

HSA - Highspeed Surface Aerator

Surface Aerators from 3 up to 55 kW



Product description

- Direct drive high efficiency surface aerator with optimized centrifugal impeller
- Micro bubble formation due to optimal transfer of kinetic energy into the water surface
- High oxygen dispersion over large surfaces, optimized mixing capacity even in deep basins

Applications

- SBR plants
- Activated sludge plants
- Aerobic digesters
- Aerated lagoons and basins
- Cooling of industrial waste water with high temperature

Advantages

- Extended unit lifetime
- No gearbox, very limited maintenance needed
- Motor IP56 and covered motor ventilation
- High efficiency IE3 motors
- High oxygen transfer in waste water due to high α -factor
- Low aerosol emissions
- No baffling in the tank needed, no surging
- Simple and quick installation
- Low investment cost for the complete installation

Materials

- Motor up to 30 kW: epoxy coated, aluminium
- Motor from 37 kW: epoxy coated, cast iron
- Float + cone / cross: AISI304
- Motor flange support: AISI304
- Impeller: AISI304
(other materials on request)

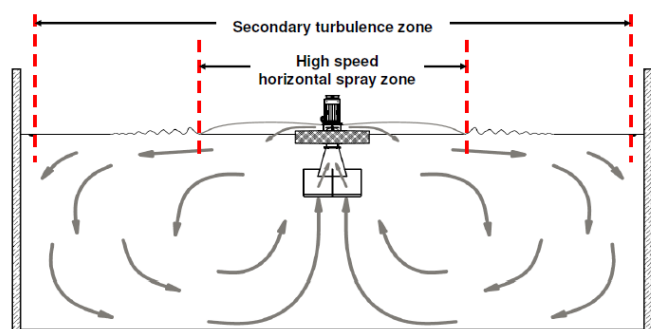
Working principle

The HSA aspirates the water from the bottom and sprays it back on the surface. The spray is horizontally injected into the water surface over 360° and the turbulence creates micro bubbles which are pushed downwards. The result is maximum oxygen transfer efficiency. The flow pattern generates a perfect oxygen dispersion and full homogenization even in deep basins and on large surfaces.



Accessories

- Motor with heater
- Cone extensions for deeper basins
- Mooring cables and springs
- Mooring anchors or piles
- Mooring posts
- Anti-erosion-plate for lagoons
- Cable floats



Dimensions and Motor Data¹

Aerator Type	Motor power [kW]	Rated voltage [V]	Rated current ² [A]	Rated speed [min ⁻¹]	Ø Float [mm]	Standard height [mm]	Weight [kg]
HSA-030	3,0	400	5,9	1460	1000	1398	132
HSA-040	4,0		7,9	1460	1000	1418	136
HSA-055	5,5		10,5	1470	1250	1872	208
HSA-075	7,5		14,3	1470	1250	1872	210
HSA-110	11,0		20,5	1475	1500	2151	339
HSA-150	15,0		28,5	1475	1500	2179	355
HSA-185	18,5		35,0	1470	1800	2411	468
HSA-220	22,0		41,0	1470	1800	2459	475
HSA-300	30,0		55,0	1470	2000	2871	650
HSA-370	37,0		66,0	1478	2100	2944	805
HSA-450	45,0		80,0	1478	2100	3004	842
HSA-550	55,0		96,0	1482	2300	3246	1039

Process Data¹

Aerator Type	Motor power [kW]	SOTR _{max} in clean water ³ [kg O ₂ /h]	Ø High turbulent surface [m]	Ø Flow influence in clean water [m]	Ø Oxygen dispersion [m]	Max. water level with standard cone [m]	Max. water level with extended cone [m]
HSA-030	3,0	4,5	6,5	13,0	45,0	2,40	3,40
HSA-040	4,0	6,0	8,0	14,0	47,0	2,50	3,50
HSA-055	5,5	8,3	9,5	15,0	49,0	2,60	3,60
HSA-075	7,5	11,3	10,0	16,0	52,0	2,80	3,80
HSA-110	11,0	16,5	10,5	19,0	61,0	3,00	4,00
HSA-150	15,0	22,5	11,0	22,0	70,0	3,20	4,70
HSA-185	18,5	27,8	11,5	25,0	75,0	3,30	4,80
HSA-220	22,0	33,0	12,0	25,0	80,0	3,40	4,90
HSA-300	30,0	45,0	13,0	25,5	86,0	3,60	5,10
HSA-370	37,0	55,5	14,0	26,0	90,0	3,80	5,30
HSA-450	45,0	67,5	15,0	26,5	95,0	3,90	5,40
HSA-550	55,0	82,5	16,0	27,0	100,0	4,00	5,50

¹ All values are indicative. ATB WATER GmbH reserves the right to adjust these values at any time without prior notice.

² Values valid for power supply 400 V / 50 Hz. The working range is from 380 to 415 V, amps value may differ.

³ Values are indicative, for a clean water efficiency of 1,5 kg O₂/kWh (+/-10%) acc. to the EN-12255-15.