TECHNICAL DATA SHEET

**Dual-circuit gas boiler ELEPHANT GB18CD-W/B wall-mounted, white/black color,
power 18kW, with Wi-Fi function**

+34 900 433 073, sales@valveelephant.com
Carrer d'Aragó,264,3-1,08007 Barcelona, Spain

1. GENERAL NOTES

1.1. Heating boiler ELEPHANT GB18CD-W/B is designed for heating and hot water supply.

1.2. This boiler is designed to heat water to a temperature lower than the boiling point of water at atmospheric pressure. The boiler should be connected to the heating system and to the hot water circuit according to its characteristics and capacity.

1.3. The boiler power supply and earthing circuit of the boiler and, if necessary, of other electrical appliances must be made in accordance with the requirements of the current Regulations: “Rules of electrical installations”, “Rules of technical operation of electrical installations of consumers” and “Rules of technical operation of electrical installations of consumers of electric energy”.

1.4. The room where the boiler is installed must be provided with a natural or supply and exhaust ventilation system. It is forbidden to close the grilles of ventilation ducts.

1.5. Works on installation, instruction on operation, start-up, preventive maintenance and repair of the boiler are carried out by a specialized organization and local gas department in accordance with “Safety rules of gas distribution and gas consumption systems”, according to the boiler installation project and obligatory filling in of the control card.

1.6. The installed boiler can be put into operation only after it has been accepted by gas service specialists, the owner has been instructed and the installation control card must be filled in.

1.7 If the device will not be used for a long time, it is necessary to disconnect the power supply and close the gas valve. In order to avoid freezing of the boiler and heating system, it is necessary to completely drain the water from the boiler and heating system.

1.8. The manufacturer is not liable for any damage caused by incorrect installation, improper use and non-compliance with the applicable standards and instructions.

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2. SECURITY MEASURES

2.1. The boiler is designed for heating the heating system circuit and hot water production. It is forbidden to use the gas boiler for other purposes.

2.2. In case of malfunction and/or malfunction of the gas boiler, immediately disconnect it and contact a specialized organization that has an official permit to perform repair and maintenance work on gas boilers. It is forbidden to repair the product on your own.

2.2. **If a gas odor occurs, proceed as follows:**

2.2.1. turn off the gas tap in front of the boiler or at the inlet to the house;

2.2.2.2. open windows and doors and ventilate the room where the boiler is located;

2.2.3. immediately call the emergency service or a gas service representative from a landline phone to 04, from a cell phone - 104 or through the single emergency number 112;

2.2.4. to avoid sparks, do not turn on or off electrical appliances, telephones;

2.2.5. do not use an open flame and do not smoke in the room.

2.3. The electrical equipment of the boiler must be supplied from a single power source and switched off by a single switch. On the power supply line from the power source to the boiler, except for the stabilizing electrical appliance, there must be no other electrical appliances. The use of extension cords and adapters is not allowed.

2.4. Before any cleaning or maintenance of the boiler, disconnect it from the mains and close the gas tap. Also close the taps on the inlet and outlet of the heating and hot water lines.

2.5. The boiler should only be serviced and repaired by qualified personnel.

2.6. It is necessary to exclude possible intervention of children and incapacitated persons into the boiler operation.

2.7. **It is strictly forbidden:**

2.7.1. presence of combustible, flammable and chemically active substances near the boiler;

2.7.2. installation of the gas boiler in places with high humidity;

2.7.3. operation of the boiler if the heating system is defrosted or there are leaks of coolant from the heating system;

2. 7.4. boiler operation if there is no draught in the chimney, i.e. there is no combustion products exit through the chimney, combustion air intake;

2.7.5. placement of any objects on the equipment;

2.7.6. operation of a defective gas boiler.

3. TECHNICAL CHARACTERISTICS

Table 1

Model	Unit of measure	ELEPHANT GB18CD-B
Heating capacity	kW	18
Efficiency	%	91
Primary heat exchanger	-	material - copper; connection - DN15
Secondary heat exchanger (DHW)	-	8 plates stainless steel
Degree of protection	-	IPx4
Electrical supply	V / Hz	220/50
Heating medium temperature	°C	45÷80
Gas flow	m3/h	~ 1
Minimum hot water pressure	MPa	0,05÷0,6
Minimum hot water flow	l/min	3
DHW capacity	l/min	10
DHW hot water temperature	°C	35÷60
Heating circuit operating pressure	MPa	0,05÷0,2
Heating area	m2	180

