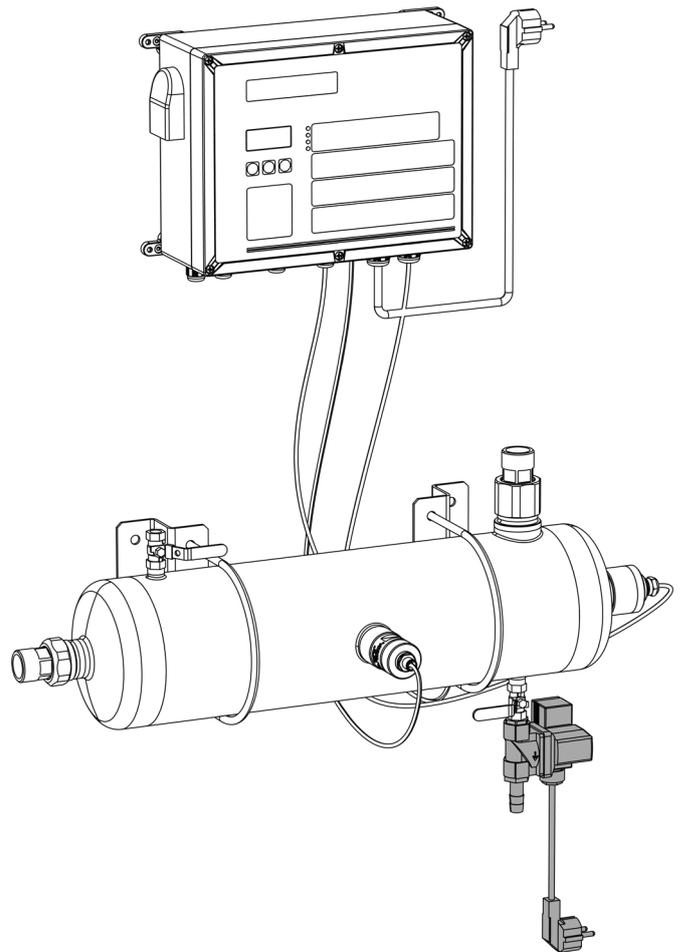


Operation manual

Temperature-controlled flushing – time-controlled for GENO-UV



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A company certified by TÜV SÜD
in accordance with DIN EN ISO 9001,
DIN EN ISO 14001 and SCC

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EU Declaration of Conformity

This is to certify that the system designated below meets the safety and health requirements of the applicable European guidelines in terms of its design, construction and execution.

This certificate will become void if the system is modified in a way not approved by us.

Manufacturer:	Grünbeck Wasseraufbereitung GmbH Josef-Grünbeck-Str. 1 89420 Hoechstädt Germany
Responsible for documentation:	Markus Pöpperl
System designation:	Temperature-controlled flushing – time-controlled for GENO-UV
Serial no.:	Refer to type plate
Applicable EC directives:	Low Voltage (2014/35/EU) EMC (2014/30/EU)
Applied harmonised standards, in particular:	DIN EN 60730-1:2017-05, DIN EN 61010-1:2011-07, DIN EN 61000-6-2:2006-03, DIN EN 61000-6-4:2011-09 DIN EN 61326-1:2013-07
Applied national standards and technical specifications, in particu- lar:	
Location, date and signature	Hoechstädt, 26.02.2019 i. V.  M. Pöpperl Dipl.-Ing. (FH)
Function of signatory:	Head of Technical Product Design

A General

1 | Preface

Thank you for choosing a Grünbeck product. Backed by decades of experience in the area of water treatment, we provide custom-made solutions for all kind of processes.

Drinking water is classified as food and requires particular care. Therefore, always ensure the required hygiene in operating and maintaining systems involved in the drinking water ordinance. 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 your water treatment system with the required care. This operation manual assists you with crucial information. Please read the entire operation manual carefully before installing, operating or servicing the system.

Customer satisfaction is our primary aim, 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 field service staff, as well as the experts at our headquarters in Hoechstädt, are available to help you.

Advice and assistance For advice and assistance, please contact your local representative (refer to www.gruenbeck.com). In case of emergency, please get in touch with our service hotline at +49 9074 41-333. We can connect you with the appropriate expert more quickly if you provide the required system data. To ensure that this information is to hand at all times, please keep the precise equipment data to hand (refer to the type plate in chapter C-1).

2 | General safety information

2.1 Symbols and notes Important information in this operation manual is emphasised by symbols. Please pay particular attention to this information to ensure the hazard-free, safe and efficient handling of the system.



Danger! Failure to adhere to this information will cause serious or life-threatening injuries, major damage to property or inadmissible impurities in the drinking water.



