

ClearFox[®] SBR Sequential Batch Reactor

Advanced biological wastewater
treatment kits for industrial and
municipal applications

clearfox.com



ClearFox® SBR is a batch based biological wastewater treatment process for municipal and industrial wastewater. SBR equipment kits represent a flexible solution, and can be installed in a variety of tank types.

Biological treatment of wastewater in existing or new tanks.



90%

Lower transport cost
SBR equipment kits for installation in locally manufactured tanks, save up to 90% on transport costs compared to standard systems.

ClearFox® SBR

The flexible and cost-effective solution for all applications

The applications

The ClearFox® SBR process utilises intermittent aeration of the wastewater to biologically degrade pollutants. The technology can be installed in any tank and is equally suitable for above-ground and underground installation.

Industrial wastewater

- From 1 to 1,000 m³/day
- Customised to fit any type of tank
- Integrated control system
- Installation in existing tanks
- Overload and underload resistant

Municipal wastewater

- Available from 5 to 5,000 people
- Suitable for new projects or upgrade of existing basins
- Designed to achieve all required effluent standards

Final effluent suitable for

- Irrigation
- Infiltration
- Discharge to river or sea

The advantages

Low investment costs

Designed according to **DWA design guidelines**

Suitable for **fluctuating wastewater flows**

Lower operating costs than other process technologies

No chemicals required for operation

Simple operation

For **industrial and municipal wastewater**

Less sludge production than with other SBR systems

Remote monitoring possible

High efficiency in pollutant removal

Effluent class C or **effluent class N** – depending on customer requirements

No mechanical parts in the wastewater

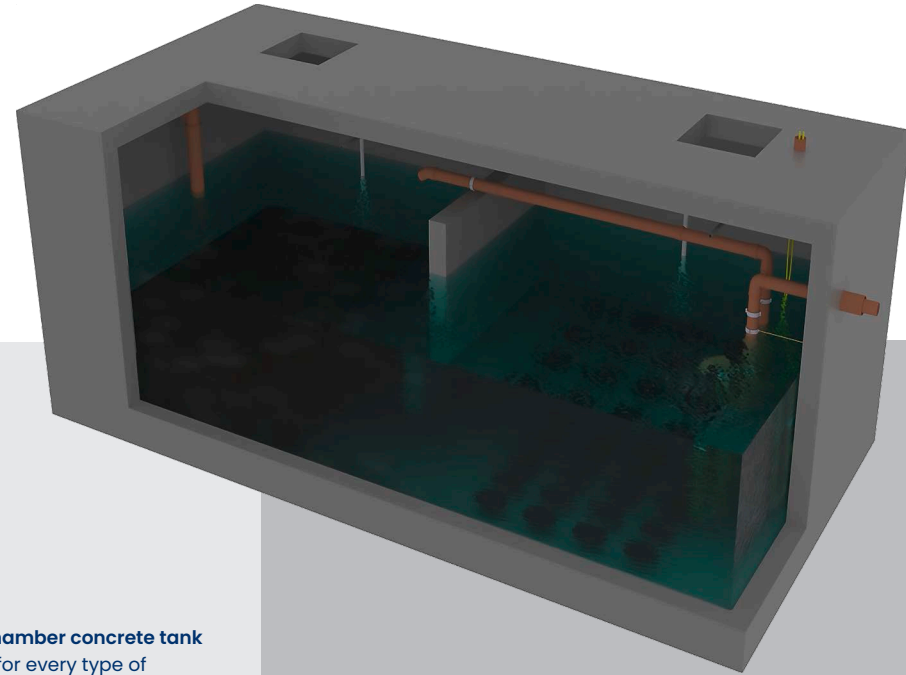
No addition of chemicals required

Certified with international approval

ClearFox® SBR

Flexible and reliable

Just clever



SBR system in a three-chamber concrete tank
The customised solution for every type of wastewater.

