/IN [± 0.05 CM/CM]	RETROFAST 0.150
		NAME	DATE	DRAWING NUMBER
		DRAWN	5/6/2008	RetroFAST® 0.150 Specification
		CHECKED	5/27/2008	REVISED Wednesday, May 27, 2009
		SHEET 3 OF 3		

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**NOTES**

- Blower piping to RetroFAST® may not exceed 100 FT [30.5m] total length and use 4 elbows maximum. For distances greater than 100 FT [30.5m] - consult factory. Blower must be located above flood/standing water levels on a solid surface or concrete base 24" X 18" X 1" [61X45.7X2.6c] minimum.
- Vent to be located above finish grade or higher to avoid infiltration. Cap with vent grate w/at least 7.1 sq in. [45.8 sq. cm] open surface area. Secure with stainless steel screws.
- Or  
Run vent to desired location and cover opening with vent grate w/at least 7.1 sq in. [45.8 sq. cm] of open surface area. Secure with stainless steel screws. Vent piping must not allow excess moisture build up or back pressure. All appurtenances to FAST® (e.g. tank pump outs, etc.) must conform to all country, state, province, and local plumbing and electrical codes. The blower control system is provided by Bio-Microbics, Inc.
- Optional blower control system by Bio-Microbics, Inc.
- Fast® module must be secured by bolting through straps, then lid is bolted to the tank.
- No more than 4 FT [1.2 m] of fill may be placed over unit lid.
- All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
- Tank, anchors, piping, conduit, blower housing pad and vents are provided by others.
- All piping and ancillary equipment installed after FAST® must not impede or restrict free flow of effluent.
- Effluent hole will accept a 3" SCH 40 PVC pipe which can be then inserted into the existing 4" Discharge pipe in the septic tank. The RetroFAST® provides vigorous aeration in a septic tank which reverses the clogging process in a drain field.



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UNLESS NOTED  
DIMENSIONS  
ARE IN INCHES  
(CENTIMETERS)  
TOLERANCES  
± 0.02 IN/IN  
± 0.05 CM/CM



RetroFAST 0.250

WEIGHT	ID	DRAWING NUMBER
DRAWN - CTC	DATE	A
CHECKED - PF	5/27/2008	REVISED Wednesday, May 27, 2009
RetroFAST® 0.250 New Construction		
SHEET 2 OF 3		

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**Specifications for RetroFAST 0.250 Wastewater Treatment System**

**1. GENERAL**  
The contractor shall furnish and install (1) RetroFAST 0.250 treatment system as manufactured by Bio-Microbics, Inc. The treatment system shall be complete with all needed equipment as shown on the drawings and specified herein.

The principal items of equipment shall include FAST System insert, insert lid, blower assembly, and blower housing. The RetroFAST 0.250 unit shall be situated within tank that exceeds the minimum dimensions and a 16" [41mm] tank opening. Tank(s) must conform to local, state, and all other applicable codes. The contractor shall provide coordination between the FAST system and tank supplier with regard to fabrication of the tank, installation of the FAST unit and delivery to the job site.

**2. OPERATING CONDITIONS**  
The RetroFAST 0.250 treatment system shall be capable of treating the wastewater produced by typical family activities (bath, laundry, kitchen, etc.) ranging from (1) one to (4) three persons and not to exceed 250 US Gallons per day [945 LPD].

**3. MEDIA**  
The FAST media shall be manufactured of rigid PVC, polyethylene, or polypropylene and it shall be supported by the polyethylene insert. The media shall be fixed in position and contain no moving or wearing parts and shall not corrode. The media shall be designed and installed to ensure that sloughed solids descend through the media to the bottom of the septic tank.

**4. BLOWER**  
The RetroFAST 0.250 unit shall come equipped with a regenerative type blower capable of delivering 9-24 CFM [15-41m3/hr]. The blower assembly shall include an inlet filter with metal filter element.

**5. REMOTE MOUNTED BLOWER**  
The blower shall be mounted remote, up to 100 feet (30.25 M) maximum, from the RetroFAST unit on a contractor supplied concrete base. The blower elevation must be higher than the normal flood level. A two-piece, rectangular housing shall be provided with tamper-proof screws. The discharge air line from the blower to the RetroFAST shall be provided and installed by the contractor.

**6. ELECTRICAL**  
The electrical source should be within 150 feet [45.7 meters] of the blower consult local codes for longer wiring distances. All wiring must conform to all applicable codes (IEC, NEC, etc.). Wiring distances must prevent significant voltage loss. Input power on 60Hz electrical system is 110/220 V.A.C. single phase, 2.3/1.0 Amps. Input power on 50Hz electrical systems 127/230 V.A.C. single phase 0.253 kw/hr. All conduit and wiring shall be supplied by contractor.


