

**Gebrauchs- und Montageanleitung**  
***Operating and installation instructions***



E-Kleindurchlauferhitzer  
MBH 3..7

*E-mini instant water heater*  
*MBH 3..7*



de > 3

en > 18

fr > 33

nl > 48

pt > 63

es > 78

cs > 93

sk > 108

bg > 122

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(At the end of this document)	

**Note: Carefully read the enclosed safety instructions through in full before the appliance is installed, put into service and used and follow them in the further steps and during use!**

## Description of appliance

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### 1. Description of appliance

This instantaneous water heater is intended to provide the economical heating of water sufficient for a single outlet, i.e. handwash basin, and is installed together with a sanitary water fitting.

When the hot water tap is opened, the instantaneous water heater switches itself on automatically and heats the water as it passes through the appliance. It is only then that the appliance uses electricity. The temperature increase depends on the flow rate.

#### 1.1 Technical specifications

Type		MBH 3	MBH 4	MBH 6	MBH 7
Energy efficiency class		A <sup>*)</sup>			
Capacity	Litre	0.2			
Rated Pressure	MPa (bar)	1 (10)			
Connecting type		pressure-resistant / pressureless			
Heating system		Bare wire heating system IES®			
Min. water resistance at 15 °C <sup>1)</sup>	Ωcm	1100			
Max. water inlet temperature	°C	20			
Rated voltage		1~ / N / PE 230 V AC			2~ / PE 400 V AC
Rated power	kW	3.5	4.4	5.7	6.5
Rated current	A	15.2	19.1	24.8	16.3
Required min. cable cross-section	mm <sup>2</sup>	1.5	2.5	4.0	1.5
Hot water output at Δt = 25 K <sup>2)</sup>	l/min	2.0	2.5	3.3	3.7
Switching on at	l/min	1.3	1.8	2.2	2.4
Switching off at	l/min	1.0	1.4	1.7	2.0
Approx. weight when filled with water	kg	1.5			
Protection class		IP25			
Marking / Approvals		see rating plate			

\*) The declaration complies with the EU regulation No 812/2013.

1) The specific resistance can be asked for at your water distribution company.

2) Temperature increase from e. g. 15 °C to 40 °C.

Description of appliance

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1.2 Dimensions

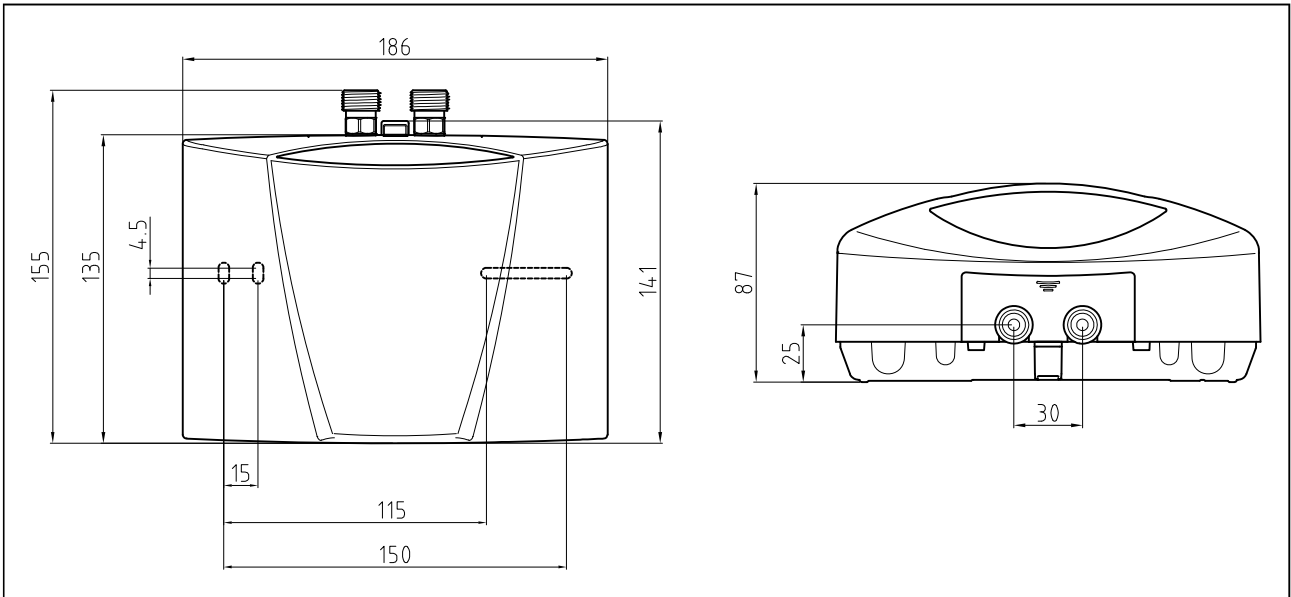


Fig. 1: "Dimensions" (in mm)