SBR process in any tank

The customised solution for all applications

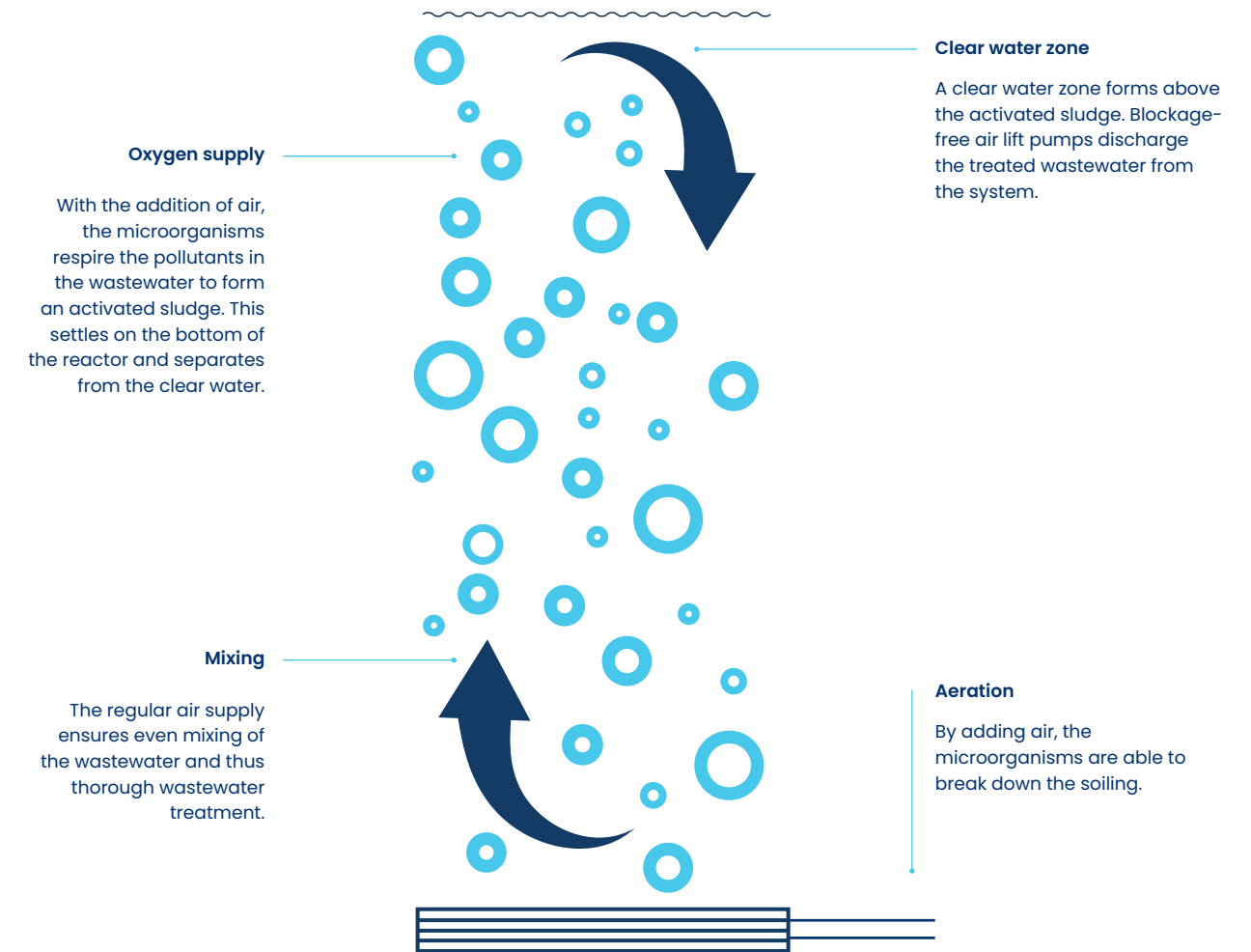
ClearFox® SBR technologies are particularly suitable for installation in single, or multi-chamber tanks. Depending on the customer's wishes and individual requirements, either prefabricated concrete tanks, plastic tanks or steel tanks can be used.

The pollutant load and wastewater volume determine the footprint and total volume of the tanks. The SBR kit is then custom manufactured to suit the tanks and the cleaning efficiency required.



