Home

O2 Aeration Technologies, LLC. proudly presents Vacuum Bubble® Technology and VBT™ brand aerators, the licensed technology, trademarks and logo of Advanced Aeration, Inc. This innovative technology revolutionizes the use of aerobic aerobic bacteria to consume more organic waste, reducing biological oxygen demand (BOD) and solids accumulation.

Among its many products and services, AAI researches and markets water treatment equipment and technologies.

Learn More

**Aeration Products**
**Markets/Applications**
**Science**

Demo Videos

*Side by Side*

*Magnified View*

View our two demonstration videos showing our superior aeration technology in action.

You will need the Windows Media Player to view these videos.

Don't have Windows Media Player? Click on the button below to install.

Vacuum Bubble® Technology revolutionizes the use of aerobic waste management systems in commercial, residential, agricultural and industrial applications throughout the world.

- Call O2 Aeration Technologies, LLC. at 1-888-801-1586 for further information.

Markets

In all Markets, VBT™ achieves the common goals of odor elimination and solids reduction by supporting aerobic bacterial metabolism. This is superior to odor producing anaerobic consumption of organic waste.

Products

**VBT™ 100 Series**

The Vacuum Bubble® Technology Aerator 101 is sized for on-site wastewater treatment, small commercial applications, and pretreatment of industrial wastewater. Several configuration options give flexibility to meet differing requirements.

**VBT™ 100 Details**

**VBT™ 200 Series**

The Vacuum Bubble® Technology Aerator 200 is best used in applications with high strength waste from commercial operations such as RV and mobile home parks, small industrial sites, restaurants, etc. The VBT™ 200 Series is often used in conjunction with ATU's and Advanced Treatment Systems as an effective pretreatment to significantly lower BOD/TSS concentrations.

**VBT™ 200 Details**

http://advancedaeration.net/o2aeration/licensed/template/home.php

11/30/2010
VBT™ 300 Series
The Vacuum Bubble® Technology Aerator 300 is ideal for mid sized CAFO facilities, small to medium sized municipal sewage processing sites, and portable sewage treatment modules. This unit has a flotation platform available as an option.

VBT™ 600 Series
The Vacuum Bubble® Technology Aerator Model 600 is sized for large Dairy and Hog farming lagoons, large municipal sewage processing plants and large industrial applications. This unit has a flotation platform available as an option.

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Vacuum Bubble® Technology

What's the VBT™ Secret?

- The bubbles stay in the water 10 to 30 times longer than ordinary, forced air bubbles.
- More time for gas to liquid exchange = more Oxygen Transfer Potential (OTP)

- 0.25mm diameter bubbles have a surface to volume ratio 12-80 times greater than ordinary forced air bubbles.
- More surface area for gas to liquid exchange = more Oxygen Transfer Potential (OTP)

- 0.25mm bubbles fill the entire body of water by diffusing from a high concentration to a low concentration (Brownian movement)
- Vacuum Bubbles® throughout the body of water with more water in touch with bubbles = more Oxygen Transfer Potential (OTP)

AERATION technologies, llc

408 Johns Rd.
Boerne, TX 78006
1-888-801-1586
210-579-7040 - Fax
www.o2aeration.com

Your Licensed Service Provider (LSP)

- Improve Drainfield Life
- Reduce Odors
- Improve Water Quality

Now Approved for Sale in Texas!

"It's All About the Bubble™!"
Improve Drainfield Life

"Purchased your Aerator in 2000 to be inserted in our brand new Septic Tank. Just had the tank pumped out and wanted you to know that the guy pumping out the system was amazed that there was only water in the tank, no sludge. Thanks for a wonderful product."
F.H., Greenwood Lake, NY. March, 2004

VBT™ is the answer!

NSF Test -
Average suspended solids of the influent were reduced by 83%

Trinity River Authority, Texas -
With 1 VBT™ TSS reduced by 69%
With 2 VBT™ TSS reduced by 79%

USAF/SHSU -
96% reduction in TSS over 5 tests with effluent discharge of 20 mg/L

Reducing TSS = Longer drainfield life

Reduce Odors

University of California, Davis presentation:
"70% BOD removal [from organic waste] can reduce certain VOC emissions by about 70%"
That is, there is a direct relationship between BOD removal and VOC emissions.
VOCs and gases such as Methane (CH₄), Hydrogen Sulfide (H₂S) and Ammonia (NH₃):
- Contribute to ozone
- Can be harmful to health
- Are unpleasant

VBT™ is the answer!

NSF Test -
With VBT™ highest loading BOD (660 mg/l) was reduced by 89%

Trinity River Authority, Texas -
With 1 VBT™ BOD reduced by 69%
With 2 VBT™ BOD reduced by 86%

USAF/SHSU -
92% reduction in BOD over 5 tests with effluent discharge of 20 mg/L

Reducing BOD = Less odor from the septic tank

Improve Water Quality

When septic systems fail discharge water is polluted with high levels of solids and BOD.

