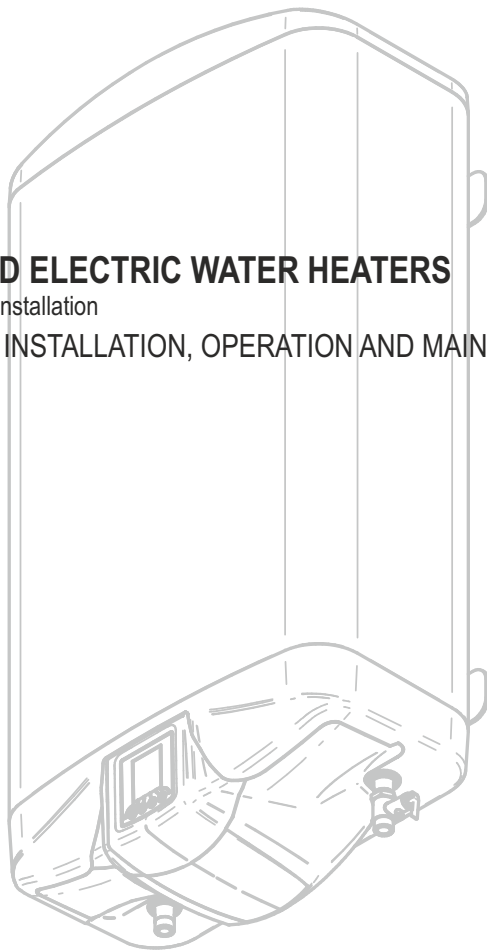


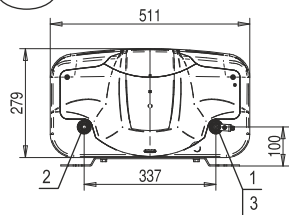
## **HOUSEHOLD ELECTRIC WATER HEATERS**

designed for wall installation

**MANUAL FOR INSTALLATION, OPERATION AND MAINTENANCE**



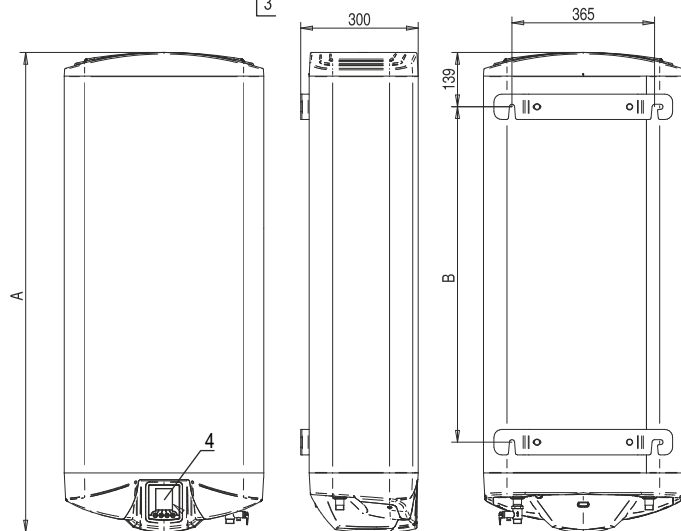
1



Model	DU060 DV060D	DU080 DV080D	DU100 DV100D
A, mm	838	1033	1227
B, mm	468	663	858

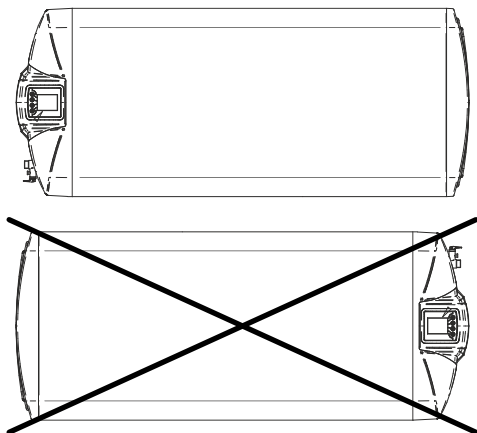
Values are approximate.

1



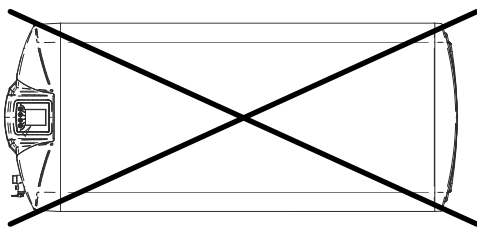
- 1 Inlet, cold water
- 2 Outlet, hot water
- 3 Combined valve
- 4 Electronic control

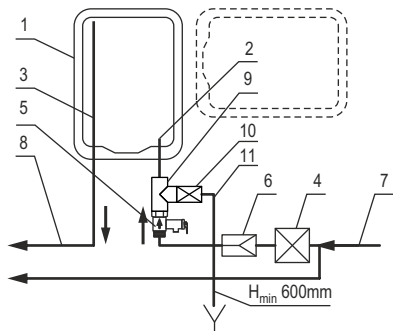
2



2

**DVxxxD**





- 1 Water heater
- 2 Water inlet
- 3 Water outlet
- 4 Stopcock
- 5 Combined valve
- 6 Pressure-reducing valve
- 7 Cold water
- 8 Hot water
- 9 Tee connector
- 10 Stopcock
- 11 Drain hose

#### ENNOTES:

1. Pos. 6 is installed for water pressure in the mains above 0,5 MPa
2. The connection between pos. 10 and pos. 11 should be watertight.

