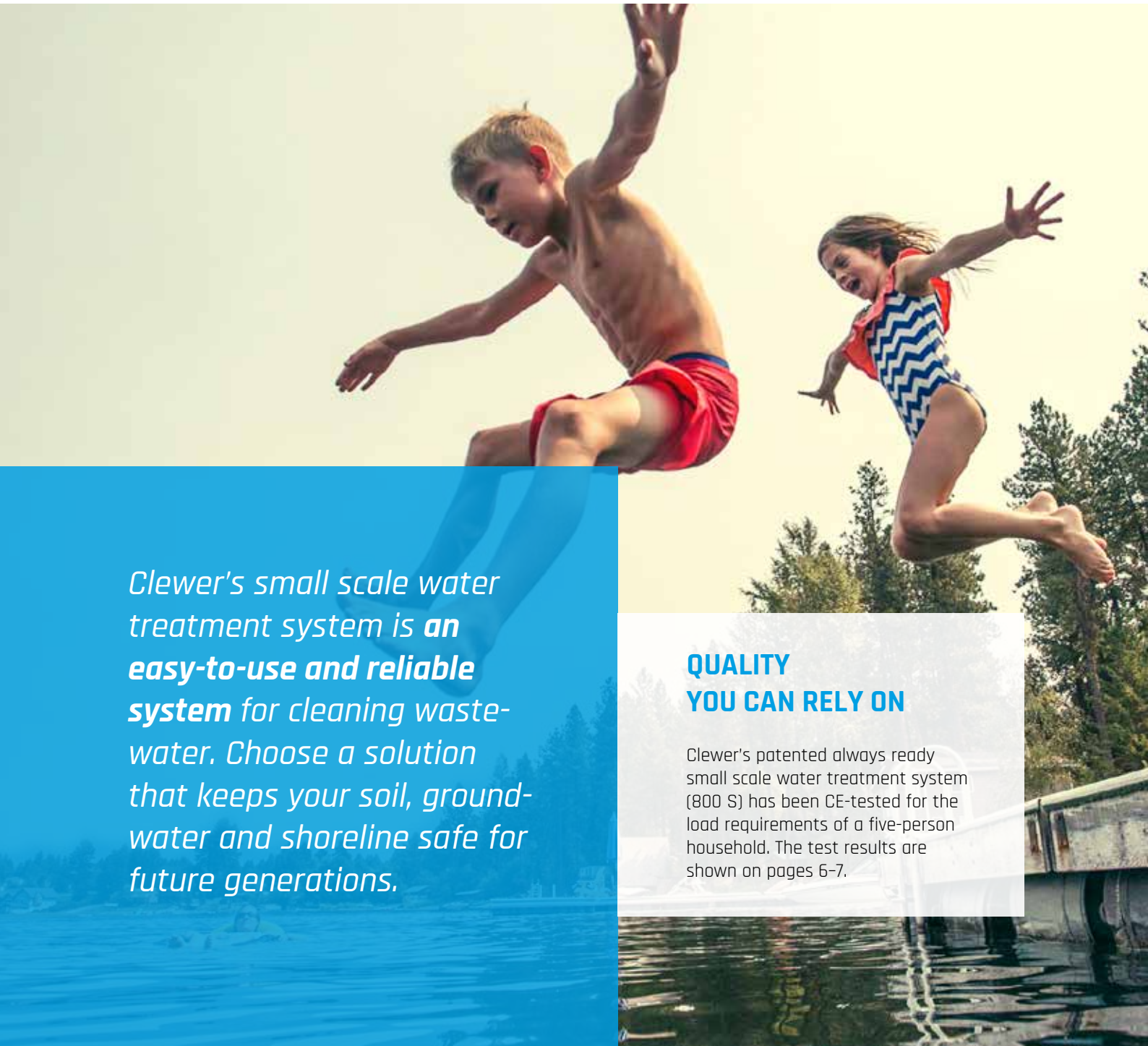
clean water

Clewer small scale water treatment systems

A CAREFREE AND SAFE WASTEWATER SOLUTION

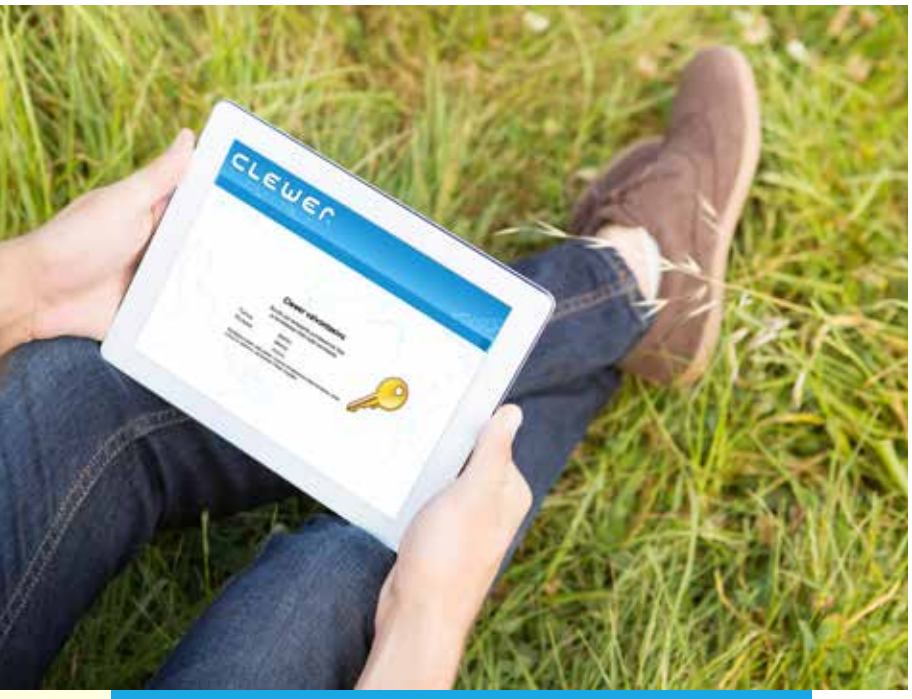
Clewer's small scale water treatment system takes care of your wastewater



*Clewer's small scale water treatment system is **an easy-to-use and reliable system** for cleaning wastewater. Choose a solution that keeps your soil, groundwater and shoreline safe for future generations.*

QUALITY YOU CAN RELY ON

Clewer's patented always ready small scale water treatment system (800 S) has been CE-tested for the load requirements of a five-person household. The test results are shown on pages 6–7.



24/7 REMOTE MONITORING

Around-the-clock monitoring ensures that your system is always operational. GSM/GPRS-based remote monitoring covers:

- the quality of treated water
- the level of chemicals
- the amount of sludge in the septic tank
- the functioning of actuators such as pumps and fans

Alerts generated by the water treatment system will be displayed online on the remote monitoring page. Messages can also be delivered by e-mail or telephone based on the customer's preferences.

