

# Submersible Sewage Pump Type ABS XFP 80C - 205G

Robust, reliable, submersible pumps, with Premium Efficiency motors from 1.3 to 30.0 kW. For the pumping of wastewater and sewage from buildings and sites in private, commercial, industrial and municipal areas.

## 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 (80C - 150E) and SiC-SiC (100G - 205G) at the motor. XFP 100G - 205G has an additional inner lipseal at the motor side. 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 - 205G).
- 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 - 205G).
- 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 motor and seal chambers (80C - 150E), or motor chamber (100G - 205G), 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 standard ATEX 2014/34/EU [II 2G Ex h db IIB T4 Gb].



## 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 IP68, with stator insulation Class H.

Start-up: 1.3 - 3.0 kW = direct on line (DOL)  
4.0 - 30.0 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): C = 222, E = 265, G = 335

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): C = 222, E = 265, G = 335

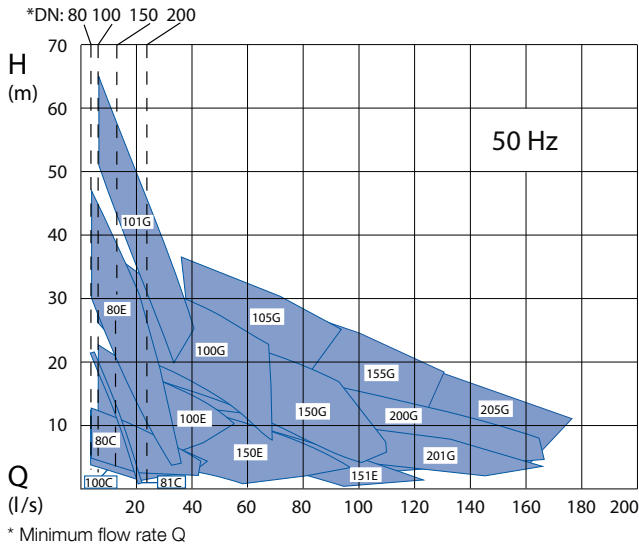
50 ..... Frequency

## Technical data

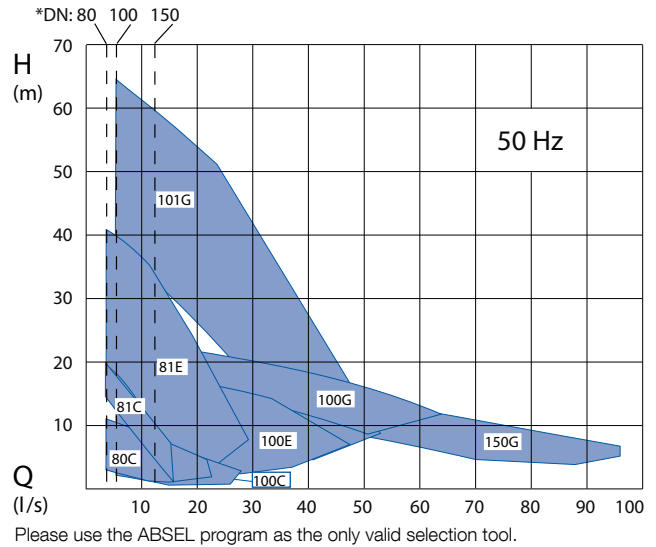
XFP	Motor	Impeller size	Rated voltage (V)	Motor power* (kW)		Rated current (A)	Speed (r/min)	Cable size	Weight** (kg)
				P <sub>1</sub>	P <sub>2</sub>				
80C-CB1	PE 22/4	3, 4	400 3~	2.5	2.2	4.6	1450	7G1.5	110 / n.a.
	PE 29/4	2	400 3~	3.4	3.0	6.4	1450	7G1.5	110 / n.a.
	PE 13/6	1, 2, 4	400 3~	1.6	1.3	3.6	980	7G1.5	110 / n.a.
80C-VX	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.
80E-CB1	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.
81C-CB1	PE 40/2	1	400 3~	4.5	4.0	7.4	2900	10G1.5	120 / n.a.
81C-VX	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.
81E-VX	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.
100C-CB1	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.
100C-VX	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.
100E-CB1	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.
100E-VX	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.
100G-CB1	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	10G2.5	340 / 380
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	2 x 4G4+2x0.75	360 / 400
	PE 185/4	1, 2	400 3~	20.0	18.5	36.9	1450	2 x 4G4+2x0.75	360 / 400
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	2 x 4G4+2x0.75	370 / 420
100G-VX	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	10G2.5	330 / 370
	PE 160/4	2	400 3~	17.4	16.0	33.1	1450	2 x 4G4+2x0.75	350 / 390
	PE 185/4	1	400 3~	20.0	18.5	36.9	1450	2 x 4G4+2x0.75	350 / 390
