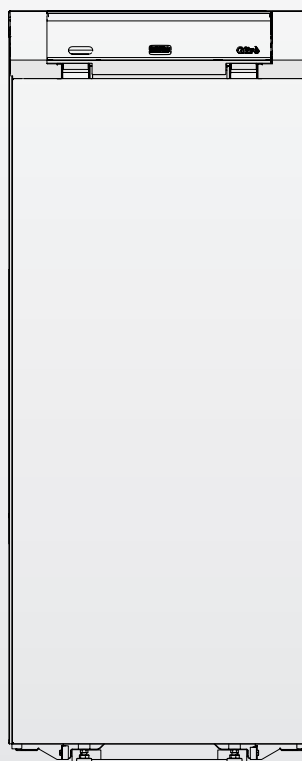


**GITRÈ LN**



**GITRÈ B/100 LN**

# **GITRÈ LN**

**EN** USER MANUAL

# **RIELLO**

Dear Customer,

Thank you for preferring a **RIELLO** heating unit, a modern, high-quality product that is able to guarantee your maximum well-being for a long period of time, with high levels of reliability and safety. In particular, if working together with a Technical Assistance Service **RIELLO** that is specifically prepared and trained to perform periodic maintenance, your unit will remain at maximum efficiency levels at minimum operating costs and if required, replacements with original spare parts can be made. This instruction manual contains important instructions and precautions that must be observed to ensure the trouble-free installation and efficient functioning of your **GITRÈ LN** boiler.

Please accept our renewed thanks for your purchase.  
Riello S.p.A.

## CONFORMITY

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**GITRÈ LN** boilers conform to the following directives:

- Directive 92/42/EEC on efficiency requirements
- Electromagnetic Compatibility Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- Ecodesign Directive 2009/125/CE for energy-related products
- Energy Labelling Directive 2010/30/EU
- Delegated Regulation (EU) N. 811/2013
- Delegated Regulation (EU) N. 813/2013
- Delegated Regulation (EU) N. 814/2013



This product must only be used for the purpose for which it is designed and made, as specified by **RIELLO**. **RIELLO** declines all responsibility, contractual or other, for damage to property or injury to persons or animals caused by improper installation, adjustment, maintenance or use.

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The following symbols are used in this manual:











**CAUTION!** = Identifies actions that require caution and adequate preparation.



**STOP!** = Identifies actions that you MUST NOT do.











## 1 GENERAL INFORMATION

### 1.1 General Safety Information

-  This product must be installed by a legally qualified heating engineer. On completion of the installation, the installer must issue the owner with a declaration of conformity confirming that the installation has been completed to the highest standards in compliance with the instructions provided by **RIELLO** in this instruction manual, and that it conforms to all applicable laws and standards.
-  This product must only be used for the purpose for which it is designed and made, as specified by **RIELLO**. **RIELLO** declines all responsibility, contractual or other, for damage to property or injury to persons or animals caused by improper installation, adjustment, maintenance or use.
-  The room where the boiler is installed must be properly ventilated to ensure a sufficient supply of air for correct combustion.
-  If you notice any water leaks, disconnect the boiler from the mains electricity supply and shut off the water supply.
-  The boiler must be serviced at least once a year.
-  Periodically check that pressure in the central heating circuit, when cold, is approximately 1.5 bar and below the maximum limit specified for the boiler. If necessary, top up through the filling cock or contact the **RIELLO** Technical Assistance Service or a qualified heating engineer.
-  If the boiler is not going to be used for an extended period of time, perform the operations described later in this manual.
-  This manual is an integral part of the equipment and therefore must be stored carefully and must ALWAYS accompany the boiler even if it is sold to another Owner or User or transferred to another plant. If it is damaged or lost, request another copy from your local Technical Assistance Service **RIELLO**.

### 1.2 Precautions

The operation of any appliance that uses fuel, electrical power and water demands that a number of fundamental safety precautions be respected:

-  Do not allow children or infirm persons to operate the system unsupervised.
-  It is forbidden to use electrical devices or equipment, such as switches, appliances, etc. if there is a smell of gas or unburnt products. If so:
  - Ventilate the room, opening doors and windows
  - Close the fuel shut-off cock.
-  Do not touch the boiler while barefoot or wet.
-  Never clean or service the boiler without first disconnecting it from the mains electricity supply by turning the mains power switch and the control panel switch OFF.
-  Never pull, disconnect, or twist the electrical cables coming from the appliance even if it is disconnected from the mains electricity supply.
-  Do not obstruct or restrict the vents in the room where the boiler is installed. Adequate ventilation is essential for correct combustion.
-  Do not expose the boiler to the elements. It is not designed for use outdoors.
-  It is prohibited to leave inflammable substances and containers in the room where the boiler is installed.
-  Do not dispose of packaging material into the environment, or leave it within the reach of children, since it can become a potential hazard. Dispose of packaging material in compliance with applicable legislation.
-  It is forbidden to operate the boiler without water.

### 1.3 Description of the appliance

The **GITRÈ LN** boiler is an oil fuelled hot water boiler capable of low temperature functioning. **GITRÈ LN** versions are designed only for central heating applications. The **GITRÈ B/100 LN** version is equipped with a 100 litre vitrified storage cylinder and can be used for central heating and domestic hot water production. The cast iron boiler body features a triple flue pass design and a horizontal combustion chamber.

The front cover opens fully to facilitate the inspection, maintenance and cleaning of internal parts and to minimise service time.

The boiler body is covered in high density glass wool insulation to reduce heat loss.

The boiler is fitted with a single stage, low NO<sub>x</sub>, fuel oil burner.

