AEROBIC TREATMENT SYSTEM

AEROBIC SEPTIC SYSTEMS are used in situations where standard septic systems are not a viable option, or in many cases, to replace failing septic systems. Aerobic systems are similar to septic systems in that they both use natural processes to treat wastewater. But unlike septic (anaerobic) treatment, the aerobic treatment process requires oxygen.

There are two types of bacteria, anaerobic and aerobic. Generally, the rate at which breakdown occurs by aerobic bacteria is much higher than anaerobic bacteria and this rate is increased by introducing more oxygen into the system.

How the aerobic treatment unit works

1. Effluent from the septic tank enters the treatment tank (digester).
2. The air pump and diffuser produces bubbles which supplies oxygen to promote bacterial growth and ensure circulation.
3. Bacteria treat the effluent by digesting fine suspended solids in the presence of sufficient oxygen.
4. Whatever solids remain become odorless and should be pumped out periodically.
5. Effluent should be directed into a soil absorption or disinfection system.

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Product Benefits:

- Wide base for stability, ease of handling and storage.
- Powered by small, silent linear air pump.
- Convenient size uses less space than conventional systems.
- Reduces the size of leaching fields.
- Manufactured from impact- resistant prime grade polyethylene.
- Spherical design ensures exceptional strength.
- Treats effluent so it can safely enter the environment.

Specifications:

MODEL	CAPACITY	DIMENSIONS		WEIGHT
		Diameter	Height	
500	500 US Gallons 1892 Litres	60" 153 cm	73" 186 cm	135 lbs 62 kgs
800	800 US Gallons 3028 Litres	75" 191 cm	80" 203 cm	280 lbs 127 kgs

Click here to download Aerobic Treatment System general information

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INSTALATION

Aerobic treatment units can be installed above or below ground and may require electrical connections, additional excavation, installation of pretreatment/final treatment components and access for maintenance.

Once your tank has been installed, make a diagram of where it is located for future reference, indicating number of feet from a particular point of the house.

MAINTENANCE

For a septic system to function properly it is important that it receives regular inspection and a proper maintenance.

General Guidelines

- Minimize the loads: The less water that goes down the drain, the better your system will work. Conserving water will help avoid overloading the system.

- Avoid using the system for Garbage Disposal: Undigested food scraps take much longer to break down, so a garbage disposal will increase the amount of solids on your thank by as much as 30 to 50 %, and therefore the tank must be pumped more frequently.

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- Heavy loads (including vehicles driving over) should not be superimposed on top or around the tank; this will cause the tank to collapse.

- The list of items below are not allowed to enter a septic tank:

    - Excessive fats, cooking oils & grease
    - Paints, solvents and motor oil
    - Fertilizer, pesticide, garden and harsh chemicals
    - Diapers, sanitary napkins, tampons, condoms
    - Plastics
    - Enzymes or additives

What is pumping?

Septic tanks are pumped by a licensed pumper with a vacuum tank truck. The pumper will use a hose and vacuum everything out of the tank. (Both liquids and solids).

Routine cleaning/ pumping

- For Aerobic Systems: The filter from the air pump must be cleaned every 6 months and the air pump must be mandatory serviced annually.

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- Maintenance of the effluent filter is very important, since solids accumulate on the filtering screen and will eventually block it. For this reason filters need to be cleaned every two to three years.

- For best results, a septic tank must be pumped out periodically, usually 3-5 years. However, this is dependent on the number of users as well as the size of septic tank.

- To determine when it is time to pump out your septic tank, a simple inspection can be undertaken. This is done by measuring the depth of the sludge and scum (neither should exceed 0.5 metres) using a firm clear 1" plastic tube (about 8 ft in length) and inserting this slowly into the tank. Once the tube has reached the bottom of the tank, place your thumb over the open end and withdraw the tube. This provides a cross sectional view of the tank and the depth of each layer can then be estimated.

- Once the contents are pumped out, the septic tank must be immediately refilled with water. **Failure to do so can result in the tank collapsing.**

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Anaerobic	Aerobic
Does not require oxygen	Requires oxygen
Has perforated balls to increase the surface area for bacteria to adhere.	Has a diffuser and perforated pipe assembly inside.
Lower efficiency than the aerobic system.	High efficiency (> 50% solid reduction).
Releases odorous gases during the digestion process	Odorous are eliminated
Lower operational costs	Higher operational costs
Does not require electricity	Electricity necessary.
Yields low quality effluent	Yields a high quality effluent
Regular Leach fields / Drain fields are required	The size of the Leach field / Drain field is greatly reduce.
Must be emptied when septic tank is being pumped.	Must be emptied when septic tank is being pumped out
Difficult to pump out	Easy to empty and clean
	Must be serviced annually but six months servicing is generally recommended.
	Can be use in areas not suitable for soakway.