

PRODUCT DATA SHEET



Floating Brush Aerators (FBA)

water | wastewater | sewage

OVERVIEW

Floating Brush Aerators are ideally suited for operation in municipal sewage treatment lagoons, especially shallow lagoon applications where vertical shaft-type aerators cannot operate.

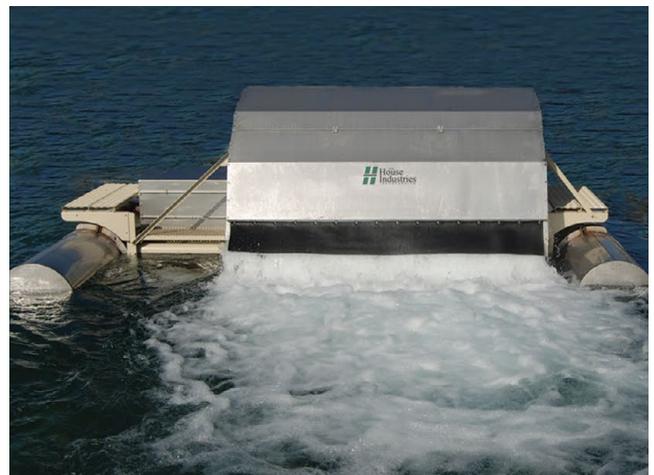
In a lagoon Floating Brush Aerators move the wastewater horizontally and create a circular flow pattern to prevent short-circuiting, and maximising lagoon treatment capacity. The horizontal mixing circulates highly oxygenated water throughout the lagoon, creating an oxygen cap to reduce odours from anaerobic breakdown of settled sludge.

The effective mixing provided by Floating Brush Aerators is also useful to create mixed conditions to minimise algal growth, and to redistribute accumulated sludge more evenly over the entire floor/base of the lagoon, thus improving lagoon treatment capacity & performance.

Floating Brush Aerators are also suitable for aeration in oxidation ditches, Pasveer channels, SBRs, equalization basins and aerobic digesters of all sizes and configurations.



Floating Brush Aerator shown with standard splash shields



Floating Brush Aerator shown with optional rotor cover

ADVANTAGES

- High aeration and mixing efficiency
- Robust design for harsh operating environments
- Ease of installation & operation
- Low & simple maintenance

STANDARD SPECIFICATIONS

Parameter	Units	FBA-022	FBA-037	FBA-056	FBA-075	FBA-110	FBA-150	FBA-186	FBA-220
Aerator size	kW	2.2	3.7	5.6	7.5	11	15	18.6	22
*1Standard Oxygen Transfer Rate (SOTR)	kgO ₂ /h	4.0	6.7	10.1	13.5	19.8	27.0	33.5	39.6
*2Mixing rate	m ³ /min	39	66	100	134	196	267	331	392
Assembled weight (approx.)	kg	530	660	910	1,140	1,560	2,280	2,730	3,090
Motor operates at 90% load based on nameplate data									
Stainless steel grease lubricated drive end and non-drive end bearings with minimum L10 rating of over 100,000 hours									
Gear reducer with minimum 2.0 service factor									
Triple-seal protection system for drive enclosure, completely sealing the drive assembly									
Factory test certificate for aeration efficiency									
Surface treatment for stainless steel weldments: SSPC-6 commercial shot blast passivation, acid bath pickling									

*1Based on factory tested Standard Aeration Efficiency (SAE) of minimum 1.8 kgO₂/kWh *2Based on factory tested Mixing Efficiency of minimum 17.8 m³/min per kW

STANDARD INCLUSIONS + OPTIONS

✓ = Standard Supply 0 = Optional Supply

Equipment	FBA-022	FBA-037	FBA-056	FBA-075	FBA-110	FBA-150	FBA-186	FBA-220
Complete aerator assembly including frame, foam-filled floats, rotor with blades, splash shields (2x both sides of rotor), service platforms (2x), drive assembly comprising motor, gear reducer and coupling	✓	✓	✓	✓	✓	✓	✓	✓
Mooring arm assembly, comprising 2x 5.5m long mooring arms, 1x cross brace & 2x mooring/ anchor caps and 2x mooring stakes, for lagoon mounting	✓	✓	✓	✓	✓	✓	✓	✓
Custom mooring system	0	0	0	0	0	0	0	0
*1Motor is TEFC, 415V, 3-ph, 50 Hz, class F insulation with IP55 protection & thermistors	✓	✓	✓	✓	✓	✓	✓	✓
Motor with custom IP rating	0	0	0	0	0	0	0	0
*2Rotor cover	0	0	0	0	0	0	0	0
*3Oil change kit	✓	✓	✓	✓	✓	✓	✓	✓

*1Motor suitable for DOL, VFD or soft start. *2Rotor cover eliminates spray. Splash shields are replaced by rotor cover when rotor cover is ordered. Note the rotor cover will lower the aeration efficiency by around 7.5%. *3Oil change kit required for gearbox oil changes. One (1) oil change kit is supplied with every aerator project regardless of quantity ordered.

MATERIALS OF CONSTRUCTION

Components		Materials	
Group 1	Drive end shaft & non-drive end shaft	316 SS	
Group 2	Foam-filled floats, floatation band attachments, non-drive end bearing cover, motor cover, splash shields (2x) and optional rotor cover	304L SS	
Group 3	Rotor and rotor blades, frame, drive enclosure, service platforms (2x) and mooring arm assembly	Option A	TGIC Powder Coated
		Option B	Hot-dipped galvanised
		Option C	304L SS
		Option D	316L SS

STANDARD EXCLUSIONS

- Control Panel
- Power cable fitted with 3-ph plug, for termination at aerator motor junction box
- Electrical 3-ph socket with local isolator mounted on a post, located at aerator on the embankment

MODEL SELECTION

- FBA-022** 2.2 kW Floating Brush Aerator
- FBA-037** 3.7 kW Floating Brush Aerator
- FBA-056** 5.6 kW Floating Brush Aerator
- FBA-075** 7.5 kW Floating Brush Aerator
- FBA-110** 11 kW Floating Brush Aerator
- FBA-150** 15 kW Floating Brush Aerator
- FBA-186** 18.6 kW Floating Brush Aerator
- FBA-220** 22 kW Floating Brush Aerator

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- A** Materials of construction, Group 3, TGIC Powder Coated
- B** Materials of construction, Group 3, Hot-dipped galvanised
- C** Materials of construction, Group 3, 304L SS
- D** Materials of construction, Group 3, 316L SS
- X** Rotor cover, without (standard)
- R** Rotor cover included
- X** Standard lagoon mooring assembly
- C** Custom mooring assembly
- X** Motor with IP55 protection (standard)
- C** Motor with custom IP rating (specify)
- X** Specification - standard
- C** Specification - custom



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