

# HEAT PUMP

## *For Domestic Hot Water*

**Model range:**

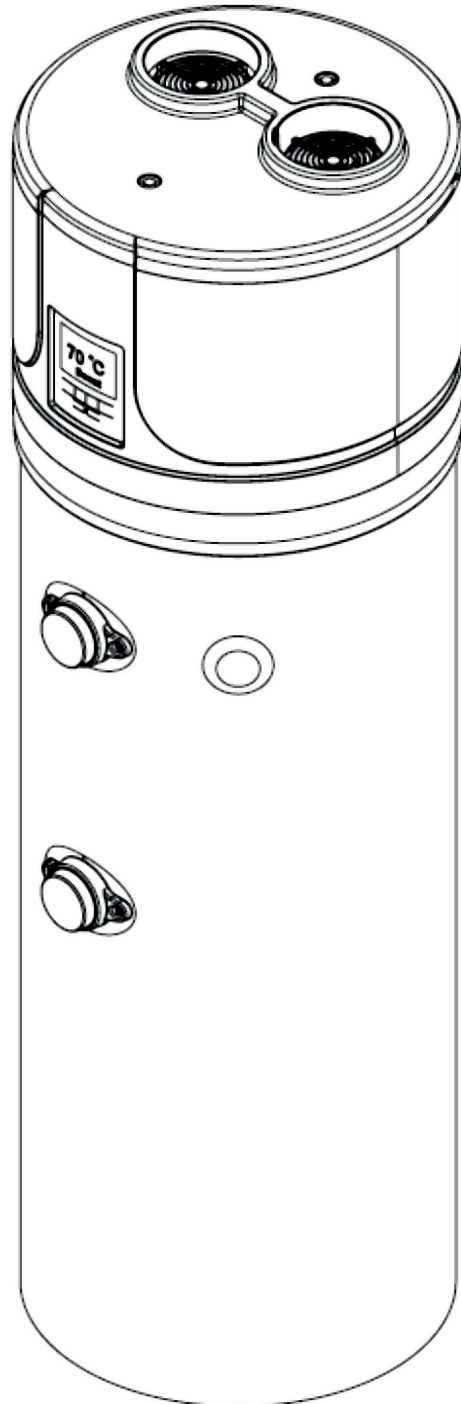
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airtherm AQUA 1.1 200L

airtherm AQUA 1.1 260L

airtherm AQUA 1.1 200L w/solar

airtherm AQUA 1.1 260L w/solar



**User manual**

ENG

**Dear Customer,**

Thank you for choosing this product!

BROOKVENT has always paid a great deal of attention to environmental problems, therefore, we have used technologies and materials with a low environmental impact to manufacture products in conformity with RAEE - ROHS (2002/95/CE and 2003/108/CE) community standards.

## **IMPORTANT RULES AND SAFETY INSTRUCTIONS**

***IMPORTANT! Non observance of the rules described below will lead to voiding the warranty and the manufacturer bearing no responsibility for the functioning of the appliance.***



