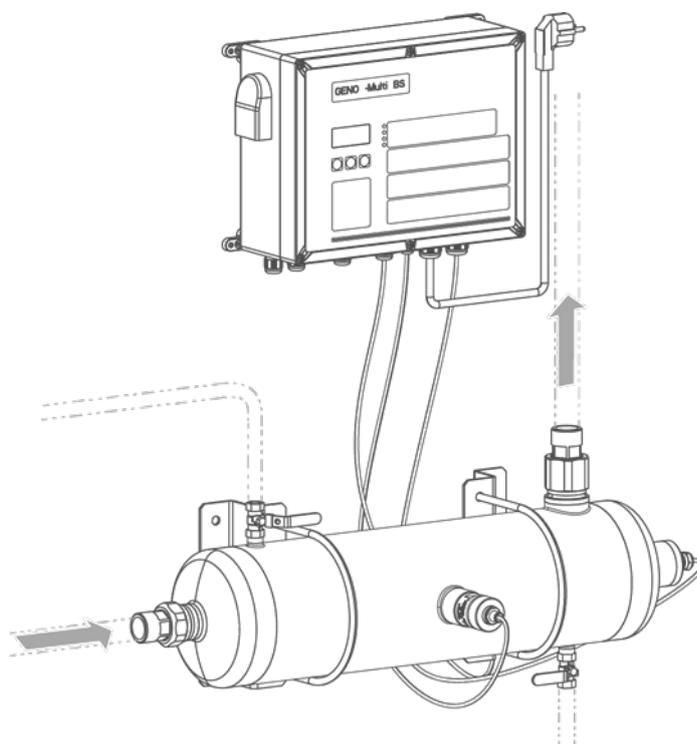


Operation manual

Flushing set for GENO-UV systems (Residential Applications)



Edition May 2019
Order no 520 950-inter_074

Grünbeck Wasseraufbereitung GmbH

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DIN EN ISO 14001 and SCC

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grünbeck

EU Declaration of Conformity



We hereby declare that the system designated below meets the safety and health requirements of the applicable European guidelines in terms of its design, construction and manufacture.

Manufacturer: Grünbeck Wasseraufbereitung GmbH
Josef-Grünbeck-Straße 1
89420 Höchstädt/Do.

Responsible for documentation: Markus Pöpperl

System designation: Flushing set

System type: GENO®-UV system (Residential application)

Serial no.: refer to type designation plate

Applicable guidelines: Low voltage guideline (2014/35/EU)
Guideline EMC (2014/30/EU)

Applied harmonised standards, in particular: DIN EN 62233:2008-11,
DIN EN 60335-1:2012-10,
DIN EN 60335-2-41:2010-11,
DIN EN 55014-1:2012-05,
DIN EN 55014-2:2016-01,
DIN EN 61000-3-2:2015-03,
DIN EN 61000-3-3:2014-03

Applied national standards and technical specifications, in particular:

Place, date and signature:

Höchstädt, 20.12.2018

i. V.

Markus Pöpperl
Dipl.-Ing. (FH)

Function of signatory:

Head of technical product design

A General information

1 | Preface

Thank you for opting for a Grünbeck product. Backed by decades of experience in the area of water treatment, we provide solutions for all processes.

Drinking water is classified as food and requires particular care. Therefore, always ensure the required hygiene in operating and maintaining systems for drinking water treatment. This also applies to the treatment of water for industrial use if repercussions for the drinking water cannot completely be excluded.

All Grünbeck systems and devices are made of high-quality materials. This ensures reliable operation over many years, provided you treat the systems with the required care. This operation manual assists you with important information. Please read the operation manual thoroughly before installing, operating or maintaining the system.

Customer satisfaction is our prime objective and providing customers with qualified advice is crucial. If you have any questions concerning this system, possible extensions or general water and waste water treatment, our customer service staff as well as the experts at our headquarters in Hoechststedt, are available to help you.

Advice and assistance For advice and assistance please contact your local representative (refer to www.gruenbeck.com) or get in touch with our service hotline which can be reached during office hours:

Tel.: +49 9074 41-333

Fax: +49 9074 41-120

E-Mail: service@gruenbeck.com

We can connect you with the appropriate expert more quickly if you provide the required system data. In order to have this data handy at all times, please copy it from the type designation plate to the overview on page C-1.

2 | How to use the operation manual

This operation manual is designed for the operators of our systems. It is divided into several chapters which are listed in alphabetic order in the table of contents on page 2. In order to find the information you are looking for please refer to page 2 for the corresponding chapter.

The header and the page numbers also indicate the corresponding chapter and therefore will help you to find your way within the operation manual.

3 | General safety information

3.1 Symbols and notes

Important notes in this operation manual are characterised by symbols. Please pay particular attention to these notes in order to ensure a danger-free, safe and productive system operation..



