



Use Manual for model

R1K 100

Premix condensing system boiler
only heating



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1.1. USE

1.1.1. GENERAL USE WARNINGS



WARNING

Before starting the boiler the User must make sure that the First start-up certificate has the stamp of the technical Support Centre proving the testing and the first start-up of the boiler.



WARNING

To validate the warranty, the boiler must be started by a technical Support Centre authorized by RADIANT no later than 30 days from the date of installation.



WARNING

In order to take advantage of the guarantee provided by the manufacturer, the customer should carefully and exclusively observe the instructions given in the USER section of the manual.



ATTENTION

This machine may be used only for the purpose for which it has been designed: heat water to a temperature below boiling point at atmospheric pressure. Any other use is considered wrong and dangerous. The manufacturer is excluded from any contractual or out of contract responsibility for damage caused to people, animals or property due to incorrect use.



DANGER

The boiler should not be used by persons (including children) with reduced physical, sensory or mental capacities or without suitable knowledge or experience unless they are instructed on the device use or monitored by a person responsible for their safety.



DANGER

DO NOT obstruct the air vents of the location in which the gas device is installed to prevent the formation of toxic explosive mixes.



DANGER

If you sense a gas odour in the location in which the boiler is installed, proceed as follows:

- › DO NOT use electrical switches, the telephone or any other device that might generate electrical discharges or sparks;
- › Immediately open all doors and windows to create an air exchange that can quickly clean the location;
- › Close the gas valves;
- › Request immediate intervention of qualified staff.