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Table continuation 1

Water expansion tank	-	tank material - galvanized sheet DC51D; tank size, mm - 400x200x58; membrane body - nitrile rubber
Chimney diameter	mm	100*60
Weight	kg	32
Overall dimensions	mm	710x420x245

4. BOILER DESIGN

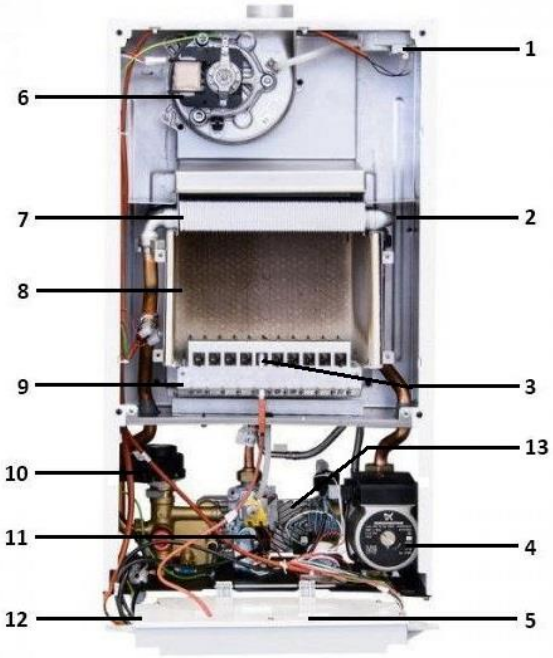

Table 2

№	Name
1	Pressostat
2	Expansion tank
3	Ignition electrode
4	Pump
5	Controller
6	Fan
7	Primary heat exchanger
8	Combustion chamber
9	Burner
10	Three-way valve
11	Gas valve
12	Pressure gauge (located at the bottom of the housing)
13	Secondary heat exchanger (DHW)

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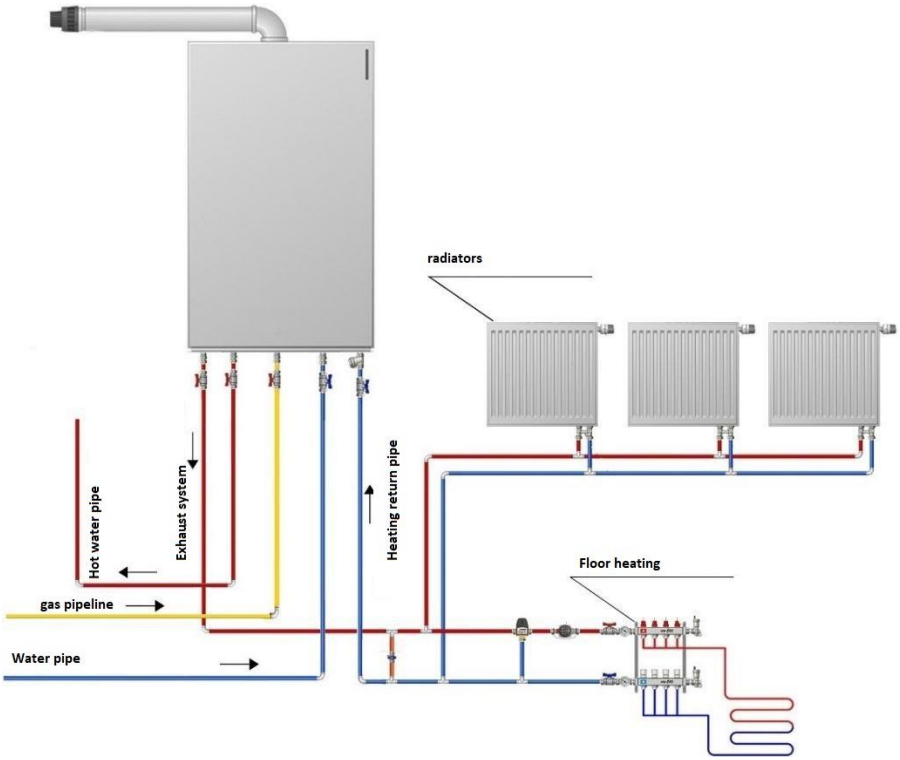
5. WIRING DIAGRAM