101G-CB1	PE 150/2	2, 3	400 3~	16.0	15.0	27.5	2900	10G2.5	320 / 360
	PE 185/2	1	400 3~	20.0	18.5	33.7	2900	2 x 4G4+2x0.75	320 / 360
	PE 250/2	1	400 3~	26.9	25.0	44.0	2900	2 x 4G4+2x0.75	340 / 380
101G-VX	PE 150/2	6, 7	400 3~	16.0	15.0	27.5	2900	10G2.5	330 / 370
	PE 185/2	4, 5, 6, 7	400 3~	20.0	18.5	33.7	2900	2 x 4G4+2x0.75	330 / 370
	PE 250/2	1, 2, 3, 4, 5	400 3~	26.9	25.0	44.0	2900	2 x 4G4+2x0.75	350 / 390
105G-CB2	PE 220/4	3, 4	400 3~	23.7	22	42.5	1450	2 x 4G4+2x0.75	410 / 450
	PE 300/4	1, 2, 3	400 3~	32.1	30	58.5	1450	2 x 4G4+2x0.75	440 / 490
150E-CB1	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.
150G-CB1	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	10G2.5	340 / 390
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	2 x 4G4+2x0.75	370 / 410
	PE 185/4	2	400 3~	20.0	18.5	36.9	1450	2 x 4G4+2x0.75	370 / 410
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	2 x 4G4+2x0.75	380 / 430
150G-VX	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	10G2.5	330 / 380
	PE 160/4	2	400 3~	17.4	16.0	33.1	1450	2 x 4G4+2x0.75	360 / 400
	PE 185/4	1, 2	400 3~	20.0	18.5	36.9	1450	2 x 4G4+2x0.75	360 / 400
151E-CB2	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.
155G-CB2	PE 220/4	3, 4	400 3~	23.7	22	42.5	1450	2 x 4G4+2x0.75	410 / 450
	PE 300/4	1, 2, 3	400 3~	32.1	30	58.5	1450	2 x 4G4+2x0.75	440 / 490
200G-CB1	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	10G2.5	380 / 420
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	2 x 4G4+2x0.75	400 / 450
	PE 185/4	2	400 3~	20.0	18.5	36.9	1450	2 x 4G4+2x0.75	400 / 450
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	2 x 4G4+2x0.75	410 / 470
	PE 90/6	1, 2, 3	400 3~	10.1	9.0	20.9	980	10G1.5	380 / 430
201G-CB2	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
205G-CB2	PE 220/4	3, 4	400 3~	23.7	22	42.5	1450	2 x 4G4+2x0.75	430 / 480
	PE 300/4	1, 2, 3	400 3~	32.1	30	58.5	1450	2 x 4G4+2x0.75	460 / 510

\* 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.

## Performance fields with Contrablock impeller



## Performance fields with vortex impeller



## Standard and options

Description	Standard	Option
Mains voltage	400 V 3~	230, 500, 695 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 (80C - 150E), SiC-SiC-NBR (100G - 205G)	-
O-rings (external seals)	NBR	Viton (not available for cable entry seal)
Cables	H07RN8-F	EMC
Cable length (m)	10	20, 30, 40, 50
Protective coating	2k Epoxy 120 µm	2k Epoxy 400 µm
Preparation for lifting hoist	Lifting hoop	-
Cooling	Self-cooling (80C - 150E); by the medium (100G - 205G)	Closed cooling (100G - 205G)
Installation	Wet-well	Dry well or transportable

\* Selected motors only. Contact Sulzer for details.

