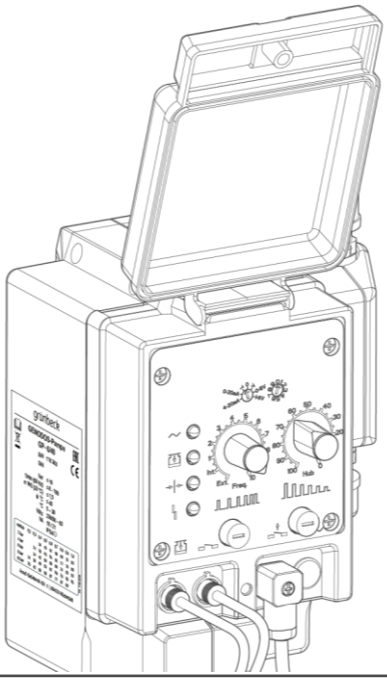
We understand water.



Dosing pump | GENODOS-Pump GP

Operation manual

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Table of contents

1 Introduction

This manual is intended for owner/users, operators and qualified specialists, and enables safe and efficient handling of the product. The manual is an integral part of the product.

► Carefully read this manual and the instructions contained within it on the components before you operate your product.

► Adhere to all safety instructions and instructions for action.

► Keep this instruction and all other applicable documents, so that they are available when needed.

1.1 Validity of the manual

This manual applies to following products:

- GENODOS-Pump GP dosing pump
- GENO-Baktox pump for dosing system DM-B/BS
- GP-1/40 pump for dosing systems GENODOS DM-T (GENO-Chlor A)

1.2 Other applicable documents

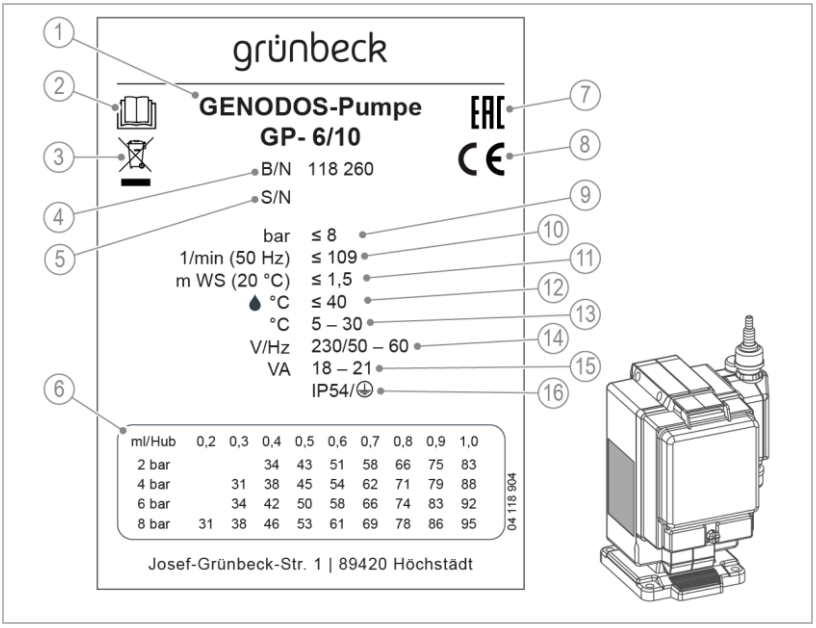
- Technical information for accessories (order no. 118 950)
- Design calculation and chemical resistance for GENODOS-Pump GP (order no. 118 949)
- Safety data sheets for chemicals

1.3 Product identification

You can identify your product by means of the product designation and the order number on the type plate.

► Check whether the products indicated in chapter 1.1 correspond to your product.

The type plate is located on the side of the device.



	Designation
1	Product designation
2	Observe operation manual
3	Disposal information
4	Order no.
5	Serial no.
6	Dosing volume (H_2O) in ml/stroke
7	EAC test mark
8	CE mark

	Designation
9	Dosing pressure
10	Dosing frequency max. (strokes/min)
11	Suction head
12	Water temperature
13	Ambient temperature
14	Power supply
15	Electrical power consumption
16	Protection/protection class

1.4 Symbols used

Symbol	Meaning
	Danger and risk
	Important information or prerequisite
	Useful information or tip
	Written documentation required
	Reference to further documents
	Work that is only allowed to be carried out by qualified specialists
	Work that is only allowed to be carried out by qualified specialists
	Work that is only allowed to be carried out by qualified specialists

1.5 Representation of warnings

This manual contains instructions that you must comply with for your personal safety. The information is highlighted by a warning sign and has the following structure:

SIGNAL WORD Type and source of danger

- Possible consequences

► Preventive measures

The following signal words are defined according to the degree of danger, and may be used in this document:

Warning sign and signal word		Consequences if the instructions are disregarded	
	**DANGER**	Personal injury	Death or serious injuries
	**WARNING**		Possible death or serious injury
	**CAUTION**		Possible moderate or minor injuries
	NOTE	Property damage	Possible damage to components, the product and/or its functions, or anything in its vicinity

1.6 Personnel requirements

During the individual life cycle phases of the product, different people carry out work tasks on the product. The work tasks require different qualifications.

1.6.1 Qualification of personnel

Personnel	Prerequisites
Operator/user	• No special expertise • Knowledge of the delegated tasks • Knowledge about possible dangers in case of improper behaviour • Knowledge of the necessary protective equipment and protective measures • Knowledge of residual risks
Owner/operating company	• Product-specific expertise • Knowledge of statutory regulations for safety and accident prevention
Qualified specialist • Electrical engineering • Sanitary engineering (SHK) • Transport	• Professional training • Knowledge of relevant standards and regulations • Knowledge about the recognition and avoidance of possible dangers • Knowledge of statutory regulations for accident prevention
Technical service (Grünbeck's technical service/authorised service company)	• Extended product-specific expertise • Trained by Grünbeck

1.6.2 Authorisations of personnel

The following table describes which activities are allowed to be performed by whom.

		Operator/user	Owner/operating company	Qualified specialist	Technical service
Transport and storage			X	X	X
Installation and mounting				X	X
Start-up				X	X
Operation and handling		X	X	X	X
Cleaning		X	X	X	X
Inspection		X	X	X	X
Maintenance	semi-annually			X	X
	Yearly			X	X
Troubleshooting		X	X	X	X
Repair				X	X
Shutdown and restart			X	X	X
Dismantling and disposal			X	X	X

1.6.4 Personal protective equipment

► As the owner/user, ensure that the necessary personal protective equipment is available.

The following components fall under the heading of personal protective equipment (PPE):

	Protective gloves		Protective footwear
	Protective overalls		Protective goggles
	Protective apron		Mask

2 Safety

2.1 Safety measures

- Only operate your product if all components are installed properly.
- Comply with the applicable local regulations concerning the drinking water protection, prevention of accidents and occupational safety.
- Do not make any changes, conversions, extensions or program modifications to your product.
- Only use genuine spare parts for maintenance or repair (refer to chapter 2.2.1).
- Keep the premises locked to prevent unauthorised access and to protect endangered/non-instructed people from residual risks.
- Observe the maintenance intervals (refer to chapter 8.2). Failure to comply can result in microbiological contamination of your drinking water system.

2.1.1 Mechanical dangers

- For all work on the system that cannot be carried out from the ground, use stable, safe, independently standing climbing aids.
- Make sure that the system is installed so that it cannot tip over and that the stability of the system is guaranteed at all times.

- Risk of tripping due to hoses and electrical cables on the floor. Route hoses and electrical cables away from traffic and escape routes.

2.1.2 Hazards relating to pressure

- Components can be under pressure. There is a risk of injuries and damage to property due to escaping dosing agent and unexpected movement of components. Check the pressure pipes on the system regularly.
- Before starting repair and maintenance work, make sure that all affected components are depressurised.
- Use personal protective equipment.

2.1.3 Electrical dangers

- There is an immediate danger of fatal injury from electric shock when touching live components. Damage to the insulation or individual components can be life-threatening.
- Only have a qualified electrician carry out electrical work on the system.
- In case of damage to live components, switch off the voltage supply immediately and arrange for repair.
- Switch off the supply voltage before working on electrical system components. Discharge the residual voltage.
- Never bypass electrical fuses. Do not put fuses out of operation. Observe the correct current rating when replacing fuses.
- Keep moisture away from live parts. Moisture can cause a short circuit.

2.1.4 Danger due to chemicals

- Chemicals can be harmful to the environment and health.They can cause burns to the skin and eyes, as well as irritation of the respiratory tract or allergic reactions.
- Avoid any skin/eye contact with chemicals.
- Use personal protective equipment.
- Read the safety data sheet before handling chemicals. Adhere to the instructions for various activities/situations.
- Current safety data sheets for chemicals are available for download at **https://www.gruenbeck.de/en/info-centre/safety-data-sheets/**.
- Follow in-house instructions when handling chemicals. Ensure that protective and emergency equipment such as emergency showers and eyewash are available and in working order, if necessary.

Mixing and residual amount of chemicals

- Do not mix different chemicals. Unforeseeable chemical reactions posing a mortal danger can occur.
- Dispose of residual amount of chemicals according to local regulations and/or in-house instructions.
- Residual amounts from used containers should not be transferred into containers with fresh chemicals, so as to avoid impairing the effectiveness of the chemicals.

Labelling/minimum shelf life/storage of chemicals

- Check the labelling of chemicals. The labelling of chemicals must not be removed or rendered illegible.
- Do not use unknown chemicals.

- Observe the use-by date stated on the label (minimum shelf life) to ensure the functionality of the system and the quality of the water produced.
- If stored incorrectly, chemicals could change their state of matter, crystallise, liberate gas or lose their effectiveness. Store and use the chemicals only at specified temperatures.

Cleaning/disposal

- Deal with spilled chemicals by absorbing them immediately with suitable binding agents.
- Collect and dispose of chemicals in such a way that the chemicals do not pose a danger to humans, animals or the environment.

2.1.5 Vulnerable persons

- This product must not be used by persons (including children) with reduced capabilities, lack of experience or knowledge.
- Children should be supervised to ensure that they do not play with the product.
- Cleaning and maintenance must not be carried out by children.

2.2 Product-specific safety instructions

Observe the relevant legal regulations when using chemicals in dosing pumps that are subject to the Ordinance on Hazardous Substances (Gef-StoffV), such as chlorine, acids and alkalis, etc.

- E.g. § 20 of the Ordinance on Hazardous Substances – operating instruction

Identification marks on the product

	Risk of electric shock		Risk of chemical burns

The attached information/instructions and pictographs must be clearly legible. They must not be removed, soiled,or painted over.

- ► Comply with all warnings and safety instructions.
- ► Immediately replace illegible or damaged symbols and pictograms.

2.2.1 Safety components

Safety components are only allowed to be replaced by genuine spare parts.

- Pump, pump head
- Dosing line
- Dosing valves
- All pressurised and components that come into contact with media

2.4 Conduct in an emergency

WARNING Pressurized media lines

- After the mains plug is disconnected, media lines on the pressure side are still under pressure.
- Dosing solution spraying out

► Use personal protective equipment.

► Release the pressure on the pressure of the pump before working on the pump head, its equipment parts or the dosing line.

2.4.1 If the dosing agent escapes

1. Deenergise the device – pull out the mains plug.
2. Locate the leak.
3. Eliminate the cause of the dosing agent discharge.

2.4.2 In case of incorrect dosage/overdose

1. Deenergise the device – pull out the mains plug.
2. Check the pump settings.
3. Check the settings of the devices in case of external actuation.

