

Description SBR Q1+ Kits

Clearfox SBR Q1+Kits operate according to the SBR-Process (Sequencing batch reactor) with integrated aerobic sludge stabilisation.

There are different stages of the treatment process (buffer, biological treatment, sludge treatment with storage) integrated within one tank. The system operates regardless of the tank material or shape. That process flexibility means that any type of tank can be used for the SBR Q1+.



Only a partial baffle is needed to retain large inorganic particles in the first chamber. This baffle can be open at the bottom.

Certifications

- Certificate of accredited test field on the cleaning performance after a 52 weeks sludge test without intermediate desludging
- Certificate of accredited test field on the cleaning performance with 6 months holiday operation without waste water feed
- Evidence from an accredited test institute that the small sewage treatment plant was not de-sludged during the 38 weeks test according to EN 12566 Part 3
- Small wastewater treatment plant expandable with module tested according to EN 12566 Part 7 for UV sterilization (at extra cost), proof of performed test required
- Small sewage treatment plant expandable with module for phosphate elimination tested according to EN 12566 part 7 (against surcharge), proof of performed test required
- Small wastewater treatment plant expandable with module tested according to EN 12566 Part 7 for sterilization and elimination of trace-resistant trace substances (at an extra charge), proof of performed test required

Additionally equipped against surcharge with C4C® module tested in accordance with EN 12566 part 7 for sterilization and elimination of trace-resistant trace substances, without building inspectorate approval, with certificate for the test carried out according to EN 12566 part 7 and manufacturer's declaration.

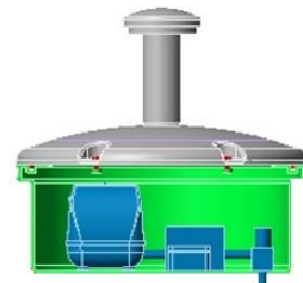
Proof of the same or higher cleaning performance on an accredited test field with the following effluent values / efficiencies of the parameters shown below (total cleaning performance of the small sewage treatment plant in combination with the C4C® module) required:

Parameter	Efficiency	Concentration Effluent
COD	96,1 %	34 mg/l
BOD	98,7 %	5 mg/l
SS	97,6 %	10 mg/l
Enterococci	>99,9 %	13 / 100 ml
E.coli	>99,9 %	1 / 100 ml
Total coliforms	>99,9 %	3 / 100 ml
17-alpha-ethinyl estradiol	97,8%	
Diclofenac	94,6 %	
1H-Benzotriazol	94,5 %	

Scope of delivery

Clearfox SBR Q1+Kits consist of an aeration system, airlift pumps, an air compressor, an air distribution manifold with electronic/magnetic valves and a control unit.

- **Maintenance free disc diffuser mounted on a PE manifold pipe; amount of diffusers and size of manifold according to plant design**
 - EPDM Membrane; A = 0,55m²; d=275 mm; chemical resistance
 - Mounting material
- **Maintenance free airlift for clearwater**
 - Special pre-cleaning function for clearwater airlift to ensure that no solids get out of the system
 - PVC with plug connection
 - Free ball passage from 50 up to 150 mm
- **Control unit installed in a cabinet**
 - Pressure sensor controlled microprocessor technology
 - Stepless automatic ventilation according to actual wastewater
 - display, illuminated, 2 lines
 - Electronic operating log, with 52 weeks storage
 - optional
 - Expandable for UV sterilization
 - Expandable for phosphate elimination
 - Expandable for elimination of trace-resistance trace substances
- **Standard cabinet for the top of the tank for systems up to 24 PE.**
 - Rotomoulded PE Cabinet with cover and ventilation



- **standard cabinet for systems up to 50 PE.**
 - Powder coated steel cabinet 600x600x250 mm
 - Ip 55
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- **Membraneairblower up to 36 PE**
 - Compact design
 - Low energy consumption
 - High quality metal housing
- **Maintenance free two stage sidechannel blower up to 50 PE**
 - Capacity according to dimensioning
 - Associated silencer
 - Corrosion protection
- **Solanoid valve manifold seperat for system > 24 PE**
 - 2/2 way, G3/4 – G 1
 - EPDM Membrane -10 to + 140°C
 - 230 VAC, 12 W, 100% ED



PE	hydraulic Loading m ³ /day	organic Loading KG BOD/day	tankvolume m ³	max. water depth m	Compressor size KW	dimension airliftpumps Mm	power consumption KWh/day	diameter connecting tube mm	kits per palett no.
4	0,6	0,24	2,40	1,50	0,04	50	0,48	13	3
6	0,9	0,36	3,60	1,50	0,05	50	0,60	13	3
8	1,2	0,48	4,80	1,50	0,075	50	0,90	13	3
10	1,5	0,60	6,00	2,00	0,095	50	1,14	13	3
12	1,8	0,72	7,20	2,00	0,095	50	1,14	13	3
14	2,1	0,84	8,40	2,00	0,115	50	1,38	13	3
16	2,4	0,96	9,60	2,00	0,115	50	1,38	19	2
18	2,7	1,08	10,80	2,00	0,18	50	2,16	19	2
20	3	1,20	12,00	2,00	0,225	50	2,70	19	2
22	3,3	1,32	13,20	2,00	0,225	50	2,70	19	2
24	3,6	1,44	14,40	2,00	0,225	50	2,70	19	2
26	3,9	1,56	15,60	2,00	0,23	50	2,76	19	1
28	4,2	1,68	16,80	2,00	0,23	50	2,76	19	1
30	4,5	1,80	18,00	2,00	0,36	50	4,32	19	1
32	4,8	1,92	19,20	2,00	0,36	50	4,32	19	1
34	5,1	2,04	20,40	2,00	0,36	50	4,32	19	1
36	5,4	2,16	21,60	2,00	0,45	50	5,40	19	0,5
38	5,7	2,28	22,80	2,00	0,45	50	5,40	19	0,5
40	6	2,40	24,00	2,00	0,45	50	5,40	19	0,5
42	6,3	2,52	25,20	2,00	0,45	75	5,40	25	0,5
44	6,6	2,64	26,40	2,00	0,45	75	5,40	25	0,5
46	6,9	2,76	27,60	2,50	0,75	75	9,00	25	0,5
48	7,2	2,88	28,80	2,50	0,75	75	9,00	25	0,5
50	7,5	3,00	30,00	2,50	0,75	75	9,00	25	0,5

