

NOTES

1. All appurtenances to ABC@-N (e.g. tanks, access ports, electrical, etc.) must conform to all applicable country, state, province, and local plumbing and electrical codes. Pump out access shall be adequate to thoroughly clean out the tank.
2. All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
3. Tank, piping, conduit, etc. are provided by others. Blower control system by Bio-Microbics, Inc. See Installation & Operation Manual.
4. If less than the specified minimums are considered necessary, consult factory for guidance.
5. All piping and ancillary equipment installed must not impede or restrict free flow of effluent.
6. Specialized treatment levels may require specific features to be incorporated into the design. Consult factory for guidance.
7. Refer to sheet 3 of 3 for leg extensions requirements.
8. The ABC@-N treatment module supplied pump includes 20 feet [6m] of electrical cord and 8 feet [2.5m] of stainless steel cable.

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UNLESS NOTED
DIMENSIONS
ARE IN INCHES
[CENTIMETERS]
TOLERANCES
± 0.02 IN/IN
[± 0.05 CM/CM]



ABC-N 4.5

WEIGHT		lb	SIZE	DRAWING NUMBER		SHEET 1 OF 3
NAME	DATE		A	ABC@-N 4.5		
DRAWN	CTC	5/12/2006		REVISED 4/15/2014		
CHECKED	PF	4/15/2014		REV. INI-02-C		

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Specifications for ABC@-N 4.5 Wastewater Treatment System

1. GENERAL
The contractor shall furnish and install (1) ABC@-N 9.0 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 ABC-N System insert, leg extensions, and pump. The ABC@-N 4.5 unit shall be situated within a 4,220 Gallon (16000 L) minimum tank, as shown on the plans. Tank(s) must conform to local, state, and all other applicable codes. The contractor shall provide coordination between the ABC@-N system and tank supplier with regard to fabrication of the tank, installation of the ABC@-N unit and delivery to the job site.
2. OPERATING CONDITIONS
The ABC@-N treatment system shall be capable of using nitrified waste and a carbon source (provided by others) to sustain a viable biomass for denitrification. Waste containing inhibitory substances is not recommended for treatment in the ABC@-N system. Consult factory for proper sizing and usage.
3. MEDIA
The ABC@-N 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. PUMP
The ABC@-N 4.5 unit shall come equipped with a continuous duty recirculation pump and recirculation assembly..
6. ELECTRICAL
The electrical source should be within 150 feet [45.7 meters] of the pump 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, 14.5/7.3 FLA. Input power on 50Hz electrical system is 120/220 VAC, single phase, 15.0/7.8 FLA. Three phase is also available upon request. All conduit and wiring shall be supplied by contractor.
7. ALARM PANEL (Optional)
The optional alarm system shall consist of a visual and audible alarm to indicate loss of power to the pump. A manual silence switch is included.
8. INSTALLATION AND OPERATING INSTRUCTIONS
All work must be done in accordance with local codes and regulations. Installation of the ABC@-N shall be done in accordance with the written instructions provided by the manufacturer. An operation and maintenance manual shall be furnished which will include a description of system installation, operation, and maintenance procedures.

Module weighs approximately 1600 pounds [725kg]. Four holes for lifting the ABC liner are supplied. Spreader bars are to be used in lifting the unit. Place spreader bars between lifting holes.
9. FLOW & PIPE SIZING
Systems have been successfully designed, tested and certified receiving gravity, demand-based influent flow. Consult factory for guidance when influent flow is controlled by pump or other means to help with highly variable flow conditions. Multiple dosing events should be used to maximize performance.
10. WARRANTY
Bio-Microbics, Inc. warrants all new ABC@-N models (ABC@-N 0.5,1.0, 1.5, 3.0, 4.5, and 9.0) against defects in materials and workmanship for a period of one year after installation or eighteen (18 months) from the 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. is 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]		 <p>ABC-N 4.5</p>	
WEIGHT	lb	SIZE	DRAWING NUMBER
		A	ABC@-N 4.5 Specifications
DRAWN	5/12/2006		
CHECKED PF	4/15/2014	REVISED	4/15/2014
		REV.	

