



**RAVELLI**

*il fuoco intelligente*

USE AND MAINTENANCE MANUAL



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**Mia 90**

Stove model:
Stove serial number:
Date of installation:
Support reference data:
Telephone number:

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## Introduction

### Warning:

We recommend you carefully read this booklet, which describes all the necessary phases for perfect functioning of your stove.

### Note:

The standards relevant to the installation and functioning contained in this manual can differ based on local standards in force. In this case, always comply with the indications of the local competent authorities. The drawings in this manual are indicative, not to scale.

### Information:

The packaging we have used offers good protection against any damage due to transport. In any case, check the stove immediately after delivery; in the event of possible visual damage, immediately inform your Aico SpA dealer.

### Description of the User and Maintenance Manual:

With this User and Maintenance Manual, the company Aico SpA wishes to provide the user with all the information on safe use of the stove, to avoid damage to people or property or parts of the stove.

**Please carefully read this manual before use and performing any intervention on the product.**

### Warnings:

Ravelli stoves and cookers are manufactured with utmost attention to each component, to protect both the user and the installer from the danger of possible accidents. We recommend authorised staff pay particular attention to electrical connections after each intervention on the product.

**For installing and using the appliance, you must comply with all applicable laws and regulations, both national and local. Installation must be carried out by authorised staff, who must provide the buyer with a declaration of conformity for the system and will assume full responsibility for final installation and as a consequence the correct functioning of the installed product. Aico SpA denies all liability in the event of non-compliance with these precautions.**

This instructions manual forms an integral part of the product: ensure that it is always with the cooker, also in the case of transfer to another owner or use or transfer to another location. In the event it is damaged or lost, ask technical support for a copy.

This cooker is intended exclusively for the use for which it was specifically manufactured. Do not use the equipment as an incinerator or in any other way other than for what it was intended. The manufacturer is exempt from any liability, contractual and extracontractual, for injury/damage caused to persons/animals and objects, due to installation, adjustment and maintenance errors and improper use. No other fuel other than pellets can be used. Do not use liquid fuels.

After removing the packaging, ensure that the content is intact and complete.

All the electrical components forming the cooker should be replaced exclusively by an authorised technical support centre using original pieces. Cooker maintenance must be carried out at least once a year and scheduled in advance with the technical support service. **Do not modify the appliance without prior authorisation.**

### For safety purposes, remember:

- The appliance can be used by children under 8 years and by persons with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, under surveillance or after they have been given instructions concerning the safe handling of the appliance and understood the dangers inherent to it. Children must not play with the device. Cleaning and maintenance to be carried out by the user must not be carried out by children without supervision.
- contact with the cooker is not recommended if you are in your bare feet or with parts of your body wet;
- it is forbidden to change the safety or regulation devices without the authorisation or without the instruction of Aico SpA.
- we do not recommend loading pellets directly into the brazier before switching on the cooker;
- the appliance works exclusively on wooden pellets; do not use the cooker with other type of fuel.

When the cooker is working it may reach very high temperatures to the touch, especially in its outer surfaces: use caution to avoid burns and possibly use special tools.

**The cooker was designed to function in any climatic condition; in the event of particularly adverse conditions (wind, frost) the safety systems could intervene and switch off the cooker.**

If this occurs, urgently contact the technical support service and, in any case, do not disable the safety systems.

## Safety information

The cooker must be installed and inspected by specialist staff trained by head office. Please carefully read this user and maintenance manual before installing and operating the cooker. If you require further clarification, contact your nearest Aico SpA dealer.

The cooker must be located indoors, never outdoors. The cooker is controlled by an electronic board that enables completely automatic and controlled combustion: its controller regulates the switch-on, the levels of and switch off phase, guaranteeing safe functioning.

Much of the ash falls into the ash pan. There are different types of pellets on the market, not all of the highest quality, and they can leave residues which are difficult to remove. In stoves without automatic cleaning system, check daily the cleanliness of the brazier.

The glass is equipped with a special air wash for self-cleaning: yet, it is impossible to avoid a slight yellowish film on the glass after some hours of functioning.

The cooker must be powered by 6 mm diameter pellets.

### WARNING

- Prepare the installation location of the cooker according to local, national and European regulations.
- The cooker must only be powered using high quality pellets with a diameter of 6 mm as described in the dedicated chapter.  
**The stove cannot burn traditional wood.**
- **It is forbidden to use the cooker as an incinerator. DANGER OF FIRE!!!**
- **Installation, electrical and hydraulic connection, verification of functioning and maintenance must be carried out by qualified and authorised staff.**
- **Improper installation or poor maintenance (non-conformity with what is reported in the following booklet) may cause damage to people or property. In this condition, Aico SpA is released from all civil or criminal liability.**
- Before connecting the cooker to electrical power, the connection of the discharge tubes (specifically for pellet stoves, not in aluminium) with the flue must be complete.
- The protection grid placed inside the pellet tank must never be removed.
- There must be a sufficient exchange of air in the room in which the cooker is installed.
- Never open the door of the cooker when functioning. **FIRE HAZARD!!!**
- **It is forbidden to operate the cooker with the door open or with the glass broken. DANGER OF FIRE!!!**
- When the cooker is working, the surfaces, the glass, the handle and the tubes are very hot: during functioning these parts can only be touched using adequate protection.
- **Do not switch on the cooker without firstly carrying out a daily inspection as described in the MAINTENANCE chapter of this manual.**
- **Do not dry clothes on the cooker. Any washing lines or similar must be kept an appropriate distance from the cooker. FIRE RISK!!!**
- Scrupulously follow the maintenance schedule.
- Do not switch off the cooker by disconnecting the electrical mains.
- Do not clean the cooker until the structure and ash are completely cold.
- Carry out all operations in a completely safe and calm manner.
- In case of chimney fire, immediately turn off the cooker via the button on the display to start the final cleaning - WITHOUT DISCONNECTING IT FROM THE MAINS AND WITHOUT OPERATING THE POWER I/O SWITCH ON THE BACK OF THE COOKER -and immediately call the **Fire department**.
- The cooker MUST BE CONNECTED TO AN INDIVIDUAL FLUE.
- The stove must be installed on the floor with an adequate load-bearing capacity. Should the existing floor not comply with the requirement above, proper measurements must be taken (for instance, the installation of a load distribution plate).
- The chimney must be accessible for cleaning.

## Responsibility

By handing over to the end user this manual, Aico SpA denies all liability, both civil and criminal, for accidents arising from non-compliance with instructions contained in it.

Aico SpA denies all liability deriving from improper use of the cooker, incorrect use by the user, by and/or repairs and from use of non-original spare parts.

The manufacturer declines all direct and indirect civil and criminal liability due to:

- poor maintenance
- non-compliance with the instructions contained in this manual
- use not complying with safety directives
- installation not complying with the standards in force in the country
- installation by unqualified and untrained staff
- changes and repairs unauthorised by the manufacturer
- use of non-original spare parts
- exceptional events

## Spare parts

Exclusively use original spare parts. Do not wait for the components to deteriorate before replacing them. Replace a worn component before it is completely broken to prevent any accidents due to sudden breakage of the components. Carry out periodic maintenance controls as described in the dedicated chapter.