Danger! Failure to adhere to these notes will cause serious or life-threatening injury, extreme damage to property or inadmissible contamination of drinking water.



Warning! Failure to adhere to these notes may cause injury, damage to property or contamination of the drinking water.



Attention! Failure to adhere to these notes may result in damage to the system or other objects.



Note: This symbol characterises notes and hints to make your work easier.



Tasks with this symbol may only be performed by Grünbeck's technical service/authorised service or by persons expressly authorised by Grünbeck.



Tasks with this symbol may only be performed by personnel instructed in electrical engineering according to the VDE guidelines or according to the guidelines of a similar local institution.



Tasks with this symbol may only be performed by water companies or approved installation companies. In Germany, the installation company must be registered in a water company installation directory as per §12(2) AVBWasserV (German Ordinance on General Conditions for the Supply of Water).

3.2 Operating personnel

Only persons who have read and understood this operation manual are permitted to work with the system. The safety guidelines must be strictly adhered to.

3.3 Designated application

The system may only be used for the purpose outlined in the product description (chapter C). The present operation manual as well as the guidelines stipulated therein and the applicable local guidelines concerning the drinking water protection, accident prevention and occupational safety must be adhered to.

In addition, appropriate application implies that the system may only be operated when it is in proper working order. Any malfunctions must be repaired immediately.

3.4 Protection from water damage



Warning! In order to properly protect the installation site from water damage:

- a) a sufficient floor drain system must be available or
- b) a safety device (refer to chapter C – Accessories) must be installed.



Warning! Floor drains leading towards a lifting system do not work in case of a power failure.

3.5 Indication of specific hazards

Danger due to electricity! → Do not touch electrical parts with wet hands! Disconnect the system from mains before starting work on electrical parts of the system. Have qualified experts replace damaged cables immediately.

Danger due to mechanical energy! System parts may be subject to overpressure. Danger of injury due to escaping water and unexpected movement of system parts. → Check pressure pipes regularly. Depressurise the system before starting repair or maintenance work on the system.

Hazardous to health due to contaminated drinking water! → The system may only be installed by a qualified company. The operation manual must be strictly adhered to! Ensure that there is sufficient flow. The pertinent guidelines must be followed for starting-up after long periods of standstill. Inspections and maintenance must be performed at the intervals specified!

Note: By concluding a maintenance contract, you ensure that all of the required tasks are performed on time. You may perform the interim inspections yourself.

4 | Shipping and storage



Attention! The system may be damaged by frost or high temperatures. In order to avoid damage of this kind:

Protect from frost during shipping and storage! Do not install or store system next to objects which radiate a lot of heat.

The system may only be transported and stored in its original packing. Ensure that it is handled with care and placed the right side up (as indicated on the packing).

5 | Disposal

5.1 Packaging

5.2 Product

Comply with the applicable national regulations.

Dispose of the packaging in an environmentally sound manner.



If this symbol (crossed out waste bin) is on the product, European Directive 2012/19/EU applies to this product. This means that this product and the electrical and electronic components must not be disposed of as household waste.

Find out about local regulations on the separate collection of electrical and electronic products.

Use the collection points available to you for disposing of your product.



For information on collection points for your product, contact your municipality, the public waste disposal authority, an authorised body for the disposal of electrical and electronic products or your waste collection service.

B Basic informations

1 | Laws, directives, standards

In the interest of good health, rules cannot be ignored when it comes to the processing of drinking water or the handling of electrical devices and chemicals. This operating manual takes the applicable German guidelines into account and provides all of the information you need to safely operate your flushing set.

2 | Deposits, effects, cleaning

The utilities companies supply us with clean drinking water which is suitable for human consumption. This water contains substances such as calcium or manganese which are indispensable for the human organism. However, in the GENO-UV system, they may cause deposits which have an adverse effect on the performance of the system.

The deposits primarily consist of calcium carbonate. The calcium carbonate in turn may contain other substances such as iron or copper as well as extremely small particles.

These substances form deposits on the protective quartz sleeves and absorb part of the UV radiation. This means that less disinfecting light can reach the water, i.e. the disinfection capacity of the system decreases.

In order to maintain the full disinfection capacity of the system, such deposits must be removed.

The cleaning agent, diluted with water, is pumped through the GENO-UV system. The special chemical composition of the cleaning agent dissolves the deposits. This process takes a certain amount of time. The dissolved substances are then removed from the GENO-UV system as the cleaning agent circulates through the system.

After being cleaned successfully, the GENO-UV has regained its full disinfection capacity.



Warning! Chemicals in the drinking water will cause injuries. The chemicals must not reach the drinking water supply system! Be particularly careful when performing work on the drinking water system. Remove the chemicals from the system by flushing the system with lots of fresh drinking water.

