

Aerator Type ABS Venturi Jet 60Hz

Jet aerator with single or twin diffuser pipes, for fixed or portable installation, coupled to a Premium Efficiency pump from the XFP range.

Applications

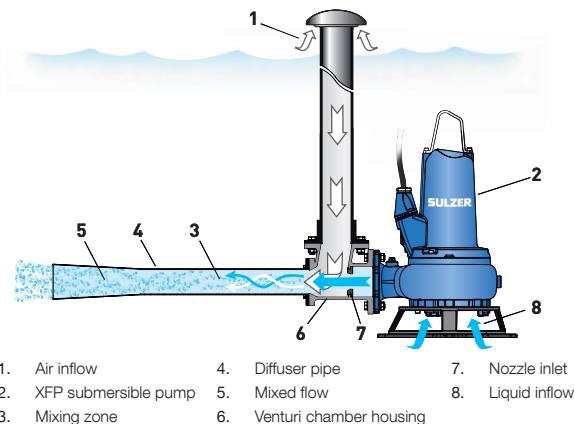
For the combined aeration and mixing of wastewater in small and medium sized tanks. Also for the cleaning of storm water tanks and for use in balancing tanks where a combination of aeration and mixing reduces septicity and minimizes odors.

Features

- Stand-alone, self-aspirating system, with the option of fixed installation with guide rail and pedestal, or portable installation with stand. The portable option is especially suitable for emergency or intermittent aeration tasks and allows for variable positioning in the tank.
- Uses standard XFP pump featuring continuously rated Premium Efficiency motor, temperature and seal monitoring, and double mechanical seals.
- Blockage-free hydraulic design with Contrablock impeller.
- Lower noise levels and reduced spray compared to surface systems.
- Maximum allowable temperature of the medium for continuous operation is 40 °C.

Venturi injection principle

The venturi jet aerator is based on the injection principle that produces an effective air-water mix which results in optimum aeration and suspension of solids. The velocity of the primary flow of liquid from the pump is accelerated when pumped through the smaller nozzle inlet, lowering the internal pressure which draws in the secondary flow of air through the air inlet pipe. The liquid and air flows are then mixed in the turbulence of the diffuser pipe and ejected as a jet of fine air bubbles into the tank.



Motor

Premium Efficiency IE3, three-phase, squirrel-cage motor; 460 V; 60 Hz; 4-pole (1750 r/min) and 6-pole (1180 r/min).

Protection type: IP 68

Stator insulation: Class H.

Start-up: DOL (direct on line)

Cooling: 100C - 150E self-cooling,

150G & 206G version with closed cooling system.

Service factor: 1.3

Notas

1. Stand and pedestal supplied as accessories.
2. Air inflow pipe and fittings, elbows, and flanges supplied by the customer.

Materials

Description	Material	
Aerator	Diffuser pipe	Stainless steel 1.4301 (AISI 304)
	Venturi chamber housing	Cast iron EN-GJL-200
Pump	Motor housing	Cast iron EN-GJL-250
	Motor shaft	Stainless steel 1.4021 (AISI 420)
	Impeller	Cast iron EN-GJL-250
	Volute	Cast iron EN-GJL-250
	Bottom plate	Cast iron EN-GJL-250
	Lifting bracket	Stainless steel 1.4401 (AISI 316)
Fasteners	Stainless steel 1.4401 (AISI 316)	

Technical data

XFP Pump	Pump discharge (in)	Aerator inlet (in)	Nozzle ϕ (in)	Water flow (gpm)	Motor power* (kW) P ₁	(hp) P ₂	Rated current (A)	Cable size	Weight ** (pump) lbs
100C-CB1.2-PE20/6	4"	4"	2.2"	220	2.4	2.7	4.2	SOOW 14/7	240
100C-CB1.1-PE20/6	4"	4"	2.2"	308	2.4	2.7	4.2	SOOW 14/7	240
100C-CB1.4-PE35/4	4"	4"	2.2"	440	3.9	4.7	6.2	SOOW 14/7	240
150E-CB1.7-PE45/4	6"	6"	3.2"	616	5.0	6.0	8.2	SOOW 14/7	369
150E-CB1.6-PE75/4	6"	6"	3.2"	837	8.2	10.1	13.8	SOOW 12/7	410
150E-CB1.4-PE105/4	6"	6"	3.2"	1057	11.4	14.1	17.7	SOOW 10/7	435
150G-CB1.7-PE185/4	6"	6"	3.2"	1387	19.8	19.8	32.3	AWM 8/4+16/3	981
206G-CB2.3-PE200/6 (†)	8"	6"	3.2"	2201	21.5	26.8	32.7	AWM 8/4+16/3	1047

(† XFP 206G requires twin aerators. 6" T-piece, 2 x 6" elbows and 8" / 6" adapter flange required for connection to pump discharge.