3 Product description

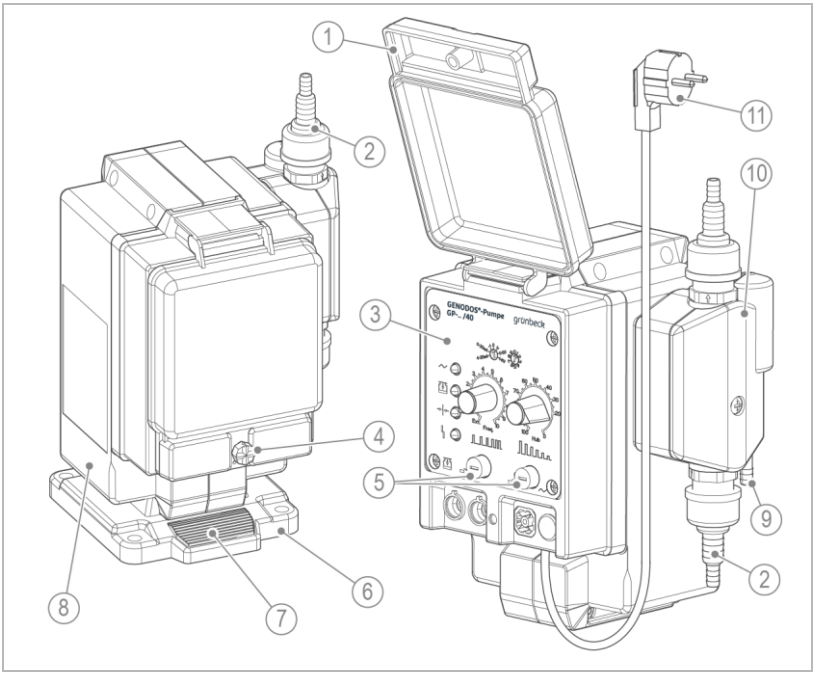
3.1 Intended use

- The GENODOS-Pump GP is designed exclusively for use in industrial and commercial applications.
- The GENODOS-Pump GP can be used in many fields of application for dosing of chemicals and active agents in water treatment.
  - exaliQ mineral substances
  - Flocculant
  - Dishwashing detergent
  - Cleaning agent
  - Disinfectant
  - Sanitizer
  - pH value regulation
- The GENO-Baktox pump in lead-sealed design for dosing systems DM-B/BS is used for disinfection of drinking and industrial water with chlorine dioxide.
- The GENODOS GP as a chlorine pump in lead-sealed design for dosing systems DM-T is used in the drinking water sector in the private environment (e.g. swimming pool). It is used to disinfect the treated water with the addition of GENO-Chlor A.

3.1.1 Foreseeable misuse

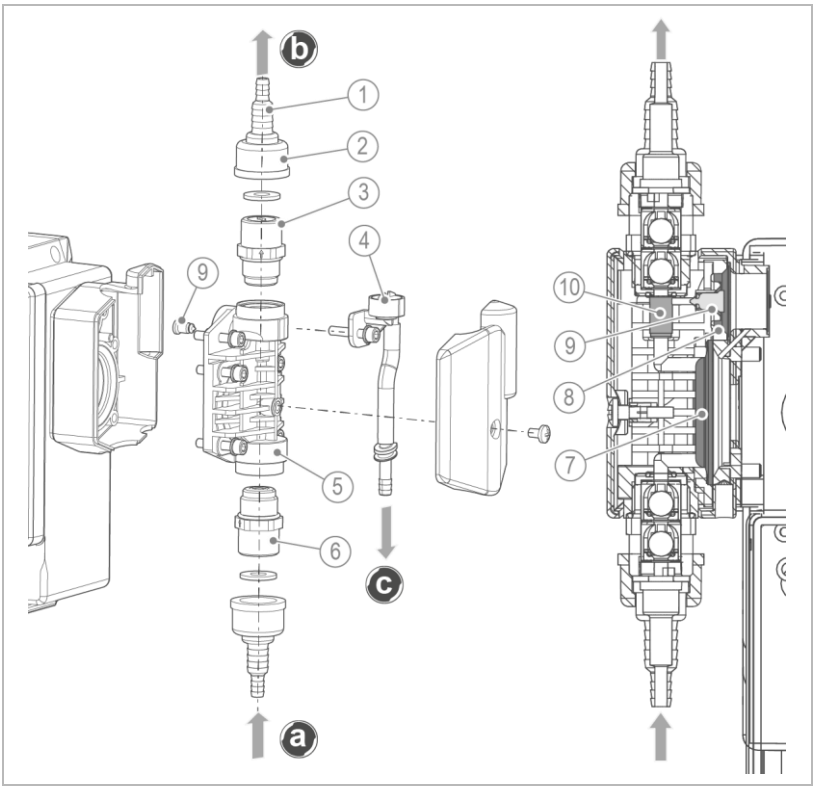
- Use of incorrect GENODOS-Pump GP or incorrect materials (refer to design calculation and chemical resistance of GENODOS-Pump GP, order no. 118 949).
- Use of non-matching accessories for the dosing system (refer to Technical information for accessories, order no. 118 950).
- Incorrect connection of suction, dosing and return pipes.
- Return pipe was not connected to the dosing tank (refer to chapter 5.4).
- Changeover of the dosing agent without taking into account the materials used (refer to chapter 7.3).

Product components



	Designation	Function
1	Cover	Transparent, to protect the operating panel
2	Connection kit D 6-12	G 5/8 screw connection for suction and pressure pipe
3	Operating panel	With display and adjusting elements
4	Lock	Screw-on, with holes for lead seal
5	Fuse	Glass tube fine fuse 5x20, medium time lag 0.125 A
6	Base plate	For floor or wall mounting
7	Push-to-release mechanism	To release the pump from the base plate
8	Housing	Two-piece, screwed on
9	Connection	Return pipe to dosing tank
10	Pump head	With connections
11	Mains plug	230 V/50 Hz for earthed socket outlet

3.1.2 Pump head connections



	Designation
1	Hose connection
2	Union nut
3	Pressure valve
4	Deaeration valve
5	Pump head housing

	Designation
6	Suction valve
7	Dosing membrane
8	Venting membrane
9	Valve pin
10	Intermediate valve

	Designation	Function
a	Suction pipe	From the dosing tank
b	Pressure pipe	To the dosing point in the water pipe
c	Recirculation hose	Return to the dosing tank

3.2 Functional description

The GENODOS-Pump GP is a self-priming and automatically deaerating membrane pump with eccentric wheel drive and a low-noise synchronous motor.

The eccentric wheel installed in the gear unit converts the rotation of the motor into a stroke movement of the dosing membrane.

The automatic deaeration is positively controlled and realised via a second membrane.

The dosing volume is not affected by the deaeration process even though a partial flow of the dosing solution is continuously returned to the dosing tank via the recirculation hose even at the minimum setting of the stroke length controller.

Due to the automatic deaeration feature, suction and dosing against pressure are ensured even if outgassing media are used or when the dosing tank is exchanged. With the GENODOS-Pump GP, the complicated manual deaeration is no longer necessary.

3.2.1 Application limits

The design of the pump head and the materials for lines and connections must be determined according to the application of the pump and the dosing agent (refer to design calculation and chemical resistance list of the GENODOS-Pump GP, order no. 118 949), for instance.

The dosing capacity of the pump is designed for 50 Hz.

Operation at a higher frequency 60 Hz has an effect on the dosing capacity.

3.2.2 Versions of GENODOS-Pump GP

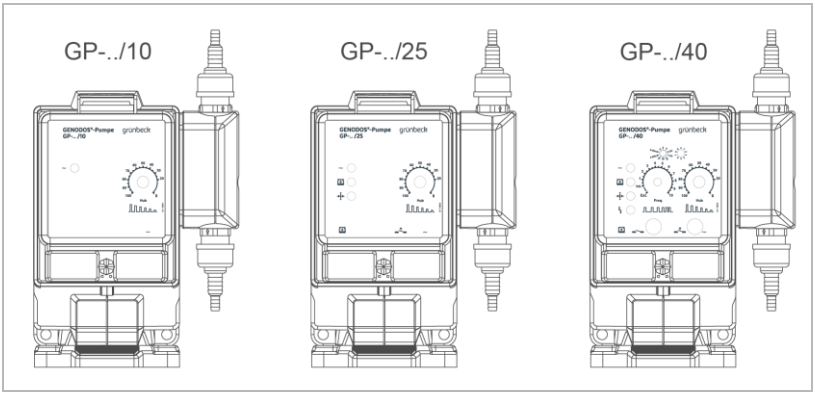
Available variants of the GENODOS pump (refer to chapter 12).

GP-6/10

1 digit **6** = dosing capacity

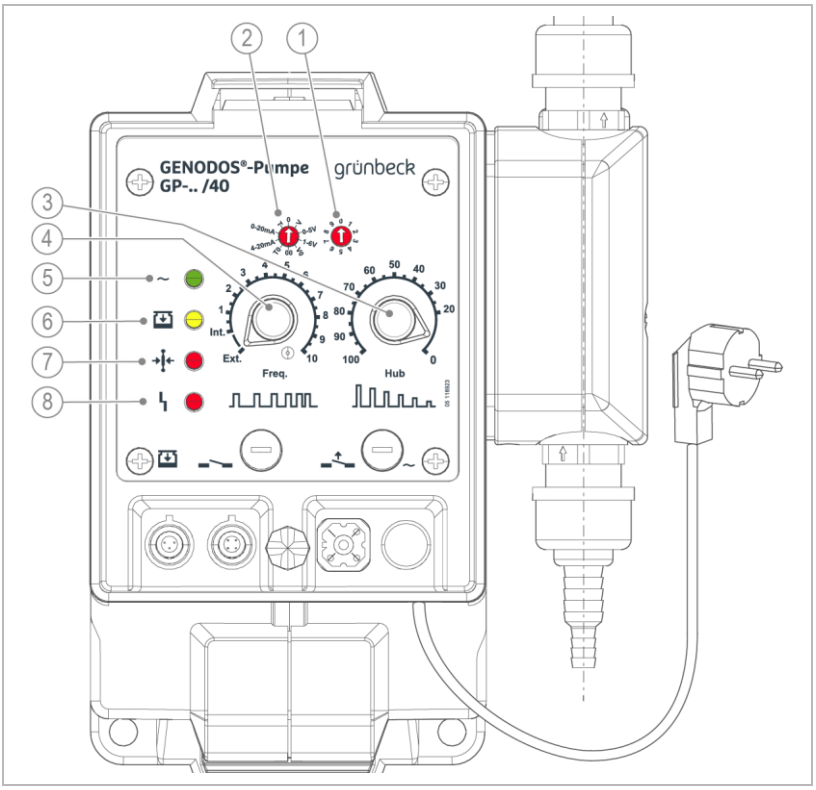
2 digits **10** = control variant

GENODOS-Pump GP pumps are available in 3 different control variants:



Features	GP-../ 10	GP-../ 25	GP-../ 40
Adjustable dosing stroke	X	X	X
Operating display	X	X	X
Indication of empty signal		X	X
Level pre-warning			X
Indication of membrane breakage		X	X
Dosing monitoring			X
Internal/external control selector			X
Voltage-free actuation			X
Voltage-free collective fault signal output		X	X
Analogue actuation 0 – 5 V / 1 – 6 V / 0 – 20 mA or 4 – 20 mA			X
Pulse division and pulse multiplication			X

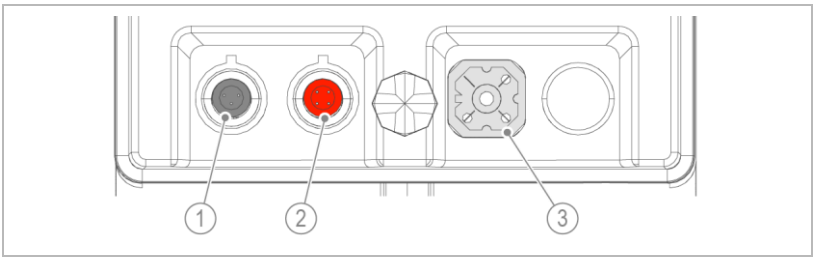
3.2.3 Displays and settings



	Designation	Function
1	Pulse division or pulse multiplication factors	Setting the pulse division and the pulse multiplication (refer to chapter 7.1.2)
2	Operating mode switch	Setting of different operating modes: 0, T, V and 00, T0, V0 or analogue 0 – 5 V, 1 – 6 V, 0.20 mA, 4 – 20 mA with external actuation (refer to chapter 7.1.1). The selector switch for the stroke frequency must be set to Ext.

