

EN



INSTALLATION AND OPERATING INSTRUCTIONS

SMART 3.5, 4.0, 4.5, 5.0, 5.5
pressurized instantaneous water heaters

1. Purpose

PERFECT pressurized instantaneous water heaters are designed to supply hot water to such sanitary devices as washbasins and sinks. Due to economic reasons, it ought to be installed as close to the hot water connection as possible. The device is adjusted to operate in a wet environment. However, it is prohibited to splash it with water. Maximum inlet water temperature should not exceed 30°C.

It is worth remembering that the efficiency of each instantaneous water heater depends on:

- its power
- water stream in the device. The higher water flow, the lower outlet water temperature and the other way round (table 3)
- voltage drops in the electrical wiring. For instance: the voltage drop by 10% results in lowering the heating efficiency of the device by 19% (table 1). Voltage drop below 185V may cause that the electronic system will prevent the device from activating
- inlet water temperature

Heater power depending on voltage

Voltage	[V]	230	220	210	200	190
Smart 3.5	[W]	3500	3200	2917	2646	2390
Smart 4.0	[W]	4000	3640	3320	3024	2720
Smart 4.5	[W]	4500	4095	3735	3400	3060
Smart 5.0	[W]	5000	4550	4150	3780	3400
Smart 5.5	[W]	5500	5030	4585	4158	3753

table 1

Caution!!!

It is prohibited to install, disconnect or move the heater to the sides while the power is turned on. The device can operate only in the position shown in the figure below. Any attempt to start the device in other position will cause damage to the heating element and the loss of warranty.

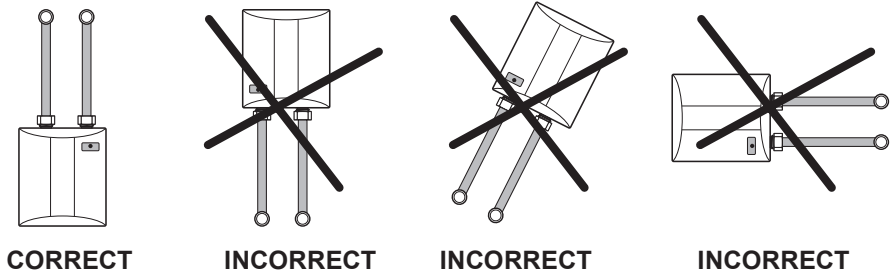


fig.1

2. Safety recommendations

- the heater ought to be installed by a qualified person
- the heater must be permanently connected to the electrical wiring equipped with an earthing clamp and a residual circuit breaker
- the heater can operate only in the position shown in figure 1.
- be careful not to swap protective earth with the power supply cable
- the heater can operate only with some suitable protections which work properly
- the device cannot be installed in the rooms where the air temperature may decrease below 0°C.
- the device cannot be installed in an aggressive environment or the environment exposed to explosion
- the heater can be used only when it is fully-operational
- in case of malfunctioning of the device, immediately cut off the water and power supply
- all maintenance works should be conducted when the device is disconnected from the power source
- only original parts can be used
- do not take off the heater case when the device is connected to the power source
- do not allow the electronic system to get wet
- in case of damage or malfunctioning, disconnect the device from the power supply and cut off the water supply by the use of the cut off/flow control valve
- periodically clean the faucet aerator
- periodically check the condition of the electrical wiring (voltage drops) - especially the electrical connection
- the water flow in the heater ought to be controlled in such a way that the water temperature does not cause the feeling of heat (especially as far as children are concerned)
- this device may be used by children over three years old and people with limited physical, sensory or mental abilities, or with no experience and knowledge if they are supervised or were provided with instructions regarding the use of the device in a safe way and understand possible dangers
- children should be supervised to ensure that they do not play with the device
- if there is a non-return valve installed on the water supply pipe the safety valve must be fitted between unit and non-return valve.
- the unit must never be exposed to temperatures below 0°C.
- the unit can only be connected to the cold water supplies.
- electric installation must be equipped with residual current protective devices and other solutions which will ensure disconnecting the heater from the source of power (intervals between all their poles should not be less than 3 mm).

