

Vacuum Bubble[®] Technology Aerator

Model 100 Series

VBT[™] 101

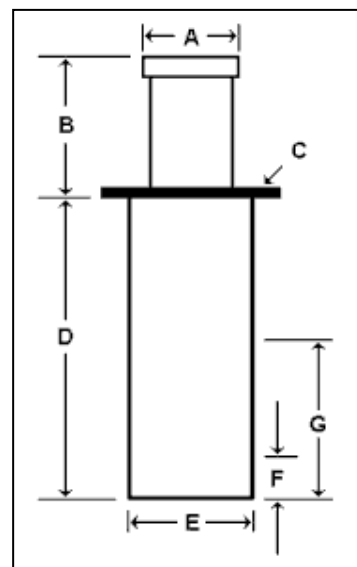
The Vacuum Bubble[®] Technology Aerator 101 is sized for on-site wastewater treatment, small commercial applications, and pretreatment of industrial wastewater. Several configuration options give flexibility to meet differing requirements. Available options, which may be ordered, include an all-weather housing, self-monitoring electronic controller, and a basic GFI controller.

VBT[™] 101 Specifications

Cubic Feet/Minute (Air)	0.22
Cubic Feet/Day (Air)	317
Lb. Oxygen/Day	5.49
Lb O₂/Hp/Hour	3.4



A: Motor Diameter	4.17"
B: Motor Height	6.5"
C: Adapter Plate (Dia.)	5.5"
D: Air Tube Length	19.75"
E: Air Tube Outer Diameter	2.375"
F: Min Water Line	6.0"
G: Max Water Line	16.0"



Motor - Franklin 1/15Hp

Voltage 1 Phase	115
Full Load Amps	1.0

Vacuum Bubble[®] Technology Aerator (“VBTTM”)
VBTTM 100 Series

Technical Specifications

A. Electric Motor

1/15HP Franklin induction asynchronous motor, squirrel cage, cast iron frame mounting according to the following:

Phases	Single phase
Frequency	50/60 Hz
Voltage	115V
Cooling	TEFC
Insulation	Class “B”
Duty	S1 – continuous, according to NBR-7094 of ABNT standard
Service factor	1.0
Max. ambient temperature	40 ⁰ C
Altitude	3,300 ft
Rotation	Clockwise
Frame	36
RPM	3250/2750

Special features

- Overload protection
- 303 stainless steel shaft with proprietary taper attachment

Coatings

- Windings – varnish coating

Painting plan

- Finish – aliphatic polyurethane enamel
- Finish color – Gloss black

B. Motor Adapter Plate – 5.5” round, cast aluminum motor adapter plate

C. Shaft – Series 300 stainless steel, 0.5” tubing 19.5” long

D. Air Tube – 19.75” Schedule 40, 2” PVC pipe with OD of 2.375”

E. Air Plate – injection molded, rigid PVC

F. Prop – Laser cut 304 stainless blade formed in proprietary fixture

G. Hardware – various series 300 stainless steel

Vacuum Bubble[®] Technology Aerator

Model 200 series

VBT[™] 200

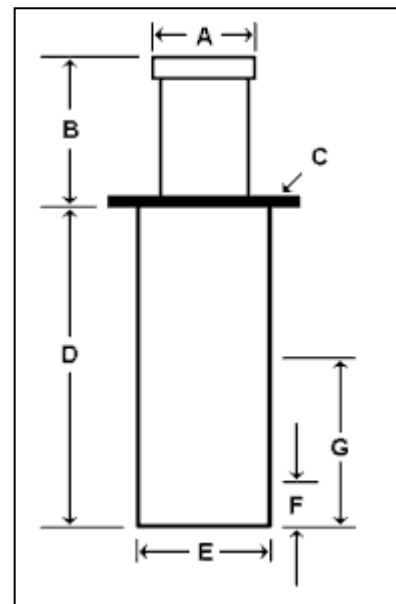
The Vacuum Bubble[®] Technology Aerator 200 is designed for medium sized industrial, commercial, and livestock applications in a tank mounted system. A GFI controller is available for the VBT[™] 200.