The **GITRÈ LN** boiler's control logic incorporates a total shutdown function to minimise energy consumption:

- The **GITRÈ LN** (heating only) model only starts up if the central heating system requests heat (i.e. when the room thermostat switches the heating on);
- If the **GITRÈ B/100 LN** (heating and DHW) model is in "Summer" mode ("Summer/Winter" selector turned to Summer position), it only starts up to restore the setpoint temperature of the water in the storage cylinder. If it is in "Winter" mode ("Summer/Winter" selector turned to Winter position), it starts up either in response to a request for heat from the heating system (i.e. when the room thermostat switches the heating on) or to restore the setpoint temperature of the water in the storage cylinder (DHW heat requests are prioritised over central heating requests)..

### 1.4 Safety devices

**GITRÈ LN** boilers incorporate the following safety and control devices:

- A **manual reset safety thermostat** that forces a safety shutdown if boiler temperature exceeds the safety threshold (110°C). The sensor used to monitor this temperature is located on the body of the heat exchanger;
- A **minimum temperature thermostat** that enables the central heating pump only if boiler temperature exceeds the minimum permissible (50°C);
- An **electronic burner controller** that monitors the correct functioning of the selected burner program and sends a lockout signal to the control panel in the event of an error.

#### ONLY FOR GITRÈ B/100 LN MODELS

- A **maximum temperature thermostat** that shuts down the burner if boiler temperature reaches or exceeds the default maximum limit ( 82°C) during the heating of domestic hot water in the storage tank;
- A **heat dissipation thermostat** that starts up the storage tank pump to dissipate excess heat in order to keep boiler temperature below the safety threshold (90°C).

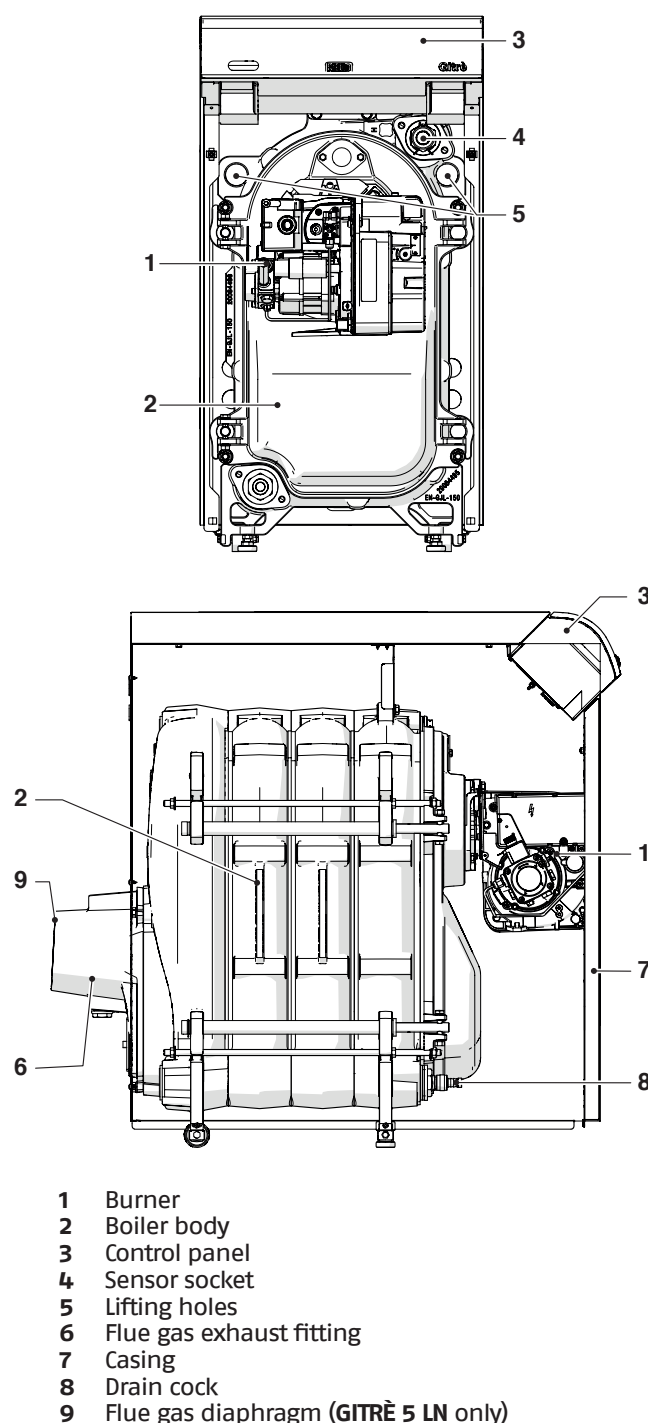
**!** The intervention of a safety device indicates a potentially dangerous malfunction in the system. Contact the manufacturer's Technical Assistance Service immediately.

**!** Safety devices must only be replaced by the manufacturer's Technical Assistance Service using original spare parts. Refer to the spare parts catalogue supplied with the boiler.