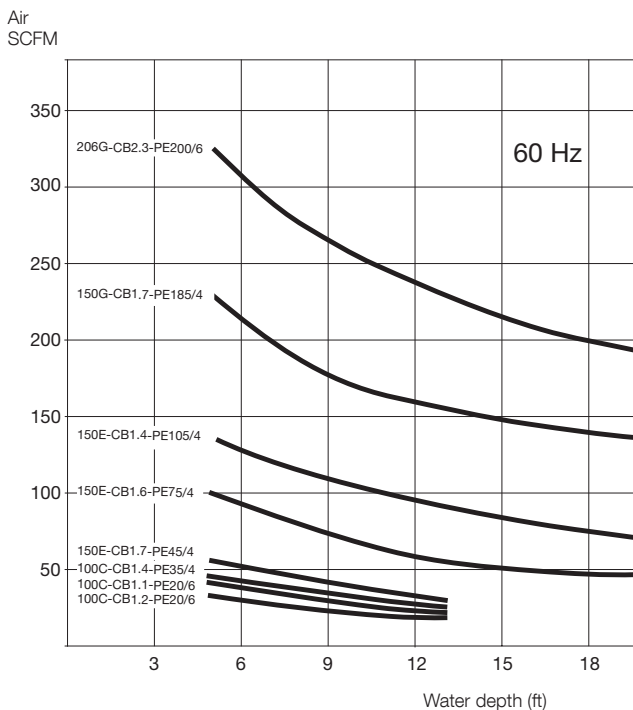
* P₁ = power at mains. P₂ = power at motor shaft.

** Aerator weight: 4" = 44 lbs, 6" = 88 lbs (does not include air inlet pipe or fittings). Portable stand: 100C = 21 lbs, 100 & 150E = 23 lbs, 150 & 206G = 39 lbs.

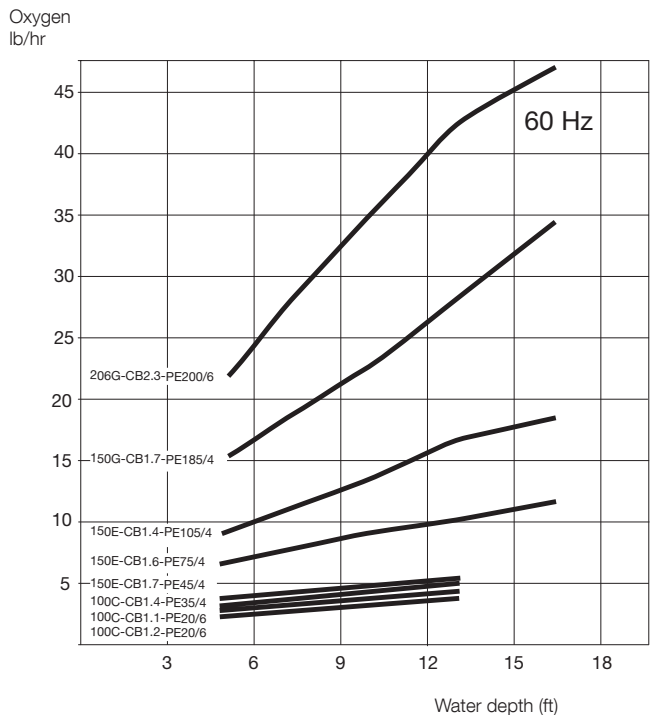
Aerator selection / Tank dimensions (ft)