EASY-TO-USE AND RELIABLE

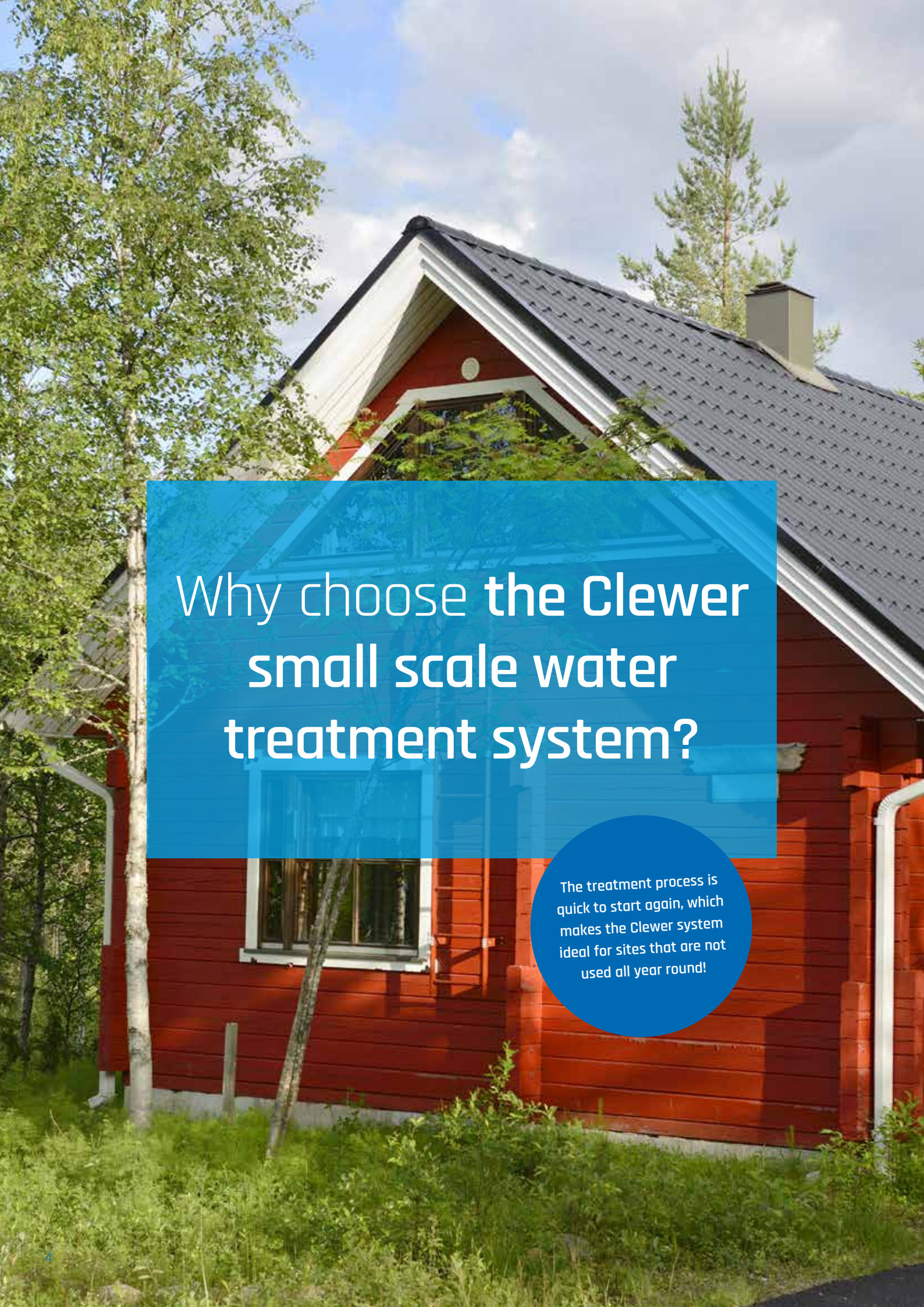
Designed to be highly automated, the system does not require close monitoring or continuous maintenance. The chemical refilling and septic tank emptying interval ranges from 300 m3 to 900 m3 depending on the size of the system. The septic tank emptying interval is about two years in continuous use and as high as 10 years in holiday homes. The technical parts of the system, such as pumps, are covered by the manufacturer's warranty. The technical parts can be easily serviced and changed, if necessary.

EASY INSTALLATION IN VARIOUS TYPES OF TERRAIN

Installing the Clewer small scale water treatment system is easy. The compact size and lightweight structure of the apparatus makes installation cost-effective even in difficult terrain, such as rocky slopes. The water treatment system can also be installed by using an existing holding tank.

For 1–7 persons
800 S
Detached houses and holiday homes

Max. 21 persons
1300 S
Terraced houses and village communities



Why choose **the Clewer small scale water treatment system?**

The treatment process is quick to start again, which makes the Clewer system ideal for sites that are not used all year round!

ALWAYS READY

- The system is able to treat household chemicals and can handle interruptions in operation
- Cleaning efficiency is not reduced by changes in load
- The system's bioprocesses do not stop even when wastewater stops coming;
  → the treatment process starts again immediately when wastewater enters the system

AUTOMATIC SYSTEM

- The small scale water treatment system is designed to be automatic, eliminating the need for constant maintenance by the user
- Remote monitoring ensures that the system is operational 24/7

CAREFREE MAINTENANCE

- The rotating reactor process is self-cleaning
- No sludge bags to be replaced or serviced
- No need for sedimentation tests

CLEAN AND SAFE ENVIRONMENT

- Clewer small scale water treatment systems help keep the property's soil, groundwater and nearby waterways clean. The system also operates with out releasing unpleasant odors. Your property will remain clean and safe for future generations.

