



Aqua-Aerobic Systems, Inc.



" Y o u r W a s t e w a t e r S p e c i a l i s t s "

AQUA-JET® SURFACE AERATORS

Aqua-Aerobic Systems, Inc. is committed to quality and to the preservation of the environment. Because of this, Aqua-Aerobic has grown from a modest company producing only mechanical aerators to a manufacturer of various biological and filtration wastewater treatment equipment and the world's largest supplier of direct-drive aerators.

More than 50,000 Aqua-Jet® aerators, ranging in size from .7 - 75 kW, have been installed throughout the world. No matter what the application, municipal or industrial, Aqua-Jet® aerators provide unequalled oxygenation and mixing.

Aqua-Jet®

SURFACE AERATORS

We've set the standards for more than 35 years

Introduced in 1969, the Aqua-Jet® still uses the best design and highest quality construction materials available in the industry:

- Propeller is 316 stainless steel
- Diffusion head, volute, intake cone and float skin are 304 stainless steel as a standard
- Motor shaft is one-piece, 17-4 stainless steel

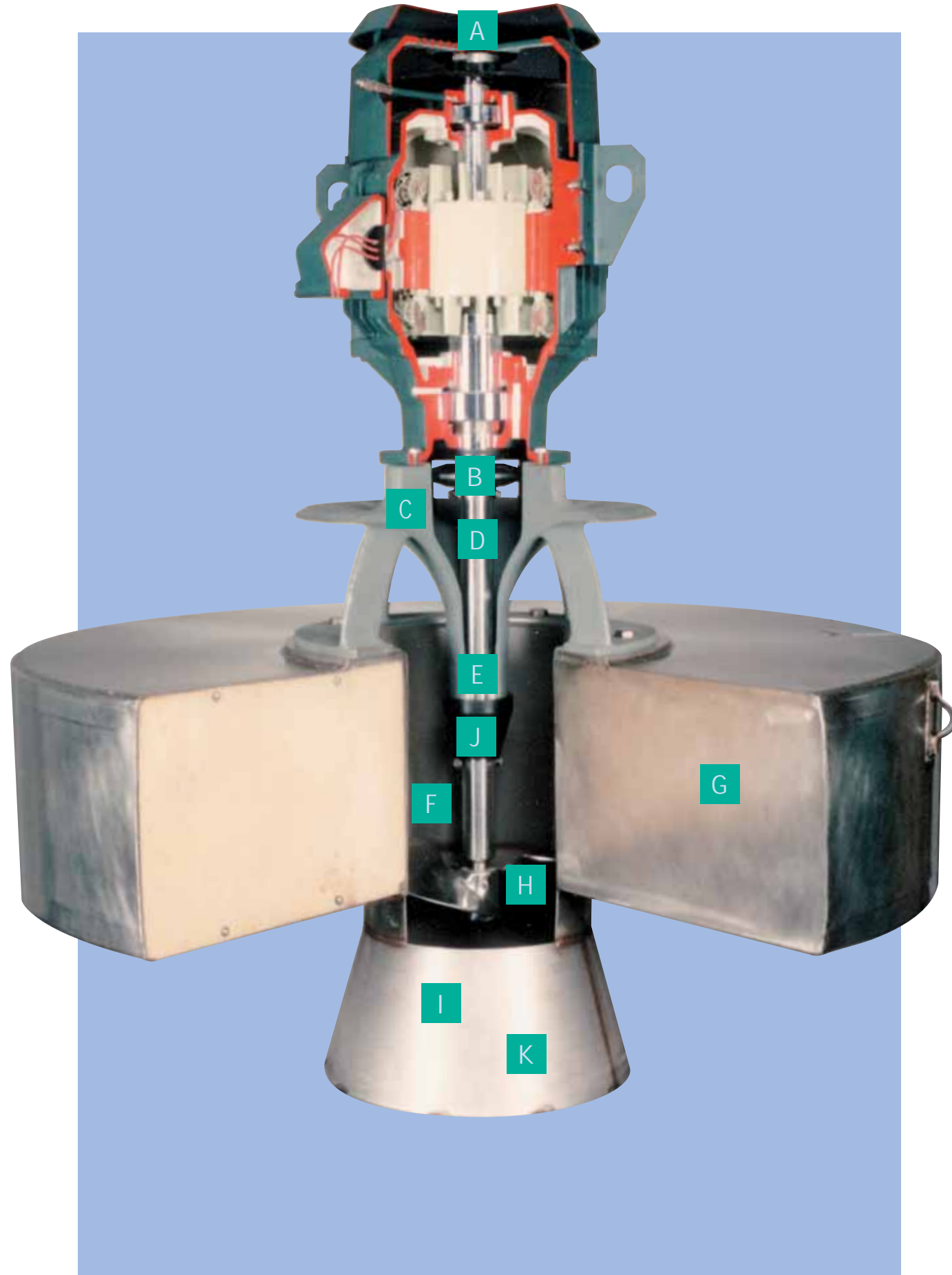
- No couplings or underwater bearings

Simple, proven mechanical design and stainless steel construction provide the foundation of the Aqua-Jet® aerator. This assures a durable, reliable aerator which will withstand the constant assault and abuse of everyday operation in your wastewater treatment system.

Features & Benefits

- Available in .7-75 kW
- Single or dual speed motor options
- Flexibility in materials of construction
- Vibration controlled design
- Superior oxygen transfer
- Low maintenance





A Motors are totally enclosed, fan cooled, and rated for severe duty. The motors are constructed to Aqua-Aerobic Systems' specifications and are designed to meet the most stringent operational requirements. Standard features include heavy duty bearings and seals, class F insulation or better and a minimum 1.15 service factor. Total scheduled maintenance on an Aqua-Jet aerator consists of motor bearing lubrication 2-4 times annually, depending on motor size.



B Labyrinth Seal Guard prevents upward migration of water



C from contacting the lower end bell of the motor. The diffuser head of an aerator must be able to support the weight of the motor, evenly distribute static and dynamic loads and change the direction of the high velocity discharge flow. The Aqua-Jet aerator accomplishes this with ease.