## BUTTONS



I



II



III



IV



V



VI



VII



VIII



IX



X



XI



XII



XIII



XIV



XV



XVI



XVII



XVIII



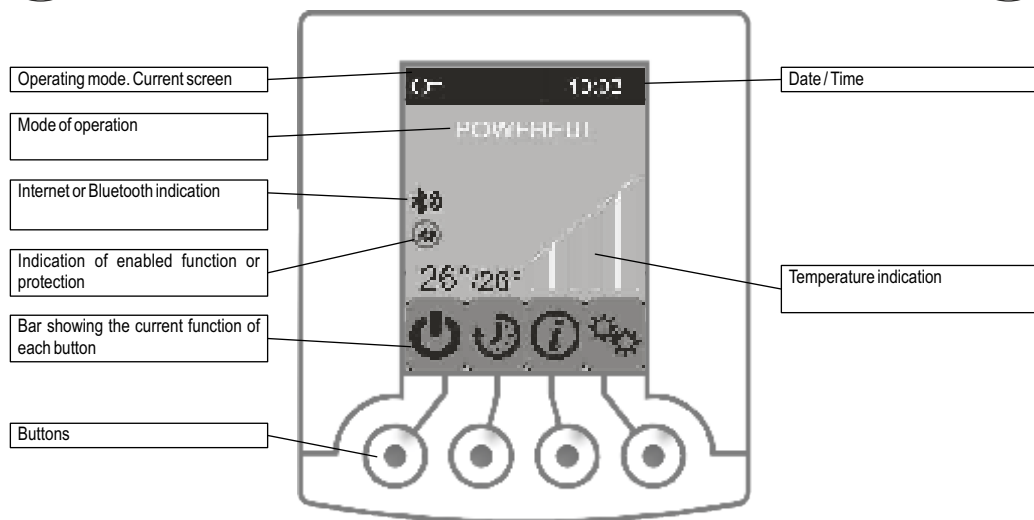
XIX



XX

	(EN)
I	Switch to working mode
II	Delayed start
III	Information
IV	Settings
V	Back
VI	Up
VII	Down
VIII	Confirmation
IX	Rejection
X	Increase
XI	Reduction
XII	Confirmation
XIII	Exclusion from work mode
XIV	Tariffs - Setting the temperatures
XV	Changing the working mode
XVI	Tariffs - choice
XVII	Mode - ECO
XVIII	Timers
XIX	Training
XX	Keyboard - down or shift on hold

## MAIN SCREEN



## Technical data of the electronic unit

Supply voltage	230V~ 50Hz +5/-10%
Maximum permissible current flowing through relay contacts	20A AC
Power consumption with heater off	<1.1W
Stand by power consumption.	<0.5W
Measured temperature range	-10°C – 120°C
Set temperature range	35 °C – 75°C
Thermal sensor temperature measurement error	<1% +/- 0.5°C
Temperature for activation of the "Freeze Protection" mode	<=8°C
Permissible ambient air temperature when operating with relay on	-20 до +55°C
Time to save settings and information after power off	up to 48 hours

## Error messages

Heater 1 (2) -Heater(s) burnt or disconnected	Depending on their order. This fault is detected when for 1 hour of operation with the heater on, it is found that the maximum temperature exceedance read by the sensor is less than 0.5C/5 min. In this case, the electronic controller will enter the "Off" mode, with no possibility of change. Re-connection of the heaters will only be possible after disconnection from an external disconnection device (apartment panel).
Sensor 1 (2) off	The temperature sensor (1 or 2) is disconnected or switched off.
Sensor 1 (2) shorted	The temperature sensor (1 or 2) is damaged or shorted.
Freezing	When the electrical supply to the water heater was switched on, a negative water temperature was measured in the water tank. Water freezing is possible! In this case, the heater will not turn on until the appliance is disconnected from the external disconnect device (apartment panel).
Other	Displayed



*Dear clients, thank you for choosing device from ELDOMINVEST LTD. - Bulgaria!  
It will be trustworthy helper in your household for many years because in its production we have  
combined high quality materials and innovative technologies.  
To be sure of its hopeful and trouble-free operation, please read the installation and operating  
instructions carefully.*

**WARNING! Before installation and operation with the appliance, read carefully the present manual!**

## **SAFETY, GENERAL REQUIREMENTS**

Before starting the installation of your appliance and its operation it is compulsory to read carefully the text of the instructions booklet. It is designed to familiarize you with the unit, with the rules for its proper and safe use and the minimum activities necessary to maintain and service it. Furthermore, you will need to provide this guide for use by qualified persons who will install and repair the unit in case of failure. Installation and commissioning of the unit is

not a warranty obligation of the seller and/or manufacturer.

Keep this guide in a suitable place for future reference.

Compliance with the rules helps for safety use of the appliance and is one of the warranty terms and conditions.

**ATTENTION!** Installation of the water heater and its connection to the water supply system shall be only made by qualified persons in accordance with the instructions herein contained and current local regulations. It is **OBLIGATORY** to install the safety and other fittings supplied or recommended by the manufacturer!

**ATTENTION!** Electrical connection of the unit shall only be made by qualified persons in conformity with the instructions herein contained and relevant regulations. The appliance must be properly connected to the conductive wires and to the protective circuit! Do not perform electrical connection until you are sure that the unit is filled with water! Non-observance of these requirements could render the appliance dangerous and its use is prohibited!

**WARNING!** When using the appliance, there is a risk of burns with hot water!


**WARNING!** Do not touch the appliance and its control unit with wet hands or if you are barefoot or stepped on a wet floor!

**WARNING!** This appliance may be used by children over 3 and persons with reduced physical, sensory or mental capabilities, or lack of experience or knowledge if supervised or instructed to use the appliance and understand the potential hazards. Children may not play with the appliance. Cleaning and maintenance operations performed by the user shall not be carried out by children without supervision. Children aged from 3 to 8 years are only allowed to operate the tap connected to the water heater.

## **ENVIRONMENTAL PROTECTION**

This appliance is marked according the REGULATION concerning waste electric and electronic equipment (WEEE). By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.



