Submersible Sewage Pump Type ABS XFP 80C - 206G

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)
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

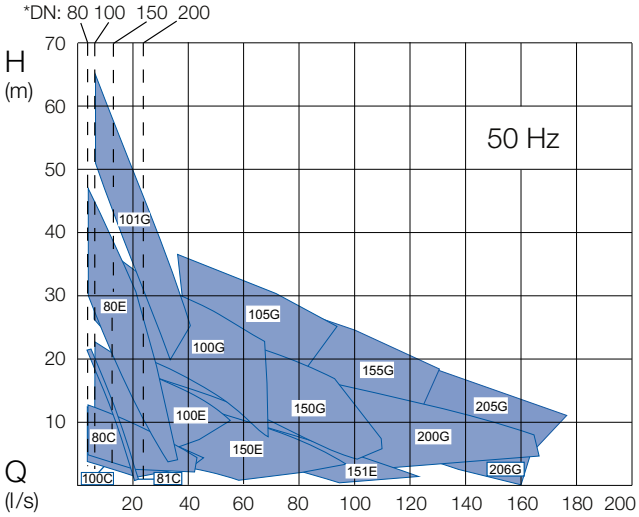
Technical data

XFP	Motor	Impeller size	Rated voltage (V)	Motor power * (kW) P_1	P_2	Rated current (A)	Speed (r/min)	Weight ** (kg)
80C-CB1	PE 22/4 PE 29/4 PE 13/6	3, 4 2 1, 2, 4	400 3~ 400 3~ 400 3~	2.5 3.4 1.6	2.2 3.0 1.3	4.6 6.4 3.6	1450 1450 980	110 / n.a. 110 / n.a. 110 / n.a.
80C-VX	PE 15/4 PE 22/4 PE 29/4	4, 5, 6, 7 2, 3, 1	400 3~ 400 3~ 400 3~	1.8 2.5 3.4	1.5 2.2 3.0	3.2 4.6 6.4	1450 1450 1450	100 / n.a. 110 / n.a. 110 / n.a.
80E-CB1	PE 70/2 PE 110/2	4 1, 2, 3	400 3~ 400 3~	7.7 12.1	7.0 11.0	13.5 20.1	2900 2900	150 / n.a. 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 PE 40/2	2 1, 2	400 3~ 400 3~	3.4 4.5	3.0 4.0	5.6 7.4	2900 2900	110 / n.a. 120 / n.a.
81E-VX	PE 55/2 PE 70/2 PE 110/2	5 4 2, 3	400 3~ 400 3~ 400 3~	6.1 7.7 12.1	5.5 7.0 11.0	10.3 13.5 20.1	2900 2900 2900	140 / n.a. 140 / n.a. 160 / n.a.
100C-CB1	PE 22/4 PE 29/4 PE 13/6	3, 4 2 1, 2, 4	400 3~ 400 3~ 400 3~	2.5 3.4 1.6	2.2 3.0 1.3	4.6 6.4 3.6	1450 1450 980	110 / n.a. 110 / n.a. 110 / n.a.
100C-VX	PE 15/4 PE 22/4 PE 29/4	4, 5, 6 2, 3, 1	400 3~ 400 3~ 400 3~	1.8 2.5 3.4	1.5 2.2 3.0	3.2 4.6 6.4	1450 1450 1450	100 / n.a. 110 / n.a. 110 / n.a.
100E-CB1	PE 40/4 PE 60/4 PE 90/4	5 3, 4 1, 2	400 3~ 400 3~ 400 3~	4.4 6.7 9.9	4.0 6.0 9.0	8.4 13.6 18.1	1450 1450 1450	160 / n.a. 170 / n.a. 190 / n.a.
100E-VX	PE 40/4 PE 60/4 PE 90/4	4, 5, 6 2, 3, 4 1, 2, 3	400 3~ 400 3~ 400 3~	4.4 6.7 9.9	4.0 6.0 9.0	8.4 13.6 18.1	1450 1450 1450	140 / n.a. 150 / n.a. 170 / n.a.
100G-CB1	PE 110/4 PE 140/4 PE 160/4 PE 185/4 PE 220/4	5 4 3 1, 2 1	400 3~ 400 3~ 400 3~ 400 3~ 400 3~	12.0 15.2 17.4 20.0 23.7	11.0 14.0 16.0 18.5 22.0	23.4 27.8 33.1 36.9 42.5	1450 1450 1450 1450 1450	340 / 380 340 / 380 360 / 400 360 / 400 370 / 420
100G-VX	PE 110/4 PE 140/4 PE 160/4 PE 185/4	4 3 2 1	400 3~ 400 3~ 400 3~ 400 3~	12.0 15.2 17.4 20.0	11.0 14.0 16.0 18.5	23.4 27.8 33.1 36.9	1450 1450 1450 1450	330 / 370 330 / 370 350 / 390 350 / 390