The Aqua-Jet's massive cast diffuser head is designed to withstand the constant stress created by the upflow spray of the aerator. Its strong flanged connection to the volute ensures that minimum stress is placed on the connections and that no vibration



D or fatigue results. One-piece shaft of 17-4 PH (precipitation hardened) stainless steel eliminates the use of couplings which require constant lubrication with water or wastewater. The one-piece design eliminates the erosion and constant maintenance problems



E inherent in coupled-shaft designs. Anti-Deflection Insert provides support for the shaft should debris be ingested into the unit. Under normal operating



F The volute of an aerator must be able to withstand constant duty in corrosive, abrasive and high velocity propeller-induced flow. The volute of the Aqua-Jet is constructed of heavy wall stainless steel to resist this assault. The heavy construction of the Aqua-Jet volute will provide a long, trouble-free life.

G Float is constructed with a closed cell polyurethane foam that adds to the structural stability of the Aqua-Jet and prevents sinking if excessive damage to the float exterior should occur. Float exteriors are of 14 gauge stainless steel; with fiberglass available as an option.



H Propeller is a two blade design constructed of 316 stainless steel. It features a 180° sweepback design for non-clog operation and greater operating efficiency.



I Intake Cone (standard on all units). Provides a smooth transition of flow with minimum headloss.



J Fluid Deflector contains the thrust washer and protects the Anti-deflection insert from the upward liquid flow.

K Draft Tube/Anti-erosion Assembly (optional). Draft tubes are volute extensions used to extend the intake of the aerator to a greater depth. Anti-erosion assemblies consist of a stainless steel plate attached to the bottom of the intake cone, via the anti-vortex cross. The assembly causes water to be drawn from the sides of the cone rather than from directly below it. See page 12 for application and dimension information.

Vibration Controlled Design

The continuous, heavy-duty operational life of rotating equipment (such as an aerator) demands a vibration-limiting design which will assure smooth operation long after the unit has been installed.

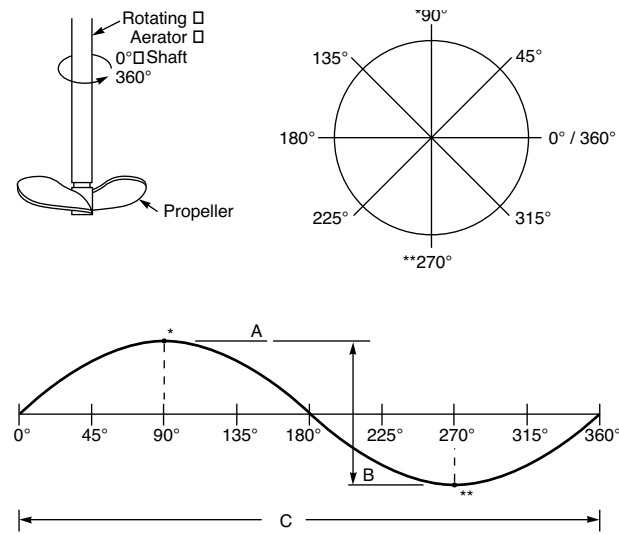
The velocity must be controlled to 7.5 mm/sec. or less. If this limitation is not met, early machine failure is inevitable.

The high maintenance cost of some aeration equipment is directly related to the manufacturer's inability to control vibration in its aerators. High maintenance and equipment failure is a fact of life with many aerator installations...but not with those utilizing Aqua-Jets.

Proper design and the use of high quality materials has made Aqua-Jet® aerators the most durable and reliable in the industry. On properly maintained aerators, Aqua-Jets outlast other aerators 2 to 1. On poorly maintained aerators, Aqua-Jets outlast other aerators by more than a 3 to 1 margin. And remember, the only scheduled maintenance on an Aqua-Jet® aerator is lubrication of

the motor bearings twice each year. Most other aerators require considerably more scheduled and unscheduled maintenance. That means more downtime and more manhours.

Illustration of one (1) Vibration Cycle and Displacement

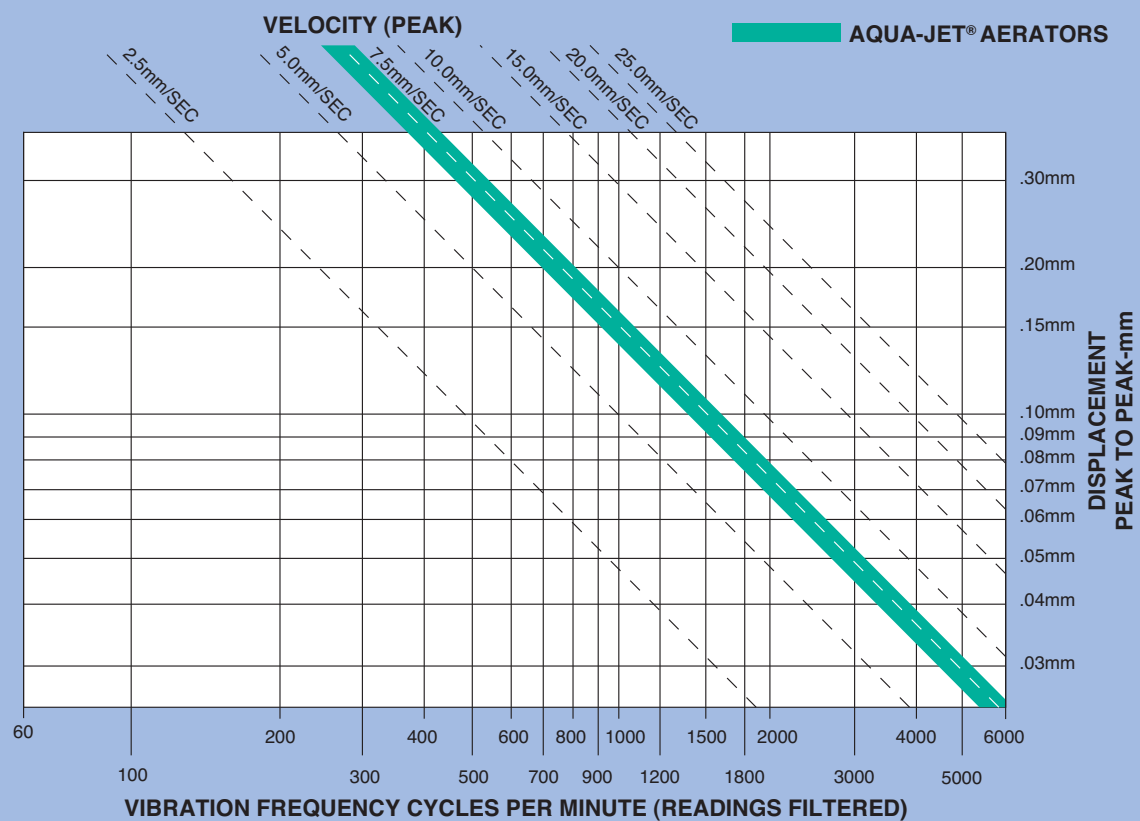


Aqua-Jet®

Aqua-Jet® aerators are installed in a wide variety of treatment schemes including SBR, MSBR, flow-through activated sludge and extended aeration systems. Aqua-Jets are also incorporated into lagoon applications such as complete mix, partial mix (facultative) and dual-power multicellular systems.

