

Operating Instructions

Please read these instructions carefully before using the appliance!



For your own safety

- Installation, commissioning and maintenance of this appliance may only be undertaken by an authorized professional who will then be responsible for adherence to the applicable standards and installation regulations.
- The appliance may only be used when correctly installed and in perfect working order!
- The appliance must be stored and installed in a frost-free room!
- The appl. must be completely filled with water before switching it on!
- The appliance wiring and piping must not be modified in any way!
- The front cover of the appliance must never be opened before disconnecting the appliance from the mains power supply!
- **The appliance must not be put under pressure. The outlet of the appliance is also used as a vent. A periodical scale removal is essential for the function of the shower head.**

Description of appliance

The appliance is a pressureless (open outlet) electric instantaneous water heater, e.g. for a shower. As an option a swivel spout is available for oversink installation. Technical specifications overleaf!

Use

The electric shower heater heats the water to the required temperature directly as it streams through. The flow is conveniently switched on and off by using the rotary ON/OFF button (7). The „Power“ indicator (2) lights up when the heater is switched on. The models CRS.. and CRX..-S differ from themselves by the way to control the temperature:

Models CRS 3..8:

The required water temperature is set via the flow rate and heating capacity. The heating capacity can be switched off or set to three different levels (low – medium – high) via the upper rotary knob (5a) while the flow rate is infinitely adjusted via the middle knob (6). By reducing the flow the temperature increases and vice versa. If the temperature rises too high, the temperature monitor will reduce the power supply until the water has cooled back to the permissible level. This is indicated by the „Overheat“ light (1). If this happens frequently although the heating capacity is reduced to minimum, the cause of the fault must be remedied and may be due, for example, to dirt in the filter, an excessive reduction in the rate of flow or an impermissibly high inflow temperature.

Models CRX 3..9-S:

The power is automatically adjusted by the electronics in line with the water flow rate in order to obtain the set temperature and keep it virtually constant. The required temperature can be set between cold (00), 30 °C and 45 °C with an accuracy of one degree via the two touch-sensitive membrane keys (5) and can be read off on the digital display (4).

If the full power of the instantaneous heater is not sufficient to heat the water to the required temperature, this is indicated by the flashing „Power“ indicator (2). The temperature can be restored by reducing the hot water flow rate via the rotary knob (6). At high feed temperatures, the power is automatically switched off by the electronics in order to avoid producing excessively hot water. This is indicated by the „Overheat“ lamp (1).

The „Pressure“ indicator (3) lights up when the flow rate is too low (< 2 l/min).

In general: Please note that it takes a little time until the outlet temperature is readjusted after the presettings have been changed.

Hot water capacity

The hot water capacity depends on the power of the appliance, the cold water temperature and the flow volume. The table „technical specifications“ (overleaf) shows the maximum temperature increase of the various types according to the flow volume. If these values are added to the water temperatures prevailing at the place of installation, we obtain the individual hot water temperatures. The maximum output temperature of the CRX..-S models is limited electronically to 45°C.

Maintenance and cleaning

- Plastic surfaces may only be wiped with a damp cloth. Never use abrasive cleaning agents or solvents.
- For a good water supply, the shower head should be cleaned at regular intervals or replaced by a new one recommended by the manufacturer.
- The electrical and plumbing components should be inspected by an authorized professional at least every three years to ensure proper functioning and operational safety at all times.

Cleaning the fine filter

The fine filter is located in the water connection and should be examined by an expert and cleaned if necessary not only when operation of the appliance deteriorates, but also in conjunction with regular servicing. Attention: Residual water comes out!

Troubleshooting

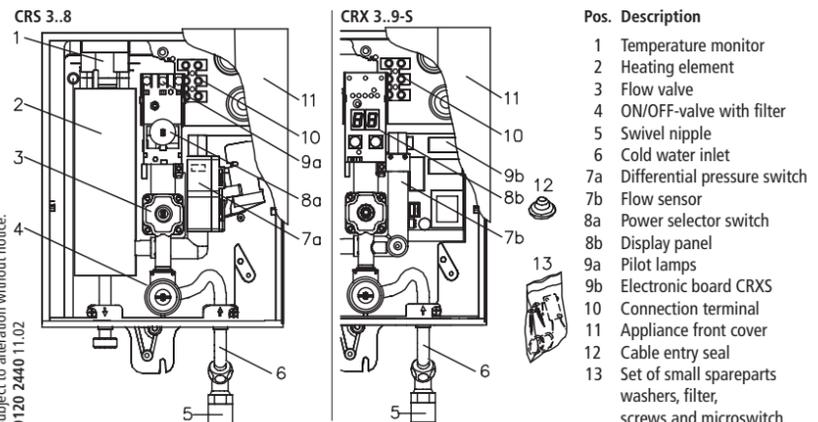
If you experience a malfunction, please try to rectify the fault yourself first with the help of this table. If a fault in your appliance cannot be rectified with the aid of this table, please contact CLAGE who will either assist you directly or put you in touch with a customer service contract partner in your area. Always specify the appliance model and serial number, please! **Repairs may only be carried out by authorized professionals. When carrying out any work, isolate the unit from the mains and shut off the water connection.**