1.3 Scope of delivery

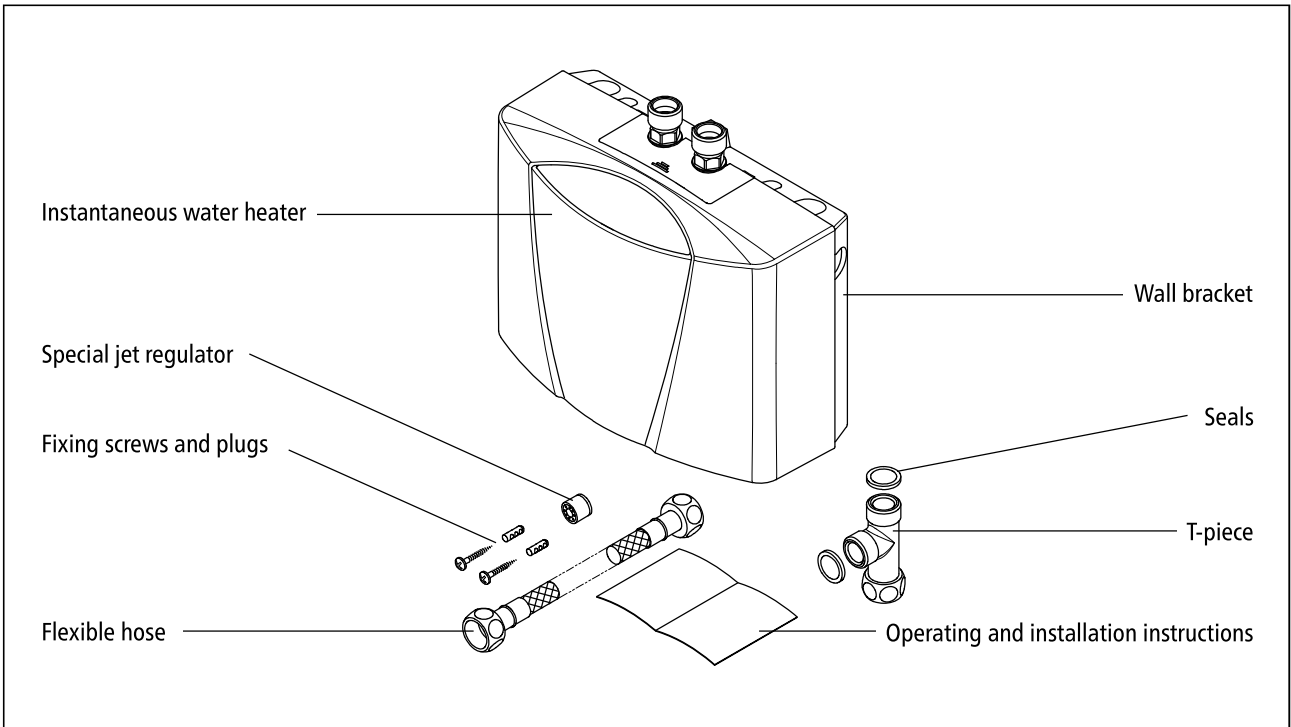


Fig. 2: "Scope of delivery"

## Installation

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### 2. Installation

**⚠** Installation, initial operation and maintenance of this appliance must only be conducted by an authorised professional, who will then be responsible for adherence to applicable standards and installation regulations. We assume no liability for any damages caused by failure to observe these instructions!