**7. INSTALLATION AND OPERATING INSTRUCTIONS**  
All work must be done in accordance with local codes and regulations. Installation of the RetroFAST 0.250 shall be done in accordance with the written instructions provided by the manufacturer.

**8. OPTIONAL ALARM PANEL**  
The alarm system shall consist of a visual and audible alarm to indicate loss of power to the blower. A manual silence switch is included.

**9. FLOW AND DOSING**  
Wastewater treatment systems work best when influent flow is delivered as consistently as possible. FAST systems have been successfully designed, tested, and certified receiving gravity, demand-based influent flow. When influent flow is controlled (either by influent pump or other means) to the FAST system to help with highly variable flow conditions, then multiple feeding events should be used to help assure even flow, optimum performance, and reliability.

**10. WARRANTY**  
Bio-Microbics, Inc. warrants all new RetroFAST® models (RetroFAST 0.150, 0.250, and 0.375) against defects in materials and workmanship for a period of two years after installation or three years from date of shipment, which ever occurs first, subject to the following terms and conditions:  
During the warranty period, if any part is defective or fails to perform as specified when operating at design conditions, and if the equipment has been installed and is being operated and maintained in accordance with the written instructions provided by Bio-Microbics, Inc., Bio-Microbics, Inc. will repair or replace at its discretion such defective parts free of charge. Defective parts must be returned by owner to Bio-Microbics, Inc.'s factory postage paid, if so requested. The cost of labor and all other expenses resulting from replacement of the defective parts and from installation of parts furnished under this warranty and regular maintenance items such as filters or bulbs shall be borne by the owner. This warranty does not cover general system misuse, aerator components which have been damaged by flooding or any components that have been disassembled by unauthorized persons, improperly installed or damaged due to altered or improper wiring or overload protection. This warranty applies only to the treatment plant and does not include any of the house wiring, plumbing, drainage, septic tank or disposal system. Bio-Microbics, Inc. reserves the right to revise, change or modify the construction and/or design of the FAST system, or any component part or parts thereof, without incurring any obligation to make such changes or modifications in present equipment. Bio-Microbics, Inc. is not responsible for consequential or incidental damages of any nature resulting from such things as, but not limited to, defect in design, material, or workmanship, or delays in delivery, replacements or repairs.

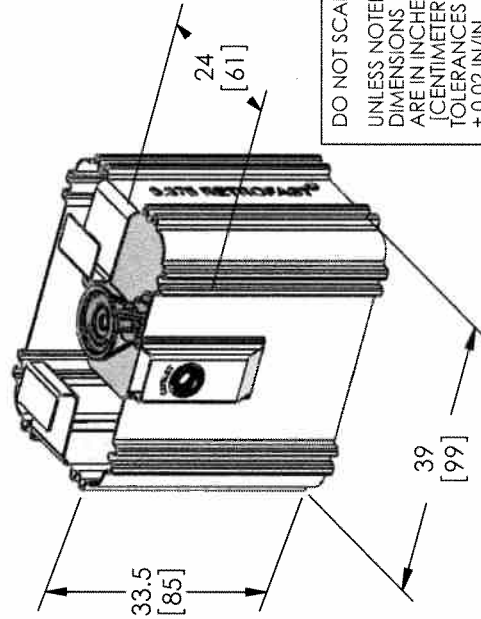
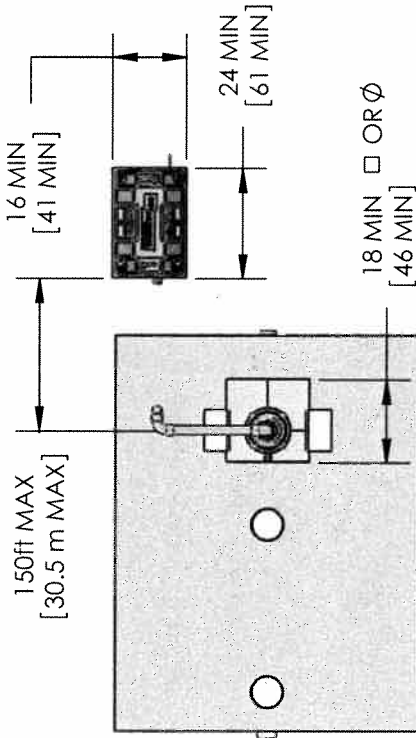
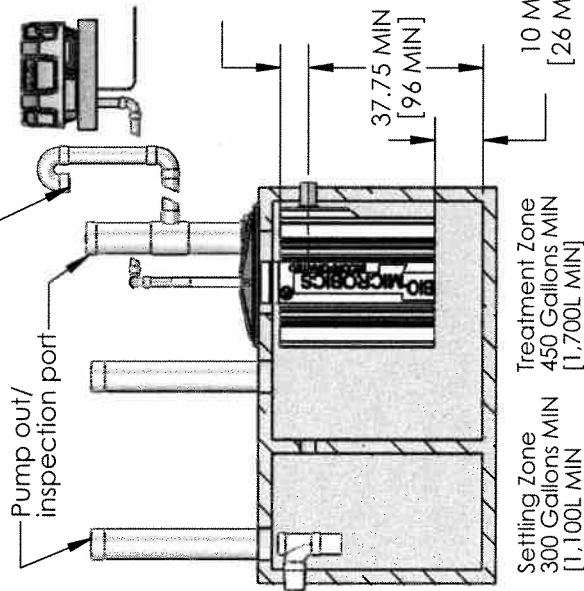
THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. BIO-MICROBICS SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
NO REPRESENTATIVE OR PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY OR TO ASSUME FOR BIO-MICROBICS, INC., ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF ITS PRODUCTS. Contact your local distributor for parts and service.