The symbol  on the product, or on the accompanying documents indicates that this appliance may not be treated as household waste. Instead it should be handed over to the applicable collection point for the recycling of electrical and electronic equipment. Disposal must be carried out in accordance with local environmental regulations for waste disposal. For more detailed information about treatment, recovery and recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## TECHNICAL DESCRIPTION

Your water heater is intended for domestic use and can provide heated water from the main water supply line to a number of consumers at the same time – kitchen, bathroom, etc.

The water used for heating should correspond to the regulatory documents on domestic water and particularly: chlorine content must be less than 250 mg/l; electrical conductivity must be greater than 100  $\mu\text{S}/\text{cm}$ , and pH must be within 6,5-9,5 for water heaters with enameled water tanks; electrical conductivity must be less than 200  $\mu\text{S}/\text{cm}$  for water heaters with tanks of chrome-nickel steel. Water pressure in the water supply installation must be higher than 0.1 MPa and less than 0.5 MPa. In the event that the water supply pressure is higher than 0.5 MPa, please refer to the recommendations described in the section concerning water connections.

The appliance has two tanks and two heating elements that are intelligently controlled by the electronic control unit.

Water tanks of the appliances are protected against corrosion with the help of high-quality enamel coating or are made of high alloy chrome-nickel (corrosion-resistant) steel. Enameled water tanks have built-in anodes of special alloy for further protection.

The casing of appliance is made of steel with epoxy-polymer coating and their thermal insulation is made of CFC-free polyurethane foam.

Schematic design and technical data of basic models and modifications are shown in Fig. 1-2 and in the table. All figures and tables can be found at the beginning of this booklet.

Models of water heaters and their modifications are designated with letters and digits as follows:

- The first two letters and the following three digits indicate the basic model of the appliance.
- „D“ – appliances are designed for wall mounting.
- „U“ – water heater for universal mounting, either in a vertical or horizontal position.
- „V“ – water heater for vertical mounting position.
- xxx – first three digits after the letter „U/V“, code of water heater capacity.
- „I“ – appliance's water tanks are made of high alloy chrome-nickel steel.
- „D“ – the water heater has built-in heating elements that heat water indirectly. This helps to improve the appliance safety and increases the corrosion resistance.
- „W“ – The water heater's electronic control unit has a WiFi module.
- „W“ – Plastic covers in white color.

Hot and cold water pipes have indicative color markings, blue and red respectively.

The exact and complete model number, declared performance parameters and serial number of your water heater are printed on the plate attached to the unit.

## WALL MOUNTING OF THE WATER HEATER

Water heaters are intended to be fitted either vertically (Figure 1) or horizontally (Figure 2), except for models with 'D' letter after the basic model, which can be only mounted in a vertical position.

**WARNING!** When the unit is mounted in a horizontal position, hot and cold water pipes and electrical parts **MUST** be on its left side, see Figure 2. Non-observance of this obligation will render the appliance dangerous whereby the manufacturer and/or retailer will not assume any liability for adverse consequences and damages!

The water heater should only be installed in premises with normal fire safety where the temperature is always higher than 0 °C. The floor of the premises must be fitted with a floor drain of the sewage water system, as it is possible for water to leak from the safety valve port during normal use of the water heater. The floor drain will facilitate the unit maintenance, inspection and service, whenever it is necessary to drain water from the tank.

The location of the water heater should be selected according to the wall type and material, appliance dimensions, fixing method, arrangement of

fixing elements and pipes, degree of protection against ingress of water. The latter is indicated on the serial number plate. The appliance must be installed in a place where it will be prevented from water sprays and splashing. To reduce heat losses, it is desirable to minimize the distance between the water heater and premises where hot water will be used.

If your water heater has a factory fitted power supply cord combined with a plug, the appliance shall not be installed in wet rooms! The appliance location must comply with the requirements of for electrical installation and its socket. Refer to the section concerning electrical connections herein.

It is mandatory to allow a clearance between the appliance and surrounding walls and ceiling:

- When the water heater is mounted vertically – at least 70 mm between the appliance and the ceiling; at least 50 mm between the appliance and the sidewall; at least 600 mm under the appliance to facilitate maintenance operations and repairs.
- If the water heater is mounted horizontally on the wall in the room – at least 70 mm between the appliance and the ceiling; at least 70 mm between the side (no leads) and the wall; at least 350 mm between the plastic cover with electrical parts and the wall to facilitate maintenance operations and repairs. Under the unit, there should be enough space to drain water from the water heater.

The water heater shall be rigidly mounted to the wall. Steel bolts should (studs) with a diameter of 10-12 mm be used, securely fixed into the wall. Fixing elements must be secured against pulling aside the wall, they need to be anchor bolts or through bolts (depending on the wall material). It is necessary that the fixing elements intended for the water heater have a bearing capacity of three times the total weight of the appliance with water in it. Appliance installation on decorative walls (made of single bricks or of other light materials) is prohibited. Figure 1 and the table show the necessary distances between bolts (studs) for suspension of appliances.

**WARNING!** Support brackets for a horizontally mounted water heater should be securely fixed to the wall of the room. Washers should be placed under the bolt heads (tenon nuts)!

**WARNING!** Water heaters with heating elements that heat water indirectly could only be mounted in a vertical position! The manufacturer and/or retailer shall not be liable for losses, damages and other circumstances resulting from improper installation, which will also render the product warranty invalid!

**WARNING!** Non-observance of the requirements for fixing the water heater to the wall may cause damages to the appliance, other appliances and the room where the appliance is located, corrosion of the casing or even more serious failures and damages. In such cases, damage is not subject to warranty obligations of the retailer and manufacturer, and will be borne by the party who did not observed the requirements of these instructions.

Installation of the water heater on the wall of the premises should only be performed by qualified persons.

