

# Sulzer Submersible Sewage Pump Type ABS XFP 80C - 201G

Robust, reliable, submersible pumps, with Premium Efficiency motors from 1.3 to 25.0 kW. For the pumping of wastewater and sewage from buildings and sites in private, commercial, industrial and municipal areas in accordance with EN 12050-1.

## Features

- The water-pressure-tight, encapsulated, flood-proof motor and the pump section form a compact, robust, modular construction.
- NEMA Class A temperature rise.
- Premium Efficiency motors in accordance with IEC 60034-30 level IE3 with testing in accordance with IEC60034-2-1.
- Continuously rated motor in submerged and non-submerged applications.
- Double mechanical seals; SiC-SiC at the medium side, SiC-C at the motor. All seals are independent of rotation direction and resistant to temperature shock.
- Anti-wicking cable plug solution (80C - 150E), or water-pressure-sealed connection chamber (100G - 201G).
- Hydraulic options of Contrablock and Contrablock Plus impellers for high efficiency, or vortex impellers for maximum solids handling.
- Lubricated-for-life bearings with a calculated lifetime of minimum 50,000 hrs. (80C - 150E), and 100,000 hrs. (100G - 201G).
- Stainless steel shaft. Designed with high safety factor to prevent fatigue fracture.
- Temperature monitoring by thermal sensors (140 °C) in the stator windings.
- Seal monitoring by a moisture probe (DI) in the seal chamber (80C - 150E), or dry chamber (100G - 201G), which signals an inspection alert if there is leakage at the shaft seals.
- Smooth outer design to reduce rag build-up.
- Stainless steel lifting hoop.
- DN 80, DN 100, DN 150 and DN 200 radial slot DIN flange discharge.
- Maximum allowable temperature of the medium for continuous operation is 40 °C.
- Maximum submergence depth of 20 m.
- Explosion-proof as standard, in accordance with international standards Ex d IIB T4 and ATEX.



## Motor

Premium Efficiency IE3, three-phase, squirrel-cage motor; 400 V; 50 Hz; 2-pole (2900 r/min), 4-pole (1450) and 6-pole (980). Protection type IP 68, with stator insulation Class H. Start-up: 1.3 - 3.0 kW = direct on line (DOL) 4.0 - 25.0 kW and 3.0 kW 6-pole = star-delta (YΔ). Service factor: 1.3

Motors with other operating voltages and frequencies are also available.

**Identification Code:** e.g. XFP 80C CB1.3 PE22/4-C-50

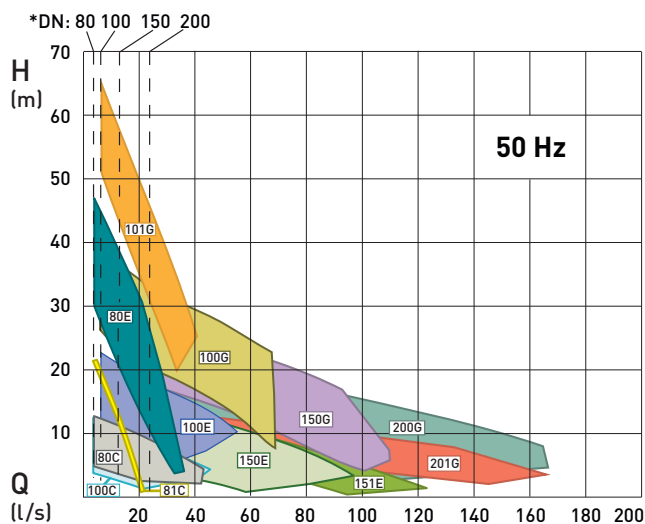
Hydraulics:

XFP ..... Product range  
8 ..... Discharge outlet DN (cm)  
0 ..... Hydraulic type  
C ..... Volute opening (dia. mm)  
CB ..... Impeller type: CB = Contrablock, VX = vortex  
1 ..... Number of impeller vanes  
3 ..... Impeller size

Motor:

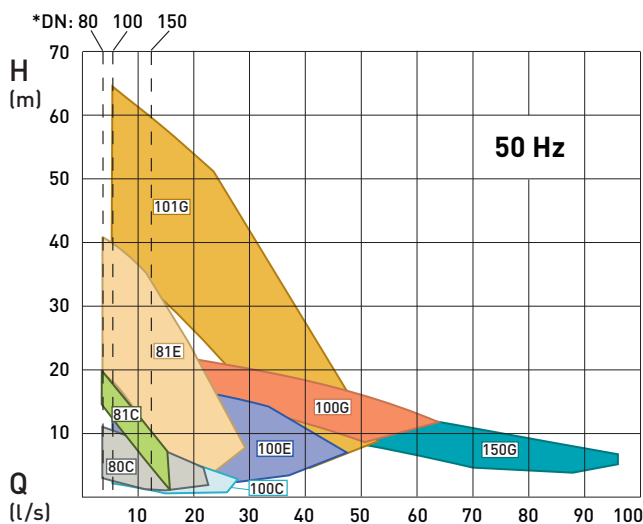
PE ..... Premium Efficiency  
22 ..... Motor power  $P_2$  kW x 10  
4 ..... Number of poles  
C ..... Volute opening (dia. mm)  
50 ..... Frequency

## Performance fields with Contrablock impeller



\* Minimum flow rate Q

## Performance fields with vortex impeller



Please use the ABSEL program as the only valid selection tool.