VBT[™] 200 Specifications

Cubic Feet/Minute (Air)	1.25
Cubic Feet/Day (Air)	1,800
Lb. Oxygen/Day	32
Lb O₂/Hp/Hour	5.33
Approx. Flow (Gal/Day) @ 300 PPM BOD₅	6,500



A: Motor Diameter	4.17"
B: Motor Height	8.5"
C: Adapter Plate (Dia.)	6.5"
D: Air Tube Length	22.0"
E: Air Tube Outer Diameter	4.5"
F: Min Water Line	6.0"
G: Max Water Line	16.0"



Motor – Bluffton MW 1/4HP

Voltage	115
Full Load Amps	2.8

Vacuum Bubble[®] Technology Aerator (“VBTTM”)
VBTTM 200 Series

Technical Specifications

H. Electric Motor

1/4HP Bluffton Motor Works induction asynchronous motor, squirrel cage, cast iron frame mounting according to the following:

Phases	Single phase
Frequency	50/60 Hz
Voltage	115V
Cooling	TEFC
Insulation	Class “B”
Duty	S1 – continuous, according to NBR-7094 of ABNT standard
Service factor	1.0
Max. ambient temperature	40 ⁰ C
Altitude	3,300 ft
Rotation	Clockwise
Frame	36
RPM	3250/2750

Special features

- Overload protection
- 303 stainless steel shaft with proprietary taper attachment

Coatings

- Windings – varnish coating

Painting plan

- Finish – aliphatic polyurethane enamel
- Finish color – Gloss black

I. Motor Adapter Plate – 6.5” diameter, cast aluminum motor adapter plate

J. Shaft – Series 300 stainless steel, 0.5” tubing 19.5” long

K. Air Tube – 22.0” Schedule 80, 4” PVC pipe with OD of 4.5”

L. Air Plate – rigid HDPE

M. Prop – Laser cut 304 stainless blade formed in proprietary fixture

N. Hardware – various series 300 stainless steel

Vacuum Bubble[®] Technology Aerator

Model 300 Series

VBT[™] 300

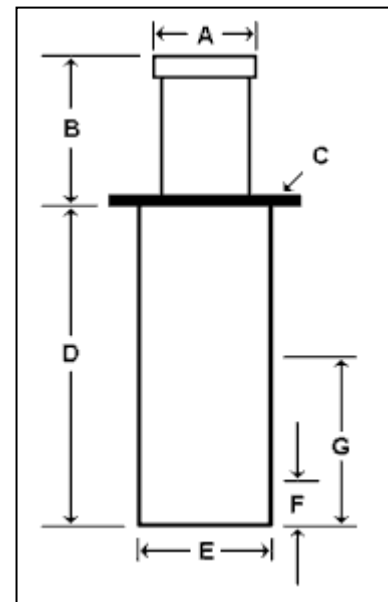
The Vacuum Bubble[®] Technology Aerator 300 is ideal for mid sized CAFO facilities, small to medium sized municipal sewage processing sites, and portable sewage treatment modules. This unit has a floatation platform available as an option.

VBT[™] 300 Specifications

Cubic Feet/Minute (Air)	5.0
Cubic Feet/Day (Air)	7,200
Lb. Oxygen/Day	132
Lb O₂/Hp/Hour	5.5
Approx. Flow (Gal/Day) @ 300 PPM BOD₅	26,000



A: Motor Diameter	7.3"
B: Motor Height	10.12"
C: Adapter Plate (Square)	12.0"
D: Air Tube Length	22.5"
E: Air Tube Outer Diameter	8.5"
F: Min Water Line	6.0"
G: Max Water Line	16.0"



Motor – WEG 1Hp

Voltage 1 Phase	115/230
Full Load Amps	12.8/6.4

Vacuum Bubble[®] Technology Aerator (“VBTTM”)
VBTTM 300 Series

Technical Specifications

A. Electric Motor

1HP WEG Motor Works induction asynchronous motor, squirrel cage, cast iron frame mounting according to the following:

Phases	Single
Frequency	60Hz
Voltage	115V/230V
Cooling	TEFC
Insulation	B, with temperature rise 80 ⁰ C
Duty	S1 - continuous
Service Factor	1.15
Ambient Temperature	40 ⁰ C
Altitude	3,300 ft
Degree of Protection	IP-55
Rotation	REV
Frame	D56C
RPM	3600
Special Features	Solid stainless steel shaft

Painting plan

- Finish– anti-corrosion, Munsell N1 flat black 202E

B. Motor Adapter Plate—12” x 12” cast aluminum

C. Shaft—Series 300 stainless steel 0.875” diameter, 21.862” long

D. Air Tube—22.5” Schedule 80, 8” PVC pipe with OD of 8.5”

E. Air plate—rigid HDPE

F. Propeller—CNC prepared 304 stainless steel blade bolted to 304 stainless, keyed hub.

Vacuum Bubble[®] Technology Aerator

Model 600 Series

VBT[™] 601

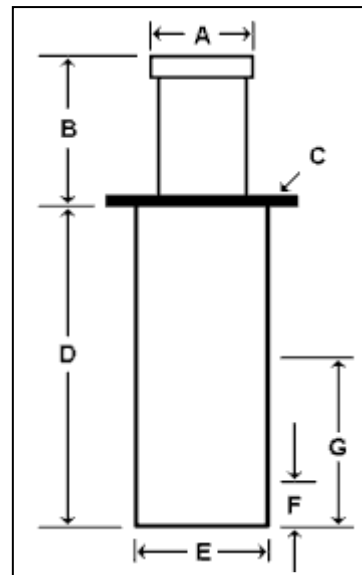
The Vacuum Bubble[®] Technology Aerator 600 is sized for large Dairy and Hog farming lagoons, large municipal sewage processing plants and large industrial applications. This unit has a floatation platform available as an option.

VBT[™] 601 Specifications

Cubic Feet/Minute (Air)	22.4
Cubic Feet/Day (Air)	32,300
Lb. Oxygen/Day	608
Lb O ₂ /Hp/Hour	8.44
Approx. Flow (Gal/Day) @ 300 PPM BOD ₅	120,000



A: Motor Diameter	7.0"
B: Motor Height/3 Phase	11.55"
C: Adapter Plate (Square)	14.0"
D: Air Tube Length	22.625"
E: Air Tube Outer Diameter	12.5"
F: Min Water Line	6.0"
G: Max Water Line	16.0"



Motor – WEG 3 Hp

Voltage 3 Phase	230/460
Full Load Amps	7.43/3.71

Vacuum Bubble[®] Technology Aerator (“VBTTM”)
VBTTM 600 Series

Technical Specifications

A. Electric Motor

3HP WEG induction asynchronous motor, squirrel cage, cast iron frame mounting according to the following:

Phases	Three phase
Frequency	60 Hz
Voltage	230-460V
Cooling	TEFC
Insulation	Class “F”, with temperature rise 80 ⁰ C
Duty	S1 – continuous, according to NBR-7094 of ABNT standard
Service factor	1.25
Ambient temperature	40 ⁰ C
Altitude	3,300 ft
Degree of Protection	IP-55
Rotation	Bi-directional
Frame	145TC
RPM	3600

Special features Solid stainless steel shaft

Coatings

- Windings - random-wound copper with anti-fungal, non-hygroscopic insulation

Painting plan

- Recommended use – non-sheltered marine environment; resistant to acid, alkalis and solvent spills
- Surface preparation – blasting Sa 2 ½
- Primer – zinc ethyl silicate primer (60 – 100 µm)
- Intermediate – epoxy polyamide (120 – 140 µm)
- Finish – aliphatic polyurethane enamel (80 – 100 µm)
- Finish color – Blue RAL 5007

B. Motor Adapter Plate – 14” x 14” cast aluminum, anodized motor adapter plate

C. Shaft – 304 stainless steel, 1.170” diameter – 21.77” long

D. Air Tube – 22.625” Schedule 35, 12” PVC pipe with OD of 12.5”

E. Air Plate – injection molded polypropylene structural foam

F. Prop – CNC prepared 304 stainless blade formed in high pressure fixture bolted to 304 stainless, keyed hub