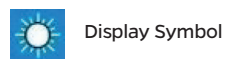
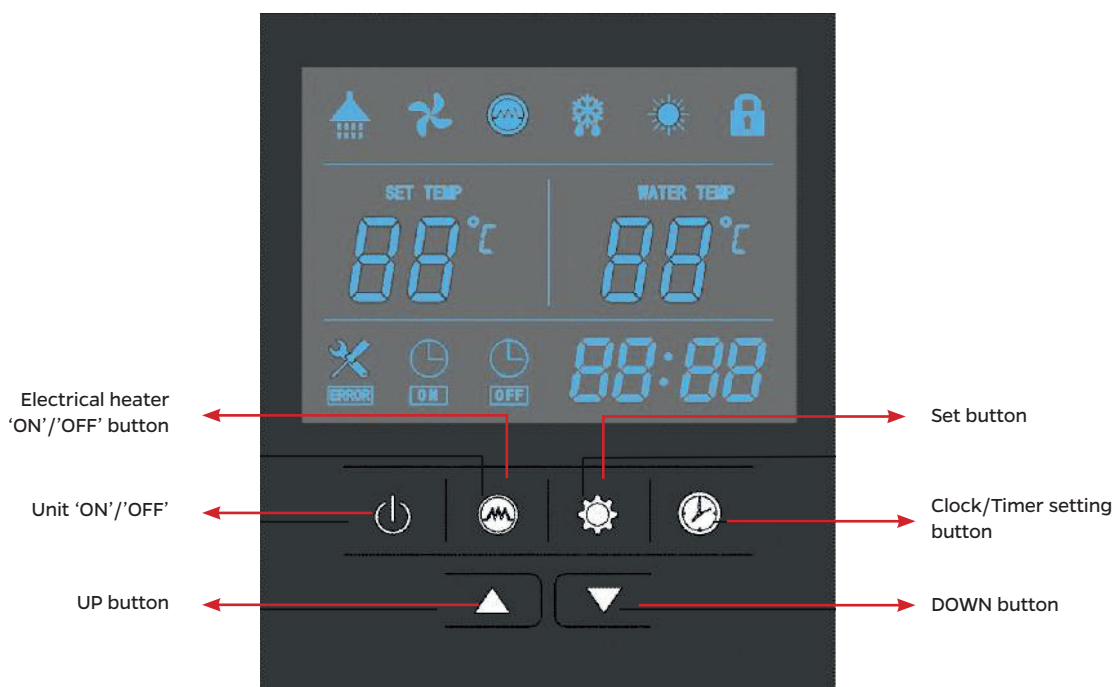
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- Children must not play with the equipment. Cleaning and maintenance intended to be carried out by the user must not be performed by unsupervised children.
- The use of the appliance for any purpose other than that it is intended is prohibited
- Do not use the storage tank if it is not filled with water.
- Installation, commissioning and maintenance of the device must be performed by qualified and authorized personnel. Do not attempt to install the device yourself.
- The appliance must only be installed in premises with normal fire resistance.
- Usage of this device at temperature and pressure level above prescribed leads to warranty violation!
- This device is intended for heating water in liquid state. using different fluids in different states leads to warranty violation!
- Device's heat exchangers are intended for use with circulating clean water and mixture of it and Propylene GLYCOL at liquid state. The presence of anticorrosion additives is obligatory. Using different fluids in different states leads to warranty violation!

# 1. BEFORE STARTING THE UNIT!



- Read carefully the “Installation and maintenance manual”, that is an integral part of your appliance!
- Check if the unit is installed and connected according to the “Installation and maintenance manual”, that is an integral part of your appliance!
- Check if the tank is full with water!
- Check if the electric main supply is present and it is with accordance to the local regulations!
- Check that the air ducts or air inlet/outlet are not blocked!

# 2. OPERATING MODES. USER INTERFACE.



Display Symbol



Button symbol



Press ▲ and ▼ buttons at the same time and hold for 5 seconds, to lock the buttons.

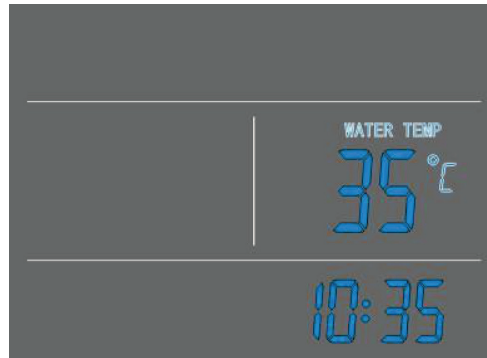
Press ▲ and ▼ buttons at the same time and hold for 5 seconds again, to unlock the buttons.

## 3. USING THE DEVICE






### 3.1. Switching 'ON'

When connecting the appliance to the main power supply, all icons are displayed on the controller screen for 3 seconds. After that an initial check will start. If everything is ok, the unit enters into a standby mode:


**Standby mode:**



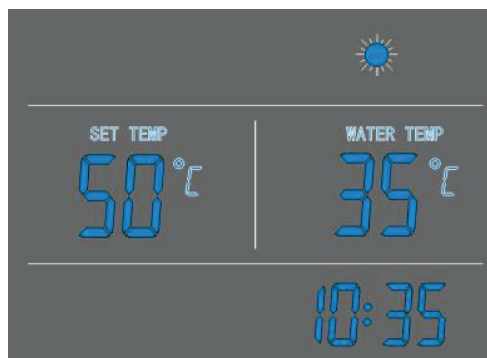
### 3.2. Clock setting

- After switching the appliance on, press  button to enter the clock setting interface, hour and minute icons "88:88" will start flashing together;
- Press  button to enter hour/minute settings, press the  and  buttons to set the exact hour(s) and minute(s);
- Press  button again to confirm and exit.


