



O2 Aeration Technologies LLC

400 Johns Rd.

Boerne, TX 78006

1-888-801-1586

HOME	NEWS	ABOUT	MARKETS	PRODUCTS	RESEARCH	SCIENCE		
------	------	-------	---------	----------	----------	---------	--	--

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, AAJ 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.



>> [Read More about Markets/Applications](#)

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](#)

VBTM 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 floatation platform available as an option.

» [VBTM 300 Details](#)

VBTM 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 floatation platform available as an option.

» [VBTM 600 Details](#)

Copyright O2 Aeration Technologies, LLC.

Layout and product information © copyright Advanced Aeration, Inc. - All rights reserved.

* Vacuum Bubble[®] technology is a registered trademark of Advanced Aeration, Inc.

Site maintained by [Practical Software Solutions](#) home of the [technikatTM](#).

Vacuum Bubble® Technology VBT™

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

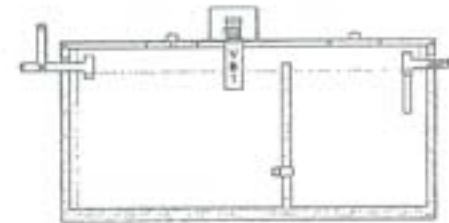
408 Johns Rd.
Boerne, TX 78006

1-888-801-1586
210-579-7040 - Fax
www.o2aeration.com

Your Licensed Service Provider (LSP)

COMAL CONCRETE PRODUCTS
4222 FM 402
NEW BRAUNFELS, TX 78132
(830) 606-4732

AERATION
technologies, llc



- ◆ Improve Drainfield Life
- ◆ Reduce Odors
- ◆ Improve Water Quality

**Now Approved for Sale
in Texas!**

"It's All About the Bubble™!"

"It's All About the Bubble™!"

"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

AERATION
technologies, llc

Reduce Odors

University of California, Davis presentation:

"70% BOD₅ 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

www.o2aeration.com

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

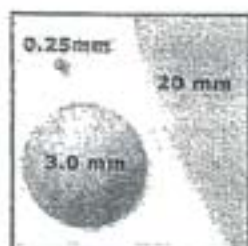
Using VBT™ =
Improved water quality

AERATION
technologies, llc

VACUUM BUBBLE® TECHNOLOGY AERATOR

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.



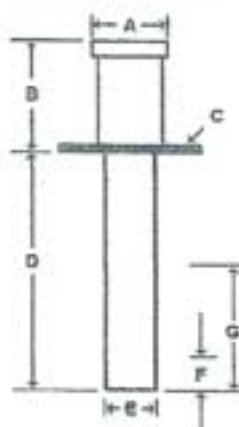
Relative size of bubbles produced by various aeration methods. Small bubbles have significantly more surface area to transfer oxygen!

- VBT™: 0.25 mm diam.
- Diffusers: 3.0-20 mm diam.

SPECIFICATIONS

VBT™ Model Series	100	200	300	600
Cubic Feet/Minute (Air)	0.21	1.25	5.00	22
Cubic Feet/Day (Air)	300	1,800	7,200	32,300
Lb. O ₂ /Day	5.50	32	132	605
Lb. O ₂ /Hp/Hour	3.44	5.33	5.50	8.40
Approximate Flow (Gal/Day) @ 300 PPM BOD ₅	1,000	6,000	18,000	80,000
Motor	1/10 Hp	1/4 Hp	1 Hp	3 Hp
Voltage 1Ø	120	120/240	120/240	NA
Full Load Amps 1Ø	0.80	6.2/3.1	12.0/6.0	NA
Voltage 3Ø	NA	NA	230/460	230/460
Full Load Amps 3Ø	NA	NA	3.2/1.6	9.0/4.5

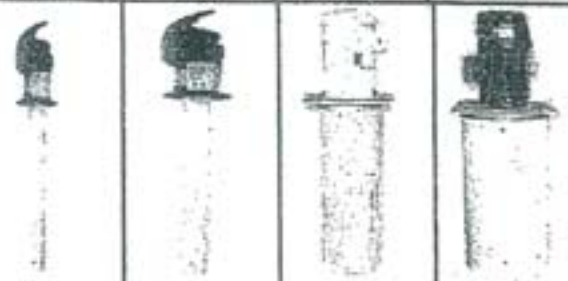
DIMENSIONS



A: Motor Diameter	3.75"	6.00"	7.00"	7.00"
B1: Motor Height (1Ø)	8.00"	9.25"	11.00"	NA
B2: Motor Height (3Ø)	NA	9.00"	8.50"	11.00"
C: Mounting Plate	5.50" Ø	6.75" sq	12.00" sq	14.00" sq
D: Air Tube Length	23.00"	26.00"	23.00"	23.00"
E: Air Tube Diameter	2.00"	4.00"	8.00"	12.00"
F: Min Water Line	6.00"	6.00"	6.00"	6.00"
G: Max Water Line	20.00"	15.00"	14.00"	14.00"