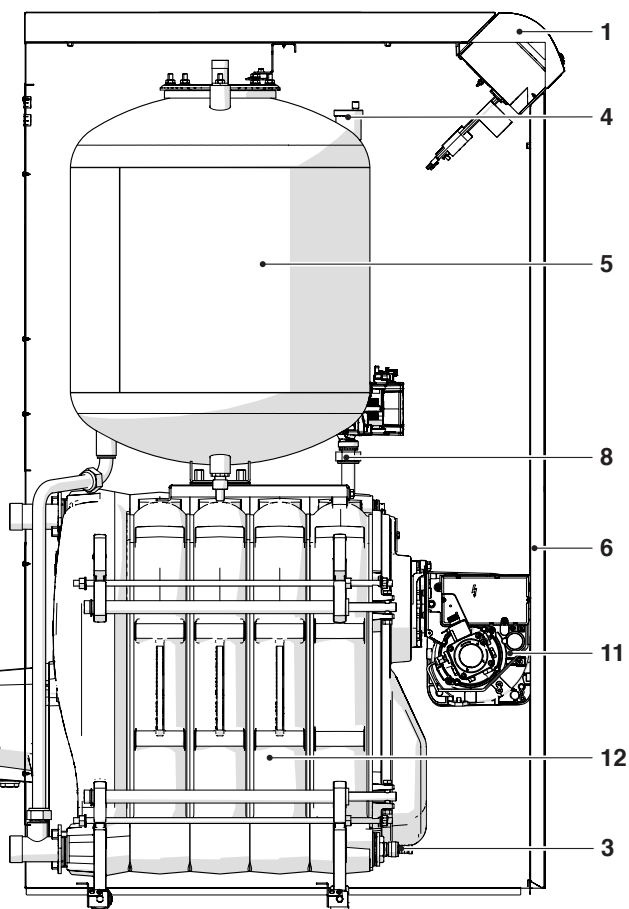
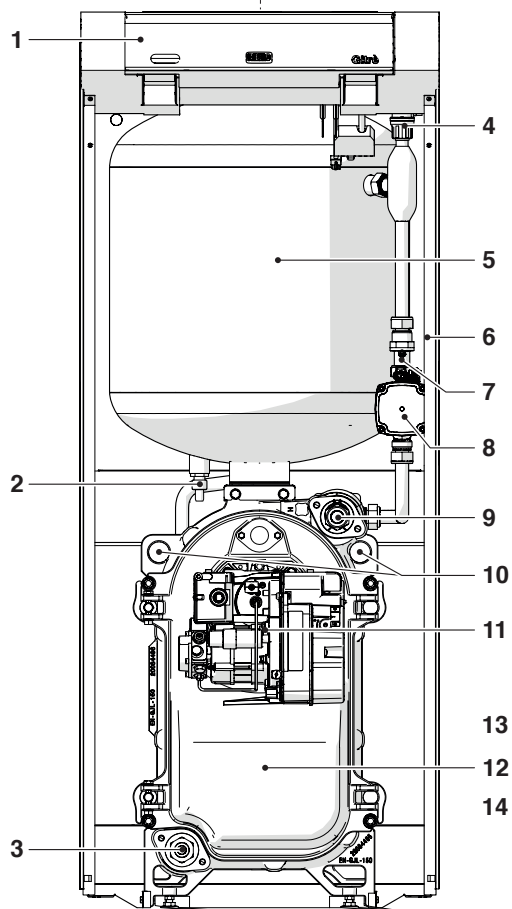
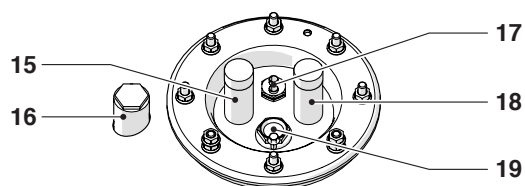
**⊘** Do not use the boiler if any of its safety devices are faulty.

### 1.5 System layout

#### GITRÈ LN



GITRÈ B/100 LN

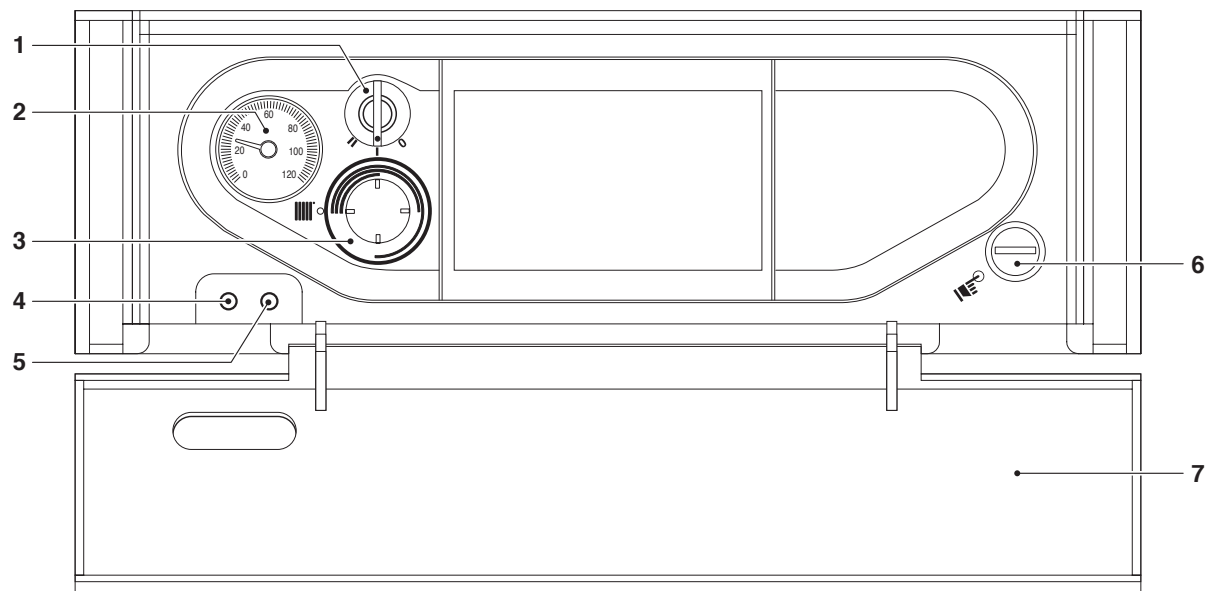


- 1 Control panel
- 2 Storage cylinder drain cock
- 3 CH circuit drain cock
- 4 Automatic vent valve
- 5 Storage cylinder
- 6 Casing
- 7 Non-return valve
- 8 Boiler circulator
- 9 Boiler temperature sensor socket
- 10 Lifting holes