## WATER HEATER CONNECTION TO THE WATER SUPPLY NETWORK

The water supply system to which the water heater will be connected, as well as other elements included, should resist continuously at water temperatures above 80 °C, and above 100 °C for a short time; they should also be capable to withstand a pressure at least twice the working pressure of the appliance.

Upon connection of the water heater to the water supply system, the indication rings around the cold and hot water pipes (inlet and outlet pipes) of the water heater should be observed. The cold water pipe is indicated with blue color, and the hot water pipe is indicated with red color. See Figure 1. Pipes of some appliances are additionally labelled. These are with threading 1/2".

A diagram showing the connection of the water heater is shown in Figure 3. Under this diagram, the water heater operates at the pressure of the water supply line and of the safety valve. If the water-supply line pressure is greater than 0.5 MPa, it is mandatory to install a pressure-reducing valve

(reducing valve). If local regulations stipulate the use of additional devices that are not supplied with the appliance, they need to be purchased and installed in accordance with the requirements.

The water heater is equipped with a combined non-return-safety valve. The latter is factory-fitted on the cold water pipe or is located in the packaging of the appliance. The combined non-return-safety valve located in the packaging of the appliance **MUST OBLIGATORY** be mounted on the cold water pipe. During that installation the arrow on its hull showing the direction of water flow through the valve must be followed.

**WARNING!** The absence or improper installation of the combined valve supplied with the product is grounds for voiding the product warranty.

**WARNING!** It is **FORBIDDEN** to install any kind of shut-off fittings between the combined valve and the water heater! It is absolutely forbidden to obstruct the lateral opening of the combined valve and/or to block its lever!

Where the plumbing pipes are copper or of another metal, other than that of the water tank, or where brass fasteners are used, it is obligatory to install on the water tank inlet and outlet non-metallic couplings (dielectric fittings).

It is recommended to set up a draining system for any dripping from the combined valve side opening. The draining pipe must have a constant downward slope and located in frost secure environment and its ends to be constantly kept open to the atmosphere.

In order to maintain the effectiveness of the appliance it is recommended that all its pipe outlets and elements connected to them be additionally covered with a suitable thermal insulating material compliant with applicable requirements.

Once the water heater is connected to the water supply main, its tank should be filled up with water. This is performed in the following order:

- Close the stopcock (10 in Figure 3)
- Open completely the hot water tap of the most remote mixing cock.
- Open the stop valve (4 in Figure 3)
- Wait until the air runs out of the system and a copious flush flows from the mixing cock for a half to one minute.
- Close the hot water tap of the mixing cock.
- Raise the lever of the combined valve (5 in Figure 3) and wait for between 30 and 60 seconds until a copious flush of water flows from the side port of the valve.
- Lower the valve lever.

**WARNING!** If no water is flowing from the valve port or it is too weak (under normal water-supply pressure), this is a fault and indicates the presence of impurities inflowing from the water main or resulting from plumbing connections have blocked the safety vent of the combined valve.

**IT IS PROHIBITED** to proceed to electrical connection of the appliance until the reason for failure is not eliminated!

**WARNING!** Non-observance of the requirements for connection to the water supply system may result in partial filling of the tank with water and malfunction of the heating element. If the combination valve is not installed or it has been improperly installed, this may even result in destruction of the water tank, premises and/or other material and non-material damage. Such sequences are not within the scope of the warranty obligations of the manufacturer and retailer and will be borne by the party who did not observe the requirements these instructions.

**WARNING!** The combined non-return-safety valve is one of the protective fittings ensuring the safety of the water heater. It is strictly **PROHIBITED** to use the water heater with a defective or removed/non-installed combined valve!

Connection of the water heater to the water supply system must only be performed by specialists.

The safety valve, if appropriate, will be used to drain water from the tank. This shall be performed as follows:

- Disconnect the water heater from the mains from the additional device and, for more security, turn off the safety fuse that is in the phase circuit to the water heater.
- Shut the cold water flow to the appliance by closing the tap (4 in Figure 3).
- Open a hot water tap of a mixing cock or disconnect the coupling of the

hot water pipe (outlet pipe) of the unit.

- Open the tap (10 in Figure 3) and wait until the water stops flowing from the opening of the drain hose. The height between the tap and the end of the hose should be at least 600mm.

These operations do not ensure that the water tank is completely drained. Draining should only be performed by a qualified technician because it involves disconnection of the electrical circuit of the appliance and removal of the water heater flange.

**WARNING!** IT IS STRICTLY PROHIBITED to turn the water heater on while its tank is partially or completely drained! Before you turn the appliance on again make sure the tank is full of water.

**WARNING!** When draining water from the tank, it is necessary to take all appropriate measures to prevent damage caused by leaking water.

## WATER HEATER ELECTRICAL CONNECTION

**WARNING!** Before you switch the power supply, make sure the appliance is full of water!

The water heater is an appliance with a degree of protection against electric shock Class I, which requires its mandatory connection to the grounding circuit of the electrical wiring.

The electrical power supply of the water heater is 230 V~ and is performed by a separate electrical circuit via a three-core insulated cable with a cross-section of each core of 2.5 mm<sup>2</sup> (phase, neutral and protective). If the protective conductor/core has attachment points, they should be safely secured against self-loosening. Otherwise, the appliance will not be properly protection connected that will impair its safety.

In the phase circuit it is **obligatory** to fit an electric fuse 16 A. The electric wiring to which the water heater will be connected should be constructed in line with the requirements of relevant standards. In the event that relevant standards do not stipulate it, it is recommended that an automatic protection against leak currents (residual current device) be installed in the electrical circuit of the water heater.

Your water heater is fitted with a factory power supply cord combined with a plug and it is electrically connected when the plug on the cord is plugged into a working and grounded power socket of the premises' electrical installation. The socket must be protected against moisture, be spray-proof, connected to a separate electrical circuit intended only for the water heater and positioned in such a way as to be easily accessible after the appliance installation. The water heater is switched off from the electrical installation when the plug of the cord is pulled from the socket, while switching on/off the appliance from the electronic control is only a function. Damaged and/or improper electrical installation, and/or socket are major hazard, it may cause accidents, product damages or impose risks to the environment, objects and humans.