**General information**

**What are wood pellets?**

Wood pellet is a fuel which consists of pressed wood sawdust, often obtained from scraps of carpentry. The material used cannot contain any foreign substances such as glue, lacquer or synthetic substances.

The wood is dried and cleaned and then pressed using a perforated matrix: due to the high pressure the sawdust heats to activate the natural binders in the wood; in this way, the pellet maintains its shape, also without adding artificial substances. The density of the wood pellets varies based on the type of wood and it can exceed 1.5 - 2 times that of natural wood.

The cylindrical sticks have a diameter of 6mm and a variable width between 10 and 40 mm.

Their density is equal to approx. 650 kg/m<sup>3</sup>. Due to the low water content (< 10%) they feature a high energy content.

UNI EN ISO 17225-2:2014 (replacing EN PLUS) defines the quality of pellets by defining three classes: A1, A2 and B.

Pellets must be transported and stored in dry places. On contact with humidity they swell, therefore making them unusable: therefore it is necessary to protect them from humidity both during transport and storage.

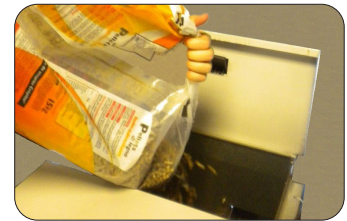
Keep the fuel and other flammable materials at an adequate distance.

**Ravelli recommends using wood pellets certified class A1 and A2 according to EN ISO 17225-2:2014 (EN PLUS), or standard DIN PLUS (more restrictive than the class A1) or STANDARD M 7135.**

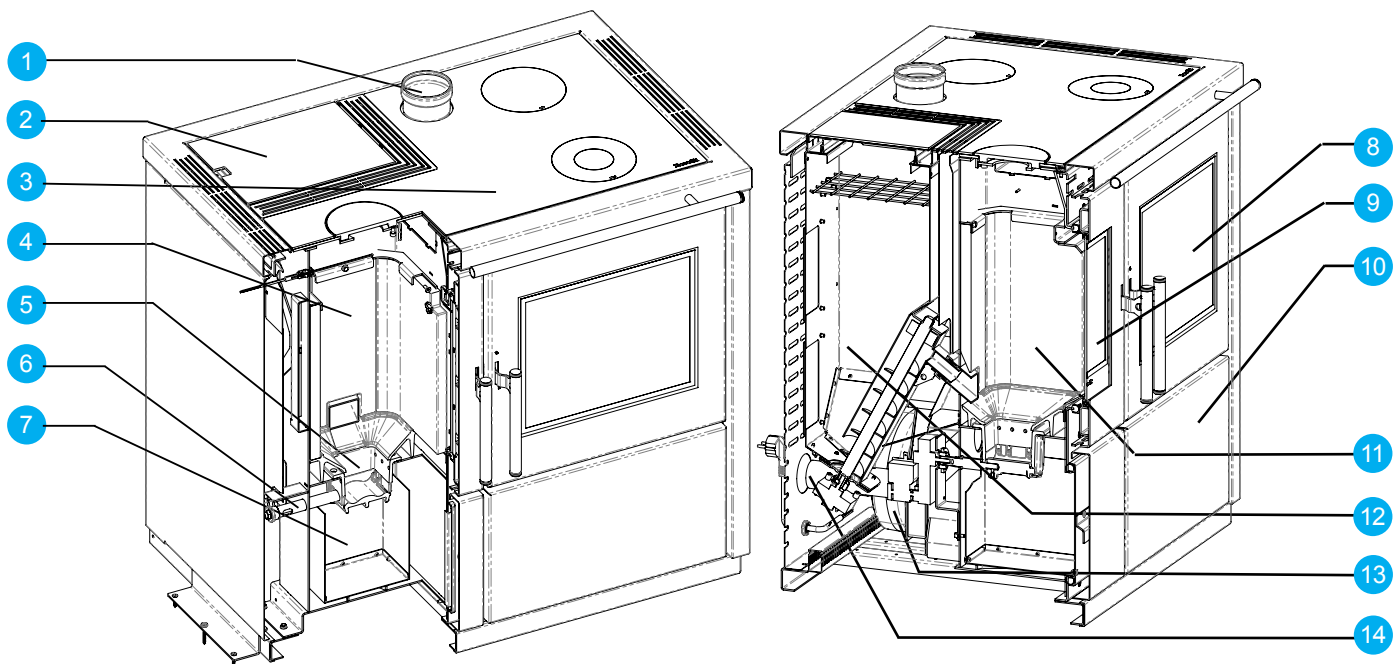
The pellets can be light or dark, usually packed in bags bearing the manufacturer's name, the main features and the classification according to the standards.



- Length : < 40 mm
- Diameter : about 6 mm
- Bulk density : ≥ 600 kg/m<sup>3</sup>
- Heat power : ≥ 16.5 MJ/kg (4.6 kWh/kg)
- Residual humidity : < 10 %
- Ash : <1.2 %
- Specific weight : >1000 kg/m<sup>3</sup>



**How is the pellet cooker made**



- 1 Flue clamp
- 2 Pellet hopper lid
- 3 Ceramic-glass cooktop
- 4 Vermiculite
- 5 Grate
- 6 Spark plug
- 7 Ash drawer

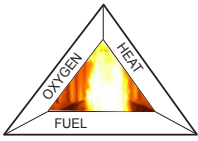
- 8 Oven
- 9 Combustion chamber door
- 10 Storage box
- 11 Vermiculite
- 12 Hopper
- 13 Smoke extractor
- 14 Combustion air inlet pipe



### Combustion

Combustion is a chemical reaction in which two reactants, called fuel and oxidizer, combine generating thermal energy (heat) and producing new substances (fumes).

To understand the expression described above, we consider this practical scheme named "combustion triangle"; it consists of three elements that are necessary to have the combustion reaction. These three elements are:



- fuel (pellets)
- oxidizing agent (oxygen in air)
- trigger (Heat)

The reaction between the fuel and the oxidizing agent is not spontaneous, but occurs using an external trigger that is a heat source, flame or spark. The trigger represents the ignition energy necessary for the reagent molecules to start the reaction. With the cooker off, this energy must be supplied from an external source (Electrical ignition coil). Then, the energy released by the reaction makes self-sustainment possible (brazier and high temperature in the combustion chamber).

The fuel and the oxidizing agent must be in adequate proportions because combustion is restricted to the so-called "flammability field". Three types of combustion are reported below, the correct one is reported in Figure 3:



Fig. 1

INCORRECT combustion, flame too drawn, in "blowtorch" style with a high quality of incandescent pellets coming out of the brazier. Correct the pellet/air set by reducing the percentage of air (from 0 to -5); if not sufficient, also increase the percentage of falling pellets (from 0 to +5) to arrive to the condition in Figure 3.

If the changes made to the settings do not bring the stove to the right combustion conditions in Figure 3, contact the Technical Support Centre.

