

Submersible Sewage Pump Type ABS XFP 80C - 201G

SULZER

Robust, reliable, submersible pumps, with Premium Efficiency motors from 1.8 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 - 201G) at the motor. XFP 100G - 201G 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 - 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 motor and seal chambers (80C - 150E), or motor and oil chambers (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 standard ATEX 2014/34/EU [II 2G Ex db IIB T4 Gb].

* See Technical Data table



Motor

Premium Efficiency IE3* motor.

60 Hz single-phase 230 V, and three-phase 460 V squirrel-cage motor as 2-pole (3400 r/min), 4-pole (1750), 6-pole (1180) and 8-pole (870).

Protection type IP 68, with stator insulation Class H.

Starting: direct on line (DOL) or star-delta (YΔ).

Service factor: 1.3

Motors with other operating voltages and frequencies are also available (DOL and YΔ).

Identification Code: e.g. XFP 80C CB1.3 PE22/4-C-60

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

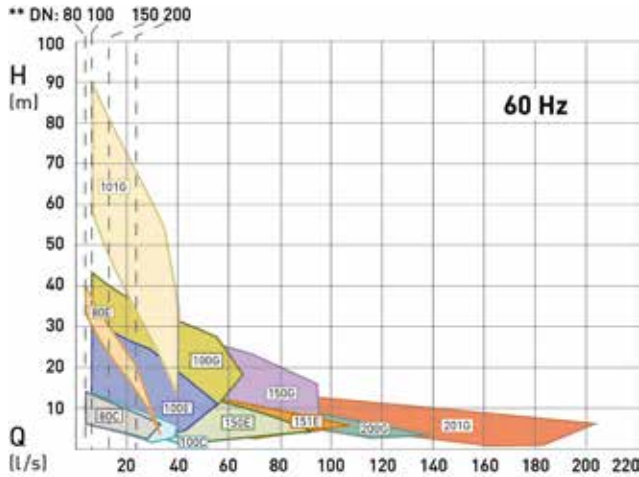
60 Frequency

Technical data

XFP	Motor	IEC rating	Impeller size	Rated voltage (V)	Motor power * (kW)		Rated current (A)	Speed (r/min)	Cable size	Weight ** (kg)
					P ₁	P ₂				
80C-CB1	PE 28/4	IE3	5	460 3~	3.1	2.8	5.2	1750	SOOW 14/7	120 / n.a.
	PE 35/4	IE3	4	460 3~	3.9	3.5	6.2	1750	SOOW 14/7	120 / n.a.
	PE 20/6	IE1	1, 2, 4	460 3~	2.4	2.0	4.2	1180	SOOW 14/7	120 / n.a.
	PE 28/4W	IE3	5	230 1~	3.6	2.8	16.9	1750	SOOW 10/7	110 / n.a.
	PE 20/6W	IE1	1, 2, 4	230 1~	2.6	2.0	12.0	1180	SOOW 12/7	120 / n.a.
80C-VX	PE 22/4	IE3	2, 3, 4	460 3~	2.5	2.2	4.6	1750	SOOW 14/7	110 / n.a.
	PE 35/4	IE3	1	460 3~	3.9	3.5	6.2	1750	SOOW 14/7	110 / n.a.
	PE 18/4W	IE3	3, 4	230 1~	2.3	1.8	10.5	1750	SOOW 12/7	110 / n.a.
	PE 28/4W	IE3	2	230 1~	3.6	2.8	16.9	1750	SOOW 10/7	110 / n.a.
80E-CB1	PE 125/2	IE3	4, 5	460 3~	13.7	12.5	21.3	3400	AWM 8/4+16/3	180 / n.a.
81C-VX	PE 45/2	IE3	1	460 3~	5.1	4.5	7.4	3400	SOOW 14/7	120 / n.a.