No matter what the application, municipal or industrial, Aqua-Jet® aerators provide unequalled reliability and long-term performance.

Some of the many industrial applications for Aqua-Jets include: beverage, dairy, meat processing, pulp & paper mills, refineries and chemical waste treatment plants. Many international corporations use Aqua-Jets exclusively.



ACCEPTABLE FIELD VIBRATION LIMITS FOR VERTICAL PUMPS & HORIZONTAL PUMPS WITH PIGGYBACK MOUNTED MOTORS (NON RIGID STRUCTURES)



Aqua-Jet® aerators are utilized at this municipality in Venezuela.

(Continued)

**Enso Publication Papers OY LTD
Anjala Mill, Finland**

Enso Publication Papers OY LTD operates pulp mill and paper mill production facilities at the Anjala Mill, Finland. The pulp mill produces a peroxide-bleached pulp; while the paper mill primarily produces lightweight and bulky newsprint. Annual production of newsprint is approximately 354,000 metric tons from three paper machines, with water consumption averaging 20,000 m³/d.

The wastewater treatment plant at the mill was first constructed in 1979, as an aerated lagoon system. Aeration was supplied by seventeen 45 kW slow speed aerators. Several changes were made to the treatment system over the years, including the addition of an anaerobic reactor in 1985 and the conversion to an activated sludge treatment system in 1988. The anaerobic reactor is bypassed in the current treatment scheme.

Average monthly operating data

Influent Data

BOD 25 metric t/d
Flow 20,000 m³/d

Effluent Data

BOD 20 mg/l
Suspended Solids 20 mg/l
COD 150-250 mg/l
Total P 1.0-1.5 mg/l
Total N 2.0-3.0 mg/l

Although the load to the activated sludge system was limited to about 15 metric t/BOD/d, the aeration supplied by the slow speed aerators was not sufficient to provide adequate oxygen to the system, as evidenced by repeated odor problems.

In 1989, twelve 75 kW Aqua-Jet[®] aerators were positioned in the first part of the aeration basin and are, subsequently, undertaking most of the aeration responsibilities in the activated sludge plant. The Aqua-Jet[®] aerators are cycled, as needed; while nine of the slow speed aerators remain in continuous operation.

The mill normally is operated under stable conditions, meeting the effluent requirements by a considerable margin. BOD and suspended solids discharge average 2.0-3.0 metric t/d. The Anjala Mill's discharge limits are 4.0 metric t/d BOD and 8.0 metric t/d suspended solids.

According to the operators of the plant, the addition of the Aqua-Jet[®] aerators to the wastewater system improved system operation and performance in several ways:

- Aqua-Jet[®] aerators need far less maintenance than the slow speed aerators.
- Aqua-Jet[®] aerators seem to provide more oxygen per horsepower than the slow speed aerators.
- Aqua-Jet[®] aerators can be used for energy conservation, as they permit on/off operation in a far more efficient and easier way than the slow speed aerators.

Data for this case history and comments were provided by:
STIG MORLING PROCESSTEKNIK AB
Falun, Sweden



Typical wastewater treatment lagoon at a pulp and paper mill.

Margarita Island / Dos Cerritos

In recent years Margarita Island, off the coast Venezuela, has become a popular tourist resort. Beach pollution became severe with increased urban growth and installation of an adequate wastewater treatment facility became necessary to ensure continued growth and development.

In 1989 Dos Cerritos, a new wastewater treatment plant, was built on the outskirts of the city of Porlamar. The plant is an activated sludge system designed to handle an average flow of 50,000 cu m/day with a maximum of 1200 l/sec. The configuration of the plant includes one aeration tank which employs eleven 55 kW Aqua-Jet[®] aerators, 6 sedimentation tanks, 2 polishing ponds and 4 ponds for sludge digestion. This design was created especially for the developing world, where a shortage of skilled labor makes operation very difficult.



Aqua-Jet[®] aerators provide the necessary wastewater treatment needed for Margarita Island's Urban Growth.

The use of fixed mounted, low-maintenance, direct-drive Aqua-Jet[®] aerators was required by the client and easy access more than compensates for the additional cost of the concrete bridge. Previous experience had shown that mechanical equipment with gearbox and oil seals requires frequent maintenance and is particularly vulnerable to breakdown.

Daily influent BOD levels average 180 ppm with effluent BOD at 5 ppm and BOD removal efficiency of .8 kg/kW/h at 80% design flow. Operators at the Dos Cerritos plant report functionally simple operation with reliable equipment and an excellent maintenance record.

**Smurfit Carton de Colombia
Cali, Colombia**

This pulp and paper mill processes 203,209 metric tons of product per year. The parent company, Jefferson Smurfit Corp., is the largest paper recycling company in the world.

Their lagoon operated under anaerobic conditions for four years with only 30% BOD removal efficiency. The decision was made to switch to aerobic aeration. After the installation of eighteen 55 kW Aqua-Jet[®] aerators, the BOD removal efficiency increased to 80%.

The detention time is approximately five days in a three-lagoon system of 142.3m x 61m x 1.37m.



Aqua-Jet[®] aerators increase the BOD removal efficiency at Smurfit Carton de Colombia.

Customer Comments

Nicolas Pombo, Corporate Environmental Engineer, said, "If I were to design another lagoon, definitely I would consider buying Aqua-Aerobic again. No doubt about it. I think they are almost maintenance-free. The mechanical performance is good."

