

KNOW THE FACTS!

HOME AERATION UNITS – COATE AER

Illustration of your Unit

You currently live in an unsewered area of Hamilton County. The waste from your house is treated by a home aeration unit. These units come in many shapes and sizes. They are sometimes referred to as “cavitettes.” Cavitette is the brand name of one aeration unit used in our county. The other brands used are: Coate Aer, Jet, Multi-Flo, Norweco, and Oldham. Although aeration units have different brand names, the principle of operation is basically the same; air injected into sewage provides agitation and oxygen which allows bacteria to reduce organic waste to carbon dioxide and water.

Treatment Process

A properly operating home aeration unit will produce a clear, sanitary effluent. The following process is used.

Primary

(Pre-Treatment/Settling) Raw sewage from your home flows first to this chamber or trash tank (See #1). Here heavy matter sinks to the bottom; fats and oily matter float. Partially treated organic matter is suspended in the middle liquid portion.

Secondary (Aeration)

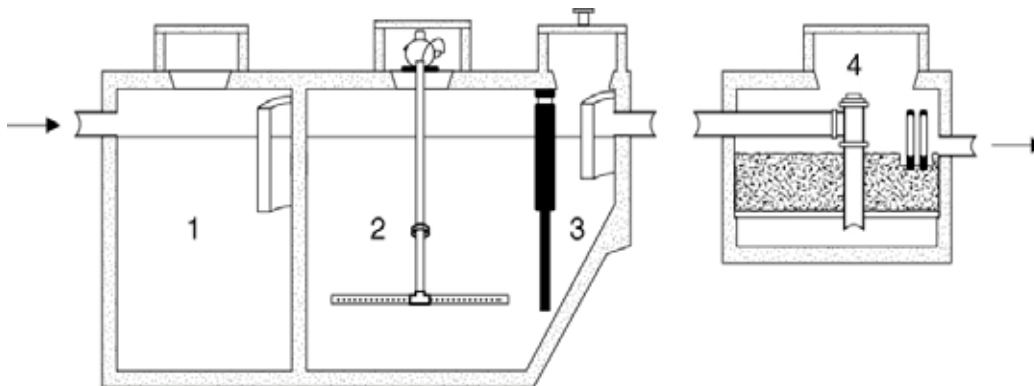
In the center chamber (#2), injected air provides agitation and oxygen to aerobic bacteria which reduces organic matter in the wastewater.

Clarification

The third chamber (#3) has no agitation so suspended solids remaining in the aerated sewage can settle. This chamber is angled so solids return to the aeration chamber for further treatment.

Tertiary (Filtration/Disinfection)

The upflow filter is a separate tank (#4). Here clarified sewage is directed to the tank bottom via a PVC pipe. From there it flows upward through filter gravel, leaving the tank via a discharge weir. Chlorine tablets stored in a mounted reservoir or a separate container provide further disinfection.



**HAMILTON COUNTY
PUBLIC HEALTH**

PREVENT. PROMOTE. PROTECT.

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Phone 513.946.7800 Fax 513.946.7890
hamiltoncountyhealth.org

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COATE AER (cont.)

Care of your Unit

Your Coate Aer may be a 500 (4 lids) or 1000 (5 lids) gallon per day treatment plant. Read the manual for your Coate Aer system. To receive a copy contact: Coate Burial Vault, Inc., P.O. Box 159, West Milton, Ohio 45383.

Note: Some aeration units are installed deep below the surface of the ground. Maintenance to these units poses special safety problems and if you meet the preceding criteria or are uncomfortable with the following procedures, contact a maintenance company registered and bonded with the Health District.

Lids - All lids must be accessible and extend four to six inches above grade. Check lids for cracks that allow surface water to enter the system, or prevent Health District personnel from performing inspections. Lids that cannot be moved without cracking or falling apart must be replaced.

Trash Tank - Remove lid from the trash tank riser. Lift internal lid and probe the scum layer with a stick or pole. If layer is hard and/or more than six inches thick, the compartment should be pumped. Replace lids.

Aeration Tank - Remove lid from the aeration riser and check the following:

- Electrical service wire-Replace if wire is frayed or black residue is present.
- Air supply line-Line should be securely connected to the motor/blower and diffuser piping.
- Air bubbles-Turbulence and air bubbles in the wastewater indicate aeration is taking place.
- Timer-Set timer to run 15 minutes every 30 minutes.
- Motor/Blower-If the motor/blower is not running, touch carefully checking for warmth. The motor should be replaced/repaired if cold. Replace lids.

Clarifier - Remove lid from the clarifier riser. Liquid below should be clear, not cloudy or grey. If there is an accumulation of floating material, it should be skimmed and discarded. Replace lid.

Upflow Filter - Remove lid from the upflow filter. The filter should be cleaned if the water level above the gravel is greater than one inch and solids are present. The filter should be cleaned soon if there is silt build-up on the gravel. All aeration units should have a chlorinator. To avoid injury when replacing chlorine tablets, follow manufacturer's directions. Replace lids.

Discharge Point - Check the discharge point. If discharge effluent is not clear, or black/grey matter is deposited at the discharge point, call a service contractor. Aeration unit discharge points are not appropriate play areas for children even when systems are operating properly.

Managing your Unit

Sewage tank pumpers must be registered with the Health District. The principle purpose of tank pumping is to remove sludge. You may want to be present at the time of pumping to insure all sludge and wastewater is removed. Contracted repairs must be performed by registered professionals. To receive a list of registered pumpers and contractors call the Health District at (513) 946-7862.

*For more information, contact the
Water Quality Division at 513.946.7966
or visit www.hamiltoncountyhealth.org.*



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