

Approved by the German Institute
of Construction Engineering for
various purification requirements

SanoClean – The small wastewater treatment system with a great effect



The ventilated SBR treatment system by Mall

Approved by the German Institute
of Construction Engineering
(Deutsches Institut für Bautechnik, DIBt)
for various purification requirements

Mall-SanoClean – outstanding treatment results



Approved technology

SanoClean SBR systems represent safe and tested technology. The inspection completed in line with the new European standards for small wastewater treatment systems will form the basis for approval in the future. SanoClean fulfils all requirements relating to the handling of domestic wastewater in Germany. This also holds for use in sensitive areas with high demands on water quality.

Approvals obtained

SanoClean S

Z-55.31-233 concrete

Z-55.31-287 PE

Z-55.3-285 concrete retrofit

for the minimum requirements
of the authorities Run-off class C

as per DIBt: COD < 150 mg/l
BOD₅ < 40 mg/l

SanoClean M

Z-55.31-232 concrete

Z-55.31-286 PE

Z-55.3-284 concrete retrofit

with nitrification Run-off class N

as per DIBt: COD < 90 mg/l
BOD₅ < 20 mg/l
NH₄-N < 10 mg/l

SanoClean L

Z-55.31-231 concrete

Z-55.3-283 concrete retrofit

with nitrification and denitrification

Run-off class D

as per DIBt: COD < 90 mg/l
BOD₅ < 20 mg/l
NH₄-N < 10 mg/l
N inorg. < 25 mg/l

SanoClean XL

Z-55.3-118 concrete

with phosphate removal

Run-off classes D+P

as per DIBt: P total < 2 mg/l

**SanoClean SBR systems are safe
and tested against every applicable
requirement.**



In the footsteps of nature – How small wastewater treatment systems work



Nature as a role model

Fully biological wastewater treatment systems emulate nature itself. They use the same processes which purify water in natural bodies of water. Useful bacteria are responsible for degrading pollutants. These little helpers are already in the wastewater and do not always have to be recreated. Treatment is particularly good when there is enough oxygen in the water and the water remains in motion.

Mechanical

Mechanical pre-cleaning is always the first treatment step. First, coarse materials are retained. Heavy particles sink to the bottom, while floating items remain at the surface of the first chamber. This includes grease or oil.

Biological

Then, the fully-biological main cleaning process takes place. The bacteria require oxygen for effective treatment. Their metabolism degrades the pollutants. A specific controllable oxygen supply optimises the work of the bacteria and reduces the operating costs.

Economical

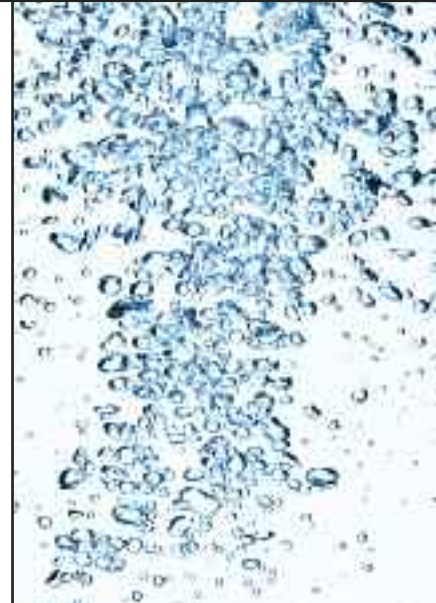
As the last stage of the wastewater treatment system, post-treatment is required. Bacteria settle and only the treated waste water can leave the system. In most systems, a separate chamber is required for post-treatment (settling). In SBR systems like the SanoClean, a pause after treatment is sufficient (settling).

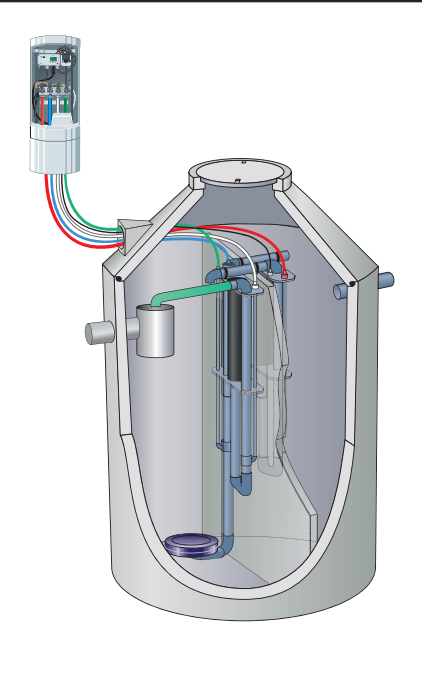
Flexible

SanoClean SBR systems are available as single and multi-container systems with a varying number of chambers and a range of container diameters.

Our small wastewater treatment systems work like nature, in nature and for nature.

Simple, safe, SanoClean.





SanoClean – SBR small wastewater treatment systems give you the right choice

Pressure ventilated

Modern small wastewater treatment systems operate without electrical pumps in the water and without electrical connections in the wastewater area. They are therefore low-maintenance and safe.

Simple and safe technology

Automatic and energy-saving operation with a single compressor, particularly quiet.

Monolithic container or retrofit

High-quality equipment in solid containers made of concrete and plastic, also suitable for retrofitting.

Officially approved

With CE marking and general technical approval for a wide range of requirements.

