



Use Manual for model

---

# R1K 50 RAIN

---

Premix condensing system boiler

only heating, suitable for outdoor installation



---

Contact Details

Office Address: 10 Frankston Gardens Drive,  
Carrum Downs, Victoria, Australia, 3201

Email Address: [sales@hydronicsupplies.com.au](mailto:sales@hydronicsupplies.com.au)

Website: [www.hydronicsupplies.com.au](http://www.hydronicsupplies.com.au)

Phone: (+61 3) 9708 2600

Fax: (+61 3) 9708 2700



## TABLE OF CONTENTS

<b>1.1. USE</b> .....	<b>5</b>
1.1.1. GENERAL USE WARNINGS.....	5
1.1.2. CONTROL PANEL.....	6
1.1.3. DISPLAY ICONS.....	7
1.1.4. INFO MENU DISPLAY DATA.....	8
1.1.5. START-UP.....	9
1.1.6. OPERATING MODE.....	9
1.1.7. INFORMATIONAL NOTE ON ANTI-FREEZE FUNCTION.....	10
1.1.8. FAULT SIGNALLING CODES.....	11
1.1.9. ACTIVE FUNCTIONS SIGNALLING CODES.....	13
3.1.10. COVER CLEANING.....	14
3.1.11. DISPOSAL.....	14