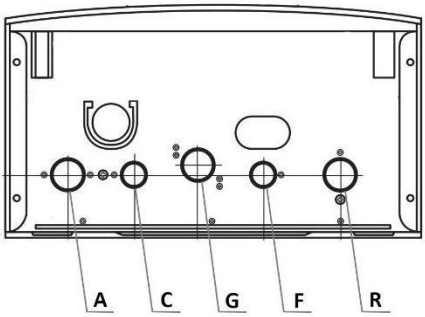
A - A - water outlet to the heating system

C - C - hot water outlet

G - G - gas inlet

F - F - cold water inlet

R - R - water inlet from the heating system



6. INSTALLATION INSTRUCTIONS

6. 1. GENERAL GUIDELINES

6.1.1. The boiler must be installed only in a place regulated by normative documents. The room where the gas boiler is installed must have normally functioning ventilation and flue gas discharge to the atmosphere.

6.1.2. The room must be well ventilated, equipped with a vent, height not less than 2.5 m and volume not less than 7.5 m^3 ,

6.1.3. The wall for boiler installation must be made of non-combustible material and able to withstand the weight of the equipment.

6.1.4 On the pipelines connected to the equipment it is necessary to provide shut-off devices. A dirt filter should be installed on the return line from the heating system to prevent suspended solids from entering the equipment. It is also recommended to install a water purification filter on the cold water inlet.

6.1.5 Before installation it is necessary to thoroughly flush all pipelines of the system with non-aggressive chemical agents. This procedure is necessary to remove all kinds of sediments and contaminants that may prevent the boiler from working properly.

6.1.6. The rooms in which the gas boiler will be operated are stipulated in accordance with the established procedure at the enterprise.

It is mandatory to install a voltage stabilizer to avoid critical overloads on the electronic control unit of the boiler as a result of voltage surges in the network.

6.2. MOUNTING LOCATION SELECTION

6.2.1. Ambient temperature range - from 7 to 35 degrees Celsius.

6.2.2 The boiler must be reliably protected from external factors (wind, humidity, negative temperature, etc.).

6.2.3. Installation and placement of gas boilers is regulated in accordance with the procedure established at the enterprise.

6.2.4. Local state regulations may contain other requirements, which are also binding.

6.2.4 When installing the boiler in a niche:

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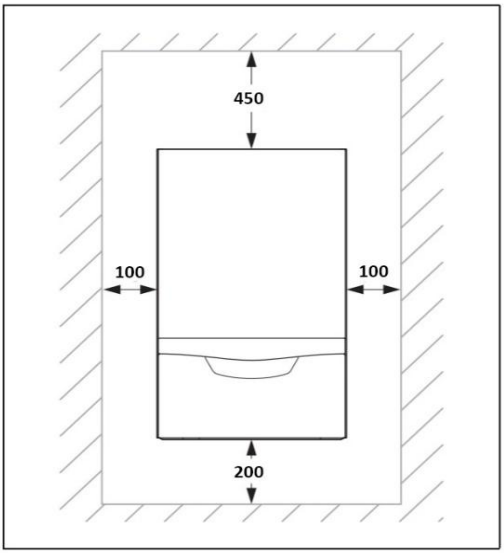

6.2.4.1. Leave a minimum free space around the boiler: 450 mm from the top, 200 mm from the bottom, 100 mm from the left and right. In front of the boiler there must be a free space of at least 60 mm.
6.2.4.2 If doors are installed, their construction must provide for a permanent free access of air to the boiler (grilles, etc.).
6.2.4.3 It is forbidden to install the boiler over the stove (and any other cooking device), washing machine, dishwasher or sinks
6.2.5. When installing the boiler in a cabinet:
6.2.5.1. The cabinet in which the boiler will be placed must be made of non-combustible or difficult to burn materials.
6.2.5.2 There must be a free space of 100 mm on each side to the left and right of the boiler.
6.2.5.3 The design of the cabinet must provide free air access from the top and bottom of the boiler.
6.2.5.4 There must be a free space of at least 60 mm in front of the boiler.

6.3. BOILER BRACKET INSTALLATION

6.3.1. Use the supplied mounting template to install the bracket. It provides the necessary dimensions and information for proper installation.
6.3.2 Fix the mounting template to the wall with the necessary distances.
6.3.3 Make holes in the wall for the hooks according to the mounting template.
6.3.4. Install the bracket.

