Gebrauchs- und Montageanleitung
Operating and installation instructions

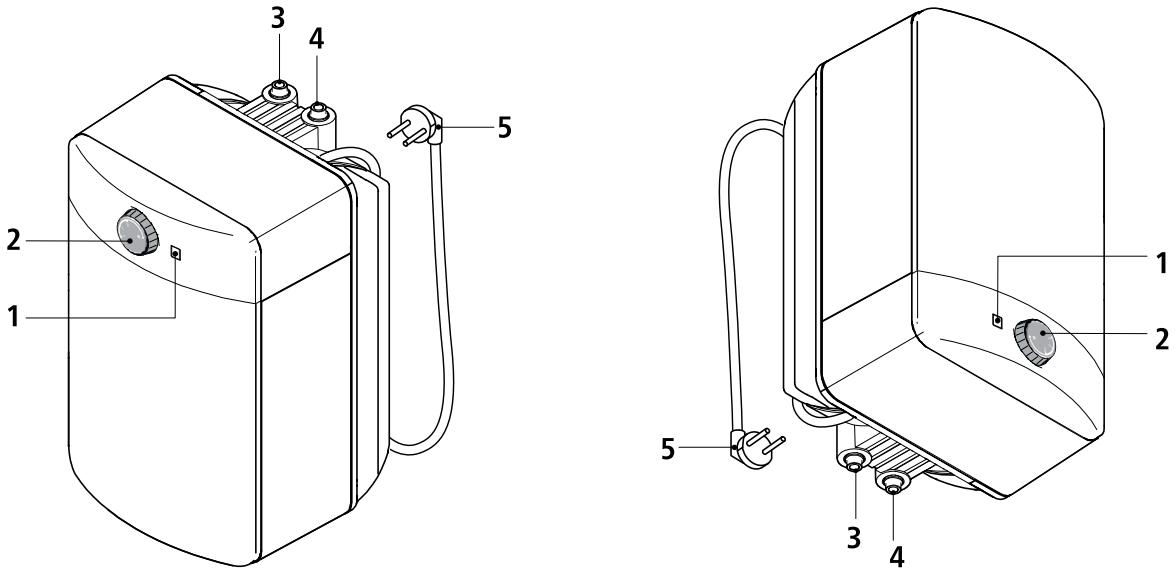
Warmwasserspeicher S10 / S15

Water storage heater S10 / S15

06.16

Contents

1. Overview



Pos.	Description
1	Indicator light
2	Temperature selector
3	Hot water connection

Pos.	Description
4	Cold water connection
5	Power connection cable with earthed plug

2. Safety instructions

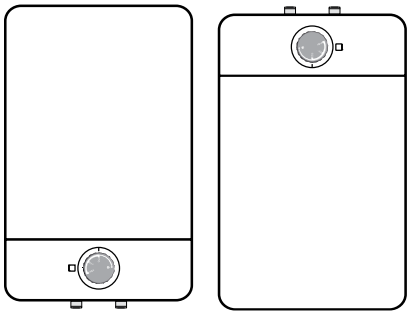
Please read these instructions carefully before installing or using the appliance! Keep the instructions handy with the appliance for future use!

Instruction manuals are intended for the specialist who is responsible for the installation of the appliance. Operation manuals are for the end user. The provided manuals correspond to the technical specifications of the appliance.

The latest version of the instructions can be found online at www.clage.com.

- Do not use the appliance until it has been correctly installed and unless it is in perfect working order.
- Do not remove the front cover under any circumstances before switching off the mains electrical supply to the unit.
- Never make technical modifications, either to the appliance itself or the electrical leads and water pipes.
- The appliance must be earthed at all times.
- Pay attention to the fact that water temperatures in excess of approx. 43 °C are perceived as hot, especially by children, and may cause a feeling of burning. Please note that the fittings and taps may be very hot when the appliance has been in use for some time.
- The appliance is only suitable for domestic use and similar applications inside closed rooms, and must only be used to heat incoming water from the mains supply.
- The appliance must never be exposed to frost.
- The values stated on the rating plate must be observed.
- In case of malfunction, disconnect the fuses immediately. In case of leaks, cut off the mains water supply instantly. Repairs must only be carried out by the customer service department or an authorised professional.
- This appliance can be used by children aged 3 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be performed by children without supervision.
- Water due to expansion drips from the outlet of a low-pressure fitting or from the relief valve while the water is being heated. The overflow line must not be shut off!
- Jet regulators must not be used on low-pressure fittings so that the water due to expansion can drain off without obstruction
- Never lift the water storage heater by pulling at the cable or the flexible connecting hoses.

