



Grzejemy jak Kawaleria®



Operating and assembly manual:

Electric instantaneous flow heater “Admiral”

(build in AsC and AsC-W electric heating boilers or sold separately)



Available power: 7,5kW; 12kW; 15kW; 18kW; 21kW

Please read this manual prior installation and use of purchased product. Efficiency of every flow heater is mentioned in technical data table. Using unit with insufficient power compared to hot water requirement will result in too low output temperature.



Do not turn flow heater on in case of suspicion, that it may contain frozen water!



Instantaneous flow heater **Admiral** requires permanent connection to electrical network, installation itself should be done by qualified electrician (in accordance with manual).



Flow heater cannot be connected to electrical installation using electric plug.

Safety instructions:

1. The installation of this **Admiral** appliance set must be in compliance with the National Electrical Code, as well as your local electrical and plumbing codes.
2. The unit must be properly earthed in accordance with all current regulations and laws.
3. Flow heater has to be connected and used in accordance with this manual.
4. All wiring and installation must be supervised by a qualified and trained electrician.
5. This appliance is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
6. This appliance must be permanently connected to the fixed circuit breaker and it must be installed vertically. Do not install this appliance near to tinder or strong magnetic field place.
7. Keep the flow heater off when exposed to freezing, do not install this unit in below zero °C conditions.
8. Please test the outlet hot water temperature with your hand to make sure it is suitable for showering before doing so.
9. The heating chamber is treated with composite nano insulation material; it is natural if there might be a bit of smell or green blue smoke when the unit is used for the first time.
10. In case of cable/wire damage you must contact qualified electrician to replace it with a new wire(s).
11. Please flush the system through completely by opening the hot tap on the water heater circuit furthest away from the heater. Allow all air and debris to pass before closing the hot tap.
12. Before the installation please make sure that water flow is present, only then connect the power supply. The heater cannot be activated without water supply, otherwise damage may occur.
13. Opening external casing of this flow heater may result in electric shock.
14. Lack of mesh filter on supply side may cause damage and may void the warranty.
15. This water heater may cause small amount of water expansion due to residual heat after operation. In most systems this is easily accommodated by the distribution pipework and water supply system



Warranty doesn't cover mechanical damages being installers' fault, as well as poor water quality (np. sedimentation, high water hardness, etc.).

Safety features in Admiral:

- Against water leakage
- Against overheating
- Build-in safety pressure valve
- Heater protection - no operation when lack of water

Product description:

Electric instantaneous flow heater **Admiral** is a device, which heats domestic hot water in flow manner. That is the most efficient way to obtain domestic hot water in faucet, sink or shower. Water is not pre-heated and stored, but heated directly when needed. As a consequence, no energy is lost in the process. **Admiral** has state-of-the-art, patented heat exchanger, solution which eliminates scale deposition – most common issue with standard flow devices with build-in heaters. Water is completely separated from live components, what ensures high durability and 100% safety.

Use:

Electric instantaneous flow heater **Admiral** can be used to obtain domestic hot water in sink or shower.

