

Submersible Sewage Pump Type ABS XFP 80C - 201G

SULZER

Robust, reliable, submersible pumps, with Premium Efficiency motors from 2.4 to 40.2 hp. 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 using bi-metallic thermal sensors in the stator windings that open at 140 °C (284 °F).
- 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.
- 3", 4", 6" and 8" radial slot ANSI flange discharge.
- Maximum allowable temperature of the medium for continuous operation is 104 °F.
- Maximum submergence depth of 65 ft.
- Available in explosion-proof version in accordance with international standards FM / CSA.

* See Technical Data table



Motor

Premium Efficiency IE3* motor.

60 Hz single-phase 230 V through 3.8 hp, and three-phase 460 V through 40.2 hp.

Squirrel-cage motor as 2-pole (3400 rpm), 4-pole (1750), 6-pole (1180) and 8-pole (870).

Protection type IP 68, with stator insulation Class H.

Starting: DOL (direct on line).

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-60

Hydraulics:

XFP Product range

8 Discharge outlet DN (cm)

0Hydraulic type

C Volute opening (dia. ins): C = 9, E = 10, G = 13

CB..... Impeller type: CB = Contrablock, VX = vortex

1 Number of impeller vanes

3 Impeller size

Motor:

PE Premium Efficiency

22 Motor power $P_2 \times 10$ hp

4 Number of poles

C Volute opening (dia. ins): C = 9, E = 10, G = 13

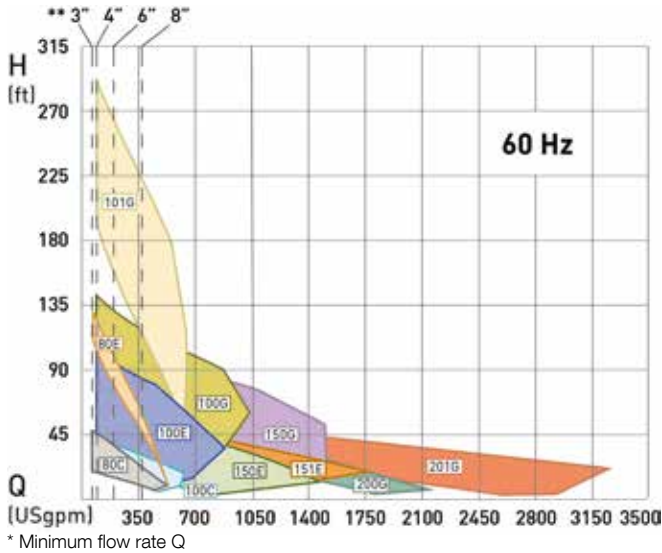
60 Frequency

Technical data

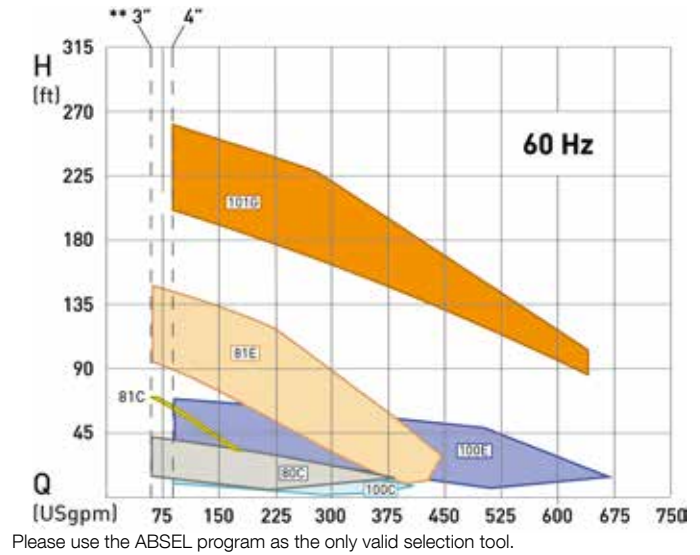
XFP	Motor	IEC rating	Impeller size	Rated voltage (V)	Motor power*		Rated current (A)	Speed (rpm)	Cable size	Weight** (lbs)
					P ₁ (kW)	P ₂ (hp)				
80C-CB1	PE 28/4	IE3	5	460 3~	3.1	3.8	5.2	1750	SOOW 14/7	265 / n.a.
	PE 35/4	IE3	4	460 3~	3.9	4.7	6.2	1750	SOOW 14/7	265 / n.a.
	PE 20/6	IE1	1, 2, 4	460 3~	2.4	2.7	4.2	1180	SOOW 14/7	265 / n.a.
	PE 28/4W	IE3	5	230 1~	3.6	3.8	16.9	1750	SOOW 10/7	243 / n.a.
	PE 20/6W	IE1	1, 2, 4	230 1~	2.6	2.7	12.0	1180	SOOW 12/7	265 / n.a.
80C-VX	PE 22/4	IE3	2, 3, 4	460 3~	2.5	3.0	4.6	1750	SOOW 14/7	243 / n.a.
	PE 35/4	IE3	1	460 3~	3.9	4.7	6.2	1750	SOOW 14/7	243 / n.a.