VBT™ is the answer!

TSS - reduced by 83% - NSF test
TSS - reduced by 69% (1 VBT™)
79% (2 VBT™) - TRA study
TSS - reduced by 96% - USAF/SHSU study
BOD - reduced by 74% - NSF test
BOD - reduced by 69% (1 VBT™)
85% (2 VBT™) - TRA study
BOD - reduced by 92% - USAF/SHSU study

Using VBT™ = Improved water quality

AERATION TECHNOLOGIES, LLC

www.o2aeration.com
The Vacuum Bubble® Technology Aerators are an extremely efficient way to aerate a body of water. The technology produces extremely small bubbles, which transfer much more oxygen to the water than any other type of aeration. This significantly reduces the horsepower required per oxygen demand.

The VBT™ 100 and VBT™ 200 series are most often used in home septic tanks and other tank-mounted applications. The VBT™ 300 and VBT™ 600 series are most often used in ponds, industrial tanks, and waste lagoons. Note: All units are available with a foam-filled polyethylene float.

### Specifications

<table>
<thead>
<tr>
<th>VBT™ Model Series</th>
<th>100</th>
<th>200</th>
<th>300</th>
<th>600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cubic Feet/Minute (Acc)</td>
<td>0.21</td>
<td>1.25</td>
<td>5.00</td>
<td>22</td>
</tr>
<tr>
<td>Cubic Feet/Day (Acc)</td>
<td>300</td>
<td>1800</td>
<td>7200</td>
<td>32,300</td>
</tr>
<tr>
<td>Lb. O₂/Day</td>
<td>5.50</td>
<td>32</td>
<td>132</td>
<td>605</td>
</tr>
<tr>
<td>Lb. O₂/Hp/Hour</td>
<td>3.44</td>
<td>5.33</td>
<td>5.50</td>
<td>8.40</td>
</tr>
<tr>
<td>Approximate Flow (Gal/Day) @ 300 PPM BOD₅</td>
<td>1,000</td>
<td>6,000</td>
<td>18,000</td>
<td>80,000</td>
</tr>
<tr>
<td>Motor</td>
<td>1/2 Hp</td>
<td>14 Hp</td>
<td>1 Hp</td>
<td>3 Hp</td>
</tr>
<tr>
<td>Voltage 10</td>
<td>120</td>
<td>120/240</td>
<td>120/240</td>
<td>NA</td>
</tr>
<tr>
<td>Full Load Amps 10</td>
<td>0.30</td>
<td>6/2/3.1</td>
<td>12/06</td>
<td>NA</td>
</tr>
<tr>
<td>Voltage 30</td>
<td>NA</td>
<td>NA</td>
<td>230/460</td>
<td>230/460</td>
</tr>
<tr>
<td>Full Load Amps 30</td>
<td>NA</td>
<td>NA</td>
<td>3/2/1.6</td>
<td>9/0.45</td>
</tr>
</tbody>
</table>

### Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>VBT™ 100</th>
<th>VBT™ 200</th>
<th>VBT™ 300</th>
<th>VBT™ 600</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Motor Diameter</td>
<td>3.75&quot;</td>
<td>6.00&quot;</td>
<td>7.00&quot;</td>
<td>7.00&quot;</td>
</tr>
<tr>
<td>B1: Motor Height (10)</td>
<td>8.00&quot;</td>
<td>9.25&quot;</td>
<td>11.00&quot;</td>
<td>NA</td>
</tr>
<tr>
<td>B2: Motor Height (30)</td>
<td>NA</td>
<td>9.00&quot;</td>
<td>8.50&quot;</td>
<td>11.00&quot;</td>
</tr>
<tr>
<td>C: Mounting Plate</td>
<td>5.50&quot; Ø</td>
<td>6.75&quot; sq</td>
<td>12.00&quot; sq</td>
<td>14.00&quot; sq</td>
</tr>
<tr>
<td>D: Air Tube Length</td>
<td>23.00&quot;</td>
<td>26.00&quot;</td>
<td>23.00&quot;</td>
<td>23.00&quot;</td>
</tr>
<tr>
<td>E: Air Tube Diameter</td>
<td>2.00&quot;</td>
<td>4.00&quot;</td>
<td>8.00&quot;</td>
<td>12.00&quot;</td>
</tr>
<tr>
<td>F: Min Water Line</td>
<td>6.00&quot;</td>
<td>6.00&quot;</td>
<td>6.00&quot;</td>
<td>6.00&quot;</td>
</tr>
<tr>
<td>G: Max Water Line</td>
<td>20.00&quot;</td>
<td>15.00&quot;</td>
<td>14.00&quot;</td>
<td>14.00&quot;</td>
</tr>
</tbody>
</table>

### Benefits

- Elimination of Odors
- Reduction in BOD and TSS
- Reduction of Solid Waste Disposal
- Reduction in Algal Growth
- Reduction in Contamination of Groundwater

For more information on the science of how the VBT aerators work, please request the VBT Science Information.