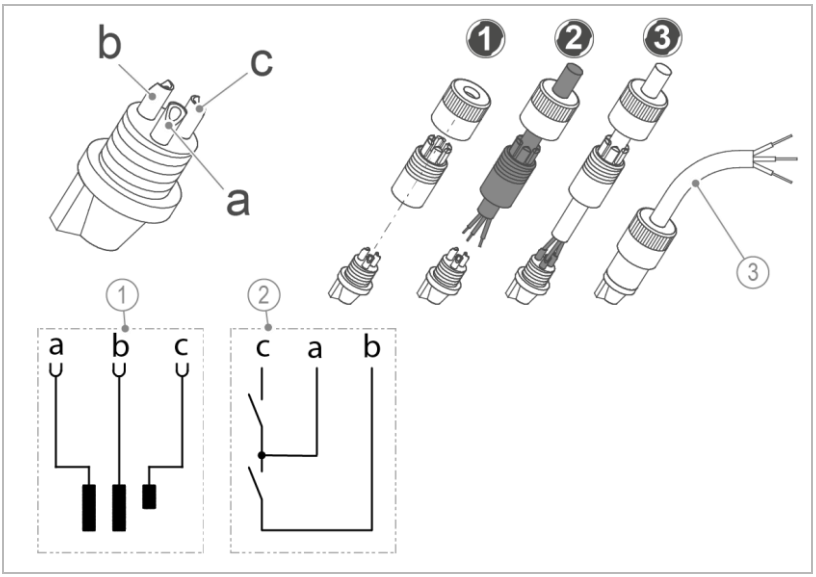
	Designation	Function
3	Stroke length controller	Adjustment of the dosing capacity per stroke. The dosing volume is continuously adjustable in the scale range from 0 – 100. The effective setting range of the stroke length is in the scale range from 30 – 100. Setting is only allowed to be carried out during operation and during the pump stroke.
4	Internal/external control selector	• Automatic control The automatic control of the pump is set on the selector switch in the scale range from Int – 10. The stroke frequency (number of dosing strokes per minute) is approx. 6 dosing strokes/minute in the Int setting and is continuously adjustable up to the setting "10" at max. 109 dosing strokes/minute (50 Hz). • External actuation When set to Ext., the pump only processes signals from external pulse generators.
5	Operating display	The operation LED indicates that the pump is supplied with mains voltage. With GENODOS-Pump GP-../40 pumps, each dosing stroke is confirmed by a short flash.
6	Indication of empty signal	The yellow LED of the empty indicator illuminates to indicate that the fluid level in the dosing tank has fallen below a certain level. If an empty sensor probe is connected, pump operation is stopped at the same time. Pump operation is automatically restarted by refilling the dosing agent. With the pump type GP-../40, a suction lance with pre-warning can be connected additionally. As a pre-warning signal, the yellow LED of the empty indicator flashes on the operating panel.
7	Membrane monitoring	The membrane monitoring indicates a leakage at the membranes by the red LED lighting up. In case of membrane breakage, pump operation is stopped immediately.
8	Dosing monitoring	The dosing monitoring compares the requested strokes with the processed dosing strokes. If a difference is detected here, this is indicated by the red LED and pump operation is stopped. If the max. number of strokes is exceeded, the pump operates with the max. stroke frequency (109 strokes/min. at 50 Hz).

3.2.4 Contact connections



	Designation	Function
1	Input Empty signal	• Coupling socket 3-pole • Level plug in black A level probe can be connected to this connection. Level switches with pre-warning can also be connected to GENODOS-Pump GP-../40 pumps. For GENODOS-Pump GP-../40 pumps, only and exclusively suction lances and empty signals with pre-warning must be used.
2	Input External actuation	• Coupling socket 4-pole • External plug in red · Connection for external pulse generators (e.g. contact water meter (Reed, Hall), control units, etc.) · Connection for control units with analogue signal output (0 – 5 V / 1 – 6 V / 0 – 20 mA / 4 – 20 mA) · Connection for external operational release (e.g. timer, relay, etc.) For external operational release (release of automatic control), the internal/external control selector must be set in the scale range "Int. – 10".
3	Output Fault signal	• Actuation plug The voltage-free alarm signal output (changeover contact) contains a collective fault signal for power failure, empty signal (but not the pre-warning for GP-../40) membrane breakage as well as dosing monitoring. GENODOS-Pump GP-../25 and GP-../40 pumps must be operated with continuous voltage, as the alarm signal is activated in the event of a power cut (control centre).

Connection empty signal inlet



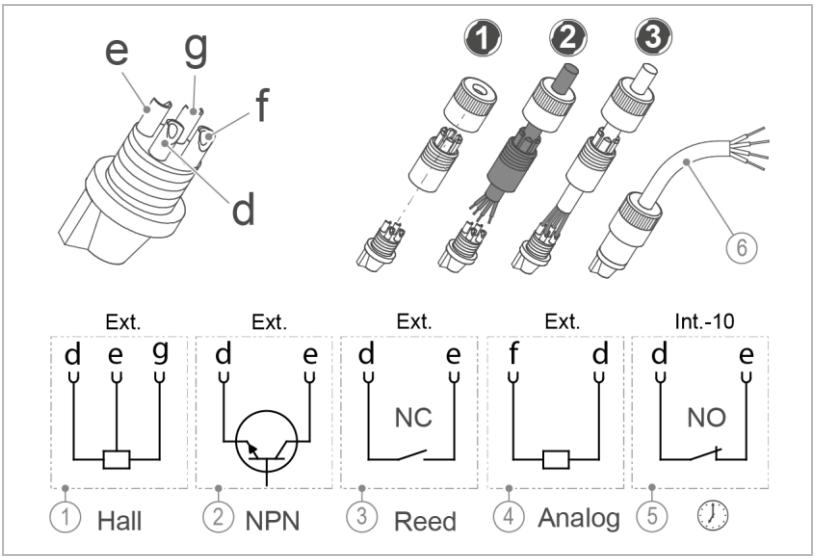
	Designation
1	Level probe (200 µs)
2	Level control with advance warning (e.g. float switch)

	Designation
3	Connection cable 3-pole (as accessory 116 093)

	Designation	Colour
a	Earth (reference point)	BR (brown)
b	Level empty	WH (white)
c	Level pre-warning	GN (green)

- ► Assemble the plug with the connection cable.
- ► Remove the factory-provided contact sleeve at the connection of the level probe.
- ► Bridge contacts a and c if no pre-warning is connected.

Connection external actuation input



	Designation
1	Hall switch
2	Transistor actuation NPN
3	Relay contact (normally open contact NO), contacts of water meter e.g. reed switch

	Designation
4	Analogue actuation: 0 – 5 V, 1 – 6 V, 0 – 20 mA, 4 – 20 mA
5	Ext. operational release (e.g. timer, normally closed contact NO)
6	Connection cable 4-pole (as accessory 116 094)

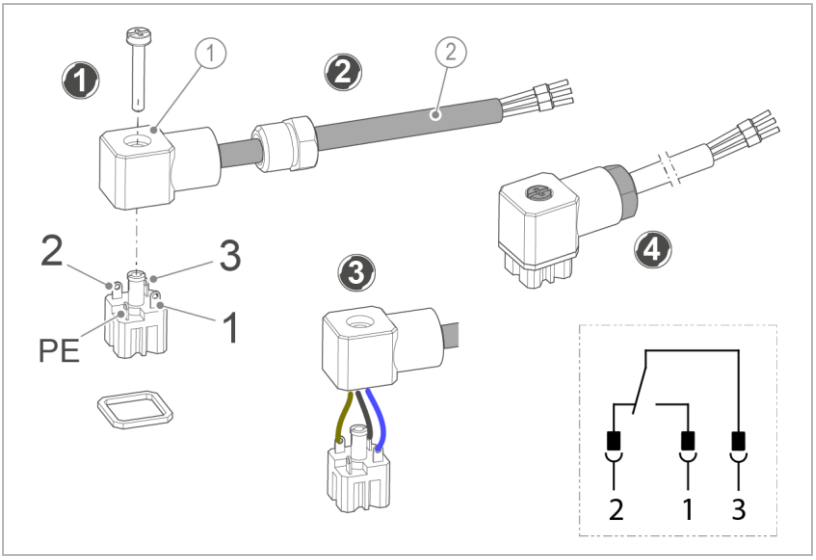
	Designation	Colour
d	earth	BR (brown)
e	Signal clock	GN (green)
f	Signal analogue	YE (yellow)
g	+ 11.6 V	WH (white)

► Assemble the plug with the connection cable.

► Carry out a functional and leak check.

- ► Connect external activators.
- ► Set the selector switch for automatic actuation (Int. – 10) or external actuation (Ext.).

Connection voltage-free alarm signal output



	Components
1	Line socket 3-pole with Pg 7 screw connection

	Components
2	Connection cable, ÖPVC-OZ 3x0.5 with wire end ferrules 0.50 mm² orange (as accessory 116 219)

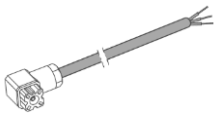
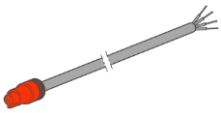
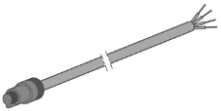
	Connections	Colour
1	1 + 3 = operation	BU (blue)
2	2 + 3 = fault	BR (brown)
3	Changeover contact (common)	BK (black)

Contact rating max. 230 V/60 VA

- ► Assemble the plug with the connection cable.

3.3 Accessories

Your product can be retrofitted with accessories. Please contact your local Grünbeck representative or Grünbeck's headquarters in Hoechstaedt for details.

Illustration	Product	Order no.
	**Connecting cable for fault signal (3 m)** With line socket 3-pole in grey (order no. 9 23 07 101)	**116 219**
	**Connecting cable for external actuation (3 m)** For external plug 4-pole in red (order no. 9 23 03 021)	**116 094**
	**Connecting cable for empty signal (3 m)** For level plug 3-pole in black (order no. 9 23 03 020)	**116 093**

You will need additional accessories to install the dosing system.

Refer to technical information "Accessories for GENODOS-Pump GP pumps", order no. 118 950.

4 Transport and storage

4.1 Transport

► Transport the product in its original packaging only.

4.2 Storage

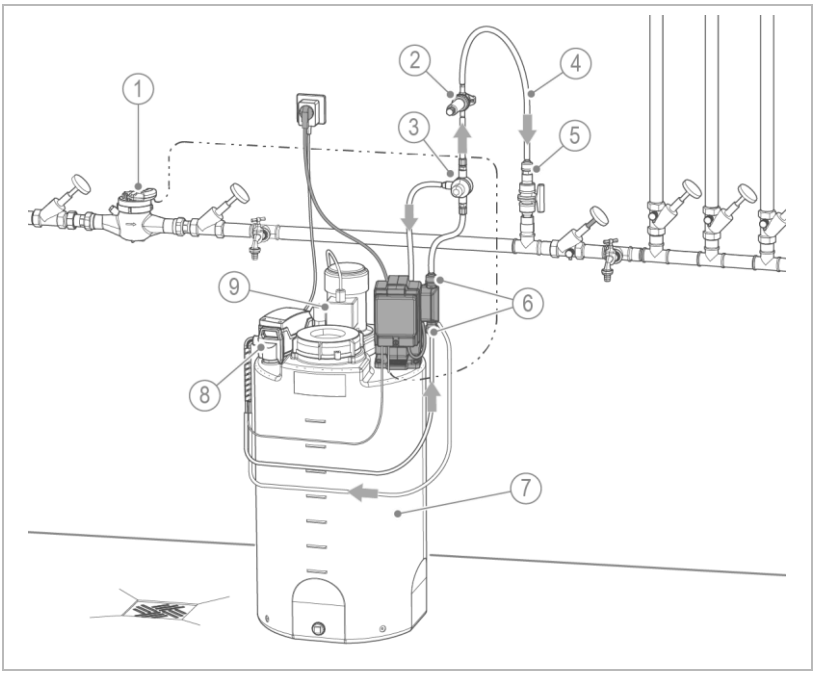
► Protect the product from the following impacts when storing it:

- Moisture, wetness
- Environmental impacts such as wind, rain, snow, etc.
- Frost, direct sunlight, severe heat exposure
- Chemicals, dyes, solvents and their vapours

5 Installation

The installation of the system represents a major intervention into the water system and only a qualified specialist may install these systems.

