

Flow Booster Type ABS SB 1200 KA

SULZER

60 Hz

The special flow booster type ABS SB-KA has been developed to meet the specific requirements of those treatment processes in which the biomass is not freely floating in the wastewater as "flakes", but builds a "bio film" that is bound to the surface by bio film carriers.

Construction

The SB-KA is designed as a compact, water pressure-tight unit including propeller and integrally casted installation bracket for the attachment on the square guide tube. A special bracket which enables a simple, clearance free and cost-effective installation in every required alignment is available as these treatment processes require that the units are installed in a severe downward slope close to the surface. The flow boosters are available in the standard material version: **CR = stainless steel version.**

Maximum allowable temperature of the medium for continuous operation is 40 °C (104 °F).

Motor:

Squirrel cage, 3-phase, 8-pole 60 Hz, insulation class F (155 °C / 311 °F), max. submergence 20 m (66 ft).

Propeller:

Technically optimized, axially operating 3-blade propellers with very good self-cleaning effect for vibration-free operation. The propellers are designed to achieve high thrusts and therefore a high flow capacity in axial direction. Smooth rounded propeller front edge to reduce friction losses.

Solids deflection ring:

The patented solids deflection ring protects the mechanical seal from damage by ingress of solids or fibrous matter and penetration of plastic carrier in the hub is effectively avoided.

Bearings:

All bearings are lubricated-for-life and maintenance-free, with a calculated lifetime of more than 100,000 h

Gearbox:

High efficiency planetary gearbox, fatigue strength with a calculated lifetime more than 100,000 h.

Shaft sealing:

Mechanical seal: Silicon carbide / Silicon carbide. O-Rings / lip seals: NBR.

Seal monitoring:

DI-system with a sensor in the junction box.

Temperature monitoring:

TCS-Thermo-Control-System with thermal sensors in the stator which open at 140 °C (284 °F).

Cable:

10 m (33 ft) sewage resistant material.

Options:

Seals in viton, cable protection sleeve, PTC or PT 100 in the stator.

Accessories:

Lifting bracket, vertical angle adjustment, flush system for the mechanical seal.

Weight:

176/179 kg (388/395 lbs).



Materials

Part	CR (stainless steel)
Motor housing	1.4571 (AISI 316 Ti)
Sliding bracket	1.4408 / polyamide (CF-8M)
Motor shaft / Propeller shaft	St 60 / EN-GJS-600-3
Propeller	1.4571 (AISI 316 Ti)
Fasteners	1.4401 (AISI 316)

Material comparison: Europe / USA

EN 1563; EN-GJS-600-3	ASTM A536, 80-55-06
St 60/1.0060	ASTM / AISI A276 Gr. 65
1.4401	ASTM / AISI 316
DIN 17 445; 1.4408	ASTM / AISI CF-8M
DIN 17 440; 1.4571	ASTM / AISI 316 Ti

System data

Motor	A 35/8	A 46/8
Rated power (kW / hp)	3.5 / 4.7	4.6 / 6.2
Rated current at 460 V (A)	8.7	10.3
Speed (min ⁻¹)	100*	100*
Motor efficiency (%)	76	76.5
Power factor	0.66	0.74

* = gear ratio i = 8

Flow booster performance table

Hydraulic No.	Mixer power P _p in kW / hp	Motor kW / hp
1236	1.4 / 1.9	3.5 / 4.7
1237	2.6 / 3.5	4.6 / 6.2

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