

Pipelife SBR system

*PIPE*LIFE 

About Pipelife

Our business activities are focused on the development, manufacturing and distribution of plastic pipe systems. We provide solutions for the complete water cycle, energy and power distribution, for telecommunication networks and industrial applications. Pipelife's unique position of providing customers with excellent services and products is the result of constant improvement and innovation at the highest quality level. Outstanding competence, extraordinary team spirit, and visionary management are the key factors for being no.1 in terms of customer satisfaction.

Due to management purposes, Pipelife has allocated its whole worldwide presence into 5 different regions, that are all headed by a Chief Operating Officer, who is in charge of the daily business and the strategy of the respective region.

Principles & Values:

- Go the last mile for the customer
- Invest in quality of people first
- Run lean and unbureaucratic
- Focus on innovation and speed
- Improve performance every single day
- Act honestly, with integrity and citizenship
- Work hard, oriented to results, yet have fun

Mission

Improve quality of life by providing high value solutions for the protection and flow of water and energy

One of Pipelife's main goals is to help the environment as much as we can. We reach this goal by recycling and providing solutions for a cleaner world!

In more and more countries, it is not allowed to drain of untreated sewage and rain water. Pipelife's SBR system (Sequential Batch Reactor) removes sulphates, micro-organisms, phosphates and nitrates from water. Our separators will help to clean water from oil and grease. Due to our wide range of eco products, we have the right solution for every situation.

The problem

Sewage water

Water is everywhere. It is the number one life fluid. Not only we depend on it, the whole world does!

The applications of water for the regulation of the earth's eco system are endless. As an example the earth's and human's temperature are regulated by water. Our brains consist of 75% water...

For two billion years the exact amount of water on earth has remained the same; 553 million cubic kilometres. Unfortunately 4% of this ground water has already been polluted. And this number is growing at a dangerous rate.

Unhealthy sewage water from houses often drains directly into nature. The consequences of this pollution are numerous. Not only nature suffers from it, humans will too. We have to clean our sewage water before we give it back to nature! Pipelife offers the perfect solution with the SBR systems.

The Pipelife SBR solution

How does the SBR solution work?

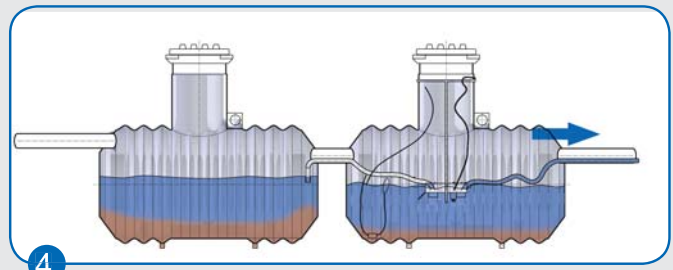
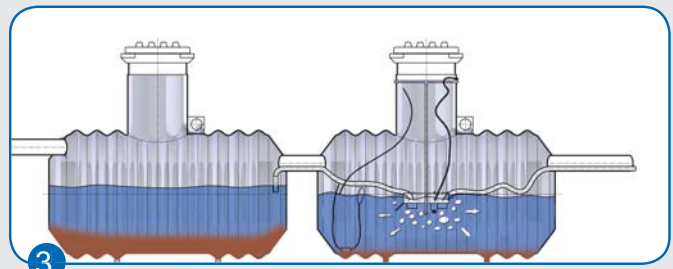
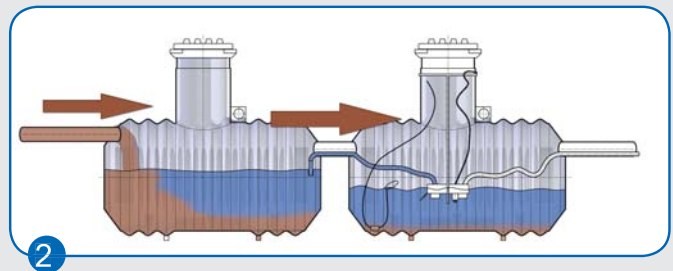
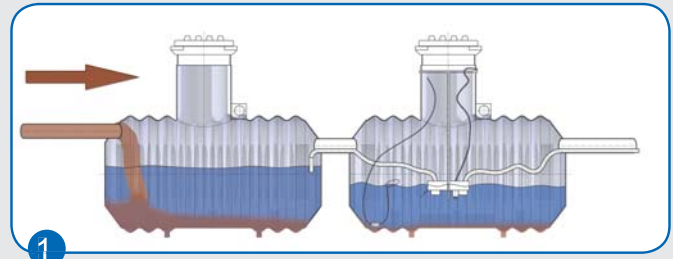
SBR stands for Sequence Batch Reactor. In this reactor the sewage water is cleaned batch by batch after each other. This batch wise treatment takes care of thoroughly cleaned sewage water.