- 11 Burner
- 12 Boiler body
- 13 Flue gas diaphragm
- 14 Flue gas exhaust fitting
- 15 Domestic cold water inlet
- 16 DHW circulation
- 17 Storage cylinder temperature sensor socket
- 18 DHW outlet
- 19 Magnesium anode

## 1.6 Control panel

### GITRÈ LN



**1 Function selector**

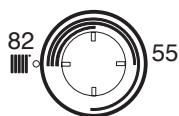
- 0 Off
- I On
- II Remote burner reset

**2 Boiler temperature gauge**

Displays the temperature of the central heating water

**3 Boiler thermostat**

Allows you to set the temperature of the central heating water (setting range 55-82°C)



**4 Electrical power indicator (green)**

Lights to show that the boiler is receiving electrical power

**5 Burner lockout indicator (red)**

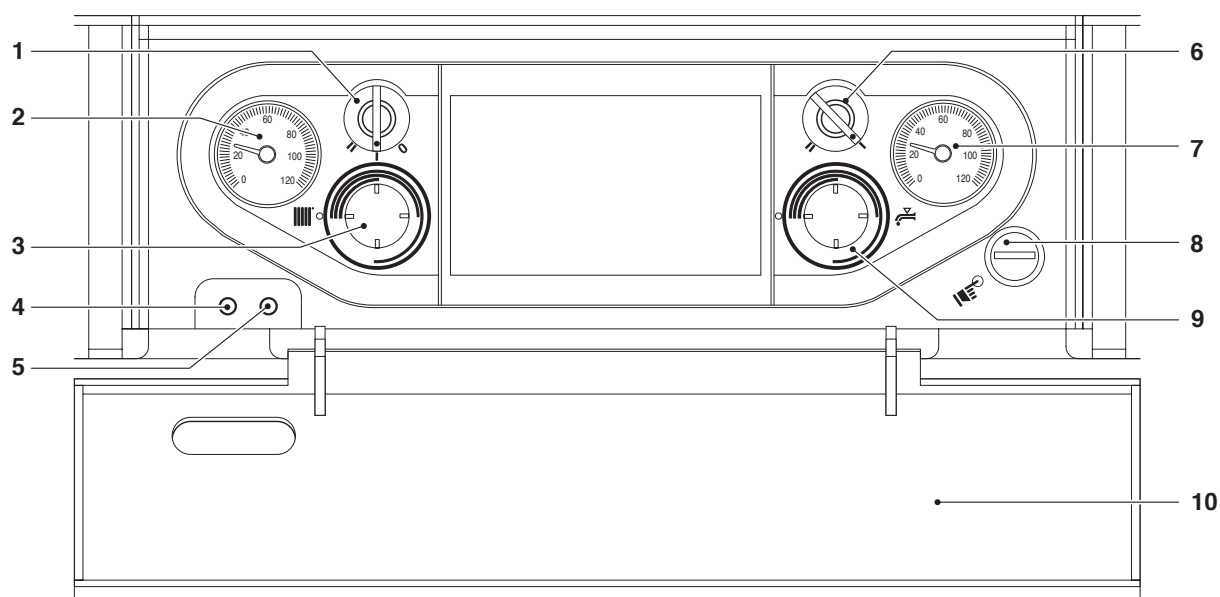
Lights to show that the burner locked out

**6 Manual reset for safety thermostat**

Allows you to reset the boiler if the safety thermostat trips. Unscrew the protective cover to access the reset button

**7 Protective cover over control panel**

## GITRÈ B/100 LN

**1 Function selector**

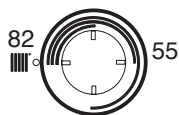
- 0 Off
- I On
- II Remote burner reset

**2 Boiler temperature gauge**

Displays the temperature of the central heating water

**3 Boiler thermostat**

Allows you to set the temperature of the central heating water (setting range 55–82°C)

**4 Electrical power indicator (green)**

Lights to show that the boiler is receiving electrical power

**5 Burner lockout indicator (red)**

Lights to show that the burner locked out

**6 Summer (I) / Winter (II) selector****7 Storage cylinder temperature gauge**

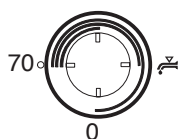
Displays the temperature of the domestic hot water in the storage cylinder

**8 Manual reset for safety thermostat**

Allows you to reset the boiler if the safety thermostat trips. Unscrew the protective cover to access the reset button

**9 Storage cylinder thermostat**

Allows you to set the temperature of the domestic hot water (setting range 0–70°C)

**10 Protective cover over control panel**



## 2 USE

### 2.1 Putting into service

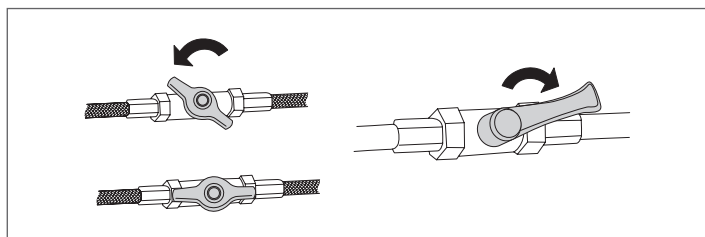
Have the **RIELLO** Technical Assistance Service start up your **GITRÈ LN** boiler for the first time. Once this has been done, the boiler can be left to function automatically.