#### 2.1 Typical installations

##### 2.1.1 Pressureless (open) installation

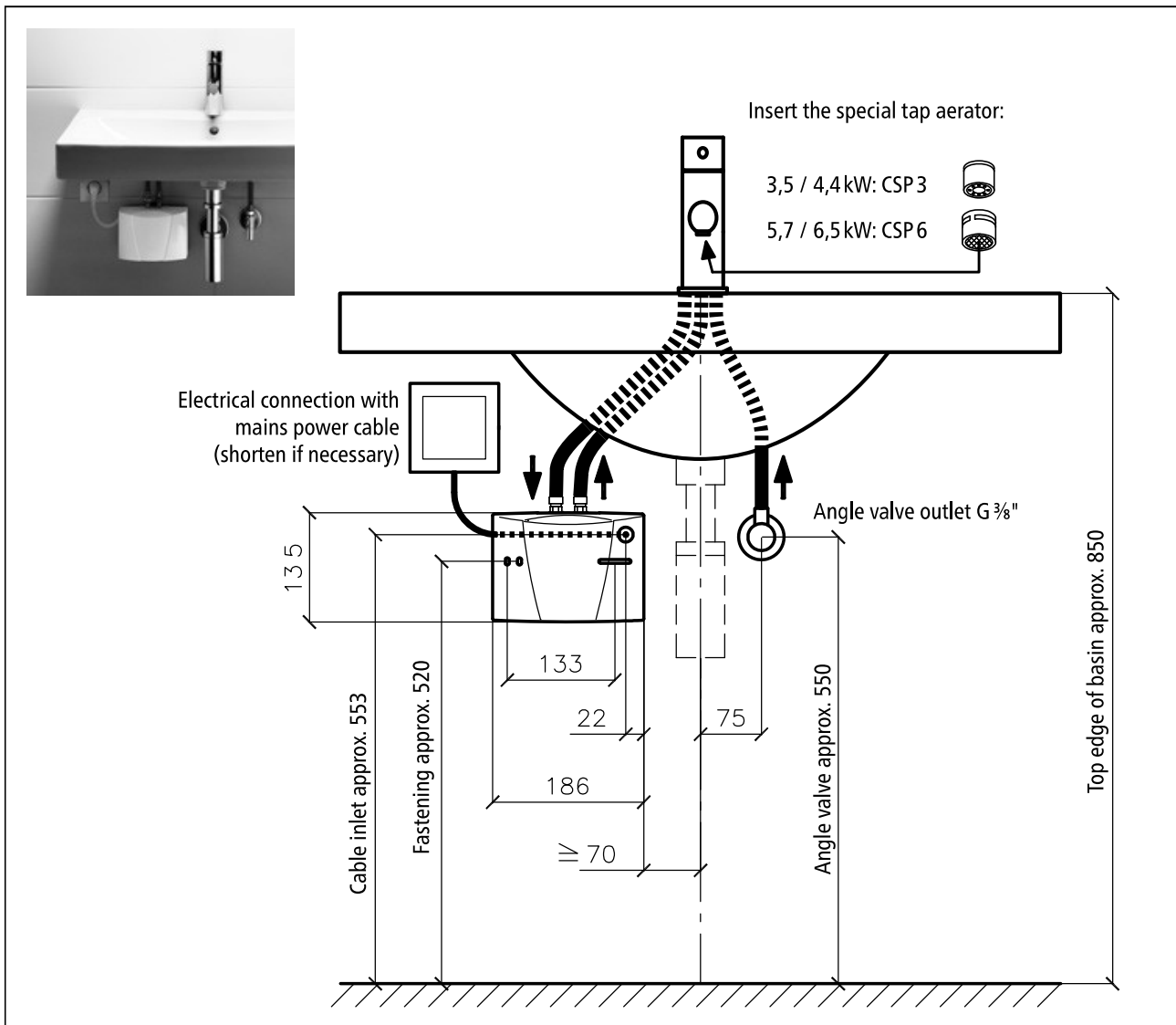


Fig. 3: "Vented (open) installation with a special open-outlet tap" (dimensions in mm)

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## 2.1.2 Pressure-resistant (closed) outlet installations

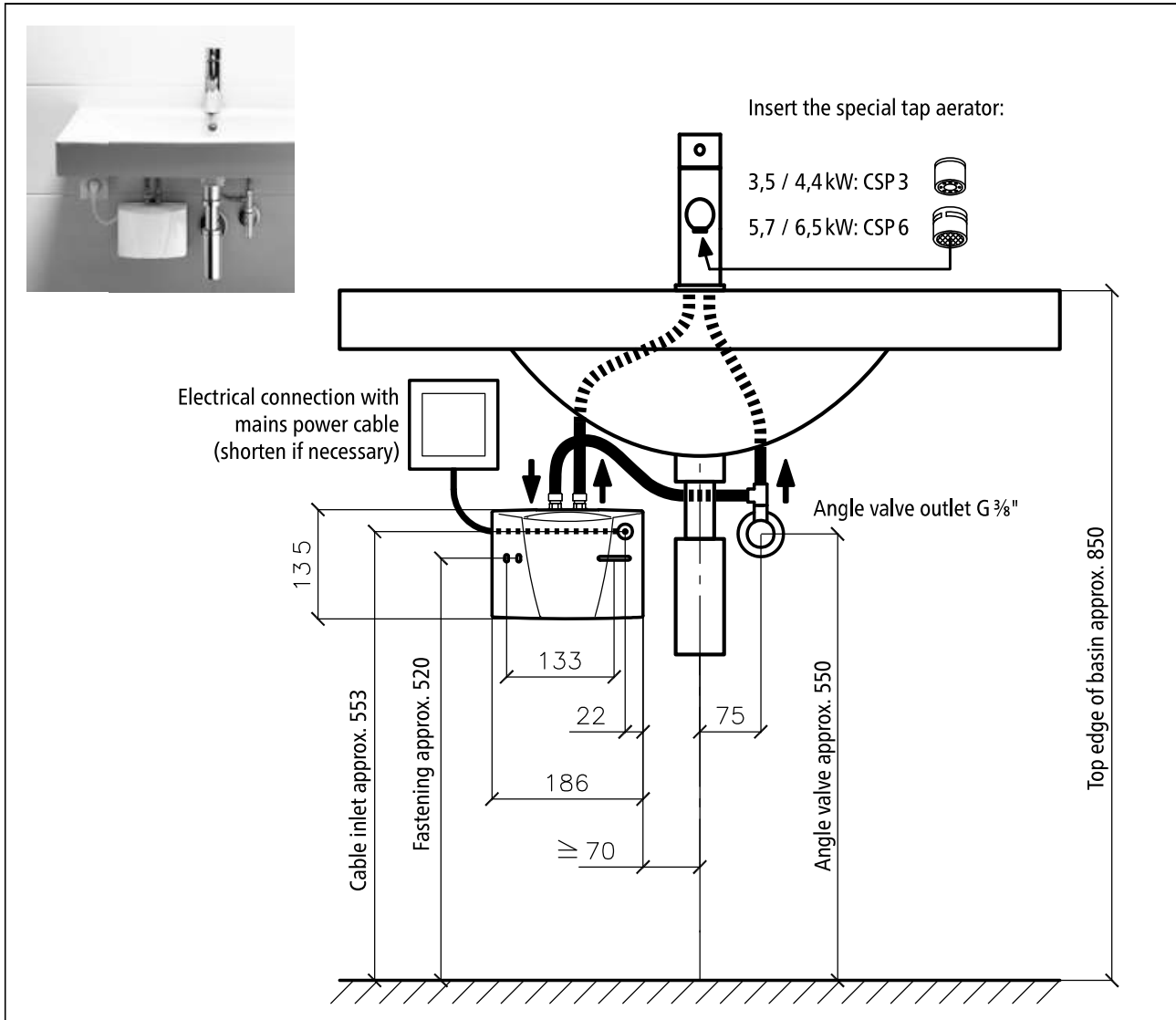


Fig. 4: "Pressure-resistant (closed) installation with standard tap" (dimensions in mm)

## 2.2 Installation instructions

The heater is installed directly to the connecting pipes of the tap. We guarantee trouble-free operation of the instantaneous water heater only if CLAGE fittings and accessories are used. Note the following during installation:

- Installation must comply with DIN VDE 0100 and EN 806 and with the statutory regulations of the country and the provisions of the local electricity and water supply company.
- Check the technical data and information on the rating plate.
- Easy access to the instantaneous water heater must be guaranteed at all times for maintenance purposes. An separate shut-off valve must be installed.
- Ensure that all accessories are removed from the packaging.