3. Description of the appliance



The electric water storage heater S 10 / S 15 contains an inner copper container for supplying hot water to one or more taps situated in close proximity to one another, e.g. kitchen sink or two wash basins. The technical specifications are listed below.

The water storage heater can be installed as closed-outlet (with safety module) or as open-outlet (with a suitable low-pressure fitting) device.

The appliance is designed for installation above or below the sink and must be installed according to the type only.

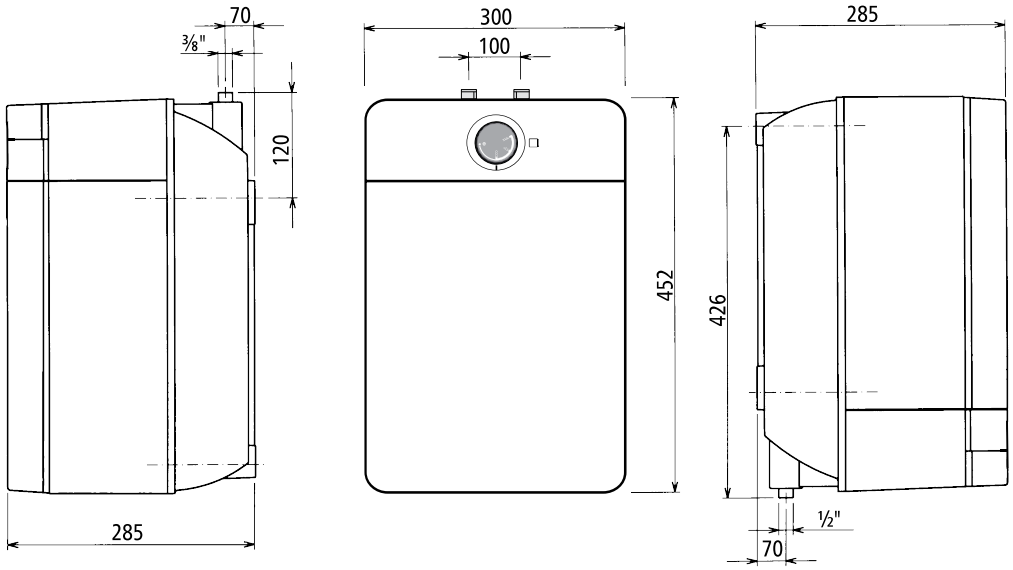
The water in the boiler is heated to the temperature set on the appliance and then stored.

4. Technical specifications

Type		S 10-U	S 10-O	S 15-U	S 15-O
Order no.		42103	41103	42153	41153
Capacity	l	10	10	15	15
Energy efficiency class		A			B
Type of system (nom. pressure)		Pressure type, 8 bar			
Inner container		Copper			
Insulation		Polyurethane			
Nominal loading at 230 V	kW	2,2			
Nominal voltage 230 ~	V	~ 230			
Rated current at 230 V	A	10	10	10	10
Water connections	inch	⅜	½	⅜	½
Mixed water capacity [1]	l	20	20	30	30
Temperature range	°C	5 - 80	5 - 80	5 - 80	5 - 80
Temperature selection		Control knob			
Heating time for Δt = 55 K [2]	min	17	17	26	26
Stand-by consumption [3]	kWh	0.34	0.30	0.49	0.43
Empty weight [4]	kg	6,5	6,5	7,5	7,5
Type of protection acc. VDE		IP 24			

*) The declaration complies with the EU regulation No 812/2013. The product data sheet is attached at the end of this document.
1) Mixed temperature 40 °C with hot temperature 65 °C and cold temperature 15 °C
2) Cold water temperature 10 °C
3) Stand by power consumption with 55 °C / 24 h
4) The water capacity should be added to the weight

5. Dimensions



6. Installation

The following regulations must be observed:

- **VDE 0100**
- **EN 806**
- **The regulations of the local power and water utilities**
- **The specifications on the rating plate**
- **Technical specifications**

General information:

- The appliance may only be installed in a frost-free room.
- The water supply must be connected **before** the electrical supply.
- Galvanized steel piping must not be installed downstream of the storage heater with copper container, otherwise corrosion due to pitting may result.