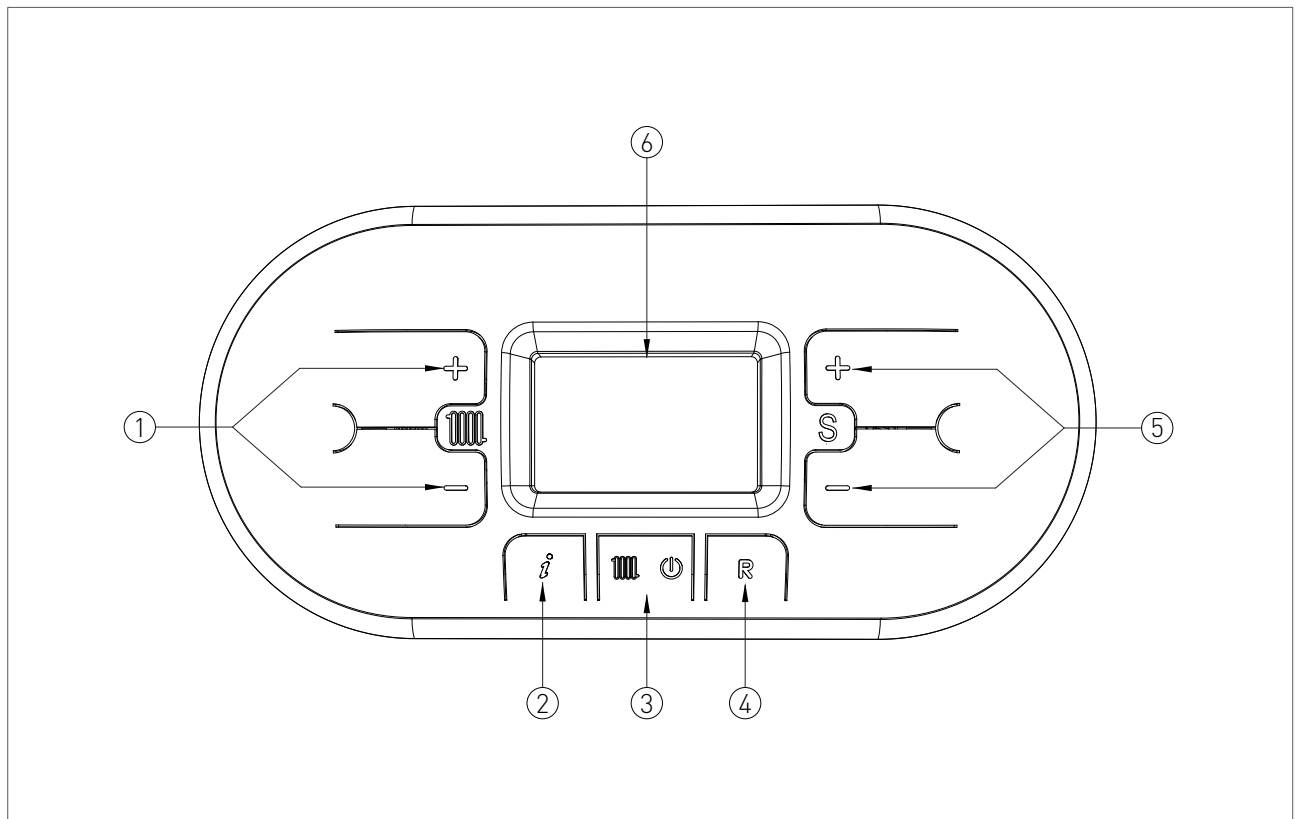


DANGER

The use of the electrical power boiler implies respecting some fundamental rules such as:

- › DO NOT touch the device with wet and/or humid parts and/or with bare feet;
- › DO NOT pull the electrical cables;
- › DO NOT leave the device exposed to atmospheric agents (rain, sun, etc.) unless specifically intended;
- › in case of cable damage, turn off the device and contact qualified professional staff to replace it.

1.1.2. CONTROL PANEL



KEY

1. HEATING TEMPERATURE ADJUSTMENT KEYS
2. INFO KEY: PRESS ONCE TO VIEW THE TEMPERATURES AND OTHER INFORMATION (see chapter 'INFO MENU DISPLAY') - HOLD FOR 5 SECONDS, IN OFF OPERATING MODE, TO VIEW THE LAST 5 FAULTS
3. OPERATING MODE SELECTION KEY: ONLY HEATING / OFF
4. RESET KEY: FAULTS RESET - CHIMNEY SWEEP FUNCTION ACTIVATION (HOLD FOR 7 SECONDS)
5. VALUE OF THE PARAMETERS ADJUSTMENT KEY / HOLD THE KEYS AT THE SAME TIME FOR 5 SECONDS TO ACTIVATE DISPLAY BACK LIGHT FOR 10 MINUTES
6. DISPLAY

1.1.3. DISPLAY ICONS

KEY

1. PARAMETER NUMBER INDICATION / DISPLAYED INFO CODE / UNIT IN WHICH THE FAULT CODE IS PRESENT
2. ACTIVE PARAMETER PROGRAMMING FUNCTION / INDICATES THAT A SINGLE UNIT WAS DEACTIVATED BY PARAMETER P06
3. SIGNALLING CONNECTED SOLAR BOARD / SOLAR COLLECTOR TEMPERATURE DISPLAY (d5)
4. SOLAR PUMP ACTIVE
5. BOILER LOWER TEMPERATURE DISPLAY (d6) / BOILER UPPER TEMPERATURE DISPLAY (d7)
6. EXTERNAL PROBE INSTALLED / EXTERNAL PROBE TEMPERATURE (d1)
7. TEMPERATURE DISPLAY / SET POINT / PARAMETER VALUE
8. OPEN THERM COMMUNICATION PRESENT (REMOTE CONTROL / AREA CONTROL UNIT)
9. INSUFFICIENT SYSTEM WATER PRESSURE SIGNALLING
10. FLAME PRESENT SIGNALLING / IT ALSO INDICATES, ON 3 PERCENTAGE LEVELS, THE MODULATING POWER LEVEL OF THE BOILER (fig.2)
11. OPERATION IN DOMESTIC CIRCUIT MODE ENABLED (ONLY FOR THE VERSION WITH REMOTE BOILER SUPPLY SYSTEM).
12. ERROR DISPLAY THAT CAN BE RESET
13. OFF OPERATING MODE
14. ERROR DISPLAY THAT CAN NOT BE RESET