## TABLE OF CONTENTS

---



## 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.

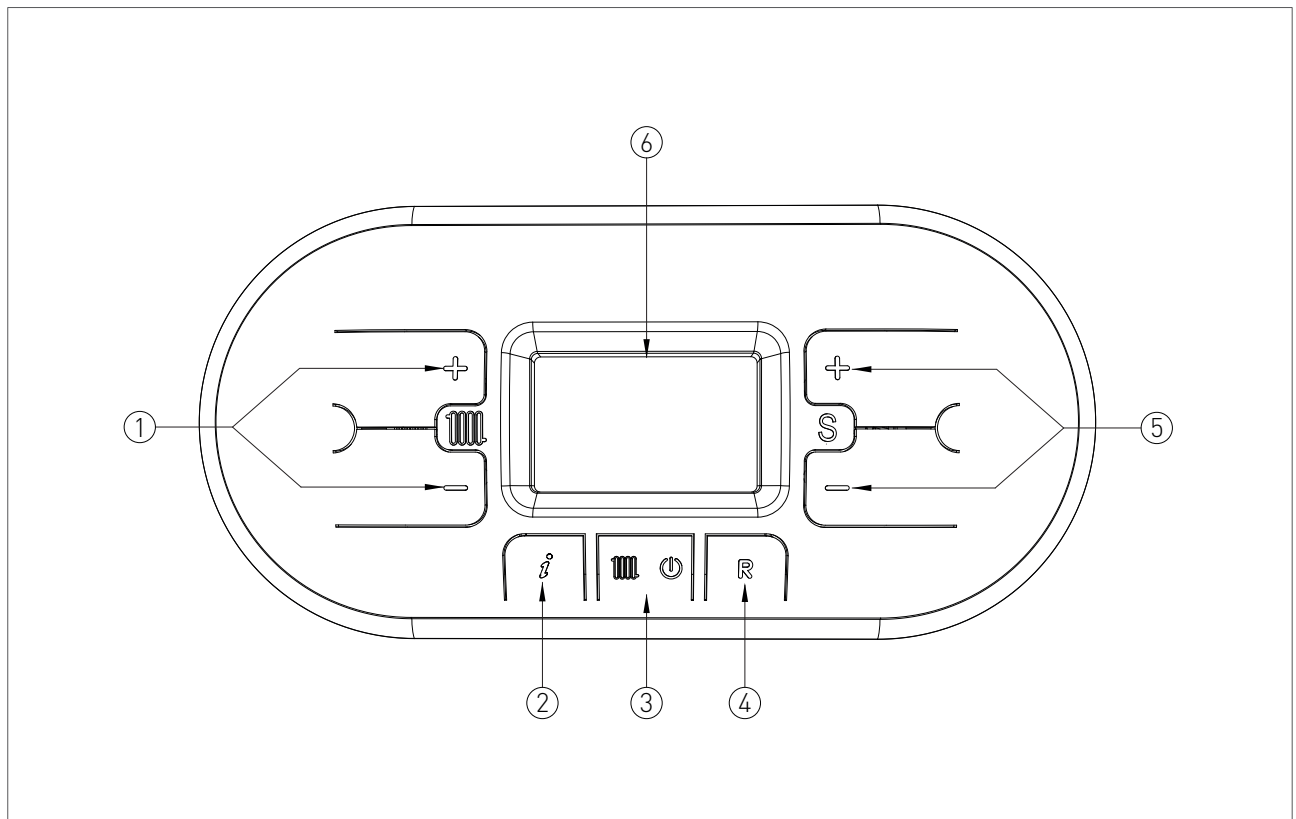


#### DANGER

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

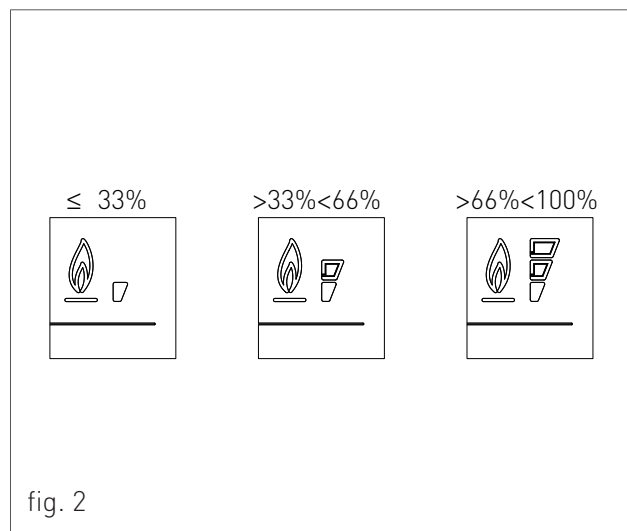
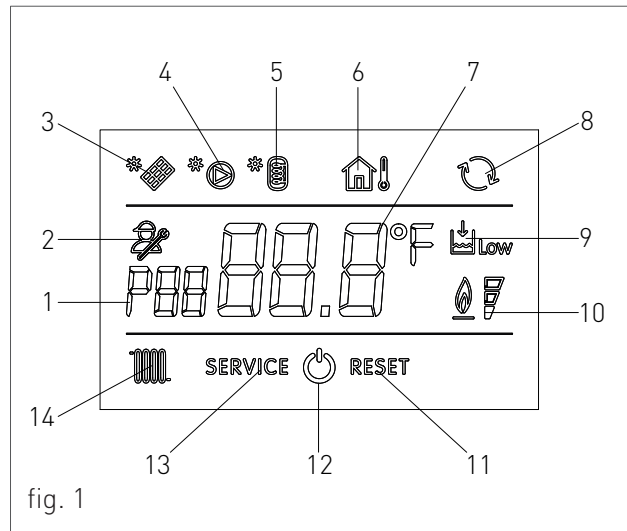
1. HEATING TEMPERATURE ADJUSTMENT KEYS
2. INFO KEY: PRESS ONCE TO VIEW THE TEMPERATURES AND OTHER INFORMATION (see chapter 'INFO MENU DISPLAY') - HOLD FOR 5 SECONDS, IN OFF OPERATING MODE, TO VIEW THE LAST 5 FAULTS
3. OPERATING MODE SELECTION KEY: ONLY HEATING / OFF
4. RESET KEY: FAULTS RESET - CHIMNEY 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. INDICATION OF PARAMETER NUMBER OR DISPLAYED INFO CODE
2. PARAMETERS PROGRAMMING FUNCTION ACTIVE
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. ERROR DISPLAY THAT CAN BE RESET
12. OFF OPERATING MODE
13. ERROR DISPLAY THAT CAN NOT BE RESET
14. OPERATION IN HEATING MODE ENABLED