## Installation

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- When using the supplied flexible connecting hose, the minimum bending radius of 27 mm must be observed at all times. The connecting hose must not be subjected to any tensile or compressive effects during assembly and when in use.
- The minimum requirements for the required water resistance must be complied with. The required water resistance of the can be obtained from your water supply company.
- The water pipes must not exert any mechanical force on the water connections of the instantaneous water heater during installation and operation. If this cannot be guaranteed due to the installation conditions, we recommend the use of flexible connections.
- This appliance is not suitable for warm water supply to showers.

### 2.3 Water connection

1. Position the instantaneous water heater with the water connectors vertically upwards for direct connection to the tap.
2. Secure the wall bracket to the wall with suitable screws and dowels.
3. Place the appliance onto the wall bracket and snap it into position. Only use the appliance if it is fitted correctly to the wall bracket.

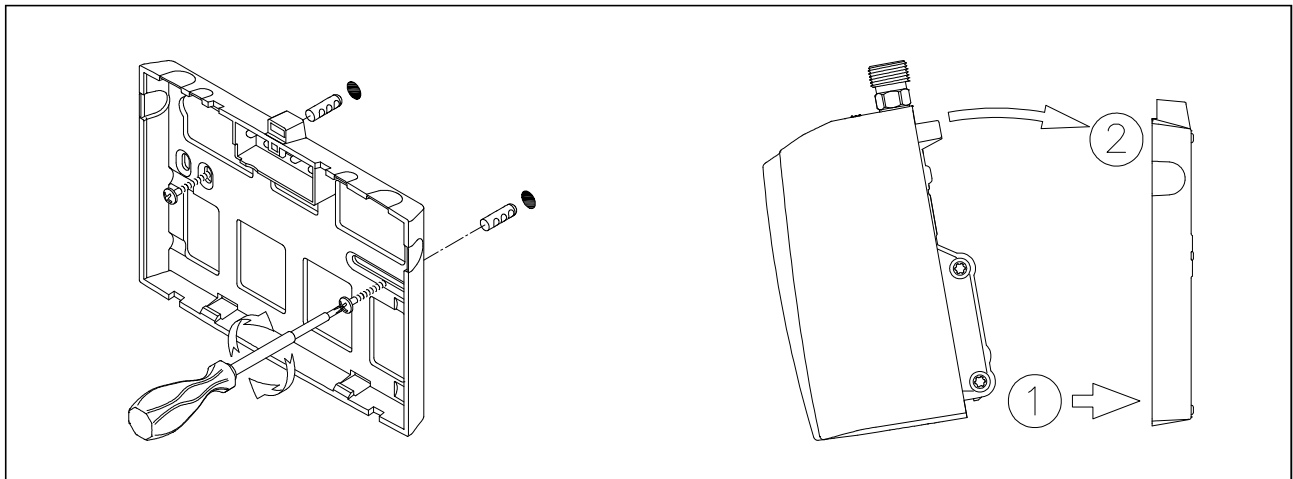


Fig. 5: "Installing the wall bracket"

4. Rinse the water pipes thoroughly before connecting them to the appliance.
5. Connect the water connectors with the relevant tap connectors. The water inlet is indicated in blue on the rating plate (under the cover) and the water outlet in red.

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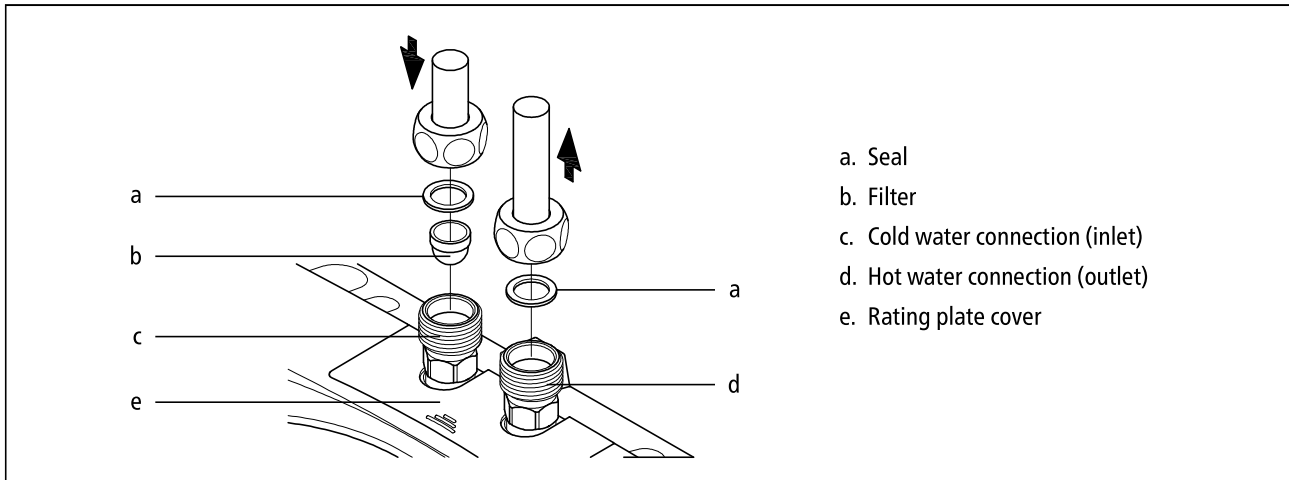



Fig. 6: "Connecting the water pipes"

6. Make sure that the water pipes do not apply any kind of mechanical pressure on the instantaneous water heater.
7. Open the hot water valve of the tap and check all connections for leaks.