Under certain circumstances, such as after long periods of dis-use, the user may need to re-start it without involving the Technical Assistance Service.

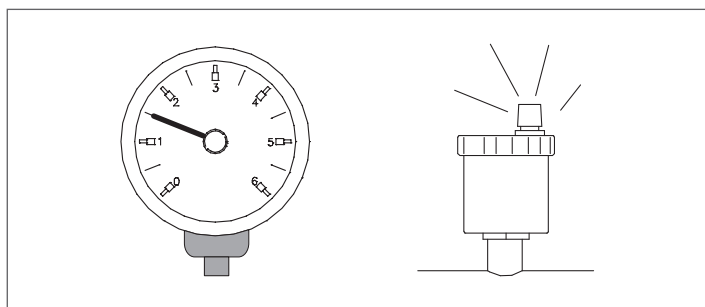
#### 2.1.1 Preliminary operations

Perform the following checks before starting up the boiler:

- Check that the fuel shut-off cock and heating system shut-off cock are open



- Check that the central heating circuit pressure gauge shows a pressure over **1 bar** with the system cold. Check also that the circuit is properly de-aerated

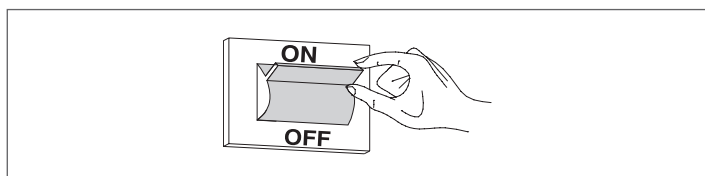


#### 2.1.2 Start-up

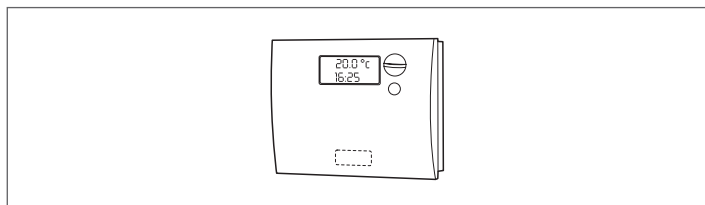
Once you have completed all the checks listed above, proceed as follows to start up the boiler for the first time:

**ONLY FOR MODELS GITRÈ 4 LN-GITRÈ 5 LN-GITRÈ 6 LN**

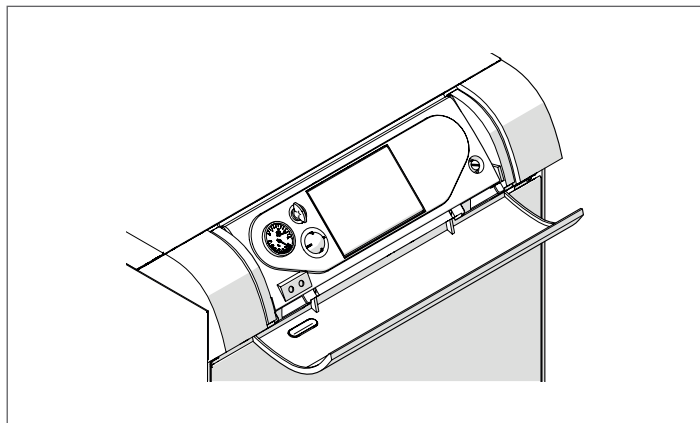
- Turn the boiler's mains power switch ON



- Set the room thermostat to the required temperature (~ 20°C) or, if the system has a timer or timer-thermostat, make sure that this is switched "ON" and adjusted to the required temperature (~ 20°C).;

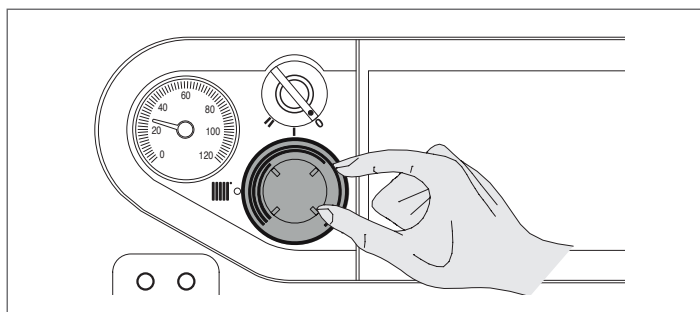


- Open the control panel access door;



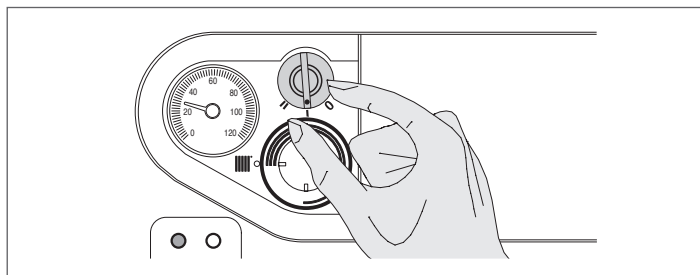
**ONLY FOR MODELS GITRÈ 4 LN-GITRÈ 5 LN-GITRÈ 6 LN**

- Turn the boiler thermostat to about the middle of the section with three lines;



- Turn the function selector to ON (I) and make sure that the green power indicator lights.

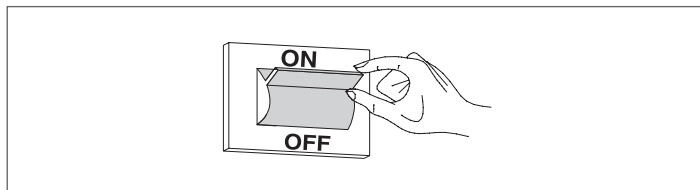
**NOTE** the burner only starts up at the end of the fuel oil pre-heating phase.



