

Idrodepurazione

SBR 250-400 series sequencing batch reactor biological purification plants

Reinforced concrete mono-blocks for purification of sewage water of a biological nature with drainage in surface water for settlements from 250 up to 400 equivalent inhabitants with the SBR "sequencing batch reactor" process



SBR series plants were designed in particular for treatment of discontinuous drainage with high nitrogen content such as: homes, hotels, restaurants, tourist resorts, shopping centres, artisan businesses, hospitals, industrial zones. *In particular, SBR biological purifiers were designed to ensure the surface water drainage limits, even for parameters relating to nitrogen, as outlined by legislation in force.*

The SBR (Sequencing Batch Reactor) system is based on sequential implementation of multiple treatment phases within one reactor.

In this type of plant, the various purification phases composing the biological process (denitrification - oxidation and nitrification with air, sedimentation) are implemented in cycles in temporal succession inside two identical reactors, which also function as the storage tank. The SBR system, compared to a traditional active sludge plant:

- executes all the treatment phases, in a single tank
- adapts to variations, even considerable ones of the pollutant parameters inbound
- guarantees very high purification performance

The SBR system obtains an achievable result by simply varying the duration of the phases, in a traditional system, by increasing the volume of the tanks. To guarantee maximum continuity of the power supply, two tanks are planned parallel, with alternating and sequential operation.

Specifications

Supply of the pre-assembled purification plant with total oxidation and biological denitrification, type SBR 250-400, manufactured using prefabricated mono-blocks in high strength, vibrated, reinforced concrete.

The supply includes

Mono-block, parallelepiped-shaped tanks, with sludge inlets and outlets, inbound diverter partition and automatic valves compartment wells. The supply comes complete with electromechanical equipment . supply automatic valves, side channel blowers, diffusers, piping and fittings for air distribution, purified waste water drainage pump, mixer, electrical panel for command and safety, equipped with a remote motor protection switch and timer - and everything else necessary for correct operation of the plant.



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SBR 250-400 series sequencing batch reactor plants



Description	Unit of	SBP series model
	measurement	ODIT Selles model

	SBR 250	SBR 300	SBR 350	SBR 400	
no.	250	300	350	400	
m³/g	37.5	45	52.5	60	
Kg/g	15	18	21	24	
Kg/g	3	3.6	4.2	4.8	
cm.	560	720	860	860	
cm.	230	230	230	230	
cm.	280	280	250	280	
no.	2	2	2	2	
Kg	19,000	24,000	25,000	27,000	
m ³	53.3	69	72.3	82	
no.	2	2	2	2	
Nm³/h	60	70	110	110	
kW	6.9	6.9	8.3	10.7	
	no. m ³ /g Kg/g Kg/g cm. cm. cm. no. Kg m ³ no. Nm ³ /h kW	SBR 250 no. 250 m³/g 37.5 Kg/g 15 Kg/g 3 cm. 560 cm. 230 cm. 280 no. 2 Kg 19,000 m³ 53.3 no. 2 Nm³/h 60 kW 6.9	SBR 250 SBR 300 no. 250 300 m³/g 37.5 45 Kg/g 15 18 Kg/g 3 3.6 cm. 560 720 cm. 230 230 cm. 280 280 no. 2 2 Kg 19,000 24,000 m³ 53.3 69 no. 2 2 Nm³/h 60 70 kW 6.9 6.9	SBR 250 SBR 300 SBR 350 no. 250 300 350 m³/g 37.5 45 52.5 Kg/g 15 18 21 Kg/g 3 3.6 4.2 cm. 560 720 860 cm. 230 230 230 cm. 280 280 250 no. 2 2 2 Kg 19,000 24,000 25,000 m³ 53.3 69 72.3 no. 2 2 2 M³/h 60 70 110 kW 6.9 6.9 8.3	SBR 250 SBR 300 SBR 350 SBR 400 no. 250 300 350 400 m³/g 37.5 45 52.5 60 Kg/g 15 18 21 24 Kg/g 3 3.6 4.2 4.8 cm. 560 720 860 860 cm. 230 230 230 230 cm. 280 280 250 280 no. 2 2 2 2 Mg 19,000 24,000 25,000 27,000 m³ 53.3 69 72.3 82 no. 2 2 2 2 Mm³/h 60 70 110 110 kW 6.9 6.9 8.3 10.7

The values given are approximate. Idrodepurazione reserves the right to make changes at any time and without prior notification. The data refer to measurements outside the tanks.

On request, plants are available dimensioned for water flow rates and organic loads different to the standard ones of 150 I/I.E. per day and 60 gBOD5 /I.E. per day.

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