## 2.4 Electrical connection

**Fill the appliance with water by repeatedly opening and closing the hot water tap before connecting to electrical power and purge completely. The heating element may be damaged if this is not done!**

1.  Check that the power supply is switched off.
2. Make sure that the cross-section of the supply line corresponds to the details in the technical specifications of these instructions.
3. Ensure that the dimensions of the circuit breaker do correspond with the cross-section of the connecting cable of the appliance and to the cross-section of the supply line.
4. Instantaneous water heater with plug:
  - a. Check that the socket is connected to the protective earth conductor.
  - b. Plug the plug into the socket.

Alternatively:

4. Instantaneous water heater without plug:
  - a. Note that according to VDE 0700, an all-pole disconnecting device with a contact opening width of  $\geq 3$  mm per phase must be provided at the installation end.
  - b. Connect the connecting pipe via a junction box to the mains, as shown in the circuit diagram.



## Installation

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Alternatively:

### 4. Connection to a permanently installed cable:

- Note that according to VDE 0700, an all-pole disconnecting device with a contact opening width of  $\geq 3$  mm per phase should be provided at the installation end.
- The cross-section of the cable must meet the requirements of the minimal cross-section, as mentioned in chapter "Technical specifications". The maximum applicable cross-section is  $6 \text{ mm}^2$ .
- Open the cover.
- Dismount the pre-installed connection cable.
- Route the permanently installed cable through the grommet and connect it as shown in the circuit diagram. Make sure that the grommet fits tightly around the cable to ensure optimal protection against water.
- Refit the cover on the appliance.

**⚠ The earth conductor must be connected!**

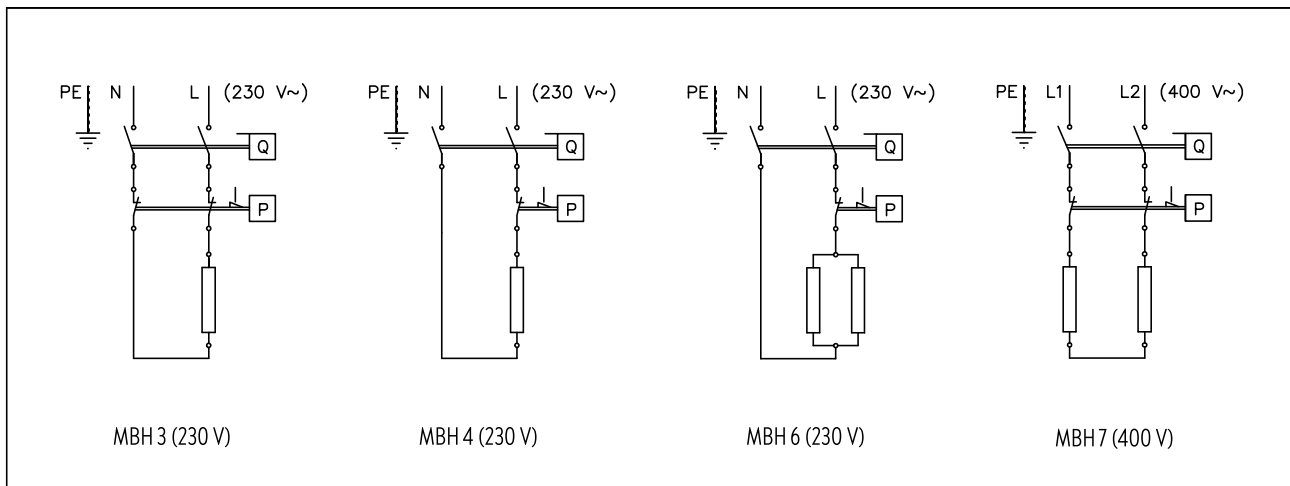


Fig. 7: "Circuit diagram"

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## 2.5 Initial start-up

### Do not switch on the electric power at this time!

1. To purge the instantaneous water heater, open the hot water tap and wait until the water emerges free of air bubbles.
2. In order to obtain an optimum water jet at low flow rates, screw the enclosed special tap aerator into the tap outlet (M 22/24).

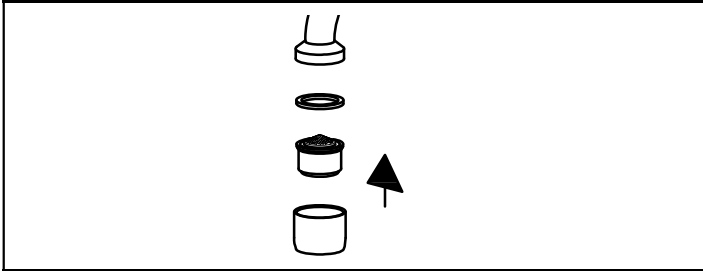


Fig. 8: "Fitting the special tap aerator"

3. Switch on the electric power.
4. Adapt the water flow if necessary, if for example the temperature is not reached. The procedure is described in the chapter "Use".
5. Explain the functions and use of the instantaneous water heater to the user and hand over these operating instructions to the user for information and future reference.
6. Register the appliance with the customer service department using the registration card or online at [www.clage.com](http://www.clage.com).

## Use

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### 3. Use

As soon as the hot water tap is opened, the instantaneous water heater switches on automatically. Close the tap and the appliance switches off automatically again.