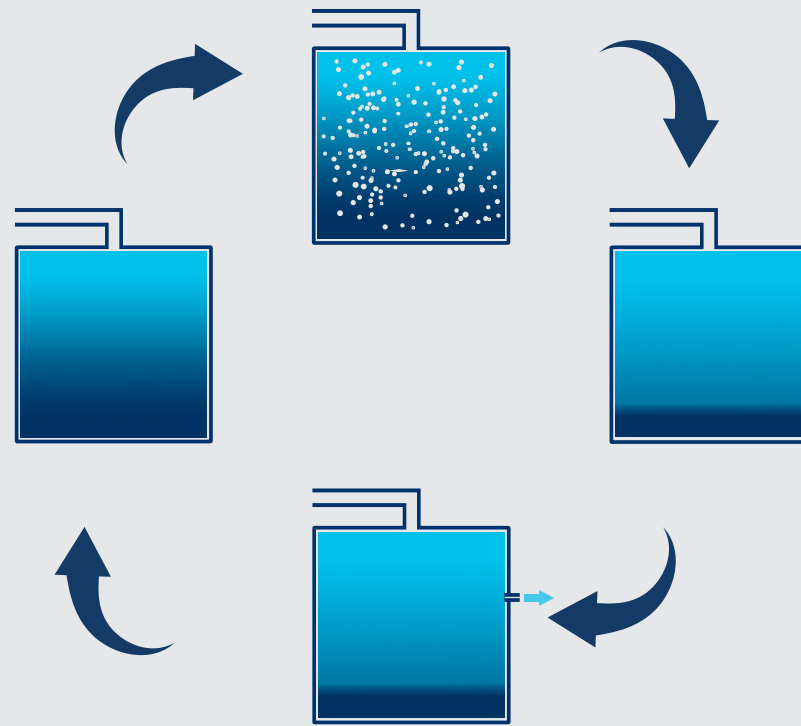
ClearFox® SBR

The fully automatic solution for biological wastewater treatment



ClearFox® SBR is a proven process for **biological wastewater treatment**. By regularly aerating the wastewater, microorganisms are able to break down the pollutants in the wastewater. These form an **activated sludge** that settles to the bottom of the tank and thus separates from the treated wastewater. An **intelligent control system** adapts the cleaning cycle to fluctuating wastewater inflows and dirt loads. It thus achieves any prescribed degree of purification.

SBR in a single chamber tank



Filling phase

The wastewater flows into the biological reactor.

Cleaning and aeration stage

The plant injects air into the wastewater via aerator discs located at the bottom of the tank.

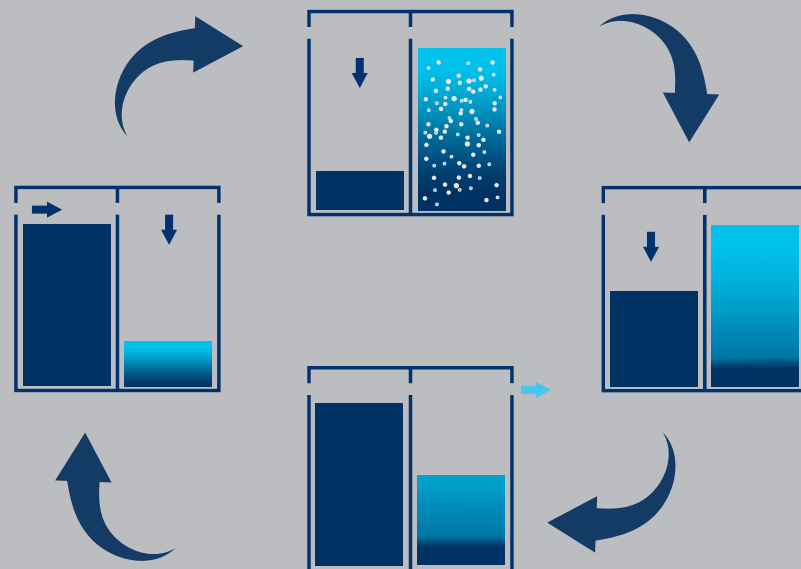
Settling phase

In the settling phase, the activated sludge settles to the bottom of the tank.

Clear water discharge

The plant discharges the treated water from the system.

SBR in a multi chamber tank



Filling phase

The wastewater in the prechamber is transferred via airlift into the biological reactor.

Cleaning and aeration stage

Aerator discs supply the wastewater with air.

Settling phase

The activated sludge settles to the bottom of the biological chamber.

Clear water discharge

After settling, the clearwater is extracted from the SBR reactor by airlift.

International Service? No Problem!

The team at PPU has travelled to every continent in the world over the last 15 years. The experience we have gained in adapting to different conditions is what sets us apart, allowing us to successfully commission wastewater treatment plants everywhere.

We act as a general contractor and therefore accompany you every step of the way. The team at PPU Umwelttechnik GmbH has an in-depth understanding of wastewater treatment processes and technologies and is happy to pass this knowledge on to you at any stage of your project.

We are happy to advise you!



**Do you have any questions?
We are happy to advise you!**
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Further information
about our ClearFox® SBR
can be found here



Innovation made in Germany

PPU Umwelttechnik GmbH provides wastewater treatment to the private, municipal, industrial and decentralised sectors. Under the brand name ClearFox®, the company sells wastewater treatment plants produced in Bayreuth all over the world. The focus is on biological, chemical-physical and oxidising processes for wastewater treatment. PPU Umwelttechnik GmbH offers selected processes in ISO sea containers. This makes them compact, mobile, modular and available anywhere in the world within a very short time. Each containerised wastewater treatment plant is tailored to individual requirements, making each project unique.

As a general contractor, PPU takes on the planning, production and commissioning of each individual wastewater treatment plant. Every customer can count on reliable co-operation with PPU Umwelttechnik GmbH.

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