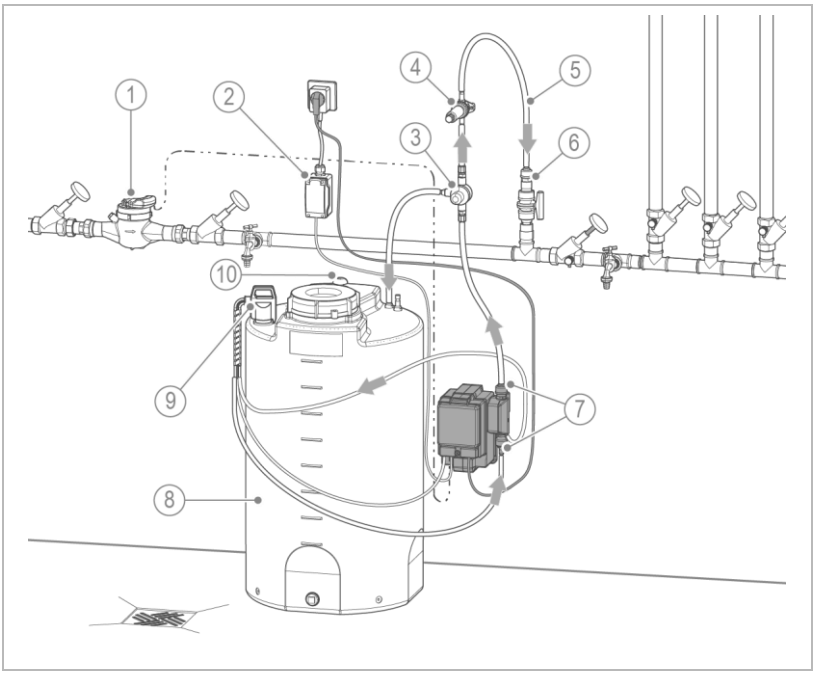
Installation example: Installation on dosing tank



	Designation
1	Contact water meter
2	Pressure maintaining valve
3	Overflow valve
4	Dosing line
5	Dosing point (dosing group)
6	Connection kit

	Designation
7	Dosing tank with automatic agitator
8	Suction lance with suction and return pipe
9	Automatic agitator with control unit

Installation example: Wall mounting



	Designation
1	Contact water meter
2	Digital time control
3	Overflow valve
4	Pressure maintaining valve
5	Dosing line

	Designation
6	Dosing point (dosing group)
7	Connection kit
8	Dosing tank with hand mixer
9	Suction lance with suction and return pipe
10	Hand mixer

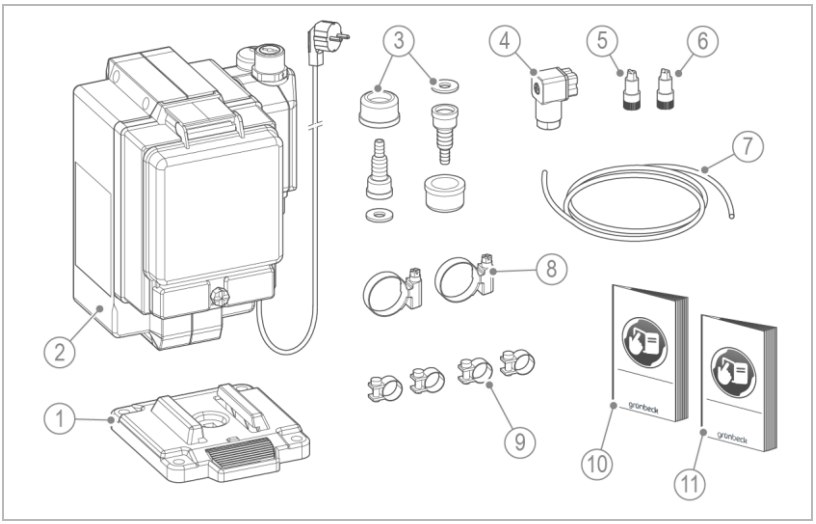
5.1 Requirements with regard to the installation site

- The adequately dimensioned installation surface of the system must be level and provide sufficient strength and load-bearing capacity to support the system's operating weight.
- The installation site must be frost-proof and ensure the system's protection from direct sunlight, chemicals, dyes, solvents and their vapours, etc.
- At the installation site, a floor drain suitable for the system size or a collecting container for the maximum volume of the dosing solution must be available.
- The installation site must be sufficiently illuminated.
- The installation site must be aerated and ventilated. Depending on the chemical used, sufficient ventilation must be provided in the event of outgassing.
- On-site obstacles/restrictions must be indicated in advance and taken into account in the design of the system.
- If hazardous chemicals are used, e.g. chlorine, acids and alkalis, the installation site must be suitable for them. A collecting container to collect the dosing solution in the event of leakage must be installed (observe the Ordinance on Hazardous Substances).
- A shock-proof socket is required within a distance of approx. 1.2 m of the system.
    - The socket outlet must be installed in such a way that the device can be unplugged immediately and at any time in the event of malfunctions or maintenance work.

5.2 Checking the scope of supply

The scope of supply varies depending on the GENODOS pump: GP-../10, GP-../25 or GP-../40.

Shown here as an example of the full scope for GP-../40.



	Designation
1	Base plate
2	GENODOS-Pump GP pump with pump head
3	Connection kit D 6-12, G5/8 (2x)
4	Line socket 3-pole with Pg 7 screw connection (voltage-free fault signal)
5	Coupling socket 4-pole, red (external input)

	Designation
6	Coupling socket 3-pole, black (empty signal)
7	Recirculation hose Ø 6/9; PVC crystal clear, 1500 mm long
8	Worm drive hose clip NORMA 8–16/9
9	Hose clamp NORMA S10/9
10	Operation manual
11	Technical information

► Check the scope of supply for completeness and damage.

5.3 Installing the dosing pump

Depending on the application of the GENODOS-Pump GP pump, the installation can be carried out individually.

The slip-on base plate allows the pump to be mounted horizontally on a bracket/dosing tank or on the floor, or vertically directly on the wall.

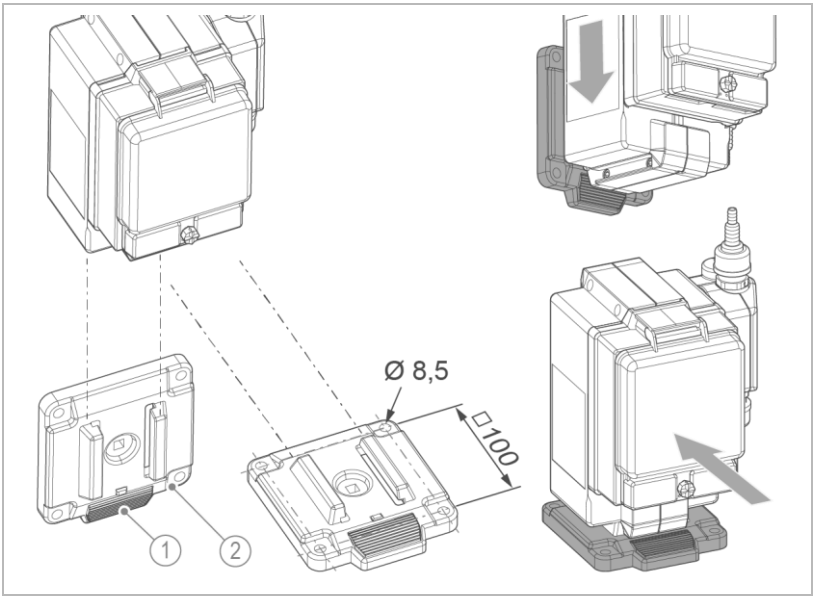
The pump is only allowed to be mounted vertically. The max. suction head is 1.5 m referred to water at 20 °C.

► Install the pump as **low** as possible.

The following points must be determined before installing the pump:

- Installation type
  - Floor or wall mounting
  - on the dosing tank
- Space required for installation, operation and cleaning
  - Lateral + 500 mm; front: + 800 mm;
    Above + 200 mm (for wall mounting 365 mm)
- Position of the pump, depending on:
  - Mains cable with shock-proof mains plug 230 V (approx. 1.2 m free length)
  - Contact water meter
  - Dosing point (dosing group)
  - Pressure maintaining valve
  - Overflow valve

5.3.1 Installation types of the base plate



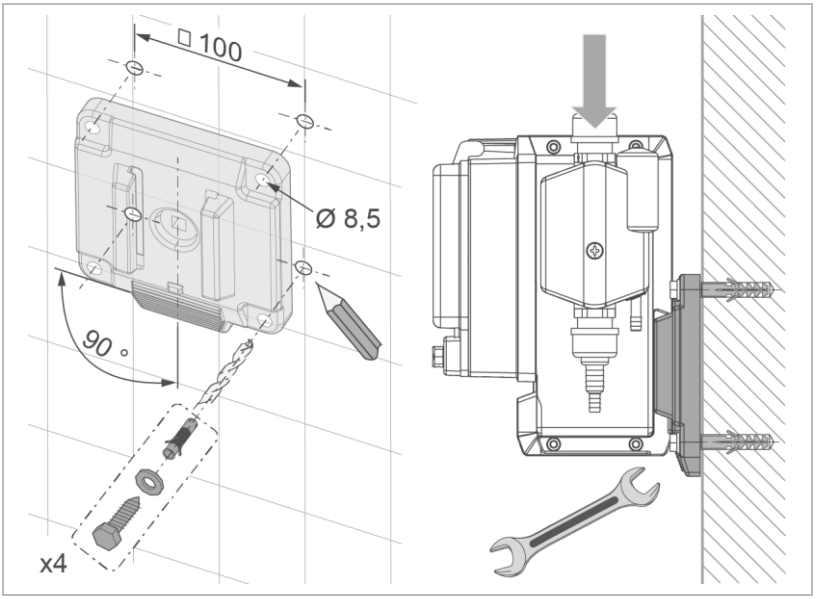
	Designation		Designation
1	Push-to-release mechanism	2	Base plate

► Check the space available on site before installing the pump.

- Space required to remove the pump when mounted horizontally (floor mounting) **≥ 240 mm**.
- Space required to remove the pump when mounted vertically (wall mounting) **≥ 365 mm**.

5.3.2 Wall mounting

- ► Select the fastening material according to the wall situation (recommendation: 4x screws with stainless steel washers).
- ► The fastening material must be provided by others on site.
- ► Check that the wall is load-bearing and that the pump can be solidly attached.



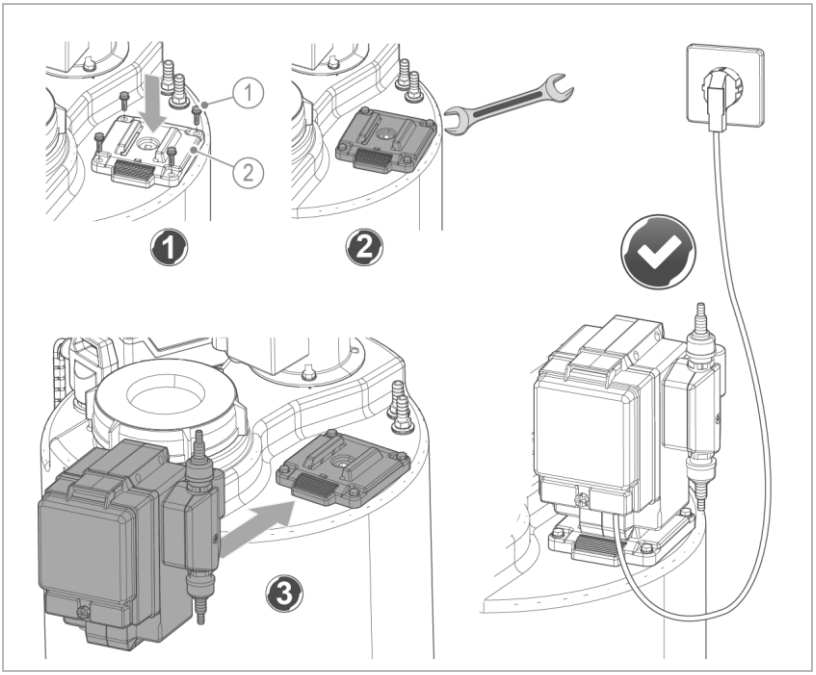
1. Determine the position of the base plate on the wall.

For dosing agents with a density of 1.0 g/ml, the pump is allowed to be mounted max. 1500 mm from the floor – mount as low as possible.

2. Fasten the base plate on the wall.
3. Slide the pump onto the base plate from above until the pump locks into place.

5.3.3 Installation on dosing tank

The dosing tank is prepared for mounting the pump with threaded inserts (fastening material included).

