Submersible Sewage Pump Type ABS XFP 80C - 206G

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)
0 . .....Hydraulic 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 x 10 hp
4 ..... Number of poles
C ..... Volute opening (dia. ins): C = 9, E = 10, G = 13
60 ..... Frequency

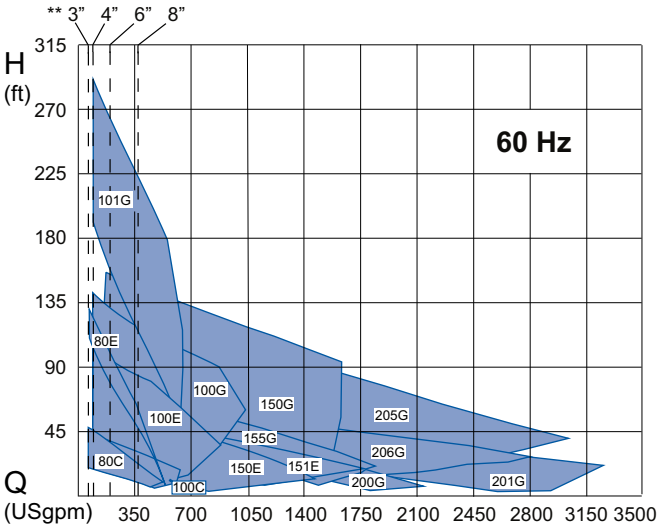
Technical data

XFP	Motor	IEC rating	Impeller size	Rated voltage (V)	Motor power * P_1 (kW)	P_2 (hp)	Rated current (A)	Speed (rpm)	Weight ** (lbs)
80C-CB1	PE 28/4	IE3	5	460 3~	3.1	3.75	5.2	1750	265 / n.a.
	PE 35/4	IE3	4	460 3~	3.9	4.69	6.2	1750	265 / n.a.
	PE 20/6	IE1	1, 2, 4	460 3~	2.4	2.68	4.2	1180	265 / n.a.
	PE 28/4W	IE3	5	230 1~	3.6	3.75	16.9	1750	243 / n.a.
	PE 20/6W	IE1	1, 2, 4	230 1~	2.6	2.68	12.0	1180	265 / n.a.
80C-VX	PE 22/4	IE3	2, 3, 4	460 3~	2.5	2.95	4.6	1750	243 / n.a.
	PE 35/4	IE3	1	460 3~	3.9	4.69	6.2	1750	243 / n.a.
	PE 18/4W	IE3	3, 4	230 1~	2.3	2.41	10.5	1750	243 / n.a.
	PE 28/4W	IE3	2	230 1~	3.6	3.75	16.9	1750	243 / n.a.
80E-CB1	PE 125/2	IE3	4, 5	460 3~	13.7	16.76	21.3	3400	397 / n.a.
81C-VX	PE 45/2	IE3	1	460 3~	5.1	6.04	7.4	3400	265 / n.a.
81E-VX	PE 80/2	IE3	4	460 3~	8.9	10.73	13.3	3400	309 / n.a.
	PE 125/2	IE3	A, 1, 2, 3	460 3~	13.7	16.76	21.3	3400	375 / n.a.
100C-CB1	PE 28/4	IE3	5	460 3~	3.1	3.75	5.2	1750	265 / n.a.
	PE 35/4	IE3	4	460 3~	3.9	4.69	6.2	1750	265 / n.a.
	PE 20/6	IE1	1, 2, 4	460 3~	2.4	2.68	4.2	1180	287 / n.a.
	PE 28/4W	IE3	5	230 1~	3.6	3.75	16.9	1750	287 / n.a.
	PE 20/6W	IE1	1, 2, 4	230 1~	2.6	2.68	12.0	1180	287 / n.a.
100C-VX	PE 22/4	IE3	3, 4, 5	460 3~	2.5	2.95	4.6	1750	265 / n.a.
	PE 28/4	IE3	2	460 3~	3.1	3.75	5.2	1750	265 / n.a.
	PE 35/4	IE3	1	460 3~	3.9	4.69	6.2	1750	265 / n.a.
	PE 18/4W	IE3	4	230 1~	2.3	2.41	10.5	1750	243 / n.a.
	PE 28/4W	IE3	2, 3	230 1~	3.6	3.75	16.9	1750	265 / n.a.
100E-CB1	PE 45/4	IE3	6	460 3~	5.0	6.04	8.2	1750	353 / n.a.
	PE 56/4	IE3	5	460 3~	6.1	7.51	9.9	1750	353 / n.a.
	PE 75/4	IE3	4, 4A, 5	460 3~	8.2	10.06	13.8	1750	375 / n.a.
	PE 90/4	IE3	2, 3, 4	460 3~	9.8	12.07	15.8	1750	419 / n.a.
	PE 105/4	IE3	1, 2, 3	460 3~	11.4	14.07	17.7	1750	441 / n.a.
	PE 35/6	IE2	2, 3, 4, 5	460 3~	4.0	4.69	6.3	1180	375 / n.a.
100E-VX	PE 45/4	IE3	5	460 3~	5.0	6.04	8.2	1750	331 / n.a.
	PE 56/4	IE3	4	460 3~	6.1	7.51	9.9	1750	309 / n.a.
	PE 75/4	IE3	4	460 3~	8.2	10.06	13.8	1750	331 / n.a.
	PE 90/4	IE3	3	460 3~	9.8	12.07	15.8	1750	397 / n.a.
	PE 105/4	IE3	1	460 3~	11.4	14.07	17.7	1750	397 / n.a.
100G-CB1	PE 130/4	IE3	8, 9	460 3~	14.0	17.43	23.2	1750	750 / 860
	PE 150/4	IE3	7, 8, 9	460 3~	16.1	20.12	25.5	1750	750 / 860
	PE 185/4	IE3	6, 7	460 3~	19.8	24.81	32.3	1750	794 / 904
	PE 210/4	IE3	4, 5, 6	460 3~	22.4	28.16	35.4	1750	816 / 904
	PE 250/4	IE3	4, 5	460 3~	26.7	33.53	40.8	1750	860 / 970
	PE 90/6	IE3	2, 3, 4, 5	460 3~	10.0	12.07	18.8	1180	750 / 838
	PE 130/6	IE3	1	460 3~	14.2	17.43	23.7	1180	750 / 838
	PE 110/6	IE3	1, 2, 3	460 3~	12.0	14.75	21.1	1180	750 / 838
