

## Aspirating Aerator

Lambda aspirating jet aerator is an efficient aerator to be installed in aerating tanks, basins, aerated lagoons and rivers/canals for municipal and industrial wastewater treatment. The hi-grade material air jet is directly mounted at an adjustable angle with the motor portion and air intake above the surface, and the propeller portion below the surface. The motor rotates and turns the hollow shaft along with the propeller and drives the water at a high speed near the propeller blades. Air above the water level is drawn via the air intake port and going into the hollow shaft. Turbulent flow created by the propeller breaks up the air into small bubbles along the water streamline, mixes in the basin and disperses oxygen. Maximum oxygen transfer can be achieved by increasing bubble hang time via horizontal water movement.

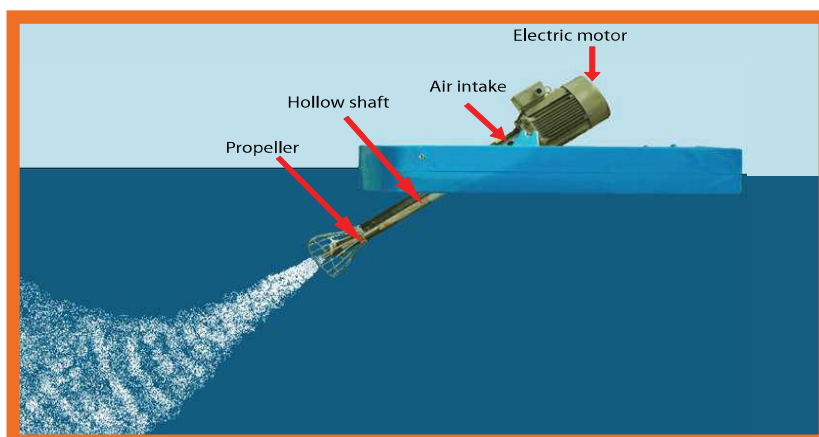


### Features

- The aerator parts are made from stainless steel 304/316 or engineering plastic depending upon water quality.
- Aerator synchronous speeds are 1,500 rpm and 3,000 rpm.
- Ceramic or stainless steel sleeve is installed at the shaft end bearing, when uses in common water.
- There is no end bearing model for the high-strength cantilever hollow shaft, which means no bearing problem when used in abrasive water.
- Installation is available both in fix and float types.

### Benefits

- Creates effective horizontal water movement to limit algae growth and distribute oxygen over a wide area.
- Operates quietly without spraying or splashing for year-round performance.
- Reduce odors by injecting oxygen and providing water movement.
- Directs circulation into most areas as the aerator angle adjust to control the amount of circulation and depth of bubble stream. Easy to move and install by one person (we recommend a registered electrician to do all the wiring).



## Application

### Sewage

Aeration, re-suspension and circulation of oxidation ditches, aerobic treatment of sewage effluent, mixing, consolidation and treatment of sludge, improved digestion resulting in the ditch returning to original handling capacity.



### Fish Farms

The total flexibility in depth and position gives the high volume of entrained air which is the perfect choice for fish rearing tanks, growing cages and fishing lakes.



### Environmental Use

Oil spillage recovery, ranging from slight oil contaminated cooling water to heavy pollution after oil spillage and to the removal of water bound larvae e.g. mosquitoes.



### Process Waste

The floatation aerator is ideal for use on large bodies of water, such as lagoons and reservoirs, where stratification is to be avoided. The unit will also deal with polluted water in situ, rejuvenating depleted oxygen levels. This method of aerating has been proved, in large ditches (e.g. paper manufacturing), to improve the consistency of effluent prior to discharge.