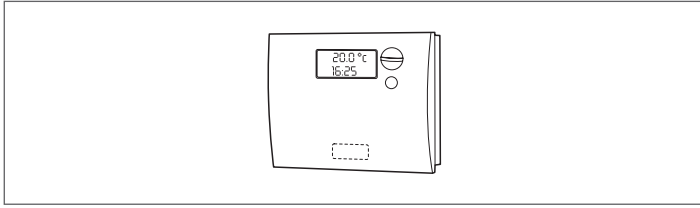
The boiler now starts up and the burner remains lit until the temperature setpoint is reached.

**ONLY FOR GITRÈ B/100 LN MODELS**

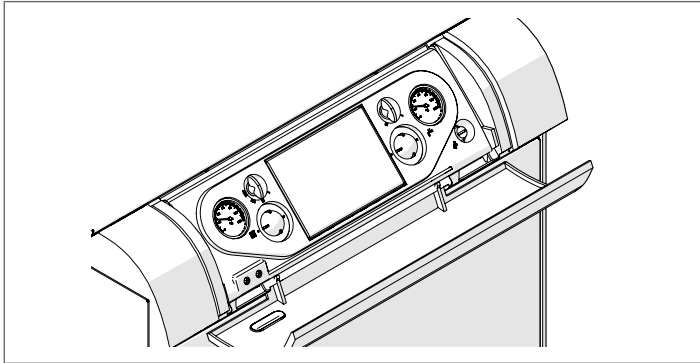
- Turn the boiler's mains power switch ON;



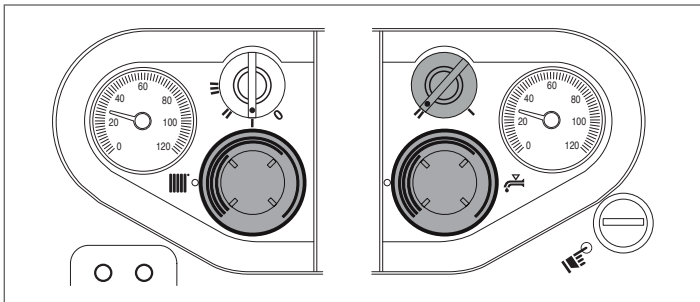
- Set the room thermostat to the required temperature (~ 20°C) or, if the system has a timer or timer-thermostat, make sure that this is switched "ON" and adjusted to the required temperature (~ 20°C).;



- Open the control panel access door;

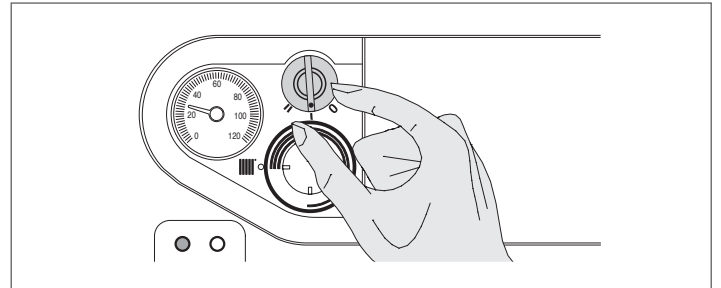


- Adjust the boiler and storage cylinder thermostats to about the middle of the section with three lines;
- Turn the Summer/Winter selector to (II) Winter;



- turn the function selector to (I) ON and make sure that the green power indicator lights.

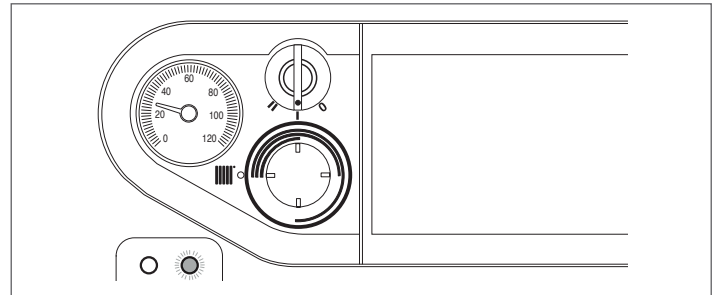
**NOTE** the burner only starts up at the end of the fuel oil pre-heating phase.



The boiler now starts up and the burner remains lit until the temperature setpoint is reached.

### 2.1.3 Ignition failure

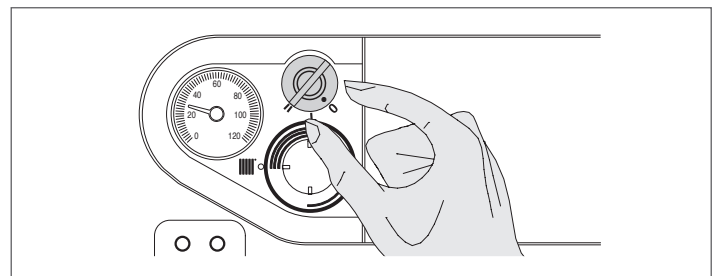
If any ignition errors or malfunctions occur, the burner enters "LOCKOUT". This is shown by the red button light on the burner and by the warning light on the control panel.



**⚠** If a "LOCKOUT SHUTDOWN" occurs, wait about 30 seconds before resetting the burner.

### 2.1.4 Resetting the burner and safety thermostat

To restore normal startup conditions, open the protective cover over the control panel and turn the function selector to position (II) "Reset burner" for at least 1 second before returning it to position (I). Wait for the burner to complete the entire ignition cycle again, up to the ignition of the flame.

