

# Submersible Recirculation Pump Type ABS XRCP 800 PA

# SULZER

## 60 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 (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 (66ft).

#### 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:

DI-system with a sensor in the junction box, oil chamber and motor. Only one single control wire.

#### Temperature monitoring:

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

#### Cable:

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

#### Optional lengths (m):

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

#### Options:

Explosion-proof version, seals in viton, PTC or PT 100 in the stator, additional seal (C-Cr) at motor side, EMC cable.

#### Weight (kg):

- XRCP 800-PA 110/4 = 395 kg (871 lbs);
- XRCP 800-PA 150/4 = 430 kg (948 lbs);
- XRCP 800-PA 220/4 = 455 kg (1003 lbs).



### Materials

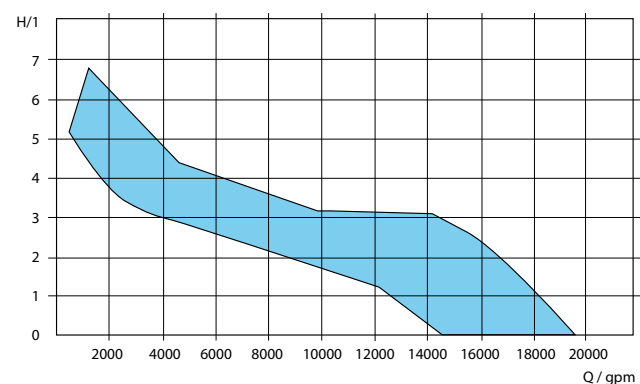
Part	EC material	CR material
Motor housing	EN-GJL-250 painted (ASTM A48; Class 35B)	1.4571 (AISI 316Ti)
Connection chamber	EN-GJL-250 painted (ASTM A48; Class 35B/CF-8M)	1.4470 (ASTM A 890 4A/CF-8M)
Motor shaft / Propeller shaft	1.4021 (AISI 420) / GJS-700-3	1.4021 (AISI 420) / GJS-700-3
Propeller	1.4571 (AISI 316 Ti)	1.4571 (AISI 316Ti)
Fasteners / Motor	1.4401 (AISI 316)	1.4401 (AISI 316)
Bracket	galv.steel or 1.4571 (AISI 316Ti)	1.4571 (AISI 316Ti)

### 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 (A) at 480 V	22.8	30.1	43.2
Speed (min <sup>-1</sup> )	294 <sup>1</sup>	293 <sup>1</sup> / 351 <sup>2</sup>	293 <sup>1</sup> / 351 <sup>2</sup>
Motor efficiency (%)	93.0	93.1	92.7
Power factor	0.77	0.76	0.75

<sup>1</sup> = gear ratio i = 6, <sup>2</sup> = gear ratio i = 5

### Performance curve



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