hands free hygiene
clean hands, safe hands

GEBERIT

Maintenance Manual

Instandhaltungsanleitung
Manuel d'entretien
Istruzioni per la manutenzione

KNOW HOW INSTALLED

Table of Content

Target group

This document is intended for use by skilled persons as defined by EN IEC 62079:2001.

Explanation of symbols

Symbol		Meaning
⚠	CAUTION	Refers to a potentially dangerous situation that may cause slight or moderate injury or material damage.
ⓘ		Refers to important information.

Safety notes

- Repairs may only be carried out by a skilled person using original spare parts and accessories
- Do not modify the lavatory tap or add any additional modules

Product classification

This document describes the maintenance work for the following Geberit products:

- 116.335.21.1, Geberit lavatory tap type 185, generator, without mixer
- 116.365.21.1, Geberit lavatory tap type 185, generator, with below-desk mixer
- 116.336.21.1, Geberit lavatory tap type 186, generator, without mixer
- 116.366.21.1, Geberit lavatory tap type 186, generator, with below-desk mixer
- 116.450.00.1, generator conversion set for Geberit lavatory tap

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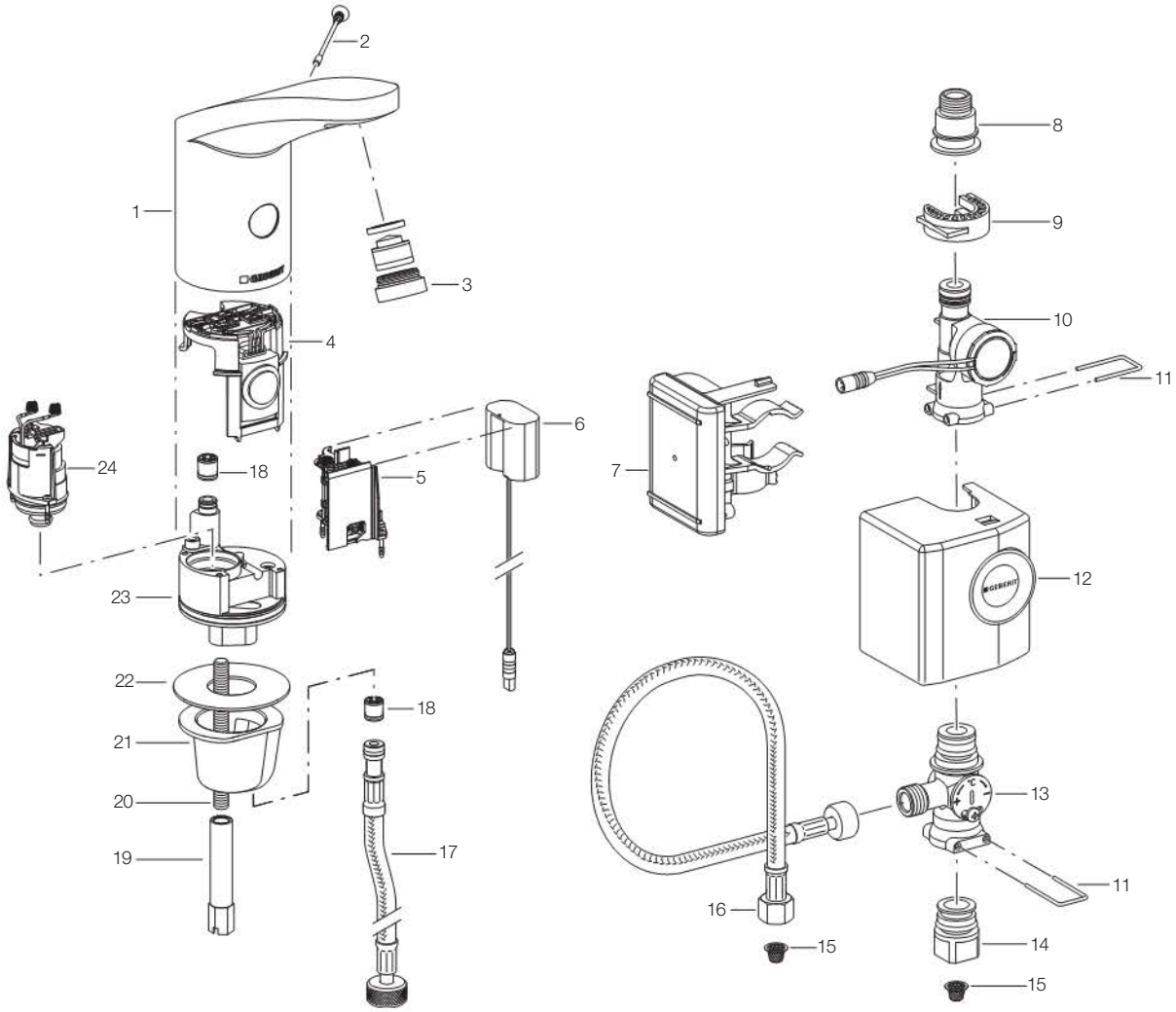
EN

