

Product description

- Direct drive floating high efficiency surface mixer with optimized axial impeller
- Intensive and high turbulence downdraft mixing, the vertical downward flow is deflected by the tank bottom to the sides generating a vertically upflow along the walls
- Ideal mixing pattern, leaving no dead spots or areas in the tank volume

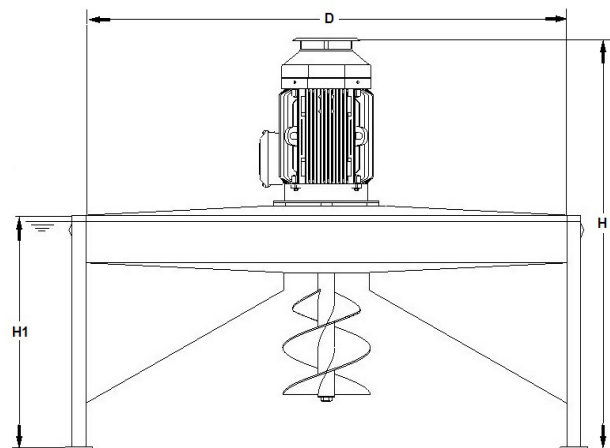


Applications

- All WWT applications, municipal or industrial
- Storm water tanks (e.g. in refineries)
- Chemical industry, waters with high temperature
- Lagoons or sludge storage tanks
- Homogenisation and equalization tanks

Advantages

- Robust and long-lasting design
- No gearbox, very limited maintenance needed
- Resistant to coarse materials, no clogging by fibres
- Motor IP56 and covered motor ventilation
- High efficiency IE3 motors
- Ideal for varying water levels
- Intensive mixing with minimum needs for W/m^3
- No restriction for location in the basin
- Simple and quick installation
- Low investment cost for the complete installation



Materials

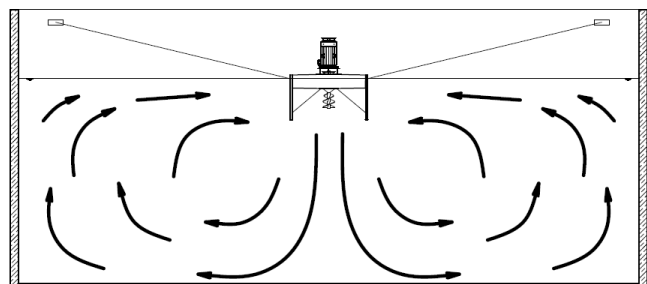
- Motor: cast iron or aluminium with epoxy coating
- Float + motor flange support: stainless steel AISI304
- Impeller: stainless steel AISI304 (other materials on request)

Accessories

- Motor with heater
- Mooring cables and springs
- Mooring anchors or piles
- Mooring posts
- Hinged arm for wall fixation
- Cable floats

Working principle

The HSM generates a vertically downward directed axial flow. The accelerated water hits the tank floor and is deflected to the side walls. Along the walls a vertical upward directed flow is induced. An ideal mixing pattern is created, leaving no dead spots or areas in the tank. With positioning of the mixer in or close to the centre of the tank an ideal power-to-volume ratio can be achieved. Hence installed power can be reduced, leading to low energy consumption.



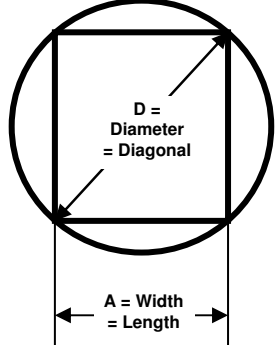
Constructive Data¹

Mixer Type	Motor power [kW]	Float diameter D [mm]	Float height [mm]	Standard draught H1 [mm]	Standard height H [mm]	Weight [kg]
HSM-030	3,0	1000	210	596	1043	110
HSM-040	4,0	1000	210	601	1063	114
HSM-055	5,5	1250	210	599	1175	176
HSM-075	7,5	1250	210	600	1175	177
HSM-110	11,0	1500	210	693	1331	246
HSM-150	15,0	1500	210	703	1349	262
HSM-185	18,5	1700	210	700	1341	330
HSM-220	22,0	1700	210	703	1379	337

Technical Data¹

Mixer Type	Motor power [kW]	Rated voltage [V]	Rated current ² [A]	Rated speed [min ⁻¹]	Pumping capacity [m ³ /h]	Thrust [N]
HSM-030	3,0	400	5,9	1460	472	605
HSM-040	4,0		7,9	1460	550	743
HSM-055	5,5		10,5	1470	888	1411
HSM-075	7,5		14,3	1470	899	1435
HSM-110	11,0		20,5	1475	1126	1941
HSM-150	15,0		28,5	1475	1152	2003
HSM-185	18,5		35,0	1470	1521	2892
HSM-220	22,0		41,0	1470	1553	2975

Process Data¹

Mixer Type	Maximum tank volume ³ [m ³]	Maximum water level ³ H [m]	Maximum tank \varnothing ³ D [m]	Maximum side length A [m]	Ratio between circular and rectangular tank
HSM-030	429	3,20	13,0	9,1	$A = 0,7 \times D$ 
HSM-040	571	3,60	14,3	10,0	
HSM-055	786	4,00	15,9	11,1	
HSM-075	1071	4,40	17,6	12,3	
HSM-110	1571	5,00	20,0	14,0	
HSM-150	2143	5,50	22,2	15,5	
HSM-185	2643	5,90	23,8	16,7	
HSM-220	3143	6,30	25,2	17,6	

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 shown are valid for ratio D/H=4; for smaller diameters higher water depths can be mixed.