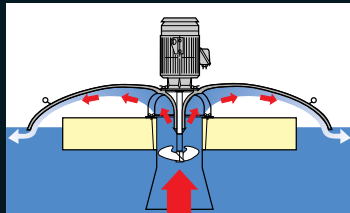
Aqua Jet II® Contained Flow Aerator



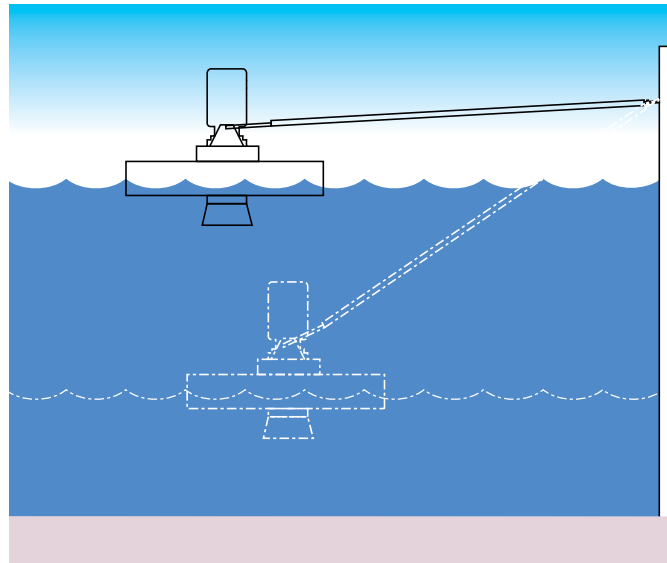
The Aqua-Jet II® is designed for improved heat retention applications which require continued operation of aeration equipment during cold weather months, but are limited because of an inadequate heat sink due to process selection or environmental conditions.

The Aqua-Jet II® is also appropriate for those applications which must comply with aerosol emission or misting control. The dome serves as a shield by redirecting spray produced by the aerator back into surface water, minimizing dissipation into the air.

- | | |
|-------------------------------|-------------------------|
| Features and Benefits: | Applications: |
| Available in 1.5-75 kW | Aerated lagoons |
| High mechanical reliability | Aerobic digesters |
| Easily installed | Activated sludge basins |
| Low maintenance | Equalization basins |



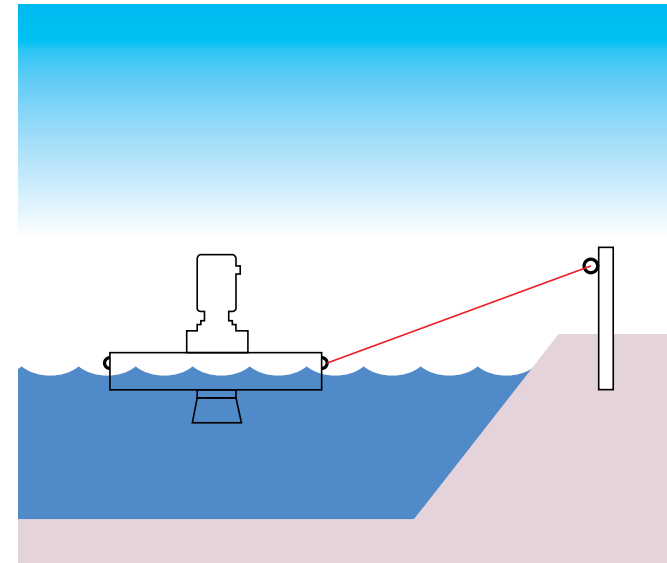
MOORING OPTIONS



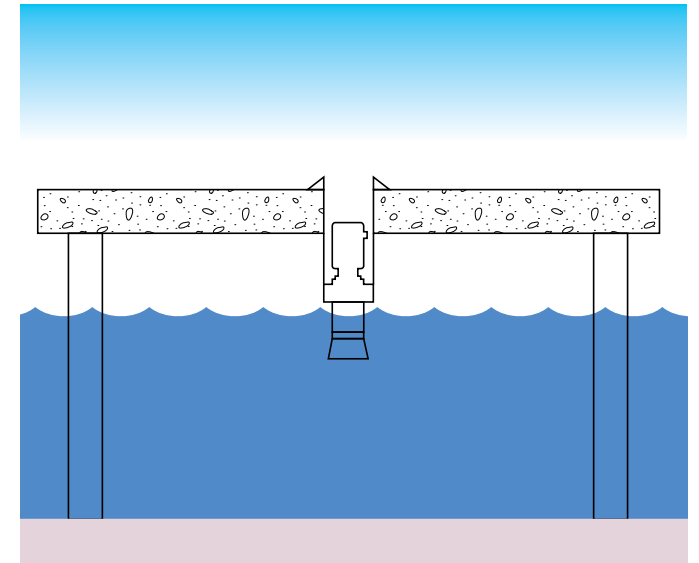
Pivotal Mooring arm is used in applications with varying water levels not exceeding arm length (lengths available up to 13 meters long). The Aqua-Jet® pivotal mooring arm fits at the base of the motor allowing the aerator to adjust to varying water levels.

MOORING OPTIONS

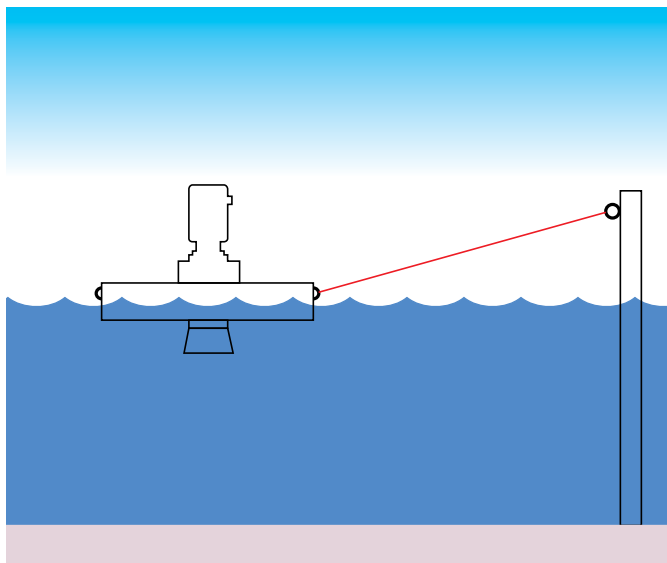
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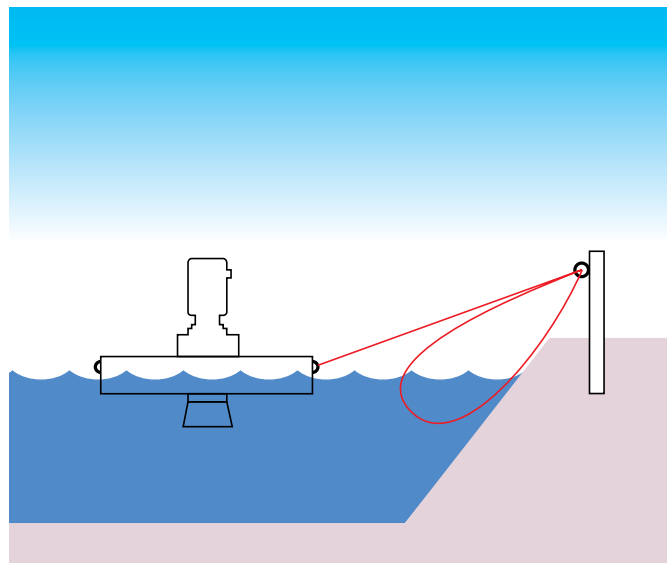
Shore Mooring, a three-point or four-point mooring to the shore, is the most common mooring configuration. Mooring cables are connected to the Aqua-Jet® mooring eyes and to an eyebolt or embedded anchor on the shore.