In the event that the purchased water heater has no factory fitted plug on the power supply, connect its conductors to the electrical installation as follows:

- conductor with brown insulation – to the phase conductor
- conductor with blue insulation – to the neutral conductor
- conductor with yellow-green insulation – to the safety conductor

**WARNING!** If the appliance power cord is connected to the electrical installation in a wet room, the connection must be waterproof!

After appliance connection to the electrical installation it is necessary to check its functionality.

**WARNING!** Non-observance of the electrical connection requirements will impair the appliance safety, whereby its use is prohibited. Any adverse consequences resulting from non-observance of the requirements on appliance electrical connection are not within the scope of the warranty obligations of the manufacturer and retailer and will be borne by the party who failed to observe the requirements in these instructions.

Only suitably qualified specialist must perform the connecting of the water heater to the electric network and check its functionality. It is not obligation of the manufacturer or retailer and is not covered by the guarantee.

## HOW TO USE THE APPLIANCE

The water heater is controlled by an electronic control unit (thermoregulator, controller) that controls directly two electric heating elements using two NTC thermal sensors for measuring the relevant temperatures in each water tank. The thermoregulator is controlled and set by self-explanatory and intuitive menus by means of 4 multifunctional buttons. The specific function of each button can be changed and its current status is displayed with appropriate graphic on an information bar on the screen. There is an option to rotate screen images 90 degrees if the unit is installed in a vertical position, for easy reading.

The buttons and their functions are shown and described at the beginning of this booklet. The main screen, technical features and error messages are shown and described at the beginning of this language version.

**WARNING!** Do not switch on the appliance if there is a possibility that the water in the water tank is frozen! This will cause damage to the heater and water container.

When the electronic controller is initially switched on, the display shows consistently:

- Manufacturer's logo – for 3 seconds.
- Model of the hardware and software of the electronic controller – for about 3 seconds. A self-diagnostic is made for the malfunction of the electronic module, and if a malfunction is detected it is displayed what the malfunction is, in order to take action to fix it if possible;
- Selection of language. It can also be subsequently selected from the "Settings" menu.
- Time and date setting. It can be subsequently selected from the "Settings" menu;
- Setting the volume and power of the appliance. It can be subsequently selected from the "Settings" menu.

The thermostat has 5 main operating modes:

- "Off" - The electric heaters are turned off in this mode. The display shows information about the current amount of hot water, time, date, etc. From here it is possible to enter the "Settings" menu, "menu", "Delay start", and "Information" menu.
- "Powerful" - This is the initial (factory set) heating mode when the ON/OFF button is initially turned on. In this mode, heating is performed simultaneously with both heaters (at full power). Here the five heating sectors are at temperatures of 35; 45; 55; 65 and 75°C, respectively (default). The other requirements are the same as for the "ECO" mode (see below).
- "Smart" - In this mode, heating is controlled by a specially developed energy-saving algorithm that automatically adapts the water heating process to individual consumption modes in order to reduce energy consumption. When switched to "Smart" mode operation, for the first 7 days of consumption, the controller will operate at the maximum heating setting, with two heaters running simultaneously, during which time it will collect and store data on the time the heaters are switched on, the duration of heating, and the water temperature immediately before switching them on. After the first 7 days, the electronic module switches to an automatic heating mode that is consistent with the training algorithm that has collected data up to that point for each of the 7 days. During this time, the heaters are allowed to operate simultaneously. The aim is to heat the water only at the right time, supplying only the required amount of hot water to the household. The menu of this mode allows users to select a new training of the algorithm (reset). If, during the training (first 7 days), another mode is switched and then returns to the "Economy" mode, the training starts again (a warning message is displayed). The display should indicate whether the electronic module is in training or not. From here, there is the option to Emergency Heat to maximum temperature if required (with both heaters heating simultaneously) when the mode is out of training, which is accompanied by a visual change to the Emergency Heat icon on the display. This is done by pressing the corresponding button for more than 2 seconds. The display shows the time remaining until complete heating. After heating, the Emergency Heat function is

deactivated.

- "ECO" - In this mode, at any given time, the controller should turn only one of the two heaters on or off. This means that when the mode is switched on, if the water in both water tanks is lower than the set temperature, the heater in the second (outlet) water tank must be switched on first. The heater in the first (inlet) water tank is switched on once the set temperature in the second water tank has been reached. Respectively, the first heater also switches off after the set temperature has been reached. When initially drawing water (draining hot water, and entering cold water) from a heated water heater, the heater whose water tank temperature sensor reads 5 degrees lower than the set temperature should be turned on. This is usually the first (inlet) water tank. In the case of continuous drawdown, when the temperature of the second water tank drops more than 5 degrees from the set temperature, the heater of the first water tank is switched off and that of the second water tank is switched on. Both heaters shall heat alternately until the water in both water containers is heated. The minimum set temperature for heating is 55C (i.e. when the water temperature drops below 50C the heater should be switched on). The maximum heating temperature is 75C. If any sensor reads a temperature higher than 75C, the electronic controller must switch off all heaters (this applies to all heating modes). The display must show information on the current temperature status of the water in the form of red and blue sectors, the total possible number of sectors being five. Also, the colour of the temperature display of an operating heater shall be red. The red sectors indicate the amount of water heated so far and the flashing blue sectors show the remaining amount of water still being heated. There shall be an indication of the remaining time in minutes and hours until the set temperature or quantity of hot water is reached. When the water heater is fully heated, the display shall show all active sectors in red without flashing. The meaning of the number of sectors is as follows:
- One sector - only the heater in the outlet water tank operates until the temperature reaches 55C. There should be a QUICK heat indication on the display;
- Two sectors - only the heater in the outlet water tank operates until the temperature reaches 75C. There should be a QUICK heat indication on the display;
- Three sectors - both heaters operate alternately until the temperature reaches 55C in both water tanks;
- Four sectors - both heaters operate alternately until a temperature of 65C is reached in both water tanks;
- Five sectors - both heaters operate alternately until a temperature of 75C is reached in both water tanks;
- "Extra Save" - This is a mode in which the heating depends on the different electricity tariffs of the household. Here you select the number and start time of the tariffs, as well as the heating temperature for each of them. The water heater heats from 35 to 75 C with the heaters working in sequence as in "ECO" mode.