In the first reactor the non solvable particles settle down. Batch wise the water is transported from the first to the second reactor **1** while the residue remains in the first reactor **2**.

As soon as the second reactor is filled, the cleaning process starts. Cleaning takes place in the second reactor during a specially designed aeration program **3**.

when necessary, chemicals can be added to improve further cleaning. The exact program can always be adapted to different needs.

As soon as the treatment cycle has been finished, the cleaned water can be pumped out **4** and a new cycle will start.



Pipelife's SBR system helps you to protect our environment!

The Pipelife parts

The swimmer unit

The swimmer unit floats on the water in the reactor. Due to its floating capacity the pumps stay in optimal position on top of the water level.

Pump ① takes care of the transport of the contaminated water from the settlement tank to the SBR reactor.

The aerator ② pumps air into the reactor tank. The air is needed for the biological cleaning process. Also additives can be pumped into the water in order to remove chemicals.

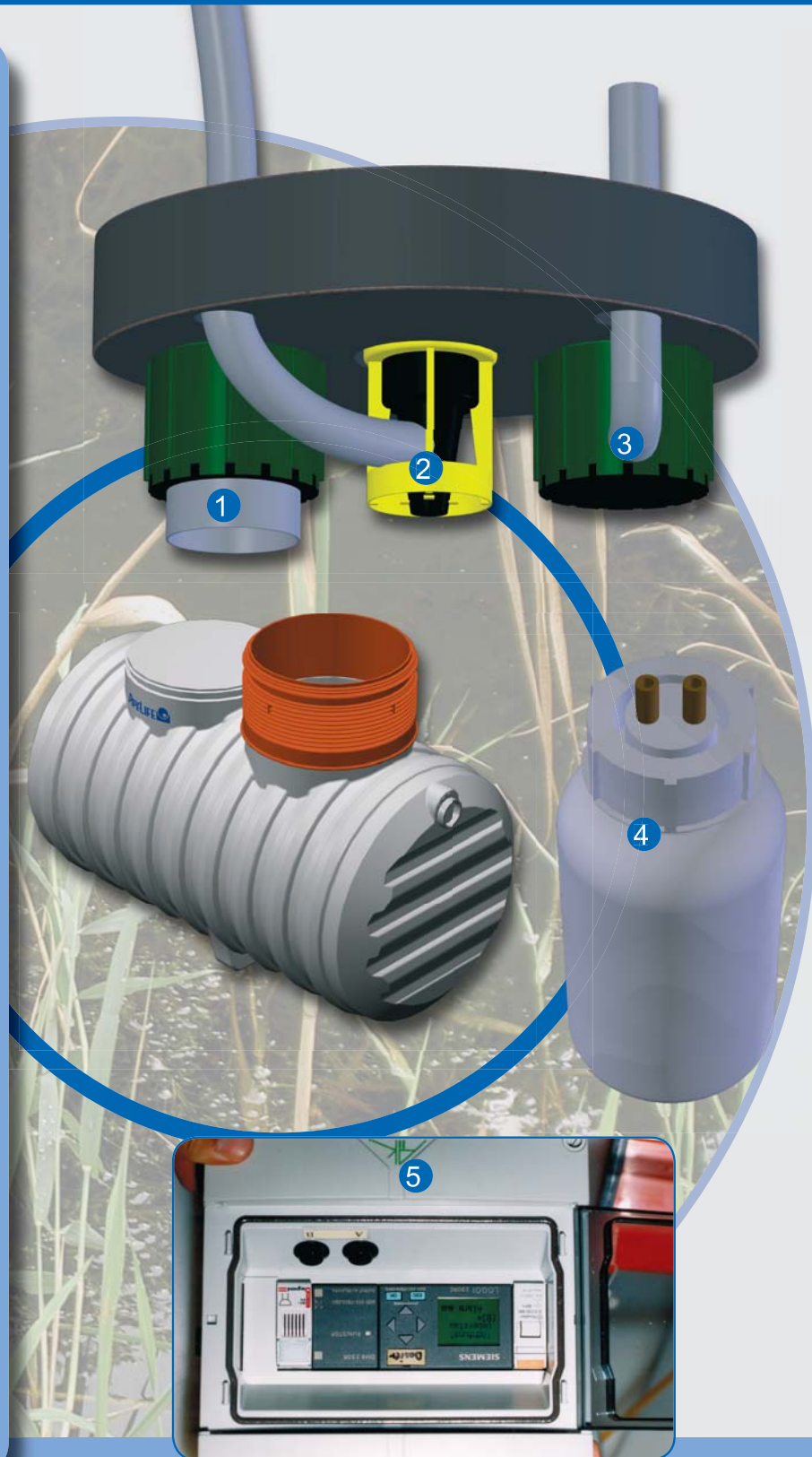
After the full treatment cycle, pump ③ pumps the clean water into the nature. Clean water now finds its way back to the place of its origin!