Structure



1 Tap housing
2 Shut-off screw
3 Tap aerator
4 IR sensor
5 Battery holder
6 Power adapter, resource-saving
7 Generator unit control
8 Adapter for reinforced braided hose
9 Clamping device
10 Generator
11 Bracket
12 Cover
13 Below-desk mixer
14 Adapter for angle stop valve
15 Basket filter
16 Reinforced braided hose
17 Reinforced braided hose
18 Check valve
19 Long nut
20 Threaded rod
21 Fastening sleeve
22 Flat gasket
23 Valve block
24 Solenoid valve

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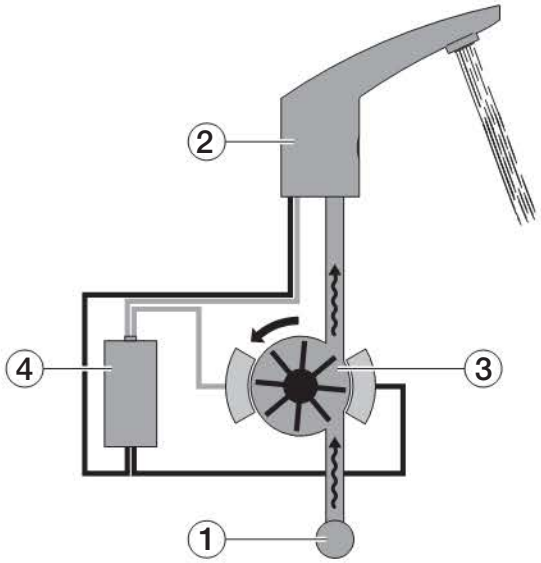
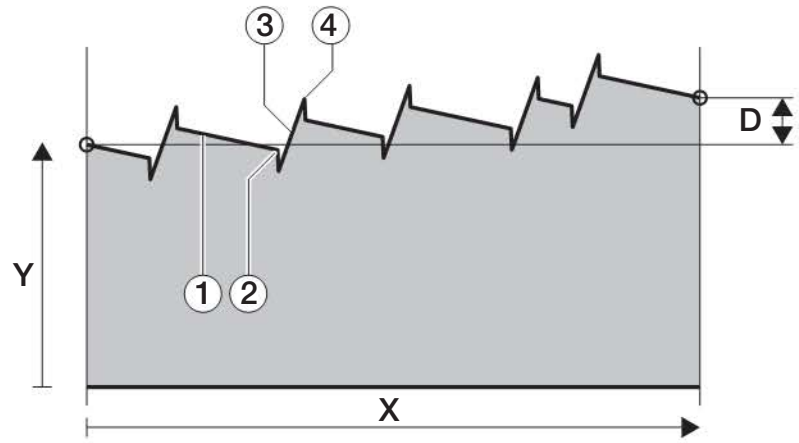
Functional principle

When water flows from the angle stop valve (1) to the lavatory tap (2), the generator (3) generates an electric current. The current is stored in the rechargeable battery (4). The rechargeable battery then provides the lavatory tap with electricity so that it can be used.



Functional diagram of lavatory tap with generator

The lavatory tap can be operated for at least ten years, if it is used for at least 80 seconds per day (20 uses for a duration of 4 seconds each). In the case of prolonged use, surplus energy is produced, thus increasing the charge level of the battery. Due to minimal self-discharge and its large storage capacity, the battery remains charged for downtimes of several months. In the case of shorter usage times, the charge level of the battery is gradually reduced.



Battery charge level

Legend

X Time axis
Y Charge level axis
1 Self-discharge of rechargeable battery and standby power consumption of lavatory tap
2 Solenoid valve of lavatory tap opens, water flow starts
3 Water flows, charging current is generated
4 Solenoid valve of lavatory tap closes, water flow stops
D Energy surplus

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Troubleshooting

To charge the rechargeable battery and to check the Geberit lavatory taps with generator, the battery charger 116.452.00.1 is required.

