

Flow Boosters Type ABS SB



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Sulzer's standard range of flow boosters type ABS SB – economical but robust without compromising on the reliable design.

Main Applications

The Sulzer flow boosters type ABS SB is a good choice for gently circulating and mixing fluids in sewage treatment plants and industrial areas. It is suitable for all low-speed wastewater mixing and circulating applications, including:

- Equalization of sewage
- Biological process (aerobic, anoxic and anaerobic)
- Selector (contact zone)
- Hazardous locations:
Certification for ATEX (Ex II 2G k Ex d IIB T4) available as an option

Key Customer Benefits

Economical and reliable

- Using asynchronous electrical motors, ranging from 1.4 to 4.6 kW (1.9 to 6.2 hp) and high-efficiently propeller
- Reduced energy costs
- Short mixing times

Easy transport and installation

2-blade mono-cast propellers are packed separately for safe transportation and easy mounting at site.

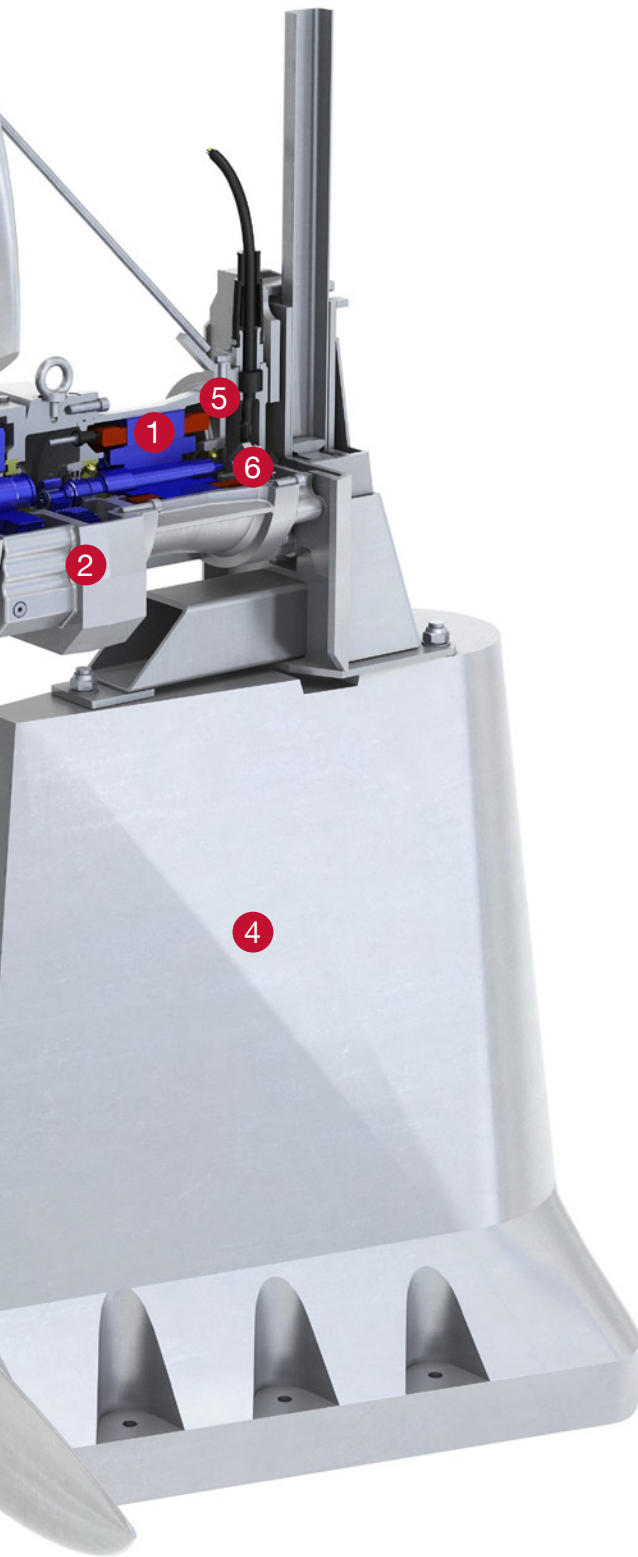
Most models are mounted complete, while larger 3-blade models are specially designed for blade-by-blade attachment without special tools.

