Flow Booster Type ABS XSB 900 M

SULZER

50 Hz

The compact flow boosters have been designed for a wide range of applications. The units are suitable to achieve flow pattern in large tanks and open waters for mixing and stirring applications.

Construction

The flow booster type ABS XSB is designed as a compact, water pressure-tight unit including propeller and integrally lockable coupling system. The flow boosters are available in the material version: **Cast iron (EC)**.
Maximum allowable temperature of the medium for continuous operation is 40 °C.

Motor:
Premium Efficiency IE3, squirrel cage, 3-phase, 4-pole, 50 Hz, insulation class F (155 °C), max. submergence 20 m.

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.

Solids deflection ring:
The patented solids deflection ring protects the mechanical seal from damage by ingress of solids or fibrous matter.

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

Gearbox:
Robust fatigue strength gearbox of high efficiency and very long operating life, oil lubricated.

Shaft sealing:
Motor side radial seal, medium side silicon carbide mechanical seal independent of direction of rotation. O-Rings / lip seals: NBR.

Seal monitoring:
DI-system with a sensor in the junction box, oil chamber, motor and gearbox.

Temperature monitoring:
TCS-Thermo-Control-System with bimetallic contacts as thermal sensors in every phase of the stator give a timely warning or switch off the motor automatically before the permissible temperature limit e.g. due to overloading, high temperatured medium, or other problem sources, has been exceeded.

Cable:
10 m sewage resistant material.
Optional lengths: 15 m, 20 m, 25 m, 30 m.

Options:
Explosion-proof version, Insulation class H, seals in viton, EMC cable, cable protection sleeve, PTC or PT 100 in the stator, double mechanical seal.

Weight of flow booster:
PA 12/4, PA 35/4 = 226 kg
PA 19/4 = 238 kg
PA 25/4 = 243 kg

Weight of concrete pedestal and coupling device:
XSB 900 = 225 kg

Motor data

Motor	PA 12/4	PA 19/4	PA 25/4	PA 35/4
Rated power P_2 [kW]	1.2	1.9	2.5	3.5
Rated current at 400 V [A]	2.37	3.75	4.63	7.63
Motor efficiency [%]	87.8	88.3	89.6	88.4
Propeller speed [min^{-1}]	86	108	121	134

Flow booster performance table

Hydraulic No.	Propeller dia. in mm	Mixer power P_P in kW	Motor kW
XSB 931	900	0.6	1.2
XSB 932	900	1.2	1.9
XSB 933	900	1.9	2.5
XSB 934	900	2.4	3.5

Materials

Part	Material
Motor housing	EN1563; EN-GJS-400-18 (GGG-40)
Motor shaft	1.0060 (St 60-2)
Propeller shaft	1.7225 fully encapsulated (42CrMo4)
Propeller shaft (double mech.seal)	1.4418
Propeller	1.4571 (AISI 316 Ti)
Coupling bracket	DIN 17 445; 1.4408 (AISI 316L)
Fasteners	1.4401 (AISI 316)