

# Submersible Sewage Pump Type ABS XFP 105J - 600X

**SULZER**

50 Hz



Submersible sewage pump type ABS XFP 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 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 sensor for moisture protection to indicate water leakage through mechanical seal.
- Option: Blockage- and maintenance-free internal closed looped cooling system. Cooling medium: Glycol - water mixture (standard for PE6 range).
- Hydraulic parts with various impeller options: 2- or 3-channel Contrablock, 2- or 3-channel closed or 3-channel skew.
- Option: Available in ATEX explosion-proof version in accordance with international standards e.g. ATEX II 2G Ex db IIB T4 Gb, FM or CSA.

## Motor

Water pressure sealed Premium Efficiency motors, (3-phase, squirrel cage induction motors), from 15 to 250 kW and depending on hydraulic requirements as 4- to 10-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:

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

**Hydraulic selection**

-> **Enter: Duty point**

-> **Select: Hydraulics**

-> **Select: Motor**



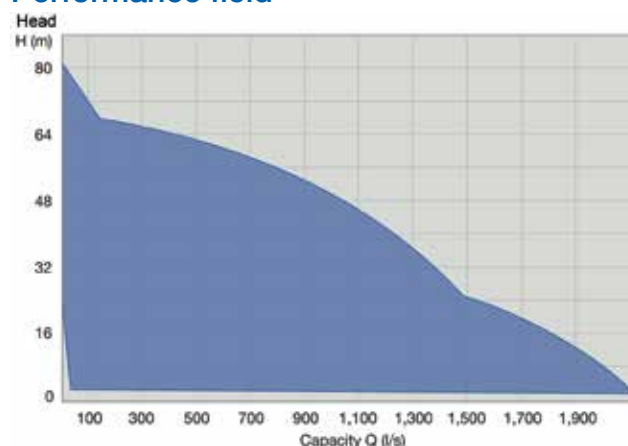
## Hydraulics

You have the choice of the following hydraulics in the range of DN 100 to DN 600 discharge: For power demand beyond available range, please refer to technical data sheet XFP CB-Plus.

Hydraulics / Impeller type			
XFP 105J	CB2	XFP 150M	CB2
XFP 155J	CB2	XFP 205M	CB2
XFP 205J	CB2	XFP 250M	CH2
XFP 206J	CB2	XFP 305M	CB2
XFP 255J	CB2	XFP 306M	CB2
XFP 305J	CB2	XFP 351M	CH3
		XFP 405M	CB2
		XFP 400R	CH3
		XFP 500U	CH3
		XFP 501U	SK3
		XFP 600V	CH3
		XFP 600X	SK3

CB... = Contrablock, CH... = closed channel, SK... = skew; last digit (2 or 3) = Number of impeller vanes

## Performance field



## 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 explosion-proof)
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	10 m	15 m, 20 m other length on request
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 coating epoxy resin	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		DI (sensor for moisture detection)*
Moisture sensor inspection chamber	DI (sensor for moisture detection)	
Vibration sensor		on request

\* standard for PE6 motor range.

## Motor protection

PE4 to PE6		non Ex	Ex/ATEX
Winding	Bi-metallic switch	X	X*
	Thermistor (PTC)	O	O*
	PT 100	O	O
Seal protection	Inspection chamber	X	O
	Motor housing	O (X for PE6)	X
	Connection box	O (X for PE6)	O (X for PE6)
Temperature bearing upper/lower	Bi-metallic switch	O (X for PE6)	O (X for PE6)
	Thermistor (PTC)	O	O
	PT 100	O	O
Vibration sensor	4.....20 mA	O	O

X = Standard; O = Option; \* PTC to be used when operated via VFD.

## Materials

Motor	Standard	Option
Connection chamber	EN-GJL-250	
Cooling chamber	EN-GJL-250	
Cooling jacket	1.0036	
Motor housing	EN-GJL-250	
Motor shaft	1.4021	1.4462
Fasteners (medium contact)	1.4401	
Lifting hoop (PE4 & PE5)	EN-GJS-400-18	1.4470
Lifting hoop (PE6)	1.0060	1.4462
Hydraulics		
Volute	EN-GJL-250	1.4470
Impeller	EN-GJL-250	1.4470*
Bottom plate (only CB version)	EN-GJL-250	1.4470*
Shroud (XFP 501U and 600X)	EN-GJL-250	
Wear ring (only CH version)	EN-GJL-300	1.4581
Wear ring impeller (only CH version)		1.4571

\* or EN-GJL-250 flame hardened for CB version

Connection system (wet)	Standard	Option
Pedestal	EN-GJL-250	Non sparking
Fastening elements	Stainless steel	
Protective coating	Epoxy resin based	
Guide rail	Galvanized steel	Stainless steel
Pipe retainer	EN-GJS-400-18	1.4470
Connection system (dry)		
Support frame	1.0036	Galvanized steel

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