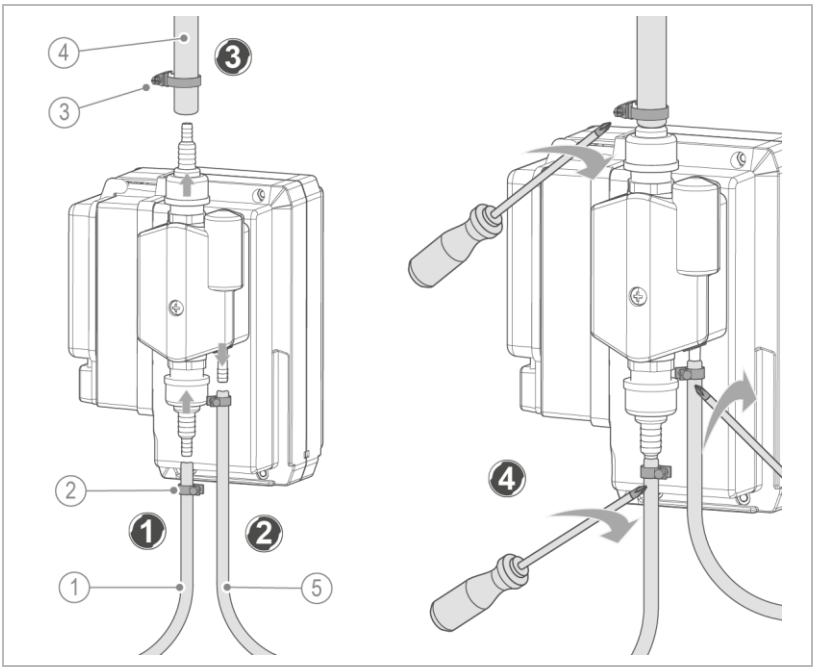


	Designation		Designation
1	Fastening screws with washer	2	Base plate

1. Place the base plate on the dosing tank so that the pump can be pushed on from the front.
2. Fasten the base plate with fastening screws and washers.
3. Slide the pump onto the base plate from the front until the pump locks into place.

5.4 Connecting the lines

The return pipe must be led back to the dosing tank. The hoses must be laid without kinks.



	Designation
1	Suction pipe from the dosing tank
2	Hose clamp NORMA S10/9
3	Worm drive hose clip NORMA 8–16/9

	Designation
4	Pressure pipe to the overflow valve and dosing point (accessories)
5	Return pipe to dosing tank

1. Attach the suction pipe to the lower connection.
2. Attach the return pipe to the rear connection (Ø 6 mm).
3. Attach the dosing line to the upper connection.
4. Fasten the lines with suitable clamps.

5.5 Check for leaks

To prevent the pump from running dry, the pump must be pre-filled with liquid during initial filling.

WARNING Discharge of dosing agent if the system is leaking

- Chemical burns caused by the use of alkali, chlorine and acid.

► Carry out the initial filling of the pump with water only (without chemical).

► Check the leak tightness of the dosing system with water during initial start-up.

► Do not use the dosing agent until the system is tight.

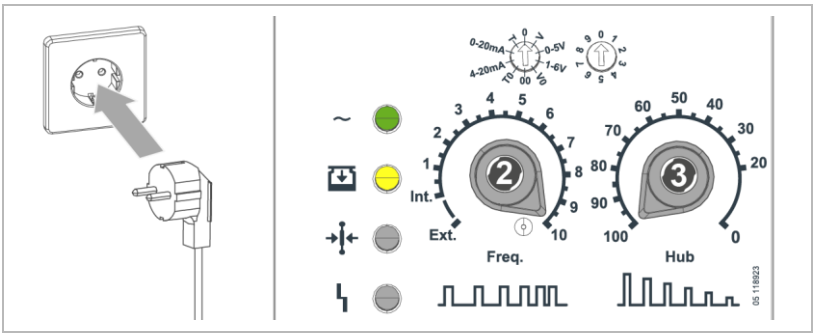
► During initial filling of the pump, use a separate vessel with water.

► Guide the suction pipe or suction lance into a vessel with water.

a Make sure that the liquid level in the vessel is above the top of the pump head.

If the pump is lead-sealed (vp), the control setting in chapter 5.5.1 can be dispensed with.

5.5.1 Switch on pump/adjust control unit



1. Establish the power supply – connect the mains plug.
2. Set the internal/external control selector to Int. 10 (for GP-../40).
3. Set the stroke length controller to 100.

» The pump is set to maximum dosing capacity and stroke frequency.

» The LED for operation indicator flashes green with each stroke.

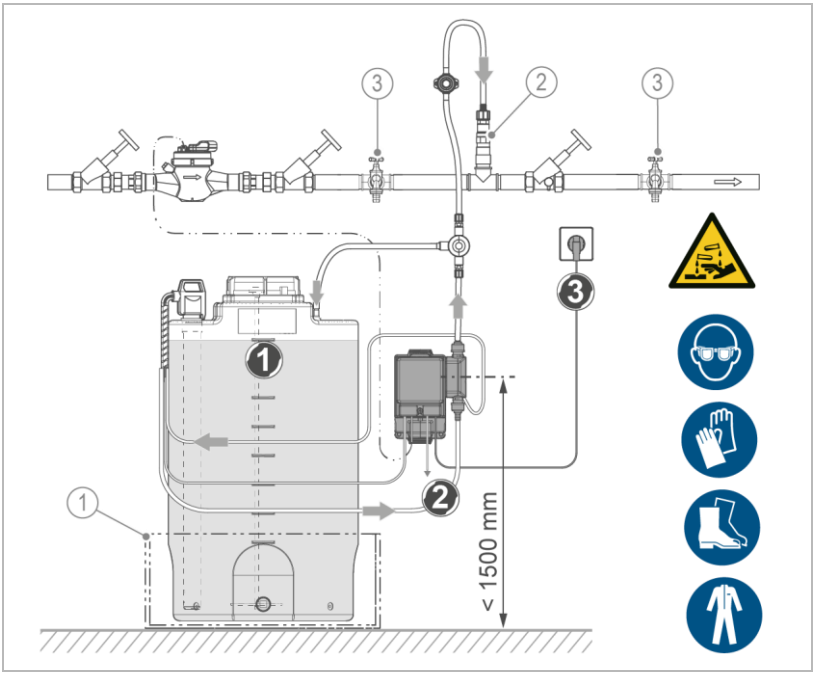
4. Check all hose connections are securely attached.
5. Check all connections and the entire dosing system for leaks.

» Leaks in the system can be detected in time.

6. Set the selector switch to Ext.
7. Disconnect the mains plug.

5.5.2 Connect the dosing tank

► Mount all required accessories for the dosing system (refer to accessories for GENODOS-Pump GP pumps).



	Designation
1	Collecting container (optional)
2	Dosing point

	Designation
3	Water withdrawal point for sampling and deaeration

1. Prepare the dosing agent.
2. Connect the suction pipe of the suction lance to the pump.
3. Plug the mains plug back in.

» The pump is ready to use.

6 Start-up

The initial start-up of the product is only allowed to be carried out by the customer service.

WARNING Skin and eye contact with dosing solution

- Chemical burns to the eyes, irritation of the skin and respiratory tract

► Use eye protection goggles, protective gloves and sturdy clothing.

► Observe the safety data sheet of the dosing agent.

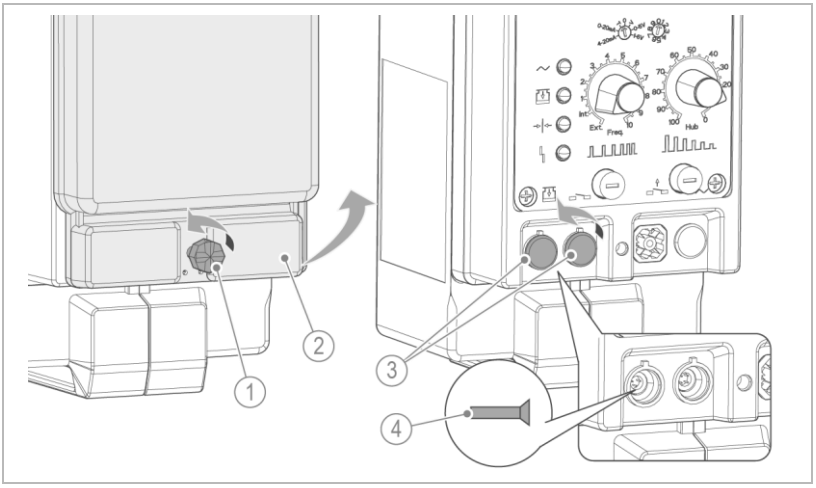
Prerequisites for initial start-up

1. Before initial start-up, check whether all the components required for safe operation of the dosing system have been installed.
2. Check whether a collecting container is required – depending on the dosing agent, e.g. chlorine, acids and alkalis (observe the Ordinance on Hazardous Substances).

   a Ensure that the collecting container can hold the volume of dosing solution in the event of leakage – if necessary, protect the pump and connections separately.

6.1 Establishing contact connections

The contacts must be pre-assembled (refer to chapter 3.2.4).

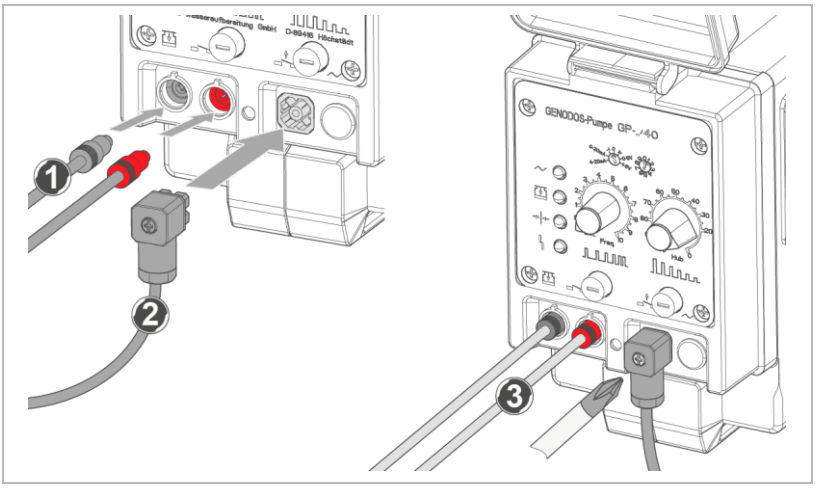


	Designation		Designation
1	Screw plug	3	Blind plug
2	Cover	4	Contact sleeve

1. Loosen the screw plug – turn counter-clockwise.
2. Lift up the cover.
3. Unscrew the blind plugs.
4. Remove the contact sleeve.

6.1.1 Establish contacts

► Connect the pump to the required contacts – depending on the design of the pump and dosing system (refer to chapter 3.2.4).



1. Establish the contact for empty signal.
2. Establish the contact for alarm signal.

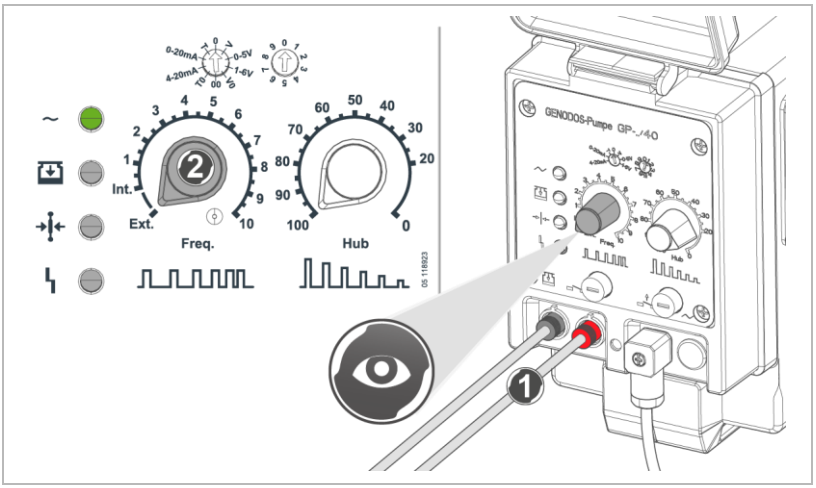
When using "external activators", do not connect the contact (4-pole in red) until the functional and leakage check has been carried out (refer to chapter 6.1.2).

3. Establish the contact for external actuation.

If the dosing pump is internally actuated, the connector plug (4-pole in red) must be unplugged.