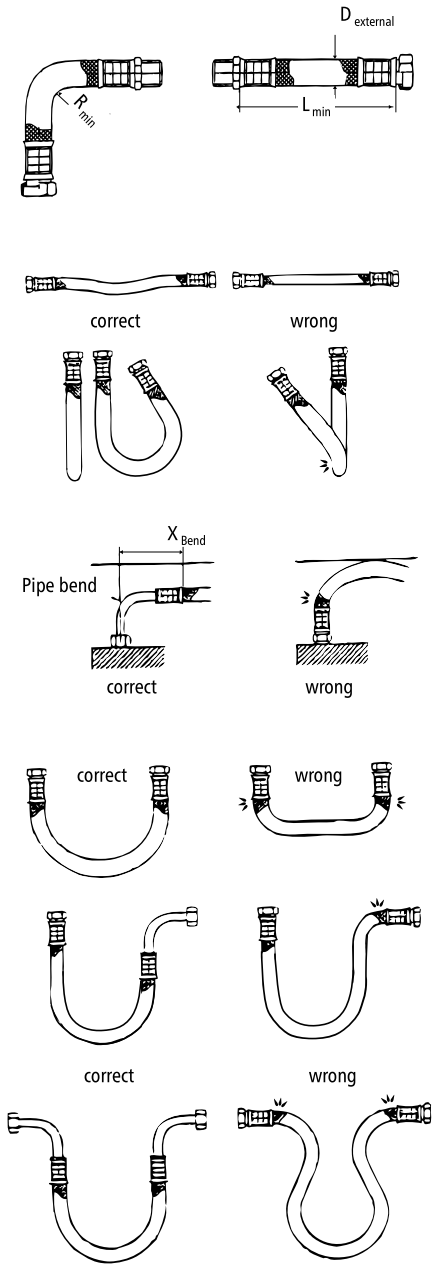
The water storage heaters S 10 / S 15 are designed for pressure-type and pressure-less installation.

Requirements for water quality

Water Quality		
Acid level	pH	7 - 8,5
Iron level (Fe)	mg/l	< 0,2
Chlorine content (Cl)	mg/l	< 150
Conductivity	mS/m	< 125
Water hardness		3 - 12 °dH / 5 - 22 °fH / 0,53 - 2,14 mmol/l $CaCO_3$
Chemical additives		not allowed

In areas with higher levels of water hardness than listed in table, an appropriate filter must be installed. The water supplier can tell you the hardness level of the water they deliver.

6. Installation



Flexible connecting hoses

Installation guidelines

Hose DN	$D_{external}$	PN	R_{min}
8 mm	12 mm	20 bar	27 mm

Ensure sufficient equipotential bonding.

- The permissible bending radius R_{min} = 27 mm must be observed at all times, including during transport and assembly as well as when installed. If it is not possible to observe the minimum bending radius, a different installation method should be used or a suitable hose should be selected.

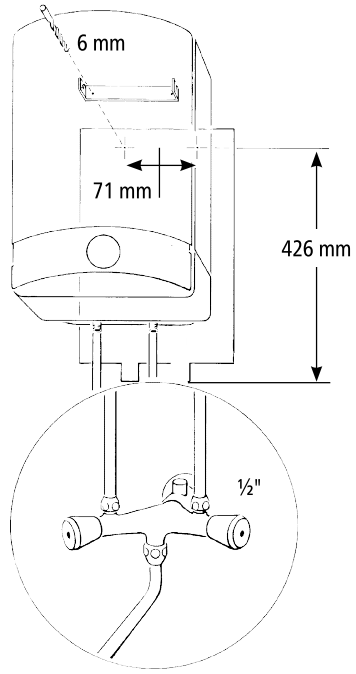
Please refer to the table for the minimum length

L_{min}	L_{min} α = 90°	L_{min} α = 180°	L_{min} α = 360°
60 mm	140 mm	180 mm	260 mm

- For curved installation there must be sufficient hose length available to form an open loop, as otherwise the hose will become kinked at the joints and thus destroyed.
- The hose length may change slightly due to the effects of pressure or heat. For straight installation, allowance should therefore be made to compensate for changes in the hose length.
- Never twist or kink the flexible connection.
- Ensure that the hose is never stressed by external tensile or compressive forces during assembly or when in use.
- Rigid connections (external thread) should not be further tightened after attaching the second connection, as this causes twisting and may damage the hose.
- The hose installer is always responsible for ensuring a tight join.
- The installer should check any sealing material supplied with the hose to ensure that it is suitable, as the hose manufacturer does not know the connection material or geometry.

