

Submersible Mixer Type ABS XRW 900

SULZER

50 Hz

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

Construction

The submersible mixer is designed as a compact, water-pressure-tight unit including propeller and integrally casted installation bracket for the attachment on the square guide tube. Different versions with an open, closed bracket or a flow ring can be chosen. The mixers are available in two standard material versions; cast iron (EC), and stainless steel (CR).

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:

High-efficiency planetary gearbox, fatigue strength with a calculated life time 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, oil chamber*, motor, and gearbox.

Temperature monitoring:

TCS-Thermo-Control-System with thermal sensors in the stator that open at 140 °C.

Cable:

10 m, sewage-resistant material.

Optional lengths: 15 m, 20 m, 25 m, 30 m.

Options:

Explosion-proof version, flow ring, seals in viton, PTC or PT 100 in the stator, vibration damper, lifting bracket, additional seal (C-Cr) at motor side, EMC cable, insulation class H.

Weight:

XRW 900-PA 110/4 = 260 kg. With flow ring = 338 kg.

XRW 900-PA 150/4 = 295 kg. With flow ring = 373 kg.

XRW 900-PA 220/4 = 320 kg. With flow ring = 398 kg.

* not in Ex version.



Motor data

| Motor | PA 110/4 | PA 150/4 | PA 220/4 |
|----------------------------|------------------|------------------------------------|------------------|
| Rated power (kW) | 11.0 | 15.0 | 22.0 |
| Rated current at 400 V (A) | 21.7 | 29.9 | 44.8 |
| Speed (min ⁻¹) | 246 ¹ | 246 ¹ /295 ² | 295 ² |
| Motor efficiency (%) | 92.1 | 92.3 | 92.1 |
| Power factor | 0.79 | 0.78 | 0.77 |

¹ = gear ratio i = 6; ² = gear ratio i = 5

Mixer performance

| Hydraulic No. | Mixer power P _p in kW | Motor kW |
|---------------|----------------------------------|----------|
| 9032 | 7.2 | 11.0 |
| 9033 | 8.1 | 11.0 |
| 9034 | 8.9 | 11.0 |
| 9035 | 10.6 | 15.0 |
| 9033 | 13.1 | 15.0 |
| 9034 | 14.6 | 22.0 |
| 9035 | 18.5 | 22.0 |
| 9052* | 5.6 | 11.0 |
| 9053* | 6.3 | 11.0 |
| 9054* | 6.8 | 11.0 |
| 9055* | 8.2 | 15.0 |
| 9053* | 9.0 | 15.0 |
| 9054* | 11.3 | 22.0 |
| 9055* | 13.9 | 22.0 |

*with flow ring

Materials

| Part | EC (cast iron) | CR (stainless steel) |
|-------------------------------|--|----------------------------|
| Motor housing | EN-GJL-250 painted | 1.4571 (AISI 316 Ti) |
| Sliding bracket | EN-GJL-250 painted / polyamide (CF-8M) | 1.4470 / polyamide (CF-8M) |
| Motor shaft / Propeller shaft | 1.4021 / EN-GJS-700-3 | 1.4021 / EN-GJS-700-3 |
| Propeller | 1.4571 (AISI 316 Ti) | 1.4571 (AISI 316 Ti) |
| Fasteners | 1.4401 (AISI 316) | 1.4401 (AISI 316) |

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