81E-VX	PE 80/2	IE3	4	460 3~	8.9	8.0	13.3	3400	SOOW 12/7	140 / n.a.
	PE 125/2	IE3	A, 1, 2, 3	460 3~	13.7	12.5	21.3	3400	AWM 8/4+16/3	170 / n.a.
100C-CB1	PE 28/4	IE3	5	460 3~	3.1	2.8	5.2	1750	SOOW 14/7	120 / n.a.
	PE 35/4	IE3	4	460 3~	3.9	3.5	6.2	1750	SOOW 14/7	120 / n.a.
	PE 20/6	IE1	1, 2, 4	460 3~	2.4	2.0	4.2	1180	SOOW 14/7	130 / n.a.
	PE 28/4W	IE3	5	230 1~	3.6	2.8	16.9	1750	SOOW 10/7	130 / n.a.
	PE 20/6W	IE1	1, 2, 4	230 1~	2.6	2.0	12.0	1180	SOOW 12/7	130 / n.a.
100C-VX	PE 22/4	IE3	3, 4, 5	460 3~	2.5	2.2	4.6	1750	SOOW 14/7	120 / n.a.
	PE 28/4	IE3	2	460 3~	3.1	2.8	5.2	1750	SOOW 14/7	120 / n.a.
	PE 35/4	IE3	1	460 3~	3.9	3.5	6.2	1750	SOOW 14/7	120 / n.a.
	PE 18/4W	IE3	4	230 1~	2.3	1.8	10.5	1750	SOOW 12/7	110 / n.a.
	PE 28/4W	IE3	2, 3	230 1~	3.6	2.8	16.9	1750	SOOW 10/7	120 / n.a.
100E-CB1	PE 45/4	IE3	6	460 3~	5.0	4.5	8.2	1750	SOOW 14/7	160 / n.a.
	PE 56/4	IE3	5	460 3~	6.1	5.6	9.9	1750	SOOW 14/7	160 / n.a.
	PE 75/4	IE3	4, 4A, 5	460 3~	8.2	7.5	13.8	1750	SOOW 12/7	170 / n.a.
	PE 90/4	IE3	2, 3, 4	460 3~	9.8	9.0	15.8	1750	SOOW 12/7	190 / n.a.
	PE 105/4	IE3	1, 2, 3	460 3~	11.4	10.5	17.7	1750	SOOW 10/7	200 / n.a.
	PE 35/6	IE2	2, 3, 4, 5	460 3~	4.0	3.5	6.3	1180	SOOW 14/7	170 / n.a.
100E-VX	PE 45/4	IE3	5	460 3~	5.0	4.5	8.2	1750	SOOW 14/7	150 / n.a.
	PE 56/4	IE3	4	460 3~	6.1	5.6	9.9	1750	SOOW 14/7	140 / n.a.
	PE 75/4	IE3	4	460 3~	8.2	7.5	13.8	1750	SOOW 12/7	150 / n.a.
	PE 90/4	IE3	3	460 3~	9.8	9.0	15.8	1750	SOOW 12/7	180 / n.a.
	PE 105/4	IE3	1	460 3~	11.4	10.5	17.7	1750	SOOW 10/7	180 / n.a.
100G-CB1	PE 130/4	IE3	8, 9	460 3~	14.0	13.0	23.2	1750	G-GC 6-3	340 / 390
	PE 150/4	IE3	7	460 3~	16.1	15.0	25.5	1750	G-GC 6-3	340 / 390
	PE 185/4	IE3	6	460 3~	19.8	18.5	32.3	1750	G-GC 6-3	360 / 410
	PE 210/4	IE3	4, 5	460 3~	22.4	21.0	35.4	1750	G-GC 4-3	370 / 410
	PE 250/4	IE3	4	460 3~	26.7	25.0	40.8	1750	G-GC 2-3	380 / 430
	PE 90/6	IE3	4, 5	460 3~	10.0	9.0	18.8	1180	AWM 8/4+16/3	390 / 440
100G-CB2	PE 250/4	IE3	1, 2, 3	460 3~	26.7	25.0	40.8	1750	G-GC 2-3	372 / 422
