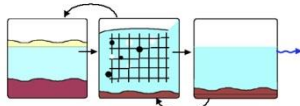


Category:



**SEQUENCING BATCH
REACTOR with
SUBMERGED
ATTACHED GROWTH**

Process: From an over-sized septic tank, wastewater enters the treatment chamber. A layering of submerged gravel and sand provides the media for fixed attached bacteria. The chamber is aerated intermittently to foster both nitrification and denitrification in the same chamber. Wastewater is recirculated back to the septic tank for further denitrification. Discharge is at predetermined times.

System: Three tanks, including an oversized septic tank (2,000 gallons recommended), treatment tank (2.5' dia. x 10' deep), and 500 -1,000 gallon clarification/dosing tank. Blower and controls are located remotely. Does not include recharge components.

Flow Range: 400-2,000+ GPD

Tests: ETI, ETV testing for denitrification; Fully approved for NJ Pinelands; Pending: Suffolk County Pilot 2

Cost: \$20,000 - \$28,000, dispersal system not included

Energy: 2.3 kWh/day or roughly \$13/month

Tanks: Concrete

Venting: 2" vent run to the leaching pit

Footprint: 120+ SF

Depth: 10 feet, need 13 feet if a two foot clearance is maintained.

Life Cycle: Pumps and blowers, 2-5 years (Cost: \$500)



Figure 1. Illustration of the Amphidrome® sequencing batch reactor as configured for testing at the Massachusetts Alternative Septic System Test Center.

F.R. Mahony & Associates, Inc.
 273 Weymouth St.
 Rockland, MA 02370

Telephone:
 781 982 9300

Warranty: One year, including pumps and blowers

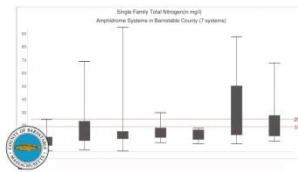
Maintenance: Semi-annual or as required by local regulators (\$400),
 Pump-outs every two years

Notes: Requires certified installer.

Installations: 250 installations in MA, MD, MN, NC, NJ, NY

Treatment:

	<i>TN</i> <i>/aver</i> <i>50%</i>	<i>cBOD</i> <i>25</i> <i>mg/L</i> <i>aver/mon</i>	<i>TSS</i> <i>30 mg/L</i> <i>aver/mon</i>	<i>pH</i> (6-9)
<i>mg/L</i>	10.8	17.9	7.5	6.6 - 8
<i>%</i>	68.7%	90%	96%	



Actual treatment levels.
 Massachusetts, MASSTC

Advantages:

- Good treatment
- Energy use moderate for type of treatment

Disadvantages:

- Not advisable for shallow locations
- Installation cost high