LONG AND CAREFREE MAINTENANCE INTERVAL

- Sludge is safely emptied by pump truck
- Emptying interval: 800 S 150–300 m3, 1300 S 450–900 m3. This corresponds to about two years in continuous use and as many as 10 years in summer homes.

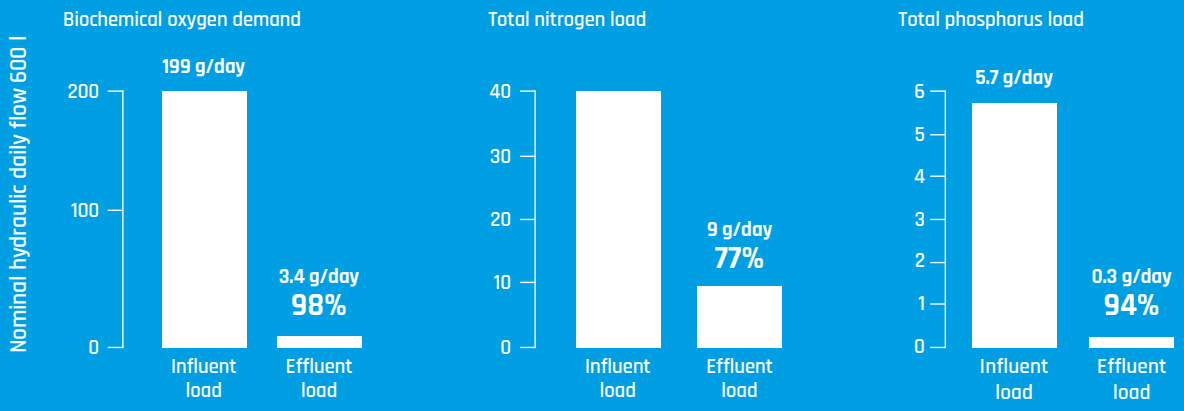
LOW POWER CONSUMPTION

- The use of centrifugal force makes the cleaning process energy efficient

Clewer's small scale water treatment system meets wastewater requirements

Clewer's patented always ready 800 S small scale water treatment system has been CE-tested for the load requirements of a five-person household. The test was conducted in compliance with the EN 12566-3 standard.

AVERAGE DAILY LOAD (G/DAY) AND TREATMENT EFFICIENCY



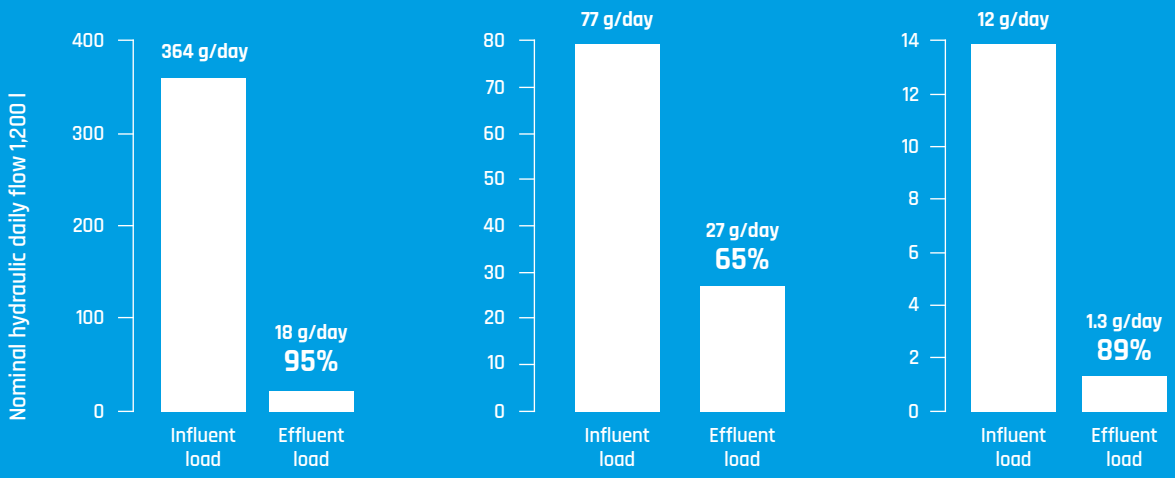
The test was conducted in compliance with the EN 12566-3 standard.