Possibility to connect 2 domestic hot water intake points (eg. sink + shower)*

7,5 kW

* it is not recommended to use more than 1 water intake point simultaneously

Possibility to connect several domestic hot water intake points *

12 kW

15 kW

* It is not recommended to use more than 2-3 water intake points simultaneously

Possibility to connect several domestic hot water intake points *

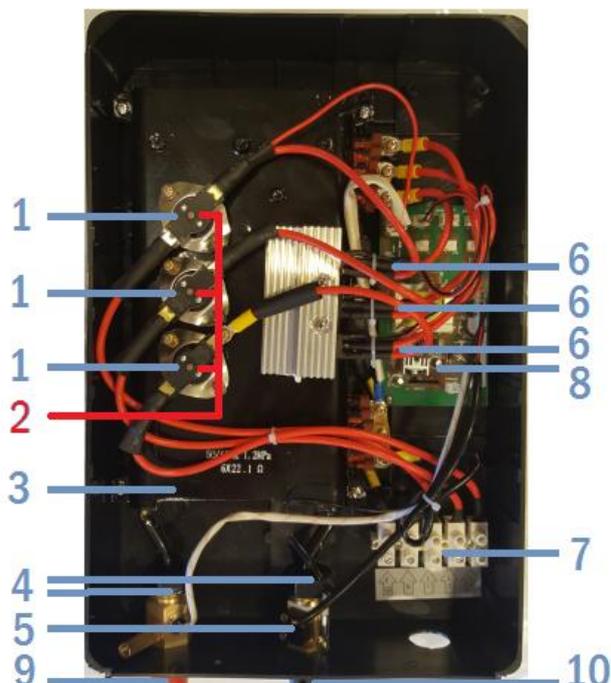
18 kW

21 kW

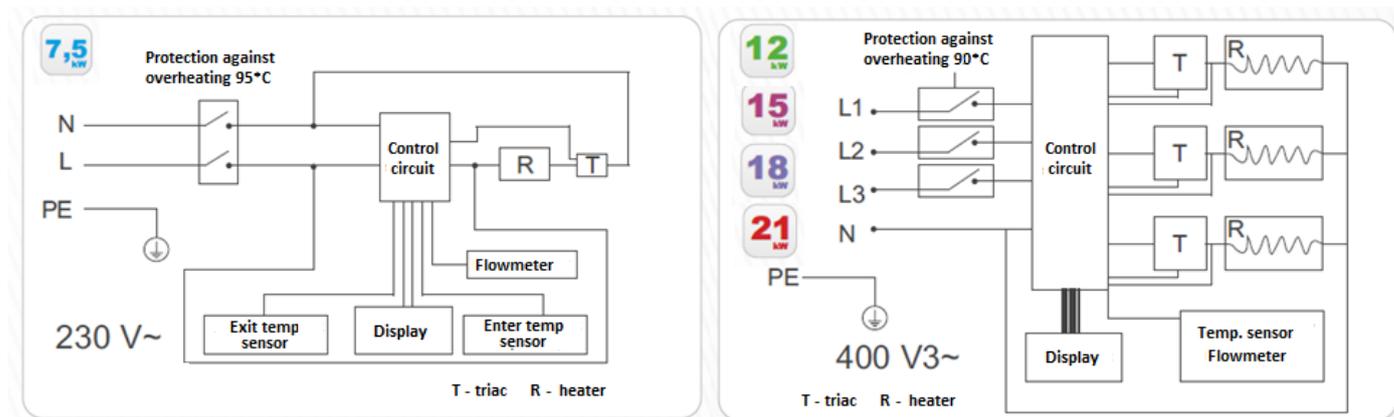
* It is not recommended to use more than 3-4 water intake points simultaneously

Device schematics:

1. Thermic switch
2. Reset (of thermic switch)
3. Heat block
4. Temperature sensor
5. Flowmeter
6. Triac
7. Connecting block
8. Thermic safety fuse
9. Hot water outlet
10. Cold water inlet



Electric schematics:



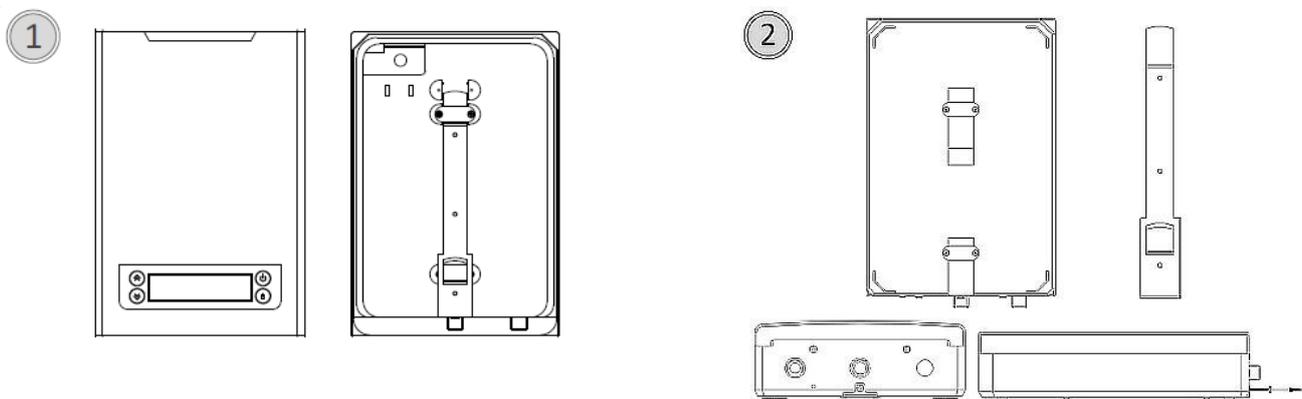
Device installation - remarks:

The installation must only be carried out by qualified installer and installed in accordance to all national and local electrical and plumbing regulations.