101G-CB1	PE 150/2 PE 185/2 PE 250/2	2, 3 1 1	400 3~ 400 3~ 400 3~	16.0 20.0 26.9	15.0 18.5 25.0	27.5 33.7 44.0	2900 2900 2900	320 / 360 320 / 360 340 / 380
101G-VX	PE 150/2 PE 185/2 PE 250/2	6, 7 4, 5, 6, 7 1, 2, 3, 4, 5	400 3~ 400 3~ 400 3~	16.0 20.0 26.9	15.0 18.5 25.0	27.5 33.7 44.0	2900 2900 2900	330 / 370 330 / 370 350 / 390
105G-CB2	PE 220/4 PE 300/4	3, 4 1, 2, 3	400 3~ 400 3~	23.7 32.1	22.0 30.0	42.5 58.5	1450 1450	410 / 450 440 / 490
150E-CB1	PE 40/4 PE 60/4 PE 90/4 PE 30/6	5, 6 3, 4, 5 1, 2, 3 1, 2, 3, 4	400 3~ 400 3~ 400 3~ 400 3~	4.4 6.7 9.9 3.5	4.0 6.0 9.0 3.0	8.4 13.6 18.1 6.4	1450 1450 1450 980	170 / n.a. 170 / n.a. 190 / n.a. 170 / n.a.
150G-CB1	PE 110/4 PE 140/4 PE 160/4 PE 185/4 PE 220/4	5 4 3 2 1	400 3~ 400 3~ 400 3~ 400 3~ 400 3~	12.0 15.2 17.4 20.0 23.7	11.0 14.0 16.0 18.5 22.0	23.4 27.8 33.1 36.9 42.5	1450 1450 1450 1450 1450	340 / 390 340 / 390 370 / 410 370 / 410 380 / 430
150G-VX	PE 110/4 PE 140/4 PE 160/4 PE 185/4	4 3 2 1, 2	400 3~ 400 3~ 400 3~ 400 3~	12.0 15.2 17.4 20.0	11.0 14.0 16.0 18.5	23.4 27.8 33.1 36.9	1450 1450 1450 1450	330 / 380 330 / 380 360 / 400 360 / 400
151E-CB2	PE 49/4 PE 60/4 PE 90/4	5 4 2, 4	400 3~ 400 3~ 400 3~	5.5 6.7 9.9	4.9 6.0 9.0	10.2 13.6 18.1	1450 1450 1450	180 / n.a. 180 / n.a. 200 / n.a.
155G-CB2	PE 220/4 PE 300/4	3, 4 1, 2, 3	400 3~ 400 3~	23.7 32.1	22.0 30.0	42.5 58.5	1450 1450	410 / 450 440 / 490
200G-CB1	PE 110/4 PE 140/4 PE 160/4 PE 185/4 PE 220/4 PE 90/6	5 4 3 2 1 1, 2, 3	400 3~ 400 3~ 400 3~ 400 3~ 400 3~ 400 3~	12.0 15.2 17.4 20.0 23.7 10.1	11.0 14.0 16.0 18.5 22.0 9.0	23.4 27.8 33.1 36.9 42.5 20.9	1450 1450 1450 1450 1450 980	380 / 420 380 / 420 400 / 450 400 / 450 410 / 470 380 / 430
205G-CB2	PE 220/4 PE 300/4	3, 4 1, 2, 3	400 3~ 400 3~	23.7 32.1	22.0 30.0	42.5 58.5	1450 1450	430 / 480 460 / 510
206G-CB2	PE 185/6 PE 220/6	2, 3, 4, 5 1, 2	400 3~ 400 3~	20.2 23.9	18.5 22.0	35.5 40.7	980 980	450 / 500 480 / 530

* P_1 = power at mains. P_2 = power at motor shaft. **Without / with cooling jacket; includes 10 m cable.