Delivered fully assembled and ready to be plugged in, in three equipment packages to suit your needs:

SanoClean **easyline**,

Mall's cost-effective solution

- Reduced to technical essentials
- Fully ready for operation and safe
- Available in sizes for up to 16 res. for normal requirements (DIBt run-off class C)
- Available in sizes for up to 12 res. for nitrification (DIBt run-off class N)
- Preferred for shallow installation and short routes
- Low maintenance and spare parts costs with just 2 maintenance dates each year
- Equipment panel allows indoor installation only

SanoClean **classicline**, the elegant solution with a wide range of options

- Switch cabinet with EPP cover
- Particularly quiet
- The technology can either be installed in the building or outdoors
- General technical approval for all DIBt cleaning requirements
- Integrated sampling including compressed air check with protected d-pac system for load-dependent operation
- TÜV-tested energy efficiency
- Future-safe and expandable to additional cleaning classes

SanoClean **activeline**, energy-optimised and environmentally friendly right from the beginning.

The small wastewater treatment system with particular advantages.

- 3-chamber container for more effective sludge storage
- Large volume for longer sludge storage and lower removal costs
- Active pre-treatment reduces pollution from the outset
- Lower biological treatment for low-energy work
- Includes the classicline advantages
- Up to 30% reduction in operating costs

Whether for new buildings or retrofitting: only as much SanoClean as necessary

Robust and can be driven over

SanoClean SBR complete systems are delivered pre-assembled in a concrete container. Up to 16 residents can be connected to a single container.

SanoClean **concrete containers** are seamless and water-tight ex works. SanoClean complete concrete systems are particularly suitable for installation in vehicle accessible areas and areas with high groundwater levels.

Lightweight and can be walked over

SanoClean SBR complete systems in a **plastic container** are also delivered pre-assembled. The container is made of robust polyethylene (PE). It is particularly light and can be installed easily even in difficult parts of your property. However, note that plastic containers are generally designed to be walked over and are not secured against floatation for high groundwater levels without additional investments.

Solutions for all situations

To modernise or retrofit your existing septic tank with SanoClean SBR systems, the container must be stable and water-tight.

The intelligent control centre

The technology centre can be fitted conveniently in a dry place (e.g. in the garage or in the cellar). Compressed air hoses run from the control centre to the wastewater treatment system, laid in an empty pipe to protect them against damage. Finally, the plug is connected, and automatic operation can start already.

Select SanoClean, install it and enjoy the good feeling.



Overview of product features

	easyline	classicline	activeline
Available with plastic container	✓	✓	–
Available for retrofitting	✓	✓	–
Load-dependent operation	–	✓	✓
TÜV-tested energy efficiency	–	✓	✓
Includes internal sampling system	–	✓	✓
High-quality industrial design	–	✓	✓
Optional indoor or outdoor cabinet	–	✓	✓
Compressed air check	–	✓	✓
Great water depths possible	–	✓	✓
Long hose lengths possible	–	✓	✓
All sizes and cleaning phases possible	–	✓	✓
Extended sludge storage possible	–	–	✓
Basic operation with reduced energy	–	–	✓



The intelligent small wastewater treatment system knows what to do



Easy to operate – low follow-on costs

The control system with d-pac automatically controls the fully biological wastewater treatment process. If necessary, it switches your system to holiday or savings mode, monitors it for faults and documents the operation – with an external storage device, if desired. SanoClean knows when it is needed.

No technology in the container

The system technology continues working in the septic tank virtually maintenance-free and with compressed air only. This means that the container is free of pumps, electricity and moving parts.

d-pac is a new component of the control system and you choose the installation location.

Quick and low-cost installation by certified local Mall partners

Our local partners install your new Mall system. They advise you and take care of the approval, installation and service. An optional maintenance contract includes system inspections every six months by our certified partners. The wastewater treatment system is also available as a retrofit kit for existing concrete and plastic containers for new buildings.



Safe technology for excellent treatment results

The SanoClean small wastewater treatment system has already been measured and tested in accordance with the upcoming European standards. It fulfils all requirements and regulations for purifying domestic wastewater everywhere in Germany.

Technical data



Technical data for SanoClean S classicline as a complete concrete system

System type	Residents (res.)	Internal diameter (mm)	Total depth max. (mm)	Total weight (kg)	Heaviest single part (kg)
SanoClean	4	2000	2250	5,990	4,650
SanoClean	6	2000	2600	6,820	5,480
SanoClean	8	2000	3000	7,835	6,490
SanoClean	12	2500	2800	10,765	8,770
SanoClean	16	2500	3300	12,545	10,550

Applies for compliance with official minimum requirement

Technical data for SanoClean S classicline as a complete PE system

System type	Residents (res.)	Number of containers	Nominal capacity (l)	Total depth max. (mm)	Total weight (kg)	Heaviest single part (kg)
SanoClean	4	1	3500	2500	250	180
SanoClean	6	1	4500	2500	280	210
SanoClean	8	1	5500	2500	330	250
SanoClean	12	2	4500	2500	500	180

Applies for compliance with official minimum requirement

Technical data for SanoClean S classicline as a retrofit kit

System type	Residents (res.)	Minimum capacity (m³)	Minimum water depth (mm)	Minimum compressor capacity at 300 mbar (w)
SanoClean	4	3.5	1000	47
SanoClean	6	4.0	1000	64
SanoClean	8	5.2	1500	86



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Print  compensated
Ident-No. 092003

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