**Technical Data**

XFP	Motor	Impeller size	Rated voltage (V)	Motor power* (kW)		Rated current (A)	Speed (r/min)	Cable size	Weight** (kg)
				P <sub>1</sub>	P <sub>2</sub>				
<b>80C-CB1</b>	PE 22/4	3, 4	400 3~	2.5	2.2	4.6	1450	7G1.5	110 / n.a.
	PE 29/4	2	400 3~	3.4	3.0	6.4	1450	7G1.5	110 / n.a.
	PE 13/6	1, 2, 4	400 3~	1.6	1.3	3.6	980	7G1.5	110 / n.a.
<b>80C-VX</b>	PE 15/4	4, 5, 6, 7	400 3~	1.8	1.5	3.2	1450	7G1.5	100 / n.a.
	PE 22/4	2, 3,	400 3~	2.5	2.2	4.6	1450	7G1.5	110 / n.a.
	PE 29/4	1	400 3~	3.4	3.0	6.4	1450	7G1.5	110 / n.a.
<b>80E-CB1</b>	PE 70/2	4	400 3~	7.7	7.0	13.5	2900	10G1.5	150 / n.a.
	PE 110/2	1, 2, 3	400 3~	12.1	11.0	20.1	2900	10G1.5	180 / n.a.
<b>81C-CB1</b>	PE 40/2	1	400 3~	4.5	4.0	7.4	2900	10G1.5	120 / n.a.
<b>81C-VX</b>	PE 30/2	2	400 3~	3.4	3.0	5.6	2900	7G1.5	110 / n.a.
	PE 40/2	1, 2	400 3~	4.5	4.0	7.4	2900	10G1.5	120 / n.a.
<b>81E-VX</b>	PE 55/2	5	400 3~	6.1	5.5	10.3	2900	10G1.5	140 / n.a.
	PE 70/2	4	400 3~	7.7	7.0	13.5	2900	10G1.5	140 / n.a.
	PE 110/2	1, 2, 3	400 3~	12.1	11.0	20.1	2900	10G1.5	160 / n.a.
<b>100C-CB1</b>	PE 22/4	3, 4	400 3~	2.5	2.2	4.6	1450	7G1.5	110 / n.a.
	PE 29/4	2	400 3~	3.4	3.0	6.4	1450	7G1.5	110 / n.a.
	PE 13/6	1, 2, 4	400 3~	1.6	1.3	3.6	980	7G1.5	110 / n.a.
<b>100C-VX</b>	PE 15/4	4, 5, 6	400 3~	1.8	1.5	3.2	1450	7G1.5	100 / n.a.
	PE 22/4	2, 3,	400 3~	2.5	2.2	4.6	1450	7G1.5	110 / n.a.
	PE 29/4	1	400 3~	3.4	3.0	6.4	1450	7G1.5	110 / n.a.
<b>100E-CB1</b>	PE 40/4	5	400 3~	4.4	4.0	8.4	1450	10G1.5	160 / n.a.
	PE 60/4	3, 4	400 3~	6.7	6.0	13.6	1450	10G1.5	170 / n.a.
	PE 90/4	1, 2	400 3~	9.9	9.0	18.1	1450	10G1.5	190 / n.a.
<b>100E-VX</b>	PE 40/4	4, 5, 6	400 3~	4.4	4.0	8.4	1450	10G1.5	140 / n.a.
	PE 60/4	2, 3, 4	400 3~	6.7	6.0	13.6	1450	10G1.5	150 / n.a.
	PE 90/4	1, 2, 3	400 3~	9.9	9.0	18.1	1450	10G1.5	170 / n.a.
<b>100G-CB1</b>	PE 110/4	5	400 3~	12.0	11.0	23.4	1450	10G1.5	340 / 380
	PE 140/4	4	400 3~	15.2	14.0	27.8	1450	10G1.5	340 / 380
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	10G2.5	360 / 400
	PE 185/4	2	400 3~	20.0	18.5	36.9	1450	10G2.5	360 / 400
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	2x4G4 + 2x0.75	370 / 420
<b>100G-VX</b>	PE 110/4	4	400 3~	12.0	11.0	23.4	1450	10G1.5	330 / 370