6.4. BOILER INSTALLATION

6.4.1. The boiler connections to the heating system and gas mains must be threaded, allowing the boiler to be disconnected if necessary.
6.4.2 If the boiler is installed to replace the old boiler, be sure to flush the piping and radiators of the heating system from rust deposits, scale and sediment.
6.4.3 Remove the protective plugs from the boiler sockets. 6.4.2.
6.4.2. Fix the gas boiler to the mounted bracket.
6.4.3. Connect the boiler to the heating and gas supply system using the outlets located at the bottom of the boiler. Make sure that the rear wall of the boiler is parallel to the wall (otherwise install a spacer). When connecting the boiler to the heating circuit, it is recommended to install two shut-off valves (supply and return circuit), which will allow maintenance without draining the heating system.
6.4.5 For filling and draining water, install a separate tap at the lowest point of the heating system.

6.5. CHIMNEY SYSTEM INSTALLATION

6.5.1. The connection is made by means of a 60/100 mm diameter coaxial chimney. This type of piping allows to discharge the combustion gases to the outside and take in combustion air from outside the building, as well as to connect to a common chimney (LAS system).
6.5.2 The coaxial chimney is installed at a slope to the ground for condensate drainage, if no condensate collector is provided.
6.5.3 If the wall through which the chimney is installed is made of flammable material, the chimney pipe must be laid through a protective sleeve made of non-combustible material and be thermally insulated (insulation thickness not less than 20 mm).
6.5.4 The chimney must be installed in a place where exhaust gases can freely escape outside and fresh air can flow inside.

6.6. POWER CONNECTION

6.6.1. The boiler is connected to a single-phase 230V power supply network with ground connection by means of a three-core cable with observance of phase-neutral polarity.
6.6.2 The connection should be made through a double-pole switch with contacts opening by at least 3 mm.

All requirements for the installation of gas boilers are established by the following building codes and regulations in accordance with the company's established procedure.

Gas connection to the boiler, as well as in general the whole process of boiler installation, must be carried out by a qualified, trained technician, in compliance with all the prescribed rules and regulations on the installation of this type of equipment, in force at the time of its installation.

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7. BOILER PREPARATION FOR FIRST START-UP

It is forbidden to start the boiler if the requirements ensuring safe operation of the boiler are not fulfilled.

7.1. The shut-off valves before the boiler on the supply and return pipelines are set in the "OPEN" position.
7.2. Between the boiler and the heating system, the movement of the coolant is not obstructed through the fittings installed on the heating system piping.
7.3. The rotor axis of the electric motor of the circulation pump rotates smoothly in manual mode.
7.4. In the boiler and heating system of closed design, the pressure of the coolant, at its temperature of 10 ° C - 20 ° C, does not exceed 1 kg / cm2.
7.5. The chimney is fixed, the exhaust and air inlet openings are not blocked.