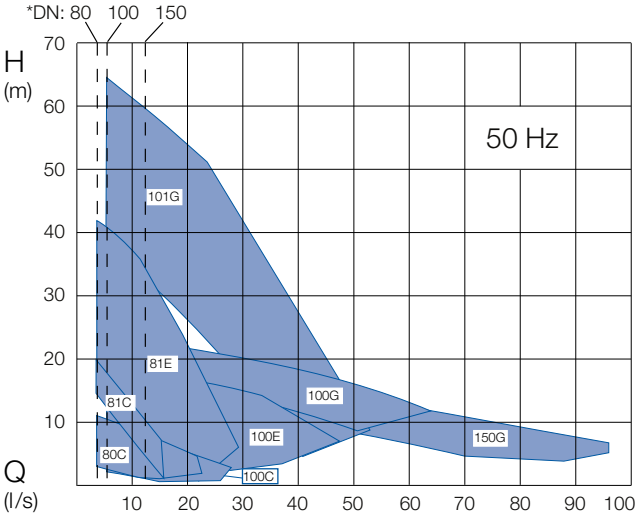
Data for alternative voltages available on request. Cable data for EMC and alternative start options available on request.

Performance fields with Contrablock impeller



* Minimum flow rate Q

Performance fields with vortex impeller



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

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 DN 100 DN 100 (high-head) DN 150 DN 150 DN 200 DN 200	80C, 81C, 80E, 81E 100C, 100E, 100G 101G, 105G 150E, 151E, 150G 155G 200G (4-pole), 205G, 206G 200G (6-pole)	62320649 62320652 DPR31211F 62320655 DPS91211F DPT91211F 62320658
	90° cast bend (single guide rail) - plug/clamp connection	DN 80 (pipe Ø 90 mm) DN 100 (pipe Ø 110 mm) DN 100 (pipe Ø 115 mm) DN 150 (pipe Ø 160 mm) DN 150 (pipe Ø 169 mm)	80C, 81C 100C, 100E, 100G 100C, 100E, 100G 150E, 151E, 150G 150E, 151E, 150G	62320650 62320653 62320654 62320656 62320657
	90° cast bend (twin guide rail) - DIN flange connection	DN 80 DN 100 DN 100 DN 150 DN 200	80C, 81C, 80E, 81E 100C,100E, 100G 101G, 105G 150E, 151E, 150G 155G, 200G, 205G, 206G	62325025 62325026 DPRF1211F 62325027 62325028
	Pedestal bracket fasteners single guide rail version (galvanised steel)		80C - 81E 100C - 105G 150E - 155G 200G - 206G	62610632 62610633 62610635 62610883
	single guide rail version (stainless steel)		80C - 81E 100C - 105G 150E - 155G 200G - 206G	62610899 62610637 62610639 62610862
	twin guide rail version (galvanised steel)		80C - 81E 100C - 105G 150E - 155G 200G - 206G	62615053 62615054 62615055 62615056
	Pedestal base anchor bolts single and twin guide rail (galvanised steel)		80C - 105G 150E - 155G 200G - 206G	62610775 62610784 62610785
	Chain Kits (stainless steel) including shackle Working load limit (WLL) 320 kg	1.6 m 3.0 m 4.0 m 6.0 m 7.0 m	See pump weights for selection	310101395001 310101236003 310101236004 310101236006 310101236007
	Working load limit (WLL) 400 kg	3.0 m 4.0 m 6.0 m 7.0 m	See pump weights for selection	310101236013 310101236014 310101236016 310101236017
	Working load limit (WLL) 630 kg	3.0 m 4.0 m 6.0 m 7.0 m	See pump weights for selection	310101236033 310101236034 310101236036 310101236037
Fixed installation - dry well, (horizontal)	**Pump Support Kit** (EN-GJL-250) head and volute supports with fixing bolts and vibration damper		80C, 81C. 80C, 81C, 100C. 80E. 81E. 100C. 100E. 150E, 151E. 101G. 100G - 206G.	61825023 61825033** 61825029 61825038 61825024 61825030 61825031 61825036*** 61825037
(vertical)	**Ground Support Stand**		80C, 81C. 80E & 81E. 100C. 100E. 150E, 151E. 101G. 100G - 206G.	61355014 61355020 61355015 61355021 61355022 61355024*** 61355023
	Adapter kit (required with support stand)		80C. 100C.	62665347*** 62665348***
Transportable	**Skirtbase**		80C, 81C, 100C. 80E & 81E. 100E. 150E, 151E. 101G. 100G - 206G	61355016 61355017 61355018 61355019 61355026*** 61355025
General	**Cathodic Protection** (zinc anodes)		80C - 206G	13905000
	Leakage Relay Type ABS CA 461	110 - 230 VAC 18 - 36 VDC, SELV	80C - 206G	16907010 16907011
	Temperature and Leakage Relay Type ABS CA 462	110 - 230 VAC 18 - 36 VDC, SELV	80C - 206G	16907006 16907007

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