	PE 140/4	3	400 3~	15.2	14.0	27.8	1450	10G1.5	330 / 370
	PE 160/4	2	400 3~	17.4	16.0	33.1	1450	10G2.5	350 / 390
	PE 185/4	1	400 3~	20.0	18.5	36.9	1450	10G2.5	350 / 390
<b>101G-CB1</b>	PE 150/2	2, 3	400 3~	16.0	15.0	27.5	2900	10G1.5	320 / 360
	PE 185/2	1	400 3~	20.0	18.5	33.7	2900	10G2.5	320 / 360
	PE 250/2	1	400 3~	26.9	25.0	44.0	2900	2x4G4 + 2x0.75	340 / 380
<b>101G-VX</b>	PE 150/2	6, 7	400 3~	16.0	15.0	27.5	2900	10G1.5	330 / 370
	PE 185/2	4, 5, 6, 7	400 3~	20.0	18.5	33.7	2900	10G2.5	330 / 370
	PE 250/2	1, 2, 3, 4, 5	400 3~	26.9	25.0	44.0	2900	2x4G4 + 2x0.75	350 / 390
<b>150E-CB1</b>	PE 40/4	5, 6	400 3~	4.4	4.0	8.4	1450	10G1.5	170 / n.a.
	PE 60/4	3, 4, 5	400 3~	6.7	6.0	13.6	1450	10G1.5	170 / n.a.
	PE 90/4	1, 2, 3	400 3~	9.9	9.0	18.1	1450	10G1.5	190 / n.a.
	PE 30/6	1, 2, 3, 4	400 3~	3.5	3.0	6.4	980	10G1.5	170 / n.a.
<b>150G-CB1</b>	PE 110/4	5	400 3~	12.0	11.0	23.4	1450	10G1.5	340 / 390
	PE 140/4	4	400 3~	15.2	14.0	27.8	1450	10G1.5	340 / 390
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	10G2.5	370 / 410
	PE 185/4	2	400 3~	20.0	18.5	36.9	1450	10G2.5	370 / 410
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	2x4G4 + 2x0.75	380 / 430
<b>150G-VX</b>	PE 110/4	4	400 3~	12.0	11.0	23.4	1450	10G1.5	330 / 380
	PE 140/4	3	400 3~	15.2	14.0	27.8	1450	10G1.5	330 / 380
	PE 160/4	2	400 3~	17.4	16.0	33.1	1450	10G2.5	360 / 400
	PE 185/4	1, 2	400 3~	20.0	18.5	36.9	1450	10G2.5	360 / 400
<b>151E-CB2</b>	PE 49/4	5	400 3~	5.5	4.9	10.2	1450	10G1.5	180 / n.a.
	PE 60/4	4	400 3~	6.7	6.0	13.6	1450	10G1.5	180 / n.a.
	PE 90/4	2, 4	400 3~	9.9	9.0	18.1	1450	10G1.5	200 / n.a.
<b>200G-CB1</b>	PE 110/4	5	400 3~	12.0	11.0	23.4	1450	10G1.5	380 / 420
	PE 140/4	4	400 3~	15.2	14.0	27.8	1450	10G1.5	380 / 420
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	10G2.5	400 / 450
	PE 185/4	2	400 3~	20.0	18.5	36.9	1450	10G2.5	400 / 450
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	2x4G4 + 2x0.75	410 / 470
	PE 90/6	1, 2, 3	400 3~	10.1	9.0	20.9	980	10G1.5	380 / 430
<b>201G-CB2</b>	PE 90/6	5, 6	400 3~	10.1	9.0	20.9	980	10G1.5	380 / 430
	PE 110/6	3	400 3~	12.2	11.0	23.8	980	10G1.5	380 / 430
	PE 140/6	1	400 3~	15.4	14.0	29.4	980	10G2.5	400 / 440