Remote monitoring allows you to review the system's performance

Remote monitoring works 24/7

The operations of small scale water treatment systems are monitored by a service centre. Around-the-clock monitoring ensures that the system is operational and generates notifications on any changes and actions required.

The alerts are shown on the monitoring system and they can also be delivered by e-mail or telephone based on the customer's preferences.



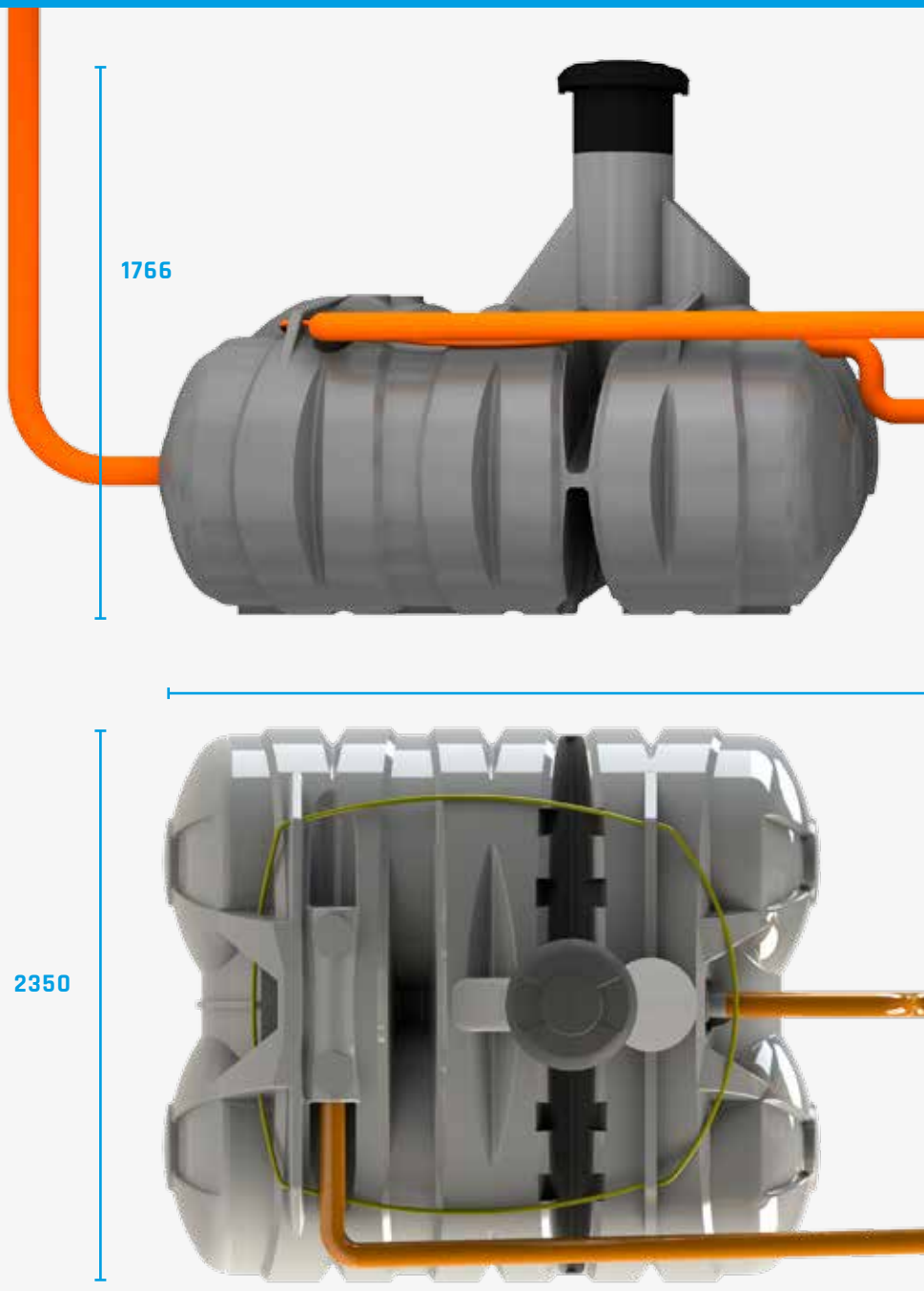
The small scale water treatment system is **easy to install**

The compact and lightweight equipment is easy to install. The system can also be installed in challenging terrain, such as rocky slopes.