15. OPERATION IN HEATING MODE ENABLED

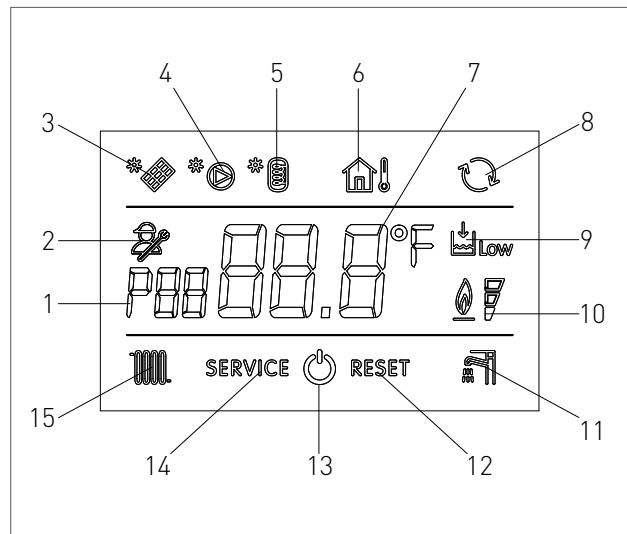


fig. 1

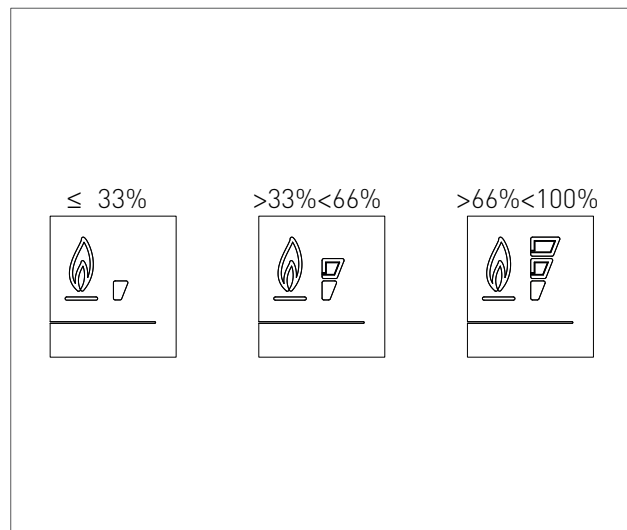









fig. 2

1.1.4. INFO MENU DISPLAY DATA

To view the boiler data from info menu you just have to press the INFO  key. The info code will be displayed on the left side of the screen and its relative value will be displayed on the centre of the screen. Use keys  and  of the heating circuit  to scroll through the list of displayed data. To exit display mode press the INFO  key.


LIST OF DISPLAYED DATA

INFO CODE	ICON	DESCRIPTION
d00		DOMESTIC CIRCUIT PROBE TEMPERATURE (ONLY FOR THE VERSION WITH REMOTE BOILER SUPPLY SYSTEM).
d01		EXTERNAL PROBE TEMPERATURE
d02		BOTTOM AREA PROBE TEMPERATURE (IF CRAD AREA BOARD INSTALLED)
d03		TOTAL POWER PERCENTAGE SUPPLIED BY THE BOILER
d10		DELIVERY PROBE TEMPERATURE OF THE MASTER UNIT
d11		RETURN PROBE TEMPERATURE OF THE MASTER UNIT
d12		FAN SPEED OF THE MASTER UNIT
d20		DELIVERY PROBE TEMPERATURE OF THE SLAVE UNIT
d21		RETURN PROBE TEMPERATURE OF THE SLAVE UNIT
d22		FAN SPEED OF THE SLAVE UNIT



1.1.5. START-UP

Before starting the boiler make sure that it is powered and that the gas tap below the boiler is open.



To start the boiler press the function key  and select the desired operating mode. If the symbol is displayed fixed, it means that the function was activated.


1.1.6. OPERATING MODE

SUMMER MODE

(ONLY FOR THE VERSION WITH REMOTE BOILER SUPPLY SYSTEM).



In this mode the boiler meets only the demands of domestic hot water.