3. Wiring system

- the instantaneous heater can be used only after being earthed
- the electrical wiring must be equipped with a residual circuit breaker
- minimal cross section of the power supply cable and fuse rating must be selected according to table 3
- check the condition of the electrical wiring (especially the electrical connection) before installing the device
- check voltage drops in the electrical wiring after the activation of the device

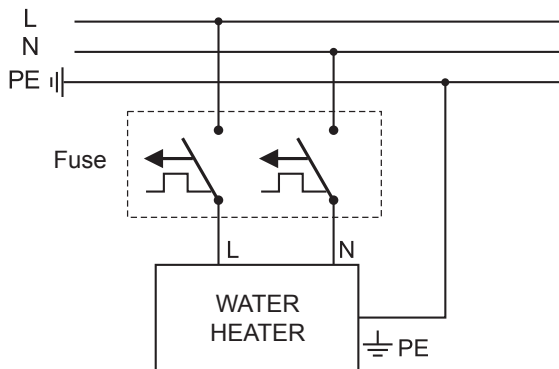
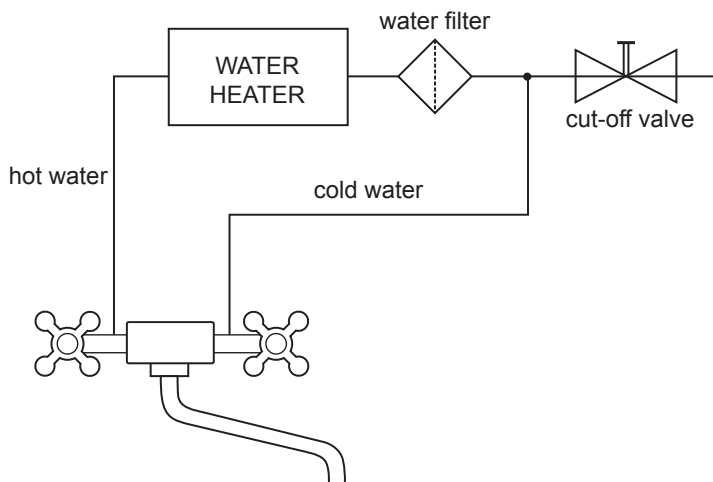


fig.2

Type	Smart 3.5	Smart 4.0	Smart 4.5	Smart 5.0	Smart 5.5
Minimum cross section [mm ²]	1,5	2,5	2,5	2,5	2,5
Current consumption	15,2	17,4	19,6	21,7	23,9

table 2

4. Water supply system



5. Installation

Caution!

The heater can only operate in the position shown in figure 1. Installing the device in other position or installing it without the water filter may lead to the damage to the heating element and the loss of warranty. Do not screw the hoses too much so as not to damage the thread. Do not seal the stub pipes with the so-called oakum or teflon tape. Protect the electronic system from getting wet.

1. Put the template to the place where the heater is to be installed. Then, mark the places where the holes for rawplugs and the hole for a supply cable will be drilled. The supply cable can be connected to the heater in two different ways illustrated in figure 3 and figure 4.
2. Screw the heater to the wall.