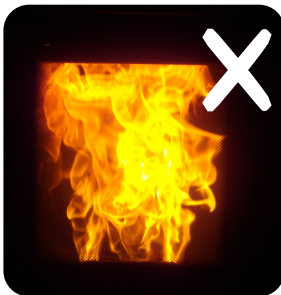


Fig. 2

INCORRECT combustion, "spring" flame in "wood stove" style with high quantity of pellets not burning on the brazier. Firstly, check the door is closed and the ash pan. Secondly, correct the pellet/air set by increasing the percentage of air (from 0 to +5); if not sufficient, also reduce the percentage of falling pellets (from 0 to -5) to arrive to the condition in Figure 3.

If the changes made to the settings do not bring the stove to the right combustion conditions in Figure 3, contact the Technical Support Centre.



Fig. 3

CORRECT combustion, lively yellow/white flame with a minimum quantity of pellets on the brazier.

Ideal combustion which does not require changes.

Figure 3 shows a flame produced by a stove with operating power set to maximum value.

### Safety devices

The cooker is equipped with sophisticated safety systems, which avoid damage to the cooker and/or the home in the event of breakage of a single piece or faults on the flue. In any case, if an anomaly occurs, the pellets are immediately stopped from falling and the switch off phase activates.

The corresponding alarm is shown on the display. It is possible to see the details in the chapter dedicated to alarms.

### Regulations, directives and Technical standards

All Aico SpA products are manufactured according to the regulation:

- **305/2011** manufacturing materials

according to the guidelines:

- **2014/30 UE** Electromagnetic Compatibility (EMC)
- **2014/35 UE** Low voltage electric safety (LVD)
- **2011/65 UE** RoHS 2
- **2014/53 UE** Radio

And according to the standards:

- **EN 14785**
- **EN 50165**
- **EN 60335-1**
- **EN 61000-3-2**
- **EN 55014-1**
- **ETSI EN 300220-1**
- **EN 62233**
- **EN 60335-2-102**
- **EN 61000-3-3**
- **EN 55014-2**



## COOKER INSTALLATION

### Advice for installation

Because of the frequent accidents caused by the malfunctioning of the flues in residential buildings, this chapter has been drafted in collaboration with Assocosma (association of stove/sweeping technicians and specialists of the field) in order to facilitate the installer to install the stove and build a system able to evacuate fumes in accordance with the regulations in force.

- Regulation 305/2011 concerning manufacturing products for CE marking (CPR);
- UNI 10683:2012 for installing a heat generator to solid biofuels (wood, pellets or other biomass);
- UNI/TS 11278:2008 regarding the choice of metallic fumes exhaust system components;
- UNI 10847:2000 concerning maintenance and control of fume systems for heat generators with liquid or solid fuel;
- UNI EN 13384-1:2008 regarding thermal and fluid-dynamic calculation methods for chimneys;
- UNI/EN 1443:2005 regarding the installation with the minimum essential chimney requirements met (followed by the compilation of fume dataplate to be affixed to the same).
- UNI EN 15287-1:2010 and UNI EN 15287-2:2008 for the design and installation of chimney systems, for the construction of chimneys installed on site and the existing chimney piping (part 1) and the design, installation and labelling of chimney systems, flues and air intake ducts for watertight heating appliances (part 2).

### Excerpt from standard UNI 10683:2012

#### Approved and non approved installations

In the case of installation in places where there are more appliances powered with different fuels, as well as with or without extractor hoods, during preventive inspections and during ignition test you must assess the situation in order to detect any deviations from the design conditions or other aspects not obvious upon design phase.

The room must have adequate ventilation according to the manufacturer's instructions for each individual appliance.

Ventilation must be calculated to ensure the functioning of the devices at the same time and in the most severe operating conditions.

It is prohibited to install equipment which is not watertight in premises for residential purposes:

- in which there are liquid fuel-operated appliances with continuous or intermittent operation, which draw the combustion air in the room in which they are installed;
- in which there are type B gas appliances intended for room heating, with or without production of domestic hot water and in adjacent and adjoining premises;
- in which, in any case, the depressurization measured during installation between the internal and external environment is greater than 4 Pa (see Appendix F of the UNI 10683 for more details).

The installation of watertight equipment can be carried out without limitations.

Installation in bathrooms, bedrooms and studio flats is only allowed for sealed or closed hearth appliances with ducted combustion air taken from the outside.

Installation in premises with fire hazards is forbidden.

#### Installation place requirements

System compatibility should be checked before assembly and installation.

The adjacent side and rear walls and the supporting surface must be made of non-combustible and heat-resistant material, unless otherwise specified below.

Installation next to combustible materials or heat-sensitive materials is allowed provided that the minimum clearance recommended is observed and suitable protection is provided with insulating and non-combustible materials. This should however be provided by the manufacturer's instructions. When the installation instructions are not available, the installer will have to secure the appliance and shall be liable for its commissioning.

Before installation you should check the position of the cooker, flue or exhaust terminals of the following have been observed:

- Installation restrictions
- Limitations provided by local administrative regulations or specific provisions of the local bodies.
- Conventional limitations imposed by the residence regulations, easement or contracts.

After surveying the installation place, the installer should check the following:

- the type of appliance;
- The minimum volume of the installation place indicated by the manufacturer is however greater than 15 m<sup>3</sup>;
- the instructions of the manufacturer of the heat generator regarding the requirements of the fume exhaust system;
- the internal cross section of the fume duct, the composing materials, the evenness of the cross section, the absence of obstructions;
- height and length on vertical plane of the chimney;
- the existence and compliance of chimney terminal;
- the possibility to fit external air vents and the dimensions of existing vents.

The complete flue exhaust system must be supplied and installed in compliance with the regulations issued by the standardization bodies and should be installed according to state-of-the-art standards.

#### Air inlet:

The installation place of non-watertight appliances must be sufficiently ventilated with special vents that allow the circulation of air in the room.

Air must be taken directly from the outside (not from other rooms, garage, ect) and must have a net usable section equal to or greater than 80 cm<sup>2</sup> for pellet stoves and heaters (EN 14785) and 100 cm<sup>2</sup> for boilers (EN 303-5).

The vent grids must be positioned so that they cannot be blocked and to allow the withdrawal of clean air.

Verify and respect the ventilation requirements for simultaneous operation of multiple combustion appliances in the presence of forced ventilation systems or hoods (refer to section 6.4 of the UNI 10683).

The air intake is not required when installing watertight appliances that take air directly from the outside.

**Fume duct and fittings:**

The term fume channels refers to the pipes that connect the appliance to the chimney.

For heat generating devices equipped with an electric fume exhaust fan you must follow the installation instructions of the manufacturer regarding the maximum length and number of bends of the exhaust ducts.

In case the maximum values or those resulted from the preliminary calculation as per UNI EN 13384-1 are not available, you should follow the provisions below:

The horizontal sections must have a minimum upward slope of 3%;

The length of the horizontal section should be minimum and its plan projection should not exceed 4 metres;

- the number of direction changes including one for the introduction into the chimney and excluding that for the effect of the use of the "T" element in appliances with rear flue, must not exceed 3.

- direction changes should not have an angle greater than 90° (45° bends recommended);

- this section should have constant diameter and equal at fire box outlet up to the fitting into the flue;

- it is forbidden to use flexible metal and cement fibre tubes and pressurization should be ensured at all times;

- fume channels must not pass through rooms where the installation of combustion appliances is prohibited.