Problem	Possible cause	Fault clearance
No water	• Angle stop valves are closed	**Open the angle stop valves**
	• Tap aerator is blocked or dirty	**Clean or replace the tap aerator** • See "Care and maintenance"
	• Basket filter is blocked or dirty	**Clean or replace the basket filter** • See "Care and maintenance"
	• Reinforced braided hose is kinked	**Rectify the kink**
	• No pressure in water net	**Check the water pressure** • Restore the water pressure
	• Shut-off screw is missing or defective	**Insert or replace the shut-off screw**
	• Tap is in cleaning mode	**Wait for the end of the cleaning mode (approx. 2 min)**
	• Detection distance is not adjusted correctly	**Correctly set the detection range** • See "Settings using the Geberit Service Handy" or "Manual settings"
	• IR window is scratched or dirty	**Clean the IR window or replace the IR sensor**
	• Interfering reflections from the washbasin	**Correctly set the detection range** • See "Settings using the Geberit Service Handy" or "Manual settings"
	• Generator produces no or too little electricity	**Check the lavatory tap, generator and control using the battery charger** • See "Checking the lavatory tap and the generator" and "Checking the generator unit control and charging the battery" in the battery charger user manual.
	• Battery level is too low	**Check the lavatory tap, generator and control using the battery charger** • See "Checking the lavatory tap and the generator" and "Checking the generator unit control and charging the battery" in the battery charger user manual.
	• Solenoid valve contacts are corroded	**Clean the contacts or replace the solenoid valve**
	• Solenoid valve is defective	**Replace the solenoid valve**
	• IR sensor contacts are corroded	**Clean the contacts or replace the IR sensor**
	• IR sensor is defective	**Replace the IR sensor**
The LED in the IR sensor flashes 6 times after each use	• Battery level is low	**Check the lavatory tap, generator and control using the battery charger** • See "Checking the lavatory tap and the generator" and "Checking the generator unit control and charging the battery" in the battery charger user manual.

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Problem	Possible cause	Fault clearance
The LED in the IR sensor flashes continuously and the tap does not work	• Battery level is too low	**Check the lavatory tap, generator and control using the battery charger** • See "Checking the lavatory tap and the generator" and "Checking the generator unit control and charging the battery" in the battery charger user manual.
The LED in the IR sensor does not flash and the tap does not work	• Battery level is too low	**Check the lavatory tap, generator and control using the battery charger** • See "Checking the lavatory tap and the generator" and "Checking the generator unit control and charging the battery" in the battery charger user manual.
Water runs constantly and stops if an object appears in the detection range	• Spring contact probes between IR sensor and solenoid valve connected the wrong way round	**Connect the plug connection correctly**
Continuous flow (water does not stop)	• Interfering objects in the detection range	**Remove objects from the detection range** • Then, remove the shut-off screw and insert it again Do not disturb the detection process (wait until the water flow stops and the LED in the IR window is no longer lit)
	• IR sensor is defective	**Replace the IR sensor**
	• Incorrect sensor mode	**Change the sensor mode or reset the sensor** • See "Settings using the Geberit Service Handy" or "Manual settings"
	• Pressure in water net is too high	**Check the pressure in the water net** • Set the net water pressure to 0,5–8,0 bar
	• Solenoid valve is defective	**Replace the solenoid valve**
Water runs although shut-off screw has been removed	• IR sensor is defective	**Replace the IR sensor**
Water starts to run by itself	• IR window is scratched or dirty	**Clean the IR window or replace the IR sensor**
	• Tap is being adversely affected by influences in the room (mirrors, metal surfaces, glass washbasins, etc.)	**Reset the sensor** • See "Settings using the Geberit Service Handy" or "Manual settings"
	• Pressure fluctuations in the water net	**Install a suitable pressure regulator**
Tap is leaky, water dripping from tap	• Leaks in water way, defective seals	**Check the connections in the water way** • Replace the seals, if defective
	• Water drops out of water outlet, solenoid valve does not close properly	**Clean or replace the solenoid valve**

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Problem	Possible cause	Fault clearance
Temperature cannot be adjusted properly	• No or not enough hot or cold water. Angle stop valves are not completely open	**Open the angle stop valves completely**
	• Basket filter in water supply valve is blocked or dirty	**Clean or replace the basket filter** • See "Maintenance"
	• Differentiated pressure of the hot and cold water pipe is higher than 1,5 bar	**Adapt the differentiated pressure of the two pipes** • Lightly close the angle stop valve at the pipe with the higher pressure • Install a flow regulator or a water pressure reducing valve
	• Reinforced braided hose is kinked	**Rectify the kink**
	• Check valve in tap housing or on reinforced braided hose is blocked	**Rectify the blocking or replace the check valve**
	• Water temperature is too low or too high	**Check the temperature of the water net or storage water heater**
	• Reinforced braided hoses are not connected correctly (cold with hot and hot with cold)	**Connect the reinforced braided hoses correctly**

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Settings using the Geberit Service Handy

The numbers and terms in the column "Menu item" correspond to what can be seen on the display of the Geberit Service Handy. Further information can be found in the operating instructions of the Geberit Service Handy.

The Geberit Service Handy must be set to bidirectional mode.

Information given in [ ] corresponds to the text displayed on the Geberit Service Handy.
Information given in < > refers to buttons on the Geberit Service Handy.