"ECO" and "Powerful" modes must have an option for heating with Timer - here the heating starts only at certain times of the day and days of the week, and it continues until the set temperature is reached according to the mode. The time that is selected in the corresponding timer is actually the moment when the water heater will have already heated the water to the appropriate temperature according to the mode ("POWERFUL" or "ECO"). When the timer is on, the icon in the main display is coloured. The minimum tolerance between two consecutive timers is 3 hours. The Timer menu is accessed by pressing the button with the corresponding symbol once. Activation and deactivation of the selected timers is done by holding the timer menu entry button for more than 2 seconds. When switching to another main mode, the timer is deactivated.

### Additional functions and protections of the electronic control unit:

- Anti-freeze - This is an automatic safety feature of the control unit that keeps water in the water tanks from freezing. When the temperature in the water tanks drops to 8C, the controller switches on the heating of the heater whose sensor has reached 8C first, or if the temperatures are equal, the one in whose water tank the inlet pipe is located. Once the water temperature reaches 15C, it switches to heating the water in the



second water container also to 15°C. This cycle is repeated until the ambient temperature rises or when the "Heat" mode is switched on. The activation of this protection shall be in "Off" mode, and shall be accompanied by an indication on the display (to show a snowflake or text). The "Anti-freeze" function must not be able to be switched off by the user.

- **Anti-Legionella** - This is a protective feature that prevents the development of harmful bacteria in the water contained of the water heater. If for 7 days the temperature in either of the two water tanks has not been heated above 55°C, then once a week (or at the first switch on if it has been switched off), the heating is switched on according to the selected mode, until four heating stages (65°C) are reached. If the day of activation of this function coincides with the day of switch-on triggered by "Timer" or "Delayed switch-on" (see below), then the activation of "Anti-Legionella" will coincide with one of the two modes ("Timer" or "Delayed switch-on"). This function must be able to be switched on and off by the user, by pressing the corresponding buttons in the "Settings" menu. This function shall operate in one of the main heating modes and its status (on or off) shall be indicated on the display. By default, the "Anti-Legionella" function is switched off.
- **Delayed start** - This is an additional function, which is selected directly from the "Off" mode and allows to delay the switching on of the last working heating mode for several hours. Inside the menu, by successively pressing the + or - button from the control unit, the delay time is selected; it is in hours and can be up to 16 astronomical hours. When this function is enabled, the last set time is selected by default (initially the default is 8 hours and 00 minutes). The minimum time tolerance is 30 minutes. The activation of this function must be accompanied by an indication on the display of the ON time in hours and minutes. When the delayed start menu entry button is held down for more than 2 seconds, it shall be possible to activate and deactivate the function.
- **Installation type** - This is a setting that determines the visual display of the control unit relative to the mounting position of the water heater. There are two options: vertical mounting (buttons and icons are below the display) and horizontal mounting (buttons and icons are to the left of the display). This also implies the possibility to rotate the images displayed on the display by 90°. This function will be selected from the "Settings" menu.
- **Wi-Fi module** - Includes and configures the Wi-Fi module for wireless connection in order to remotely control the electronic control unit.
- Other functions and information that can be selected from the "Settings" menu are:
  - Selection of language
  - Time and date setting. Holding the + and - buttons for more than 2 sec. will change the value by 3 units per second. This principle applies to all menus that have a time selection.
  - Setting the volumes (50; 65 and 80L) and maximum water heater outputs (3.3 kW or 3 kW). These settings affect the operation of the water heater in the "SMART" mode, in the remaining time to heat and in the statistics in the "Information" menu. When the electronics are first switched on, they must be set necessarily before the electronic controller goes into operating mode.
  - Factory reset
  - Information about the version and model of the electronic module and the software version. From the "Info" menu in the "Off" mode, information about temperatures and heating times for the past time period (up to 7 days back) is displayed. It is also possible to monitor the power consumption and Wi-Fi network information.

When any submenu is inactive in all modes for more than 30 sec., it switches to the Main screen according to the mode.

- **Service mode** - Whenever switching from the "Off" mode to one of the main heating modes, if it cannot be done permanently, an initial diagnosis of the electronic controller is made (the sensors and other main elements of the control are checked for good working order). Faults and malfunctions shall also be detected during operation in any of the main heating modes. When a fault or defect in the control unit is detected or occurs, the electronics module shall go into "Off" mode and the fault

information shall be displayed and the electronics shall beep for 1 min. Possible defects and faults may be:

- Heater 1 (2) - Heater(s) burned out or broken, depending on their order. This fault is detected when, during 1 hour of operation with the heater switched on, it is found that the maximum temperature exceedance read by the sensor is less than 0.5°C/5 min. In this case, the electronic controller will enter the "Off" mode, with no possibility of change. Re-activation of the heaters will only be possible after disconnection from an external disconnect device (apartment panel);
- Sensor 1 (2) off - The temperature sensor (1 or 2) is disconnected or off;
- Sensor 1 (2) shorted - The temperature sensor (1 or 2) is damaged or shorted;
- Freeze - When the electrical power was turned on to the water heater, a negative water temperature was measured in the water tank. Freezing of the water is possible! In this case, the heater will not turn on until the appliance is disconnected from the external disconnect device (apartment panel).
- Other.