		DO NOT SCALE	
		UNLESS NOTED DIMENSIONS ARE IN INCHES (CENTIMETERS) TOLERANCES ± 0.02 IN/IN [± 0.05 CM/CM]	WEIGHT
DRAWN	NAME	ID	SIZE
CHECKED	PF	DATE	DRAWING NUMBER
5/27/2008	REVISD	Wednesday, May 27, 2008	RetroFAST@ 0.250 Specification
SHEET			3 OF 3

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3"[8]  $\phi$  MIN Vent  
See Note 2



**NOTES**

1. Blower piping to FAST® may not exceed 100 FT [30.5m] total length and use 4 elbows maximum. For distances greater than 100 FT [30.5m] - consult factory. Blower must be located above flood/standing water levels on a solid surface or concrete base 24" X 18" X 1" [61X45.7X2.6c] minimum.
2. Vent to be located above finish grade or higher to avoid infiltration. Cap with vent grate w/at least 7.1 sq in. [45.8 sq. cm] open surface area. Secure with stainless steel screws.  
or  
Run vent to desired location and cover opening with vent grate w/at least 7.1 sq in. [45.8 sq. cm] of open surface area. Secure with stainless steel screws. Vent piping must not allow excess moisture build up or back pressure.
3. All appurtenances to FAST® (e.g. tank pump outs, etc.) must conform to all country, state, province, and local plumbing and electrical codes. The blower control system is provided by Bio-Microbics, Inc.
4. Optional blower control system by Bio-Microbics, Inc.
5. Fast® module must be secured by bolting through straps, then lid is bolted to the tank. No more than 4 FT [1.2 m] of fill may be placed over unit lid.
6. All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
7. Tank, anchors, piping, conduit, blower housing pad and vents are provided by others.
8. All piping and ancillary equipment installed after FAST® must not impede or restrict free flow of effluent.
10. Effluent hole will accept a 3" SCH 40 PVC pipe which can be then inserted into the existing 4" Discharge pipe in the septic tank. The RetroFAST® provides vigorous aeration in a septic tank which reverses the clogging process in a drain field.

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DIMENSIONS  
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(CENTIMETERS)  
TOLERANCES  
 $\pm 0.02$  IN/IN  
 $[\pm 0.05$  CM/CM]



RetroFAST 0.375

WEIGHT	lb	kg
	NAME	DATE
DRAWN	CTC	5/27/2008
CHECKED	PF	5/27/2008
DRAWING NUMBER		
RetroFAST® 0.375 New Construction		
SHEET 2 OF 3		
REV. INI-01-D		

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Specifications for RetroFAST 0.375 Wastewater Treatment System

1. **GENERAL**  
The contractor shall furnish and install (1) RetroFAST 0.375 treatment system as manufactured by Bio-Microbics, Inc. The treatment system shall be complete with all needed equipment as shown on the drawings and specified herein.

The principal items of equipment shall include FAST System insert, insert lid, blower assembly, and blower housing. The RetroFAST 0.375 unit shall be situated within tank that exceeds the minimum dimensions and a 16" [41cm] tank opening. Tank(s) must conform to local, state, and all other applicable codes. The contractor shall provide coordination between the FAST system and tank supplier with regard to fabrication of the tank, installation of the FAST unit and delivery to the job site.