C Product description

1 | Type designation plate

The type designation plate is located on the cover of the tank. When contacting Grünbeck for inquiries or orders, please specify the data shown on the type designation plate in order to speed up the processing of your request. Simply copy the information from the type designation plate to the form below in order to have it handy whenever necessary.

Flushing set for GENO-UV-systems (Residential Application)

Serial number:

Order number: 520 020

2 | Designated application

The flushing set for GENO-UV systems (residential application) is designated for the flushing (cleaning) of the following systems:

GENO-UV- disinfection system	5 HH / HTI / HS 10 HH / HTI / HS
Disinfection systems GENO-UV	40 S, 60 S, 115 S, 120, 200 S

The flushing set is used to clean the protective quartz sleeves, the inner surface of the pressure vessels and the light sensor surface resp. the UV sensor shell. The flushing intervals and duration depend on the concentration of the various substances in the water. Iron, manganese and carbonates in particular cause light-absorption which adversely affects the disinfecting effect of the UV system and therefore they must be removed at regular intervals.



Note: If your GENO-UV disinfection system is equipped with an intensity monitoring device (type 5 / 10 HTI), the necessity of a flushing may be determined by the reduced light intensity. At 70% light intensity, the intensity monitoring device provides a pre-alarm (visible alarm signal), i. e. the system should be cleaned.

If your GENO-UV system features a UV sensor (types 40 S / 60 S), the radiation intensity signal visually indicates the necessity to clean the system as soon as the value is 10 % above the lower limit value.

The protective quartz sleeves of all systems without monitoring devices should be inspected at regular intervals (e.g. visual inspection every six months).

Furthermore, the system should be cleaned whenever the UV lamp is replaced (every 9000 hours of operation).

In order to ensure reliable operation of your GENO-UV system, you should only use the genuine GENO-Clean CP agent to rinse the system.



Attention! You may only operate the flushing set after having completely installed all components. Never bridge any safety devices or tamper with the system in any other way.



Warning! Dangerous voltage! If the power cable is damaged, the cleaning agent may be live! Therefore, always check the power cable for damage before using the system.

Appropriate application of the system also implies that the information contained in this manual and all safety guidelines applying at the installation site must be observed.

3 | Technical specifications

The flushing set is used to rinse (clean) the GENO-UV systems (residential application).

All system data is summarized in table C 1. The information given relates to the standard version of the flushing set. If you have a special system version, the appropriate information will be provided separately.

Table C-1: Technical specifications		Flushing Set for GENO-UV Systems Residential application
Connection data		
Nominal connection diameter		R ¼"
Drain connection min.		DN 50
Power supply	[V]/[Hz]	230 / 50
Connected load	[VA]	28
Protection type/protection class		IP 68 / II
Performance data		
Capacity	[l/h]	1200
Delivery height H max.	[m WC]	2
Dimensions and weights		
Tank size W x D x H	[mm]	390 x 330 x 540
Hose length	[m]	4
Volume	[l]	50
Empty weight	[kg]	5
Environmental data		
Water / ambient temperature max.	[°C]	30/40
Order no.		520 020

4 | Scope of supply

- 1 Plastic tank
- 1 Centrifugal pump
- 2 Pressure hose clips
- 1 Hose, 4m long



Note: The hose has to be divided once according to the local conditions.

- 2 Clamps
- 1 Operation manual

5 | Cleaning agent

In order to ensure a reliable operation of your system you should only use the original cleaning agent to rinse the system.

Cleaning agent GENO-Clean CP
(10 x 1 litre bottle)

Order no.
170 022



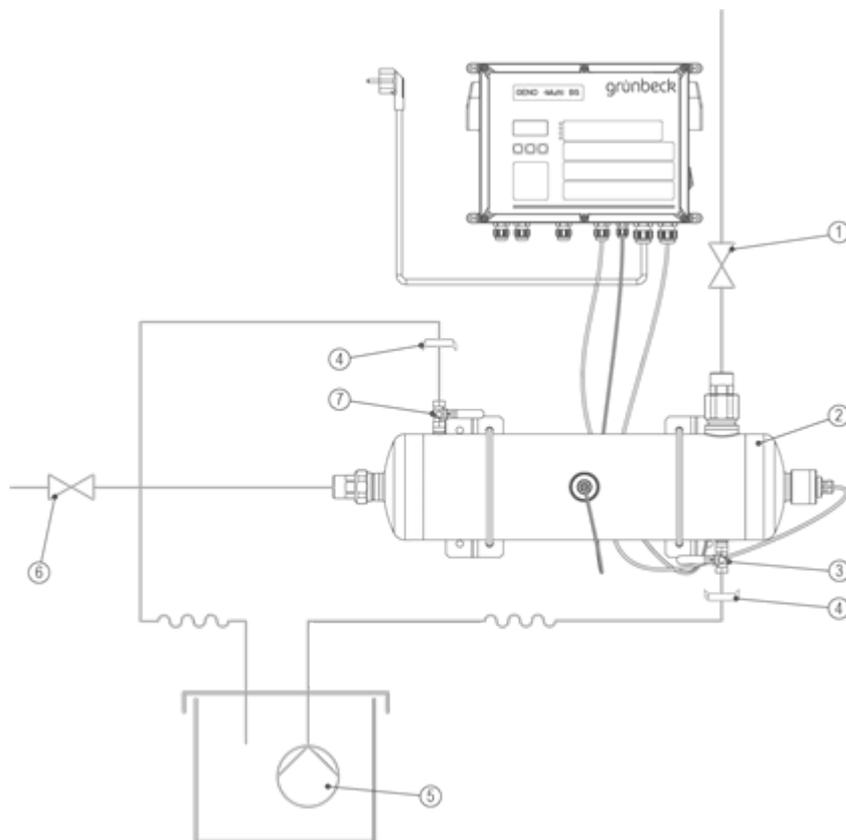
Warning! GENO-Clean CP irritates the eyes and the skin. Always wear gloves and goggles when handling the agent in order to avoid injuries.