In any case, the fume ducts should be sealed and protected against combustion products or condensate as well as insulated if passing outside the installation room.

It is not allowed to mount manual draught adjustment devices on forced draught appliances.

**Chimney:**

- must be made of materials suitable to guarantee resistance to normal mechanical stress, chemical resistance and have proper insulation to prevent the formation of condensate; it should, therefore, be thermally insulated;

- chimney product standard EN 1856-1 and used materials standard UNI/TS 11278).

- be predominantly vertical and have no narrowing along their entire length.

- be properly spaced by means of air gaps and insulated with non flammable materials.

- maximum direction changes should be 2 at angles below 45°.

- the flue installed inside the house should be insulated and can be inserted into a chimney terminal as long as the piping standards are complied with;

- the fume duct should be connected to the chimney by means of a T fitting with a collection chamber fitted with inspection glass to check the combustion residues and condensate collection.

The combustion products must be released above the roof. It is not possible to connect the appliance to a flue shared with other combustion appliances or with exhausts of hoods.

**Flue dataplate:**


Supplied with the chimney, it identifies:

- the manufacturer;

- the CE marking;

- the description of the product according to EN 1856-1 (metal flue) and EN 1856-2 (metal smoke channels)

There is also a part to be completed by the installer which certifies the suitability of the chimney to the appliance installed, installation standard EN 1443.

NAME and BRAND MANUFACTURER	CE	XX	← Last two digits of the year in which the marking has been affixed
		01234	← Identification number
CERTIFICATE CE:01234-CPD-0999			← Certificate number
Chimney System: EN 1856-1 T400 N1 D v3 I50050 G(30)			← Designation stated by manufacturer
SECTION RESERVED TO THE INSTALLER			
1) DESIGNATION EN 1443: <b>T400 N1 D 3 G(30)</b>			} Section compiled by the installer
2) DIAMETER: <b>100</b> mm			
3) DISTANCE FROM FLAMMABLE MATERIAL: <b>30</b> mm	→		
4) INSTALLER (name/address): <b>Mario Bianchi Via Rossi 24 Calcinante (BG)</b>			
5) DATE: <b>01/27/2014</b>			
WARNING: THIS LABEL SHOULD NOT BE REMOVED OR MODIFIED			

**Example of designation EN 1443:**

<b>EN 1856-1</b>	<b>T400</b>	<b>N1</b>	<b>D</b>	<b>3</b>	<b>G</b>	<b>30</b>
with	b	c	d	e	f	g

**KEY:**

**to:** Reference standard (in this case steel chimney)

**b:** Indicates the temperature class (T80, T200, etc.);

**c:** Indicates the protection class (N-->negative - P--> Positive - H-->High pressure; "x"--> indicates the loss allowed whereas 1 is the most restrictive);

**d:** It indicates the condensate resistance class (D-->for dry use - W-->for wet use);

**e:** Indicates the corrosion resistance class (1, 2, 3 or m);

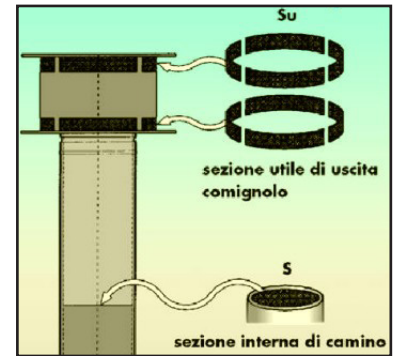
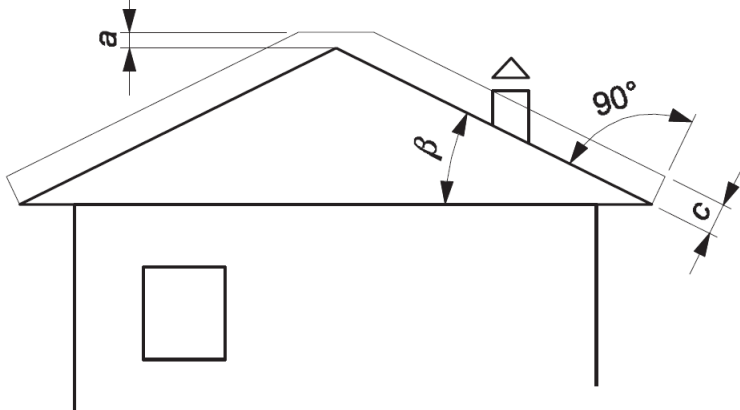
**f:** Indicates the soot fire resistance class (G--> soot fire resistant O--> not soot fire resistant);

**g:** Indicates the distance to keep from combustible materials.

**Chimney cap:**

The UNI 10683 prescribes that the chimney cap must meet the following characteristics:

- The flue section must be at least twice the inner section of the chimney;
- Have a structure suitable to prevent water or snow from entering;
- Be built so that in the presence of wind it still ensures fume exhaust (wind-proof chimney cap)
- the release height measured between the lower covering layer and the lower point of the fume release into environment must be outside of the reflux area;
- Be built at safe distance from antennas or parabolic antennas never be used as a support;

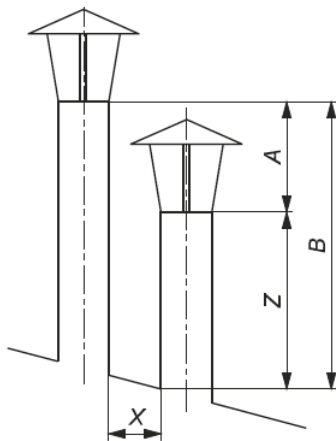

**Safe distances for proper installation of chimney terminal:**
**Reflux area**


Simbolo	Descrizione	Zona di rispetto [mm]
c	Distanza misurata a 90° dalla superficie del tetto	1 300
a	Altezza sopra il colmo del tetto	500

The exhaust height must be outside the reflux area calculated according to the figure and the table given above. Next to the ridge it should be considered the smaller among the two.

**Position in relation to other chimneys**

If you need to install the chimney near another existing chimney for fume evacuation, it is necessary to respect the distances shown in the table.

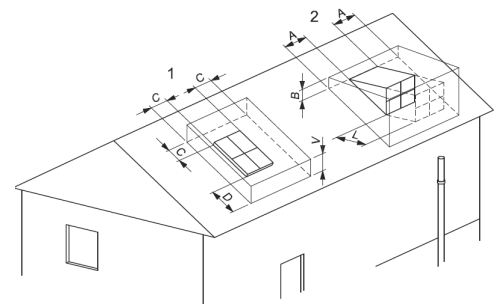


Simbolo	Descrizione [mm]	Zona di sbocco [mm]
Z	Altezza misurata verticalmente	
B	$X \leq 500$	$Z + A$
A	Altezza sopra l'ostacolo	200

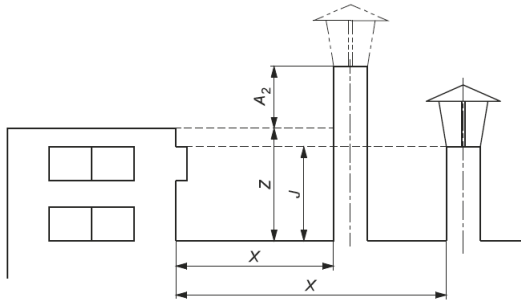
**Placement in relation to skylights and dormers**

The outlet of the chimney cap must be located outside of the clearance zones indicated in the figure.