Warning! Failure to adhere to this information may cause injuries, damage to property or contamination of the drinking water.



Caution! Failure to adhere to this information can result in damage to the system or other objects.



Note: This symbol characterises information and tips that make your work easier.



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



Tasks with this symbol may only be performed by trained and qualified electrical experts 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 suppliers or approved installation companies. In Germany, the installation company must be registered in the installation directory of a water supplier according to Section 12(2) AVBWasserV (German Ordinance on General Conditions for the Supply of Water).

2.2 Operating personnel

Only allow persons who have read and understood this operation manual to work with the system. Strictly observe the safety information.



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.

3 | Shipping and storage



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

Protect from frost during transportation and storage!

Do not install or store the system next to objects which radiate a lot of heat.

4 | Disposal

Comply with the applicable national regulations.

4.1 Packaging

Dispose of the packaging in an environmentally sound manner.

4.2 Product



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 or the electric and electronic components are not allowed to be disposed of in the household waste.

Dispose of electrical and electronic products or components in an environmentally sound manner.



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 information



Note: Prior to installation, please check the temperature-controlled flushing for possible transportation damage.

The control unit must be protected against frost and may not be installed next to heat sources which radiate a lot of heat. The device itself is approved for an ambient temperature of max. 40 °C.



Warning: The electrical installation may only be carried out by an authorised electrician in accordance with the regulations of the electrical utility and the applicable VDE regulations. The client must provide an AC/DC sensitive ground fault circuit interrupter (trip current 30 mA). The electrical connection is made via a 230V/50Hz AC power system.



Caution! The electrical power supply to the control unit must be disconnected before each installation/removal or intervention in the control.

Do not disconnect the unit from the mains prior to a holiday!



Note: Like the corresponding GENO-UV disinfection devices, the temperature-controlled flushing must be connected to a permanently live socket outlet.



Caution! Danger of burns! During continuous operation, the coil of the 2/2-way solenoid valve can become very hot.

C Product description

1 | Intended use

The temperature-controlled flushing – time-controlled for GENO-UV serves for the periodic renewal of water in the GENO-UV disinfection unit. During longer idle times (e.g. holiday, seasonal operation), the lamp energy can raise the temperature of the water to above the admissible temperature range. This can be effectively prevented by means of temperature-controlled flushing that is time-controlled.

The temperature-controlled flushing – time-controlled for GENO-UV is designed exclusively for use in industrial and commercial applications.

1.1 Mounting of the temperature-controlled flushing – time-controlled for GENO-UV

Plug the electronic part onto the solenoid valve coil as shown in Fig. D-1. It must be ensured that the drain tap (no. 7) can be opened/closed correctly. If necessary, the connector part in the electronics can be turned by $\pm 90^\circ$.



Note: Do not damage the cable connections on the plug or the electronics!

2 | Technical data

Table C-1: Technical data	Temperature-controlled flushing – time-controlled for GENO-UV
Connection data	2/2-way valve
Protective system	IP 65 (with connector socket)
Power supply [V/Hz]	230/50 – 60
Connection data	Digital time control
Protection/Protection class	IP 65/ ⊕ (with valve)
Power supply [V/Hz]	230/50 – 60
Nominal capacity	1.5 W
Switching voltage	like operating voltage
Switching times	0.5 s ... 10 h
Performance data	Digital time control
Nominal pressure (PN)	10
Operating range	2-10 bar
Dimensions and weights	Temperature rinsing
Width approx. (with drain connection)	170 mm
Height approx.	100 mm
Depth, approx.	90 mm
Ambient data	
Ambient temperature	5 – 40 °C
Max. relative air humidity	70 %
Order no.	523 820

3 | Scope of supply

Temperature-controlled flushing – time-controlled for GENO-UV consisting of 2/2-way solenoid valve, digital time control and mains cable. Reducing nipple for connection to the GENO-UV disinfection unit, as well as a hose for draining the water.

D Installation/Commissioning/Operation

1 | Commissioning

The temperature-controlled flushing is connected to the GENO-UV disinfection unit as shown in Fig. 1, System design.