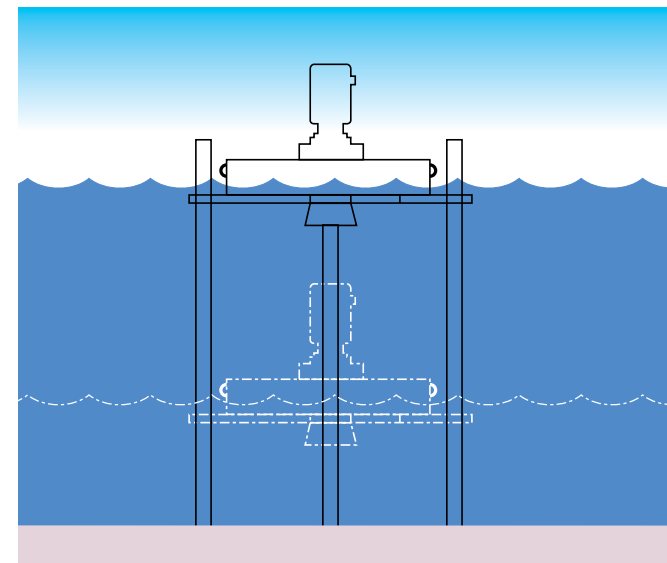
Pier (Fixed) Mounting is used when the Aqua-Jet® can be fixed-mounted to various platforms or structures. The hanging design shown here is one of the more common fixed-mounted arrangements. This mooring option is ideal for those installations where gear-reduced units are being replaced by the more efficient Aqua-Jet®.



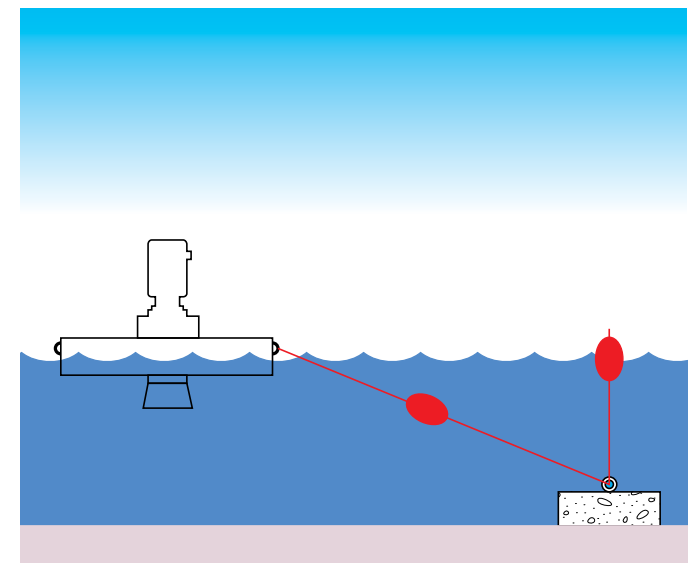
Post Mooring is used in larger lagoons where distances prohibit mooring the Aqua-Jet® to the shore. A mooring post is installed into the lagoon floor and the mooring line is attached to an eyebolt in the post.



Maintenance Mooring enables the operator to easily move the aerator to the shore for maintenance. One or two mooring connection points are supplied with a disconnect device and a long length of cable. This allows the aerator to be moved to the opposite side of the basin without disconnecting the mooring



Restrained Mooring is used in applications with varying water levels. The Aqua-Jet® restrained mooring frame fits around the mooring posts and allows the aerator to slide up and down the post as the water level changes.

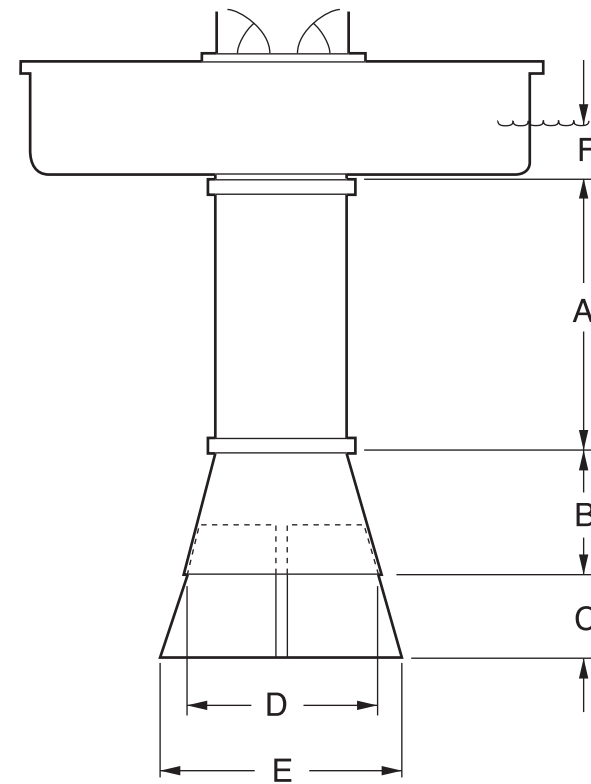


Bottom Mooring is another mooring arrangement for those installations where the distance from the Aqua-Jet® to the shore would require longer lengths of cable than is practical and where the use of a mooring post is not feasible. The unit is moored from three (3) or four (4) points to concrete blocks on the lagoon floor.

Anti-Erosion Assemblies and Draft Tubes

Anti-erosion assemblies consist of a stainless steel plate attached to the bottom of the Aqua-Jet® intake cone via an anti-vortex cross. The assembly causes water to be drawn from the sides of the intake cone, rather than from directly below it; and prevents the floor erosion that can sometimes occur in shallow basins.

