

Submersible Sewage Pump Type ABS XFP 80C - 206G

SULZER

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 - 206G) at the motor. XFP 100G - 206G 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 - 206G).
- 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 - 206G).
- 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 - 206G), 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)

0Hydraulic 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

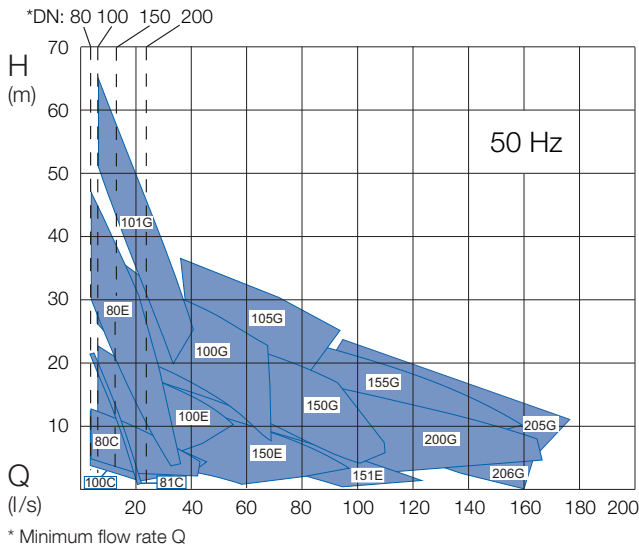
Technical data

XFP	Motor	Impeller size	Rated voltage (V)	Motor power * (kW)		Rated current (A)	Speed (r/min)	Weight ** (kg)
				P ₁	P ₂			
80C-CB1	PE 22/4	3, 4	400 3~	2.5	2.2	4.6	1450	110 / n.a.
	PE 29/4	2	400 3~	3.4	3.0	6.4	1450	110 / n.a.
	PE 13/6	1, 2, 4	400 3~	1.6	1.3	3.6	980	110 / n.a.
80C-VX	PE 15/4	4, 5, 6, 7	400 3~	1.8	1.5	3.2	1450	100 / n.a.
	PE 22/4	2, 3,	400 3~	2.5	2.2	4.6	1450	110 / n.a.
	PE 29/4	1	400 3~	3.4	3.0	6.4	1450	110 / n.a.
80E-CB1	PE 70/2	4	400 3~	7.7	7.0	13.5	2900	150 / n.a.
	PE 110/2	1, 2, 3	400 3~	12.1	11.0	20.1	2900	180 / n.a.
81C-CB1	PE 40/2	1	400 3~	4.5	4.0	7.4	2900	120 / n.a.
81C-VX	PE 30/2	2	400 3~	3.4	3.0	5.6	2900	110 / n.a.
	PE 40/2	1, 2	400 3~	4.5	4.0	7.4	2900	120 / n.a.
81E-VX	PE 55/2	5	400 3~	6.1	5.5	10.3	2900	140 / n.a.
	PE 70/2	4	400 3~	7.7	7.0	13.5	2900	140 / n.a.
	PE 110/2	2, 3	400 3~	12.1	11.0	20.1	2900	160 / n.a.
100C-CB1	PE 22/4	3, 4	400 3~	2.5	2.2	4.6	1450	110 / n.a.
	PE 29/4	2	400 3~	3.4	3.0	6.4	1450	110 / n.a.
	PE 13/6	1, 2, 4	400 3~	1.6	1.3	3.6	980	110 / n.a.
100C-VX	PE 15/4	4, 5, 6	400 3~	1.8	1.5	3.2	1450	100 / n.a.
	PE 22/4	2, 3,	400 3~	2.5	2.2	4.6	1450	110 / n.a.
	PE 29/4	1	400 3~	3.4	3.0	6.4	1450	110 / n.a.
100E-CB1	PE 40/4	5	400 3~	4.4	4.0	8.4	1450	160 / n.a.
	PE 60/4	3, 4	400 3~	6.7	6.0	13.6	1450	170 / n.a.
	PE 90/4	1, 2	400 3~	9.9	9.0	18.1	1450	190 / n.a.
100E-VX	PE 40/4	4, 5, 6	400 3~	4.4	4.0	8.4	1450	140 / n.a.
	PE 60/4	2, 3, 4	400 3~	6.7	6.0	13.6	1450	150 / n.a.
	PE 90/4	1, 2, 3	400 3~	9.9	9.0	18.1	1450	170 / n.a.
100G-CB1	PE 110/4	5	400 3~	12.0	11.0	23.4	1450	340 / 380
	PE 140/4	4	400 3~	15.2	14.0	27.8	1450	340 / 380
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	360 / 400
	PE 185/4	1, 2	400 3~	20.0	18.5	36.9	1450	360 / 400
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	370 / 420
