

GreenLife



General User Manual Greywater Recycling Plants



www.greenlife.de

GreenLife GmbH
Sacktannen 1a
D-19057 Schwerin

Dear customer,

Congratulations on your purchase of this GreenLife product and thank you for the confidence you have placed in us.

Please check the goods for any damage when you receive them.

The carrier, not the manufacturer or the supplier, is liable for transport damage. Transport damage reported after receipt of the goods can no longer be claimed. If the packaging is damaged, the goods must be unpacked immediately in the presence of the supplier in order to determine any damage, which must be reported to the carrier in writing. The goods must remain with the buyer until the transport damage has been clarified.

Before installing, connecting and/or operating this product, it is absolutely necessary to read the installation and operating instructions carefully and completely and to observe all safety instructions. Please keep these instructions in a safe place for future reference.

If you have any questions or comments, please do not hesitate to contact us at service@greenlife.de at your disposal.

Best regards,

Your GreenLife Team

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1. Introduction

The greywater recycling plant, hereinafter referred to as GWR plant, is used exclusively for the treatment and reuse of slightly contaminated wastewater (greywater) from showers, wash hand basins and bathtubs, which can preferably be used for flushing toilets and washing machines, but is also suitable for garden irrigation and cleaning activities.

When operated properly, the treated greywater achieves the quality required by the EU Water Framework Directive.

In single households, users are free to wash their laundry with treated greywater. In an apartment building, service water can be offered for washing laundry. Alternatively, the tenant must be provided with a drinking water connection for the washing machine. As a rule, the operator must notify the competent health authority of service water utilisation systems by means of a form. This form, together with a commissioning report and an inspection plan, is an integral part of these instructions for use.

Any other use is considered improper. The manufacturer and/or seller are not liable for any damage resulting from this!

2. General

2.1 About this manual

2.1.1 General notes on installation and operation

On the following pages you will find information and important tips that will ensure the successful installation and safe operation of your GreenLife GWR system. We have made every effort to provide you with instructions that leave no questions unanswered. In order for us to continually improve, please let us know if you find anything missing or incomprehensible in this manual. Please write to: info@greenlife.de.

It is essential that you follow the installation instructions and the operating and maintenance instructions exactly during installation and commissioning. Only then can we guarantee the smooth operation of your GreenLife GWR system. Please also note that it is necessary to carry out annual maintenance. Through maintenance, you have a positive influence on the operational safety and readiness of your GWR system.

The operating instructions must be read in full before installation and commissioning. During installation and operation, the information given in these operating instructions must be followed exactly.

Please keep these instructions in a safe place so that you can refer to them in the future if necessary.

2.1.2 Structure of the documentation and target persons

The documents supplied for the GWR system consist of two sets of instructions:

- the preceding 1st instruction is the instruction manual. It is intended for the operator of the GWR system (owner).
- the 2nd manual is the installation, commissioning and maintenance manual. This is intended for specialists for planning, installation and maintenance of the GWR system as well as for the operator of the system (building owner) for checking.

In addition, if necessary, all operating instructions for the individual components can be requested by e-mail at info@greenlife.de (e.g. for the respective air compressor). The instructions contained therein for installation, operation and maintenance of the respective unit must be observed.

2.2 Warranty

The warranty covers defects that can be traced back to the manufacture or the material. These defects must be proven to have existed despite proper transport, installation and intended use in accordance with the operating instructions.

Upon receipt of the delivery, the system with all associated components must be checked for completeness and intactness. Damage or missing quantities must be confirmed by the carrier. The discovery of obvious defects must be notified in writing without delay, in the case of unrecognisable or concealed defects immediately after they become apparent.



Warning

Observance of the information in these operating instructions is part of the warranty regulations. Unauthorised modifications to the system or improper use may invalidate the warranty.

The warranty assumes that the installation and operation of the system is carried out in accordance with the operating instructions, that the system is not handled improperly or modified without authorisation, that any necessary maintenance and repairs are carried out professionally and are fully documented in the operating log.

3. Safety during installation, operation and maintenance

3.1 Symbols and their meaning

Residual risks that cannot be avoided during operation and maintenance are pointed out separately in these operating instructions. The risks can exist for persons, the system or the environment. They are highlighted in these operating instructions with the aid of safety instructions and symbols:



Warning

This symbol indicates that above all dangers to persons are to be expected (danger to life, danger of injury)!



Warning

This symbol indicates that above all hazards to the installation (equipment, machinery, material) and / or the environment are to be expected.



Notice

This symbol indicates important information.

3.2 Basic safety measures for operation and maintenance

The following applies to installation, operation and maintenance:



Warning

Installation and maintenance are only to be carried out by qualified persons who have suitable equipment and facilities as well as sufficient knowledge. To avoid hazards, the relevant accident prevention regulations must be observed.

All work on the system may only be carried out when it is de-energised. It must be ensured that the supply voltage cannot be inadvertently switched on again.

Operation and maintenance must be carried out in accordance with the national standards and the operating instructions and in compliance with the operating instructions. The work may only be carried out by qualified specialists or competent persons.

Commissioning may only take place when the installation is completely finished and the system is fully operational.

The permanently safe operation of the unit requires that all necessary measures are taken for this purpose. It is the operator's duty of care to plan these measures and to check their execution.

3.3 Continuous operation (disposal instructions)

For compliance with the cleaning requirements, operation must be in accordance with the operating instructions.

The GWR system must be permanently ready for operation (= trouble-free on the grid)!