CLEWER 800 S

Example installation; the actual positioning of the equipment will depend on the requirements of each individual site.

Illustrations, installation instructions and other useful information to support planning: **http://www.clewer.com/material-bank/**

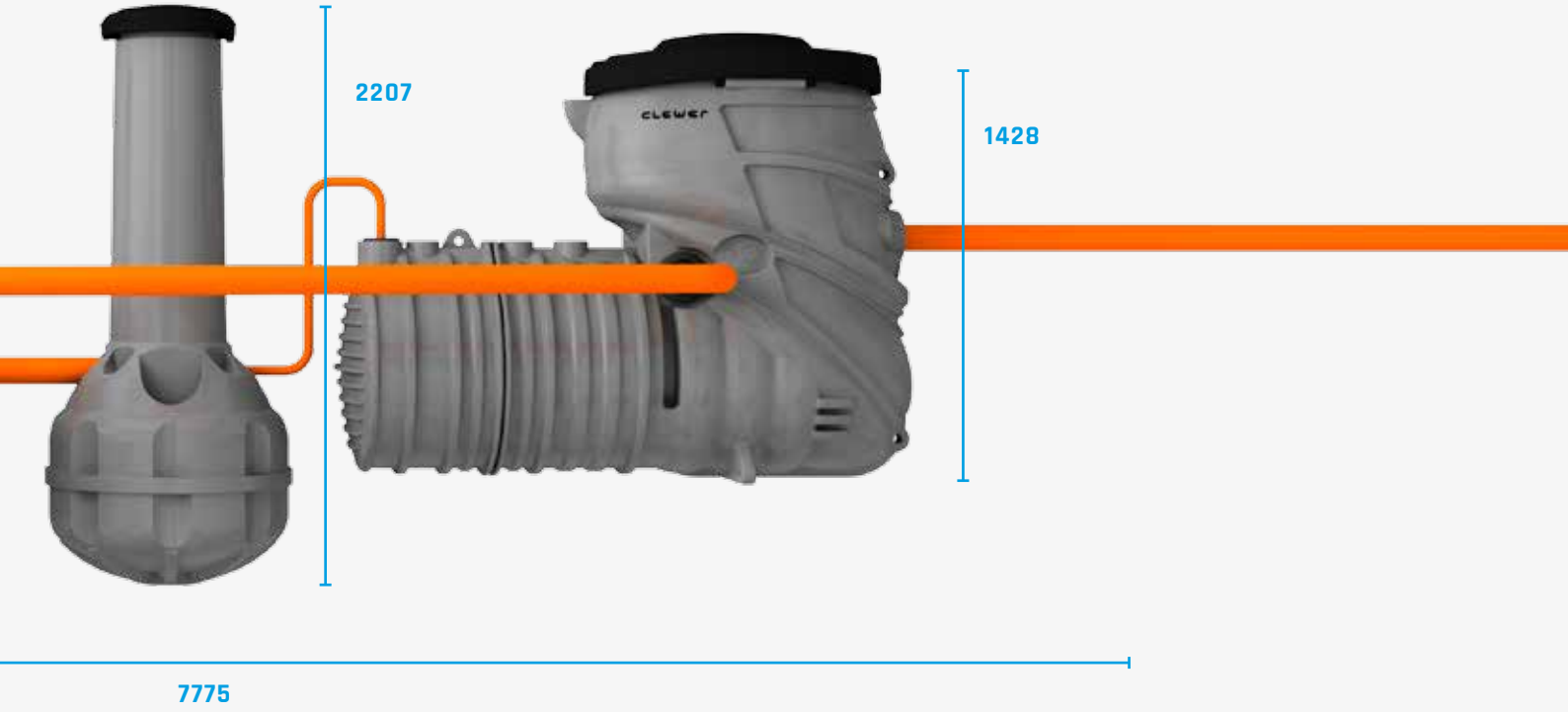


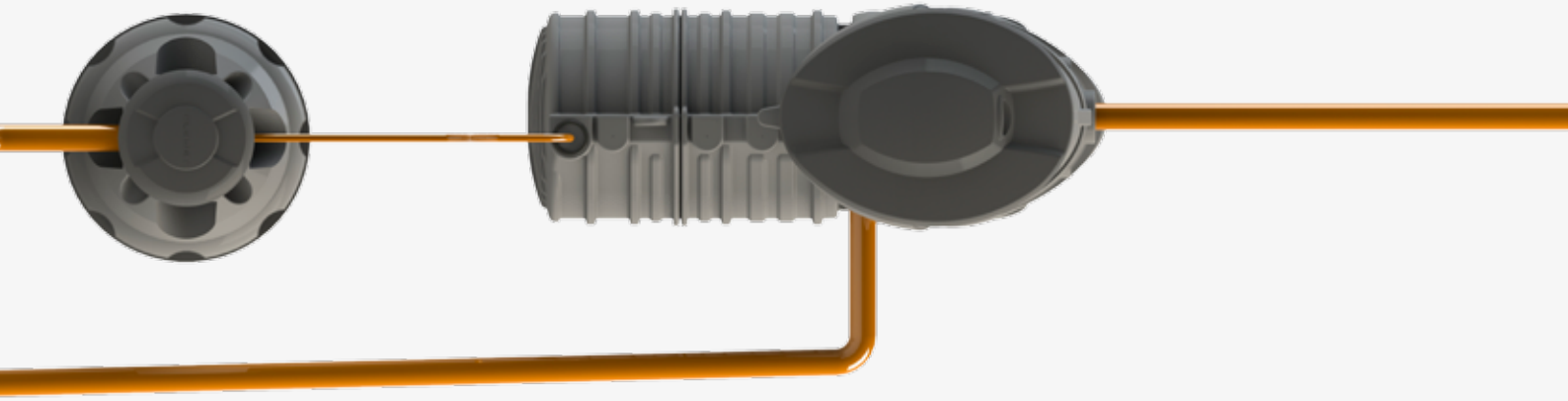
The water treatment unit is installed on a 200 mm gravel bed and backfilled with gravel. The top part of the backfill can start from the upper surface of the isolating layer, using material such as garden soil.

All drain pipe connections: **V110M**

Safety overflow below the lowest sewered point

All bushings: **Forsheda seals**





Efficient and patented RBBR technology

Clewer's waste water treatment systems use a Rotating Bed Biofilm Reactor (RBBR), a patented next-generation biofilm reactor developed in Finland.

RBBR technology is a new innovation in the cleaning system market. Traditional biological wastewater treatment is based on an activated sludge process. RBBR technology is based on an **efficient and stable biofilm** that is formed when microorganisms attach to the surface of the carrier.

The carrier filling ratio of the reactor can be represent **as much as 95%** of the reactor's contents. The rotating movement of the bioreactor keeps it from getting clogged up. Thanks to the large area of the carrier treatment area, Clewer small scale water treatment systems are both compact and efficient.

CE

EN-12566-3