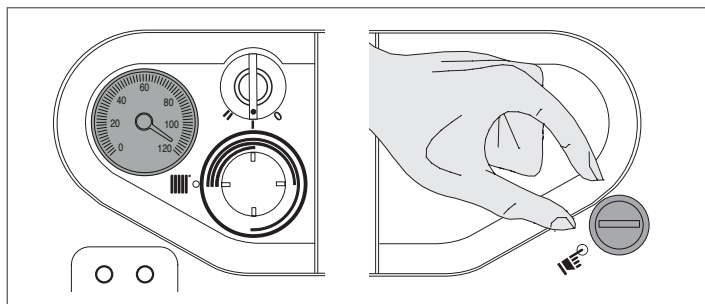


If boiler temperature becomes too high, the manual reset safety thermostat trips.

**⚠** No warning signal is given if the safety thermostat trips, but the fact that it has tripped can be seen from the boiler temperature gauge ( $T > 110^{\circ}\text{C}$ ).

Proceed as follows to reset the safety thermostat:

- Wait until boiler temperature falls below 80°C;
- Open the control panel cover;
- Unscrew the cap over the safety thermostat reset button;
- Press the reset button;
- Replace the cap.

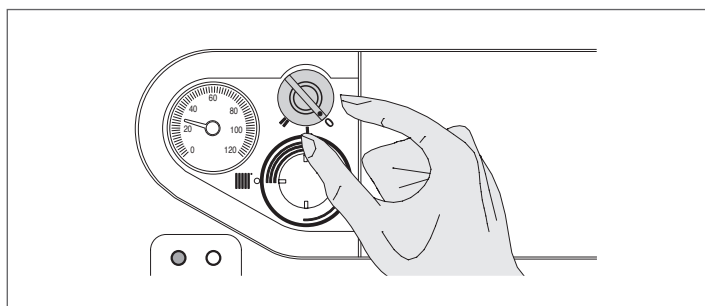


**⚠** Eliminate the cause of overheating before restarting the boiler. Contact **RIELLO's** Technical Assistance Service.

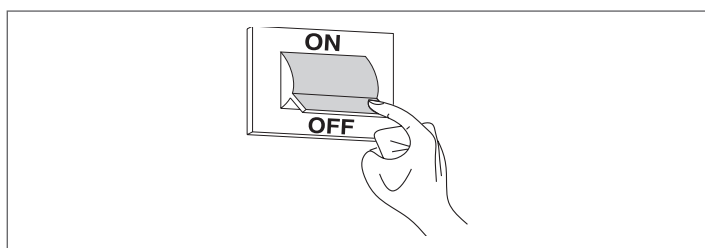
## 2.2 Temporary shutdown

To switch the boiler off for short periods with outdoor temperature ABOVE ZERO:

- Open the control panel access door;
- Turn the control panel power switch to (0) OFF and make sure that the green power indicator goes out;



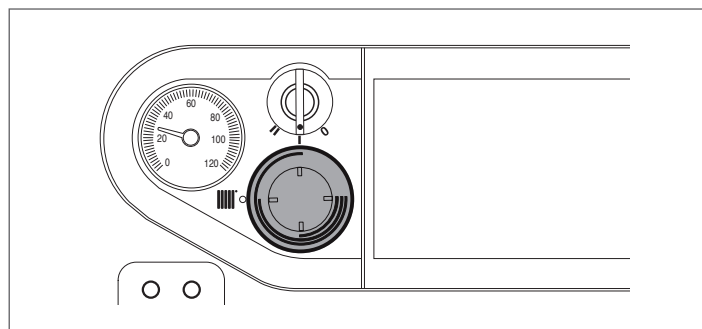
- switch the boiler OFF at the mains power switch;



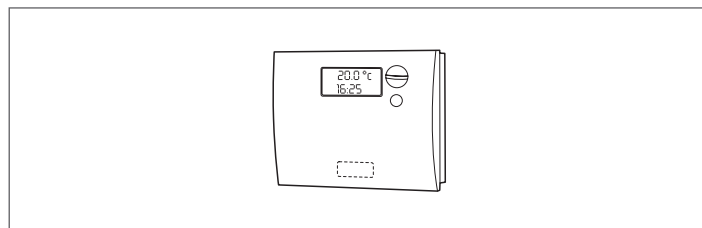
**⚠** Do NOT perform this procedure if outdoor temperature might fall below ZERO (risk of freezing).

Then proceed as follows:

- Adjust the boiler thermostat to its minimum setting;

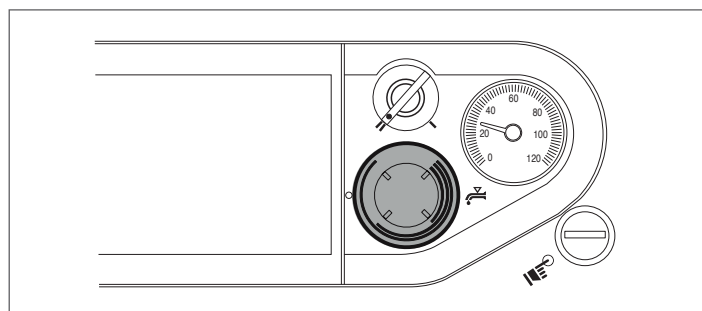


- Turn the room thermostat to about 10°C or select the frost protection function.