The control bottle

To check the cleaned water, bottle ④ takes a sample from the water which is pumped away.

The control unit

The Pipelife control unit ⑤ regulates the batch process and returns information to the user about the state of the cleaning process.



How to choose your system?

The tank

The size of the reactor tanks depends on the number of people who uses it. The SBR system needs two tanks at least. The first tank is the settlement chamber in which solid particles will settle down. The second chamber contains the SBR unit.

The minimum size of both tanks are declared by the following table. Pipelife offers solutions for each size! Contact your local Pipelife dealer for more information!

Persons	amount of sewage water (m ³ /d)	Minimal water volume first tank (m ³)	Minimal water volume second tank (m ³)
4	0,6	2,36	1
6	0,9	3,09	1,5
8	1,2	4,12	2
10	1,5	5,15	2,5
12	1,8	6,18	3
16	2,4	8,24	4

Pipelife tanks are easy to install and maintain. By choosing a Pipelife tank you are guaranteed to be the owner of a running system year after year.

The local Pipelife dealer will be glad to help you to choose the best tank for your needs.

Use Pipelife tanks for optimal cleaning!!

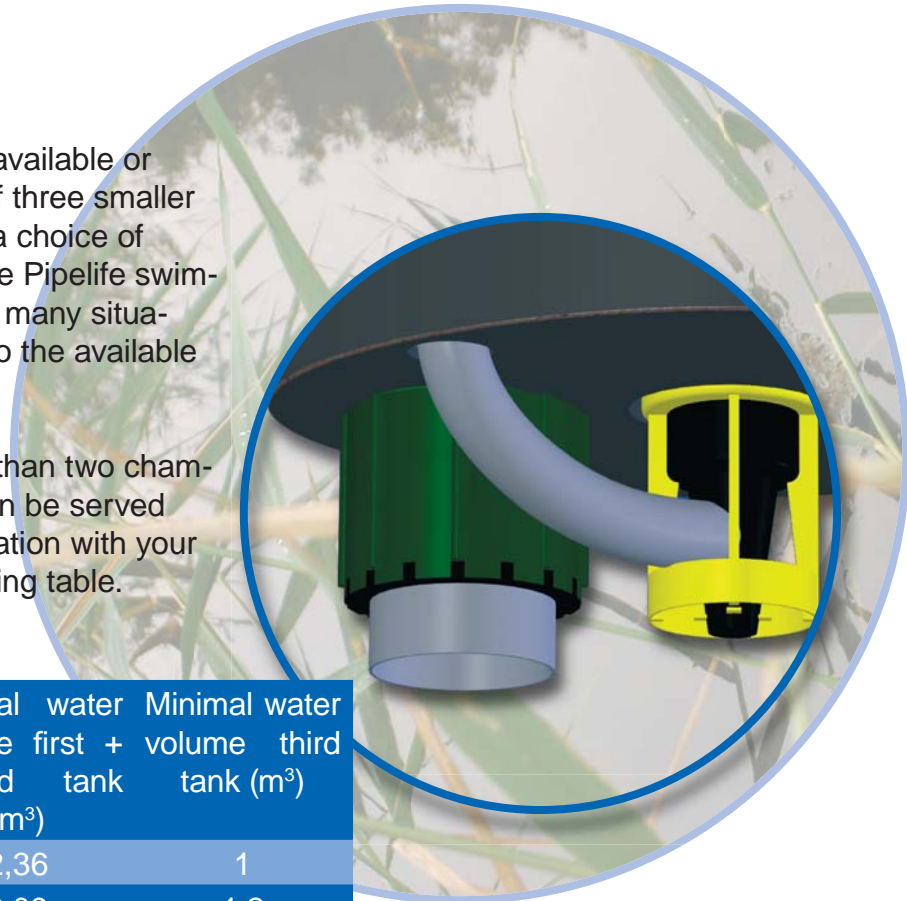
How to choose your system?