Exception: In case of actuation with external operational release by timer (refer to chapter 1704842831.0.293688768).

6.1.2 External actuation



1. Plug the red contact for external actuation into the socket.
2. Set the internal/external control selector to Ext.

Actuation by external operational release (timer)

Observe the operation manual for the digital time control (order no. 163 950).

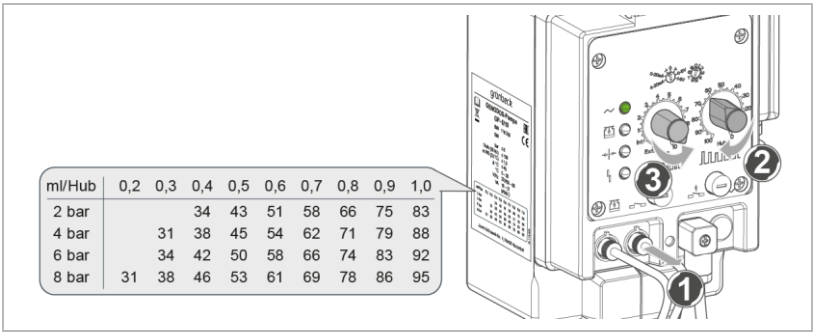
1. Adjust the internal/external control selector in the scale range Int. – 10 (for GP-../40).
2. Connect the time control.

6.1.3 Set dosing capacity and stroke frequency

The dosing capacity (dosing volume H_2O) is only allowed to be set on the stroke length controller with the pump running (in operation) according to the water pressure.

If the GENO-Baktox pump and the chlorine pump for DM-T systems are lead-sealed, the adjustment can be dispensed with.

► Adjust the dosing capacity (stroke and frequency) by measuring volumetrically:



The adjustment of the dosing volume per stroke is continuously variable from 0 – 100. The effective setting range is between 30 and 100.

1. Disconnect the external connection.
2. Adjust the required dosing capacity at the stroke length controller (only in operation) – refer to table on type plate.
3. Set the number of strokes/min (stroke frequency) with the internal control selector between 1 and 10 accordingly.

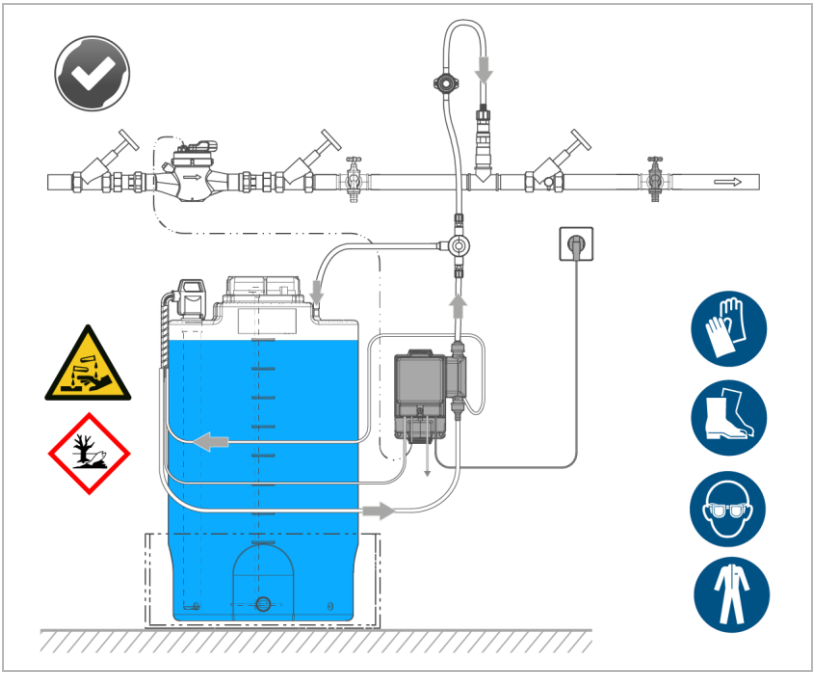
Internal control											
Item	Int.	1	2	3	4	5	6	7	8	9	10
Strokes/ min.	6	19	29	38	46	56	65	75	85	94	109

6.2 Checking dosing system

WARNING Discharge of hazardous dosing solution

- Chemical burns on contact of dosing solution with eyes, skin

► Connect the recirculation hose to the dosing tank each time you start up the system.



1. Check that all lines are securely connected.
   a Retighten the clamps if necessary.
2. Check that the recirculation hose to the dosing tank is connected.
3. Check that all contact connections are connected.

4. Completely open a water withdrawal point after the dosing point.
5. Establish a max. dosing capacity.
6. Check the function of the pump.
7. Perform a test run.
8. Fill in the start-up log (refer to chapter 13.1).

6.3 Handing over the product to the owner/operator

► Explain to the owner/user how the product works.

► Use the manual to brief the owner/operator and answer any questions.

► Inform the owner/user about the need for inspections and maintenance.

► Hand over all documents to the owner/operator for storage.

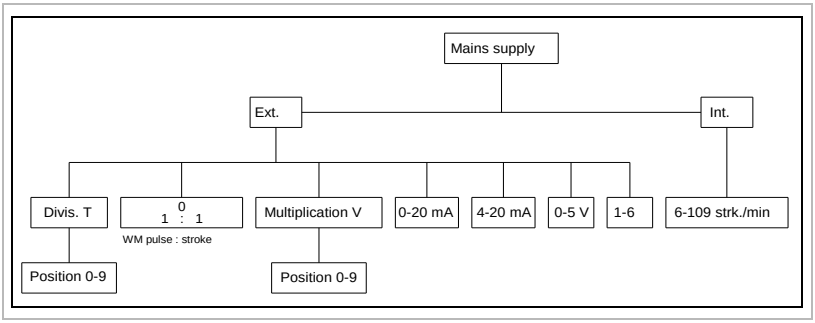
6.3.1 Disposal of packaging

► Dispose of packaging material as soon as it is no longer needed (refer to chapter 11.2).

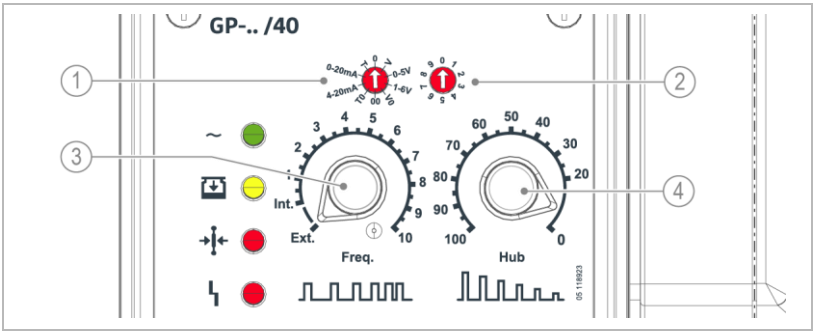
7 Operation/handling

The schematic overview shows the various operating modes and possible settings of the GP-../40 pump.

Schematic overview of the operating modes



7.1 Settings for external actuation



	Designation		Designation
1	Operating mode switch	3	Internal/external control selector
2	Pulse division or pulse multiplication factors	4	Stroke length controller

► Set the stroke frequency selector switch to Ext.

GENODOS-Pump GP-../40 pumps can store and process a maximum of **65517** incoming pulses with external actuation. With "Mains off" or when switching to another operating mode (operating mode switch), these stored pulses are deleted.

7.1.1 Set operating mode

With external actuation, the GP-../40 pump can be set to different operating modes.

► Set the required operating mode:

- 0: The incoming pulses are processed 1:1.Each incoming water meter pulse triggers a dosing stroke.
- T: Pulse division, pulse reduction with selected factor (set factor, refer to chapter 7.1.2).
- V: Pulse multiplication, pulse ratio with selected factor (set factor, refer to chapter 7.1.2).
- Analogue actuation: 0 – 5 V / 1 – 6 V / 0 – 20 mA / 4 – 20 mA

If the function of pulse storage (when the stroke frequency of max. 109 strokes/min. is exceeded) is not desired in the various operating modes (0 / T / V),

► adjust the operating mode switch accordingly to 00, T0 or V0:

- 00: The incoming pulses are processed 1:1. Each incoming water meter pulse triggers a dosing stroke.
- T0: Pulse division, pulse reduction with selected factor (set factor, refer to chapter 7.1.2).
- V0: Pulse multiplication, pulse ratio with selected factor (set factor, refer to chapter 7.1.2).

7.1.2 Set factors

Setting pulse division

Item	0	1	2	3	4	5	6	7	8	9
Pulse input	1	3	5	8	10	15	20	30	40	50
≙ pump factor	1	0, 333	0, 200	0, 125	0, 100	0, 066	0, 050	0, 033	0, 025	0, 020
Dosing strokes	1	1	1	1	1	1	1	1	1	1

Setting pulse multiplication

Item	0	1	2	3	4	5	6	7	8	9
Pulse input	1	1	1	1	1	1	1	1	1	1
≙ pump factor	1	2	4	6	8	10	12	14	16	18
Dosing strokes	1	2	4	6	8	10	12	14	16	18

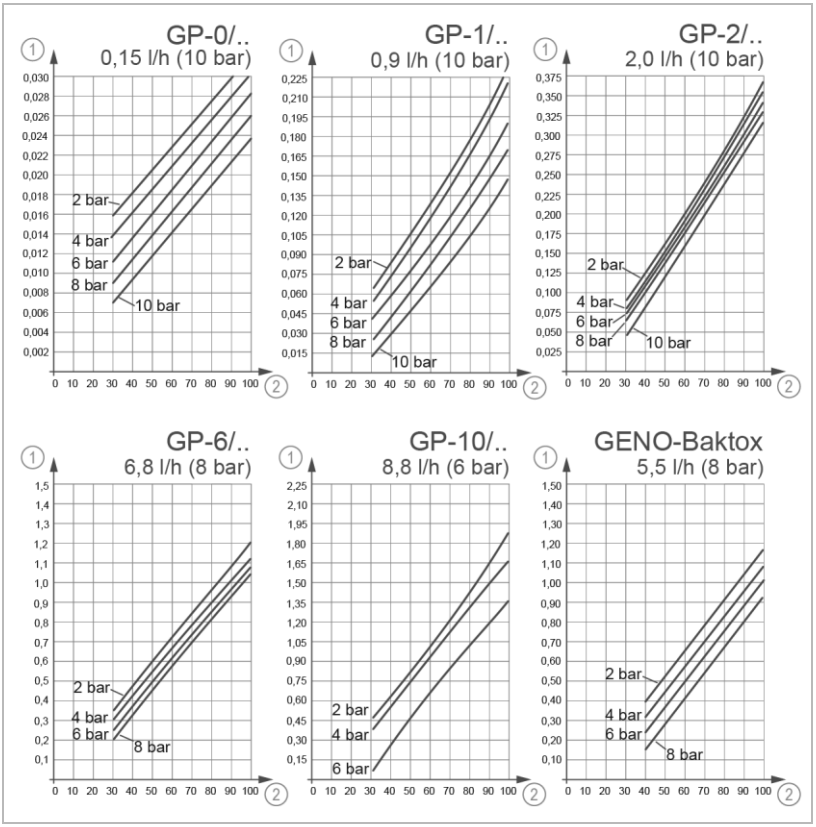
7.2 Dosing capacity

Observe the design calculation (order no. 118 949).

In the case of lead-sealed pumps (vp) in the drinking water sector, the preset dosing capacity must not be adjusted.

The dosing capacity of the pump is designed for 50 Hz.

► Set the dosing capacity on the stroke length controller.



	Designation		Designation
1	ml/stroke	2	Stroke length controller

In case of counter-pressures of > 1 bar (10 mWC) and in case of fluctuating counter-pressures, a pressure maintaining valve must be connected downstream.

We recommend to generally use an overflow valve, in particular in case of aggressive media.

An overflow valve is a safety device to protect the dosing pump and the corresponding fittings and pipes.

It prevents an impermissibly high pressure increase in the system on the discharge side of the dosing pump.

7.2.1 Take samples

► Take samples regularly to check the concentration of the dosing solution.

During sampling, it should be noted that there will be fluctuating concentrations (clouds) of the dosing agent in the medium (e.g. water) depending on the dosing pulse or pulse sequences.

► During sampling, ensure that the concentration is corrected taking account of the sample volume taken.

