

# Submersible Recirculation Pump Type ABS RCP 500

# SULZER

## 60 Hz

Compact, submersible recirculation pump RCP 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 RCP 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 RCP is available in cast iron (EC) and optional in stainless steel (CR).

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

#### Motor:

Squirrel cage, 3-phase, 12-pole, 60 Hz. Protection type IP68, with stator insulation Class F (155 °C / 311 °F), max. submergence 20 m (66 ft).

#### Propeller:

Technically optimized, axially operating 3-blade propeller 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 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:

Mechanical seal: Silicon carbide / Silicon carbide.

O-rings / lip seals: NBR.

#### Seal monitoring:

Leakage sensors (DI) in the oil, motor and cable connection chambers.

#### Temperature monitoring:

TCS-Thermo-Control-System with thermal sensors in the stator which open 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, cable protection sleeve, shielded cable, PTC or PT 100 in the stator, insulation class H\*.

#### Weight:

- with motor A 60/12 - 215 kg (474 lbs).
- with motor A 90/12 - 250 kg (551 lbs).
- with motor A 120/12 - 255 kg (562 lbs).



### Materials

Part	EC (cast iron) material	CR (stainless steel) material
Motor housing	EN-GJL-250, painted (ASTM A48; Class 35B)	1.4404 (AISI 316L)
Connection chamber	EN-GJS-400-18 painted (ASTM A536; 60-40-18)	1.4408 (CF-8M)
Motor shaft	1.4021 (AISI 420)	1.4404 (AISI 316L)
Propeller	1.4571 (AISI 316Ti)	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	A 60/12	A 90/12	A 120/12
Rated power (kW / hp)	6.0 / 8	9.0 / 12	12.0 / 16
Rated current at 460 V (A)	17.5	24.0	31.4
Speed (min <sup>-1</sup> )	571	566	569
Motor efficiency (%)	75.2	77.6	78.3
Power factor	0.57	0.61	0.61

### Performance field