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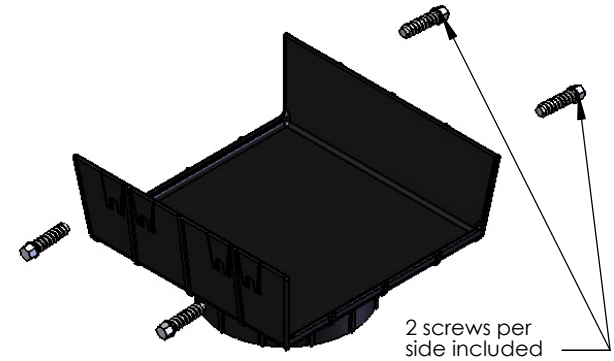
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SHEET 2 OF 3

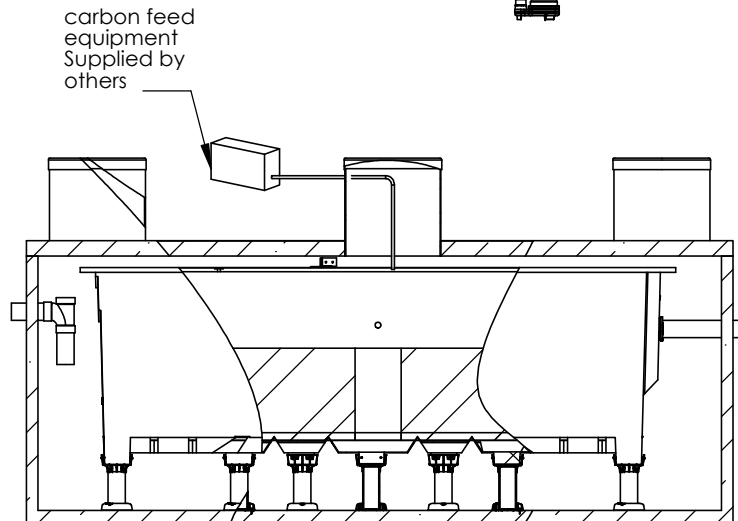
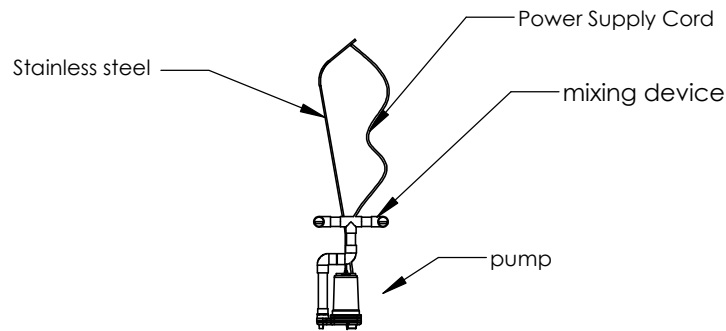
Notes:

1. Secure leg extension to the ABC®-N unit by placing two screws on each side of the leg extension (4 screws per foot are included).
2. To obtain the desired height of leg cut 4" [10] schd. 40 PVC pipe (not included). Minimum pipe length of 11.7" [29.7]; For heights greater than 18" [45.7] use schd. 80 PVC pipe (not included). Consult factory for extending leg beyond 36" [91].
3. Anchor the leg extensions to the tank with non-corrosive hardware not included at the provided mounting points.
4. Tank, anchors, piping conduit, blower, housing pad and vents are provided by others.
5. Control panel for pump operation is optional.

Minimum leg extension assembly



See Note 2



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ABC-N 4.5

WEIGHT	lb	SIZE	DRAWING NUMBER	SHEET 3 OF 3
NAME	DATE	A	ABC®-N 4.5 Details	
DRAWN	CTC 5/12/2006			
CHECKED	PF 4/15/2014	REVISED 4/15/2014	REV. INI-02-C	

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