The Draft Tube accessory provides an extension of the intake cone and permits a deeper intake of water. Its specific application is in extremely deep basins. The Draft Tube is available in lengths as indicated in the chart below. Contact your Aqua-Aerobic Systems representative for Anti-Erosion and Draft Tube data specific to your application.



KW	A	B	C	D	E	F
0.7	61.0	15.2	15.2	24.1	31.1	17.8
	121.9	15.2	15.2	24.1	31.1	17.8
1.5, 2.2, 3.7	91.4	15.2	15.2	31.1	38.1	17.8
	182.9	15.2	15.2	31.1	38.1	17.8
5.5, 7.5	91.4	20.3	25.4	41.3	48.3	22.9
	182.9	20.3	25.4	41.3	48.3	22.9
11, 15, 18.5	91.4	30.5	30.5	54.6	67.3	27.9
	182.9	30.5	30.5	54.6	67.3	27.9
22.5	91.4	35.6	30.5	62.2	76.2	33.0
	182.9	35.6	30.5	62.2	76.2	33.0
30, 37.5, 45, 55	91.4	50.8	30.5	78.1	91.4	40.6
	182.9	50.8	30.5	78.1	91.4	40.6
75	91.4	76.2	30.5	108.6	108.6	48.3
	182.9	76.2	30.5	108.6	108.6	48.3

All dimensions in centimeters.

Low Trajectory Diffuser (L.T.D.) Assembly

The low trajectory diffuser (L.T.D.) is a high density polyethylene ring that is attached to the top of the diffusion head, increasing the diameter of the diffuser. This arrangement lowers the spray of the Aqua-Jet® reducing windblown spray and misting.

Low trajectory diffusers are used in colder climates, and where a smaller, lower spray pattern is desired.

Arctic Pak

The Arctic Pak ring contains thermal resistance heaters which minimize the chance of icing on the exposed surfaces of the Aqua-Jet®, such as the cast diffusion head.

The Arctic Pak is complete with its own junction box (which mounts on the Aqua-Jet® motor fan cover) and automatic controls and control panel. Operation of the Arctic Pak is controlled by an ambient temperature thermostat. The unit can be used on either floating or fix-mounted Aqua-Jets.

Drawings and wiring diagrams are available on request. Contact your Aqua-Aerobic Systems representative.



KW	WATTS	FUSE AT 220V
0.7	850	6.4 AMP
1.5, 2.2, 3.7	850	6.4 AMP
5.5, 7.5	1000	8.0 AMP
11, 15, 18.5	1250	10.0 AMP
22.5	2500	20.0 AMP
30, 37.5, 45, 55	3350	25.0 AMP
75	5050	40.0 AMP

Selection of Electrical Service Cable

Maximum Allowable Cable Length in Meters.
(Based on 5% Voltage Drop and a 90% Power Factor)

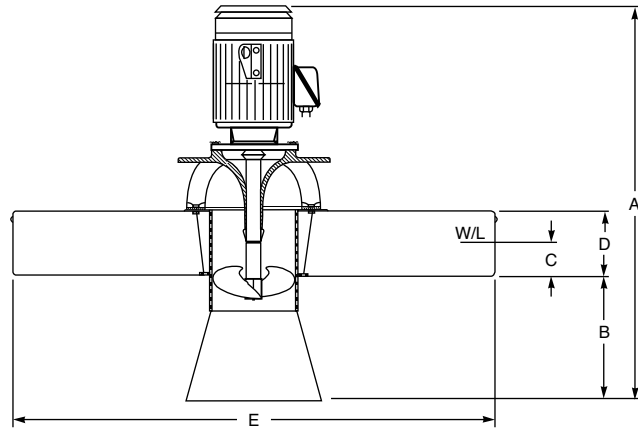
	KW (50 Hz)	FULL-LOAD AMPS	AWG CABLE SIZE												
			12-4	10-4	8-4	6-4	4-4	2-4	0-4	00-4	000-4	0000-4			
380 VOLT	.7	2.5	705												
	1.5	4	440												
	2.2	6	294	461											
	3.7	10	176	277	440										
	5.5	13	135	213	339	532									
	7.5	17	104	163	259	407	636								
	11	25		111	176	277	428	680							
	15	31			142	223	345	548	812						
	18.5	39				177	274	436	646	807					
	22	49				141	218	347	514	642					
	30	62					173	274	406	507	650				
	37.5	80						212	315	393	504				
	45	94							268	335	429				
	56	115								274	350				
	75	158								199	255	303			
					Maximum Cable Length in Meters										
415 VOLT	.7	2.3	837												
	1.5	3.7	520												
	2.2	5.5	350	550											
	3.7	9.2	209	328	523										
	5.5	12.0	160	252	401	630									
	7.5	15.6	123	194	308	485	749								
	11	23.0		131	209	328	508	807							
	15	29.0			166	261	403	640	948						
	18.5	36.0				210	325	515	764	955					
	22	45.0				168	260	412	611	764					
	30	57.0					205	325	482	603	772				
	37.5	74.0						250	371	464	594				
	45	86.0							320	400	511				
	56	105								327	419				
	75	145								239	303	360			

1. NOMINAL VALUES. SPECIFIC AMP RATING WILL VARY ACCORDING TO MOTOR MANUFACTURER.
2. ALLOWABLE AMPACITY RATING OF SELECTED CABLE SHOULD BE 125% OR MORE OF MOTOR FULL LOAD AMPERAGE.

Selection of Anchor Cable

DIAMETER	STRAND	MATERIAL	UNIT SIZE (50 Hz)
4.76mm	7 x 19	304 STAINLESS	0.7-22 kW
6.35mm	7 x 19	304 STAINLESS	30-56 kW
9.53mm	7 x 19	304 STAINLESS	75 kW

