

Submersible Mixer Type ABS RW 480

SULZER

60 Hz

The submersible mixer RW 480 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-pressurertight unit including propeller and integrally casted installation bracket for attachment to the square guide tube. The mixers are available in cast iron version with stainless steel propeller. Maximum allowable temperature of the medium for continuous operation is 40 °C (104 °F).

Motor:

Squirrel cage, 3-phase, 4-pole 60 Hz, insulation class F (stator wound and impregnated according to class H), max. submergence 20 m (66 ft).

Propeller:

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

Solids deflection ring:

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

Gearbox:

High efficiency helical gearbox, fatigue strength with a calculated lifetime 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 and gear box.

Temperature monitoring:

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

Cable:

10 m (33 ft) sewage-resistant material.

Options:

Seals in viton, shielded cable, PTC or PT 100 in the stator.

Accessories:

Lifting bracket, vibration damper.



Weight:

163 kg (359 lbs) A 90/4, 169 kg (373 lbs) A130/4.

Features

- Highly efficient submersible mixer for the homogenisation of high concentrated sewage sludge.
- Reduced energy cost due to a unique drive unit design including a high efficient gear box.
- No risk to motor overloading due to high or varying dry matter content.
- Reduced mixing times.
- Blockage-free 2-blade propeller reduce LCC.

Motor data

Motor	A 90/4	A 130/4
Rated power (kW/hp)	9.0 / 12.0	13.0 / 17.4
Rated current at 460 V (A)	15.3	21.9
Speed (min ⁻¹)	507 - 536	563
Motor efficiency (%)	88.0	86.9
Power factor	0.84	0.86

Mixer performance table

Hydraulic No.	Mixer power P _p in kW/hp	Motor kW/hp
4811	6.7 / 9.0	9.0 / 12.0
4812	7.6 / 12.2	9.0 / 12.0
4813	9.4 / 12.6	13.0 / 17.4

Materials

Part	Material (Europe)	Material (USA)
Motor housing	EN-GJL-250; EN 1561	ASTM A48, Class 35 B
Sliding bracket	EN-GJS-400-18 EN 1563 painted / polyamide (CF-8M)	ASTM A536; 60-40-18 painted, polyamide (CF-8M)
Motor shaft	1.4021	ASTM / AISI 420
Propeller shaft	1.4418	ASTM / AISI S165M
Propeller	DIN 17 440; 1.4571	ASTM / AISI 316 Ti
Fasteners	1.4401	ASTM / AISI 316

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