## Application Guide

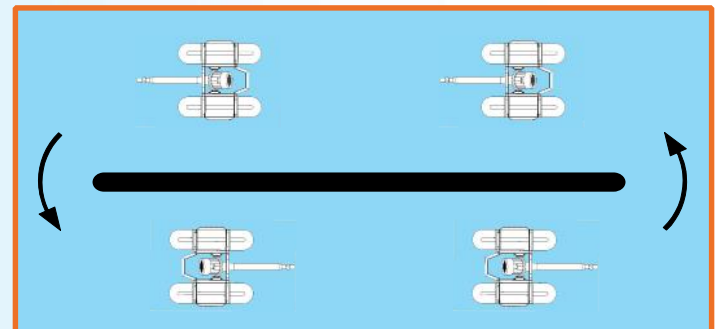
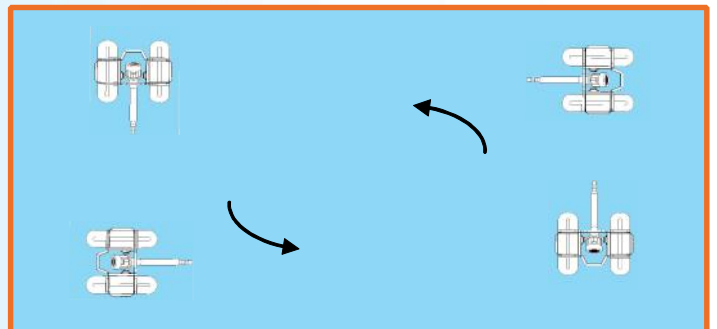
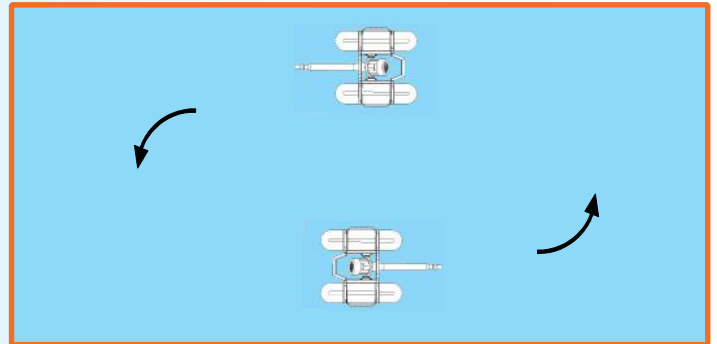
This guide is written to assist the user of Lambda aspirating jet aerators in the effective and efficient sizing and application of this product. When making a recommendation for Lambda aerators you must carefully consider mixing and oxygen requirements, as well as the configuration of the process system.

### How is it applied?

Lambda aerators can be mounted on floats, basin walls or bridge. They are fully adjustable with several mooring options available to fit specific basin geometries. Multiple aerators can be used depending upon the basin size. These aerators can be used in different shaped tanks, lagoons and oxidation ditches. Typical positioning is presented in the left.

### Design and process advantages:

Oxygen transfer rates are maximized by the extremely efficient mixing capabilities of the Lambda aerator and by the horizontal bubble hang time generated. This makes the Lambda aerator the ideal choice for large lagoons or for any application that requires complete mixing because mixing zones can be linked to maximize energy efficiency. The versatility of the mounting options reduced capital costs.



**Type : S, for Common Water  
380V, 3 Phase, 50 Hz, IP55, 3,000 rpm.**



### 2 -5.5 Hp

Model	Hp	Quantity				Approx. Total Weight (kg)
		Aerator	Motor Cover	Frame	Float	
STT020A-PA080	2	✓	✓	-	✓	42
STT030A-PA080	3	✓	✓	-	✓	44
STT055A-PA100	5.5	✓	✓	-	✓	60



### 7.5 -10 Hp

Model	Hp	Quantity				Approx. Total Weight (kg)
		Aerator	Motor Cover	Frame	Float	
STH075A-PI200	7.5	✓	✓	✓	✓	172
STH100A-PI200	10	✓	✓	✓	✓	207