Commands

Menu item [EN] [DE]	Description	Application	Adjustment range	Factory setting
20 [Valve] [Ventil]	Switch solenoid valve. Flushes until it is switched off again (stops automatically after 10 min)	a) Function test for the valve b) Flushing of standing water (stagnation) c) Disinfection of the pipe section and the tap (minimum 3 min at a minimum of 70 °C) d) Winter emptying	On = <OK> Off = <OK>	Off
21 [RangeTest] [TestErfas]	Check detection range. Red LED in IR window lights up if an object comes into the detection range. No flush is initiated (switches off automatically after 90 s)	Problems with user detection	On = <OK> Off = <OK>	Off
22 [ResetSens] [ResetSens]	Reset sensor. IR sensor recalibrates itself	a) In the event of detection malfunctions b) Environment has changed (e.g. new washbasin)	Start = <OK>	–
23 [FactrySet] [Werkseinst]	Factory settings. All functions are reset to the factory setting	In the case of malfunctions	Start = <OK>	–
24 [CleanMode] [Reinigung]	Switch cleaning function. The tap is inactive for 90 s	Cleaning the tap and the washbasin without the water running	Start = <OK>	–

Programs

Menu item [EN] [DE]	Description	Application	Adjustment range	Factory setting
30 [MainProgr] [Hauptmenü]	Select main menu. Presence: Flushes as long as an object is in the detection range Water saver: see menu item 44 Run-on time: see menu item 43	Selecting one of the three programs	Presence = [A] Water saver = [B] Run-on = [C]	[A]
31 [Esaver] [E Sparen]	Select energy saver. Reduces the reaction speed of the IR sensor after the time from menu item 40 [ESaverT] has elapsed after the last use	Extension of the battery lifetime	On = [ON] Off = [OFF]	[OFF]
32 [CleanEn] [FreiReini]	Enable cleaning. Enables one person to manually start the cleaning function (see "Care and maintenance")	Prerequisite for starting the manual cleaning function	On = [ON] Off = [OFF]	[OFF]

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Programs

Menu item [EN] [DE]	Description	Application	Adjustment range	Factory setting
33 [IntFlush] [IntervSp]	Select interval flush. Starts the interval flush program. The tap flushes automatically at the interval dictated by the entered value from menu item 42 [IntervalT] for the duration of the entered value from menu item 41 [IntFlushT] after the last use	a) Hygiene b) Flushing out of stagnant water	On = [ON] Off = [OFF]	[OFF]

Parameters

Menu item [EN] [DE]	Description	Application	Adjustment range	Factory setting
40 [ESaverT] [EnerSparZ]	Set start time energy saver. Is active if 31 [Esaver] is selected in menu item [ON]	–	6–48 h [...]	24 h [24]
41 [IntFlushT] [IntervSpZ]	Set interval flush – flush time. Is active if 33 [IntFlush] is selected in menu item [ON]	–	3–180 s [...]	3 s [3]
42 [IntervalT] [IntervalZ]	Set interval flush – flush interval. Is active if 33 [IntFlush] is selected in menu item [ON]	–	1–168 h [...]	168 h [168]
43 [RunOnTime] [NachlaufZ]	Set run-on time. Is active if 30 [MainProgr] is selected in menu item [C]. The tap continues to flush with the input value after the object has been removed from the detection range	a) Hygiene b) Cleaning of implements	1–180 s [...]	120 s [120]
44 [WSaverT] [TWSparenZ]	Select running time water saver. Is active if 30 [MainProgr] is selected in menu item [B]. The tap flushes as long as an object is in the detection range but not longer than the input value	a) Water saver b) Extracting a certain amount of water	3–180 s [...]	10 s [10]
45 [DetectRng] [Erfassdis]	Set detection range. Manual setting [0]: Place your hand in the detection range until the LED in the IR window flashes. Hold your hand in the desired detection distance until the LED lights up for one second and a water impulse follows	Individual adjustment of the detection distance	Manual 5–33 cm = [0] 11–14 cm = [1] 16–19 cm = [2] 21–24 cm = [3] 26–29 cm = [4] 31–33 cm = [5]	16–19 cm [2]
46 [SensorUp] [SensOben]	Set upper sensor operation. Off: IR sensor is switched off. (It is not possible for both IR sensors to be switched off at the same time) Auto: IR sensor switches automatically to "Dynamic" if required. Dynamic: IR sensor only reacts to moving objects	Improvement of the detection safety in case of external influences (e.g. strongly reflecting objects in the room)	Off = [0] Auto = [1] Dynamic = [2]	Auto [1]
47 [SensorLow] [SensUnten]	Set lower sensor operation. Off: IR sensor is switched off. (It is not possible for both IR sensors to be switched off at the same time) Auto: IR sensor switches automatically to "Dynamic" if required. Dynamic: IR sensor only reacts to moving objects	Improvement of the detection safety in case of external influences (e.g. strongly reflecting washbasins)	Off = [0] Auto = [1] Dynamic = [2]	Auto [1]

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Counters

Menu item [EN] [DE]	Description	Output
50 [Days?] [SumBetrT?]	Total number of days of operation. Displays the number of days of operation since commissioning	[...] days
51 [Uses?] [SumBenut?]	Total number of uses. Displays the number of uses since commissioning	[...] uses
52 [IntFlush?] [SumIntSp?]	Total number of interval flushes. Displays the number of interval flushes since commissioning	[...] flushes
53 [ϟDays] [ϟSumBetrT]	Number of days of operation power-on. Displays the number of days of operation since the unit was last switched on	[...] days of operation
54 [ϟUses] [ϟSumBenut]	Number of uses power-on. Displays the number of uses since the unit was last switched on	[...] uses
55 [ϟIntFlush] [ϟSumIntSp]	Number of interval flushes power-on. Displays the number of interval flushes since the unit was last switched on	[...] flushes