SPECIFICATIONS



Stainless Steel - SS

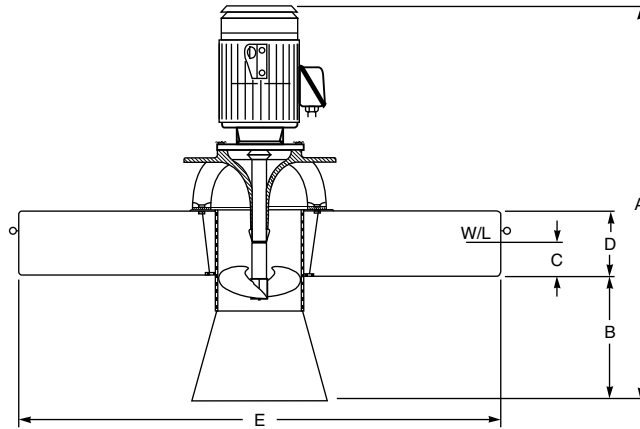
SS Model	KW (50 Hz)	RPM	Apprx. Shpg. Wt.(kg)	DIMENSIONS					Shaft Dia.	Mooring Cable Dia.
				A	B	C	D	E		
3000101	0.7	1500	91	88.1	20.3	10.2	19.1	118.8	2.2	5mm
3000201	1.5	1500	91	*103.0	21.6	10.2	27.9	151.1	3.18	
3000301	2.2	1500	152	112.1	21.6	12.7	27.9	151.1	3.18	
3000300	2.2/7	1500/1000	186	118.4	21.6	14.0	27.9	151.1	3.18	
3000501	3.7	1500	186	112.1	21.6	13.3	27.9	151.1	3.18	
3000500	3.7/1.1	1500/1000	213	118.4	21.6	14.6	27.9	151.1	3.18	
3000701	5.5	1500	213	*131.3	26.4	17.1	30.5	177.8	4.45	
3000700	5.5/1.6	1500/1000	354	137.7	26.4	18.4	30.5	177.8	4.45	
3001001	7.5	1500	372	131.3	26.4	15.2	30.5	177.8	4.45	
3001000	7.5/2.3	1500/1000	390	141.3	26.4	16.5	30.5	177.8	4.45	
3001501	11	1500	408	*163.2	40.6	15.9	34.3	210.5	5.40	
3001500	11/3.3	1500/1000	540	173.2	40.6	17.1	34.3	210.5	5.40	
3002001	15	1500	581	172.6	40.6	16.5	34.3	210.5	5.40	
3002000	15/4.8	1500/1000	612	174.8	40.6	17.8	34.3	210.5	5.40	
3002501	18.5	1500	653	174.8	40.6	17.1	34.3	210.5	5.40	
3002500	18.5/5.6	1500/1000	748	177.0	40.6	18.4	34.3	210.5	5.40	
3003001	22.5	1000	785	220.8	77.8*	24.1	37.8	240.0	5.40	
3003000	22.5/9.5	1000/750	839	229.4	77.8*	25.4	37.8	240.0	5.40	
3004001	30	1000	875	256.7	103.3*	25.4	37.8	291.1	6.35	
3004000	30/12.7	1000/750	1,179	261.1	103.3*	26.7	37.8	291.1	6.35	
3005001	37.5	1000	1,270	256.7	103.3*	22.5	37.8	291.1	6.35	
3005000	37.5/15.7	1000/750	1,352	261.1	103.3*	23.8	37.8	291.1	6.35	
3006001	45	1000	1,406	261.1	103.3*	25.4	37.8	291.1	6.35	
3006000	45/18.7	1000/750	1,678	261.1	103.3*	26.7	37.8	291.1	6.35	
3007501	55	1000	1,497	261.1	103.3*	25.4	37.8	291.1	6.87	
3007500	55/23.5	1000/750	1,769	265.9	97.9*	26.7	43.2	291.1	6.87	
3010021	75	750	2,245	303.5	123.2*	24.1	43.2	332.7	9.98	
3010020	75/38.1	750/600	2,676	313.7	118.1*	25.4	48.3	332.7	9.98	

Dual Speed - Highlighted area indicates dual speed specifications.

.7 kW and 1.5 kW not available in dual speed.

All dimensions in centimeters.

* Includes allowance for anti-vortex cross.



FSS Series

FSS Model	KW (50 Hz)	RPM	Apprx. Shpg. Wt.(kg)	DIMENSIONS					Shaft Dia.	Mooring Cable Dia.
				A	B	C	D	E		
4200101	0.7	1500	125	88.1	21.6	10.2	17.8	118.8	2.2	5mm
4200201	1.5	1500	125	103.0	21.6	10.2	27.9	162.6	3.18	
4200301	2.2	1500	204	112.1	21.6	10.2	27.9	162.6	3.18	
4200351	2.2/7	1500/1000	250	118.4	21.6	11.4	27.9	162.6	3.18	
4200501	3.7	1500	250	112.1	21.6	12.7	27.9	162.6	3.18	
4200551	3.7/1.1	1500/1000	261	118.4	21.6	14.0	27.9	162.6	3.18	
4200701	5.5	1500	261	131.3	26.4	15.2	30.5	180.3	4.45	
4200751	5.5/1.6	1500/1000	386	141.3	26.4	16.5	30.5	180.3	4.45	
4201001	7.5	1500	397	131.3	26.4	14.0	30.5	180.3	4.45	
4201051	7.5/2.3	1500/1000	408	141.3	26.4	15.2	30.5	180.3	4.45	
4201501	11	1500	408	163.2	39.4	15.2	35.6	213.4	5.40	
4201551	11/3.3	1500/1000	544	169.9	39.4	16.5	35.6	213.4	5.40	
4202001	15	1500	572	172.6	39.4	17.8	35.6	213.4	5.40	
4202051	15/4.8	1500/1000	601	174.8	39.4	19.1	35.6	213.4	5.40	
4202501	18.5	1500	601	174.8	39.4	20.3	35.6	213.4	5.40	
4202551	18.5/5.6	1500/1000	696	178.1	39.4	21.6	35.6	213.4	5.40	
4203001	22.5	1000	751	220.8	76.2*	20.3	39.4	240.0	5.40	
4203051	22.5/9.5	1000/750	850	229.4	76.2*	21.6	39.4	240.0	5.40	
4204001	30	1000	980	256.7	103.3*	25.4	37.8	291.1	6.35	
4204051	30/12.7	1000/750	1020	261.1	103.3*	26.7	37.8	291.1	6.35	
4205001	37.5	1000	1070	256.7	103.3*	25.4	37.8	291.1	6.35	
4205051	37.5/15.7	1000/750	1160	261.1	103.3*	26.7	37.8	291.1	6.35	
4206001	45	1000	1205	261.1	103.3*	26.7	37.8	291.1	6.35	
4207501	55	1000	1250	261.1	103.3*	26.7	37.8	291.1	6.87	

Dual Speed - Highlighted area indicates dual speed specifications.

.7 kW, 1.5 kW, 45 and 55 kW not available in dual speed.

All dimensions in centimeters.

* Includes allowance for anti-vortex cross.