Simbolo	Descrizione	Zone di rispetto [mm]	
Abbaino (2)	A	Distanza laterale dall'abbaino	1 500
	B	Altezza sopra il colmo della struttura dell'abbaino	1 000
	L	Distanza frontale dall'abbaino	3 000
Lucernario (1)	C	Distanza dal filo superiore o laterale di aperture o finestre	1 000
	D	Distanza dal filo minore di aperture o finestre	3 000
	V	Altezza sopra aperture o finestre	1 000



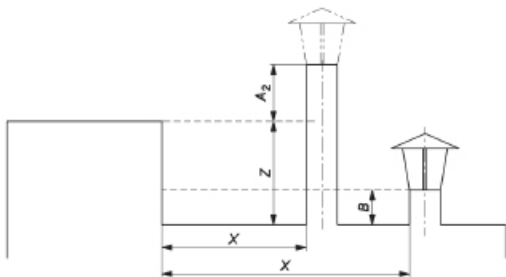
IT IS MANDATORY TO HAVE THE EXHAUST THROUGH THE ROOF IT IS FORBIDDEN TO DISCHARGE FLUES THROUGH A DIRECT SYSTEM OR ANY OTHER SYSTEM NON COMPLIANT TO REGULATIONS

**Outlet height in the presence of a technical volume or obstacle with openings and windows**


Distanza [mm]	Quota di sbocco
$X \leq 5\,000$	$Z + A_2$
$5\,000 < X \leq 10\,000$	J

The symbol Z indicates the height (mm) from the obstacle or the technical compartment

Simbolo	Descrizione	Distanze da rispettare [mm]
$A_2$	Altezza sopra la falda virtuale tesa tra i tetti di edifici od ostacoli o vani tecnici adiacenti in assenza di aperture/finestre	1 000

**Outlet height in the presence of a technical volume or obstacle without openings**


Roof with slope $\beta \leq 10^\circ$		Roof with slope $\beta > 10^\circ$	
Distance (mm)	Outlet height	Distance (mm)	Outlet height
$X \leq 2000$	$Z + A_2$	$X \leq 3000$	$Z + A_2$
$X > 2000$	B	$X > 3000$	B

The symbol Z indicates the height (mm) from the obstacle or the technical compartment.

Simbolo	Descrizione	Distanze da rispettare [mm]
$A_2$	Altezza sopra la falda virtuale tesa tra i tetti di edifici od ostacoli o vani tecnici adiacenti in assenza di aperture/finestre	500
$B^*)$	Altezza sopra tetti piani o parapetti chiusi	1 000

\* If the terrace or flat roof is walkable, you should observe the relative distances from the floor recommended for roof with slope  $\beta \leq 10^\circ$ .

**Testing and commissioning**

Commissioning must be preceded by a test that involves the verification of the operation of the following elements:

- the suitability of the fumes exhaust system;
- connection to external air vents, if any;
- electric and hydraulic connections;
- check that all the materials that make up the smoke duct, flue, chimney terminal are suitable for use and compliant with standards (fume exhaust of a stove with solid fuel).

For heat generating devices powered by mechanical systems testing must be done according to manufacturer's instructions.

**The test is considered successful when all operation phases are completed without encountering anomalies faults.**

**Additional documentation and informations for the user**

Upon installation completion, the installer should hand over to the user:

- the user's manual of the appliance supplied by the manufacturer;
- the technical documentation of the accessories used and subject to maintenance;
- the documentation of the flue exhaust system;
- The system booklet (where applicable);
- the documentation that certifies installation completion;

The documentation required to cover installer's liability comprises:

- detailed description (including photos) of other heat generators present;
- declaration of conformity of the state-of-the-art system (D.M. 37/08);
- description of overall dimensions, layout or photos regarding the modifications brought to the layout in case it was necessary to intervene during installation;

The use of certified material with CE marking (305/2011);

- any information regarding the warranty;
- the date and signature of installer;

**Maintenance schedule.**

Maintenance should be carried out periodically as shown in the table below, and in the manner prescribed by standards and performed by qualified personnel; upon completion a regular intervention report should be issued.

***The installer should ask for the receipt of delivered documentation and preserve it together with the technical documentation regarding the installation performed.***

Type of appliance installed	<15 kW	(15 - 35) kW
Pellet-fueled appliance	2 years	1 year
Appliances with open firebox	4 years	4 years
Appliances with close firebox	2 years	2 years
Water appliances	1 year	1 year
Boilers	1 year	1 year
Fume exhaust system	4 t of fuel	4 t of fuel

**REFERENCE KEY OF SYSTEM DECLARATION OF CONFORMITY**

1. Like in the case of gas plants, by "other" we may mean the replacement of a device installed in a fixed manner.
2. Specify: name, surname, qualification and (when there is an obligation as per Art.5, paragraph 2) registration data to the relative Professional association of the technician that drafted the project.
3. Specify the technical standards and regulations in force, classifying them per design, execution and inspection.
4. Should the system executed according to the design be modified during work, the project submitted at the end of the works should include the versions made. The project also includes the fire prevention protocol (where applicable).
5. For products subject to standards, the report should contain a complete statement of compliance to the same, where applicable, with reference to marking, test certificates etc. issued by authorized bodies.  
For the other products (to be listed) the signatory should declare that it regards materials, products and parts compliant with provided for in articles 5 and 6. The report should state the compliance with installation area.  
When this is relevant for the proper operation of the system, indications on the number or features of appliances installed or about to be installed should be provided (e.g. for gas: 1) number, type and power of appliances; 2) features of the parts that make up the ventilation systems of the area; 3) features of the system that feeds the fuels;  
4) information on appliance wiring, where applicable).
6. The layout of the system executed includes the description of the works done (with simple reference to the project when the latter was drawn up by an authorized professional and variations during works have not been approved). In the case of: modification, enlargement and non-routine maintenance, the intervention should be integrated, if possible, into the layout of the existing system. The layout shall include the fire prevention protocol (where applicable).
7. The reference data include the name of the company that carried out the works and the date of the statement. For plants or parts of plants built before the entry into force of this decree, the reference to declarations of conformity may be replaced by a reference to declarations of conformity (Article 7, paragraph 6). If part of the system is executed by another company (such as ventilation and fume exhaust in gas installations), the declaration should include reference data for the said parts.
8. If the installation includes products or systems legitimately used for the same job in another Member State of the European Union or party to the Agreement on the European Economic Area, for which there are no technical standards for the product and installation, the declaration of conformity should be annexed to the project drafted and signed by a registered professional engineer in accordance with the specific technical skills required, certifying that the risk assessment associated with the use of the product or production system was performed, and the fact that he had adopted all necessary measures to achieve levels of safety equivalent to those guaranteed for the installations carried out, according to state-of-the-art standards and to have supervised the proper execution of the installation in all its phases in compliance with all technical standards provided by the manufacturer of the system or the product.
9. Example: any certificates containing the outcome of the checks performed on the system before commissioning or cleaning, sanitizing treatments etc..
10. Upon completion of works, the company that installed the system should issue the client a declaration of conformity of the systems in compliance with the standards in Art.7. The client or the owner should entrust installation, modification, enlargement and maintenance tasks of the system in Art. 1 exclusively to authorized companies as per Art. 3.