Three tanks

Sometimes a septic tank is already available or the preferred solution consists out of three smaller tanks. Choosing for Pipelife means a choice of maximum compatibility. Installing the Pipelife swimmer remains quick and easy! And in many situations no changes have to be made to the available tanks.

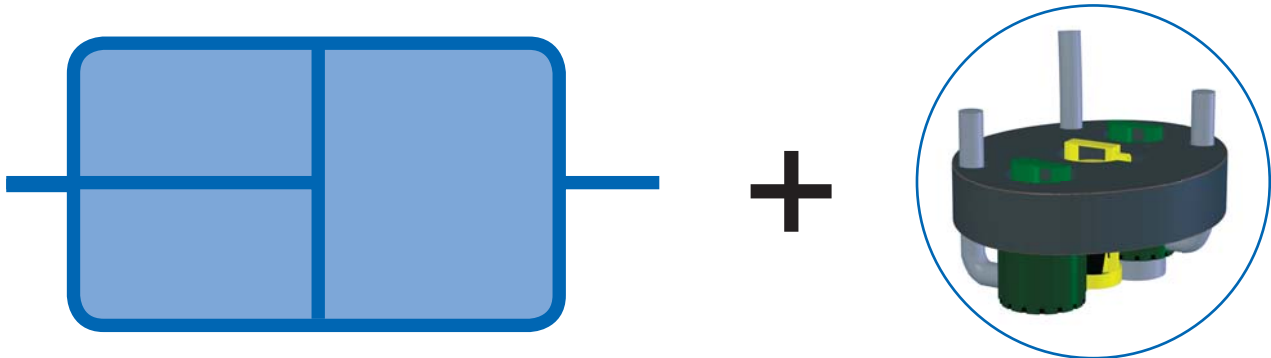
Many septic tanks consist of more than two chambers. To check how many people can be served with the Pipelife SBR unit in combination with your existing septic tank, use the following table.

Persons	amount of sewage water (m ³ /d)	Minimal volume second tank (m ³)	water first + tank	Minimal water volume third tank (m ³)
4	0,6	2,36		1
6	0,9	3,09		1.2
8	1,2	4,12		1.6
10	1,5	5,15		2