\* P<sub>1</sub> = power at mains. P<sub>2</sub> = power at motor shaft. \*\*Without / with cooling jacket; includes 10 m cable.

Data for alternative voltages available on request.

## Standard and Options

Description	Standard	Option
Mains voltage	400 V 3~	230, 500, 230/400, 400/695, 500/866 V
Voltage tolerance	± 10%	-
Motor efficiency	Premium Eff. IE3	-
Insulation class	H	-
Start-up	Direct on line (DOL), star-delta (YΔ)	-
Approvals	Ex / ATEX	-
Mechanical seal (at medium side)	SiC-SiC-NBR	SiC-SiC-Viton
Mechanical seal (at motor side)	SiC-C-NBR	-
O-rings	NBR	Viton (external seals)
Cables	S1BN8-F	EMC
Cable length (m)	10	20, 30, 40, 50
Protective coating	2k Epoxy 120 µm	2k Epoxy 400 µm
Provision for lifting hoist	Lifting hoop	
Cooling	Self-cooling (80C - 150E); by the medium (100G - 201G)	Closed cooling (100G - 201G)
Installation	Wet well	Dry well or transportable

## Monitoring

Description		Standard	Option
<b>Motor</b> (temperature)	Bi-metallic switch in windings	X	-
	PTC thermistor in windings	-	X
<b>Seals</b> (leakage)	Moisture sensor (DI) in oil chamber (80C - 150E)	X	-
	Moisture sensor (DI) in dry chamber (100G - 201G)	X	-
	Moisture sensor (DI) in connection chamber (100G - 201G)	-	X

## Materials

Description	Material	Option
Motor housing	Cast iron EN-GJL-250	-
Volute	Cast iron EN-GJL-250	-
Impeller	Cast iron EN-GJL-250	Stainless steel 1.4470 [AISI 329]*
Bottom plate	Cast iron EN-GJL-250	Stainless steel 1.4470 [AISI 329]*
Motor shaft	Stainless steel 1.4021 [AISI 420]	-
Lifting hoop	Stainless steel 1.4401 [AISI 316]	-
Fasteners	Stainless steel 1.4401 [AISI 316]	-

\* Selected models only. Contact Sulzer for details.

## Accessories

	Description	Size	XFP	Part no.
<b>Fixed installation - wet well with ABS Automatic Coupling System</b>	<b>Pedestal*</b> (cast iron EN-GJL-250) 90° cast bend (single guide rail) - DIN flange connection	DN 80	80C - 81E	62320649
		DN 100	100C - 100G	62320652
		DN 100 (high-head)	101G	DPR31211A
		DN 150	150E - 150G	62320655
		DN 200	200G	DPT91211A
		DN 200	201G	62320658
	90° cast bend (single guide rail) - plug/clamp connection	DN 80 (pipe Ø90 mm)	80C - 81E	62320650
		DN 100 (pipe Ø109 mm)	100C - 100G	62320653
		DN 100 high head (Ø109 mm)	101G	DPR32211A
		DN 100 (pipe Ø115 mm)	100C - 100G	62320654
		DN 150 (pipe Ø160 mm)	150E - 150G	62320656
	90° cast bend (twin guide rail) - DIN flange connection	DN 80	80C - 81E	62325025
		DN 100	100C - 101G	62325026
		DN 150	150E - 150G	62325027
		DN 200	200G & 201G	62325028
	<b>Pedestal bracket fasteners</b> single guide rail version (galvanised steel)		80C - 81E	62610632
			100C - 101G	62610633
			150E - 150G	62610635
			200G & 201G	62610883
	single guide rail version (stainless steel)		80C - 81E	62610899
		100C - 101G	62610637	
		150E - 150G	62610639	
		200G & 201G	62610862	
twin guide rail version (galvanised steel)		80C - 81E	62615053	
		100C - 101G	62615054	
		150E - 150G	62615055	
		200G & 201G	62615056	
<b>Pedestal base anchor bolts</b> single and twin guide rail (galvanised steel)		80C - 101G	62610775	
		150E - 150G	62610784	
		200G & 201G	62610785	
<b>Chain Kit</b> (galvanized steel) including shackle	3 m	80C - 201G	61265065	
	4 m		61265093	
	6 m		61265069	
	7 m		61265096	
<b>Chain Kit</b> (stainless steel) including shackle	3 m	80C - 201G	61265081	
	4 m		61265099	
	6 m		61265085	
	7 m		61265102	
<b>Fixed installation - dry well, (horizontal)</b>	<b>Pump Support Kit</b> (EN-GJL-250) head and volute supports with fixing bolts and vibration damper		80C, 81C	61825023
			80C, 81C, 100C	61825033**
			80E	61825029
			81E	61825038
			100C	61825024
			100E	61825030
			150E, 151E	61825031
			101G	61825036***
			100G, 101G, 150G, 200G, 201G	61825037
		(vertical)	<b>Ground Support Stand</b>	80C, 81C
	80E & 81E			61355020
	100C			61355015
		100E	61355021	
	150E, 151E	61355022		
	101G	61355024***		
	100G, 101G, 150G, 200G & 201G	61355023		
	<b>Adapter kit</b> (required with support stand)	80C	62665347***	
		100C	62665348***	
<b>Transportable</b>	<b>Ground Support Stand</b>	80C, 81C, 100C	61355016	
		80E & 81E	61355017	
		100E	61355018	
		150E, 151E	61355019	
		101G	61355026***	
		100G, 101G, 150G, 200G & 201G	61355025	
<b>General</b>	<b>Cathodic Protection</b> (zinc anodes)	80C - 201G	13905000	

\*Guide rail not included \*\*Vortex version of pumps (VX) \*\*\* Contrablock version of pump (CB)