100G-VX	PE 110/4	4	400 3~	12.0	11.0	23.4	1450	330 / 370
	PE 140/4	3	400 3~	15.2	14.0	27.8	1450	330 / 370
	PE 160/4	2	400 3~	17.4	16.0	33.1	1450	350 / 390
	PE 185/4	1	400 3~	20.0	18.5	36.9	1450	350 / 390
101G-CB1	PE 150/2	2, 3	400 3~	16.0	15.0	27.5	2900	320 / 360
	PE 185/2	1	400 3~	20.0	18.5	33.7	2900	320 / 360
	PE 250/2	1	400 3~	26.9	25.0	44.0	2900	340 / 380
101G-VX	PE 150/2	6, 7	400 3~	16.0	15.0	27.5	2900	330 / 370
	PE 185/2	4, 5, 6, 7	400 3~	20.0	18.5	33.7	2900	330 / 370
	PE 250/2	1, 2, 3, 4, 5	400 3~	26.9	25.0	44.0	2900	350 / 390
105G-CB2	PE 220/4	3, 4	400 3~	23.7	22.0	42.5	1450	410 / 450
	PE 300/4	1, 2, 3	400 3~	32.1	30.0	58.5	1450	440 / 490
150E-CB1	PE 40/4	5, 6	400 3~	4.4	4.0	8.4	1450	170 / n.a.
	PE 60/4	3, 4, 5	400 3~	6.7	6.0	13.6	1450	170 / n.a.
	PE 90/4	1, 2, 3	400 3~	9.9	9.0	18.1	1450	190 / n.a.
	PE 30/6	1, 2, 3, 4	400 3~	3.5	3.0	6.4	980	170 / n.a.
150G-CB1	PE 110/4	5	400 3~	12.0	11.0	23.4	1450	340 / 390
	PE 140/4	4	400 3~	15.2	14.0	27.8	1450	340 / 390
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	370 / 410
	PE 185/4	2	400 3~	20.0	18.5	36.9	1450	370 / 410
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	380 / 430
150G-VX	PE 110/4	4	400 3~	12.0	11.0	23.4	1450	330 / 380
	PE 140/4	3	400 3~	15.2	14.0	27.8	1450	330 / 380
	PE 160/4	2	400 3~	17.4	16.0	33.1	1450	360 / 400
	PE 185/4	1, 2	400 3~	20.0	18.5	36.9	1450	360 / 400
151E-CB2	PE 49/4	5	400 3~	5.5	4.9	10.2	1450	180 / n.a.
	PE 60/4	4	400 3~	6.7	6.0	13.6	1450	180 / n.a.
	PE 90/4	2, 4	400 3~	9.9	9.0	18.1	1450	200 / n.a.
155G-CB2	PE 220/4	5	400 3~	23.7	22.0	42.5	1450	410 / 450
	PE 300/4	3, 4	400 3~	32.1	30.0	58.5	1450	440 / 490
200G-CB1	PE 110/4	5	400 3~	12.0	11.0	23.4	1450	380 / 420
	PE 140/4	4	400 3~	15.2	14.0	27.8	1450	380 / 420
	PE 160/4	3	400 3~	17.4	16.0	33.1	1450	400 / 450
	PE 185/4	2	400 3~	20.0	18.5	36.9	1450	400 / 450
	PE 220/4	1	400 3~	23.7	22.0	42.5	1450	410 / 470
	PE 90/6	1, 2, 3	400 3~	10.1	9.0	20.9	980	380 / 430
205G-CB2	PE 220/4	3, 4	400 3~	23.7	22.0	42.5	1450	430 / 480
	PE 300/4	1, 2, 3	400 3~	32.1	30.0	58.5	1450	460 / 510
206G-CB2	PE 185/6	2, 3, 4, 5	400 3~	20.2	18.5	35.5	980	450 / 500
	PE 220/6	1, 2	400 3~	23.9	22.0	40.7	980	480 / 530

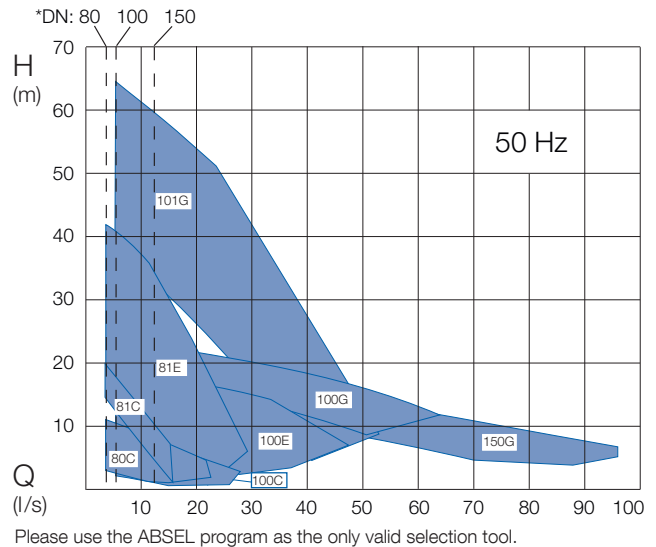
* P₁ = power at mains. P₂ = power at motor shaft. **Without / with cooling jacket; includes 10 m cable.