	PE 18/4W	IE3	3, 4	230 1~	2.3	2.4	10.5	1750	SOOW 12/7	243 / n.a.
	PE 28/4W	IE3	2	230 1~	3.6	3.8	16.9	1750	SOOW 10/7	243 / n.a.
80E-CB1	PE 125/2	IE3	4, 5	460 3~	13.7	16.8	21.3	3400	AWM 8/4+16/3	397 / n.a.
81C-VX	PE 45/2	IE3	1	460 3~	5.1	6.0	7.4	3400	SOOW 14/7	265 / n.a.
81E-VX	PE 80/2	IE3	4	460 3~	8.9	10.7	13.3	3400	SOOW 12/7	309 / n.a.
	PE 125/2	IE3	A, 1, 2, 3	460 3~	13.7	16.8	21.3	3400	AWM 8/4+16/3	375 / n.a.
100C-CB1	PE 28/4	IE3	5	460 3~	3.1	3.8	5.2	1750	SOOW 14/7	265 / n.a.
	PE 35/4	IE3	4	460 3~	3.9	4.7	6.2	1750	SOOW 14/7	265 / n.a.
	PE 20/6	IE1	1, 2, 4	460 3~	2.4	2.7	4.2	1180	SOOW 14/7	287 / n.a.
	PE 28/4W	IE3	5	230 1~	3.6	3.8	16.9	1750	SOOW 10/7	287 / n.a.
	PE 20/6W	IE1	1, 2, 4	230 1~	2.6	2.7	12.0	1180	SOOW 12/7	287 / n.a.
100C-VX	PE 22/4	IE3	3, 4, 5	460 3~	2.5	3.0	4.6	1750	SOOW 14/7	265 / n.a.
	PE 28/4	IE3	2	460 3~	3.1	3.8	5.2	1750	SOOW 14/7	265 / n.a.
	PE 35/4	IE3	1	460 3~	3.9	4.7	6.2	1750	SOOW 14/7	265 / n.a.
	PE 18/4W	IE3	4	230 1~	2.3	2.4	10.5	1750	SOOW 12/7	243 / n.a.
	PE 28/4W	IE3	2, 3	230 1~	3.6	3.8	16.9	1750	SOOW 10/7	265 / n.a.
100E-CB1	PE 45/4	IE3	6	460 3~	5.0	6.0	8.2	1750	SOOW 14/7	353 / n.a.
	PE 56/4	IE3	5	460 3~	6.1	7.5	9.9	1750	SOOW 14/7	353 / n.a.
	PE 75/4	IE3	4, 4A, 5	460 3~	8.2	10.1	13.8	1750	SOOW 12/7	375 / n.a.
	PE 90/4	IE3	2, 3, 4	460 3~	9.8	12.1	15.8	1750	SOOW 12/7	419 / n.a.
	PE 105/4	IE3	1, 2, 3	460 3~	11.4	14.1	17.7	1750	SOOW 10/7	441 / n.a.
	PE 35/6	IE2	2, 3, 4, 5	460 3~	4.0	4.7	6.3	1180	SOOW 14/7	375 / n.a.
	PE 45/4	IE3	5	460 3~	5.0	6.0	8.2	1750	SOOW 14/7	331 / n.a.
100E-VX	PE 56/4	IE3	4	460 3~	6.1	7.5	9.9	1750	SOOW 14/7	309 / n.a.
	PE 75/4	IE3	4	460 3~	8.2	10.1	13.8	1750	SOOW 12/7	331 / n.a.
	PE 90/4	IE3	3	460 3~	9.8	12.1	15.8	1750	SOOW 12/7	397 / n.a.
	PE 105/4	IE3	1	460 3~	11.4	14.1	17.7	1750	SOOW 10/7	397 / n.a.
	100G-CB1	PE 130/4	IE3	8, 9	460 3~	14.0	17.4	23.2	1750	G-GC 6-3
PE 150/4		IE3	7	460 3~	16.1	20.1	25.5	1750	G-GC 6-3	750 / 860
PE 185/4		IE3	6	460 3~	19.8	24.8	32.3	1750	G-GC 6-3	794 / 904
PE 210/4		IE3	4, 5	460 3~	22.4	28.2	35.4	1750	G-GC 4-3	816 / 904
PE 250/4		IE3	4	460 3~	26.7	33.5	40.8	1750	G-GC 2-3	860 / 970