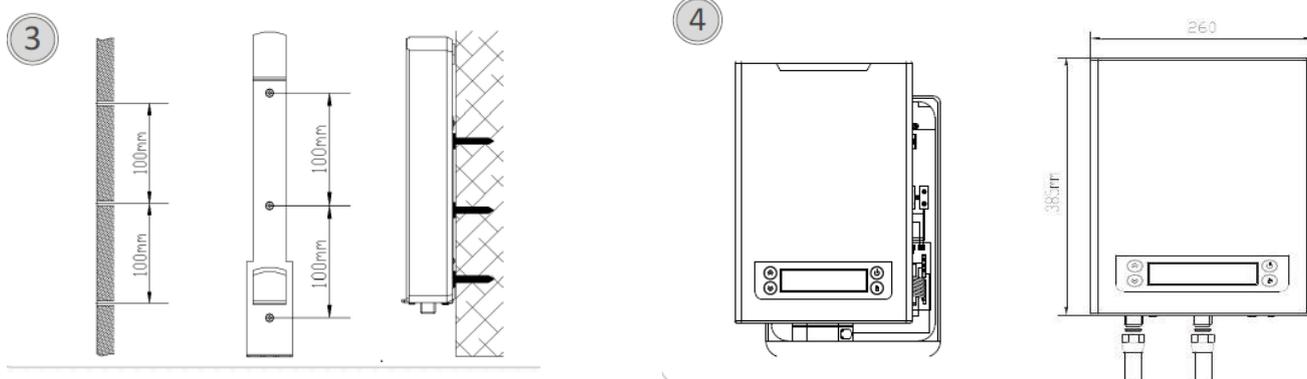
1. Make sure the device is not mechanically damaged and complete.
2. Do not install in premises where temperature falls below 0°C.
3. Compare your installation with device requirement (power allocation, supply voltage, water pressure, earth, wires cross section, proper fuses both over-current and differential-current, etc.).
4. Device needs to be earthed!
5. Main power circuit needs to be protected both over-current and differential-current fuses.
6. Do not install close to strong magnetic field.
7. In case of longer idle time of device, power supply needs to be disconnected.
8. We highly recommend fitting an isolation valve and ball valve before the unit to close system before removal of the tap and servicing.

Installation step-by-step:

1. Front and back sides of the unit.
2. Remove screws which fixed the bracket on back of the heating unit.



3. Hold the back bracket hanger in position against the wall and mark three mounting holes. Drill three holes of 6.00mm diameter, the distance between every two holes is 100mm. (Put plastic anchor in the hole, fix the bracket on the wall and secure the hanger using the screws supplied or an appropriate alternative method).
4. Uninstall screws on appliance to remove the front cover, please use hand to pull out the screen row line plug carefully before removing the front cover. Once your product has been fixed in accordance with the diagrams above please connect your product to the mains water supply using a 1/2" tap pipes to the blue connection of the unit.



Flow heater **Admiral 7,5 kW** (single phase) **has** power cord taken out enabling to connect device without removing external casing!



Flow heaters supplied with **400 V~** **do not have** power cord taken out. Connection to be made directly to connecting block inside device. The hole for inserting power cord is placed on the bottom side!

Electrical works:

1. The installation must only be carried out by qualified electrician in accordance with all regulations.
2. The unit must be properly earthed and proper fuses need to be installed.
3. While connecting device, main electrical switch needs to be turned off (on electrical switchboard).

Water connection:



Water connection need to be performed using elastic hoses with gasket. Do not use teflon or oakum for that purpose. Please pay special attention while making water connection, rotating or breaking connection may cause irreparable damage to the device.