Unit info

Menu item [EN] [DE]	Description	Output
60 [TypeNo] [Modell-Nr]	Type number. Indicates the article number of the tap (does not apply if the IR sensor has been replaced)	[...]
61 [SWVersion] [SWVersion]	Software version. Indicates the software version of the IR sensor (e.g. [0312] = version 3.12)	[...] XXZZ
62 [SerialNo] [Serien-Nr]	Serial number. Indicates the serial number of the current IR sensor	[...]
63 [ManufDate] [ProdDatum]	Manufacturing date tap. Indicates the manufacturing date of the tap. Does not apply if the IR sensor has been replaced (e.g. [1007] = calendar week 10, 2007)	[...] WWYY
64 [TypePower] [Netz/Batt]	Type of power supply. Indicates whether it is a mains-operated (AC) or a battery-operated (DC) tap	DC = [0] AC = [1]
65 [Battery%] [Batterie%]	Battery capacity. Indicates the current battery capacity in %. The battery must be replaced at 00 %	[...] %

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Manual settings

The tap allows to set a limited number of functions manually without using the Geberit Service Handy. The setting is performed with the infrared sensor.
The manual mode must be activated before the functions A–E can be set (see "Activating manual mode").

Overview of functions

Functions A–E		Description
A	Enable cleaning	Enables one person to manually start the cleaning function (see "Care and maintenance"). The function remains continuously activated. See "A – Enabling cleaning" on the following pages
B	Set flush time to factory setting	The flush time is set to the factory setting. The tap flushes as long as an object is in the detection range. See "B – Setting the flush time to the factory setting" on the following pages
C	Set water saver	The tap flushes as long as an object is in the detection range but no longer than 10 s. See "C – Setting the water saver" on the following pages
D	Set run-on time to 120 seconds	Once you have removed your hand, the tap will continue to flush for 120 s. See "D – Setting the run-on time to 120 seconds" on the following pages
E	Set the detection distance	The detection distance from the IR sensor to the hand is set. See "E – Setting the detection distance" on the following pages
Further functions		
	Reset all settings	All settings are reset to the factory settings and manual mode is deactivated. See "Resetting all settings" on the following pages

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Activating manual mode

The following instructions show a battery-operated tap. The same procedure applies to mains-operated and generator-operated taps.

The manual mode is active for 30 min. All functions can be set within this period.

Prerequisites

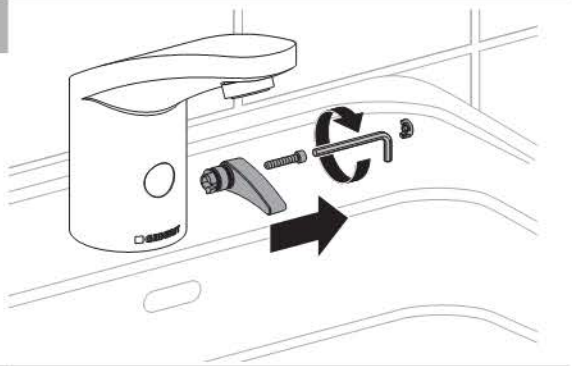
- Tap is operable
- Water supply valve is open
- Battery is fully charged (LED in the IR window does not flash)
- Mains current is present

CAUTION

Short-circuiting the spring contact probes and battery terminals can result in burns or damage to property.

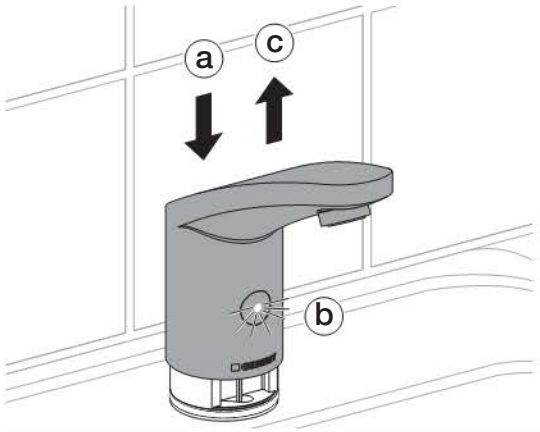
- Ensure that the tap housing is only ever pushed onto the valve block in the correct position.
- Only connect the battery to the contacts in the battery holder.

1



2

3 Steps a–c must be performed four times in a row. (a) Press the tap housing onto the contacts until (b) LED lights up for 1 s then (c) push the tap housing back up immediately by 3 cm.