#### 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
d0		DOMESTIC CIRCUIT PROBE TEMPERATURE
d1		EXTERNAL PROBE TEMPERATURE
d2		FAN SPEED
d3		BOTTOM AREA PROBE TEMPERATURE [IF AREA BOARD INSTALLED]
d4		RETURN PROBE TEMPERATURE
d5		SOLAR COLLECTOR TEMPERATURE [IF SOLAR BOARD INSTALLED] [SCS]
d6		SOLAR BOILER TEMPERATURE (BOTTOM) [IF SOLAR BOARD INSTALLED] [SBS1]
d7		SOLAR BOILER TEMPERATURE (TOP) [IF SOLAR BOARD INSTALLED] [SBSS]
d8		SOLAR COLLECTOR PROBE TEMPERATURE 2 [IF SOLAR BOARD INSTALLED] [SCS2]
d9		EXTRA SOLAR BOILER TEMPERATURE [IF SOLAR BOARD INSTALLED] [SBS3]
dA		INERTIAL STORAGE SENSOR TEMPERATURE
dB		LOW-TEMPERATURE HEATING CIRCUIT RETURN SENSOR TEMPERATURE (IN HYBRID SYSTEM BOX MODE) - HEATING PUMP RETURN SENSOR TEMPERATURE (IN HYBRID DOMESTIC SYSTEM MODE)
dC		HYBRID SYSTEM BOX D.H.W. TANK SENSOR TEMPERATURE - HOT WATER TEMPERATURE OUT OF THE REMOTE TANK TO THE BOILER (ONLY FOR HYBRID DOMESTIC SYSTEM WITH OPTIONAL SENSOR)
dD		POWER SUPPLIED BY THE HEATING PUMP IN KW/H (ONLY FOR HYBRID DOMESTIC SYSTEM)
dE		HEATING FLOW RATE DISPLAY EXPRESSED IN L/MIN (IF THERE IS A FLOWMETER).







#### 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	<b>FLAME BLOCK</b>	<p>MAKE SURE THAT THE BOILER AND CONTACTOR GAS VALVES ARE OPEN.</p> <hr/> <p>PRESS THE RESET  BUTTON ON THE 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	<b>SAFETY THERMOSTAT (95 °C)</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E03	RESET	<b>FUMES SAFETY THERMOFUSE (102 °C)</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E04		<b>WATER MISSING IN THE SYSTEM</b>	<p>IF THE SYSTEM PRESSURE IS BELOW 1.2 BAR, FILL THE SYSTEM AS DESCRIBED IN CHAPTER "SYSTEM FILLING".</p> <hr/> <p>IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.</p>
E05	SERVICE	<b>HEATING PROBE</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E10	SERVICE	<b>LOW FLOW RATE</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E15	SERVICE	<b>RETURN PROBE</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E16	SERVICE	<b>ELECTRIC FAN</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E18	SERVICE	<b>INSUFFICIENT CIRCULATION</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E21	SERVICE	<b>GENERAL INTERNAL BOARD ERROR</b>	<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> <hr/> <p>IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.</p>



### 3. USE

CODE	ICON	FAULT	INTERVENTION
E22	SERVICE	<b>PARAMETERS PROGRAMMING REQUEST</b>	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.  IF THE BLOCK PERSISTS CONTACT THE TECHNICAL SUPPORT CENTRE.
E31	SERVICE	<b>INCOMPATIBLE REMOTE CONTROL</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E32	SERVICE	<b>COMMUNICATION ERROR BETWEEN THE BOILER BOARD AND THE MODBUS BOARD</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E35	RESET	<b>RESIDUAL FLAME</b>	PRESS THE RESET  BUTTON ON THE CONTROL PANEL TO RESET THE FAULT, AS SOON AS THE ERROR CODE DISAPPEARS FROM THE DISPLAY, THE BOILER WILL START AUTOMATICALLY.
E40	SERVICE	<b>SUPPLY VOLTAGE</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.
E52	SERVICE	<b>COMMUNICATION FAULT BETWEEN MODBUS CONTROLLER AND MODBUS CONTROL UNIT</b>	CONTACT THE TECHNICAL SUPPORT CENTRE.



### 1.1.9. ACTIVE FUNCTIONS SIGNALLING CODES

CODE	FUNCTION	INTERVENTION
F08	<b>HEATING ANTI-FREEZE FUNCTION ACTIVE</b>	WAIT UNTIL THE OPERATION IS COMPLETED
F33	<b>SYSTEM AIR RELEASE CYCLE IN PROGRESS</b>	WAIT UNTIL THE OPERATION IS COMPLETED



#### 3.1.10. COVER CLEANING

Clean the cover of the device using a wet cloth and come 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 dismantle of this product helps preventing potentially negative consequences on human health and environment.





**RADIANT BRUCIATORI s.p.a.**

Via Pantanelli, 164/166 - 61025 Loc. Montelabbate (PU)

Tel. +39 0721 9079.1 • fax. +39 0721 9079279

e-mail: [info@radiant](mailto:info@radiant) • Internet: <http://www.radiant.it>