Prefabricated small-scale wastewater treatment unit for treating household wastewater

Product: Clewer 800 S
Material: Polyethylene (PE)

Treatment efficiency:		
Treatment efficiencies tested with organic load (BOD_7) of 199 g/d:	Nominal hydraulic daily flow	0.6 m^3/d
	COD_{cr}	96%
	BOD_7	98%
	SS	97%
	Total nitrogen	77%
	Total phosphorus	94%
Electricity consumption:		2.05 kWh/d
Treatment efficiency:		
Treatment efficiencies tested with organic load (BOD_7) of 364 g/d:	Nominal hydraulic daily flow	1.2 m^3/d
	COD_{cr}	92%
	BOD_7	95%
	SS	93%
	Total nitrogen	65%
	Total phosphorus	89%
Electricity consumption:		3.77 kWh/d
Watertightness:		Approved
Tensile strength:		Approved
Durability:		Approved

The product has undergone two EN tests with two different nominal organic loads and nominal daily flows.

clewer®
clean water

Clean water for future generations

Based in Finland, Clewer is a leading developer of waste water treatment technology. We operate globally, delivering environmentally friendly solutions for industry, car washes, municipalities, and for fish farming, etc.

We have implemented various types of wastewater treatment plants around the world, from the islands off the Finnish archipelago to the deserts of Algeria. Clewer's larger systems provide efficient and safe wastewater treatment for communities, up to thousands of people in size.

Read more at **www.clewer.com**

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Contact us!

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