## Monitoring

Description		Standard	Option
<b>Motor</b> (temperature)	Bi-metallic switch in windings	●	-
	PTC thermistor in windings	-	●**
<b>Seals</b> (leakage)	Moisture sensor (DI) in motor and seal chambers (80C - 150E)	●	-
	Moisture sensor (DI) in motor chamber (100G - 205G)	●	-

Temperature and leakage relays are required. See accessories table.

\*\* Must be selected when pump is operated via VFD.

## Materials

Description	Material	Option
Motor housing	Cast iron EN-GJL-250	-
Volute	Cast iron EN-GJL-250	Ceramic coated EN-GJL-250***
Impeller	Cast iron EN-GJL-250	Stainless steel 1.4470 (AISI 329)***, Flame hardened or ceramic coated EN-GJL-250***
Bottom plate	Cast iron EN-GJL-250	Stainless steel 1.4470 (AISI 329)***, Flame hardened or ceramic coated EN-GJL-250***
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 Sulzer 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 - 105G	62320652
		DN 100 (high-head)	101G	DPR31211F
		DN 150	150E - 155G	62320655
		DN 200	200G (4-pole)	DPT91211F
		DN 200	200G (6-pole)	62320658
		DN 200	201G & 205G	62320658
	90° cast bend (single guide rail) - plug/clamp connection	DN 80 (pipe Ø90 mm)	80C - 81E	62320650
		DN 100 (pipe Ø109 mm)	100C - 105G	62320653
		DN 100 high head (Ø109 mm)	101G	DPR31211F
		DN 100 (pipe Ø115 mm)	100C - 105G	62320654
		DN 150 (pipe Ø160 mm)	150E - 155G	62320656
	90° cast bend (twin guide rail) - DIN flange connection	DN 80	80C - 81E	62325025
		DN 100	100C - 105G	62325026
		DN 150	150E - 155G	62325027
		DN 200	200G - 205G	62325028
	<b>Pedestal bracket fasteners</b> single guide rail version (galvanised steel)		80C - 81E	62610632
		100C - 105G	62610633	
		150E - 155G	62610635	
single guide rail version (stainless steel)		200G - 205G	62610883	
		80C - 81E	62610899	
		100C - 105G	62610637	
		150E - 155G	62610639	
twin guide rail version (galvanised steel)		200G - 205G	62610862	
		80C - 81E	62615053	
		100C - 105G	62615054	
		150E - 155G	62615055	
<b>Pedestal base anchor bolts</b> single and twin guide rail (galvanised steel)		200G - 205G	62615056	
		80C - 105G	62610775	
		150E - 155G	62610784	
<b>Chain Kit</b> (stainless steel) including shackle	3 m	200G - 205G	62610785	
	4 m		310101236013	
	6 m		310101236014	
	7 m		310101236016	
			310101236017	
<b>Fixed installation - dry well, (horizontal)</b>          <b>(vertical)</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 - 205G.	61825037
		<b>Ground Support Stand</b>		80C, 81C.
	80E & 81E.		61355020	
	100C.		61355015	
	100E.		61355021	
	150E, 151E.		61355022	
<b>Adapter kit</b> (required with support stand)		101G.	61355024***	
		100G - 205G.	61355023	
<b>Adapter kit</b> (required with support stand)		80C.	62665347***	
		100C.	62665348***	
<b>Transportable</b>	<b>Skirtbase</b>		80C, 81C, 100C.	61355016
			80E & 81E.	61355017
			100E.	61355018
			150E, 151E.	61355019
			101G.	61355026***
			100G - 205G	61355025
<b>General</b>	<b>Cathodic Protection</b> (zinc anodes)		80C - 205G	13905000
	<b>Leakage Relay Type ABS CA 461</b>	110 - 230 VAC 18 - 36 VDC, SELV	80C - 205G	16907010 16907011
	<b>Temperature and Leakage Relay Type ABS CA 462</b>	110 - 230 VAC 18 - 36 VDC, SELV	80C - 205G	16907006 16907007

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

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