6. Installation

Oversink (S 10-O / S 15-O)



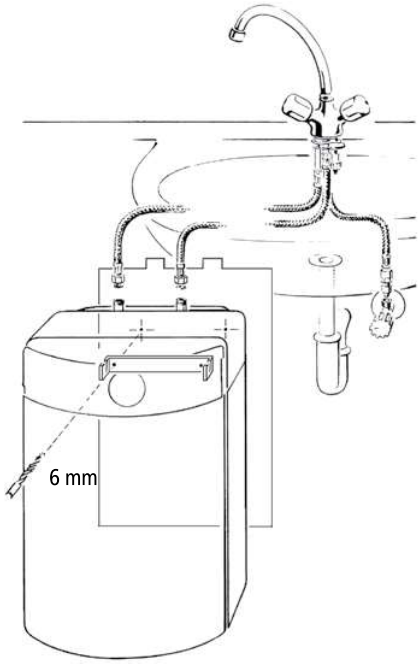
Pressure-less installation (open-outlet)

- For one outlet only.
- A special low-pressure mixing battery for pressure-less installation is required. This fitting permits relatively simple, reliable installation. The appliance is automatically installed without pressure when using the low-pressure fitting.
- Use of the low-pressure mixing battery ensures that the storage heater is never subjected to the pressure of the water mains. The open outlet of the mixing battery allows the water due to expansion to drain off freely.
- The outlet must always be free. Jet regulators must not be used. Water due to expansion drips from the outlet as the water is heated.

Low-pressure mixing battery for undersink installation: e.g. SNO, Art. No. 4100-0110

- Set the flow rate as per DIN 44531 or according to the specifications in the installation manual of the fitting.

Undersink (S 10-U / S 15-U)

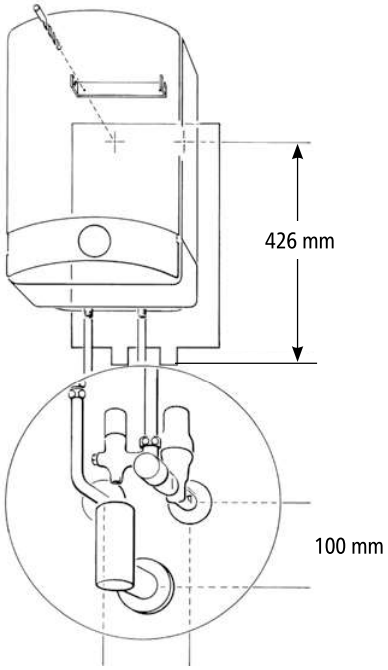


Low-pressure mixing battery for undersink installation: e.g. SNT, Art. No. 4100-02100

- Set the flow rate as per DIN 44531 or according to the specifications in the installation manual of the fitting.

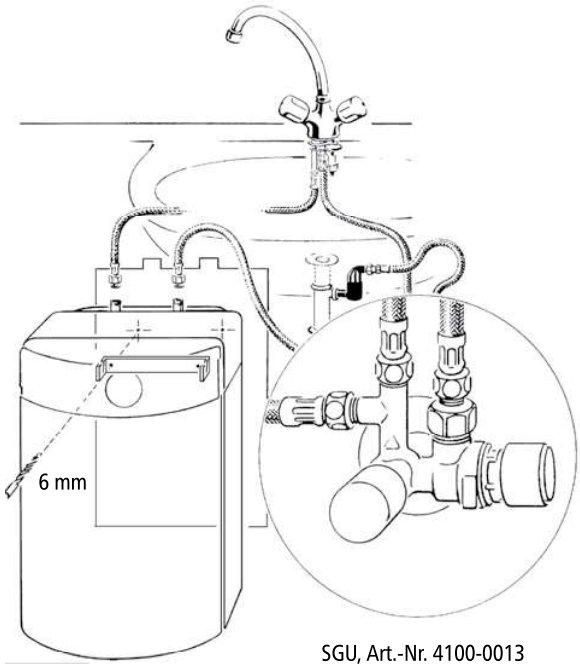
6. Installation

Oversink (S 10-O / S 15-O)