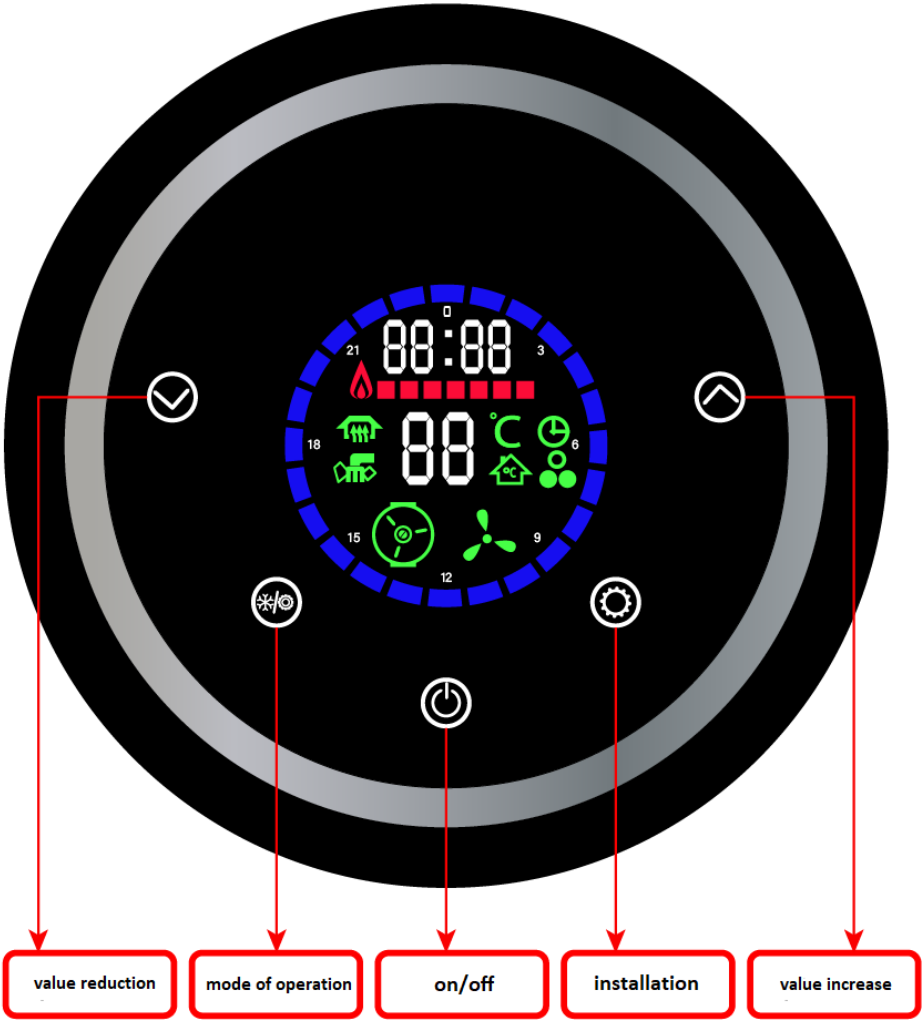
8. BOILER FILLING

8.1. After the boiler installation, the first filling (water injection) must be done by the specialists of the installation organization.
8.2. Unscrew the automatic water pump outlet valve and the floor heating manifold in the system or the radiator outlet valve.
8.3. Open the gas boiler water replenishment valve and the water supply valve in the system, at the same time close the sanitary hot water drain valve.
8.4. When the pressure of the circulating heating system reaches 0.1 MPa (1 bar), close the gas boiler water replenishment valve.

9. FIRST START

9.1 The first start-up of the gas boiler must be carried out by a gas service specialist or a certified specialist of a specialized organization.
9.2. According to the results of the procedure, the employee makes a corresponding mark in the boiler passport (section 16).

10. CONTROL INTERFACE DESCRIPTION



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10.1. ON/OFF button.

10.1.1. A short press of the button achieves switching the gas boiler on / off (if the display is not in the setting mode or screen saver).

10.1.2. In the setting mode, a short press of the button is used to confirm and exit the setting mode.

10.1.3 In the screen saver mode, a short press of the button activates the screen.

10.2. MODE SELECT button.

10.2.1. When on, briefly press this button to switch the boiler to winter, summer or synchronization mode.

10.2.2. In the screen saver mode, briefly press the button to activate the screen.

10.2.3. In the non-setting state, press and hold the mode button for 10 seconds to enter the dial setting function (this function does not allow user settings).

10.3. INSTALL button.

10.3.1. In the no-fault and no-tuning state, press the switch to set the heating temperature or room temperature.

10.3.2 In the no-tuning state, press and hold the setting button for 10 seconds to enter the factory default setting function (this function does not allow user settings).

10.3.3 In screen saver mode, briefly pressing the button activates the screen.

10.4. REDUCE button.

10.4.1. В состоянии настройки при кратковременном нажатии кнопки параметры будут автоматически увеличены на единицу. При удержании кнопки в нажатом состоянии параметры будут продолжать увеличиваться.

10.5. REDUCE button.

10.5.1. In the setting state, pressing the button briefly will automatically decrease the parameters by one. When the button is held down, the parameters will continue to decrease further.

Table 3

Function	**Badge**	Icon description	**Function description**
Mode		Heating time	If the icon is continuously lit, the boiler is in heating mode. Otherwise, the icon is hidden.
Heating		Heating	Flashes when normal heating or timer heating is in operation. Lit permanently when the boiler is not operating in “winter” mode. In “summer” mode it is hidden or lit permanently when the heating temperature is set. When operating in "summer mode", heating is not active and frost protection is not affected.
Operation status		Hot water status	In all modes, flashes when a hot water flow signal is detected. The icon is hidden when the hot water signal is turned off (always lit in summer mode). Set the bathroom temperature to be displayed permanently.
		Freeze protection	Lit when the system is switched off and the freeze protection function is active. Hidden when the protection is exited.
		Room temperature control	When the system detects that the room temperature controller is turned off, the icon flashes, otherwise it is hidden.