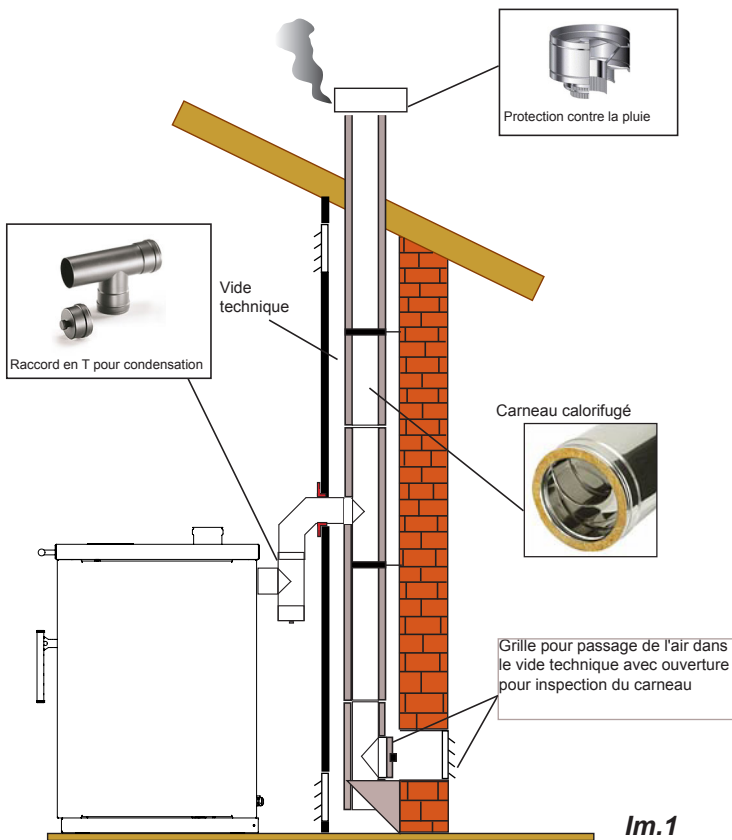




**Examples of installation of a pellet cooker**



IT IS MANDATORY TO USE WATERTIGHT PIPES WITH SILICONE SEALS.

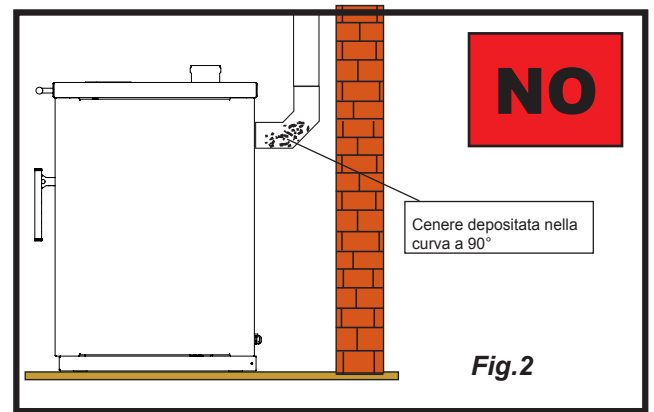


**Im.1**

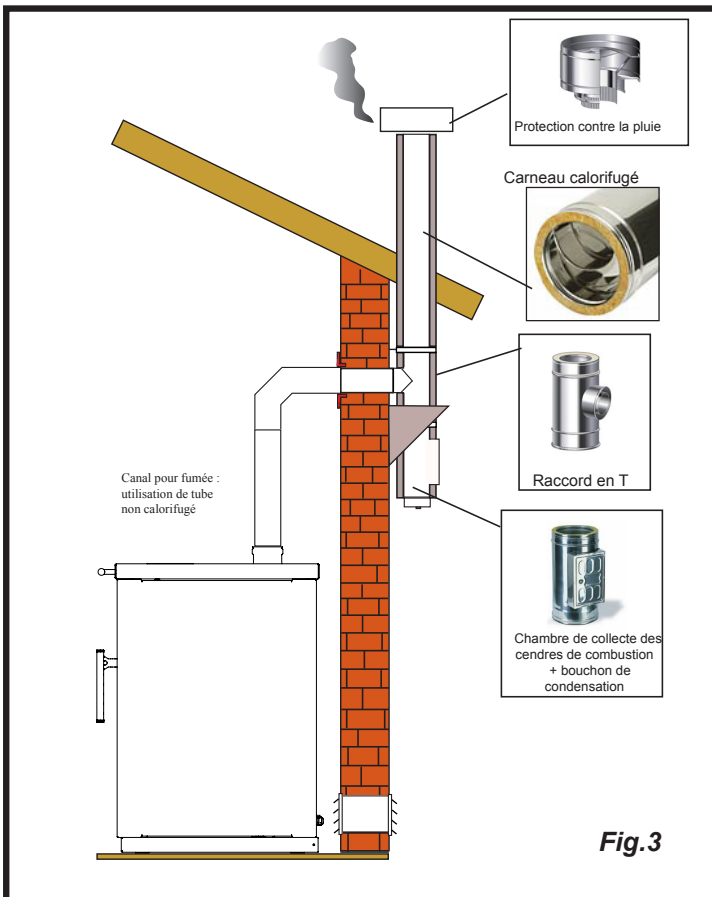
This type of installation (See Figure 1) requires the chimney to be insulated despite the fact that the entire duct is installed inside the building. Moreover, the structure should be inserted into a properly ventilated skylight well.

At the bottom of the chimney is provided an inspection cover suitably isolated from wind and rain.

It is not recommended to install a 90° curve as the first section, since the ash could quickly obstruct the smoke passage, compromising the draught. (See Fig. 2)



**Fig.2**

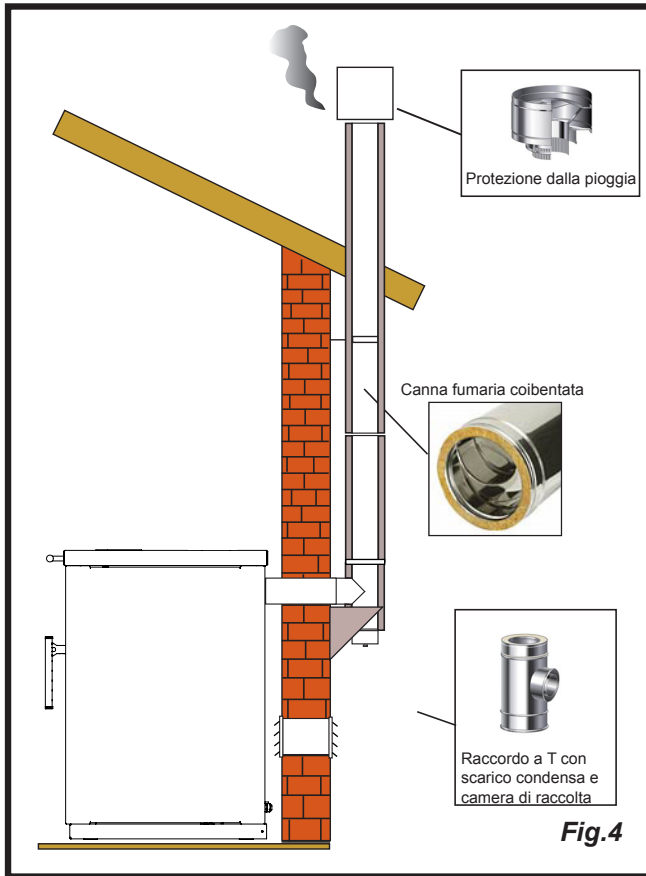


**Fig.3**

This type of installation (See Fig. 3) does not require insulated flue for the section inside the building, while the section located outside of the building should be made of insulated tubes. The lower part of the flue has an assembled "T" joint with an inspection plug.