### 3.3. Heating mode

- Press and hold the button  for 2 seconds when the unit is in standby. The "Heating mode" will start. The control panel will display the following information:

**Water heating mode:**



The left side of the temperature display  shows the set water temperature.

The right side of the temperature display  shows the current temperature of the water tank.

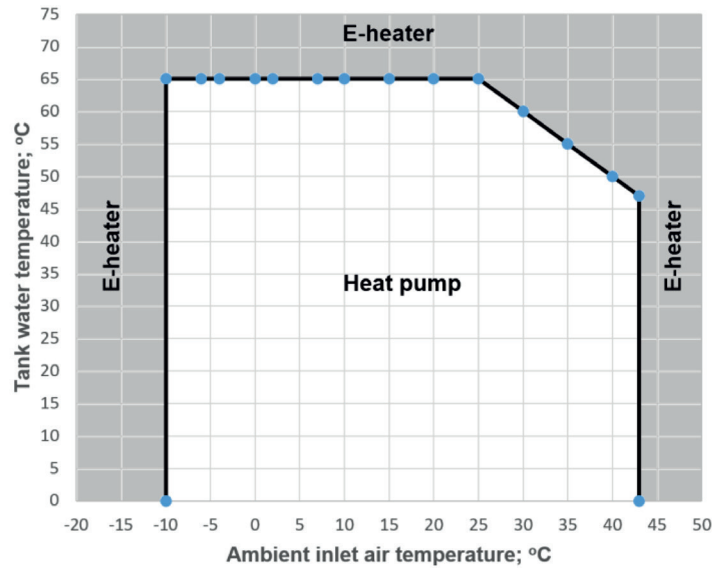
The heat pump will start working continuously in order to reach the set temperature. If the set temperature is adjusted to above 65°C, E-Heater will start working to continue heating the water to the set temperature. If the outside air temperature is less than -10°C or above 44°C, only the E-HEATER will work! While the heat pump is working at a low outside air temperature, defrosting mode could be activated automatically in order to melt the ice collected on the evaporator.

This is a standard procedure.

### 3.4. Setting desired water temperature

When the unit is working, press ▲ or ▼ button to adjust the set temperature of water tank.

The maximum achievable water temperature by heat pump only, depends on outside air inlet temperature and could be seen on the graph below:




If the temperature set on the control display is more than achievable one indicated in the graph above, the E-heater will be switched ON automatically to reach it.

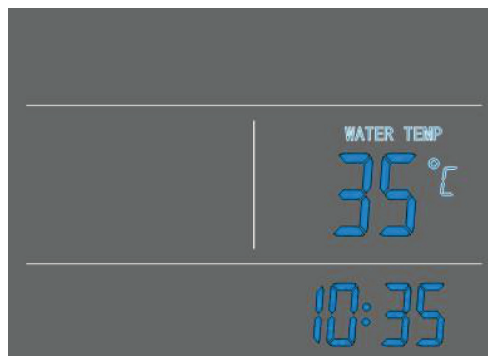


**In order to save energy, avoid setting the temperature above 55°C if not necessary! This way the heat pump will work without the help of the E-Heater!**

### 3.5. Switching the unit OFF



To switch the unit OFF press  button and hold it for 2 seconds while the unit is running. The control panel will display the following information:

*Standby mode:*















## URGENT NEED OF HOT WATER!

### 3.6. Boost mode

While the heat pump is running, press this  button to turn 'ON' "Boost mode". The heater icon  will be shown, and the electrical heater will work according to the control program together with the compressor until the set temperature is reached.

## 4. FLEXIBLE USAGE OF YOUR APPLIANCE!

### 4.1. Timer setting

- After switching the appliance on, press and hold  button for 5 seconds to enter the timer setting interface, the timer on icon  and hour icon “88:” will flash together;
- Press the  and  buttons to set the exact hour(s).
- Press  button to transfer to minute setting, minute icon “:88” will flash, press the  and  buttons to set the exact minute(s).
- Press  button again to transfer to timer off setting, the timer off icon  and hour icon “88:” will flash together.
- Press the  and  buttons to set the exact hour(s).
- Press  button again to save and exit the timer setting interface.

Press  button to cancel the timer, while the “timer setting” mode is active!

#### NOTE:

- 1) The timer ‘ON’ and timer ‘OFF’ functions can be set at the same time.
- 2) The timer settings are repeating.
- 3) The timer settings are still valid after a sudden power cut.