Easy inspection

Connection to the vibration-absorbing concrete pedestal is made with an innovative coupling system, allowing the unit to be raised and lowered for inspection even in filled tanks giving a high reliability.



Features and Benefits



- 1 Efficient three phase motor, water pressure-tight encapsulated. Protection type IP 68, stator insulation class F (155°C). Motor shaft and rotor dynamically balanced**
 - Economical and reliable design
- 2 2/3-stage helical gearbox**
 - Allows numerous ratios via fatigue-strength helical gears
 - Calculated lifetime of more than 100,000 hours for the oil-lubricated bearings
 - Compact and lightweight drives
- 3 Mono-cast propeller** (except SB 900/ 1200 series)
 - For effective mixing and vibration-free operation
 - Reduces strain on the drive unit through extreme smoothness and vibration damping – the result of highly elastic design and geometry
 - Produces high thrust and high flow capacity in an axial direction with performance-optimized 2- and 3-blade designs
 - Self-cleans effectively due to optimized blade profile and special curved propeller edge
 - Reducing the risk of accumulation of fibrous material, the dynamical balanced rotating assembly will always run smoothly extending the bearing lifetime
- 4 Patented concrete pedestal with heavy-duty, fully lockable coupling device**
 - Eliminates turbulences with its streamlined shape and thus improves propeller efficiency
 - Suppresses all damaging vibration through its mass and material characteristics
 - Resists corrosion and provides a robust, reliable connection to the tank floor
 - Allows raising and lowering of the unit for inspection – even in filled tanks
- 5 TCS (Thermo Control System) with bimetallic contacts as thermal sensors**
 - Provides a warning or switches off the motor automatically before the permissible temperature limit is exceeded, whether due to high- temperature medium or another problem source
- 6 DI system with sensors in the junction box and motor**
 - Provides a warning before water is able to enter the motor or unit
- 7 Solids deflection ring**
 - Protects the mechanical seal from damage due to the ingress of solids or fibrous matter

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Operating data

| 50 Hz | | 60 Hz |
|----------------|--------------------|--------------------------------------|
| 900 – 2,500 mm | Propeller diameter | 900 – 2,500 mm 35 – 98 in |
| up to 4.5 kW | Motor power | up to 4.6 kW up to 6.2 hp |
| up to 81% | Motor efficiency | up to 81.6% |
| up to 4.3 m³/s | Mixing flow | up to 4.2 m³/s up to 66,600 USgpm |

Materials

| Flow booster part | |
|-------------------------------|--|
| Motor housing | EN-GJS-400-18 / ASTM A 536, 60-40-18 |
| Motor shaft / propeller shaft | 1.0060, ASTM, AISI A276 Gr.65 / 1.7225 fully encapsulated (42CrMo4) |
| Propeller | Reinforced solid polyurethane (SB 1200 composite, fiberglass, resin) (SB 900 1.4571 – AISI 316) |
| Coupling bracket | 1.4408 / ASTM / AISI CF – 8M |

We Do What We Say

Customer partnership

- We are a **reliable partner**
- We provide a **high level of service**
- We **make our customers more competitive**



Committed people

- We drive **accountability**
- We are **open and transparent**
- We are **team players**



Operational excellence

- We **focus on results**
- We take **initiative** and work within **established processes**
- We **act safely**



A Global Specialist at Your Doorstep

Sulzer serves clients worldwide through a network of over 150 production and service sites and has a strong footprint in emerging markets.



● Sulzer headquarters,
Winterthur, Switzerland



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