

Flow Booster Type ABS XSB 1400 to 2750 LX

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 (104 °F).

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 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 (mm):

10 (33 ft) sewage-resistant material.
Optional lengths: 15 (49 ft), 20 (66 ft), 25 (83 ft), 30 (98 ft).

Options:

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



Materials

Part	Material
Motor housing	EN-GJS-400-18/ASTM A536, 60-40-18
Motor shaft	1.0060/ASTM/AISI A276 Gr.65
Propeller shaft	1.7225 fully encapsulated (42CrMo4)
Propeller shaft (double mech. seal)	1.4418
Propeller	Composite (glass fibre, resin, gel coat)
Coupling bracket	1.4408/ASTM/AISI 316L
Fasteners	1.4401/ASTM/AISI 316

Weight of flow booster:

XSB 1431 = 278 kg (613 lbs)
XSB 2231, 2531, 2731 = 315 kg (695 lbs)
XSB 2232, 2233, 2532, 2533, 2732, 2733 = 320 kg (706 lbs)

Weight of concrete pedestal and coupling device:

1200 mm: XSB 1431, 223.., 253.., 273.. = 970 kg (2139 lbs)
2050 mm: XSB 1431, 223.., 253.., 273.. = 1470 kg (3241 lbs)

Motor

Premium Efficiency IE3, squirrel cage, 3-phase, 4-pole, 60 Hz. Max. submergence 20 m (66 ft).

Insulation: Class F (155 °C / 311 °F)

Motor data

Motor	PA 55/4	PA 75/4
Rated power P_2 (kW/hp)	5.5 / 7.4	7.5 / 10.1
Rated current at 480 V (A)	11.6	13.3
Motor efficiency (%)	89.5	90.7
Propeller speed (r.p.m)	46 / 51 / 56 / 82	51 / 56 / 59

Flow booster performance table

Hydraulic No.	Propeller dia. in mm / ft	Mixer power P_p in kW / hp	Motor kW / hp
XSB 1431	1400 / 4.6	4.3 / 5.8	5.5 / 7.4
XSB 2231	2200 / 7.2	4.3 / 5.8	5.5 / 7.4
XSB 2232	2200 / 7.2	5.1 / 6.8	5.5 / 7.4
XSB 2233	2200 / 7.2	6.5 / 8.7	7.5 / 10.1
XSB 2531	2500 / 8.2	4.0 / 5.4	5.5 / 7.4
XSB 2532	2500 / 8.2	5.2 / 7.0	5.5 / 7.4
XSB 2533	2500 / 8.2	6.3 / 8.4	7.5 / 10.1
XSB 2731	2750 / 9.0	4.2 / 5.6	5.5 / 7.4
XSB 2732	2750 / 9.0	5.5 / 7.4	7.5 / 10.1
XSB 2733	2750 / 9.0	6.5 / 8.7	7.5 / 10.1

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