### ONLY FOR GITRÈ B/100 LN MODELS

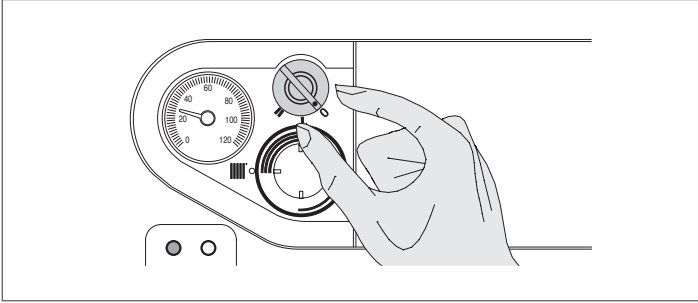
- in addition to the previous operations, turn the storage cylinder thermostat to about the middle of the section with one line.



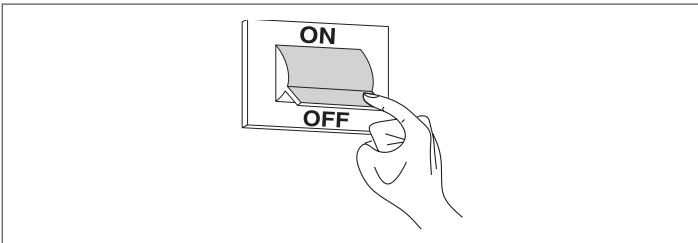
## 2.3 Preparing for extended periods of disuse

If the boiler is not going to be used for an extended period of time, proceed as follows to prepare it for shut-down

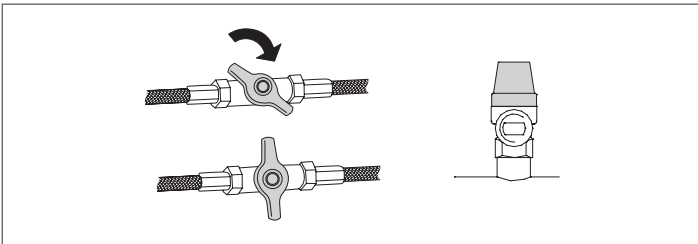
- Open the control panel access door;
- Turn the control panel power switch to (0) OFF and make sure that the green power indicator goes out;



- switch the boiler OFF at the mains power switch;



- Close the fuel shut-off cocks.



**⚠** Drain the central heating circuit and domestic hot water circuit if there is any risk of freezing.

## 2.4 Cleaning and servicing the boiler

Please remember that THE PERSON RESPONSIBLE FOR SYSTEM MANAGEMENT MUST ENSURE THAT PROFESSIONALLY QUALIFIED HEATING ENGINEERS UNDERTAKE PERIODIC MAINTENANCE AND COMBUSTION EFFICIENCY MEASUREMENTS.

**RIELLO's** Technical Assistance Service is qualified to satisfy these legal requirements and can also provide useful information on MAINTENANCE PROGRAMMES designed to guarantee:

- greater safety
- compliance with applicable legislation
- freedom from the risk of fines in the event of spot checks.

Regular maintenance is essential for the safety, efficiency and durability of the boiler.

Servicing is a legal requirement and must be performed at least once a year by a professionally qualified heating engineer.

## 2.5 External cleaning

Clean the boiler's casing panels and control panel with a soft cloth dampened in soapy water.

To remove marks from the boiler casing, use a cloth dampened in a 50% mix of water and denatured alcohol or a suitable cleaning product.

Wipe the boiler dry after cleaning it.

**⚠** Do not use abrasive products, petrol or triethylene.

### 2.5.1 Annual cleaning

At least once a year, the user must have the boiler served by **RIELLO's** Technical Assistance Service or by a qualified heating engineer.

## 2.6 Troubleshooting

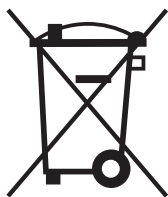
FAULT	CAUSE	SOLUTION
<b>The boiler does not reach its temperature setpoint</b>	Problem with boiler control thermostat	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> <li>- Check the temperature setting</li> </ul>
<b>The generator triggers a thermal safety block</b>	Problem with boiler control thermostat	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>
	No water	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>
<b>The generator is at temperature but the heating system is cold</b>	Air in the circuit	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>
	Pump malfunctioning	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>
	Minimum temperature thermostat faulty	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>
<b>There is a smell of fumes</b>	Fumes escaping into the air	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>
<b>The safety valve keeps opening</b>	Incorrect circuit pressure	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>
	CH expansion vessel	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>

**ONLY FOR GITRÈ B/100 LN MODELS**

FAULT	CAUSE	SOLUTION
<b>The storage cylinder safety valve keeps opening</b>	Storage cylinder safety valve	- Contact your local Technical Assistance Service
	Incorrect DHW circuit pressure	- Contact your local Technical Assistance Service
	DHW circuit expansion vessel	- Contact your local Technical Assistance Service
<b>The DHW pump is not working</b>	DHW pump problem	- Contact your local Technical Assistance Service
	Storage cylinder temperature sensor problem	- Contact your local Technical Assistance Service
<b>Insufficient domestic hot water</b>	Incorrect pressure in DHW circuit	- Contact your local Technical Assistance Service
	Lime scale or deposits in storage cylinder	- Contact your local Technical Assistance Service
	Storage cylinder thermostat	- Check the setting of the storage cylinder thermostat

### 3 RECYCLING AND DISPOSAL

Packaging materials from **RIELLO GITRÈ LN** boilers must be disposed of through appropriate channels in order to permit recovery and recycling. At the end of its useful life, dispose of the boiler in compliance with applicable legislation.





# RIELLO

RIELLO S.p.A.  
37045 Legnago (VR) - Italy  
Tel. 0442630111 - Fax 044222378 - [www.riello.it](http://www.riello.it)

The manufacturer strives to continuously improve all products. Appearance, dimensions, technical specifications, standard equipment and accessories are therefore liable to modification without notice.