

# Submersible Recirculation Pump Type ABS XRCP 800 PA

# SULZER

## 50 Hz

Compact, submersible, recirculation pump type XRCP is designed for pumping activated sludge in treatment plants during the nitrification and denitrification process, as well as for pumping of storm, surface and river water.

### Construction

The submersible recirculation pump type XRCP is designed as a compact, water-pressure-tight unit, including propeller and bracket with well proven automatic coupling system using a single guide rail. The single guide rail coupling system guarantees quick and economical installation to DIN-flange. The XRCP is 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 / Lipseals: NBR.

#### Seal monitoring:

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

\* not in Ex version.

#### Temperature monitoring:

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

#### Cable:

10 m, sewage-resistant material.

#### Optional lengths (m):

15, 20, 30, 40, 50.

#### Options:

Explosion-proof version, seals in viton, PTC in the stator, additional seal (C-Cr) at motor side, EMC cable.

#### Weight (kg):

- XRCP 800-PA 110/4 = 395 kg
- XRCP 800-PA 150/4 = 430 kg
- XRCP 800-PA 220/4 = 455 kg
- XRCP 800-PA 250/4 = 455 kg



### Materials

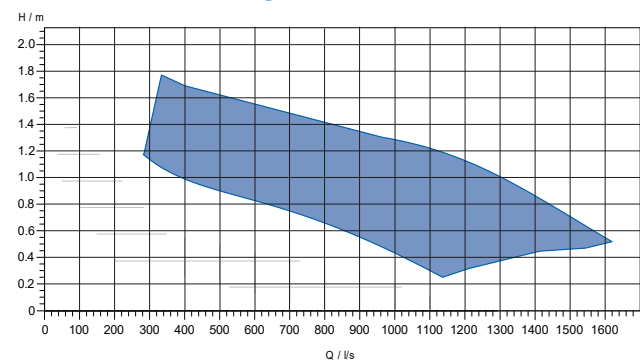
Part	EC material	CR material
Motor housing	EN-GJL-250 painted	1.4404 (AISI 316L)
Connection chamber	EN-GJL-250 painted	1.4470 (AISI 329)
Motor shaft / Propeller shaft	1.4021 (AISI 420) / GJS-700-3	1.4021 (AISI 420) / GJS-700-3
Propeller	1.4571 (AISI 316 Ti)	1.4571 (AISI 316Ti)
Fasteners / Motor	1.4401 (AISI 316)	1.4401 (AISI 316)
Bracket	Galvanized steel	1.4404 (AISI 316L)

### Motor data

Motor	PA 110/4	PA 150/4	PA 220/4	PA 250/4
Rated power (kW)	11.0	15.0	22.0	25.0
Rated current (A) at 400 V	21.7	29.9	44.8	50.9
Speed (min <sup>-1</sup> )	293 <sup>1</sup>	293 <sup>1</sup> / 366 <sup>2</sup>	293 <sup>1</sup> / 366 <sup>2</sup>	293 <sup>1</sup> /366 <sup>2</sup>
Motor efficiency (%)	92.1	92.3	92.1	91.6
Power factor	0.79	0.78	0.77	0.77

<sup>1</sup> Gear ratio i = 5, <sup>2</sup> Gear ratio i = 4

### Performance range



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