Benefits for Clearfox SBR Q1+ Kits

No odor	Easy installation and handling
Low running coasts	Sludge stabilization/sludge treatment
High performance with high quality, Made in Germany	Stable and very robust process technology

Additional equipment

The Clearfox SBR Q1+ system can be upgraded to any required effluent standard. No matter if it is a phosphorous elimination, hygienisation or even trace-resistance trace substances must be eliminated.

- **GRP outdoor column for up to 24 PE**
 - Stable design with integrated buried base for ground installation

- **Red Warninglight**
 - Complete set with red lamp housing 230 V

- **Connection tube 1/2"**
 - 50 m roll
 - Pressure hose
 - Size 1/2" (13mm) 13,2x3,2mm
 - Stainless steel hoseclamps

- **Connection tube 3/4"**
 - 50 m roll
 - Pressure hose
 - Size 3/4" (19mm) 19x3,2mm
 - Stainless steel hoseclamps

- **Connection tube 1"**
 - 50 m roll
 - Pressure hose
 - Size 1" (25mm) 25x4,3mm
 - Stainless steel hoseclamps

- **Phosphorous elimination**

At the end of the cleaning process a precipitant is added to the reactor. This takes the phosphate out and store it in the activated sludge.

- Peristaltic dosing pump 0,2 – 4,5 l/h
 - 230 V +/- 10%, 50/60 Hz; 5 VA
 - IP65
 - Capacity adjustable via potentiometer
- Suction lance with level control

- **Chlorine disinfection**

The chlorine disinfection also will be handled with a dosingpump.

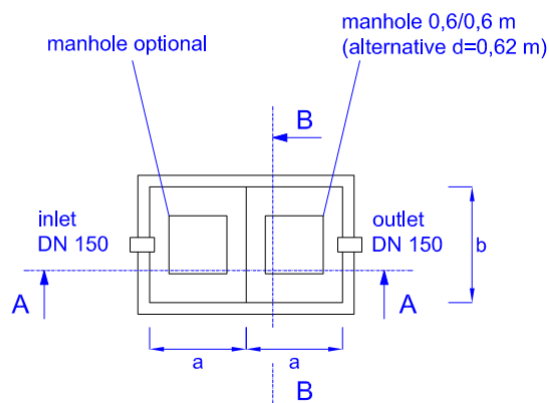
The cleaned water will be pumped by the airliftsystem to a retention tank. During the filling is also the dosing of the chlorine to this tank.

- Peristaltic dosing pump 0,2 – 4,5 l/h
 - 230 V +/- 10%, 50/60 Hz; 5 VA
 - IP65
 - Capacity adjustable via potentiometer
- Suction lance with level control
- Size of the retention tank (customer side)
50% of the daily amount of wastewater

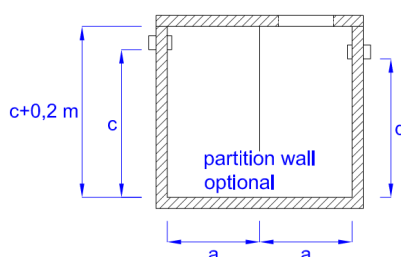


PE	a m	b m	c m	d m	e m	f m
4	0,80	1,00	1,60	1,50	0,75	1,70
6	1,20	1,00	1,60	1,50	0,75	1,70
8	1,30	1,25	1,60	1,50	0,75	1,70
10	1,20	1,25	2,10	2,00	1,00	2,20
12	1,40	1,25	2,10	2,00	1,00	2,20
14	1,40	1,50	2,10	2,00	1,00	2,20
16	1,60	1,50	2,10	2,00	1,00	2,20
18	1,80	1,50	2,10	2,00	1,00	2,20
20	1,50	2,00	2,10	2,00	1,00	2,20
22	1,70	2,00	2,10	2,00	1,00	2,20
24	1,80	2,00	2,10	2,00	1,00	2,20
26	2,00	2,00	2,10	2,00	1,00	2,20
28	2,10	2,00	2,10	2,00	1,00	2,20
30	1,80	2,50	2,10	2,00	1,00	2,20
32	1,90	2,50	2,10	2,00	1,00	2,20
34	2,00	2,50	2,10	2,00	1,00	2,20
36	2,20	2,50	2,10	2,00	1,00	2,20
38	2,30	2,50	2,10	2,00	1,00	2,20
40	2,40	2,50	2,10	2,00	1,00	2,20
42	2,50	2,50	2,10	2,00	1,00	2,20
44	2,60	2,50	2,10	2,00	1,00	2,20
46	2,00	2,75	2,60	2,50	1,25	2,70
48	2,10	2,75	2,60	2,50	1,25	2,70
50	2,20	2,75	2,60	2,50	1,25	2,70

ground view



cut drawing A - A



cut drawing B - B