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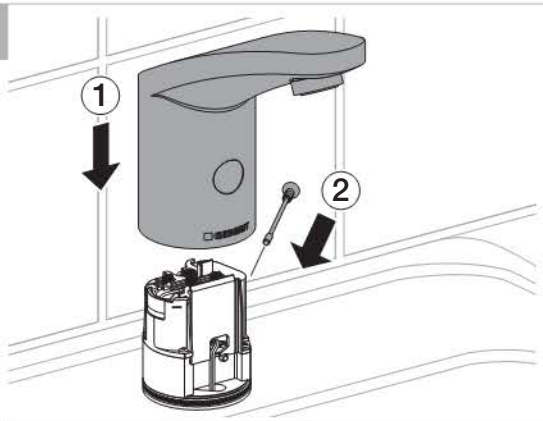

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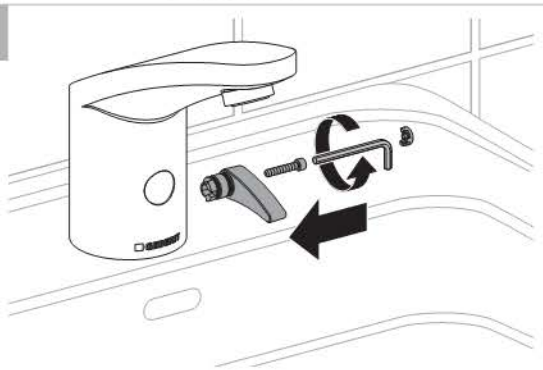

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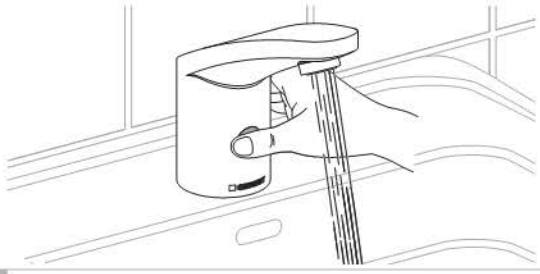
A – Enabling cleaning

Enables one person to manually start the cleaning function (see "Care and maintenance"). The function remains continuously activated.

1. Activate manual mode (see "Activating manual mode"). Manual mode will remain active for 30 min. Set the function within this period.
2. Cover the IR window completely with your hand. Water will stop after 5 s.

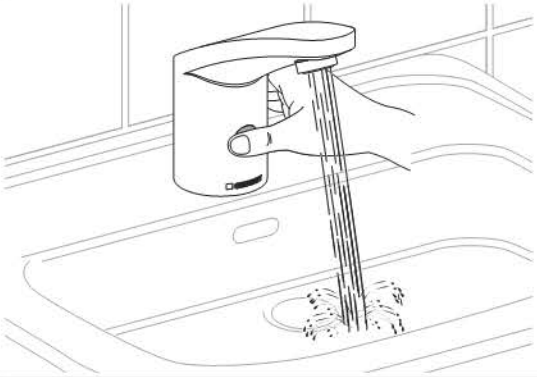


3. Remove your hand immediately.

B – Setting the flush time to the factory setting

The flush time is set to the factory setting. The tap flushes as long as an object is in the detection range.

1. Activate manual mode (see "Activating manual mode"). Manual mode will remain active for 30 min. Set the function within this period.
2. Cover the IR window completely with your hand. Water will stop after 5 s. Wait until a further water impulse has occurred.

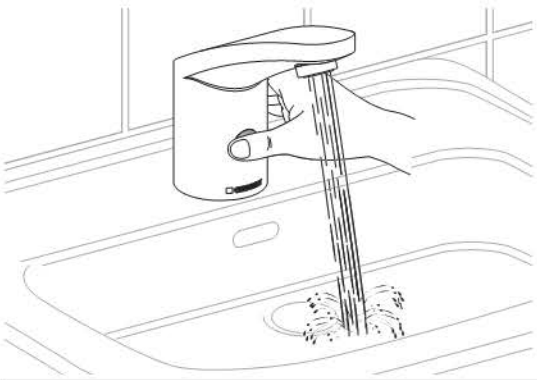


3. Remove your hand immediately.

C – Setting the water saver

The tap flushes as long as an object is in the detection range but no longer than 10 s.

1. Activate manual mode (see "Activating manual mode"). Manual mode will remain active for 30 min. Set the function within this period.
2. Cover the IR window completely with your hand. Water will stop after 5 s. Wait until 2 further water impulses have occurred.

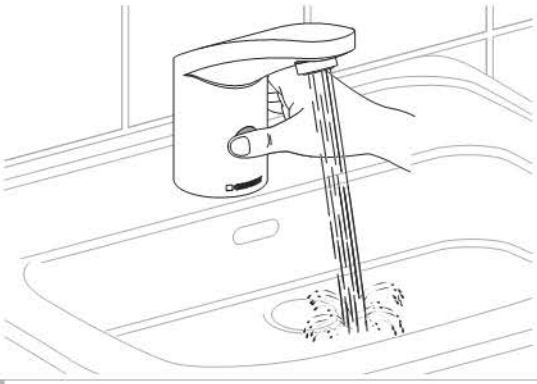


3. Remove your hand immediately.

D – Setting the run-on time to 120 seconds

Once you have removed your hand, the tap will continue to flush for 120 s.