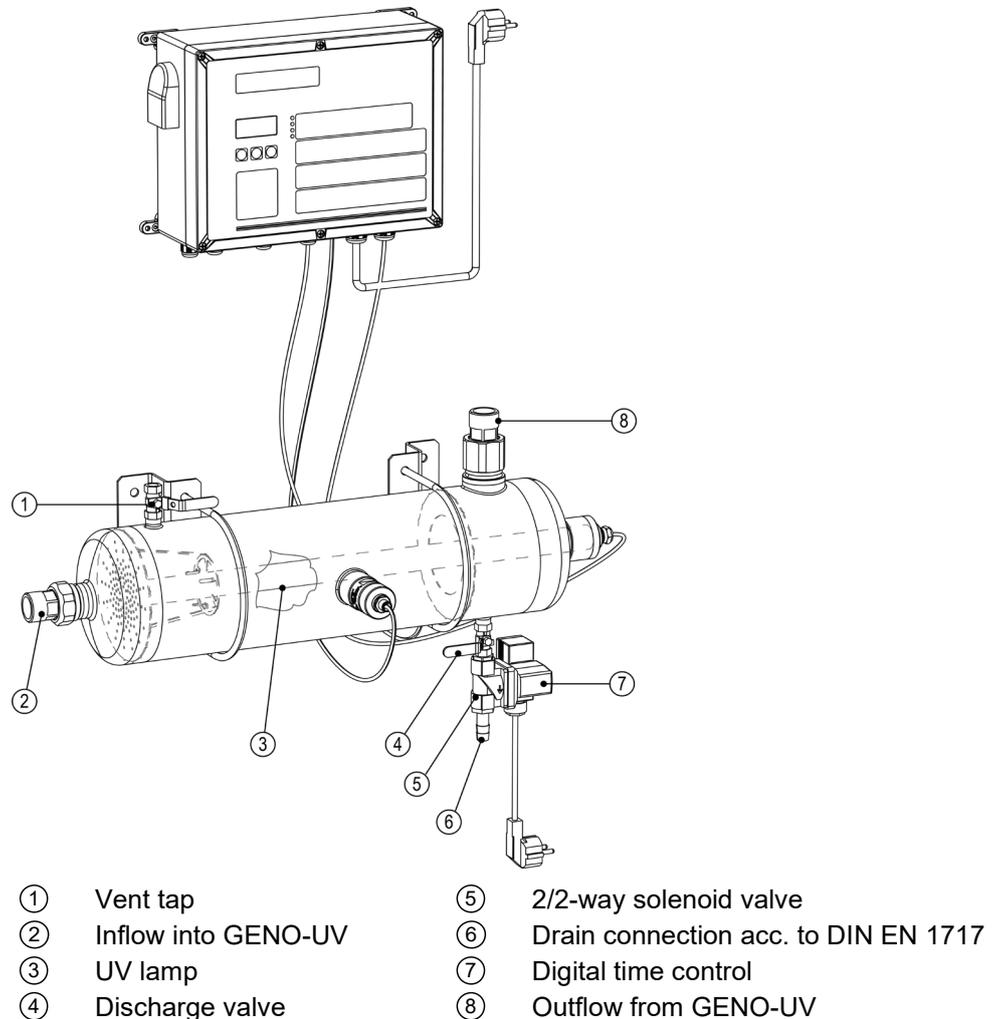


Fig. 1: System design

The hose is led to the drain. There must be a free outflow to the drain. Depending on the GENO-UV disinfection unit, a different volume of water must be exchanged. The system volumes are listed in the relevant technical data or an extract can be found in the table below.

Disinfection unit	Water volume
GENO-UV 40 S	8 litres
GENO-UV 60 S; GENO-UV 60 I	10 litres
GENO-UV 120 S, GENO-UV 120 I	16 litres
GENO-UV 200 S, GENO-UV 200 I	21 litres

Deviations from the proposed basic settings may be necessary depending on the local pressure level, temperature conditions and other conditions.

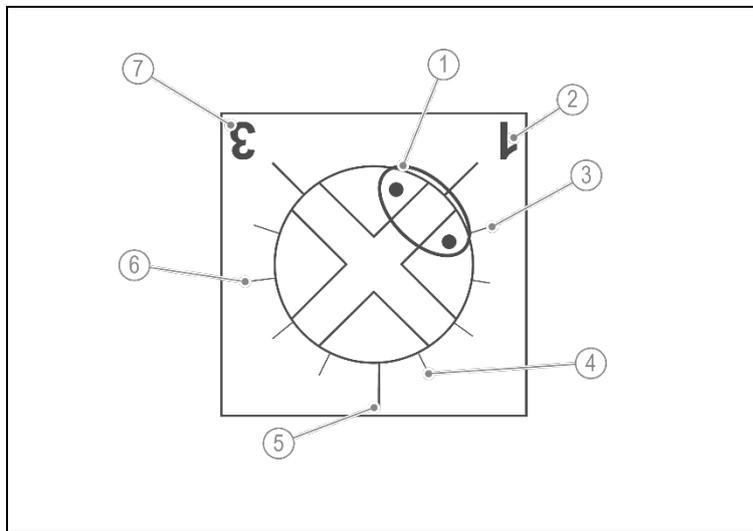
A = t_{on} = open state (basic setting = 10 s)

