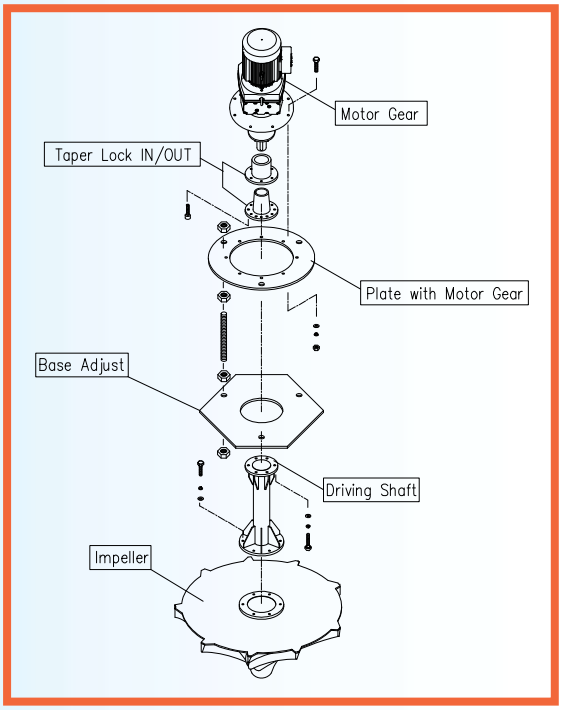
Low Speed Surface Aerator

Drive Unit:

The aerator is driven by a motor of suitable rating. The speed is reduced from the motor speed to the aerator speed by a suitable reduction gear box having worm/helical gears. The speed of the aerator and the diameter of the impeller are so selected that aerator will have the optimum oxygen transfer capacity. The motor is of reputed make suitable for outdoor duties. The reducer bearings and gears are oil lubricated and weather protected. Our range of manufacturing covers 3.0 HP, 5 HP, 10 HP, 12.5 HP, 15 HP, 20 HP, 25, HP, 30 HP, 40 HP, 50 ***HP, 60 HP, 75 HP and 100 HP*** fixed type surface aerators.

Adjusting Studs:

The depth of submergence can be adjusted by the adjusting studs. It is necessary to maintain the water level to avoid overloading of aerator drive.



How Aerator Works

Aerators consist of a motor mounted to a gear reducer and an extended shaft. A specially designed rotor is attached to the bottom of the extended shaft. The aerator is positioned so the rotor is partially submerged in the wastewater. When activated, turns at a slow speed (typically 40 to 100 rpm). Specially designed fins on the rotor then pump large amounts of water into the air in a fine spray. These very small droplets create a 360-degree circular pattern. High transfer of oxygen is created by the large surface-to-volume ratio of the water droplet and its long exposure to air after spraying. Pumping up oxygen-deficient water at the bottom of the basin and exposing it to air above the water surface provides faster mass transfer from ambient air to the water droplet. The deep pumping action of aerator generates effective localized mixing to optimize many wastewater treatment processes. Aerator is ideal for treatment processes in industries that require fast and efficient oxygen transfer, including the pulp and paper, food processing, and other industries.

e l h s

v 8l

6 8

B8 d 8

E8 s 8e

8

F8 qvdBS 8

qvd E6F GS 8

G8 l 8

H8 e 8

I 8 i 8

M8 x qvd 8k

8

N8 d 8

p i

d 8h

7 8w

6 7

8z E6 EHA 2BBG 3

8

d j

d

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8 w

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6 6

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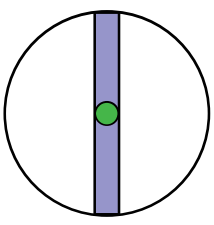
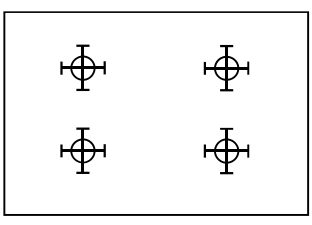
S