SG, Art.-Nr. 4100-0011 for S 10-O,
SGM, Art.-Nr. 4100-0012 for S 15-O

Undersink (S 10-U / S 15-U)

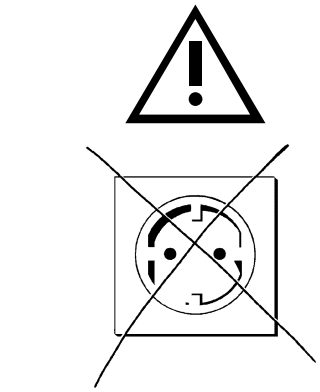


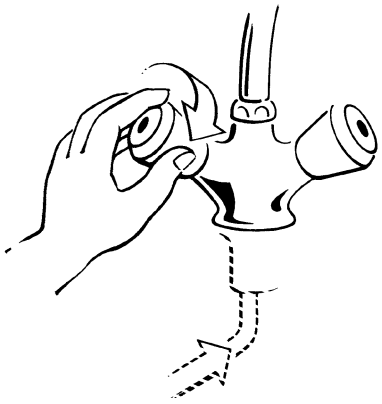
SGU, Art.-Nr. 4100-0013

Pressure-type installation (closed-outlet)

- Suitable for one or more taps.
- Any suitable mixing battery may be used, provided that it is approved for use with water storage heaters.
- A type-tested relief valve to DIN 1988 must be installed in the water supply line for pressure-type installation.
- Water due to expansion drips from the overflow valve as the water is heated. The overflow must never be blocked.
- The overflow valve of the pressure-relief device must be connected to a water drainage via a discharge pipe with continuous drop.
- A one-way restrictor or shutoff valve must never be installed between the pressure-type storage heater and diaphragm safety valve.
- The water pressure at the cold water connection must not exceed 5 bar, otherwise a pressure reducing valve must be installed. The water storage heater is subjected to the full pressure of the water mains downstream of the connection.
- For safety reasons, the appliance must be inspected by a professional at regular intervals of not more than two years.

7. Initial operation





Important: The appliance must be completely filled with water before being started up!

S 10 / S 15 for operation on 230 V AC and must be connected to a professionally installed, earthed socket outlet. Multiple connectors must not be used.

1. Ensure that the appliance is not plugged in and that the fuse is deactivated.
2. Slightly open the relief valve for pressure-type installation (see chapter "Maintenance").
3. Turn on the main water tap or shut-off valve and the hot water tap of the installed mixing battery to fill the appliance until bubble-free water emerges from the outlet.
4. Flush the water storage heater for 3 minutes with fully opened hot water tap.
5. Check the system for leaks and remedy these if necessary.
6. Set the temperature selector to position ❄.
7. Plug the appliance into the mains power supply.
8. Set the required temperature and remain in attendance while the water heats up. The indicator lamp lights up while the water is being heated. Water due to expansion drips from the outlet of a low-pressure fitting and from the overflow relief valve of a pressure-type installation while the water is being heated.
9. Check the relief valve after 4 minutes. Due to expansion water drips out of the outlet of a low-pressure fitting or out of the relief valve while the water is heated.

Attention! If no expansion water drips out, shut off the power supply immediately. Open the hot water tap to release the pressure. For troubleshooting you can find hints in the chapter "Troubleshooting and service".

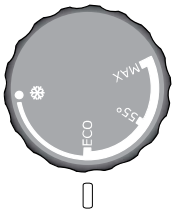
10. If the indicator light switches off, the water has reached the set temperature.

Note: Flush the water storage heater when you put it into operation for the first time or if it was out of usage for more than a week.

1. After heating, let the water stay in the storage water heater for one hour.
2. Open the hot water tap and wait until cold water drains out.
3. Close the hot water tap.
4. Repeat the steps 1-3 three times.

8. How to use

S10-O / S 15-O



S10-U / S 15-U

Via the temperature selector the temperature can be continuously adjusted in a range of 5 to 80 °C.

The water is dispensed via the hot water tap of the installed fitting and can then be mixed with cold water.