#### 3.1 Rating plate cover

On the inner part of the cover you can find the name of the application type (1), as well as the serial number (2) and the article number (3).

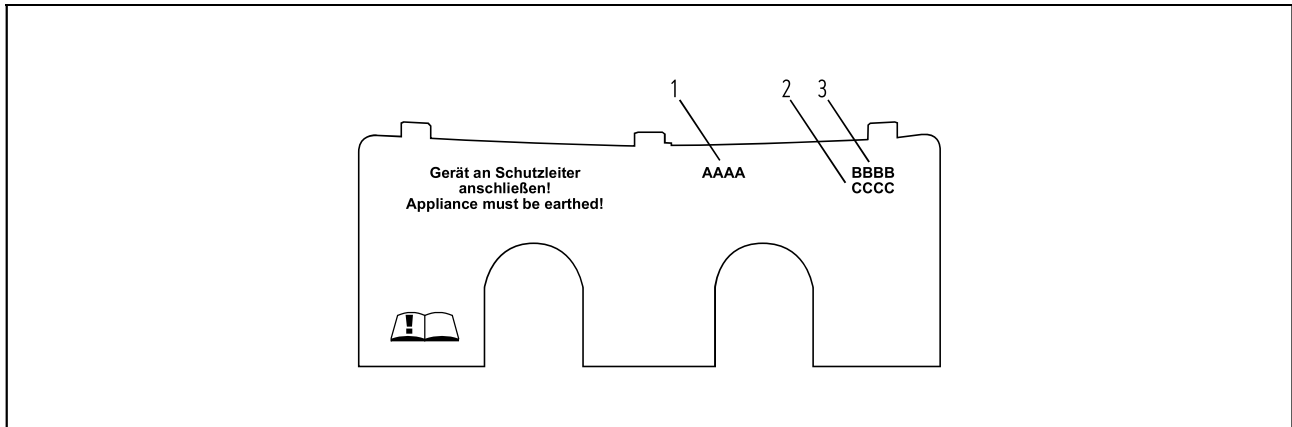


Fig. 9: "Rating plate cover"

#### 3.1.1 Removing the cover

Under this cover, the rating plate and the hood screw are located.

1. Push the cover at the corrugation towards the wall bracket.
2. At the rear corners press the cover down until the front edge lifts.
3. Remove the cover by pulling forward.

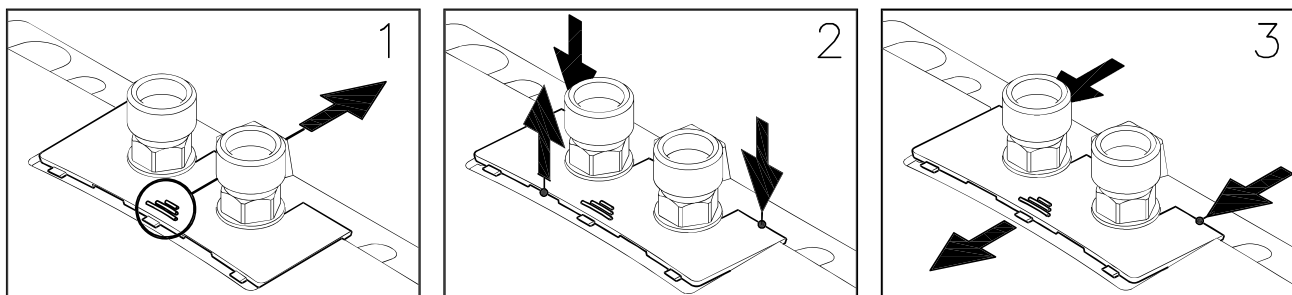


Fig. 10: "Removing the cover"

Use

**DE** 3.2 Adjusting the water flow and temperature

**May only be carried out by a specialist.**

Remove the cover, undo the hood screw underneath and remove the hood.

The maximum temperature and flow depend on the conditions at the installation site.

In case of quite low or high cold water temperatures, you may reduce or increase the flow with the adjustment screw to achieve a comfortable outlet temperature. See figure below for direction of rotation:

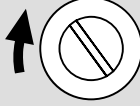

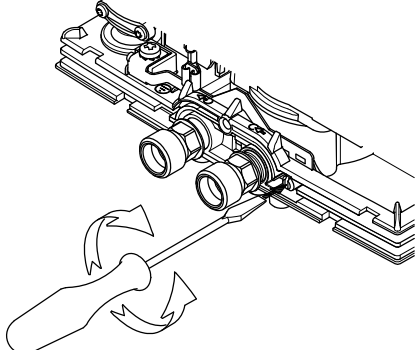
Direction of rotation			
Flow	-	+	
Temperature	+	-	

Fig. 11: "Adjusting the water flow and temperature"