Also observe the additional information given on the label of the bottle!

D Installation and operation

1 | Installation

1. Unpack all system components.
2. Check for completeness and perfect condition.
3. Divide hose once according to local conditions.
4. Insert one pressure hose clip into one hose segment each.
5. Press hose onto pressure hose clips by means of clamps.



- | | |
|-------------------------|------------------------|
| ① Shut-off valve outlet | ⑤ Pump |
| ② GENO-UV-system | ⑥ Shut-off valve inlet |
| ③ Rinsing valve | ⑦ Rinsing valve |
| ④ Screw connection | |

Fig. D-1: Installation drawing

2 | Flushing the GENO-UV system (see fig. D-1)

1. Switch off the GENO-UV system (item 5) via the main switch. (see operating manual of system).
2. Close shut-off valves (items 2 and 8).



Note: If the water supply must not be interrupted, a removable bypass pipe (or a bypass pipe with a possibility to lock and empty) must be provided.

3. Connect the hoses with pressure hose clips to the rinsing valve (items 3 and 4).
4. Direct the hose end of the rinsing valve (item 4) to the drain outlet.
5. Open rinsing valves (items 3 and 4.).
6. Direct the hose end of the rinsing valve (item 3) into the tank.
7. Put hose end of the rinsing valve (item 4) to the upper threaded piece of the pump (item 7). Tighten the hose by turning the coupling nut.



Warning! Dangerous voltage! If the power cable is damaged, the cleaning agent may be live! Therefore, always check the power cable for damage before using the system.

8. Prepare the cleaning agent GENO-Clean CP corresponding to the system type and according to table D-1.



Warning! GENO-Clean CP irritates the eyes and the skin. Always wear gloves and goggles when handling the agent in order to avoid injuries.
Also observe the additional information given on the label of the bottle!

Table D-1: Required GENO-Clean-CP volume

Order no.	GENO-UV disinfection system type	System volume, approx. [l]	Water volume [l]	Amount of GENO-UV-Clean CP [l]	Flushing tank filling, approx. x times
520 ...					
520 ...	10-HH/HTI/HS	10	36	4	1.0
522 ...	UV 40 S	11	36	4	1.0
522 ...	UV 60 S	28	54	6	1.5
522 ...	UV 115 S	41	82	9	2.5
522 ...	UV 120	27	54	6	1.5
522 ...	UV 200 S	36	72	8	2.0
523 ...	DVGW 60 S	10	36	4	1
523 ...	DVGW 120	16	36	4	1
523 ...	DVGW 200 S	21	45	5	1

10. Insert mains plug of the pump's mains cable (10 m) into the shock-proof socket.
11. Pump (circulate) the cleaning agent through the GENO-UV system for 30 - 60 minutes.



Note: The duration of the cleaning depends on the degree of pollution.

12. Disconnect the pump.
13. Discharge the cleaning agent. If necessary, neutralize the system to pH 7 by means of the GENO-neutralization agent.
14. Rinse the system, the pump and the hoses with fresh water.
15. Close the rinsing valve (item 4).



Warning! Chemicals in the drinking water will cause injuries. The chemicals must not reach the drinking water supply system! Be particularly careful when performing work on the drinking water system. Remove the chemicals from the system by rinsing the system with lots of fresh drinking water.

16. Open the shut-off valve at the inlet (item 8) and discharge the remainder of the cleaning agent into the drain via the rinsing valve (item 3).
17. Close the rinsing valve (item 3).
18. Switch on the mains switch of the GENO-UV system.
19. Open the shut-off valve at the outlet (item 2).
20. Open the closest tap in the vicinity for a few minutes.