

Submersible Mixer Type ABS XRW 330

SULZER

60 Hz

The compact submersible stainless steel mixer type ABS XRW 330, is specifically designed for the major mixing functions during the homogenization of sludge and slurry.

Construction

The submersible mixer is designed as a compact, water-pressure-tight unit, including propeller and integrally casted installation bracket for attachment to a square guide tube. Maximum allowable temperature of the medium for continuous operation is 40 °C (104 °F).

Motor:

Premium Efficiency, IE3 equivalent, sensorless permanent-magnet motor with high overload capacity; 60 Hz; 10-pole; 480 V* using variable frequency drive (VFD) control. Protection type IP 68, with stator insulation Class F.

Start-up:

variable frequency drive (VFD) Max. submergence 20 m (66 ft).

Propeller:

The mixer is equipped with a special 2-blade mixed-flow propeller. With this propeller a very strong rotating turbulent flow is produced in semi axial flow direction. Therefore this propeller combines all properties for the homogenization of sewage sludge which belongs to the intrinsic viscous substances.

Solids deflection ring:

Enhanced solids deflection ring design. The patented solids deflection ring protects the mechanical seal from damage by ingress of solid or fibrous matter.

Bearings:

All bearings are lubricated-for-life and maintenance-free, with a calculated lifetime of more than 100,000 h.

Shaft sealing:

Sic-Sic, covered mechanical seal at medium side. NBR O-rings and lip seals.

Seal monitoring:

System with leakage sensors (DI) in the oil, motor and cable connection chambers.

Temperature monitoring:

Overtemperature protection using a PTC thermistor in the stator at 140 °C (284 °F).

Cable:

10 m (33 ft) sewage-resistant, shielded, VFD power cable type 37-102VFD

Optional lengths (m):

15 m (49 ft), 20 m (66 ft), 30 m (98 ft), 40 m (131 ft), 50 m (164 ft).

Options:

Explosion-proof version, additional seal (C-Cr) at motor side, seals in viton, vibration damper, lifting hoop.

Weight:

80 kg (176 lbs).

* other voltages available



System data

Motor	PM 30/10	PM 50/10
Rated power (kW/hp)	3.0 / 4.0	5.0 / 6.7
Motor efficiency (%)	90.7	88.9
Variable Frequency Drive (VFD)	A	B
Rated power (kW/hp)	4.0 / 5.4	5.5 / 7.4
Rated current (A) at 480 V	9.9	12.9
Total system efficiency (%)	88.0	86.5

Mixer performance

Hydraulic No.	Mixer power P_p in kW/hp	Motor kW/hp
3311 A	1.2 / 1.6	3.0 / 4.0
3312 A	1.5 / 2.0	3.0 / 4.0
3313 A	2.0 / 2.7	3.0 / 4.0
3311 B	2.5 / 3.4	5.0 / 6.7
3312 B	3.0 / 4.0	5.0 / 6.7
3313 B	3.5 / 4.7	5.0 / 6.7
3314 B	4.0 / 5.4	5.0 / 6.7
3315 B	4.5 / 6.0	5.0 / 6.7

Materials

Part	
Motor housing	1.4404 (AISI 316 L)
Sliding bracket	1.4470 (AISI 329) / polyamide (CF-8M)
Motor shaft	1.4401 (AISI 316)
Propeller	1.4571 (AISI 316 Ti)
Fasteners	1.4401 (AISI 316)
Lifting band	1.4571 (AISI 316 Ti)