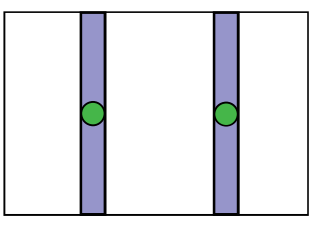
Round Tank

Fixed Mount center



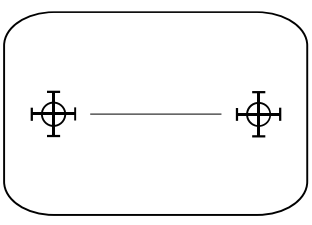
Rectangular Tank

Float Mount



Rectangular Tank

Fixed Mount



Oxydation Ditch

Float Mount

Low Speed Surface Aerator
380 V, 3 Phase, 50 Hz, IP55

SEW

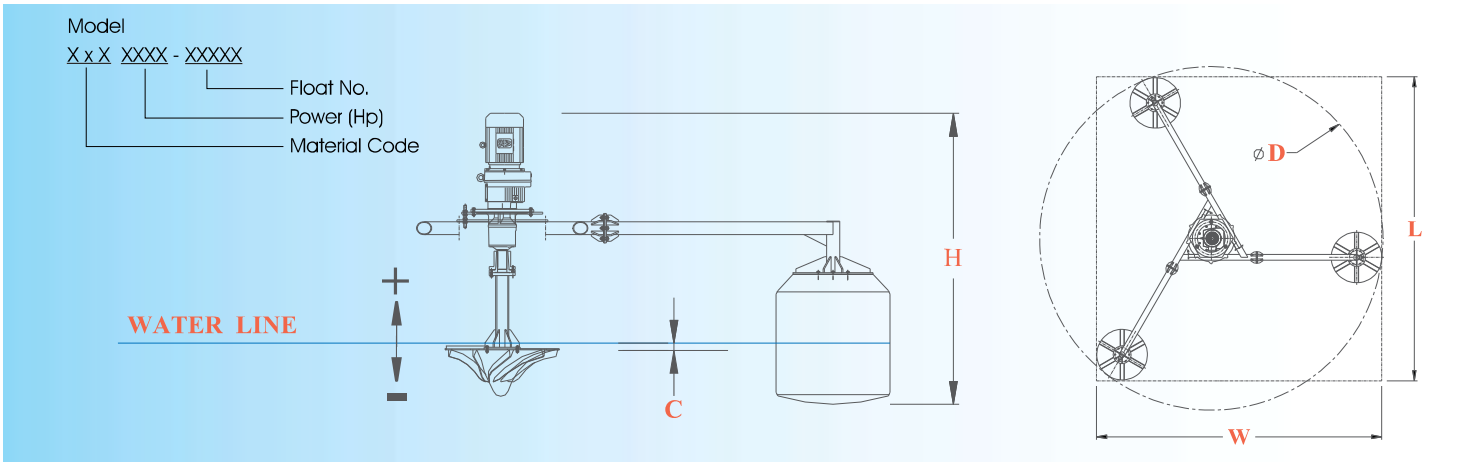
Mild steel with hot dip galvanized

Model	Hp	Quantity			Approx. Total Weight (kg)
		Aerator	Frame	Float	
VST055A-PC250	5.5	✓	✓	✓	588.0
VSH075A-PC700	7.5	✓	✓	✓	1,081.0
VSH100A-PC700	10	✓	✓	✓	1,107.0
VSH150A-PC700	15	✓	✓	✓	1,130.0
VSH200A-PC700	20	✓	✓	✓	1,271.0
VSH250A-PC2K0	25	✓	✓	✓	3,145.0
VSH300A-PC2K0	30	✓	✓	✓	3,513.0
VSH400A-PC2K0	40	✓	✓	✓	3,585.0
VSH500A-PC2K0	50	✓	✓	✓	3,850.0

SS 304

Model	Hp	Quantity			Approx. Total Weight (kg)
		Aerator	Frame	Float	
VTT055A-PC250	5.5	✓	✓	✓	588.0
VTH075A-PC700	7.5	✓	✓	✓	1,081.0
VTH100A-PC700	10	✓	✓	✓	1,107.0
VTH150A-PC700	15	✓	✓	✓	1,130.0
VTH200A-PC700	20	✓	✓	✓	1,271.0
VTH250A-PC2K0	25	✓	✓	✓	3,145.0
VTH300A-PC2K0	30	✓	✓	✓	3,513.0
VTH400A-PC2K0	40	✓	✓	✓	3,585.0
VTH500A-PC2K0	50	✓	✓	✓	3,850.0

Low Speed Surface Aerator - SEW Motor



General Specification :

Model	VxT055A-PC250	VxH075A-PC700	VxH100A-PC700	VxH150A-PC700	VxH200A-PC700	VxH250A-PC2K0	VxH300A-PC2K0	VxH400A-PC2K0	VxH500A-PC2K0
Geared motor									
Power [KW/Hp]	4/5.5	5.5/7.5	7.5/10	11/15	15/20	18.5/25	22/30	30/40	37/50
Voltage [V], Phase, Frequency	380V, 3Ph, 50Hz								
Insulation class	F								
Protection class	IP55								
Output speed approx. [rpm.]	74	78	88	98	107		43	43	53
Rated current [A]	8.7	11	5.5	22.5	29.5	37	42.5	55	67
Service factor	2.8	3.7	3	2.2	3.2	3	3.6	2.7	27
Flange size	350	450	450	450	550	550	660	660	660
Impeller type	Turbine								
Impeller dia. approx. [mm.]	1000		1,180			2,000		2,200	
Number of float	PC250 x 3		PC700 x 3			PC2K0 x 3			

