

Submersible Chopper Pump Type ABS XFP 100E and 150G

SULZER

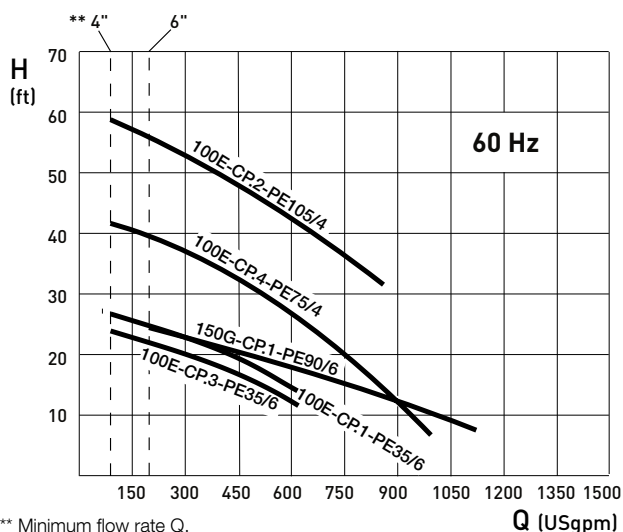
Robust, reliable, submersible chopper pumps, with Premium Efficiency motors from 10.0 to 14.0 hp. For the pumping of heavily contaminated commercial, industrial, municipal and agricultural wastewater, sewage and sludge, in wet well installations.

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.
- Double mechanical seals. SiC-SiC at the medium side; SiC-C (100E) and SiC-SiC (150G) at the motor. XFP 150G 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 (100E), or water-pressure-sealed connection chamber (150G).
- Hardened chopper impeller and cutter plate efficiently reduces large solids or fibrous materials to ensure optimum blockage-free pumping.
- Lubricated-for-life bearings with a calculated lifetime of minimum 50 000 hrs. (100E), and 100 000 hrs. (150G).
- 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 (100E), or motor and oil chambers (150G), 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.
- 4" and, 6" radial slot ANSI flange discharge.
- Maximum allowable temperature of the medium for continuous operation is 104 °F.
- Maximum submergence depth of 65 ft.
- Explosion-proof as standard, in accordance with international standards FM / CSA.

* See Technical Data Table.

Performance Curves



** Minimum flow rate Q.

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



Motor

Premium Efficiency IE3, three-phase, squirrel-cage motor, 460 V, 60 Hz, 4-pole [1 750 rpm] and 6-pole [1 180 rpm].

Voltage tolerance: ± 10%

Protection type: IP 68

Stator insulation: Class H

Start-up: DOL (direct on line).

Cooling: 100E self-cooling, 150G by the medium.

Service factor: 1.3

Motors with other operating voltages and frequencies are also available.

Identification Code

e.g. XFP 100E CP.4 PE75/4-E-60

Hydraulics:

XFP Product range

10.....Discharge outlet DN [cm]

0Hydraulic type

EVolute opening [dia. ins]

CP.....Chopper impeller

4Impeller size

Motor:

PE Premium Efficiency

75 Motor power P_2 x 10 hp

4Number of poles

EVolute opening [dia. ins]

60Frequency

Materials

Description	Material	(Europe)	(USA)
Motor housing	Cast iron	EN-GJL-250	ASTM A48; Class 35B
Volute	Cast iron	EN-GJL-250	ASTM A48; Class 35B
Impeller	Cast iron	EN-GJS-600-3	ASTM A536 80-60-03
Bottom plate	Cast iron	EN-GJL-300	ASTM A48; Class 40B
Motor shaft	Stainless steel	1.4021	ASTM / AISI 420
O-rings	NBR		
Lifting hoop	Stainless steel	1.4401	ASTM / AISI 316
Fasteners	Stainless steel	1.4401	ASTM / AISI 316

Technical Data

XFP	Motor	IEC rating	Impeller size	Rated voltage (V)	Motor power *		Rated current (A)	Speed (rpm)	Cable size	Weight ** (lbs)
					(kW) P ₁	(hp) P ₂				
100E-CP	PE 75/4	IE3	4	460 3~	8.2	10.1	13.8	1 750	SOOW 12/7	375
	PE 105/4	IE3	2	460 3~	11.4	14.1	17.7	1 750	SOOW 10/7	419
	PE 35/6	IE2	1, 3	460 3~	4.0	4.7	6.3	1 750	SOOW 14/7	353
150G-CP	PE 90/6	IE3	1	460 3~	9.9	12.1	18.8	1 180	SOOW 10/7	772

* P₁ = power at mains. P₂ = power at motor shaft. ** Includes 49 ft cable. Data for alternative voltages available on request.

Standard and Options

Description	Standard	Option
Mains voltage	460 V 3~	220, 230, 380 V 3~*
Cables	CSA	EMC
Cable length [ft]	49	33, 66, 99, 131, 164
Mechanical seal (at medium side)	SiC-SiC-NBR	SiC-SiC-Viton
Mechanical seal (at motor side)	SiC-C-NBR (100E), SiC-SiC-NBR (150G)	-
O-rings (external seals)	NBR	Viton (not available for cable entry seal)
Protective coating	2k Epoxy 120 µm	2k Epoxy 400 µm

* 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 (XFP 100E)	●	-
	Moisture sensor (DI) in motor and oil chambers (XFP 150G)	●	-
	Moisture sensor (DI) in connection chamber (XFP 150G)	-	●

Temperature and leakage relays are required. See accessories table. * Must be selected when pump is operated via VFD.

Accessories

	Description	Size	XFP	Part no.	
Fixed installation - wet well with Sulzer Automatic Coupling System	Pedestal* (cast iron EN-GJL-250)	DN 100	100E	62320652	
	90° cast bend (single guide rail) - DIN flange connection	DN 150	150G	62320655	
	90° cast bend (single guide rail) - plug/clamp connection	DN 100 (pipe Ø109 mm)	100E	62320653	
		DN 100 (pipe Ø115 mm)	100E	62320654	
		DN 150 (pipe Ø160 mm)	150G	62320656	
	90° cast bend (twin guide rail) - DIN flange connection	DN 100	100E	62325026	
		DN 150	150G	62325027	
	Pedestal bracket fasteners single guide rail version (galvanised steel)			100E	62610633
				150G	62610635
	Pedestal bracket fasteners single guide rail version (stainless steel)			100E	62610637
				150G	62610639
	Pedestal bracket fasteners twin guide rail version (galvanised steel)			100E	62615054
				150G	62615055
Pedestal base anchor bolts single and twin guide rail (galvanised steel)			100E	62610775	
			150G	62610784	
Chain kit (galvanized steel) including shackle	10 ft	100E & 150G		61265065	
	13 ft			61265093	
	20 ft			61265069	
	23 ft			61265096	
	Chain kit (stainless steel) including shackle			10 ft	100E & 150G
13 ft		61265099			
20 ft		61265085			
23 ft		61265102			
Transportable		Ground support stand		100E	
			150G	61355025	
General	Cathodic protection (zinc anodes)		100E & 150G	13905000	
	Leakage relay type ABS CA 461	110 - 230 VAC	100E & 150G	16907010	
		18 - 36 VDC, SELV		16907011	
Temperature and leakage relay type ABS CA 462	110 - 230 VAC	100E & 150G		16907006	
	18 - 36 VDC, SELV			16907007	

*Guide rail not included

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