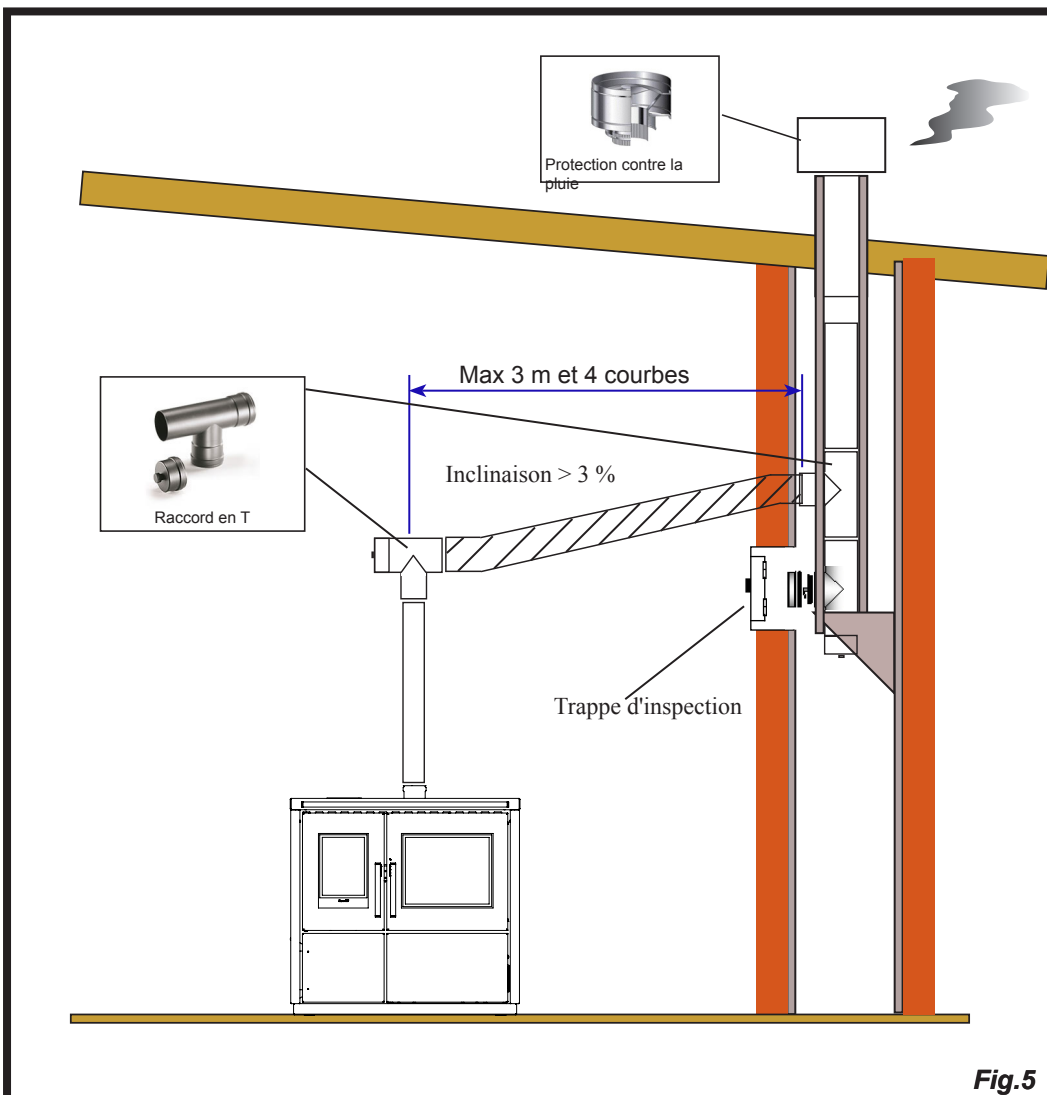
In this way you can inspect the outer section.





This type of installation (see Figure 4) requires insulated chimney since the entire smoke duct was assembled inside the house.  
The lower part of the flue has an assembled "T" joint with an inspection plug.

In case you need a horizontal section to attach to an existing chimney (see Fig. 5), respect the gradients shown in the figure, so as to reduce the ash storage in the horizontal pipe. In the lower part of the flue duct was installed a T fitting with inspection plug like for the flue inlet.