7.3 Changing dosing agent

Have a change of the dosing agent carried out only by authorised and qualified personnel only.

WARNING Incorrect use of dosing agent

- Health hazard due to overdosage and/or incorrect dosing agents in drinking water

► Only use dosing agents approved by Grünbeck in the drinking water sector.

CAUTION Use of the wrong pump version

- Leaks if unsuitable materials are used for seals, lines, connections.

► Check that the design of the pump and accessories is suitable for the new dosing agent.

► Only use the sealing materials supplied.

► Perform the following when changing the dosing agent:

1. Check that the design of the pump, the pump head and the materials for lines and connections are suitable for the new dosing agent.
2. Rinse the pump with clear water.
3. Change the pump head, lines and connections, if necessary.
4. Check whether a collecting container is necessary for the new dosing agent.

If hazardous chemicals are used, e.g. chlorine, acids and alkalis, it will be mandatory to use a collecting container.

8 Maintenance and repair

Maintenance includes cleaning, inspection and servicing of the product.

The responsibility for inspection and maintenance is subject to local and national requirements. The owner/user is responsible for compliance with the prescribed maintenance work.

By concluding a maintenance contract you ensure that all maintenance work will be performed in due time.

► Only use genuine spare and wearing parts from Grünbeck.

8.1 Cleaning

Only allow cleaning work to be carried out by persons who have been instructed in the risks and dangers that can arise from the appliance.

WARNING Cleaning of live components

- Risk of electric shock
- Sparking possible due to short circuit

► Switch off the voltage supply – as well as any external voltage – prior to starting the cleaning work.

► Do not use any high-pressure equipment for cleaning and do not blast electrical/electronic devices with water.

NOTE Do not clean the system with cleaning agents containing alcohol/solvents.

- These substances will damage plastic components.

► Use a mild/pH-neutral soap solution.

► Use personal protective equipment.

► Only clean the outside of the product.

► Do not use any strong or abrasive cleaning agents.

► Wipe the surfaces with a damp cloth.

► Dry the surfaces with a cloth.

8.1.1 Cleaning in case of leaking dosing solution

WARNING Skin and eye contact with dosing solutions

- Chemical burns to the eyes and irritation of the skin and respiratory tract

► Use eye protection goggles, protective gloves and sturdy clothing.

► Observe the safety data sheet of the dosing agent.

► Absorb leaked dosing solution with suitable means – using a binding agent if necessary.

► Clean the areas until completely dry.

8.2 Intervals

Faults can be detected in time by regular inspection and maintenance, and system failures can be avoided.

► As owner/operating company, determine which components have to be inspected and maintained at which intervals (load-dependent). This is subject to the actual conditions, e.g.: Water condition, degree of impurities, environmental influences, consumption, etc.

The following interval table shows the minimum intervals for the activities to be performed.

Task	Interval	Activities
Inspection	2 months (recommended)	• Visually inspect pump for leaks • Visually inspect entire dosing system for leakage and function • Check dosing solution for contents and shelf life
Maintenance	6 months	• Check functioning of the pump • Check the entire dosing system for leaks • Assess the consumption of the dosing solution
	Yearly	• Check pump for condition and leak tightness • Clean components that come into contact with chemicals (pump head, valves) and replace if necessary • Check flow rates and dosing volumes • Check the function and condition of all system components (dosing point, suction lance, pressure maintaining valve, contact water meter) • Change wearing parts if necessary
Repair	5 years	• Recommendation: Replace wearing parts

8.3 Inspection

You as owner/operating company may perform the regular inspections yourself. Initially, we recommend inspecting the appliance at shorter intervals initially and later on as required.

► Conduct an inspection at least every 2 months.

1. Visually inspect the pump and the dosing lines for leaks.

2. Check whether the dosing system is in operating mode and does not report any faults.
3. Visually inspect the entire dosing system for leakage.
4. Check the dosing solution for contents and shelf life.

8.4 Maintenance

Regular work is necessary in order to ensure proper functioning of the product in the long term. DIN EN 806-5 recommends regular maintenance to ensure trouble-free and hygienic operation of the product.

8.4.1 Semi-annual maintenance

In order to carry out the semi-annual maintenance, proceed as follows:

1. Check the function of the pump.
2. Check the entire dosing system for leaks.
3. Check that the pump doses properly during water withdrawal.
4. Evaluate the dosing solution consumption depending on the water volume consumed.

8.4.2 Annual maintenance

Annual maintenance work requires expert knowledge. This maintenance work is only allowed to be performed by the technical service or by qualified specialists trained by Grünbeck.

In addition to the semi-annual maintenance, the following work needs to be done:

5. Clean the components that come into contact with chemicals (pump head, valves).
    a. Replace the components, if necessary.
6. Check the flow rates and dosing volumes.
7. Check the function and condition of all system components (dosing point, suction lance, pressure maintaining valve, contact water meter).
    a. Clean the dosing point, if necessary.
    b. Replace the components, if necessary.
8. Replace worn components as necessary (refer to chapter 8.6).

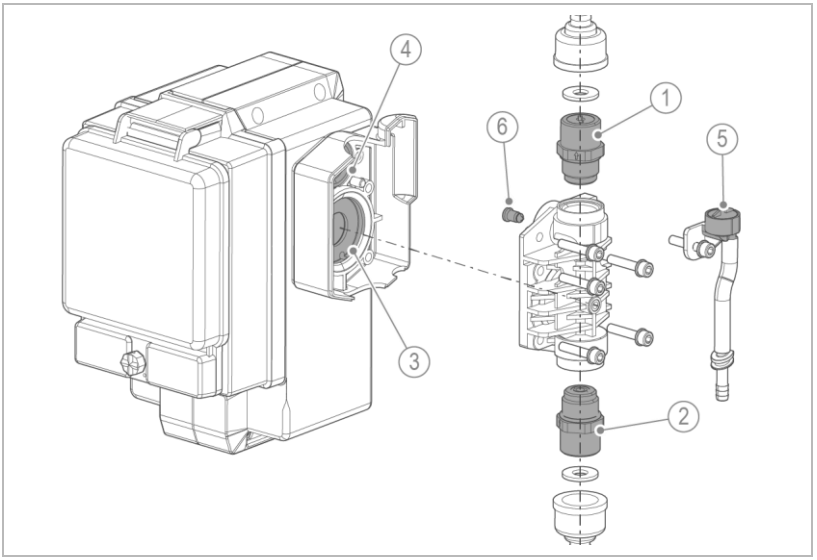
8.5 Spare parts

You can find an overview of the spare parts in the spare parts catalogue at www.gruenbeck.com. You can obtain the spare parts from the Grünbeck representative responsible for your area.

8.6 Wearing parts

Wearing parts are only allowed to be changed out by the technical service.

Wearing parts are listed below:



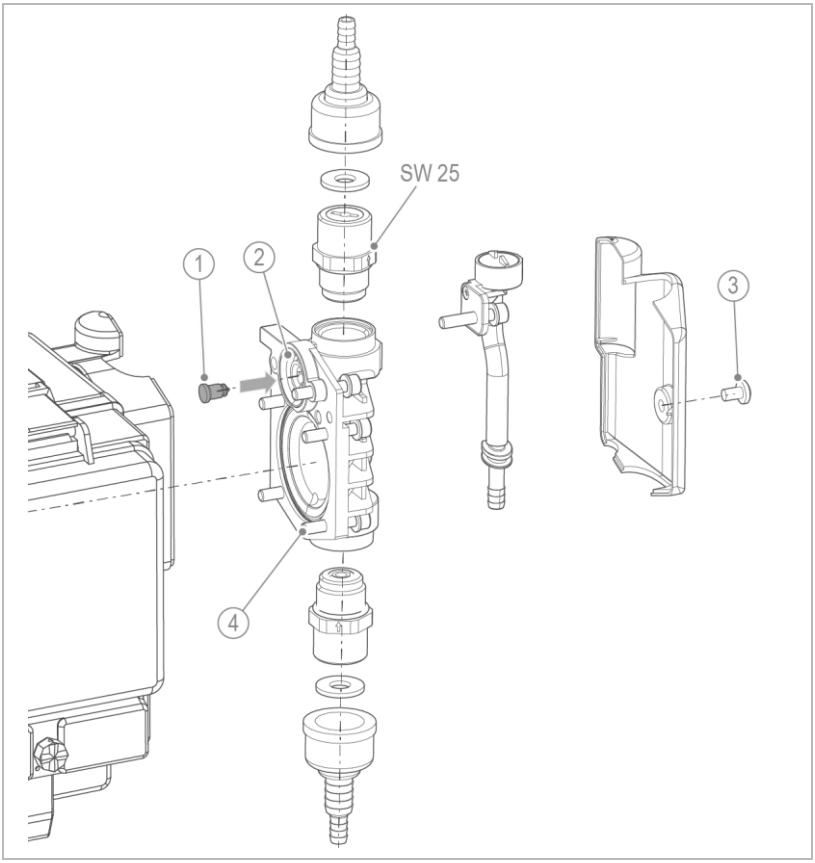
	Designation
1	Pressure valve
2	Suction valve
3	Dosing membrane
4	Venting membrane

	Designation
5	Deaeration valve
6	Valve pin
	Seals (e.g. O-rings)

8.6.1 Dismantle pump head

► Rinse the pump with water first.

► Release all pressure from the dosing line before you start to disconnect the pressure connection from the pump head.



	Designation		Designation
1	Valve pin	3	Cross-slot screw
2	Venting duct on the pump head	4	Hexagon socket screws (4 mm)

Pay attention to the following during installation of the pump head:

► When reassembling, first insert the valve pin into the venting duct guide on the pump head to avoid damaging it.

9. Loosen the cross-slotted screw of the cover.
10. Loosen the hexagon socket screws.
11. Replace damaged components.
12. Clean the valves, if necessary.
13. Complete assembly of the pump head.
14. Tighten the hexagon socket screws – tighten evenly cross-wise.
15. Check the function and leak tightness of the pump.

9 Fault

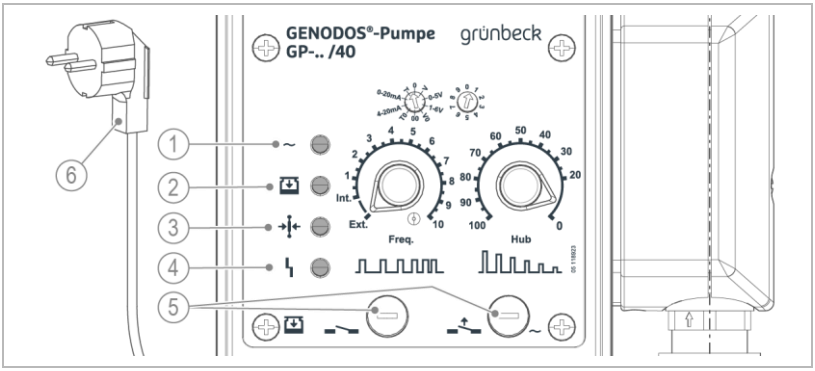
WARNING Skin and eye contact with dosing solutions

- Chemical burns to the eyes and irritation of the skin and respiratory tract

► Use eye protection goggles, protective gloves and sturdy clothing.

► Observe the safety data sheet of the dosing agent.