PE 90/6		IE3	4, 5	460 3~	10.0	12.1	18.8	1180	AWM 8/4+16/3	772 / 882
100G-CB2	PE 250/4	IE3	1, 2, 3	460 3~	26.7	33.5	40.8	1750	G-GC 2-3	842 / 952
101G-CB1	PE 185/2	IE3	4	460 3~	20.0	24.8	28.4	3400	G-GC 4-3	750 / 838
	PE 200/2	IE3	3, 4	460 3~	21.8	26.8	30.5	3400	G-GC 6-3	728 / 838
	PE 230/2	IE3	2, 3	460 3~	25.1	30.8	35.1	3400	G-GC 4-3	772 / 822
	PE 300/2	IE3	1, 2	460 3~	32.5	40.2	45.8	3400	G-GC 2-3	794 / 904
101G-VX	PE 230/2	IE3	5, 6	460 3~	25.1	30.8	35.1	3400	G-GC 4-3	794 / 882
	PE 300/2	IE3	3, 4, 5, 6	460 3~	32.5	40.2	45.8	3400	G-GC 2-3	816 / 904
150E-CB1	PE 45/4	IE3	7	460 3~	5.0	6.0	8.2	1750	SOOW 14/7	375 / n.a.
	PE 56/4	IE3	6	460 3~	6.1	7.5	9.9	1750	SOOW 14/7	397 / n.a.
	PE 75/4	IE3	5, 6	460 3~	8.2	10.1	13.8	1750	SOOW 12/7	375 / n.a.
	PE 90/4	IE3	4, 5	460 3~	9.8	12.1	15.8	1750	SOOW 12/7	441 / n.a.
	PE 105/4	IE3	4	460 3~	11.4	14.1	17.7	1750	SOOW 10/7	463 / n.a.
	PE 35/6	IE2	4, 5, 6	460 3~	4.0	4.7	6.3	1180	SOOW 14/7	375 / n.a.
150G-CB1	PE 130/4	IE3	8	460 3~	14.0	17.4	23.2	1750	G-GC 6-3	772 / 882
	PE 150/4	IE3	7	460 3~	16.1	20.1	25.5	1750	G-GC 6-3	772 / 882
	PE 185/4	IE3	6, 7	460 3~	19.8	24.8	32.3	1750	G-GC 6-3	838 / 926
	PE 210/4	IE3	4, 5	460 3~	22.4	28.2	35.4	1750	G-GC 4-3	838 / 948
	PE 250/4	IE3	4, 5	460 3~	26.7	33.5	40.8	1750	G-GC 2-3	882 / 1014
	PE 110/6	IE3	2,3, 4	460 3~	12.0	14.8	21.1	1180	AWM 8/4+16/3	772 / 860
151E-CB2	PE 75/4	IE3	4	460 3~	8.2	10.1	13.8	1750	SOOW 12/7	397 / n.a.
	PE 90/4	IE3	2, 3	460 3~	9.8	12.1	15.8	1750	SOOW 12/7	441 / n.a.
	PE 105/4	IE3	1	460 3~	11.4	14.1	17.7	1750	SOOW 10/7	463 / n.a.
	PE 35/6	IE2	1, 2, 3, 4	460 3~	4.0	4.7	6.3	1750	SOOW 14/7	375 / n.a.
200G-CB1	PE 90/6	IE3	3, 4	460 3~	10.0	12.1	18.8	1180	AWM 8/4+16/3	860 / 948
	PE 110/6	IE3	1, 2	460 3~	12.0	14.8	21.1	1180	AWM 8/4+16/3	860 / 948
	PE 130/6	IE3	1	460 3~	14.2	17.4	23.7	1180	AWM 8/4+16/3	860 / 948
201G-CB2	PE 130/6	IE3	6	460 3~	14.2	17.4	23.7	1180	AWM 8/4+16/3	860 / 948
	PE 160/6	IE3	4, 5	460 3~	17.5	21.5	28.4	1180	AWM 8/4+16/3	882 / 970
	PE 200/6	IE3	2, 3	460 3~	21.5	26.8	32.7	1180	G-GC 4-3	1014 / 1102
	PE 120/8	IE3	1, 2	460 3~	13.5	16.1	23.7	870	G-GC 6-3	882 / 970