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Problem	Possible cause	Solution
„Power“ indicator or LED remains off, water remains cold	Circuit breaker tripped	Have the fault rectified and reset
	Water pressure too low	Increase flow pressure
The pilot lamp „Power“ lights, water remains cold	Heating element or electronics faulty	Contact customer service
The pilot lamp „Low Pressure“ lights, water remains cold	Flow rate too low	Increase flow pressure
The pilot lamp „Overheat“ lights	Overtemperature	Check cold water feed temperature
	Dirt in tap or filter	Cleaning, Customer service
Water flows lower as expected	Depends on the heater	Check technical specifications
	Shower head dirty or calcified	Clean the shower head
	Filter dirty or calcified	Clean or renew the filter
	Shower head not suitable	Use CLAGE shower head
The hot water is not hot enough	Flow rate is too high (winter?)	Reduce the water flow slightly
	No full power	Select „high“ power
	Heating element defect	Contact customer service

Layout of appliance and spareparts

When ordering, please always specify the appliance model, nominal rating and serial number!



- | Pos. | Description |
|------|---|
| 1 | Temperature monitor |
| 2 | Heating element |
| 3 | Flow valve |
| 4 | ON/OFF-valve with filter |
| 5 | Swivel nipple |
| 6 | Cold water inlet |
| 7a | Differential pressure switch |
| 7b | Flow sensor |
| 8a | Power selector switch |
| 8b | Display panel |
| 9a | Pilot lamps |
| 9b | Electronic board CRXS |
| 10 | Connection terminal |
| 11 | Appliance front cover |
| 12 | Cable entry seal |
| 13 | Set of small spareparts washers, filter, screws and microswitch |

Installation instructions for the authorized technician

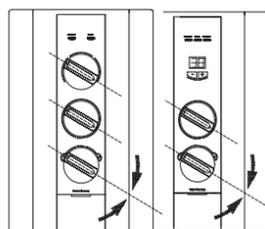
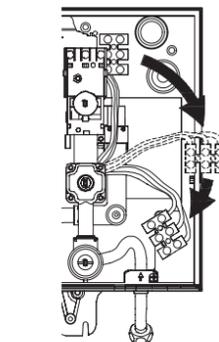
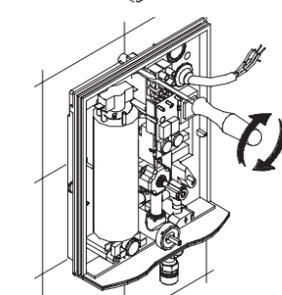
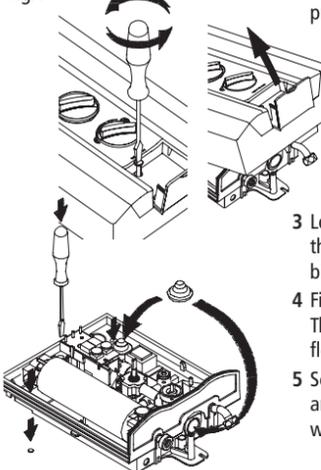
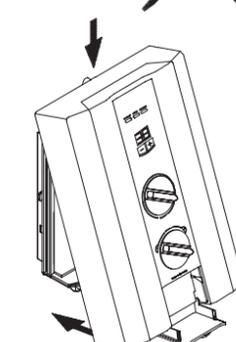
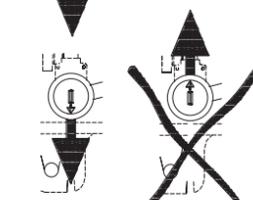


Fig.1



Rear of rotary knobs: align mount vertically with valve!



Technical specifications:

Type:	CRS 3/CRX 3-S	CRS 6/CRX 6-S	CRS 8 / CRX 9-S
Capacity:	0.2 litre		
Rating pressure:	open-outlet, 0 bar		
Heating system:	Tubular heater		
Nominal rating / -loading at 1/N/PE-220 V:	3,3 kW (15 A)	6,0 kW (27 A)	7,6 kW (35 A) / 8,0 kW (37 A)
Nominal rating / -loading at 1/N/PE-230 V:	3,6 kW (16 A)	6,6 kW (29 A)	8,3 kW (36 A) / 8,8 kW (38 A)
Nominal rating / -loading at 1/N/PE-240 V:	3,9 kW (16 A)	7,2 kW (30 A)	9,0 kW (38 A) / 9,6 kW (40 A)
Required conductor cross-section:	3 x 2.5 mm ²	3 x 4.0 mm ²	3 x 6.0 mm ²
Maximum temperature increase at 230 V and flow rate of 4 l/min:	12 °C ¹	24 °C ¹	30 / 32 °C ¹
flow rate of 5 l/min:	9 °C ¹	19 °C ¹	24 / 25 °C ¹
flow rate of 6 l/min:	8 °C ¹	16 °C ¹	20 / 21 °C ¹
flow rate of 7 l/min:	7 °C ¹	13 °C ¹	17 / 18 °C ¹
flow rate of 8 l/min:	6 °C ¹	12 °C ¹	15 / 16 °C ¹
¹ + cold water temperature = maximum hot water temperature			
Switch-on flow CRS.. / CRX..-S:	≥ 2 l/min ≥ 2.5 l/min / ≥ 2 l/min ≥ 3 l/min / ≥ 2 l/min		
Temperature presetting (CRX..-S only):	cold (00), 30 – 45 °C		
Suitable for areas with cold water temps. of:	28 – 30 °C	15 – 30 °C	10 – 20 °C
Cold water connection:	1/2" B.S.P. external thread, surface-mounted or flush-mounted		
Net weight and dimensions (H x W x D):	2.2 kg / 33 x 21 x 11 cm		
Protection class / type of protection to IEC:	1 / IP25		
Safety mark:	see rating plate		