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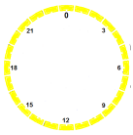
Load		Fan	Displayed when the fan is running, otherwise hidden.
		Water pump	Displayed when the water pump is running, otherwise hidden.
Parameter		Main temperature	1. Shutdown icon “OF”. 2. Blinks to display fault code “EX”. 3. When there is hot water flow, the water temperature will be displayed: “XX° C”. 4. In winter mode, when there is no domestic water consumption, the heating temperature: "XX℃" will be displayed. 5. When adjusting the water temperature, the set temperature will flash and display: “XX℃”.
Hours		Real time clock	1.When no parameters are set, the current time is displayed. 2.Display the parameter code when setting a parameter.
		Time period	This icon is always displayed. When the timer function is started, the shaded time indicates that the time has started, the timer is running, and heating operation is enabled. Скрытый период времени не может to start and stop the heating operation.

Flame		Flame icon	After the system detects that the ignition is on, the icon flashes, otherwise the icon is hidden.
		Flame power icon	When the ignition is working, the icon shows the amount of flame power.

11. FUNCTION UTILIZATION

11.1. WINTER MODE

11.1.1. In winter mode, both the heating and DHW functions operate, with priority given to DHW, which operates 24 hours a day. The heating temperature is the same for 24 hours.

11.1.2 To activate the winter mode, use the “MODE SELECT” button.

11.2. SUMMER MODE

11.2.1. Summer mode (used only for the hot water function, heating is not started).

11.2.2 To activate the summer mode, use the “MODE SELECT” button.

11.3. SYNCHRONIZATION MODE

11.3.1. The heating and domestic hot water functions operate, with domestic hot water being given priority, and it is possible to set the operating time (the heating temperature during operating time is the same as the heating temperature).

11.3.2 Use the “MODE SELECT” button to activate the synchronization mode.

11.4. TIME PERIOD SETTING

11.4.1. When in synchronization mode, briefly press the SET button to enter the synchronization period setting.

11.4.1.2 Set the working and non-working hours. The clock circle corresponds to 24 hours, the current corresponding set period flashes, and the clock display area shows the switching status of the corresponding clock “ ” or “ ”, (ON/OFF 0N: WORKING OFF: not working).

Press the “UP” and “DOWN” keys to move forward and backward from 0 to 23 hours, and select any hour period. You can switch the period to “ON” or “OFF” by pressing the “MODE SELECT” key, that is, so that the boiler operates when the period is ‘ON ’ and does not operate when the period is “OFF”. Do not press anything for 20 seconds or briefly press “ON/OFF” to exit and save the settings.

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11.5. HEATING TEMPERATURE SETTING

11.5.1. During normal heating operation, short press the “UP” or ‘DOWN’ buttons, or short press the “SET” button to enter the heating temperature setting mode. A short press of “UP” will increase the heating temperature by 1 degree, a short press of “DOWN” will decrease the heating temperature by 1 degree. To continuously increase or decrease the heating temperature, press and hold the “UP” or “DOWN” button. Press the “ON/OFF” button or do not perform any action for 20 seconds to automatically exit the confirmation. Radiator heating adjustment range: 30 ℃ ~ 80 ℃, floor heating adjustment range: 30 ℃ ~ 60 ℃.

11.6. HOT WATER TEMPERATURE SETTING

11.6.1. During normal DHW operation or summer mode, press the “SETUP” button once to enter the hot water temperature setting mode, then press the “SETUP” button again to enter the heating temperature setting mode. Press the “INCREASE” button to increase the heating temperature by 1 degree, or press the “REDUCE” button to decrease the heating temperature by 1 degree. To continuously increase or decrease the heating temperature, press and hold the “UP” or “DOWN” button. Press the “ON/OFF” button or do not perform any action for 20 seconds to automatically exit the confirmation. Hot water adjustment range: 30° C~60° C.

11.7. WI-FI CONNECTION

11.7.1. Press and hold “MODE SELECT” + “REDUCE” buttons for 5 seconds, a beep will sound, the time display area will blink, and the Wi-Fi pairing status will be entered. After successful pairing, a beep will sound and the word “AP” will disappear. If pairing is still not performed after 2 minutes, the word “AP” disappears, and to exit the Wi-Fi pairing status, you need to press and hold “MODE SELECT” + “REDUCE” again for 5 seconds to enter the Wi-Fi pairing status.