100G-CB2	PE 250/4	IE3	1, 2, 3	460 3~	26.7	33.53	40.8	1750	842 / 952
101G-CB1	PE 185/2	IE3	4	460 3~	20.0	24.81	28.4	3400	750 / 838
	PE 200/2	IE3	3, 4	460 3~	21.8	26.82	30.5	3400	728 / 838
	PE 230/2	IE3	2, 3	460 3~	25.1	30.84	35.1	3400	772 / 822
	PE 300/2	IE3	1, 2	460 3~	32.5	40.23	45.8	3400	794 / 904
101G-VX	PE 230/2	IE3	5, 6	460 3~	25.1	30.84	35.1	3400	794 / 882
	PE 300/2	IE3	3, 4, 5, 6	460 3~	32.5	40.23	45.8	3400	816 / 904
150E-CB1	PE 45/4	IE3	7	460 3~	5.0	6.04	8.2	1750	375 / n.a.
	PE 56/4	IE3	6	460 3~	6.1	7.51	9.9	1750	397 / n.a.
	PE 75/4	IE3	5, 6	460 3~	8.2	10.06	13.8	1750	375 / n.a.
	PE 90/4	IE3	4, 5	460 3~	9.8	12.07	15.8	1750	441 / n.a.
	PE 105/4	IE3	4	460 3~	11.4	14.07	17.7	1750	463 / n.a.
	PE 35/6	IE2	4, 5, 6	460 3~	4.0	4.69	6.3	1180	375 / n.a.
150G-CB1	PE 130/4	IE3	8	460 3~	14.0	17.43	23.2	1750	772 / 882
	PE 150/4	IE3	7, 8	460 3~	16.1	20.12	25.5	1750	772 / 882
	PE 185/4	IE3	6, 7	460 3~	19.8	24.81	32.3	1750	838 / 926
	PE 210/4	IE3	4, 5, 6, 7	460 3~	22.4	28.16	35.4	1750	838 / 948
	PE 250/4	IE3	2, 3, 4, 5, 6, 7	460 3~	26.7	33.53	40.8	1750	882 / 1014
	PE 350/4	IE3	1, 2, 3, 4, 5	460 3~	37.0	46.94	58.1	1750	904 / 1036
	PE 110/6	IE3	1, 2, 3, 4	460 3~	12.0	14.75	21.1	1180	772 / 860
	PE 130/6	IE3	1	460 3~	14.2	17.43	23.7	1180	794 / 882
151E-CB2	PE 75/4	IE3	4	460 3~	8.2	10.06	13.8	1750	397 / n.a.
	PE 90/4	IE3	2, 3	460 3~	9.8	12.07	15.8	1750	441 / n.a.
	PE 105/4	IE3	1	460 3~	11.4	14.07	17.7	1750	463 / n.a.
	PE 35/6	IE2	1, 2, 3, 4	460 3~	4.0	4.69	6.3	1750	375 / n.a.
155G-CB2	PE 200/6	IE3	1	460 3~	21.5	26.82	32.7	1180	904 / 1014
	PE 160/6	IE3	1, 2, 3	460 3~	17.5	21.46	28.4	1180	794 / n.a.
	PE 130/6	IE3	2, 3, 4	460 3~	14.2	17.43	23.7	1180	772 / n.a.
	PE 110/6	IE3	4, 5	460 3~	12.0	14.75	21.1	1180	772 / 860
	PE 90/6	IE3	5	460 3~	10.0	12.07	18.8	1180	772 / 860
200G-CB1	PE 90/6	IE3	3, 4	460 3~	10.0	12.07	18.8	1180	860 / 948
	PE 110/6	IE3	1, 2	460 3~	12.0	14.75	21.1	1180	860 / 948
	PE 130/6	IE3	1	460 3~	14.2	17.43	23.7	1180	860 / 948
201G-CB2	PE 130/6	IE3	6	460 3~	14.2	17.43	23.7	1180	860 / 948
	PE 160/6	IE3	4, 5	460 3~	17.5	21.46	28.4	1180	882 / 970
	PE 200/6	IE3	2, 3	460 3~	21.5	26.82	32.7	1180	1014 / 1102
	PE 120/8	IE3	1, 2	460 3~	13.5	12.68	23.7	870	882 / 970
205G-CB2	PE 350/4	IE3	4	460 3~	37.0	46.94	58.1	1750	1014 / 1124
	PE 250/4	IE3	4	460 3~	26.7	33.53	40.8	1750	970 / 1080
	PE 90/6	IE3	4	460 3~	10.0	120.69	18.8	1180	882 / 970
	PE 130/6	IE3	1, 2	460 3~	14.2	17.43	23.7	1180	904 / 992
	PE 160/6	IE3	1	460 3~	17.5	21.46	28.4	1180	860 / n.a.
	PE 110/6	IE3	2, 3	460 3~	12.0	14.75	23.7	1180	838 / 926
206G-CB2	PE 200/6	IE3	3, 4	460 3~	21.5	26.82	32.7	1180	992 / 1012
	PE 250/6	IE3	3	460 3~	26.9	33.53	39.8	1180	1058 / 1168
	PE 160/6	IE3	4, 5	460 3~	17.5	21.46	28.4	1180	981 / 1069
	PE 130/6	IE3	5	460 3~	14.2	17.43	23.7	1180	948 / 1036
	PE 120/8	IE3	2, 3, 4, 5	460 3~	13.5	16.09	23.7	870	860 / 948