Application for aeration and mixing tank

Oxygen transfer rate [kg] O2/hr	8.2	11.2	14.9	22.4	29.8	37.3	44.7	59.6	74.5
Min depth [m]	1.5	1.5	1.5	1.5	1.5	2	2	2	2
Max depth [m]	4	4	4	4.5	4.5	5	5	5	5
Mixing aeration tank [dia.m]	10.5	15.5	17.5	22.0	25.0	33.0	35.0	37.0	38.0
Aeration pond/Lagoon [dia.m]	32.0	42.0	46.0	50.0	55.0	64.0	68.0	74.0	80.0

Dimension :

Diameter [mm.] D	5,500			6,000				7,500			
Height [mm.] H	1,725	1,765	1,850	2,390	2,410	2,470	2,550	3,760	3,840	3,900	3,980
Coverage [mm.] C	50							+50 to +100			
Width [mm.] W	4,050			5,650				6,535			
Length [mm.] L	4,250				5,975			6,870			
Weight approx. [kg.]	525	550	588	1,081	1,107	1,130	1,271	3,145	3,513	3,585	3,850
Mooring cables diameter [mm.]	6			9				12			

Material :

Material code	S	T	U
Geared motor	"SEW" MADE IN WEST GERMANY, IP55, Service Factor higher than two		
Coupling	Stainless Steel 304		Stainless Steel 316
Drive shaft	Hot-dip Galvanized Steel	Stainless Steel 304	
Impeller			
Frame ass'y			
Bolt & nut	Stainless Steel 304		
Float	Polyethylene, PU Foam Filled		

Float

Float Number	Float Type
PC250	PCF250A
PC700	PCF700A
PC2K0	PCF2K0A

*Oxygen transfer rate at standard condition.
Mixing volume are calculated due to power per unit volume 10 watt/cu.m.

Low Speed Surface Aerator
380 V, 3 Phase, 50 Hz, IP55

Transmax

Mild steel with hot - dip galvanized

Model	Hp	Quantity			Approx. Total Weight (kg)
		Aerator	Frame	Float	
VTG020-3PC250	2.0	✓	✓	✓	550.0
VTG030-3PC250	3.0	✓	✓	✓	600.0
VTG040-3PC250	4.0	✓	✓	✓	650.0
VTG055-3PC250	5.5	✓	✓	✓	700.0
VTG075-3PC250	7.5	✓	✓	✓	1,150.0
VTG010-3PC250	10	✓	✓	✓	1,200.0
VTG015-3PC700	15	✓	✓	✓	1,300.0
VTG020-3PC700	20	✓	✓	✓	1,450.0
VTG025-3PC1K	25	✓	✓	✓	2,350.0
VTG030-3PC1K	30	✓	✓	✓	2,500.0
VTG040-3PC1K	40	✓	✓	✓	2,550.0
VTG050-3PC2K	50	✓	✓	✓	3,850.0
VTG060-3PC2K	50	✓	✓	✓	4,000.0
VTG075-3PC12	50	✓	✓	✓	4,100.0

SS 304

Model	Hp	Quantity			Approx. Total Weight (kg)
		Aerator	Frame	Float	
VTS055-3PC250	5.5	✓	✓	✓	550.0
VTS055-3PC250	5.5	✓	✓	✓	600.0
VTS055-3PC250	5.5	✓	✓	✓	650.0
VTS055-3PC250	5.5	✓	✓	✓	700.0
VTS075-3PC250	7.5	✓	✓	✓	1,150.0
VTS010-3PC250	10	✓	✓	✓	1,200.0
VTS015-3PC700	15	✓	✓	✓	1,300.0
VTS020-3PC700	20	✓	✓	✓	1,450.0
VTS025-3PC1K	25	✓	✓	✓	2,350.0
VTS030-3PC1K	30	✓	✓	✓	2,500.0
VTS040-3PC1K	40	✓	✓	✓	2,550.0
VTS050-3PC2K	50	✓	✓	✓	3,850.0
VTS060-3PC2K	50	✓	✓	✓	4,000.0
VTS075-3PC2K	50	✓	✓	✓	4,100.0