

# Submersible Recirculation Pump Type ABS XRCP 250

# 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 cast iron (EC) and stainless steel (CR) versions.

Maximum allowable temperature of the medium for continuous operation is 40 °C (104 °F).

### Motor:

Premium Efficiency IE3, three-phase, squirrel-cage motor; 480 V\*; 60 Hz; 6-pole. Protection type IP 68, with stator insulation Class H.

\* other voltages available.

### Start-up:

direct on line (DOL) Max. submergence 20 m (66 ft).

### Propeller:

Technically optimized, axially operating 2- or 3-blade propeller, designed to achieve high thrust and therefore a high flow capacity in an axial direction. The propeller is self-cleaning and so ensures vibration-free operation.

### 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.

### Shaft sealing:

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

### Seal monitoring:

DI-system with sensors in the oil, motor and cable connection chambers. Only one single control wire.

### Temperature monitoring:

Thermal sensors in the stator which open at 140 °C (284 °F).

### Cable:

10 m (33 ft) sewage-resistant material.

### Optional lengths (m):

15 (39 ft), 20 (66 ft), 30 (98 ft), 40 (131 ft), 50 (164 ft).

### Options:

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

### Weight (kg):

XRCP-PA 18/6 = 85 kg (187 lbs);

XRCP-PA 35/6 = 107 kg (235 lbs)



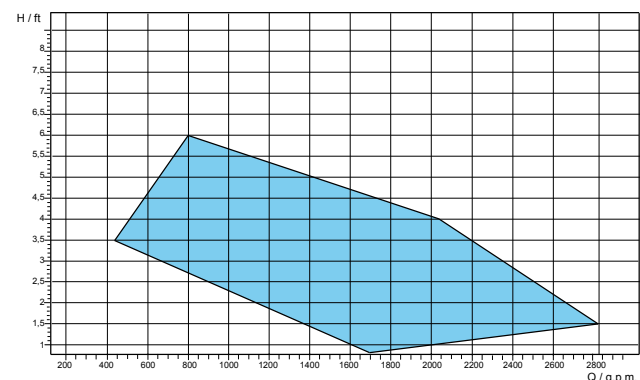
## Materials

Part	EC material	CR material
Motor housing	EN-GJL-250 painted (ASTM A48; Class 35B)	1.4404 (AISI 316L)
Connection chamber	EN-GJL-250 painted (ASTM A48; Class 35B)	1.4408 (CF-8M)
Motor shaft	1.4021 (AISI 420)	1.4401 (AISI 316)
Propeller	1.4460 (AISI 329)	1.4460 (AISI 329)
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 18/6	PA 35/6
Rated power (kW/hp)	1.8 / 2.4	3.5 / 4.7
Rated current (A) at 480 V	3.4	6.9
Speed (min <sup>-1</sup> )	1153	1169
Motor efficiency (%)	82.9	84.8
Power factor	0.77	0.72

## Performance curve



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