**WARNING!** This appliance can be used by children aged from 3 years and above and persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children. Children aged from 3 to 8 years are only allowed to operate the tap connected to the water heater.

The combination valve is equipped with a special integrated vent, which during normal operation of the water heater, prevents the expanded water from dripping out the side port of the valve and allows it to enter the cold water pipe. The water amount is minimal and it is not hot. During normal operation of the water heater and if an additional non-return valve, water may drip from the side port of the valve. This is not be considered as a defect and the side port of the combination valve should not be plugged in any way, because it will cause destruction of the water tank. The integrated vent prevents the water contained in the water tank from flowing back to the cold water pipe in the event of water supply interruption.

When the appliance is used in hard water areas, it may produce noise during heating. It is due to the lime deposits upon the surface of heating elements and water tank. The quantity of lime deposits depends on the type of water and its heating temperature. When the latter is higher than 60 °C, lime deposits will increase. The built-up lime will impair the performance of the wiring element, may cause damage and increases the water heating time.

During operation, you may hear minimum noise due to the water flowing through water pipes or appliance, as well as to natural processes of thermal expansion and heat exchange.

If the water heater is regularly used to heat water to a lower temperature, it is recommended to heat and maintain water up to the maximum temperature for at least one day. This prevents from growth of bacteria.

## CONNECTING TO THE INTERNET

Connection is optional and not mandatory for the intended operation of the appliance!

The connection is necessary in order to control the appliance and monitor its operation remotely!

You need to download the Eldom app on your device (smartphone, tablet or laptop) from Google Play or App Store. The minimum operating system version on the device shall be Android 8.0.

In order to control and monitor the operation of the appliance you need to have a registration (account) in the Eldom app.

**STEP 1.** Activate the Bluetooth connection from the "Wi-Fi" menu in the "Settings" of the electronics.

**STEP 2.** Select a local control connection in the application.

**STEP 3.** Select the "add new appliance" button, select "other" from the two options.

STEP 4. To connect via Bluetooth, the user must turn on the Location and Bluetooth services on their phone. If they are not turned on, an indication message is displayed.

STEP 5. Scans for Eldom devices, selects the device. The process of pairing the phone with the water heater electronics takes place, where the user must press "OK" on the electronics for it to be successful.

STEP 6. After successful pairing, the appliance is visible in the "water heaters" section of the local control home page.

STEP 7. For control via the Internet select the "system settings" tab. At the bottom of the screen, select the "network settings" option. Carefully type in the name and password of the Wi-Fi network to which the appliance is to be connected.

STEP 8. Activate the "Wi-Fi" connection from the "Wi-Fi" menu in the "Settings" of the electronics.

By following these steps, your appliance is connected to the Eldom remote control and monitoring system. The subsequent control and monitoring of its operation is carried out via the application option via Internet.

It is possible to control the "Added New Appliance" from several devices at the same time, as long as the Eldom application is installed on them, and the latter is used with the same registered user (account: name and password).

## ADDITIONAL CORROSION PROTECTION

**Water heater with enameled water tanks.** Every water heater with enameled water tank has additional integral corrosion protection. It consists of anode/s made of a special alloy and only operating when the water tank is filled with water. The anode is a consumable (normally wearing during operation) and its operation life is up to three years. This period is highly dependent on the usage pattern and on the parameters of water heated. Following the expiry of this period, a technician employed by a repairer authorized by the manufacturer or retailer will have to inspect the anode/s. If necessary, the anode must be replaced with a new one. Meeting the deadline and timely replacement of the anode/s is an important condition to prolong the effective anticorrosion protection to the internal tank. Anode assessment and replacement is not covered by the manufacturer or retailer's warranty.

**Water heater with high alloy chrome-nickel steel.** Anticorrosion protection and long service life are guaranteed by the properly selected steel, suitable design and workmanship.

## SERVICE, PREVENTION, MAINTENANCE

For the proper operation of the water heater in hard water areas, it is recommended that the water tank is de-scaled periodically. It must be performed at least every 2 years and more frequently in hard water areas. Lime scale deposited on the enamel coating should not be removed but only cleaned with dry cotton cloth without using hard objects. The regular de-scaling and cleaning is of particular importance for the appliance reliability. During these operations, it is desirable to inspect the anode of the enameled water tank. This service is not provided under warranty maintenance and should be performed by an appropriately qualified person.

**WARNING!** To ensure safe and flawless operation of the water heater, the combination valve must be inspected periodically to make sure that its flow-rate is not decreased. You should perform this by raising the lever and waiting for 30-60 seconds until a copious flush of water flows from the side port of the valve. This must be carried out after the unit is connected to the water supply system and the water tank is filled with water, during operation but not less than every 2 weeks, as well as after any water supply interruptions. If the water tank is filled and no water runs out of the valve port or the flow is too weak, this is a failure and the valve is probably clogged with dirt. It is strictly prohibited to use the appliance with a faulty combination valve. Immediately disconnect the appliance from the electrical supply and contact the nearest repairer authorized by the manufacturer. Otherwise, this will damage the water tank and possibly cause other damages to objects or the room where the water heater is installed.

When you are not certain about the temperature in the room where the water

heater is installed, i.e. that it may fall below 0°C, the water from the water tank MUST be drained - please refer to section 'CONNECTION TO THE WATER SUPPLY NETWORK'

In order to clean the housing and plastic parts of the water heater only use a damp cotton cloth, do not clean with aggressive and/or abrasive substances or detergents. Prior to cleaning the appliance it MUST be disconnected from the electrical supply by means of the additional uncoupling device or by pulling the plug out of the socket. IT IS PROHIBITED to clean the appliance with a steam generator. Please, take special precautions to prevent moisture formation on the control panel. The water heater may be switched into an operation mode again only after complete removal of moisture.