Temperature selection

Setting	°C	Function
❄	5	This switch setting protects the appliance against frost damage
Eco	30	Economy setting "Eco", usually for wash basins
55°	55	55 °-setting, usually for kitchen sinks
MAX	80	Setting for hot water and when large amounts of warm water are required

The storage heater cannot be switched off via the temperature selector. It can only be switched off by disconnecting the mains plug.

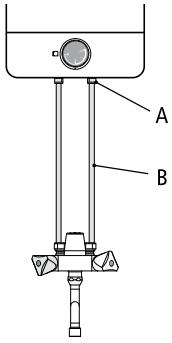
Note: Please avoid the temperature setting between 25 and 55 °C if the heater is not in use every day due to the risk of legionella bacteria.

Legionella prevention

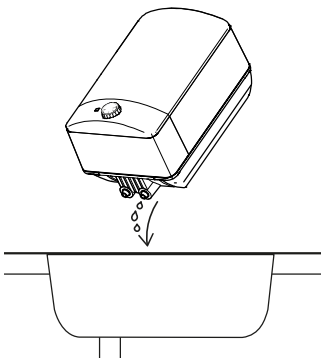
If the water storage heater is out of use for more than a week, legionella bacteria can arise in the water tank. In this case you need to flush the appliance (see flush procedure in chapter "Initial operation").
Do not breathe in any potential rising steam.

9. Drain water storage heater

S10-O / S 15-O



S10-U / S 15-U



Preparation

1. Pull out the main plug.
2. Open the hot water tap and wait until cold water drains out.

Attention! Make sure that the storage water heater is flushed completely with cold water.

3. Close the hot water tap.
4. Close the water supply of the storage water heater.
5. Open the hot water tap to release the pressure out of the system.
6. Close the tap if no more water drains out.

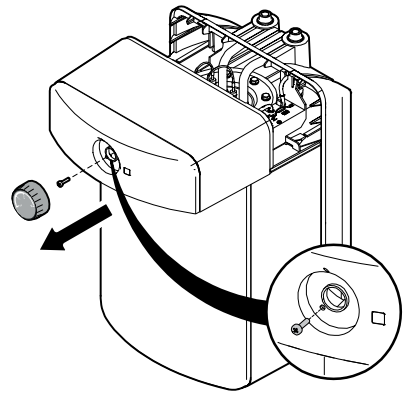
S 10-O / S 15-O

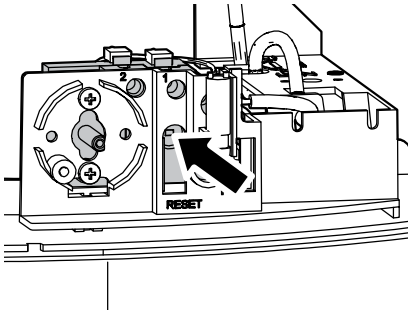
- Disassemble the cold water pipe (B) from the cold water connection (A)
- Catch any leakage water which possible drips out.
- Connect a flexible connecting hose at the cold water connection and put the other end of the hose into a sink.
- Open the hot water tap to ventilate the storage water heater. The water will then drain out via the hose.

S 10-U / S 15-U

- Disassemble the water connecting hoses directly at the storage water heater.
- Catch any leakage water which possible drips out.
- Place the storage water heater over a sink and turn it upside down. The water will now drain out until it is empty.

10. Reset safety thermal cut-out





Attention! These works must only be conducted by an authorised professional.

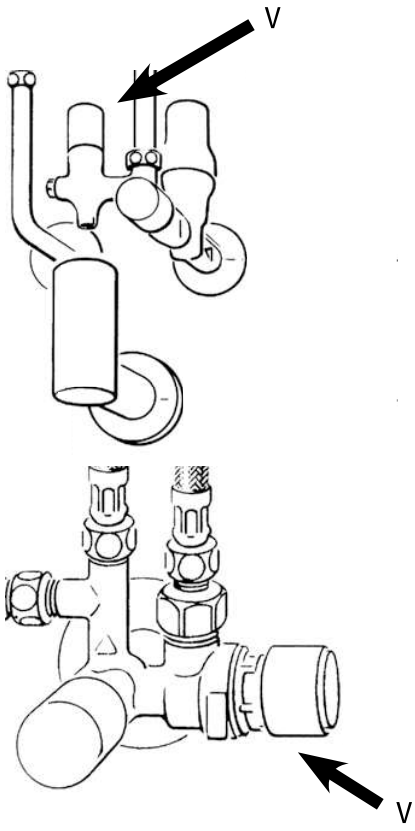
Note: You must not reset the safety thermal cut out if it was triggered while the storage water heater was empty. In this case the thermostat and the safety thermal cut out need to be replaced. Please contact the CLAGE customer service for this purpose.

