

# SBR - Sequencing Batch Reactor

## Activation treatment plants with an intermittent operation

Are you planning a building, an extension or the reconstruction of a waste water treatment plant? Do you want to use as much of the existing the treatment plant as possible?

We propose using the versatile SBR technology.

### ACB SBR 10 - 180

The ACB SBR waste water treatment plant is a biological waste water treatment plant with an intermittent operation (SBR) designed for the treatment of waste water from small sources of pollution such as households, sanitary facilities of industrial plants, leisure amenities and other sources.

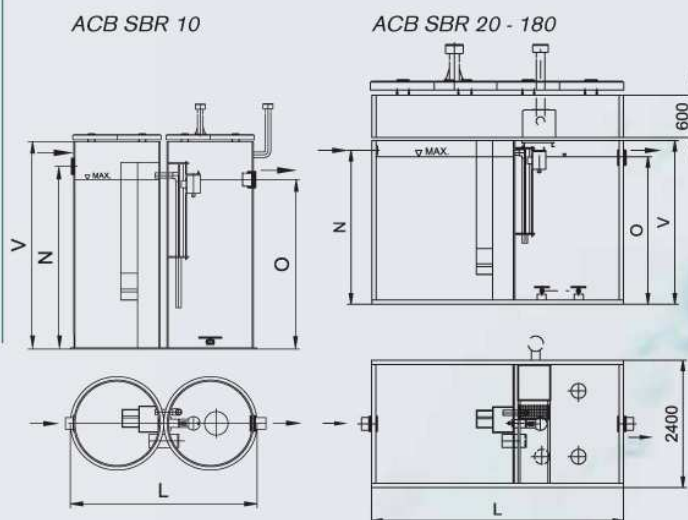


The treatment plant consists of a polypropylene tank, divided into a sedimentation part and an activation part. The sedimentation part also serves as an accumulation sump and a sump for partial anaerobic sludge stabilisation. The activation is aerated with help of AME aeration diffusers. The individual stages of the treatment process take place cyclically in a single tank – the reactor. In its basic option, the treatment plant operation is controlled by a simple programmable relay.

The deliveries take the form of plastic tanks or installations in a concrete tank or into an existing plastic tank. The SBR system is the most efficient and financially the least demanding solution for a waste water treatment plant reconstruction.



Chart of the wastewater treatment plant with an extension and a cover.



#### Technical data

Type ACB SBR	10	20	35	50	80	120	180
Number of PE	5 - 10	10 - 20	20 - 35	35 - 50	50 - 80	80 - 120	120 - 180
Quantity of waste water $Q_{24}$ (m <sup>3</sup> /d)	1,5	3	5,25	7,5	12	18	27
Tank length L (mm)	2270	2310	2200	3000	3600	5400	8000
Tank width (mm)	2 × ∅1100		2400	2400	2400	2400	2400
Tank height without extension V (mm)	2500	2820	3080	3080	3080	3080	3080
Inlet height N (mm)	2115	2115	2680	2680	2960	2960	2960
Outlet height O (mm)	2015	2015	2580	2580	2780	2780	2780

## Do you need a waste water treatment plant for more than 180 PE? The SBR system may be used for various sizes.

### SBR 250 – 5000

The waste water treatment plants SBR 250 to 5000 are effective for the treatment of waste water from small sources of pollution for 250 to 5000 PE. This relates to water of a sewage character. Industrial waste water may be treated only in the case where its character corresponds to sewage water or, if appropriate, after consultation with the manufacturer. The basic treatment unit is complemented by a rough pretreatment, a tertiary secondary treatment, a measuring shaft, and a sludge treatment tank.

The treatment plants work on the principle of a low-load activation with a system of sequencing phase reactors when the same tank is used as an activation tank and as a tank for the settlement of suspended substances.

Depending on the type, the reactor is made up of one or two tanks. FORTEX aeration grates with AME fine-bubble aeration diffusers are used for the aeration. The air is supplied by blowers.

By their outlet parameters, SBR treatment plants comply with the applicable government regulations.



#### Usually achieved average outlet values

BOD <sub>5</sub>	(mg/l)	15
COD	(mg/l)	75
Insoluble solids	(mg/l)	20

Type AC SBR	Technical data						
	250	350	450	550	650	750	850
Number of PE	150 - 250	250 - 350	350 - 450	450 - 550	550 - 650	650 - 750	750 - 850
Quantity of waste water Q <sub>24</sub>	(m <sup>3</sup> /d) 37,5	52,5	67,5	82,5	97,5	112,5	128
Quantity of waste water Q <sub>max</sub>	(m <sup>3</sup> /h) 10,8	12,1	12,7	13,4	15,2	16,9	18,4
Orientation volume of reactors	(m <sup>3</sup> ) 48	67	87	101	119	137	156

Type AC SBR	Technical data					
	1000	1500	2000	3000	4000	5000
Number of PE	850 - 1000	1000 - 1500	1500 - 2000	2000 - 3000	3000 - 4000	4000 - 5000
Quantity of waste water Q <sub>24</sub>	(m <sup>3</sup> /d) 150	225	300	450	600	750
Quantity of waste water Q <sub>max</sub>	(m <sup>3</sup> /h) 20,6	28,8	38,5	55,1	73,5	91,9
Orientation volume of reactors	(m <sup>3</sup> ) 173	260	346	519	692	865



### Advantages and qualities of SBR treatment plants

- most effective solution in the case of an irregular inlet to the waste water treatment plant
- ideal solution for the reconstruction of an existing waste water treatment plants
- effective solution where the units have to be connected to the treatment plant successively
- easy installation
- low power demands
- complete delivery including an extension and a heat-insulated cover
- the basic waste water treatment plant unit may be complemented with a tertiary secondary treatment or, if appropriate, with other technological equipment
- treatment plants are certified by an authorised body and have the relevant Declarations of Conformity



BlowTech Sp. z o.o. / BlowTech Co. Ltd  
 ul. Kmicica 56 / Kmicica str. 56  
 54-514 Wrocław – Poland  
 tel.: +48 71 3631859, fax: +48 71 3631987  
 www.blowtech.com.pl

FORTEX-AGS, a.s. • Jílová 1550/1 • 787 92 ŠUMPERK  
 tel.: +420 583 310 111 • e-mail: covobchod@fortex-ags.cz  
 http://www.fortex-ags.cz