Operation is only permissible if the grey water supplied corresponds to the design data in terms of quantity and quality.



Warning

In principle, only substances with the same characteristics as domestic greywater may be fed into the GWR plant.

Biocidal, toxic or biologically incompatible or degradable substances must not enter the system, as they lead to biological process problems (⇒ Table 3: Disposal instructions).

Liquids and solids that can lead to clogging of pipes or damage to aggregates must not be discharged (⇒ Table 3: Disposal instructions).

The operator must in particular ensure that

- the system is only used for its intended purpose,
- the system is only operated in perfect working order and, in particular, the safety devices are regularly checked to ensure that they are functioning properly,
- the complete operating instructions are always available in legible condition, complete and within easy reach at the place of use of the system,
- only qualified and authorised personnel operate, maintain and repair the system,
- regular inspections of the system are carried out to ensure long-term trouble-free operation,
- system maintenance is carried out at least every twelve months,
- all system components are easily accessible for inspection and maintenance,
- no greywater runs into the system for commissioning and maintenance (e.g.: via bypass),
- the system and all associated components are suitably secured against access by unauthorised persons during all operating phases,
- modifications to the system are only carried out by authorised specialist personnel.

This also applies to a change in the mode of operation (e.g. change in machine running times).



Danger

Operation and maintenance require precise knowledge of the operating instructions and the safety instructions contained herein.

Before commissioning, it must be ensured that no one can be endangered by the operation.

The unit may only be operated in perfect condition. Any defects found must be rectified immediately or have them rectified immediately. When working on the electrical equipment, disconnect the system from the mains and secure it against being switched on again! Repair work on the electrical equipment of the system may only be carried out by a trained electrician! Check electrical equipment regularly! Always keep the switch cabinet / control unit closed! Access is only allowed to authorised persons with a key / tool! Never spray switch cabinets and other housings of electrical equipment with a water hose for cleaning!

Before recommissioning after maintenance or repair work, make sure that removed components (e.g. tank cover) are properly refitted.

Table 3: Prohibited substances

Substances that must not enter the system	Caused problem	Correct disposal point
Ash	does not decompose	waste bin (residual waste)
Solids , e.g.: Sanitary towels, ear swabs, plasters, panty liners, tampons, textiles	poison the grey water, eat away at pipelines, affect the quality of process water	waste bin (residual waste)
Liquids , e.g.: Nail varnish, nail varnish remover, cream, make-up remover, hair dye, bleach.	poison the grey water, eat away at pipelines, affect the quality of process water	collection points
Medicines/Drugs	poison the grey water, affect the quality of process water	collection points, pharmacies
Cleaning agents , e.g.: Disinfectants, cleaning agents (pipe cleaners), thinners, brush cleaners.	poison the grey water, eat away at pipelines, affect the quality of process water	collection points
Binders , e.g.: Cat litter, bird sand	lead to deposits and blockages	waste bin (residual waste)
Liquids according craft activities e.g.: Chemicals, paints, varnishes, oils, soldering water, cement water, wallpaper paste	poison the grey water, eat away at pipelines, affect the quality of process water	collection points
Kitchen waste , e.g.: Grease, oil, food waste	lead to deposits and blockages, attract vermin	Waste bin (organic waste), collection points
Machine lubricants , substances containing lubricants	poison the grey water, affect the quality of process water	collection points
Pesticides , e.g.: Plant protection products, pesticides	poison the grey water, affect the quality of process water	collection points



The statutory environmental protection regulations (e.g. regulated sludge removal) must be complied with during all work on the plant.

3.4 Dangers if the safety instructions are not observed

Failure to comply with the safety instructions may endanger persons, systems, machinery or the environment. Failure to comply with the safety instructions may result in the loss of any claims for damages.

4. Transportation and Storage

4.1 Transportation



Transport and lifting of the system tanks is only permitted when unfilled!

During transport, the container must be secured against slipping, e.g. with tension belts. The container must be secured in such a way that it cannot be damaged. Do not use chains or wire ropes!

Transport and loading must always be carried out shock-free!

Dragging or pushing the tank over the ground is not permitted!

4.2 Storage



Store on a level surface without sharp objects.

Secure the manhole against the ingress of rainwater, dirt or people (especially children).

Some parts of the system (e.g. lip seals) are only UV-resistant to a limited extent.

4.3 Weather conditions

If there is a risk of frost when the unit is installed/stored outdoors, make sure that the unit is completely drained and that the pumps and pipelines are free of water. In such a case, the membrane filter must be stored separately. It must be kept 100% moist. If the membrane filter dries out, it will be irreversibly destroyed. The tapping points and service water pipes that are not frost-free must also be shut off and drained in good time before the onset of frost.

5. Registration form Health Department

Address

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Notification of the operation or commissioning of a service water utilisation system in accordance with §13 Para.3 of the Drinking Water Ordinance. (According to the amended Drinking Water Ordinance, which came into force on 01.01.2003, the local public health authorities must be notified of service water utilisation systems. This applies to the construction as well as to the commissioning and decommissioning of the systems (§13 paras. 1 and 3).

Applicant:

Plant location:

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Plant type: (See delivery note)

Manufacturer:

GreenLife GmbH
Sacktannen 1a
D-19057 Schwerin
GERMANY

Place, date

Signature plant owner

6. Operation diary

Date	Operation hours					Special incidents
	Aerator	Feed pump	UV system (if available)	Filtrate pump	Overall system	
						Operation Diary sheet nr. _____