* P₁ = power at mains. P₂ = power at motor shaft. **Without / with cooling jacket; includes 49 ft 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	230 V 1~, 460 V 3~	208 V 1~, 208, 230, 600 V 3~*
Voltage tolerance	± 10%	-
Motor efficiency	Premium Eff. IE3**	-
Insulation class	H	-
Start-up	Direct on line	-
Approvals	FM / CSA	-
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	CSA	-
Cable length (ft)	49	33, 66, 99, 131, 164
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

Motor	Material	Option
Motor housing	Cast iron EN-GJL-250	-
Motor shaft	Stainless steel 1.4021	-
Fasteners	Stainless steel 1.4401	-
Lifting hoop	Stainless steel 1.4401	-
Hydraulics	Material	Option
Volute	Cast iron EN-GJL-250	Ceramic coated EN-GJL-250*
Impeller	Cast iron EN-GJL-250	Stainless steel 1.4470 *, Flame hardened or ceramic coated EN-GJL-250*
Bottom plate	Cast iron EN-GJL-250	Stainless steel 1.4470 *, Flame hardened or ceramic coated EN-GJL-250*

* Selected models only. Contact Sulzer for details.

Material comparison

Europe	USA
EN-GJL-250	ASTM A48; Class 35B
1.4021	ASTM / AISI 420
1.4401	ASTM / AISI 316
1.4470	ASTM / AISI 329

Accessories

	Description	Size	XFP	Part no.		
Fixed installation - wet well with Sulzer Automatic Coupling System	Pedestal* (cast iron ASTM A48; Class 40B) 90° cast bend (single guide rail) - DIN flange connection	3"	80C - 81E	62320649		
		4"	100C - 100G	62320652		
		4" (high-head)	101G	DPR32211F		
		6"	150E - 150G	62320655		
		8"	200G	DPT92211F		
		8"	201G	62320658		
	90° cast bend (single guide rail) - plug/clamp connection	3" (pipe Ø3½")	80C - 81E	62320650		
		4" (pipe Ø4¼")	100C - 100G	62320653		
		4" high head (pipe Ø4¼")	101G	DPR32211F		
		4" (pipe Ø4½")	100C - 100G	62320654		
		6" (pipe Ø6¼")	150E - 150G	62320656		
	90° cast bend (twin guide rail) - DIN flange connection	3"	80C - 81E	62325029		
		4"	100C - 101G	62325030		
		6"	150E - 150G	62325031		
8"		201G	62325032			
Pedestal bracket fasteners single guide rail version (galvanised steel)		80C - 81E	62610632			
		100C - 101G	62610633			
single guide rail version (stainless steel)		150E - 150G	62610635			
		201G	62610883			
		80C - 81E	62610899			
twin guide rail version (galvanised steel)		100C - 101G	62610637			
		150E - 150G	62610639			
		201G	62610862			
		80C - 81E	62615053			
Pedestal base anchor bolts single and twin guide rail (galvanised steel)		100C - 101G	62615054			
		150E - 150G	62615055			
		201G	62615056			
		80C - 101G	62610775			
		150E - 150G	62610784			
Fixed installation - dry well, (horizontal)	Pump Support Kit (ASTM A48; Class 40B) head and volute supports with fixing bolts and vibration damper		201G	62610785		
			80C	61825032		
			80C**, 81C, 100C	61825033		
			81E***	61825038		
			100E	61825030		
			150E, 151E	61825031		
			101G	61825036		
			100G, 101G**, 150G, 201G	61825037		
		(vertical)	Ground Support Stand		80C, 81C	61355014
					81E***	61355020
	100C			61355015		
	100E			61355021		
	150E, 151E			61355022		
	101G			61355024		
	100G, 101G**, 150G, 201G			61355023		
Transportable	Skirtbase				80C, 81C, 100C	61355016
			80E & 81E	61355017		
			100E	61355018		
			150E, 151E	61355019		
			101G	61355026		
			100G, 101G**, 150G, 201G	61355025		
		General	Cathodic Protection (zinc anodes)		80C - 201G	13905000
Temperature and Leakage Relay Type ABS CA 462	110 - 230 VAC		80C - 201G	16907006		
	18 - 36 VDC, SELV			16907007		
Temperature and Leakage Relay Type ABS CA 462	110 - 230 VAC		80C - 201G	16907006		
	18 - 36 VDC, SELV		16907007			

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