12. FAULT CODE LIST

Table 4

Code	Value
E1	Incorrect ignition
E2	Overheating
E3	Fan malfunction
E4	Water pump malfunction
E5	Gas valve or electronic control system malfunction
E6	DHW malfunction
E7	Heating malfunction

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13. OPERATING AND MAINTENANCE INSTRUCTIONS

All installation, maintenance, repair and conversion from one type of gas to another must be performed by a qualified service technician trained in the use of this equipment and in compliance with all applicable installation codes and regulations in effect at the time of installation.

13.1. In order to maintain the operational characteristics of the boiler it is necessary to have the boiler inspected and serviced annually by a qualified technician. According to the results of the works, the technician makes notes on the technical and preventive maintenance with the indication of the inspection results and the works carried out (p. 15).
13.2 In case of breakdown and/or improper operation of the boiler it is necessary to disconnect it and call a qualified technician to determine and eliminate the cause.
13.3. In case of a decision to stop using the boiler, dismantling should be carried out only by qualified technical personnel. The power supply, water supply and fuel supply must be disconnected.

14. UTILIZATION

14.1. After the end of operation, the boiler must be dismantled by carrying out the following operations:

14.1.1. Close the shut-off valves on the heating system pipelines, drain the water from the boiler.
14.1.2 Close the gas shut-off valve. 14.1.3.
14.1.3. Disconnect the heating, DHW and gas pipelines.

14.2. It is recommended to hand over the dismantled boiler to a specialized organization

15. ANNUAL MAINTENANCE AND PREVENTIVE MAINTENANCE RECORDS

Date	Name of organization	Signature, stamp	Note

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16. CONTROL COUPONS

INSTALLATION CONTROL CARD

1. Date of installation _____

2. Installation by whom _____

_____

3. Stamp of the installation organization _____ «__» _____20 ___ year

CONTROL TICKET FOR COMMISSIONING WORK

1. Date _____

2. Address _____

3. Name of service organization _____

_____

4. Who performed (at the place of installation) adjustment and adjustment of the boiler

_____

5. Date of gas start-up _____

6. By whom the gas was started up and instructed _____

_____

7. Signature of the person who filled in the coupon_____

8. Subscriber's signature _____ «__» _____ 20 ___ year

9. Organization stamp _____ «__» _____ 20 ___ year

17. WARRANTY TERMS

17.1. Warranty period - 12 months from the date of commissioning, but no more than 18 months from the date of sale, provided that the user, installation and maintenance organizations comply with the requirements of instructions for installation and operation of the gas boiler.
17.2. The manufacturer shall not be liable for and shall not provide a warranty for faults resulting from failure to comply with the following:

- conditions and requirements listed in this passport;
- norms and rules, requirements of standards, in accordance with the procedure established at the enterprise.

17.3. Claims to the quality of goods may be made during the warranty period.
17.4. Defective products are repaired or exchanged for new ones free of charge during the warranty period. The decision to replace or repair the product is made by ELEPHANT. The replaced product or parts of the product resulting from the repair are the property of ELEPHANT.
17.5. Costs associated with dismantling, installation and transportation of the defective product during the warranty period shall not be reimbursed to the Buyer.
17.6 If the claim is unfounded, the costs of diagnostics and examination of the product shall be paid by the Buyer.
17.7 The products are accepted for warranty repair (as well as for return) fully completed.

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WARRANTY CARD №____

№	Product Name	Packs

Name and address of the trading organisation

_____

Date of sale _____ Seller's signature _____

Stamp or seal of the trading organisation Acceptance stamp

I agree with the terms and conditions of the warranty:
Buyer _____ (signature)

Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.

For warranty repairs, complaints and product quality claims, please contact ELEPHANT at: Carrer d'Aragó,264,3-1,08007 Barcelona, Spain E-mail address: sales@valveelephant.com.

When making a complaint about the quality of goods, the buyer shall present the following documents:
1. A free-form application, which shall specify:
   - name of the organisation or full name of the buyer, actual address, contact telephone numbers;
   - name and address of the organisation that carried out the installation;
   - basic parameters of the system in which the product was used;
   - a brief description of the defect.
2. Document confirming the purchase of the product (delivery note, receipt)..
3. Act of hydraulic test of the system in which the product was installed.
4. This completed warranty card.

A note on the return or exchange of goods _____

Date: «___»_____202__г. Caption _____