101G-CB1	PE 185/2	IE3	4	460 3~	20.0	18.5	28.4	3400	G-GC 4-3	340 / 380
	PE 200/2	IE3	3, 4	460 3~	21.8	20.0	30.5	3400	G-GC 6-3	330 / 380
	PE 230/2	IE3	2, 3	460 3~	25.1	23.0	35.1	3400	G-GC 4-3	350 / 390
	PE 300/2	IE3	1, 2	460 3~	32.5	30.0	45.8	3400	G-GC 2-3	360 / 410
101G-VX	PE 230/2	IE3	5, 6	460 3~	25.1	23.0	35.1	3400	G-GC 4-3	360 / 400
	PE 300/2	IE3	3, 4, 5, 6	460 3~	32.5	30.0	45.8	3400	G-GC 2-3	370 / 410
150E-CB1	PE 45/4	IE3	7	460 3~	5.0	4.5	8.2	1750	SOOW 14/7	170 / n.a.
	PE 56/4	IE3	6	460 3~	6.1	5.6	9.9	1750	SOOW 14/7	180 / n.a.
	PE 75/4	IE3	5, 6	460 3~	8.2	7.5	13.8	1750	SOOW 12/7	170 / n.a.
	PE 90/4	IE3	4, 5	460 3~	9.8	9.0	15.8	1750	SOOW 12/7	200 / n.a.
	PE 105/4	IE3	4	460 3~	11.4	10.5	17.7	1750	SOOW 10/7	210 / n.a.
	PE 35/6	IE2	4, 5, 6	460 3~	4.0	3.5	6.3	1180	SOOW 14/7	170 / n.a.
150G-CB1	PE 130/4	IE3	8	460 3~	14.0	13.0	23.2	1750	G-GC 6-3	350 / 400
	PE 150/4	IE3	7	460 3~	16.1	15.0	25.5	1750	G-GC 6-3	350 / 400
	PE 185/4	IE3	6, 7	460 3~	19.8	18.5	32.3	1750	G-GC 6-3	380 / 420
	PE 210/4	IE3	4, 5	460 3~	22.4	21.0	35.4	1750	G-GC 4-3	380 / 430
	PE 250/4	IE3	4, 5	460 3~	26.7	25.0	40.8	1750	G-GC 2-3	400 / 460
	PE 110/6	IE3	2,3, 4	460 3~	12.0	11.0	21.1	1180	AWM 8/4+16/3	350 / 390
151E-CB2	PE 75/4	IE3	4	460 3~	8.2	7.5	13.8	1750	SOOW 12/7	180 / n.a.
	PE 90/4	IE3	2, 3	460 3~	9.8	9.0	15.8	1750	SOOW 12/7	200 / n.a.
	PE 105/4	IE3	1	460 3~	11.4	10.5	17.7	1750	SOOW 10/7	210 / n.a.
	PE 35/6	IE2	1, 2, 3, 4	460 3~	4.0	3.5	6.3	1750	SOOW 14/7	170 / n.a.
200G-CB1	PE 90/6	IE3	3, 4	460 3~	10.0	9.0	18.8	1180	AWM 8/4+16/3	390 / 430
	PE 110/6	IE3	1, 2	460 3~	12.0	11.0	21.1	1180	AWM 8/4+16/3	390 / 430
	PE 130/6	IE3	1	460 3~	14.2	13.0	23.7	1180	AWM 8/4+16/3	390 / 430
201G-CB2	PE 130/6	IE3	6	460 3~	14.2	13.0	23.7	1180	AWM 8/4+16/3	390 / 430
	PE 160/6	IE3	4, 5	460 3~	17.5	16.0	28.4	1180	AWM 8/4+16/3	400 / 440
	PE 200/6	IE3	2, 3	460 3~	21.5	20.0	32.7	1180	G-GC 4-3	460 / 500
	PE 120/8	IE3	1, 2	460 3~	13.5	12.0	23.7	870	G-GC 6-3	400 / 440