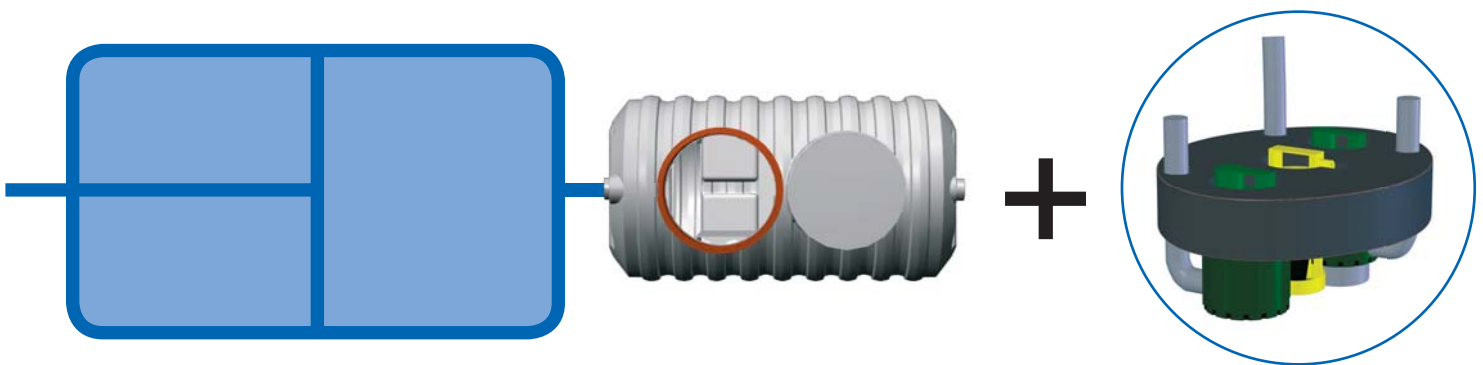


How to choose your system when a septic tank is already installed?

When a three chamber tank is available the following configuration is possible.



Solution 1: Upgrade your septic tank to a full SBR system by placing the reactor unit in one of its chambers.

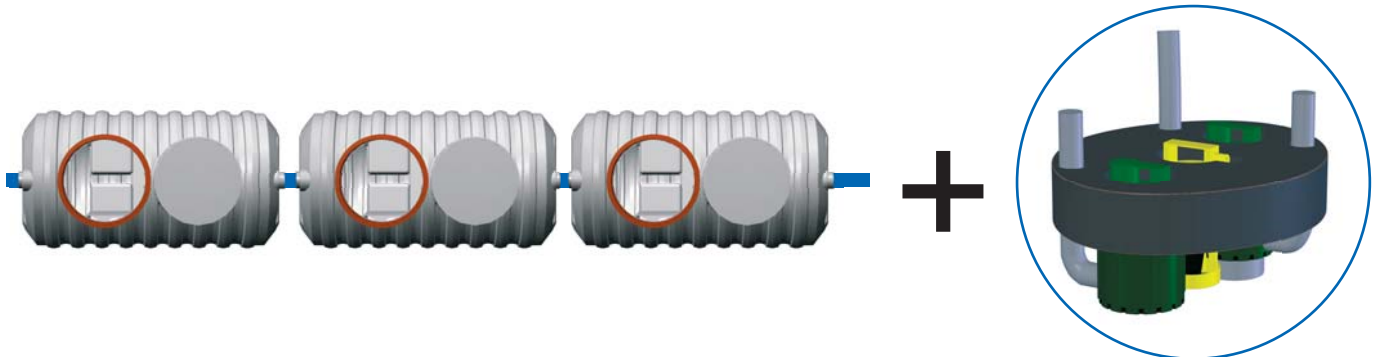


Solution 2: Upgrade your septic tank to a full SBR system by adding an extra tank with reactor unit behind your existing septic tank.

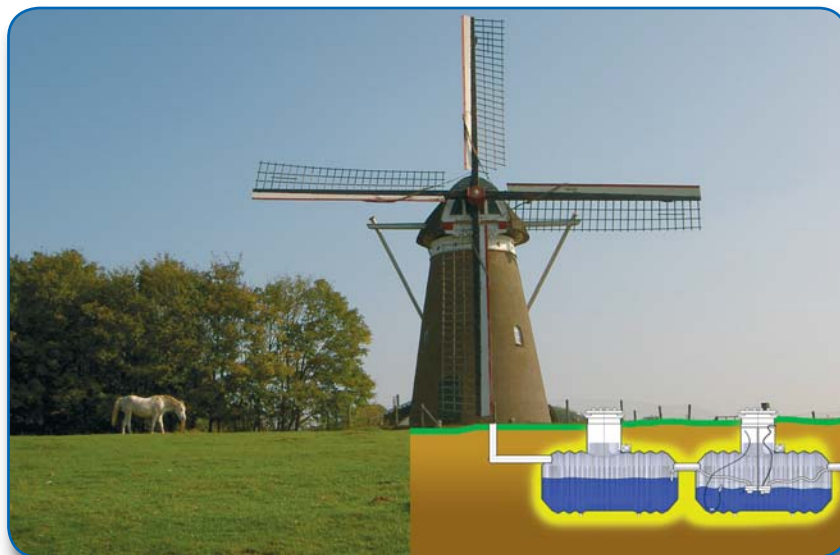
Pipelife makes changing your tanks into an SBR system easy!