Data for alternative voltages available on request. Cable data for EMC and alternative start options 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 - 206G)	-
O-rings (external seals)	NBR	Viton (not available for cable entry seal)
Cables	H07RN8-F	EMC
Cable length (m)	10	20, 30
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 - 206G)	Closed cooling (100G - 206G)
Installation	Wet-well	Dry well or transportable

* Selected motors only. Contact Sulzer for details.

Monitoring

Description		Standard	Option
Motor (temperature)	Bi-metallic switch in windings PTC thermistor in windings	● -	- ●**
Seals (leakage)	Moisture sensor (DI) in motor and seal chambers (80C - 150E) Moisture sensor (DI) in motor chamber (100G - 206G)	● ●	- -

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	-
Cooling jacket	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.
Fixed installation - wet well with Sulzer Automatic Coupling System	Pedestal* (cast iron EN-GJL-250) 90° cast bend (single guide rail) - DIN flange connection	DN 80	80C, 81C, 80E, 81E	62320649
		DN 100	100C, 100E, 100G	62320652
		DN 100 (high-head)	101G, 105G	DPR31211F
	90° cast bend (single guide rail) - plug/clamp connection	DN 150	150E, 151E, 150G	62320655
		DN 150	155G	DPS91211F
		DN 200	200G (4-pole), 205G, 206G	DPT91211F
		DN 200	200G (6-pole)	62320658
		DN 150 (pipe Ø 160 mm)	150E, 151E, 150G	62320656
	90° cast bend (twin guide rail) - DIN flange connection	DN 80 (pipe Ø 90 mm)	80C, 81C	62320650
		DN 100 (pipe Ø 110 mm)	100C, 100E, 100G	62320653
		DN 100 (pipe Ø 115 mm)	100C, 100E, 100G	62320654
	90° cast bend (twin guide rail) - DIN flange connection	DN 150 (pipe Ø 160 mm)	150E, 151E, 150G	62320656
		DN 150 (pipe Ø 169 mm)	150E, 151E, 150G	62320657
		DN 200	155G, 200G, 205G, 206G	62325028
	Pedestal bracket fasteners single guide rail version (galvanised steel)		80C - 81E	62610632
		100C - 105G	62610633	
single guide rail version (stainless steel)		150E - 155G	62610635	
		200G - 206G	62610883	
		80C - 81E	62610899	
twin guide rail version (galvanised steel)		100C - 105G	62610637	
		150E - 155G	62610639	
		200G - 206G	62610862	
Pedestal base anchor bolts single and twin guide rail (galvanised steel)		80C - 81E	62615053	
		100C - 105G	62615054	
		150E - 155G	62615055	
Chain Kits (stainless steel) including shackle Working load limit (WLL) 320 kg		200G - 206G	62615056	
		80C - 81E	62610775	
		150E - 155G	62610784	
		200G - 206G	62610785	
	Working load limit (WLL) 400 kg	1.6 m	See pump weights for selection	310101395001
		3.0 m		310101236003
		4.0 m		310101236004
	Working load limit (WLL) 630 kg	6.0 m		310101236006
		7.0 m		310101236007
		3.0 m	See pump weights for selection	310101236013
	Working load limit (WLL) 400 kg	4.0 m		310101236014
		6.0 m		310101236016
7.0 m			310101236017	
Working load limit (WLL) 630 kg	3.0 m	See pump weights for selection	310101236033	
	4.0 m		310101236034	
	6.0 m		310101236036	
Fixed installation - dry well, (horizontal)	Pump Support Kit (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 - 206G.	61825037
		(vertical)	Ground Support Stand	
	80E & 81E.			61355020
	100C.			61355015
	100E.			61355021
Adapter kit (required with support stand)		150E, 151E.	61355022	
		101G.	61355024***	
Transportable	Skirtbase		100G - 206G.	61355023
			80C, 81C, 100C.	61355016
			80E & 81E.	61355017
			100E.	61355018
			150E, 151E.	61355019
General	Cathodic Protection (zinc anodes)		101G.	61355026***
			100G - 206G	61355025
			80C - 206G	13905000
Leakage Relay Type ABS CA 461		80C - 206G	16907010	
	110 - 230 VAC		16907011	
Temperature and Leakage Relay Type ABS CA 462	18 - 36 VDC, SELV		16907006	
	110 - 230 VAC		16907007	
	18 - 36 VDC, SELV			

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

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