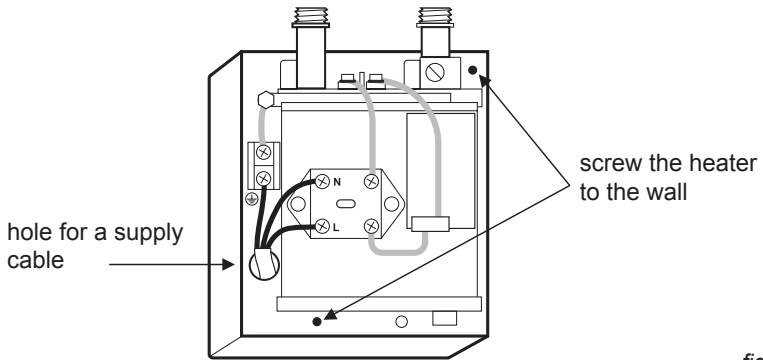


fig. 3

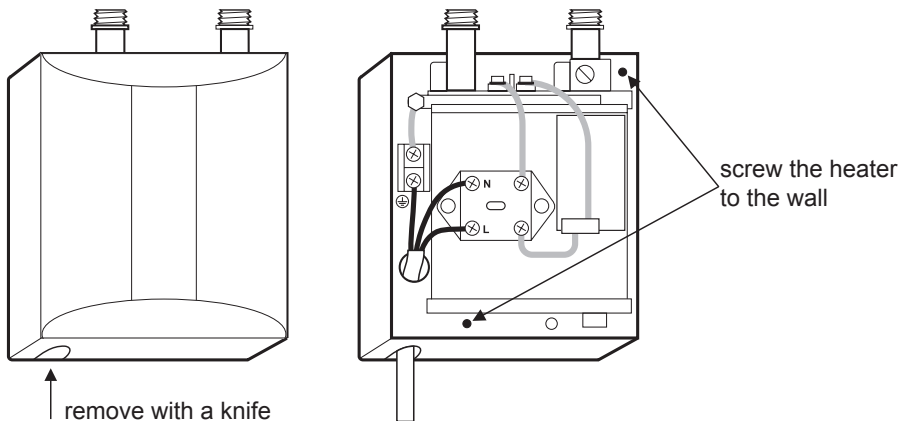


fig. 4

3. Connect the heater according to section 4 of the manual. Remember to insert the water filter according to the instructions shown in the fig. 5. Use only flexible hoses with rubber gaskets designed for pressurized installation. Do not swap the heater outlet (red) with the heater inlet (blue).

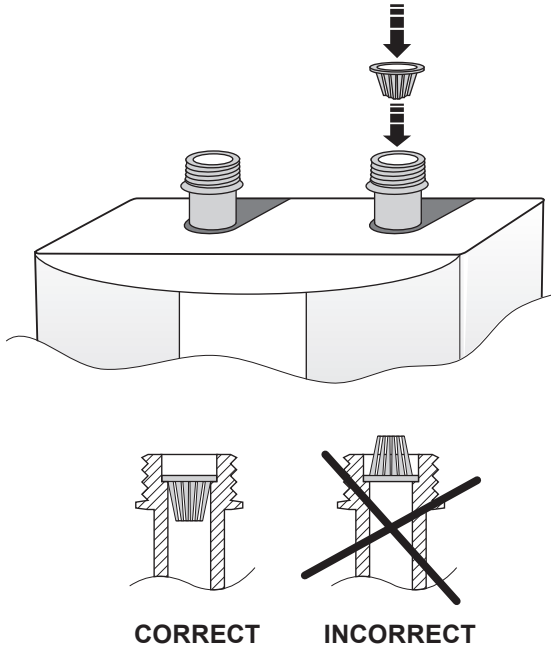


fig. 5

Caution! Do not screw the hose nuts too much so as not to damage the stud pipe threads of the heater. Removing the water filter will result in the loss of warranty. The filter must be installed according to the instructions given in fig. 5.

4. Turn on the water and check leak tightness of hydraulic connections. If the electronic circuit gets wet, remove the water by blowing air onto it.
5. Release the air from the device at high water flow rate.
6. Connect the heater to the electrical wiring.

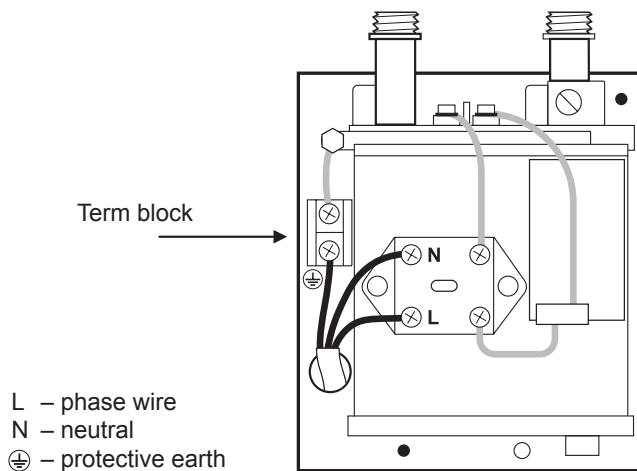


fig. 6

Caution!

