

Submersible Mixer Type ABS XRW 750

SULZER

60 Hz

The compact submersible mixer type ABS XRW 750 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.

The mixers are available in two standard material versions:

EC = cast iron version, CR = stainless steel version

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:

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 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 lifetime 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 that 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).

Materials

Part	EC (cast iron) Europe / USA	CR (stainless steel) Europe / USA
Motor housing	EN-GJL-250; EN 1561 painted / ASTM A48, Class 38 B	1.4404 / ASTM - AISI 316 L
Sliding bracket	EN-GJL-250; EN 1561 polyamide (CF-8M) / ASTM A48, Class 38 B	1.4470 / polyamide (CF-8M) / ASTM - A 890 4A
Motor shaft / Propeller shaft	1.4021 / ASTM - AISI 420 / EN-GJS-700-3 / ASTM A536, 100-70-03	1.4021 / ASTM - AISI 420 / EN-GJS-700-3 / ASTM A536, 100-70-03
Propeller	1.4571; DIN 17 440 / ASTM - AISI 316 Ti	1.4571; DIN 17 440 / ASTM - AISI 316 Ti
Fasteners	1.4401 / ASTM - AISI 316	1.4401 / ASTM - AISI 316



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 reduces LCC.

Motor data

Motor	PA 130/4
Rated power (kW / hp)	13.0 / 17.4
Rated current at 480 V (A)	21.8
Speed (min ⁻¹)	296 ¹
Motor efficiency (%)	93
Power factor	0.77

¹ = gear ratio i = 6

Mixer performance table

Hydraulic No.	Mixer power P _p in kW/hp	Motor kW/hp
7511	9.7 / 13.0	13.0 / 17.4

Options: explosion-proof version, viton seals, additional seal (C-Cr), shielded cable, PTC or PT 100 in the stator, insulation Class H.

Accessories: lifting bracket, vertical angle adjustment, flush system for the mechanical seal.

Weight: 390 kg (446 lbs.).