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

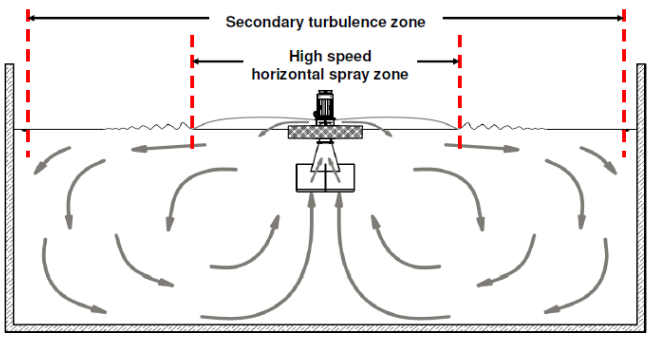
- Motor: cast iron or aluminium with epoxy coating
- Float + cone / cross: AISI304
- Motor flange support: AISI304
- Impeller: AISI304
  (other materials on request)

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

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.



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Dimensions and Motor Data[1]

Aerator Type	Motor power [kW]	Rated voltage [V]	Rated current[2] [A]	Rated speed [min^{-1}]	∅ 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 Data[1]

Aerator Type	Motor power [kW]	$SOTR_{max}$ in clean water[3] [kg O_2/h]	∅ High turbulent surface [m]	∅ Flow influence in clean water [m]	∅ 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 O_2/kWh (+/-10%) acc. to the EN-12255-15.