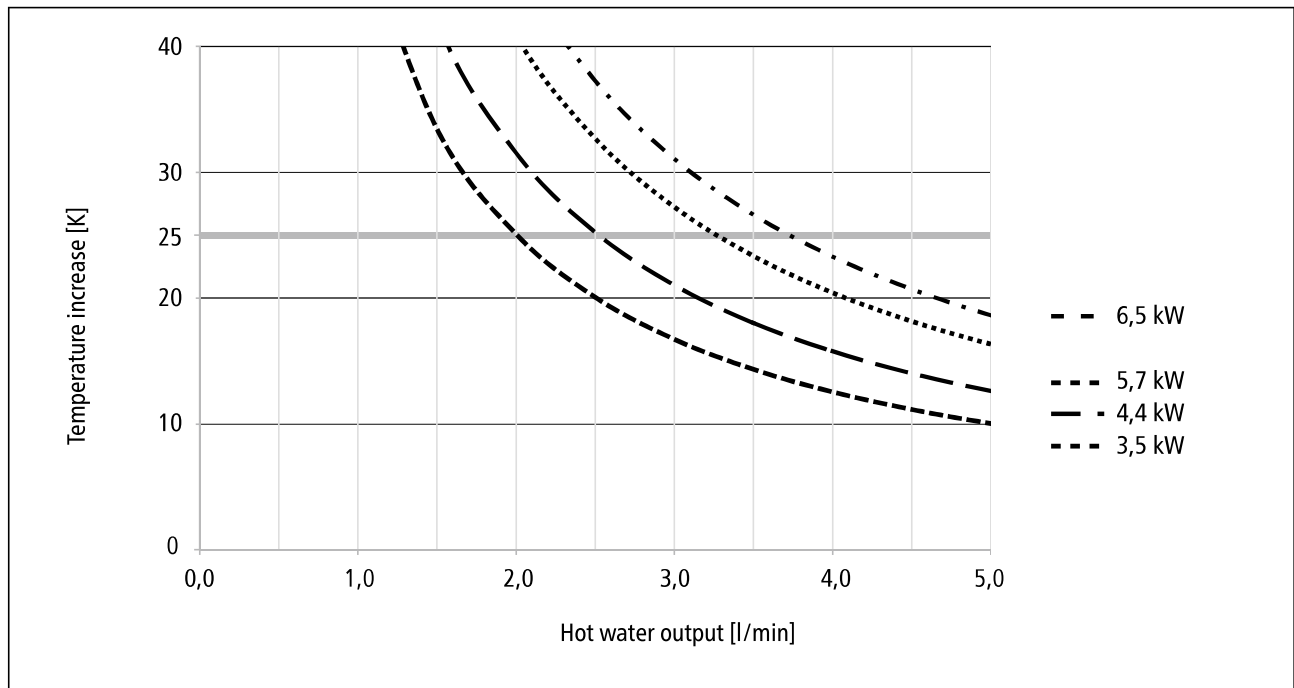



Fig. 12: "Temperature increase and hot water output"

### 3.3 Changing the strainer

The cold water connection of the instantaneous water heater is equipped with a strainer. Dirt deposited in this strainer can reduce the hot water output. Clean or replace as follows.

1.  Switch off the power supply to the instantaneous water heater.
2. Close the shut-off valve in the inlet pipe.
3. Disconnect the water pipe from the water inlet. The water inlet is indicated in blue on the rating plate (under the cover). This can cause water leakage.
4. Lever the strainer out of the connection piece of the instantaneous water heater and clean or replace it.
5. Insert the clean strainer into the connection piece and connect the water pipe to the water inlet of the instantaneous water heater.
6. Purge the instantaneous water heater as described in the chapter “Purging”.
7. Switch the power supply back on again.

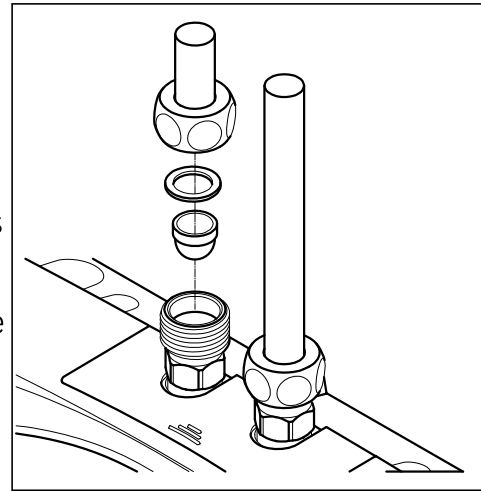


Fig. 13: “Changing the strainer”

### 3.4 Purging

Each time it is emptied (for example after work on the plumbing system or following repair work on the appliance), the instantaneous water heater must be purged before it is used again.

1. Switch off the power supply to the instantaneous water heater.
2. To purge the instantaneous water heater, open the hot water tap and wait until the water emerges free of air bubbles.
3. Switch the power supply back on again.

### 3.5 Cleaning and maintenance

- Plastic surfaces and fittings should only be wiped with a damp cloth. Do not use abrasive or chlorine-based cleaning agents or solvents.
- For a good water supply, the outlet fittings (e.g. jet regulators and shower heads) should be unscrewed and cleaned at regular intervals. Every three years, the electrical and plumbing components should be inspected by an authorised professional in order to ensure proper functioning and operational safety at all times.

### 4. Troubleshooting

#### 4.1 Self-help when problems occur

The following table will help you to determine and rectify the reasons for possible problems.

Problem	Possible cause	Remedy
No water flows	Water supply is turned off	Open the main water valve and angle valve
Water flows more slowly than expected	Special tap aerator is not fitted	Fit the special tap aerator
	Water pressure too low	Check the water flow pressure
	Dirt in the pipes	Remove any dirt from the filter, angle valve and tap
The appliance switches itself on and off	Water pressure fluctuates, flow rate is too low	Remove any dirt / increase the water flow pressure, close other taps, open angle valve further
Water remains cold even though the appliance switches on	Electric supply incorrect	Check the electric supply
	No voltage	Check fuses in the electrical installation
	Faulty heating element	Replace heating element (by authorised technician)
Appliance does not switch on and the water remains cold	Water connections mixed up	Check installation
	Water flow pressure too low	Check water flow setting (by authorised technician), open angle valve further, check water pressure
	Dirt in the pipes	Remove dirt from the inlet and outlet pipes
Hot water temperature varies	Water pressure fluctuates	Stabilise the water flow pressure
	Supply voltage varies	Check the supply voltage
Hot water temperature is too low	Flow rate is too high or inlet temperature is too low	Adjust the water flow (by authorised technician)
	Power supply is too low	Check the power supply
	MBH 6: A faulty heating element	Replace heating element (by authorised technician)

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 customer service.