* P_1 = power at mains. P_2 = power at motor shaft. ** Without / with cooling jacket; includes 49 ft cable. Data for alternative voltages available on request.

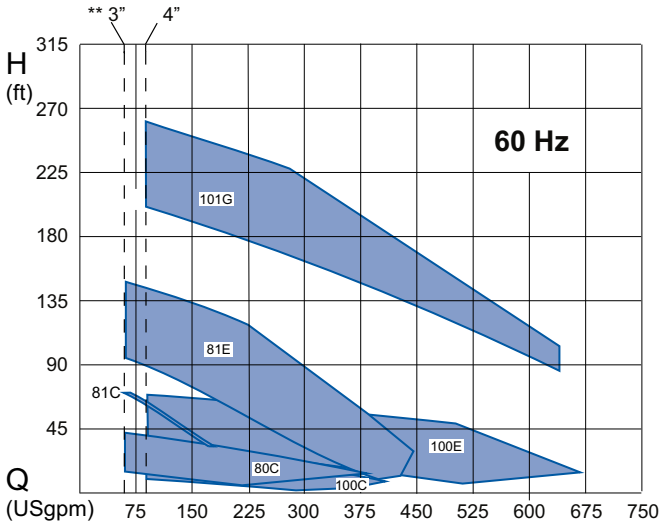
Cable data for EMC and alternative start options available on request.

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	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 - 206G)	-
O-rings (external seals)	NBR	Viton (not available for cable entry seal)
Cables	CSA	-
Cable length (ft)	49	33, 66, 99
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. ** 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	-
Cooling jacket	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” 4” 4” (high-head) 6” 6” 8” 8”	80C, 81C, 80E, 81E 100C, 100E, 100G 101G, 105G 150E, 151E, 150G 155G 205G, 206G 200G & 201G	62320649 62320652 DPR32211F 62320655 DPS91211F DPT91211F 62320658
	90° cast bend (single guide rail) - plug/clamp connection	3” (pipe Ø 3½”) 4” (pipe Ø 4¼”) 4” high head (pipe Ø 4½”) 6” (pipe Ø 6¼”) 6” (pipe Ø 6½”)	80C, 81C, 81E 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	3” 4” 4” 6” 8”	80C, 81C, 80E, 81E 100C, 100E, 100G 105G 150E, 151E, 150G 155G, 200G, 201G, 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
Fixed installation - dry well, (horizontal)	**Pump Support Kit** (ASTM A48; Class 40B) head and volute supports with fixing bolts and vibration damper		80C 80C**, 81C, 100C 81E*** 100E 150E, 151E 101G 100G - 206G, 101G**	61825032 61825033 61825038 61825030 61825031 61825036 61825037
(vertical)	**Ground Support Stand**		80C, 81C 81E*** 100C 100E 150E, 151E 101G 100G - 206G, 101G**	61355014 61355020 61355015 61355021 61355022 61355024 61355023
Transportable	**Skirtbase**		80C, 81C, 100C 80E & 81E 100E 150E, 151E 101G 100G - 206G, 101G**	61355016 61355017 61355018 61355019 61355026 61355025
General	**Cathodic Protection** (zinc anodes)		80C - 206G	13905000
	Temperature and Leakage Relay Type ABS CA 462	110 - 230 VAC 18 - 36 VDC, SELV	80C - 206G	16907006 16907007
	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) *** Only with PE 80/2 motor