The following must be observed:

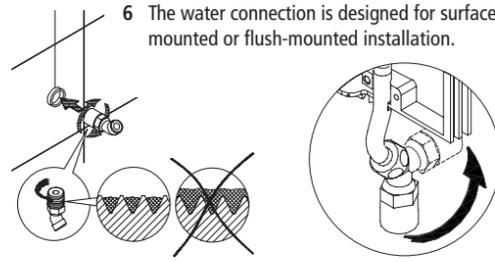
- The statutory regulations of the respective country, as well as those of the local electricity and water supply companies.
- The specifications on the rating plate and the technical specifications.

Installation site

- The installation site must be free from frost at all times.
- The appliance complies with protection type IP25 and may be installed in zone 1 acc. IEC
- Best performance is guaranteed at a flow pressure of ≥ 2 bar (0,2 MPa), avoiding pressures exceeding 6 bar (0,6 MPa).
- An isolation valve must be fitted in convenient position in the supply pipe to allow the water heater to be serviced.
- The spout also functions as a vent. Only special open-outlet (non-pressure) taps are allowed for installation with this appliance.

Installing the appliance:

- 1 Rinse water supply pipes thoroughly and turn off for installation.
- 2 **Align knobs as shown in Fig. 1.** Remove the front cover by unscrewing the locking screw behind the small lid.
- 3 Locate and break out the required holes and cable inlets. Mark the drilling holes with the appliance and drill them with a 6 mm bit.
- 4 Fit the rubber grommet supplied and insert the connecting lead. The lead must be secured with the cable clamp when using a flexible power cord.
- 5 Screw the appliance into position using the enclosed raw plugs and screws. The appliance has to be installed vertically on a wall with water connections downwards.
- 6 The water connection is designed for surface-mounted or flush-mounted installation.

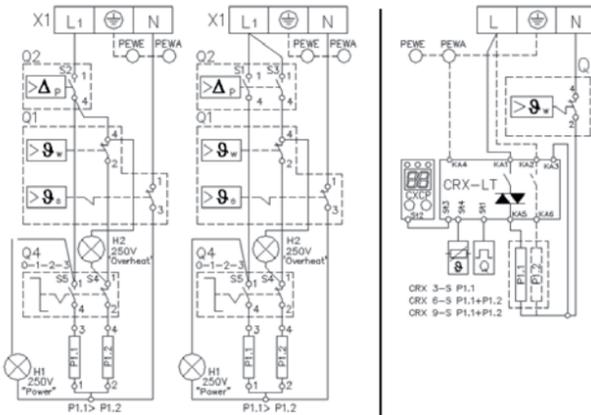


It must be carefully sealed with a little material when screwed into the wall connections.

- 7 The front cover must be neatly broken off at the designated points when installed on the wall.
- 8 Fit the shower hose with the shower head or the swivel spout to the outlet of the appliance and the riser rail.
- 9 Open the water supply to the appliance and the tap to check all connections for leaks.
- 10 Next, open and close the hot water tapping valve several times until no more air emerges from the line and all air has been eliminated from the heater.

Electrical connection:

The instantaneous water heater is an appliance of protection class I and must be connected to the protective earth conductor!



- 1 Check the power supply to be switched off prior to the electrical connection!
- The appliance must be connected to the supply by means of permanent wiring through suitable isolation having a contact separation of at least 3 mm in all poles.
- The cross sectional area of the connection cable must be in accordance with the power rating.
- To protect the appliance, a fuse element must be fitted with a tripping current commensurate with the nominal current of the appliance.

- 2 The connection cable should be sealed with the cable seal and carefully connected to the terminal block using leads as well as the earth conductor.

- The connecting terminal can be transferred to the bottom of the appliance if necessary.

- The cord anchorage can only be used for cable cross-sections up to 4 mm². The connecting cable must not be strained when the cord anchorage is not used.

- 3 Fit the front cover. If necessary, align the rotary control and the valve so that the mounting points form a vertical line. Secure the front cover with the fastening screw.

- 4 **Fill the appliance with water completely**, switch on the power supply to the appliance.

- 5 **Explain the use of the electric shower heater to the user and fold these instructions so that they can be stored behind the front panel.**