2. **OPERATING CONDITIONS**  
The RetroFAST 0.375 treatment system shall be capable of treating the wastewater produced by typical family activities (bath, laundry, kitchen, etc.) ranging from (1) one to (5) five persons and not to exceed 375 US Gallons per day (1420 LPD).

3. **MEDIA**  
The FAST media shall be manufactured of rigid PVC, polyethylene, or polypropylene and it shall be supported by the polyethylene insert. The media shall be fixed in position and contain no moving or wearing parts and shall not corrode. The media shall be designed and installed to ensure that sloughed solids descend through the media to the bottom of the septic tank.

4. **BLOWER**  
The RetroFAST 0.375 unit shall come equipped with a regenerative type blower capable of delivering 9-24 CFM [15-41m3/hr]. The blower assembly shall include an inlet filter with metal filter element.

5. **REMOTE MOUNTED BLOWER**  
The blower shall be mounted remote, up to 100 feet (30.25 M) maximum, from the RetroFAST unit on a contractor supplied concrete base. The blower elevation must be higher than the normal flood level. A two-piece, rectangular housing shall be provided with tamper-proof screws. The discharge air line from the blower to the RetroFAST shall be provided and installed by the contractor.

6. **ELECTRICAL**  
The electrical source should be within 150 feet [45.7 meters] of the blower consult local codes for longer wiring distances. All wiring must conform to all applicable codes (IEC, NEC, etc.). Wiring distances must prevent significant voltage loss. Input power on .60Hz electrical system is 110/220 VAC, single phase. 2.3/1.0 Amps. Input power on 50Hz electrical systems 127/230 VAC, single phase 0.253 kw/hr. All conduit and wiring shall be supplied by contractor.


7. **INSTALLATION AND OPERATING INSTRUCTIONS**  
All work must be done in accordance with local codes and regulations. Installation of the RetroFAST 0.375 shall be done in accordance with the written instructions provided by the manufacturer.

8. **OPTIONAL ALARM PANEL**  
The alarm system shall consist of a visual and audible alarm to indicate loss of power to the blower. A manual silence switch is included.

9. **FLOW AND DOSING**  
Wastewater treatment systems work best when influent flow is delivered as consistently as possible. FAST systems have been successfully designed, tested, and certified receiving gravity, demand-based influent flow. When influent flow is controlled (either by influent pump or other means) to the FAST system to help with highly variable flow conditions, then multiple feeding events should be used to help assure even flow, optimum performance, and reliability.

10. **WARRANTY**  
Bio-Microbics, Inc. warrants all new RetroFAST® models (RetroFAST 0.150, 0.250, and 0.375) against defects in materials and workmanship for a period of two years after installation or three years from date of shipment, which ever occurs first, subject to the following terms and conditions:  
During the warranty period, if any part is defective or fails to perform as specified when operating at design conditions, and if the equipment has been installed and is being operated and maintained in accordance with the written instructions provided by Bio-Microbics, Inc., Bio-Microbics, Inc. will repair or replace at its discretion such defective parts free of charge. Defective parts must be returned by owner to Bio-Microbics, Inc.'s factory postage paid, if so requested. The cost of labor and all other expenses resulting from replacement of the defective parts and from installation of parts furnished under this warranty and regular maintenance items such as filters or bulbs shall be borne by the owner. This warranty does not cover general system misuse, aerator components which have been damaged by flooding or any components that have been disassembled by unauthorized persons, improperly installed or damaged due to altered or improper wiring or overload protection. This warranty applies only to the treatment plant and does not include any of the house wiring, plumbing, drainage, septic tank or disposal system. Bio-Microbics, Inc. reserves the right to revise, change or modify the construction and/or design of the FAST system, or any component part or parts thereof, without incurring any obligation to make such changes or modifications in present equipment. Bio-Microbics, Inc. is not responsible for consequential or incidental damages of any nature resulting from such things as, but not limited to, defect in design, material, or workmanship, or delays in delivery, replacements or repairs.

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DO NOT SCALE		SIZE	DRAWING NUMBER
UNLESS NOTED DIMENSIONS ARE IN INCHES (CENTIMETERS) TOLERANCES ± 0.02 IN/IN [± 0.05 CM/CM]	NAME	A	RetroFAST@ 0.375 Specification
WEIGHT	DATE		
	5/9/2008		
DRAWN	CHECKED	PF	REV.
			5/27/2008/REVISED Wednesday, May 27, 2009
			
RetroFAST 0.375			
SHEET			3 OF 3

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