## 5. WE CARE FOR YOUR HEALTH!

### 5.1. Disinfection weekly cycle


The E-heater will start each week at the set time automatically, regardless if the machine is on or in standby mode. The E-heater will stop working, when the tank temperature reaches 70°C (disinfection against legionella bacteria).

## 6. OTHER FUNCTIONALITIES AVAILABLE ON THE UNIT

### 6.1. Antifreeze mode in standby

When the unit is in standby mode, if the water temperature in the tank is below 5°C (tank water freeze protection), only the E-heater will work, until tank temperature increases above 10°C or the unit is turned on.


### 6.2. Defrosting

The icon  indicates that the defrosting function is enabled. This is an automatic function, the system will enter or exit the defrosting function according to the inner control program.

### 6.3. Pump anti-block function:

When the external pump (if any) stops for 12 hours, it will be forced to run for 2 minutes.

### 6.4. Fan ventilation

The icon indicates that the fan ventilation function is enabled. When the heat pump is ON, press this button  and hold for 5 seconds to enable or disable the fan ventilation function. If this function is enabled the fan will continue working to ventilate the air, even when the water temperature reaches the set point and the unit is in standby mode. If this function is disabled the fan will stop, when the water temperature reaches the set point and the unit is in standby mode.

## IF SOMETHING GOES WRONG!



- **Switch off the unit! Disconnect it from the main power supply!**
- **Call and inform them about the error code or describe all abnormalities and strange behavior or noise of your appliance!**

## 7. ERROR CODES


During standby or running status, if there is a malfunction, the unit will stop automatically and show the error code on the left screen of the controller. See the installation and maintenance manual















## 7.1. Possible errors/explanation

Error	Code	Wskaźnik LED
Stand by		LED off
Standard operation		LED on (glows red)
Lower tank water temp sensor failure	P1	☆ ● (1 flash)
Upper tank water temp sensor failure	P2	☆☆ ● (2 flashes)
Coil temp sensor failure	P3	☆☆☆ ● (3 flashes)
Air return temp sensor failure	P4	☆☆☆☆ ● (4 flashes)
Ambient temp sensor failure	P5	☆☆☆☆☆ ● (5 flashes)
High pressure protection	E1	☆☆☆☆☆☆ ● (6 flashes)
Low pressure protection	E2	☆☆☆☆☆☆☆ ● (7 flashes)
Over heat protection	E3	☆☆☆☆☆☆☆ ● (8 flashes)
Defrosting	Defrost indicator	☆☆☆☆☆☆☆... (long flash)
Communication failure	E8	LED on

## 8. E-HEATER ONLY

If the E-heater button  on the control panel has been turned on manually when the unit is in standby mode, only the E-HEATER will work, until the temperature of the upper tank (5) reaches the set temperature TS2.

### 8.1. MEANING OF LED ICONS

Icon	Description	Solution
	Hot water available	The icon indicates that the domestic hot water temperature reaches the set point. The hot water is available for use. Heat pump is standby
	Fan ventilation	The icon indicates that the fan ventilation function is enabled
	Electrical heating	The icon indicates that the electrical heating function is enabled. The electrical heater will work according to the control program
	Defrosting	The icon indicates that the defrosting function is enabled. This is an automatic function, the system will enter or exit the defrosting according to the inner control program
	Heating	The icon indicates that the current operation mode is Heating
	Key lock	The icon indicates the button lock function is enabled. The buttons cannot be operated until this function is disabled
	Left temperature display	The display shows the set water temperature. In case any malfunction occurs, this section will display the related error code
	Right temperature display	When checking or adjusting the parameters, this section will display the related parameter value
	Time display	The display shows the clock time or timer time
	Timer 'ON'	The icon indicates that the timer 'ON' function is enabled
	Timer 'OFF'	The icon indicates that the timer 'OFF' function is enabled
	Error	The icon indicates there is malfunction



## Environmental Guidelines



This symbol on the product(s) and / or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

At the end of the device's life cycle, the user is required to take the device to designated collection points collection for recycling of waste generated from electrical and electronic equipment, or to return the old appliance at the store in case of purchase of a new device. Proper segregation of waste associated with subsequent recycling, processing and/or environmentally friendly destruction of the used device supports the avoidance of potential negative effects on both the environment and health; it also encourages the reuse and/or recycling of the materials from which the device was manufactured.

**BROOKVENT™**

airtherm<sup>™</sup>  
AQUA 1.1