After each installation of the case, carefully check if both gaskets (the blue one and the red one) of the stub pipe closely fit to the heater's case.

7. Exchange the aerator (strainer) for the aerator supplied by the manufacturer.
8. Adjust it according to the instructions given in section 6 of the manual.
9. Remember to periodically clean sediment from the aerator (strainer).

6. Temperature adjustment

Caution!!!

The water temperature in the instantaneous water heater depends on the water flow rate. The higher flow rate, the lower temperature and the other way round. Too high outlet water temperature may trigger thermal protection causing device blockage. To unblock the device, you have to press the thermal protection button.

1. Cut off the power supply of the heater.
2. Take off the case.
3. In order to increase the outlet water temperature, lower the water flow by turning the control valve with a screwdriver towards "+" or to lower the outlet water temperature by turning the control valve towards "-". (fig.7).
Use table 3 to reach an ideal water temperature..

Outlet water temperature 15°C

Water flow	[l/min]	1,5	2	2,5	3	3,5
Smart 3.5	[°C]	48	40	35	32	–
Smart 4.0	[°C]	53	43,5	38	34	–
Smart 4.5	[°C]	59,5	48,5	41	37	–
Smart 5.0	[°C]	62,5	50,5	43,5	39	35
Smart 5.5	[°C]	–	54	46	41	37,5

table 3

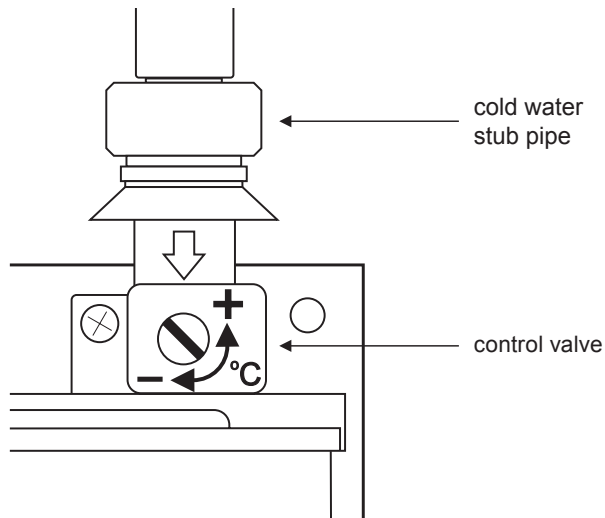


fig. 7

4. Put on the case to check the leak-tightness of stub gaskets.
5. Turn on the power.
6. In case the water temperature is either too low or too high, repeat the regulation procedure starting from the point 1.

7. Cleaning the water filter

1. Cut off the water supply to the cut-off/control valve and disconnect the device from the power supply.
2. Disconnect the hose from the heater inlet.
3. Remove the filter (it is advisable to use a small screwdriver – fig. 8)