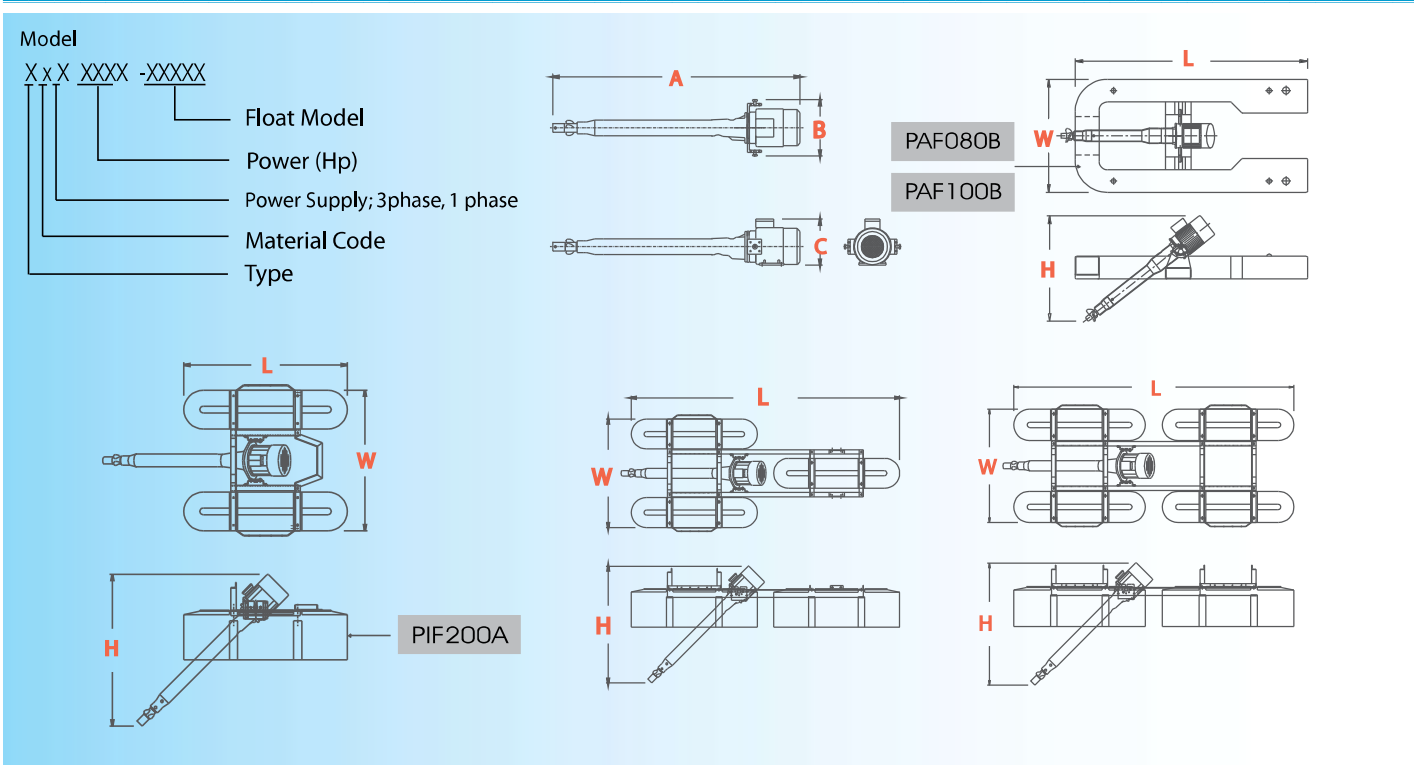
### 15 -25 Hp

Model	Hp	Quantity				Approx. Total Weight (kg)
		Aerator	Motor Cover	Frame	Float	
STH150A-PI200	15	✓	✓	✓	✓	285
STH200A-PI200	20	✓	✓	✓	✓	306
STH250A-PI200	25	✓	✓	✓	✓	325



### 30 Hp

Model	Hp	Quantity				Approx. Total Weight (kg)
		Aerator	Motor Cover	Frame	Float	
STH300A-PI200	30	✓	✓	✓	✓	402



## General Specification

Model	SxT020A-PA080	SxT030A-PA080	SxT055A-PA100	SxH075A-PI200	SxH100A-PI200	SxH150A-PI200	SxH200A-PI200	SxH250A-PI200	SxH300A-PI200
Motor									
Power [KW / Hp]	1.5 / 2	2.2 / 3	4 / 5.5	5.5 / 7.5	7.5 / 10	11 / 15	15 / 20	18.5 / 25	22 / 30
Voltage [V], Phase, Frequency	380 V, 3 Ph, 50 Hz.								
Rated current [A]	3.5	4.8	8.2	11.2	14.7	21	28.3	36	42
Insulation class									
Protection class	IP55								
Impeller	Marine Type								
Impeller speed approx. [rpm.]	2,880	2,880	2,905	2,910	2,910	2,930	2,930	2,940	2,940
Number of float	PA080 x 1		PA100 x 1	PI200 x 2		PI200 x 3		PI200 x 4	
Weight Approx. [kg.]	42	44	60	172	207	285	306	325	402
Mooring cable diameter [mm.]	6			9			12		

## Application for aeration and mixing tank

* Oxygen transfer rate [kg. O2 / hr]	3.0	4.5	8.2	11.2	14.9	22.4	29.8	37.3	44.7
Min depth [m]	1.5	1.5	1.5	1.5	2	2.5	3	3	3
Max depth [m]	2.5	2.5	3.5	3.5	4	5	5	6	6
Working distance [m]	12	15	20	23	25	33	35	38	40
Mixing volume [cu.m]	100	150	300	400	550	800	1,000	1,300	1,600

## Dimension

Aerator length [mm.]	A	1,122	1,147	1,300	1,805	1,805	2,099	2,099	2,121	3,054
Aerator width [mm.]	B	350	350	370	410	410	410	410	410	629
Aerator height [mm.]	C	229	229	282	324	324	392	392	392	412
Total length [mm.]	L	1,565	1,565	1,565	1,480	1,480	3,290	3,290	3,290	3,290
Total width [mm.]	W	750	750	750	1,380	1,380	1,380	1,380	1,380	1,380
Total height [mm.]	H	676	676	890	1,341	1,341	1,593	1,593	1,593	1,915

## Material

Material Code	A	T	U
For aerator model	2-3 Hp	All model	All model
Housing	Stainless Steel 304	Stainless Steel 304	Stainless Steel 316
Drive shaft			
Propeller			
Mounting bracket	Stainless Steel 304		
Frame ass'y	Hot-dip Galvanized Steel		
Bolts & nut	Stainless Steel 304		
Float	Polyethylene, Polyurethane foam filled		

## Float

Float Number	Float Type
PA080	PAF080B
PA100	PAF100B
PI200	PIF200A