

Submersible Sewage Pump Type ABS XFP CB Plus

Submersible sewage pump type ABS XFP CB Plus is designed for municipal and industrial wastewater equipped with Premium Efficiency IE3-level motor. Suitable for clean water and wastewater, sewage with sludge and high rag content, solids and fibrous material.

Construction

- Premium Efficiency IE3 motors in accordance with IEC 60034-30. Testing in accordance with IEC60034-2-1.
- Premium Efficiency motors designed for VFD operation in accordance with IEC/TS 60034-25 A ($U_{peak} < 1300$ V).
- The water-tight fully flood-proof motor and the pump section form a compact and robust unit, easy to clean and easy to service.
- Water pressure sealed connection chamber, with two stage cable entry, protected against excessive cable tension and bending.
- Bimetallic thermal sensors in the stator which open at 140 °C.
- Rotor and shaft dynamically balanced.
- Upper and lower bearings lubricated-for-life, maintenance-free.
- Insulated upper bearing for VFD operation standard for PE6 and optional for PE4 and PE5.
- Triple shaft sealing.
- Upper and lower sealing by means of a silicon carbide/silicon carbide mechanical seal, independent of the direction of rotation.
- Inspection chamber with moisture sensor to indicate water leakage through mechanical seal (PE4 - PE6).
- Option: Blockage- and maintenance-free internal closed looped cooling system. Cooling medium: Glycol - water mixture (standard for PE6 range).
- Hydraulic parts with 2-channel Contrablock Plus impeller.
- ATEX explosion-proof version in accordance with international standards e.g. ATEX II 2G Ex h db IIB T4 Gb, FM or CSA (Ex as standard with PE3, optional with PE4 - PE6).



Motor

Water pressure sealed Premium Efficiency motors, (3-phase, squirrel cage induction motors), from 18.5 to 250 kW and, depending on hydraulic requirements as 4- to 8-pole versions.

Voltage: 380...420 V, 3~, 50 Hz (other voltages on request).

Insulation components: Class H (winding protection by 140 °C sensor)

Temperature rise: According to NEMA class A up to 110 kW and class B above.

Protection type: IP68

Start-up: DOL (direct on line), star-delta, VFD or soft starter.

Pump selection

To access more detailed information like pump performance curves, dimensional drawings, product description and motor performance curves, please use our ABSEL program:

<https://absel.sulzer.com/>

Hydraulic selection

-> Enter: Duty point

-> Select: Hydraulics

-> Select: Motor

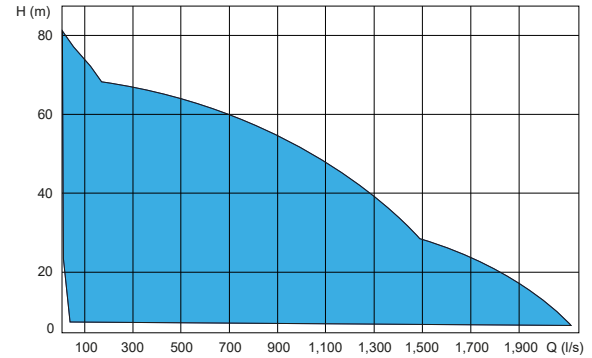
Hydraulics

You have the choice of the following hydraulics in the range of DN 100 to DN 400 discharge:

Hydraulics / Impeller type

XFP 105J	CB2	XFP 255J	CB2
XFP 107J	CB2	XFP 255L	CB2
XFP 155J	CB2	XFP 305J	CB2
XFP 205J	CB2	XFP 305M	CB2
XFP 205L	CB2	XFP 306M	CB2
XFP 205M	CB3	XFP 356M	CB3
XFP 206J	CB2	XFP 405M	CB2

Performance field



H = Total Head; Q = Discharge Volume

Standard and options

Description	Standard	Option
Max. ambient temperature	40 °C	60 °C
Max. submergence depth	20 m	-
Mains voltage	380...420 V/50 Hz	Other voltage on request
Voltage tolerance	multi-voltage $\pm 5\%$; 400 V $\pm 10\%$	-
Insulation components	Class H [140 °C]	Class H [160 °C] (not for Ex)
Start-up	DOL [direct on line], star-delta, VFD or soft starter	-
Approval	non-Ex	Ex/ATEX *
Cables	H07RN8-F	EMC shielded cables
Cable length (m)	10	15, 20, 30, 40, 50
Mechanical seal (medium side)	SiC-SiC (NBR)	SiC-SiC (Viton execution)
Mechanical seal (motor side)	SiC-SiC	-
O-rings	NBR	Viton
Preparation for lifting hoist	Lifting hoop	Lifting hoop in stainless steel *
Protective coating	Two component epoxy resin coating	Special coatings on request
Cathodic protection	-	Zinc anodes on request
Installation	Wet-well	Dry-well vertical/horizontal
Motor cooling	Cooling by surrounding medium	Closed loop cooling system **
Moisture sensor motor housing / connection chamber	PE3, PE6	PE4, PE5
Moisture sensor inspection chamber	PE4 - PE6	-
Vibration sensor	-	PE4 - PE6

* Standard for PE3. ** Standard for PE6.

Motor protection

PE3 to PE6		non-Ex	Ex/ATEX
Winding	Bi-metallic switch	●	●*
	Thermistor (PTC)	○	○*
	PT 100	○**	○**
Moisture sensor	Inspection chamber	●**	○**
	Motor housing	○ (● for PE3 and PE6)	●
	Connection chamber	○** (● for PE6)	○** (● for PE6)
Temperature bearing upper/lower	Bi-metallic switch	○** (● for PE6)	○** (● for PE6)
	Thermistor (PTC)	○**	○**
	PT 100	○**	○**
Vibration sensor	0 - 20 mm/s	○**	○**

● = standard. ○ = option. * PTC to be used when operated via VFD. ** Not available for PE3.

Materials

Motor	Standard	Option	Connection system (wet)	Standard	Option
Connection chamber	EN-GJL-250	-	Pedestal	EN-GJL-250	Non sparking
Cooling chamber	EN-GJL-250	-	Fastening elements	Stainless steel	
Cooling jacket	1.0036 (PE4 - PE6)*	Stainless steel	Protective coating	Epoxy resin based	
Motor housing	EN-GJL-250	-	Guide rail	Galvanized steel	Stainless steel
Motor shaft	1.4021	1.4462	Pipe retainer	EN-GJS-400-18	1.4470
Fasteners (medium contact)	1.4401	-			
Lifting hoop (PE3)	1.4401	-			
Lifting hoop (PE4 & PE5)	EN-GJS-400-18	1.4470			
Lifting hoop (PE6)	1.0553	1.4462			
			Connection system (wet)	Standard	Option
			Support frame	1.0036	Galvanized steel

Hydraulics	Standard	Option
Volute	EN-GJL-250	1.4470
Impeller	EN-GJL-250	1.4470** / A532***
Bottom plate	EN-GJL-250	1.4470** / A532***

* PE3 = EN-GJL-250. ** or EN-GJL-250 flame hardened for CB version.

*** ASTM A-532 Alloy III A

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