Flow Booster Type ABS XSB 1600 to 2500 M

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.

50 Hz

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 2-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 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
Thermal sensors in the stator which open at 140 °C.

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

Options
Explosion-proof version, Insulation class H, seals in viton, EMC cable, PTC in the stator, double mechanical seal.

Weight of flow booster

XSB	Weight (kg)
1621, 1625, 1822, 1823, 2224, 2525, 2521	300
1622, 1624, 1821, 1824, 1825, 2221, 2521, 2524	305
1623, 2022, 2023, 2522, 2523	310

Weight of concrete pedestal and coupling device

XSB	Weight (kg)
1621, 1622, 1623, 1624, 1625,1821, 1822, 1823, 1824, 1825, 2022, 2023	490
2221, 2224, 2521, 2522, 2523, 2524	650

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	Reinforced solid polyurethane
Coupling bracket	DIN 17 445; 1.4408 (AISI 316L)
Fasteners	1.4401 (AISI 316)

Motor data

Motor	PA 12/4	PA 19/4	PA 25/4	PA 35/4	PA 40/4	PA 45/4	PA 55/4
Rated power (kW)	1.2	1.9	2.5	3.5	4.0	4.5	5.5
Rated current at 400 V (A)	2.37	3.75	4.63	7.63	8.38	11.4	12.5
Motor efficiency (%)	87.8	88.3	89.6	88.4	88.2	89.5	89.9
Propeller speed (r/min)	42 / 47	39 / 47 / 53 / 54	43 / 47 / 53 / 61	53 / 60 / 61 / 68	64	57 / 61	87

Flow booster performance table

Hydraulic No.	Propeller dia. in mm	Mixer power P_p in kW	Motor kW
XSB 1621	1600	0.7	1.2
XSB 1622	1600	1.3	1.9
XSB 1623	1600	2.0	2.5
XSB 1624	1600	2.8	3.5
XSB 1625	1600	4.6	5.5
XSB 1821	1800	0.8	1.2
XSB 1822	1800	1.2	1.9
XSB 1823	1800	1.5	1.9
XSB 1824	1800	2.7	3.5
XSB 1825	1800	3.3	4.0
XSB 2021	2000	1.1	1.9
XSB 2022	2000	1.6	2.5
XSB 2023	2000	2.1	2.5
XSB 2024	2000	3.1	3.5
XSB 2025	2000	3.6	4.0
XSB 2221	2200	1.1	1.9
XSB 2222	2200	1.6	2.5
XSB 2223	2200	2.4	2.5
XSB 2224	2200	3.9	4.5
XSB 2521	2500	1.4	1.9
XSB 2522	2500	1.7	2.5
XSB 2523	2500	2.2	2.5
XSB 2524	2500	3.0	3.5
XSB 2525	2500	3.7	4.5

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