9.1 Signals



	Designation		Designation
1	LED operation indicator (green)	4	LED dosing monitoring (red)
2	LED empty signal (yellow)	5	Glass cartridge fuse 5x20 type MT, medium time lag, 0.125 A
3	LED membrane monitoring (red)	6	Mains plug

1. Remedy the malfunction.
2. Observe the messages of the control unit.

3. Acknowledge the message/fault by disconnecting and re-connecting the mains plug.

Display	Explanation	Remedy
LED operation indicator not illuminated	Power failure	► Check connection cable and mains voltage
	Fuses defective	► Check fuses and replace, if necessary
LED empty signal illuminates	Liquid below required level	► Refill dosing agent
	Pay attention to pre-warning	► Check level probe
LED membrane monitoring illuminates	Dosing membrane defective	► Replace dosing membrane
	Venting membrane defective	► Replace venting membrane
LED dosing monitoring illuminates	Motor overload	► Unplug the mains plug and plug it in again ► Check counter-pressure
	Mains voltage below 230 V	► Check mains voltage ► Unplug the mains plug and plug it in again

9.2 Observations

Observation	Explanation	Remedy
Pump does not prime despite full stroke movement (stroke controller 6 to 100)	Suction head exceeded (max. 1.5 m)	► Set pump lower
	Liquid below required level	► Refill dosing agent
	Suction connection leaking	► Seal suction connection
	Valves dry (possibly crystalline deposit)	► Lift up suction hose briefly ► Rinse out pump thoroughly ► Remove and clean suction and pressure valve ► Remove and clean vent valve
	Suction pipe is kinked or dirty	► Replace or clean suction pipe
Pump does not pulse	Power failure	► Check connection cable and mains voltage
	Fuses defective	► Check fuses and replace, if necessary
Liquid is leaking from the pump head	Pump head insufficiently or unevenly tightened	► Tighten the screws on the pump head
	Dosing membrane defective	► Have dosing membrane replaced by technical service
	Venting membrane defective	► Have venting membrane replaced by technical service

Observation	Explanation	Remedy
Dosing monitoring illuminates	Motor overload	► Unplug the mains plug and plug it in again ► Check counter-pressure
	Mains voltage below 230 V	► Check mains voltage ► Unplug the mains plug and plug it in again
Leakage at the connection kits	Hose expanded too far	► Loosen the hose on the connection kit in question and cut off approx. 1 cm ► Re-attach and secure the hose

If a fault cannot be rectified, further measures can be taken by the technical service or a qualified specialist trained by Grünbeck.

► Contact customer service.

10 Shut down

If a relatively long downtime of the system is planned, a pump shut-down must be carried out.

10.1 Temporary shutdown

1. Flush the pump with water if necessary – depending on the active agent.
2. Disconnect the pump from the mains.
3. Disconnect the external actuation, e.g. time control.

10.2 Restart

1. Connect the pump to the mains.
2. Connect the external actuation or contacts.
3. Put the pump back into operation and check for leak tightness (refer to chapter 5.5).
4. Check the dosing system (refer to chapter 6.2).

11 Dismantling and disposal

11.1 Dismantling

The work described herein represents an intervention into your water system.

► Have this work performed by qualified specialists only.

4. Rinse the pump with water.
5. Disconnect the pump from the mains.
6. Depressurise the lines.
7. Dismantle the dosing point.
8. Close the dosing point connection with a suitable plug.
9. Disconnect external contact connections.
10. Dismantle the suction, dosing and return pipes.
11. Dismantle the pump.

11.2 Disposal

► Comply with the applicable national regulations.

Packaging

► Dispose of the packaging in an environmentally sound manner.

NOTE Risk to the environment due to incorrect disposal

- Packaging materials are valuable raw materials and can be reused in many cases.
- Incorrect disposal can cause environment pollution.
- ► Dispose of packaging material in an environmentally sound manner.
- ► Observe the locally applicable disposal regulations.
- ► If necessary, commission a specialist company with the disposal.

Dosing solution

- ► Observe the safety data sheet of the chemical.
- ► Rinse the dosing tanks with a large amount of water.
- ► Dispose of residual chemicals according to the instructions in the safety data sheet.

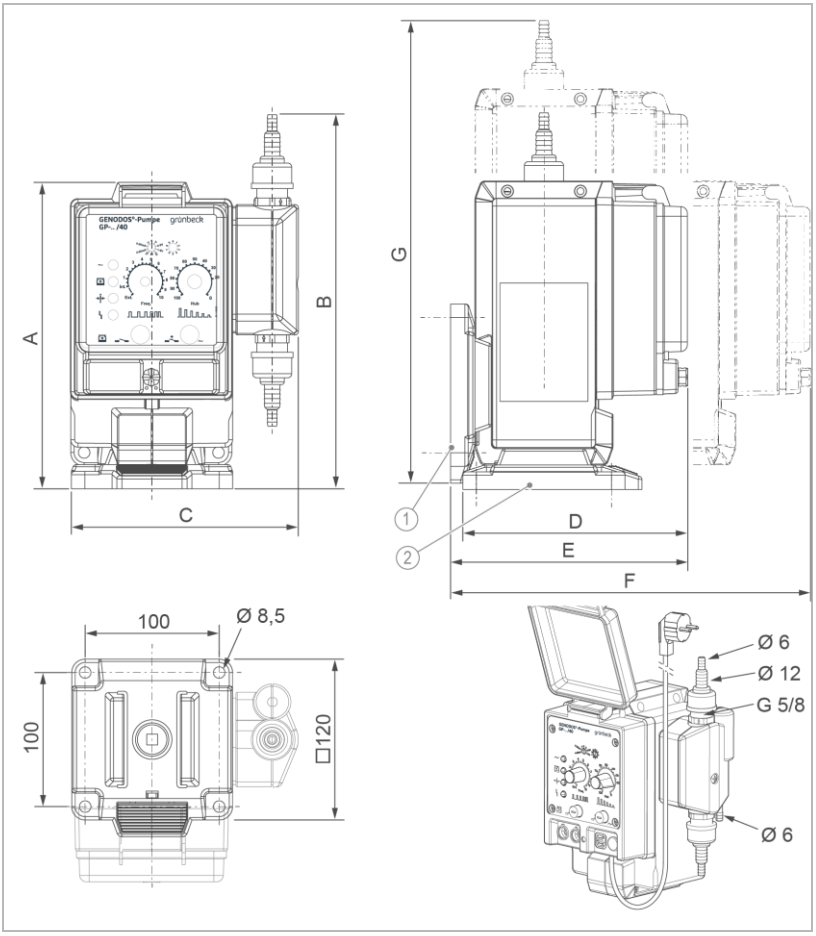
Product

If this symbol (crossed-out wheelie bin) is on the product, the product or its electrical and electronic components must not be disposed of as household waste.

- ► Dispose of electrical and electronic products or components in an environmentally sound manner.
- ► If your product contains batteries or rechargeable batteries, dispose of them separately from your product.

For more information on take-back and disposal, go to www.gruenbeck.com.

12 Technical specifications



	Designation		Designation
1	Base plate wall mounting	2	Base plate floor mounting

Dimensions and weights		GP-../ 10	GP-../ 25	GP-../ 40
A Height with base plate	mm	230		
B Total height	mm	280		
C Total width	mm	170		
D Depth (floor mounting)	mm	165		
E Depth (wall mounting)	mm	175		
F Required depth for replacement (floor mounting)	mm	≥ 240		
G Required height for replacement (wall mounting)	mm	≥ 365		
Shipping weight	kg	2.5		

Connection data		GP-../ 10	GP-../ 25	GP-../ 40
Connection suction/pressure pipe	mm	12/6		
Connection thread		G 5/8		
Return pipe connection	mm	6		
Protection/protection class		IP54/⏚		
Rated voltage	V~	230		
Rated frequency (dosing capacity is designed for 50 Hz)	Hz	50 – 60		
Power input (standby/operation = max.)	VA	18/21		

Performance data		GP-../ 10	GP-../ 25	GP-../ 40
Dosing frequency at 50 Hz	strokes/ min	109	109	6 – 109
Suction head (at 20 °C water temperature)		≤ 1.5 m WC		
Dosing accuracy (at 20 °C water temperature)		< ±5% of final value		

General data		GP-../ 10	GP-../ 25	GP-../ 40
Dosing agent temperature	°C	≥ 40		
Ambient temperature	°C	5 – 30		
Air humidity (non-condensing)	%	< 95		
ÜA registration number *The Office of the Vienna Provincial Government – City of Vienna*		R-15.2.3-21-17496		

Materials	GP-../ 10	GP-../ 25	GP-../ 40
Pump head/valves	PPO/EPDM (standard), PVDF/Viton (4G), PVDF/FPM/PTFE (GENO-Baktox)		
Valve balls	Borosilicate glass/Hastelloy		
Seals	EPDM (standard), Viton (4G), FKM, GENO-Baktox		
Membranes	EPDM-PTFE-coated		

Features	GP-../ 10	GP-../ 25	GP-../ 40
Adjustable dosing stroke	X	X	X
Operating display	X	X	X
Indication of empty signal		X	X
Level pre-warning			X
Indication of membrane breakage		X	X
Dosing monitoring			X
Internal/external control selector			X
Voltage-free actuation			X
Voltage-free collective fault signal output		X	X
Analogue actuation 0 – 5 V / 1 – 6 V / 0 – 20 mA or 4 – 20 mA			X
Pulse division and pulse multiplication			X

Dosing capacity		Order no. PPO/EPDM version (standard)		
GP-0/..	0.15 l/h at max. 10 bar	**118 110**	118 130*	**118 150**
GP-1/..	0.9 l/h at max. 10 bar	**118 160**	118 180*	**118 200**
GP-2/..	2.0 l/h at max. 10 bar	**118 210**	118 230*	**118 250**
GP-6/..	6.8 l/h at max. 8 bar	**118 260**	118 280*	**118 300**
GP-10/..	8.8 l/h at max. 6 bar	**118 310**	118 330*	**118 350**

		Order no. PVDF/Viton version (4G)		
GP-0/..	0.15 l/h at max. 10 bar	118 1104G*		**118 1504G**
GP-1/..	0.9 l/h at max. 10 bar	**118 1604G**	118 1804G*	**118 2004G**
GP-2/..	2.0 l/h at max. 10 bar	**118 2104G**	118 2304G*	**118 2504G**
GP-6/..	6.8 l/h at max. 8 bar	**118 2604G**	118 2804G*	**118 3004G**
GP-10/..	8.8 l/h at max. 6 bar	**118 3104G**	118 3304G*	**118 3504G**

GENO-Baktox pump	Order no. Baktox lead-sealed version (vp)		
for dosing system DM-B 6/10			**118 221vp**
for dosing system DM-B 20/30			**118 222vp**
for dosing system DM-BS 6/10			**118 223vp**
for dosing system DM-BS 20/30			**118 224vp**

GP-1/40 for GENODOS DM-T	Order no. PVDF/Viton lead-sealed version (4gvp)		
for dosing system DM-T 6			**118 201 4gvp**
for dosing system DM-T 10			**118 202 4gvp**
for dosing system DM-T 20			**118 203 4gvp**
for dosing system DM-T 30			**118 204 4gvp**
for dosing system DM-T 80			**118 205 4gvp**
for dosing system DM-T 100			**118 206 4gvp**

***** No longer available – only available as exchange unit

13 Operation log

- ► Document the initial start-up and all maintenance activities.
- ► Copy the maintenance report.

GENODOS-Pump GP _____

Serial no.: _____

13.1 Start-up log

Customer		
Name		
Address		
Installation/accessories		
Dosing tanks Type/size		
Agitator	☐ manual	☐ automatic
Suction lance Type/size		
Dosing lines Type/size/material		
Hose connections Type/size/material		
Dosing point dosing group Type/size/material		
Pressure maintaining valve Type/size/material		
Overflow valve Type/size/material		
Contact water meter Type		

Installation/accessories	
External actuation Type	
Connection kit on the pump Type/size/material	
Dosing Active agent	

Operating values		
Operating mode	☐ internal	☐ external
Setting the operating mode		
Setting the dosing capacity		

Remarks

Start-up	
Company	
Service technician	
Work time certificate (no.)	
Date/signature	

Maintenance no.: ___

- ► Enter the measured values and operating data.
- ► Confirm the tests with **OK** or record any repairs carried out.

Work performed		
☐ Inspection	☐ Maintenance	☐ Repair

Designation

Execution confirmed	
Company:	
Name:	
Date:	Signature:

Maintenance no.: ____

- ► Enter the measured values and operating data.
- ► Confirm the tests with **OK** or record any repairs carried out.

Work performed		
☐ Inspection	☐ Maintenance	☐ Repair

Designation

Execution confirmed	
Company:	
Name:	
Date:	Signature:

EU Declaration of Conformity

In accordance with the EU Low-Voltage Directive 2014/35/EU, Appendix IV

CE

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

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

GENODOS-Pump GP

GP-0/..; GP-1/..; GP-2/..; GP-6/..; GP-10/..; GENO-Baktox

Serial no.: refer to type plate

The aforementioned system also complies with the following directives and provisions:

- EMC (2014/30/EU)

The following harmonised standards have been applied:

- DIN EN 61000-6-2:2006-03
- DIN EN 61000-6-3:2011-09

The following national standards and regulations have been applied:

- DIN EN 14743:2007-09

Responsible for documentation: Dipl.-Ing. (FH) Markus Pöpperl

Manufacturer

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Hoechstaedt; Germany, 17.09.2018

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