1. Activate manual mode (see "Activating manual mode"). Manual mode will remain active for 30 min. Set the function within this period.
2. Cover the IR window completely with your hand. Water will stop after 5 s. Wait until 3 further water impulses have occurred.



3. Remove your hand immediately.

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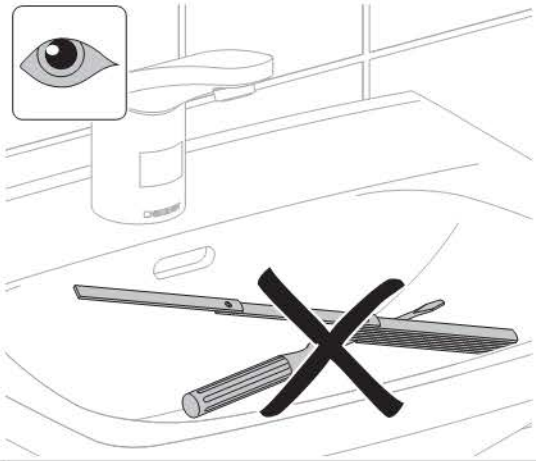
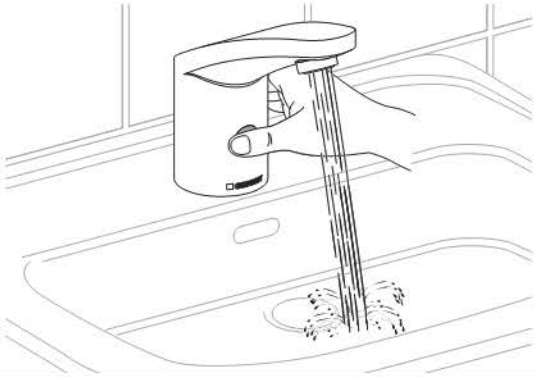
E – Setting the detection range

The detection distance from the IR window to the hand is set.

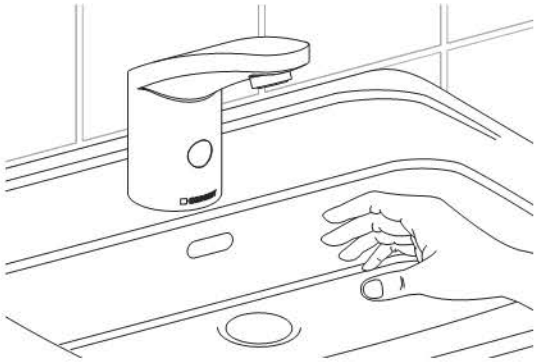
1. Activate manual mode (see "Activating manual mode"). Manual mode will remain active for 30 min. Set the function within this period.
2. Remove all objects from the detection range.



3. Cover the IR window completely with your hand. Water will stop after 5 s. Wait until 4 further water impulses have occurred.



4. Remove your hand immediately. The function is now activated.
5. Hold your hand at the current detection distance until the LED in the IR window flashes. Then place your hand at the desired detection distance until the LED is constantly lit for 1 s and a water impulse follows for 1 s.



Reset all settings

All settings are reset to the factory settings and manual mode is deactivated.

- The process for resetting the control is the same as for "Activating manual mode", but step 3 must be repeated six times.

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Care and maintenance

The following maintenance work is required as needed but no later than on the specified time interval:

- Cleaning the surface – weekly
- Cleaning the tap aerator – monthly
- Cleaning the basket filter – yearly

Cleaning the surface (cleaning function)

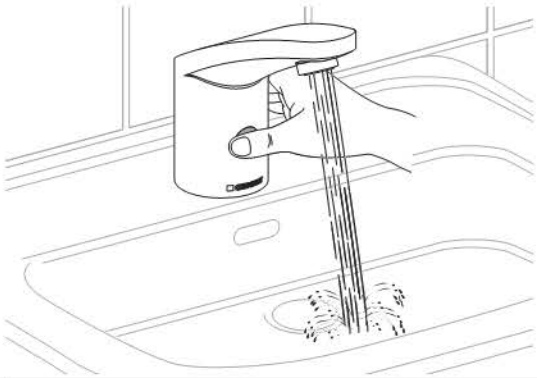
The tap can be deactivated for 90 s for cleaning purposes.

Prerequisites

The cleaning function is enabled (see "Settings using the Geberit Service Handy", "Enabling cleaning").

CAUTION
Aggressive and scouring cleaning agents will damage the surface.
- Never use aggressive cleaning agents that are acidic, abrasive or corrosive or contain chlorine. Only use water and a mild cleaning agent.