Materials of Construction

COMPONENT	MODEL SERIES	
	STAINLESS STEEL	FSS
MOTOR SHAFT	ONE-PIECE, 17-4 STAINLESS STEEL	
PROPELLER	316 STAINLESS STEEL, DYNAMICALLY BALANCED	
MONOLITHIC CAST DIFFUSION HEAD	304 S.S.	304 S.S.
FLOAT SKIN	14 GAUGE, 304 S.S.	FIBER REINFORCED POLYESTER (FRP)
FLOAT CONTENT	CLOSED CELL POLYURETHANE FOAM	
VOLUTE	304 STAINLESS STEEL	
INTAKE CONE	304 STAINLESS STEEL	

AQUA-JET® OPTIONS

Dual Speed

Very few wastewater treatment systems are fully or evenly loaded at all times. Consequently, aeration systems sized to handle peak loads have excess capacity during periods of light loading. This results not only in an excessive dissolved oxygen residual, but also consumes excess energy. And energy costs you money.

Aqua-Aerobic Systems' Dual Speed Aqua-Jet® aerators provide the option for speed reduction during periods of light loading. This reduces power consumption and operating costs. Control options are available to provide manual or automatic operation of your system.

Energy Efficient Motors

Aqua-Aerobic Systems' energy efficient motors offer significant energy savings over standard industrial designs. The energy savings realized with the motor design allow the initial price premium to be recovered in a relatively short period of time.

All motors combine energy saving designs with the quality construction you expect in an Aqua-Jet®. This provides you with low operating costs and many years of trouble-free operation.

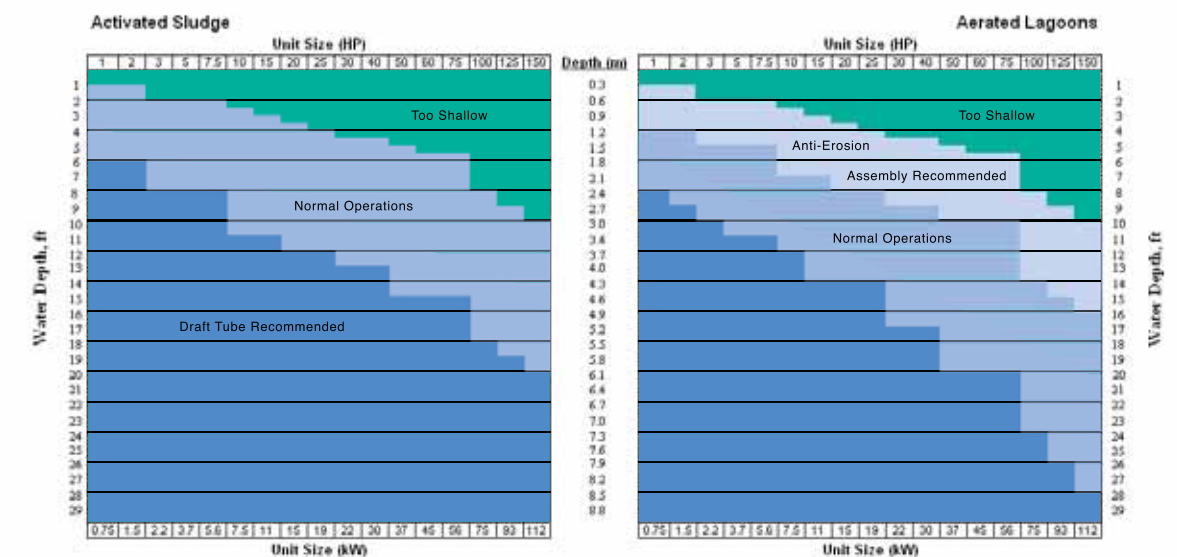
Endura® Series

Endura® Series aerators offer a five-year no-maintenance warranty. This option is available on 2.2kw - 112kw AquaJet® aerators. All Endura® Series are available in high efficiency, and each unit is vibration tested and hydraulically designed for optimum performance in the most stringent applications.



Aqua-Jet® aerators successfully treat the wastewater at a food processing plant.

TYPICAL AQUA-JET® AERATOR OPERATING DEPTHS*



WARNING: The Aqua-Jet® aerator has a high velocity, upwardly directed hydraulic flow directly below the unit. In addition, horizontal surface velocities persist for some distance from the unit. These flow patterns may, in some instances, cause damage to basin bottoms or walls creating leaking potential. In earthen or lined basins, Aqua-Aerobic Systems recommends the use of a concrete pad on the basin bottom directly below the aerator. If concrete is known to be non-resistant to the waste, other material should be investigated. Rip rapping or similar means of bank protection can protect basin walls. If basin contains toxic wastes, user is advised to obtain engineering advice as to basin design and construction necessary to prevent possible erosion and leakage. Aqua-Aerobic Systems assumes no liability or responsibility for any damage to basin bottoms or walls, or for any injuries or damages resulting therefrom.

* NOTE: These charts are intended for approximation purposes only. Requirements are dependent on basin geometry, etc., and Aqua-Aerobic Systems should be contacted for specific applications.

* NOTE: Consult Aqua-Aerobic Systems for information on larger horsepower units.

Aqua-Jet®
Surface Aerators

Aqua-Jet II®
Contained Flow Aerators

AquaDDM®
Direct Drive Mixer-Blenders

Aqua MixAir®
Aeration Systems

AquaEnduraDisc®
Fine Bubble Diffusers

AquaEnduraTube®
Fine Bubble Diffusers

AquaSBR®
Sequencing Batch Reactors

AquaExcel®
Batch Reactors with AquaEnsure®

AquaMSBR®
Modified Sequencing Batch Reactor

AquaPASS™
Phased Activated Sludge Systems

AquaMB Process®
Multiple Barrier Membrane System

Aqua-Aerobic® MBR
Membrane Bioreactors

AquaDisk®
Cloth Media Filters with OptiFiber®

Aqua MiniDisk®
Cloth Media Filters with OptiFiber®

AquaDiamond®
Cloth Media Filters with OptiFiber®

AquaABF®
Automatic Backwash Filters

ThermoFlo®
Surface Spray Coolers

IntelliPro®
Process Management System

Aqua-Aerobic Systems, Inc.

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The information contained herein relative to data, dimensions and recommendations as to size, power and assembly are for purpose of estimation only. These values should not be assumed to be universally applicable to specific design problems. Particular designs, installations and plants may call for specific requirements. Consult Aqua-Aerobic Systems, Inc. for exact recommendations or specific needs.