1. All water pipes and other accessories must be in accordance with all current regulations and laws.
2. Device has to be connected vertically (connections from bottom side). Horizontal placement is forbidden. Blue connection is for cold water inlet, red one for hot water outlet.
3. Flush the system through completely by opening the hot tap on the water heater circuit furthest away from the heater. Allow all air and debris to pass before closing the hot tap.
4. Remember to use rubber gaskets on water connections.
5. On cold water inlet, rubber gasket should be equipped with mesh net. All connections need to be checked for tightness.

Use:

Flow heater starts operation when water flow sensor detects demand for hot water (eg. starting a shower) – only then device turns on and starts to consume electrical energy). Device is turned off instantly when demand for hot water stops. It is possible to set required water temperature level, what additionally reduces total energy consumption.

Flow heaters are equipped in overheating safety feature. When water temperature exceeds 67°C (7,5 kW) and 72°C (12 - 21 kW) device will enter into pause mode in order to avoid scales deposition. It will be indicated by "E1" shown on display. Device will return to standard mode after temperature cools down to 58°C. Automatics also monitors current loss, which when detected is indicated by "E2" shown on display. "E3" is shown when temperature sensor has been damaged.

Admiral also protects build-in heating element from overheating – electric supply is turned off when heating element temperature reaches 95°C (7,5 kW) and 90°C (12 - 21 kW). In case this protective system is activated, one should remove external case and press **RESET** button.

Control:

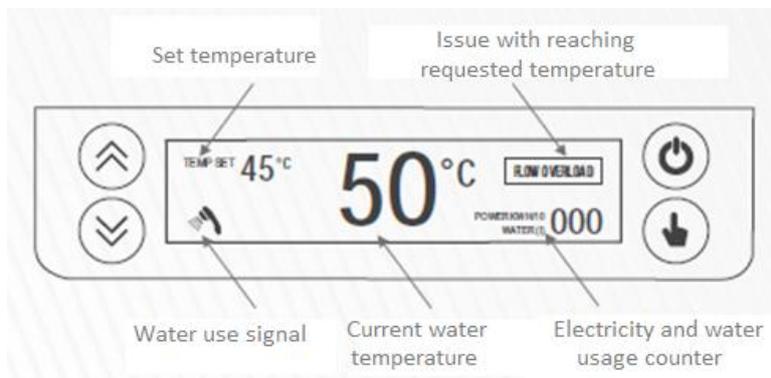
1. Open the water faucet for a few minutes until water flow is continuous and all air is purged from water pipes, after turning water off turn on power supply.
2. With vented installation and turned on power supply, **Admiral** can be used. Press  and open running water to ensure flow rate of more than 3,2 l/min for flow heaters 12-21 kW and more than 2 l/min for flow heater 7,5 kW.
3. In order to turn device off simply stop using hot water.
4. Use  and  buttons to change requested temperature.
5. During standard operation display shows current water temperature, by pressing   buttons set temperature is visible.
6. Device is equipped in safety valve, which will be triggered automatically when inside pressure exceeds 1,2 Mpa.

7. Press  to learn electricity and water usage.

8. Admiral has build-in memory ensuring all parameters are kept in case of lack of electricity

9. If the unit has been paused, you may initially get a short burst of very hot water while you turn on again. Please run the water through for a few seconds to let the temperature settle down. Please check hot water with hand before you taking a shower. If the unit will not be used in winter, drain out water completely so that the heater will not freeze and be permanently damaged.

Control panel:



 Information is shown when reaching requested temperature is not possible as a consequence of too high demand for hot water or too low starting temperature.

 Information of flow heater status - blinking icon signals water consumption. Flow rate activating heating: 3,2 l/min for flow heaters 12-21 kW and 2 l/min for flow heater 7,5 kW.

 Counter showing electricity and water consumption. Change by pressing button.