XFP Pump	Wastewater tank (sample size)			Storm water tank (sample size)		
	Rectangular	Square	Circular	Rectangular	Rectangular	Circular
100C-CB1.2-PE20/6	6.0 X 4.0	4.9	ϕ 5.5	-	-	-
100C-CB1.1-PE20/6	7.2 X 4.8	5.9	ϕ 6.6	-	-	-
100C-CB1.4-PE35/4	8.0 X 5.3	6.5	ϕ 7.4	8.0 X 6.0	8.0 X 5.0	ϕ 5.5
150E-CB1.7-PE45/4	9.5 X 6.3	7.8	ϕ 8.8	10.0 X 8.0	10.0 X 6.5	ϕ 6.5
150E-CB1.6-PE75/4	12.0 X 8.0	9.8	ϕ 11.1	18.0 X 10.0	15.0 X 8.0	ϕ 8.0
150E-CB1.4-PE105/4	15.0 X 10.0	12.2	ϕ 13.8	22.0 X 12.0	20.0 X 10.0	ϕ 13.0
150G-CB1.7-PE185/4	17.5 X 11.5	14.2	ϕ 16.0	24.0 X 13.0	22.0 X 10.0	ϕ 14.0
206G-CB2.3-PE200/6	21.0 X 13.0	16.4	ϕ 18.0	27.0 X 14.0	24.0 X 10.0	-

Air flow performance



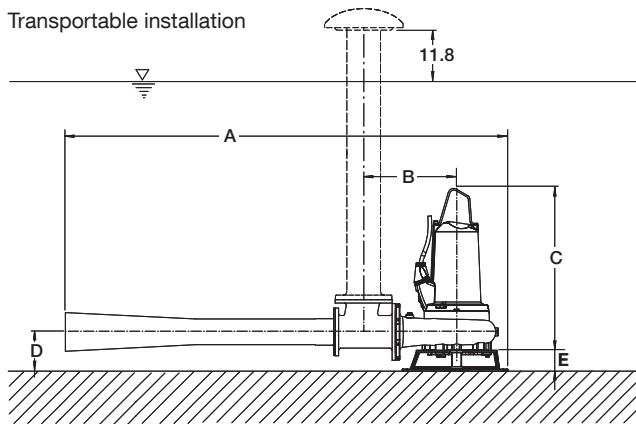
Oxygen transfer performance



Oxygen transfer data measured as per "Measurement of Oxygen Transfer in Clean Water" ASCE Standard 2-06, 2006.

Dimensions (in)

Transportable installation



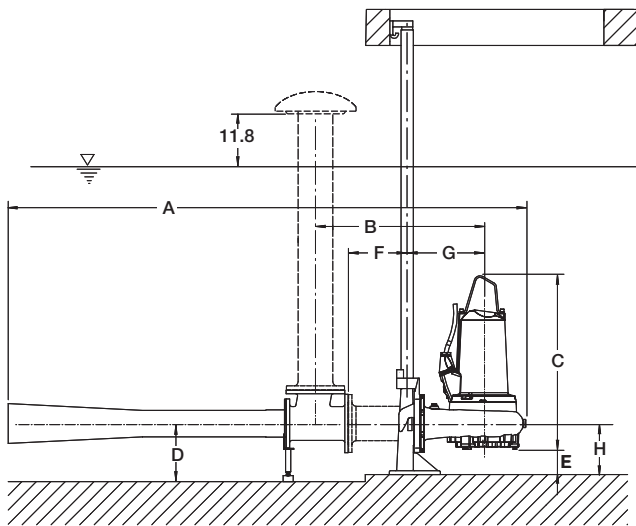
Note: in some cases the support stand may need to be weighted to the tank base to prevent lateral movement of the unit.

	100C	150E			150G	206G*
		PE45/4	PE75/4	PE105/4		
A	62.8	88.1	88.1	88.1	91.2	93.8*
B	15.3	18.5	18.5	29.4	19.5	21.3*
C	27	29.4	29.4	32.2	49.6	53
D	7.6	7.8	7.8	7.8	11.8	12.6
E	4.1	4.1	4.1	4.1	7.8	7.8

* Twin aerators as standard and only.

Required: DN 150 T-piece, 2 x DN 150 elbows and DN 200 / DN 150 adapter flange for connecting to pump discharge (not included in dimension; supplied by the customer).