B = function setting (basic setting = $t_{off} + t_{on}$)

C = t_{off} = closed state (basic setting = 5 h)

Proposal for basic setting

A			B		C		
1	2	3	4	5	6	7	8



- ① Cursor
- ② Position 1 of the potentiometer = minimum value of the selected time range (default position)
- ③ Min. value of the time range +10% of the time range
- ④ Min. value of the time range +40% of the time range
- ⑤ Min. value of the time range +50% of the time range
- ⑥ Min. value of the time range +80% of the time range
- ⑦ Position 3 of the potentiometer = full scale of the selected time range

The time is set as a percentage. For example, a setting of 8 s in the time range 0.5 ... 10 s achieves by changing over to the time range 0.5 ... 10 h, a value of 8 hours.

Example: In the time range 0.5 ... 10 s, the percentages correspond to the following times:

17 % \approx 1,6 s

34 % \approx 3,2 s

51 % \approx 4,8 s

68 % \approx 6,3 s

85 % \approx 7,9 s

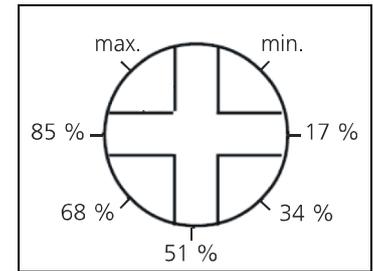
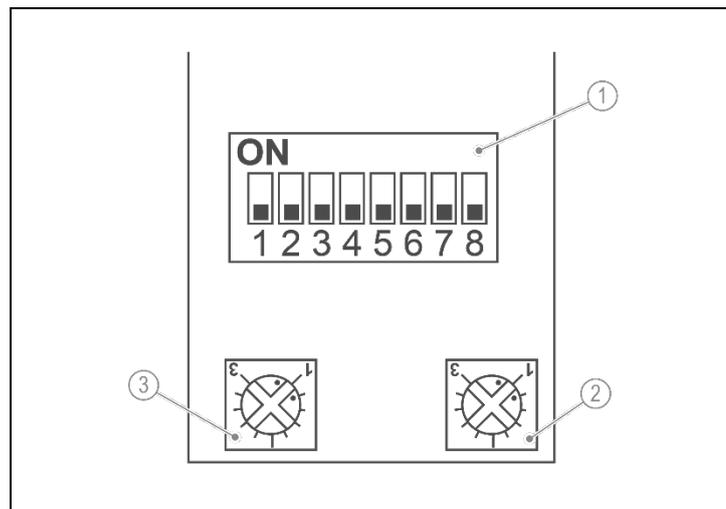


Fig. D-3 Legend for time setting

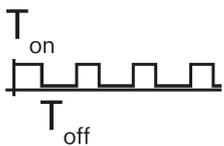
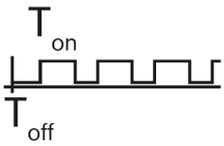


Note: After finishing the installation, open the GENO-UV vent tap on the temperature-controlled flushing.

2 | Design



- ① Switches 4 and 5: To choose the operating mode of the solenoid valve
Switches 1, 2 and 3: To adjust the range t_{on}
Switches 6, 7 and 8: To adjust the range t_{off}
- ② Potentiometer t_{off}
- ③ Potentiometer t_{on}

Switches 4 and 5	Operation mode of the solenoid valve	
<p>ON</p>  <p>4 5</p>	ON (t_{on})/OFF (t_{off}) cycle of the valve: Set the time t_{on} and the time t_{off}	
<p>ON</p>  <p>4 5</p>	OFF (t_{off})/ON (t_{on}) cycle of the valve: Set the time t_{on} and the time t_{off}	
<p>ON</p>  <p>4 5</p>	Timed-out activation of the valve: Only set the time t_{on}	
<p>ON</p>  <p>4 5</p>	Delayed activation of the valve: Only set the time delay t_{off}	

Switches 1, 2, 3 (t_{on}) and 6, 7, 8 (t_{off})	Time range
<p>ON</p>  <p>1 2 3 6 7 8</p>	0,5-10 seconds
<p>ON</p>  <p>1 2 3 6 7 8</p>	1,5-30 seconds
<p>ON</p>  <p>1 2 3 6 7 8</p>	5-100 seconds
<p>ON</p>  <p>1 2 3 6 7 8</p>	0,5-10 minutes

ON  1 2 3 6 7 8	1,5-30 minutes
ON  1 2 3 6 7 8	5-100 minutes
ON  1 2 3 6 7 8	12-240 minutes
ON  1 2 3 6 7 8	0,5-10 hours