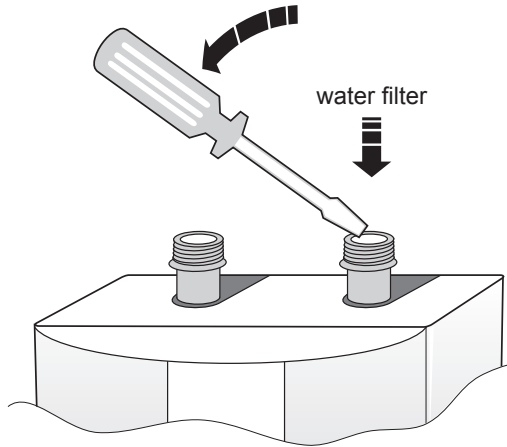


fig. 8

4. Clean sediment from the filter.
5. Insert the filter into the heater inlet with a basket bottom down (fig. 9)

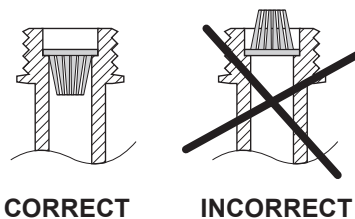


fig. 9

6. Connect the hose to the heater.
7. Turn on water and check leak tightness of hydraulic connections.
8. Before you switch on the power supply, check if the electronic system did not get wet. If it did, blow the water from the electronic circuit board.
9. Adjust it according to the instructions given in section 6 of the manual.

8. Cleaning the faucet aerator

Every now and then it is advisable to press the rubber strainer of the aerator in order to crush the scale on the outlet channels. It is also recommendable to unscrew the aerator in order to check whether there is no scale under it.

9. Defects and their countermeasures

Too low water flow:

- clogged water filter (clean it according to the instructions given in section 7 of the manual) or clogged aerator

The heater does not activate:

- the heater inlet swapped with the heater outlet
- excessive water flow control
- clogged water filter (clean it according to the instructions given in section 7 of the manual),
- too low water pressure in the water supply system
- no power supply – a blown fuse

The heater does not heat despite the fact that the control light indicating device activation is turned on:

- too low voltage in the electrical wiring (overloaded wiring)
- very low inlet water temperature,
- too high water flow rate (adjust it according to the instructions given in section 6 of the manual)

Too low outlet water temperature:

- too high water flow rate (adjust it according to the instructions given in section 6 of the manual)
- too low inlet water temperature
- significant voltage drops in the electrical wiring (look at section 1 table 1)

Too high outlet water temperature:

- excessive water flow control by the control valve (adjust it according to the section 6 of the manual)
- clogged water filter (clean it according to the instructions in section 7 of the manual)
- too low water pressure in the water distribution system

The heater turns on and immediately turns off:

- fluctuating water pressure in the water supply system
- excessive water flow control by the flow control valve

Abrupt changes in outlet water temperature:

- voltage fluctuations in the electrical wiring
- changes in the water flow rate caused by sudden water pressure drops in the water supply system

10. Technical data

Type	Smart 3.5	Smart 4.0	Smart 4.5	Smart 5.0	Smart 5.5
Power [kW]	3.5	4.0	4.5	5.0	5.5
Current consumption [A]	15.2	17.4	19.6	21.7	23.9
Voltage [V]	230	230	230	230	230
Minimum activation flow rate [l/min]	1.1	1.25	1.4	1.5	1.6
Maximum water pressure [MPa]	0,65	0,65	0,65	0,65	0,65
IP rating	IP24	IP24	IP24	IP24	IP24
Minimum water resistivity at 15°C [Ω m]	1300	1300	1300	1300	1300

11. Set contents

1. Instantaneous water heater 1 piece
2. Water filter 1 piece
3. Rawlplugs $\varnothing 6$ 2 pieces
4. Template for drilling holes 1 piece
5. Aerator (strainer) 1 piece

SAFE DISPOSAL OF WASTE

Pursuant to the provisions of the Act dated 29 July 2005 on Waste Electrical and Electronic Equipment , it is forbidden to dispose of the waste equipment marked with a crossed-out bin to the communal waste bins.

A user who intends to get rid of this product is obliged to take the equipment he no longer uses to the collection point. Such points are run, among others, by wholesalers or retailers of such equipment and by local organisational units specialising in waste collection.

The above statutory regulations have been introduced in order to limit the amount of the electrical and electronic waste, as well as to ensure the suitable level of waste collection and its recycling. The heater contains no hazardous substances which have a particularly negative impact on health and environment.

The materials used in the device are reusable. Thanks to it, when you reuse them you contribute to environment protection



RoHS