1. Pull out the main plug.
2. Remove the temperature selector by pulling it forward.
3. Loosen the screw which is located behind the temperature selector.
4. Remove the hood by pulling it forward carefully.
5. Reset the safety thermal cut out by triggering the reset button with a screwdriver.
6. Replace the hood carefully. When mounting the hood ensure that no cables are pinched or clamped!
7. Replace the screw and tighten it.
8. Push the temperature selector back onto the shaft.
9. Start up the storage water heater according to the chapter “Initial operation“.

11. Cleaning and maintenance

- Plastic surfaces and fittings may only be wiped with a damp cloth. Never use abrasive cleaning agents or solvents.
- The electrical and plumbing components should be inspected by an approved professional every two years to ensure proper functioning and operational safety at all times.

12. Relief valve

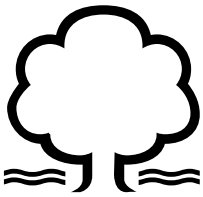


Note the operating instructions for the fittings and safety mechanisms!

Relief valve for pressure-type installation

- The relief valve of a pressure-type system must be vented slightly at regular intervals (once per month) to ensure proper functioning.
- Turn the valve cap (V) anticlock-wise until the valve opens and water drains from the outlet into the funnel. Reclose the valve. If this does not work, disconnect the appliance and call a professional to examine the relief valve.
- If water constantly drips from the relief valve, it is probably soiled. In this case too, it should be examined by a professional.

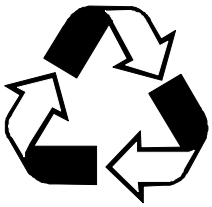
13. Environment and recycling



Save energy and water

The water storage heater operates most economically when set to 55 °C. Scale builds up more rapidly in the appliance at higher water temperatures and the heat loss is also higher.

Reducing the water flow will help to save valuable drinking water.



Packaging and materials

Your product was manufactured from high-quality, reusable materials and components. Please respect in case of discarding that electrical devices should be disposed of separately from household waste at the end of their service life. Therefore, please take this device to a municipal collection point that accepts electronic scrap. Disposing it correctly will support environmental protection and will prevent any potential negative effects on human beings and the environment that could arise from inappropriate handling of these devices at the end of their service life. Please contact your local authority for further details of your nearest designated collection point or recycling site.

Business customers: If you wish to discard equipment, please contact your dealer or supplier for further information.

14. Troubleshooting and service

Repairs must only be carried out by authorised professionals.

If a fault in your appliance cannot be rectified with the aid of this table, please contact the service organisation of your importer or the Central Customer Service Department. Please have the details of the typeplate at hand.

CLAGE GmbH
Central Customer Service
Pirolweg 1–5, 21337 Lüneburg, Germany
Tel.: (+49) 4131 89 01-40
Fax: (+49) 4131 89 01-41
E-Mail: service@clage.de

Problem	Remedy
Water does not flow	check and open main water tap, service valve, shut off valve if necessary
	check fittings and hose connections
Little water flows	check water pressure (< 1.5 bar)
	clean jet nozzle at outlet, clean micro-filter
	in service valve / relief valve if necessary
Water does not heat up	check fuse and electrical connection
	check temperature setting on appliance
	call customer service department to check thermal cut-out, thermostat or heating element if necessary
Water not hot enough	check temperature setting on appliance
	check temperature limitation
	too much hot water may have been withdrawn within a short space of time, wait for the water to heat up again
Steam emerges	have the appliance checked by a customer service engineer
Short-circuit (fuse tripped)	have the appliance and its installation checked by a customer service engineer
No expansion water	pull out the main plug and contact the customer service.

If the connection cable is damaged, it must be replaced with an original spare cable from the manufacturer by an authorised technician in order to avoid any hazards.

If you cannot rectify the fault with the aid of the troubleshooting table, please contact the customer service.