To switch the boiler to SUMMER operating mode, press the function key , the symbol  will appear fixed on the display, indicating that the function is enabled.

Whenever hot domestic water is needed the automatic start-up system will start the burner; this is indicated by displaying the symbol  blinking.

HEATING ONLY MODE

In this mode the boiler meets only the demands of heating.




To switch the boiler to HEATING ONLY operating mode, press the function key , the symbol  will appear fixed on the display, indicating that the function is enabled.



Whenever heating energy is needed to heat the rooms the automatic start-up system will start the burner; this is indicated by displaying the symbol  blinking.

WINTER MODE

(ONLY FOR THE VERSION WITH REMOTE BOILER SUPPLY SYSTEM).



In this mode the boiler meets the demands of heating and of domestic hot water.

To switch the boiler to WINTER operating mode, press the function key , the symbols  and  will appear fixed on the display, indicating that the function is enabled.

Whenever heating energy and domestic hot water are needed the automatic start-up system will start the burner; this is indicated by displaying the symbol  e  blinking.




ADJUSTING THE HEATING TEMPERATURE



You can adjust the temperature using keys  and  of the heating circuit .

- press key  to decrease the temperature.
- press key  to increase the temperature.

The heating temperature adjustment field ranges from 30 °C to 80 °C (25 °C – 45 °C for floor systems).

DOMESTIC HOT WATER TEMPERATURE ADJUSTMENT



You can adjust the temperature using keys  and  of the 'S'  symbol:

- press key  to decrease the temperature.
- press key  to increase the temperature.

The hot domestic water temperature adjustment field ranges from 35 °C to 60 °C.

OFF MODE

In this mode the boiler no longer meets the heating and domestic hot water demands, the anti-freeze, pump anti-locking and diverter valve anti-locking systems still remain active.

To switch the boiler to OFF operating mode, press the function key , the symbol  will appear fixed on the display, indicating that the function is enabled.

If the boiler was previously running, it will be turned off and the post-ventilation and post-circulation functions will be enabled.

If you have to deactivate the boiler for a long period of time, proceed as follows:

- › contact the Technical support centre that will empty the water system, where no anti-freeze is intended, and will cut off the power, water and gas supply.
- › Or leave the boiler in OFF operating mode keeping active the electrical and gas supplies so that the anti-freeze function may activate.

1.1.7. INFORMATIONAL NOTE ON ANTI-FREEZE FUNCTION

The boiler is protected against freezing thanks to the electronic board preparation with functions that start the burner and heat the concerned parts when their temperature goes below the minimum pre-set values.



WARNING




This function is available only if:

- › the boiler is powered;
- › the gas supply is open;
- › the pressure of the system is proper;
- › the boiler is not blocked.



1.1.8. FAULT SIGNALLING CODES

The boiler might signal some faults by displaying a code. Below you have a list of the codes and of the operations to be performed in order to unlock the boiler.

CODE	ICON	FAULT	INTERVENTION
E01	RESET	FLAME BLOCK	<p>MAKE SURE THAT THE BOILER AND CONTACTOR GAS VALVES ARE OPEN.</p> <hr/> <p>PRESS THE RESET  BUTTON ON THE MASTER CONTROL PANEL TO RESET THE FAULT, AS SOON AS THE ERROR CODE DISAPPEARS FROM THE DISPLAY, THE BOILER WILL START AUTOMATICALLY.</p> <hr/> <p>IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.</p>
E02	RESET	SAFETY THERMOSTAT (95 °C)	CONTACT THE TECHNICAL SUPPORT CENTRE.
E03	RESET	FUMES SAFETY THERMOFUSE (102 °C)	CONTACT THE TECHNICAL SUPPORT CENTRE.
E04		WATER MISSING IN THE SYSTEM	<p>IF THE SYSTEM PRESSURE IS BELOW 1.2 BAR, FILL THE SYSTEM.</p> <hr/> <p>IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.</p>
E05	SERVICE	HEATING PROBE	CONTACT THE TECHNICAL SUPPORT CENTRE.
E06	SERVICE	DOMESTIC CIRCUIT PROBE	CONTACT THE TECHNICAL SUPPORT CENTRE.
E14	RESET	AIR PRESSURE SWITCH	<p>PRESS THE RESET  BUTTON ON THE MASTER CONTROL PANEL TO RESET THE FAULT, AS SOON AS THE ERROR CODE DISAPPEARS FROM THE DISPLAY, THE BOILER WILL START AUTOMATICALLY.</p> <hr/> <p>IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.</p>
E15	SERVICE	RETURN PROBE	CONTACT THE TECHNICAL SUPPORT CENTRE.
E16	SERVICE	ELECTRIC FAN	CONTACT THE TECHNICAL SUPPORT CENTRE.
E18	SERVICE	INSUFFICIENT CIRCULATION	CONTACT THE TECHNICAL SUPPORT CENTRE.