Installation with straight pedestal

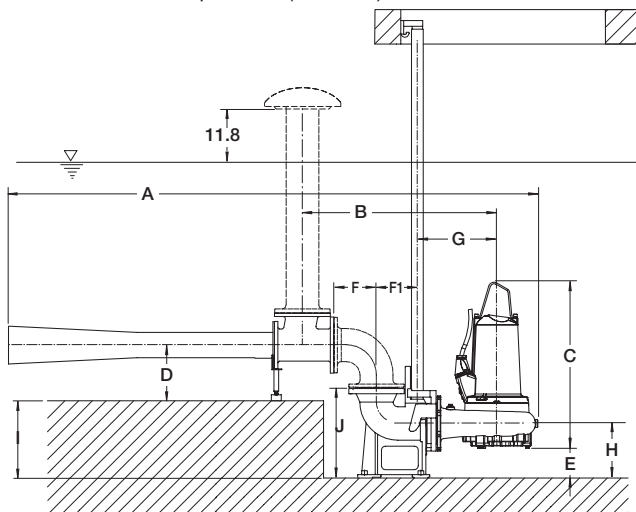


	100C	150E			150G	206G*
		PE45/4	PE75/4	PE105/4		
A	62.7+F	98.3+F	98.3+F	98.3+F	91.1+F	19.8+F
B	17.4+F	20.9+F	20.9+F	20.9+F	21.8+F	39.1+F
C	28.1	30.8	30.8	30.8	50	53
D	11.3	11.2	11.2	11.2	11.2	11.2
E	3.2	4.8	4.8	4.8	4.4	4.6
F	**	**	**	**	**	**
G	12.5	14.6	14.6	14.6	15.6	21.4
H	7.8	9.8	9.8	9.8	9.8	9.4

** Variable dimension (supplied, and dimensions specified, by customer).

Required: DN 100 or DN 150 flange for XFP 100C - 150G, DN 150 T-piece, 2 x DN 150 elbows and DN 200 / DN 150 adapter flange for XFP 206G.

Installation with 90° pedestal (duckfoot)



Note: further and more detailed dimension drawings for all installation types are available on Sulzer.com or by request.

	100C	150E			150G	206G*
		PE45/4	PE75/4	PE105/4		
A	71.5+F	98.3+F	98.3+F	98.3+F	100.8+F	109.7+F
B	26+F	30.5+F	30.5+F	30.5+F	31.5+F	38.8+F
C	28.1	30.8	30.8	33.5	51	53
D	11.3	11.2	11.2	11.2	11.2	11.2
E	4.2	6	6	6	5.6	6.2
F	**	**	**	**	**	**
F1	7	8.2	8.2	8.2	8.2	11.6
G	14	16	16	16	17	20.9
H	8.8	11	11	11	11	12.7
I	10.3	15.6	15.6	15.6	15.6	20.6
J	14.6	18.2	18.2	18.2	18.2	21.6

** Variable dimension (supplied, and dimensions specified, by customer).

Required: DN 100 or DN 150 elbow for XFP 100C - 150G, DN 150 T-piece, 2 x DN 150 elbows and DN 200 / DN 150 adapter elbow for XFP 206G.

Accessories

	Description	Size	XFP	Part no.	
Fixed installation - wet well with Sulzer Automatic Coupling System	Pedestal (kit)* (cast iron EN-GJL-250) 90° cast bend (single guide rail) - DIN flange connection	DN 100	100C & 100E	62320652	
		DN 150	150E & 150G	62320655	
		DN 200	206G	DPT91211A	
	Pedestal (components)* cast iron EN-GJL-250 straight (single guide rail) - DIN flange connection	DN 100	100C & 100E	Gasket	14020018
				Base	32560611
				Bracket	41420520
		DN 150	150E & 150G	Seal	43070518
				Guide piece	31450510
				Gasket	14020020
				Base	32560620
DN 200	206G	Bracket	31420535		
		Seal	43070519		
			Guide piece	31450510	
				On request	
Pedestal bracket fasteners single guide rail version (galvanised steel) single guide rail version (stainless steel)	100C & 100E 150E & 150G 206G			62610633	
				62610635	
				62610883	
	100C & 100E 150E & 150G 206G			62610637	
				62610639	
			62610862		
Pedestal base anchor bolts single and twin guide rail (galvanised steel)	100C & 100E 150E & 150G 206G			62610775	
				62610784	
				62610785	
Chain kit (stainless steel) including shackle	3 m	100C - 206G		310101236013	
	4 m			310101236014	
	6 m			310101236016	
	7 m			310101236017	
Transportable	Ground support stand		100C	61355016	
			100E	61355018	
			150E	61355019	
			150G & 206G	61355025	
General	Cathodic protection (zinc anodes)		100C - 206G	13905000	
	Leakage relay type ABS CA 461	110 - 230 VAC	100C - 206G	16907010	
		18 - 36 VDC, SELV		16907011	
	Temperature and leakage relay type ABS CA 462	110 - 230 VAC	100C - 206G	16907006	
		18 - 36 VDC, SELV		16907007	

* Guide rail not included.

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