## Troubleshooting

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### 4.2 Spare parts

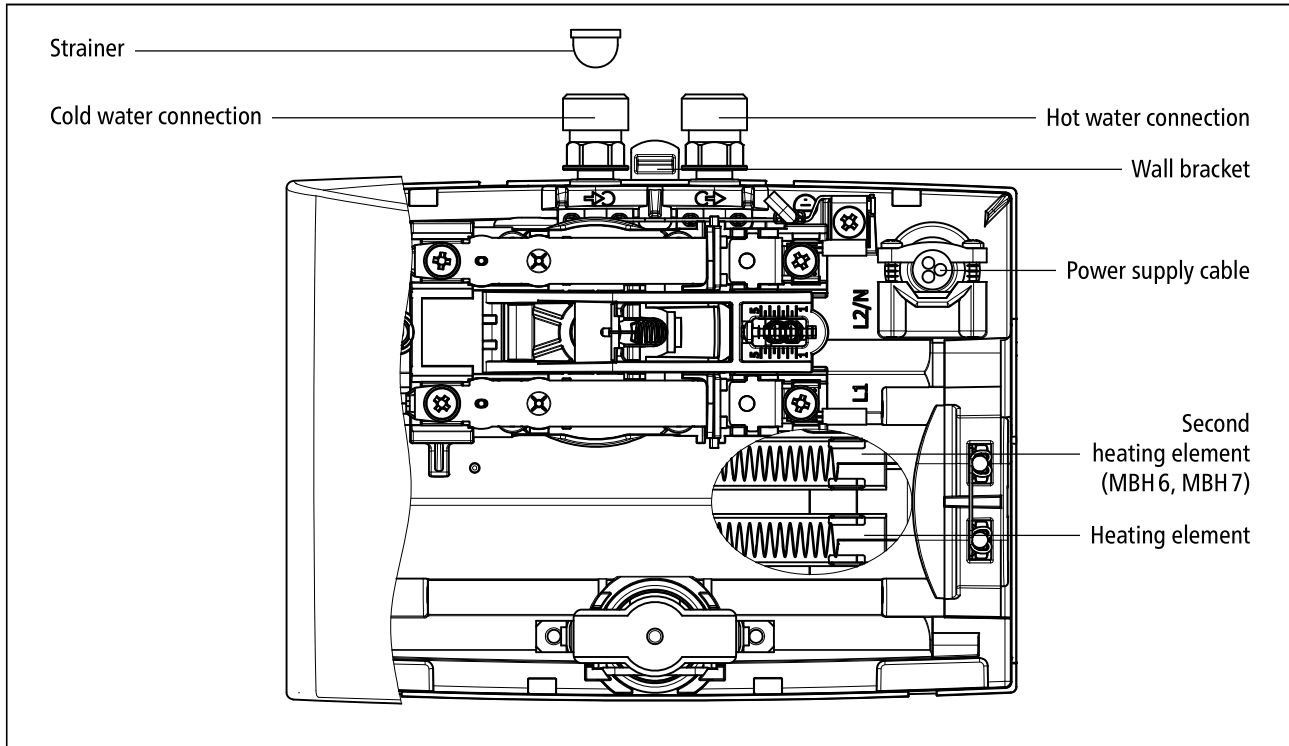


Fig. 14: "Spare parts"

### 4.3 Customer service address

#### CLAGE GmbH

After-Sales Service

Pirolweg 4  
21337 Lüneburg  
Germany


Phone: +49 4131 8901-400

Email: [service@clage.de](mailto:service@clage.de)

If there is a fault with the appliance, please send in the heater with details of the problem and a copy of the sales invoice for examination or repair.

## 5. Disposal

### 5.1 Disassembly

1.  Switch off the power supply to the instantaneous water heater.
2. Close the shut-off valve in the inlet pipe.
3. Disconnect the electrical connection in the appliance junction box or disconnect the protective earth plug if the appliance is fitted with a plug.
4. Disconnect the water pipes from the connectors of the appliance. This can cause water leakage.
5. Remove the appliance from the wall bracket. To do so, insert the tip of a wide screwdriver as far as it will go into the latch between the water connection pieces and push the latch slightly upwards. Tilt the appliance forward by max. 15° and remove it by lifting it upwards.
6. Unscrew the wall bracket from the wall.

### 5.2 Environment and recycling

This product was manufactured climate neutrally according to Scope 1 + 2. We recommend the purchase of 100% green electricity to make the operation climate neutral as well.

**Disposal of transport and packaging material:** For smooth transport your product is carefully packed. The disposal of the transport material is carried out by the specialist tradesman or the specialist trade. Separate the sales packaging according to materials separated according to materials via one of the dual systems in Germany.

**Disposal of old products:** Your product was manufactured from high-quality, reusable materials and components. Products marked with the crossed-out wheeled bin symbol must be disposed of separately from household waste at the end of their service life. Therefore, take this product to us as the manufacturer or to one of the municipal collection points that recycle used electronic devices. This proper disposal serves to protect the environment and prevents possible harmful effects on humans and the environment that could result from improper handling of the products at the end of their service life. For more detailed information on disposal, please contact your nearest collection point or recycling centre or your local council.

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

For disposal outside Germany, please also observe the local regulations and laws.