3. USE

CODE	ICON	FAULT	INTERVENTION
E21	SERVICE	GENERAL INTERNAL BOARD ERROR	<p>CUT OFF THE POWER SUPPLY FROM THE MAIN SWITCH AND THEN RESTORE IT, AS SOON AS THE ERROR CODE DISAPPEARS, THE BOILER WILL RESTART AUTOMATICALLY.</p> <p>IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.</p>
E22	SERVICE	PARAMETERS PROGRAMMING REQUEST	<p>CUT OFF THE POWER SUPPLY FROM THE MAIN SWITCH AND THEN RESTORE IT, AS SOON AS THE ERROR CODE DISAPPEARS, THE BOILER WILL RESTART AUTOMATICALLY.</p> <p>IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.</p>
E31	SERVICE	SOLAR AUXILIARY BOARD CONNECTION FAULTS	CONTACT THE TECHNICAL SUPPORT CENTRE.
E32	SERVICE	COMMUNICATION ERROR BETWEEN THE BOILER BOARD AND THE MODBUS BOARD	CONTACT THE TECHNICAL SUPPORT CENTRE.
E35	RESET	RESIDUAL FLAME	<p>PRESS THE RESET  BUTTON ON THE MASTER CONTROL PANEL TO RESET THE FAULT, AS SOON AS THE ERROR CODE DISAPPEARS FROM THE DISPLAY, THE BOILER WILL START AUTOMATICALLY.</p> <p>IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.</p>
E40	SERVICE	SUPPLY VOLTAGE	CONTACT THE TECHNICAL SUPPORT CENTRE.
E52	SERVICE	COMMUNICATION FAULT BETWEEN MODBUS CONTROLLER AND MODBUS CONTROL UNIT	CONTACT THE TECHNICAL SUPPORT CENTRE.
E78	SERVICE	COLLECTOR PROBE	CONTACT THE TECHNICAL SUPPORT CENTRE.
E99	SERVICE	GENERAL ERROR COMING FROM THE CRAD BOARD	CONTACT THE TECHNICAL SUPPORT CENTRE.



1.1.9. ACTIVE FUNCTIONS SIGNALLING CODES

CODE	FUNCTION	INTERVENTION
F08	HEATING ANTI-FREEZE FUNCTION ACTIVE	WAIT UNTIL THE OPERATION IS COMPLETED
F09	DOMESTIC CIRCUIT ANTI-FREEZE FUNCTION ACTIVE	WAIT UNTIL THE OPERATION IS COMPLETED
F28	ANTI-LEGIONELLA	WAIT UNTIL THE OPERATION IS COMPLETED



3.1.10. COVER CLEANING

Clean the cover of the device using a wet cloth and some neutral soap.



WARNING

DO NOT use abrasive or powder detergents as they might damage the plastic cover and control elements.

3.1.11. DISPOSAL

The device and all its accessories must be differentiated, suitably disposed of in accordance with the standards in force.



The use of the symbol WEEE (Waste Electrical and Electronic Equipment) shows that this product cannot be dismantled as domestic waste. Proper dismantling of this product helps prevent potentially negative consequences on human health and environment.



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