Maintenance:

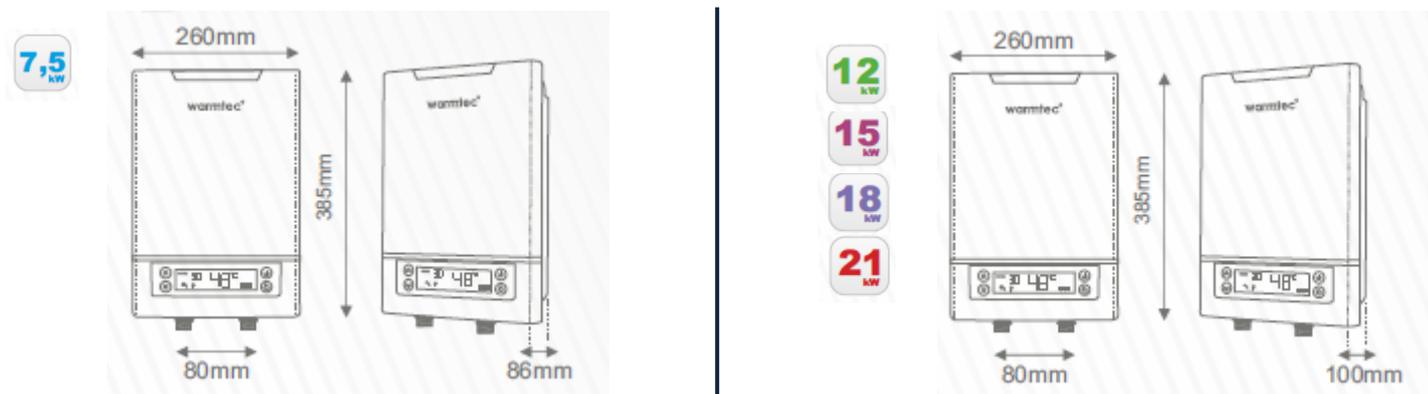
Although it is not required by any regular maintenance procedures, please ensure consistent water flow, it is recommended for the following maintenance:

1. Periodically remove scale and dirt that may build up at the aerator of the faucet or in the shower head. Please periodically clean inlet strainer and the shower to keep a free water flow.
2. There is a built in meshed gasket screen at inlet connection which should be cleaned from periodically depends on your water quality. Please shut the water flow before doing so.

Technical parameters:

Power and supply	7,5 kW 230 V~	12 kW 400 V~	15 kW 400 V~	18 kW 400 V~	21 kW 400 V~
Minimal cable requirement	3 x 6 mm ²	5 x 2,5 mm ²			
Water temperature range	30 - 55°C	30 - 60°C	30 - 60°C	30 - 60°C	30 - 60°C
Minimal current	32,61 A	3x17,3 A	3x21,7 A	3x26 A	3x30,3 A
Safety fuses	40 A	20 A	25 A	32 A	40 A
Tapping size	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"
Water supply pressure	0,02 - 0,6 MPa	0,02 - 0,6 MPa	0,02 - 0,6 MPa	0,02 - 0,6 MPa	0,02 - 0,6 MPa
Water flow activating heating	2 l/min	3,2 l/min	3,2 l/min	3,2 l/min	3,2 l/min
Water temperature limiter	67°C	72°C	72°C	72°C	72°C
Overheating sensor	95°C	90°C	90°C	90°C	90°C
Flow rate with Δt=30°C	3,6 l/min	5,8 l/min	7,2 l/min	8,7 l/min	10,1 l/min
Protection	IP25	IP25	IP25	IP25	IP25

Dimensions:



Troubleshooting:

Problem	Cause	Solution
Water leakage from connections.	A. Not properly screwed connections. B. Lack of seal.	A. Try to screw properly. B. Exchange seal.
LED is not working.	A. Lack of electricity. B. Damaged diode.	A. Connect electricity. B. Exchange diode (service).
Buttons does not work.	A. Water supply is turned off. B. Too low water pressure. C. Device malfunction.	A. Turn water supply on. B. Check water pressure. C. Service required.
Water is too hot.	A. Too high water temperature setting. B. Too low water pressure.	A. Decrease water temperature setting. B. Increase water flow.
Water is too cold.	A. Too low water temperature setting. B. Too high water demand compared with device power.	A. Increase water temperature setting. B. Decrease water flow (e.g. use only 1 intake point at one time).
Water pressure is dropping.	Mesh filter is filled.	Check and clean filter.
No water heating.	Thermic switch was activated.	Take casing off and press reset button.
Display shows E1.	Water temperature exceeded 67°C.	Reduce temp. Increase water supply.
Display shows E2.	Leakage.	Contact service.
Display shows E3.	Sensor malfunction.	Contact service.



Any attempt to fix device outside authorized service causes **warranty loss!**