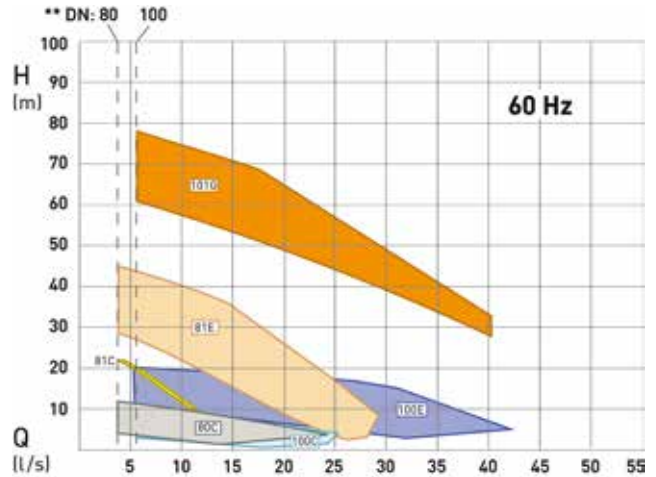
* P₁ = power at mains. P₂ = power at motor shaft. **Without / with cooling jacket; includes 15 m cable. Data for alternative voltages available on request.

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	460 V 3~	220, 230, 380 V 3~*
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 - 201G)	-
O-rings (external seals)	NBR	Viton (not available for cable entry seal)
Cables	NBR	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 - 201G)	Closed cooling (100G - 201G)
Installation	Wet-well	Dry well*** or transportable

* Selected motors only. Contact Sulzer for details. ** See Technical Data table. *** Except XFP 80E and 81E.

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 and oil chambers (100G - 201G)	● ●	- -

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.
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 - 81E	62320649
		DN 100	100C - 100G	62320652
		DN 100 (high-head)	101G	DPR32211F
		DN 150	150E - 150G	62320655
		DN 200	200G	DPT92211F
	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	DPR32211F
		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
Pedestal bracket fasteners single guide rail version (galvanised steel)	DN 200	201G	62325028	
			62610632	
single guide rail version (stainless steel)		80C - 81E	62610633	
		100C - 101G	62610635	
twin guide rail version (galvanised steel)		150E - 150G	62610636	
		201G	62610883	
Pedestal base anchor bolts single and twin guide rail (galvanised steel)		80C - 81E	62610899	
		100C - 101G	62610637	
Chain Kit (stainless steel) including shackle		150E - 150G	62610639	
		201G	62610862	
Fixed installation - dry well, (horizontal)	Pump Support Kit (EN-GJL-250) head and volute supports with fixing bolts and vibration damper		80C - 81E	62615053
			100C - 101G	62615054
			150E - 150G	62615055
			201G	62615056
			80C - 101G	62610775
			150E - 150G	62610784
			201G	62610785
	Ground Support Stand	3 m	80C - 201G	310101236013
		4 m		310101236014
		6 m		310101236016
		7 m		310101236017
			80C	61825023
			80C**, 81C, 100C	61825033
Adapter kit (required with support stand)		81E***	61825038	
		100E	61825030	
		150E, 151E	61825031	
		101G	61825036	
		100G, 101G**, 150G, 201G	61825037	
		80C, 81C	61355014	
Transportable	Skirtbase		81E***	61355020
			100C	61355015
			100E	61355021
			150E, 151E	61355022
			101G	61355024
			100G, 101G**, 150G, 201G	61355023
General	Cathodic Protection (zinc anodes)		80C***	62665347
	Leakage Relay Type ABS CA 461	110 - 230 VAC	100C***	62665348
	Temperature and Leakage Relay Type ABS CA 462	110 - 230 VAC		
		18 - 36 VDC, SELV		
		110 - 230 VAC		
		18 - 36 VDC, SELV		

*Guide rail not included **Vortex version of pumps (VX) *** Only with PE 80/2 motor