1 Cover the IR window completely with your hand. The flow of water stops after 5 s.



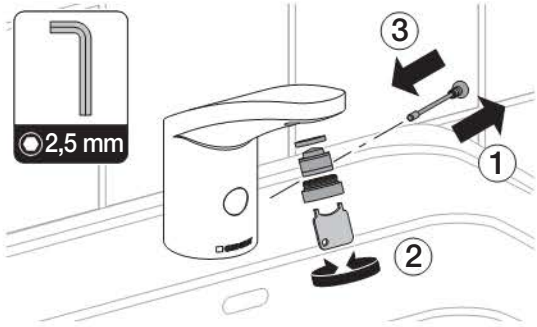
2 Remove your hand. The cleaning function is now active.

3 Clean the tap with a soft, damp cloth.

4 Dry the tap with a soft, dry cloth.

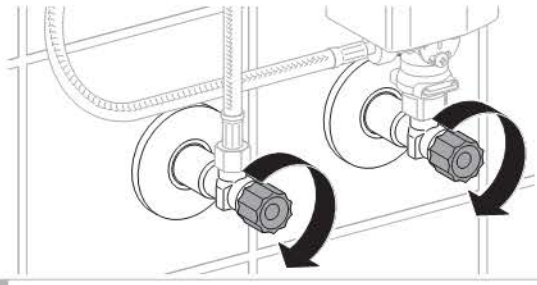
Cleaning the tap aerator

▸ Remove the shut-off screw and the tap aerator using the key provided. Clean the tap aerator and reinstall the shut-off screw.



Cleaning the basket filter

1 Close the angle stop valves.



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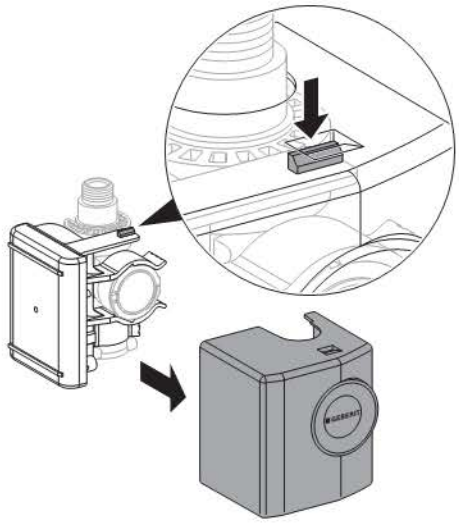
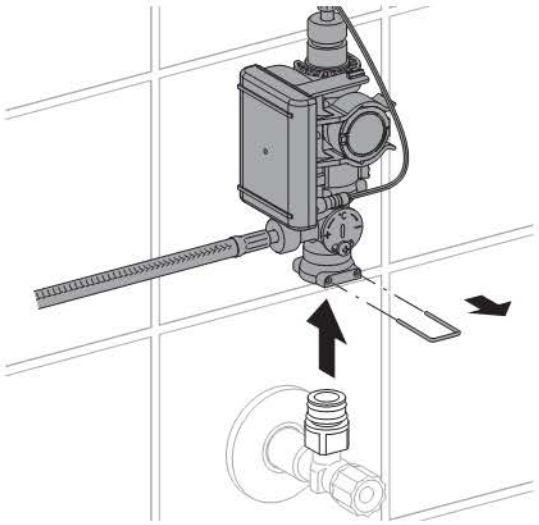


3 Remove the generator. (version with below-desk mixer)



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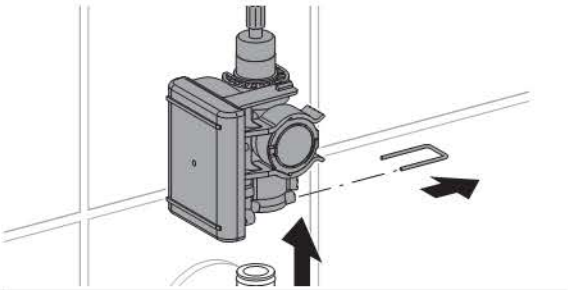
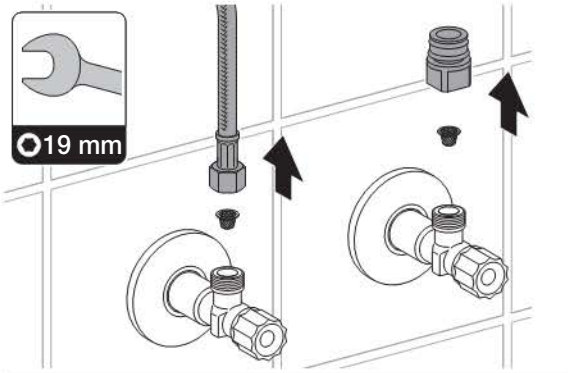
(version without below-desk mixer)



4 Unscrew the screw connections.



5 Clean the basket filter.

6 Reassemble everything by following the steps in reverse order.

7 Open the angle stop valves.

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