How to choose your system when no septic tank is already installed?

When you have to build a complete SBR system, Pipelife tanks are the perfect solution!



Solution 3: Place the full SBR system, which includes two or three tanks and the reactor unit.



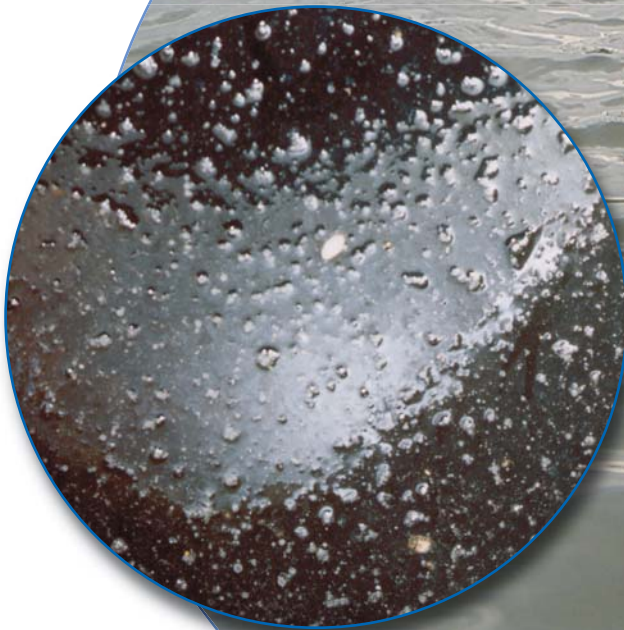
To make a SBR system from the start, use Pipelife reactor tanks!

How to choose your system?

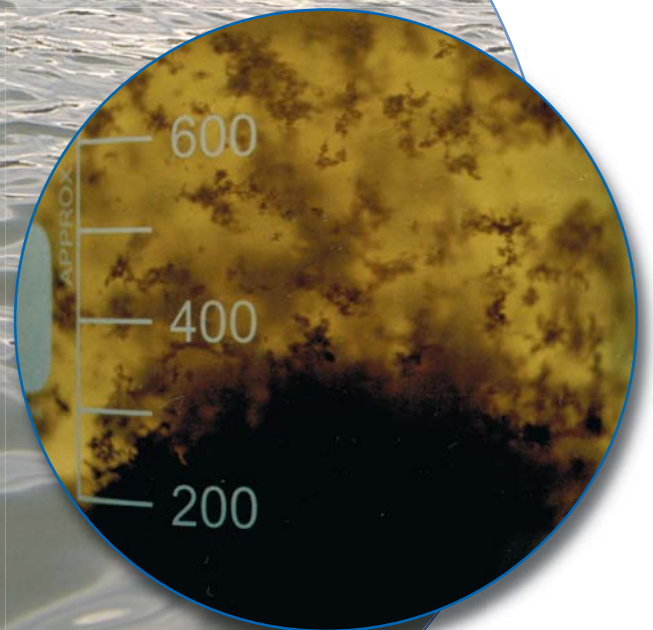
Cleaning capacity

How well does the Pipelife SBR system clean? The following residuals are the maximum residuals when the Pipelife products are used.

Parameter	Unity	Max. Residual	Intended residual
COD	mg/l	90	60
BOD ₅	mg/l	20	10
N _{total, anorg} (=NH ₄ ⁺ , NO ₂ ⁻ -N, NO ₃ ⁻ -N)	mg/l	25	15
NH ₄ ⁺ -N	mg/l	10	0



Water during the treatment



An organic process makes the polluting elements clot

Pipelife SBR advantages

Electronic controlled batch reaction

Durable materials used

Choice of the complete Pipelife standard

Low cost operation and maintenance

Service and support by choosing the right system

High quality Pipelife tanks available

Batch process can be tuned to needs

Easy installation

Large access holes for cleaning and maintenance

Use in combination with existing septic tanks

Life expectation: 20 years of service

The SBR system comes with all needed parts

Big storage volume in the Pipelife tanks

Modular system for different households

Good feedback during the cleaning process

Pipelife Sludge Separator available

Customized solutions

Sand and Oil Separators available

Pipelife S.B.R. system



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