

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 (284 °F).
- 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.
- These pumps are available as standard (PE4 - PE6) and explosion-proof construction in accordance with international standards such as NEC 500 Class I, Division 1, Groups C and hazardous (classified) locations.



Motor

Water pressure sealed Premium Efficiency motors, (3-phase, squirrel cage induction motors), from 20 to 280 kW (27 to 375 hp) and depending on hydraulic requirements as 4- to 8-pole versions.

Voltage: 460 V, 3-, 60 Hz (other voltages on request).

Insulation components: Class H (winding protection by 140 °C (284 °F) 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), 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

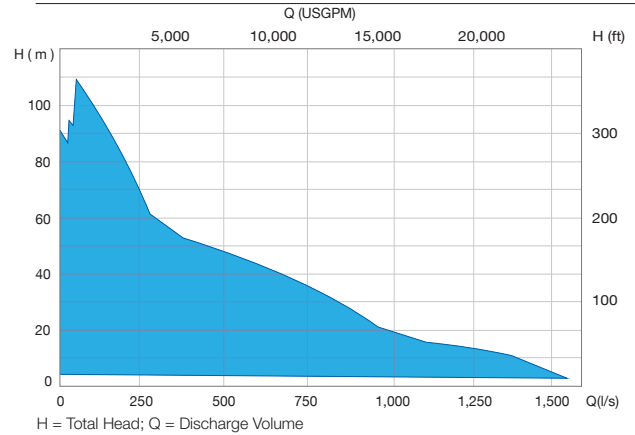
Hydraulics

You have the choice of the following hydraulics in the range of DN 100 to DN 400 (4 to 16 in) discharge:

Hydraulics / Impeller type

XFP 105J / 4 inch	CB2	XFP 255J / 10 inch	CB2
XFP 106J / 4 inch	CB2	XFP 255L / 10 inch	CB2
XFP 107J / 4 inch	CB2	XFP 305J / 12 inch	CB2
XFP 155J / 6 inch	CB2	XFP 305M / 12 inch	CB2
XFP 205J / 8 inch	CB2	XFP 306M / 12 inch	CB2
XFP 205L / 8 inch	CB2	XFP 356M / 14 inch	CB3
XFP 205M / 8 inch	CB3	XFP 405M / 16 inch	CB2
XFP 206J / 8 inch	CB2		

Performance field



Standard and options

Description	Standard	Option
Max. ambient temperature	40 °C (104 °F)	60 °C (140 °F)
Max. submergence depth	20 m (66 ft)	-
Mains voltage	460 V/60 Hz	230 V, 380 V, 575 V, 600 V / 60 Hz
Voltage tolerance	± 10 % at 460 V	-
Insulation components	Class H [140 °C/284 °F]	Class H [160 °C/320 °F] (not for Ex)
Start-up	DOL [direct on line], VFD or soft starter	-
Approval	Non-FM	NEC Class I, Division 1, Groups C and D*
Cables	G-GC, H07RN8-F	EMC shielded cables
Cable length (m [ft])	10 [33]	15 [49], 20 [66], 30 [98], 40 [131], 50 [164]
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	PE6	PE3 - PE5
Moisture sensor inspection chamber	PE3 - PE6	-
Vibration sensor	-	PE4 - PE6

* Standard for PE3. ** Standard for PE6.

Motor protection

		PE3 60 Hz			PE4/PE5 60 Hz		PE6 60 Hz	
		Non-Ex	FM	ATEX	Non-Ex	FM	Non-Ex	FM
Winding	Bi-metallic switch	●	●*	●	●	●*	●	●*
	Thermistor (PTC)	○	○*	●	○	○*	○	○*
	PT 100	-	-	-	○	○	○	○
Leakage sensor	Inspection chamber	-	●	-	●	●	●	●
	Motor chamber	●	-	●	○	○	●	●
	Connection chamber	-	-	-	○	○	●	●
Temperature bearing upper/lower	Bi-metallic switch	-	-	-	○	○	●	●
	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*	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			

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

Connection system (wet)	Standard	Option
Support frame	1.0036	Galvanized steel

Material comparison

Europe	USA
EN 1561; EN-GJL-250	ASTM A48; Class 35 B
EN 1563; EN-GJS-400-18	ASTM A536; 60-40-18
EN 10025; 1.0036; S235JRG1	EN 10025; 1.0060; E335
1.4021; 1.4401	ASTM / AISI 420; 316
1.4470	ASTM A 890 4A (CD 3MN)

sulzer.com

XFP CB-Plus 60Hz en 02.2025, Copyright © Sulzer Ltd 2025

This document does not provide a warranty or guarantee of any kind. Please contact us for a description of the warranties and guarantees offered with our products. Directions for use and safety will be given separately. All information herein is subject to change without notice.