BENEFITS

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



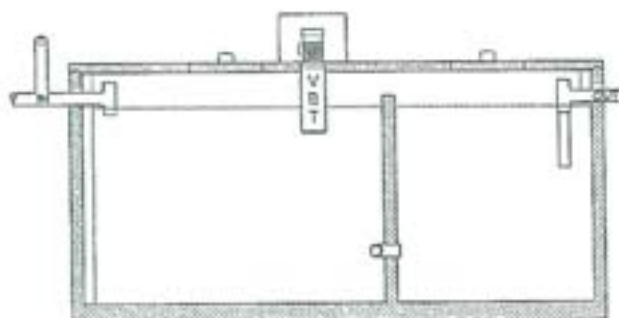
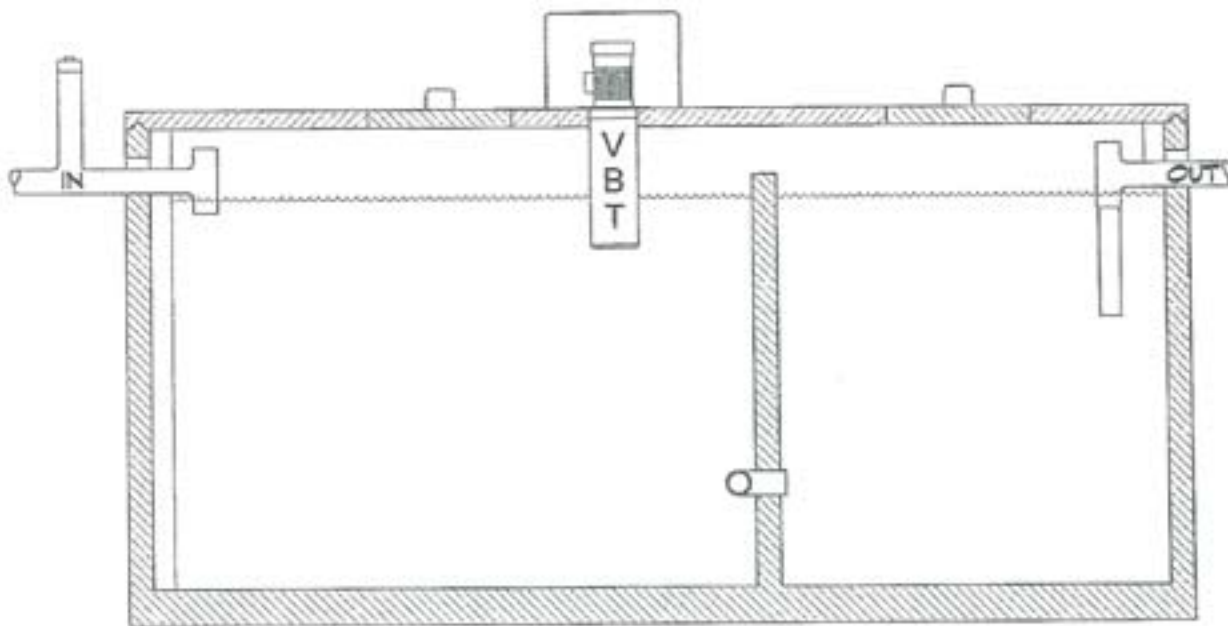
For more information on the science of how the VBT aerators work, please request the VBT Science Information.

AERATION
technologies, llc

VBT™
Vacuum Bubble Technology

Greg W. Johnson, P.E.
1-833-801-1586
FAX: 210-597-7040
greg@aeration.com
www.aeration.com

408 Johns Rd.
Boerne TX, 78006



OWNER:	O2 AERATION TECHNOLOGIES, LLC	DRAWN BY:	
STREET ADDRESS:	170N HOLLOW OAK, NEW BRAUNFELS, TEXAS 78132		
DESCRIPTION:	VBT and SEPTIC TANK DRAWING		
PREPARED BY:	GREG W. JOHNSON, P.E.	SCALE:	N.T.S.
		DATE:	3/12/2009
		REVISED:	