The rules concerning the anode inspection and replacement (see the preceding section), and de-scaling must be observed during and after guarantee expiry.

When using and maintaining the appliance safeguard the plate with appliance's specifications and serial number. In the event you unstick it, keep it together with the warranty card, because it is possible to identify the water heater only by them.

## FAILURES

If the appliance does not heat water, check if the wall switch is not turned off, if the appliance is not switched off or if the temperature is not set to minimum.

If the electrical supply is in order, the appliance is switched on and the temperature is set to maximum but water is not heated, switch the appliance off from the wall switch and call the nearest authorized repairer.

If no water runs out of a fully opened hot water tap or the flow is weak, check if the filter at the mixing cock is not clogged, whether the stopcock is not partially or completely closed before the water heater (4 in Figure 3), of whether the central water supply is not interrupted. If all of the above is in order, disconnect the water heater from the power supply from the wall switch and call the nearest authorized repairer.

All error messages displayed on the screen and their remedies are described at the beginning of this booklet. In general, you need to disconnect the water heater from the power supply from the wall switch and call the nearest authorized repairer.

In the event of damage to the power cord and/or plug, please refer to the nearest repairer authorized by the manufacturer/retailer, because the cord with the plug must be replaced by the manufacturer, its authorized service or a suitably qualified person, in order to avoid a risk.

## WARRANTY, WARRANTY PERIOD AND WARRANTY CONDITIONS

The warranty, warranty conditions, warranty period, warranty validity for purchased appliance and service related manufacturer or vendor liabilities during the appliance warranty period are listed in the appliance warranty form. When buying the appliance the warranty form must be filled and signed both by seller and buyer. Keep the warranty form in a secure place.

In all instances shall be in force the applicable laws, regulations and other legislation dealing with the rights and obligations of consumer, seller and manufacturer, and their relationships related to purchased water heater, its installation, use, servicing and maintenance.

Warranty term is determined by seller and is in force only for the geographical territory of the country.

Warranty is valid only if the appliance:

- Is installed according to the requirements for installation and operation.
- Is used only as per designed purpose and in accordance with the installation and operation manual.

• Warranty consists of free of charge repair of all factory defects, which may arise during the warranty term. Repair is performed by service specialists, authorized by seller.

• Warranty is not valid for damages, caused by:

- Improper transportation
- Improper storage

- Improper usage
  - Parameters of water, different from the admissible norms for quality of drinking water, and particularly if the composition of chlorides is more than 250 mg/l; the electrical conductivity is less than 100  $\mu\text{S/cm}$  and pH is outside of 6,5-9,5 for water heaters with enameled water tanks; the electrical conductivity is more than 200  $\mu\text{S/cm}$  for water heaters with water tanks made of chrome-nickel steel.
  - Supply voltage, different than the unit's rated voltage.
  - Damages due to freezing of water.
  - Elemental perils, disasters and other force majeure circumstances.
  - Non observance of the installation and operation manual.
  - In cases, when a non authorized person has tried to repair any kind of a defect.
- In the above cases the defect will be repaired against relative payment.
- Warranty shall not apply to normal wear parts and components of the device, parts that are being removed during normal use, lighting and signal lamps and the like, changing the color of external surfaces, change of shape, size and location of parts and components that are exposed to impact and conditions that are not considered normal use.
  - Lost profits, tangible and intangible damages caused by temporary inability to use the device during its prevention and repair shall not be covered by the warranty.

COMPLIANCE WITH THE REQUIREMENTS OF THIS INSTRUCTION MANUAL IS A PREREQUISITE FOR SAFE OPERATION OF YOUR PURCHASED PRODUCT AND IS ONE OF THE WARRANTY TERMS AND CONDITIONS.

IT IS ABSOLUTELY PROHIBITED TO THE USER OR ANY AUTHORIZED BY HIM PERSON TO UNDERTAKE ANY CHANGES IN THE PRODUCT DESIGN AND STRUCTURE. ANY FINDING OF SUCH ACTIONS OR ATTEMPTS SHALL AUTOMATICALLY RENDER VOID ALL WARRANTY LIABILITIES OF SELLER OR PRODUCER.

IN CASE OF NECESSITY FOR SERVICE SEEK ONLY MANUFACTURER AUTHORIZED SERVICE COMPANIES LISTED IN THE ANNEXED FORM.

THE MANUFACTURER PRESERVED HIS RIGHT TO STRUCTURAL CHANGES WITHOUT NOTICE WHERE SUCH SHALL NOT AFFECT PRODUCT SAFETY.

1	ESP32-WROVER-E (IE)	Wi-Fi & Bluetooth Modul Wi-Fi / BT
2	2400-2483.5 MHz	Radio frequency band
3	11.23/19.91 dBm (EIRP)	Maximum RF power
4	13	Number of channels
5	DSSS/OFDM, GFSK	Modulation
6	PCB Antenna/ IPEX Antenna	Antenna type
7	IEEE 802.11b/g/n	Protocol
8	802.11b/g/n	Speed
9	№ E1177-233113 / 2023-06-12	Certification 2014/53/EU

## EU DECLARATION OF CONFORMITY

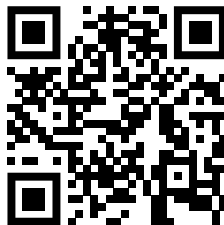
Hereby, Eldominvest Ltd. declares that the Electric water heater with electronic control and Wi-Fi module is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

<https://eldominvest.com/en/Declaration-WV-DU.html>



Online video guides



<https://youtu.be/OzuKLu4liiKU>



Manufacturer:

ELDOMINVEST Ltd., [www.eldominvest.com](http://www.eldominvest.com)  
275A VI. Varnenchik blvd., Varna, 9009, Bulgaria