

Submersible Mixer Type ABS XRW 900

SULZER

60 Hz

The compact submersible mixers have been designed for a wide range of applications. They are suitable to achieve 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 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 (104 °F).

Motor: Premium Efficiency IE3, squirrel cage, 3-phase, 4-pole, 60 Hz, insulation class F (155 °C / 311 °F), max. submergence 20 m (66 ft).

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: Leakage sensor (DI) in the junction box, oil chamber*, and motor.

* not in FM version.

Temperature monitoring: TCS-Thermo-Control-System with thermal sensors in the stator which open at 140 °C (284 °F).

Cable: 10 m (33 ft), sewage-resistant material.

Optional lengths: 15 m (49 ft), 20 m (66 ft), 25 m (82 ft), 30 m (98 ft)

Options: Explosion-proof version, flow ring, seals in viton, PTC in the stator, vibration damper, lifting bracket, additional seal (C-Cr) at motor side, EMC cable.

Weight: XRW 900-PA 130/4 = 250 kg (552 lbs).

XRW 900-PA 170/4 = 285 kg (629 lbs)

XRW 900-PA 250/4 = 310 kg (684 lbs)

With flow ring add = 78 kg (172 lbs).

Materials

Part	EC (cast iron)	CR (stainless steel)
Motor housing	EN-GJL-250 painted	1.4404 (AISI 316 L)
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)



Motor data

Motor	PA 130/4	PA 170/4	PA 250/4
Rated power (kW / hp)	13.0 / 17.4	17.0 / 22.8	25.0 / 33.5
Rated current at 480 V (A)	21.8	28.8	43.2
Speed (min ⁻¹)	254 ²	254 ² /295 ¹	295 ¹
Motor efficiency (%)	93	93.1	92.7
Power factor	0.77	0.76	0.75

1 = gear ratio i = 6; 2 = gear ratio i = 7

Mixer performance

Hydraulic No.	Mixer power P _p in kW/hp	Motor kW/hp
9032	8.1 / 10.8	13.0 / 17.4
9033	9.2 / 12.2	13.0 / 17.4
9034	9.8 / 13.0	13.0 / 17.4
9035	11.6 / 15.5	17.0 / 22.8
9033	13.2 / 17.6	17.0 / 22.8
9034	14.6 / 19.6	25.0 / 33.5
9035	18.4 / 24.6	25.0 / 33.5

Material comparison: Europe / USA	
EN 1561; EN-GJL-250	ASTM A48; Class 35 B
EN 1563; EN-GJS-700-3	ASTM A536, 100-70-03
ST 60/ 1.0060	ASTM - AISI A276 Gr. 65
1.4021	ASTM - AISI 420
1.4401 / 1.4470	ASTM - AISI 316 / -A 890 4A
1.4404	ASTM - AISI 316 L

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