**Fig.5**

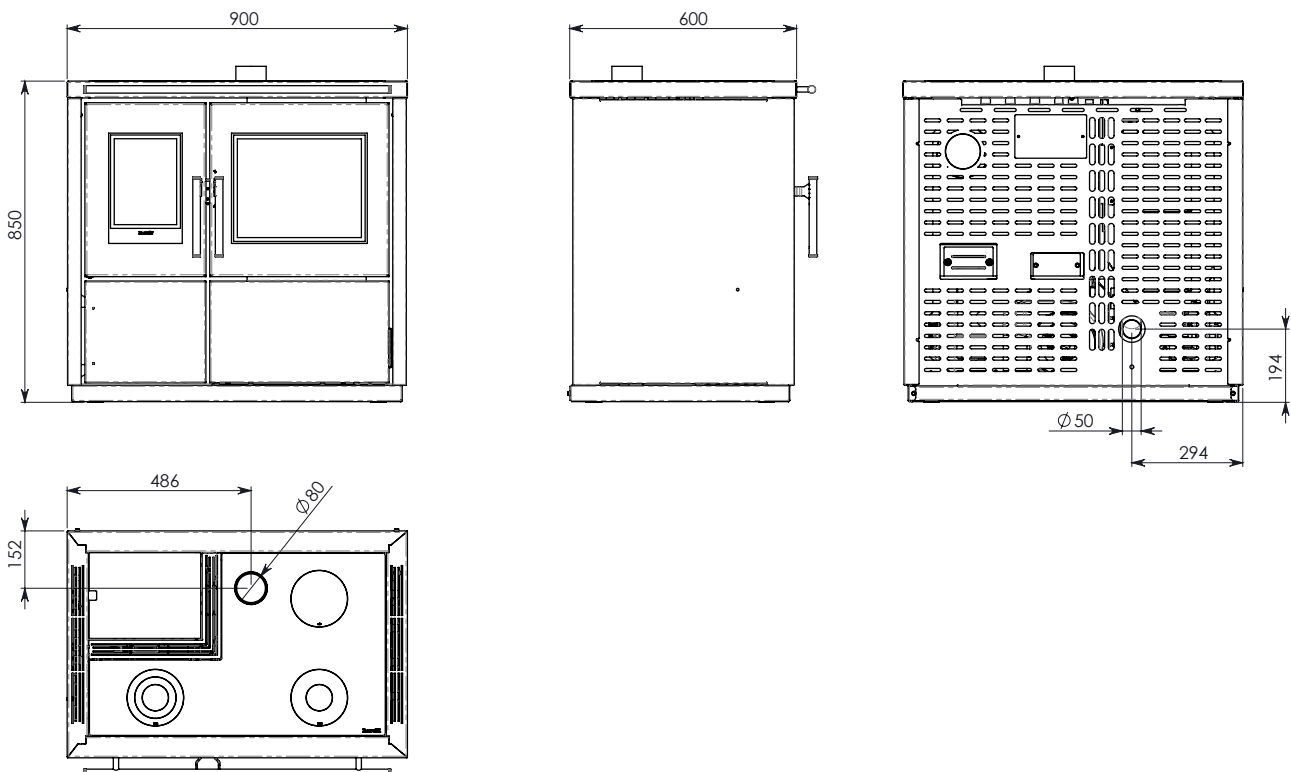
**TECHNICAL CHARACTERISTICS**

	UdM	
Height	mm	850
Width	mm	900
Depth	mm	600
Oven dimensions (hxwxh)	mm	345 x 359 x 415
Empty weight	Kg.	232
Diameter of smoke release tube	mm	80
Max heating volume	m <sup>3</sup>	185
Input Red. - Rat.	kW	3.0 - 10.6
Output power Red. - Rat.	kW	2.7 - 9.3
Hourly pellet consumption Red. - Rat.	kg/h	0.62 - 2.2
Power consumption upon switch-on	W	270
Power consumption at rated power	W	28
Power consumption at reduced power	W	13
Power consumption in stand-by	W	2,2
Additional electric power of electric grill	W	1132
Additional electrical power of oven bulb	W	40
Electrical power supply	V - Hz	230 - 50
Tank capacity	Kg.	19
Autonomy min - max	h	9 - 30
Efficiency Red. - Rat.	%	89.02 - 87.04
CO at 13%O <sub>2</sub> Red. - Rat.	%	0.029 - 0.004
Fumes flow rate Red. - Rat.	g/s	4.02 - 6.70
Minimum suction		0.1 mbar - 10 Pa
Fume temperature Red. - Rat.	°C	104 - 218

The Coocker Mia 90 is not suitable for recessed installation.

To ensure adequate ventilation, a space of 50 mm must be maintained between the stove and the rear and side walls, even if the walls are not combustible.

R = right side           150 mm  
 L = left side            150 mm  
 B = back side           100 mm  
 S = upper side       800 mm  
 A = front side           1000 mm



The data reported above are indicative and not binding. They can vary based on the type of pellets used. Ravelli reserves the right to make changes to enhance the performance of its products

### MIA 90 pellet cooker specifications

Ravelli cooker Mia 90 is a product of the latest generation combining tradition of wood cookers with technology, comfort and quietness of modern pellet stoves.

It has been designed to ensure the heating of homes and, simultaneously, to be used as a cooker. In fact, you can cook either on the cooktop in ceramic glass or in the oven, heated directly by flame and hot fumes.

### How to use the cooktop

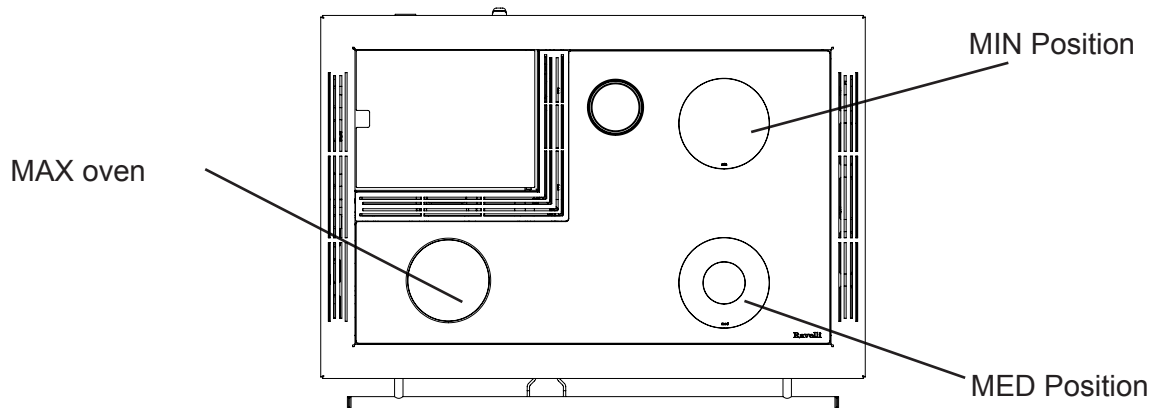
The cooktop is divided into different heating zones.

For fast cooking and high temperature you can use the cast iron oven (MAX) placed directly over the flame.

MED and MIN positions are useful for slow cooking and keeping food warm.



To obtain the best results from your cooktop we recommend you use the cooker in HEATINGmode at full power.



PLACE THE COOKWARE AND KITCHEN UTENSILS CAREFULLY ON THE GLASS-CERAMIC COOKTOP. BE CAREFUL NOT TO DROP WATER ON LIVE PARTS.

### How to use the oven

The cooker is fully equipped for cooking food. The oven temperature can be set between 120°C and 250°C.

The automatic control system of combustion "Ravelli Cooking System" ensures that the set temperature is reached and maintained for the desired cooking time. During cooking, you can activate the electric grill, useful to keep food warm at the end of the cooking process.

Due to the thermal inertia, oven cooling may be much slower than the heating. In the first periods of use of the cooker, it is advisable to check the time required to reach the temperature in cooling mode. To speed up the oven cooling process, you can open the oven's door for a few seconds.

YOU can also use the oven in the summer to warm food, by activating the electric grill.

To use the oven and the electric grill you need to use the cooker in COOKING MODE. All the relevant information is given in the following sections.



THE TIME NEEDED TO REACH THE TEMPERATURE OF THE OVEN AND THE ACTUAL MAXIMUM AND MINIMUM TEMPERATURE WITHIN THE OVEN DEPENDS ON THE TYPE AND QUALITY OF PELLETS USED.

### Getting started

#### How to unpack the cooker

First open the package; if possible, remove the cooker from the package near the area where it will be installed. The materials that make up the packing are neither toxic or harmful, therefore do not require special disposal procedures. Further storage, disposal or possible recycling is the responsibility of the end user, as per the existing laws.

The device must be installed so as to provide easy access for cleaning the oven and the gas and fume exhaust ducts.

You should pay particular attention to the door and its glass, as well as the cooktop, that must be protected from shocks that compromise their intact state.

#### IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT

Demolition and disposal of the product is the sole responsibility and liability of the owner who must comply with the laws in force in his country regarding safety, respect for and protection of the environment.

At the end of its service life, the product must not be disposed of as municipal waste. It must be taken to a special local authority differential waste collection centre or to a dealer providing this service.

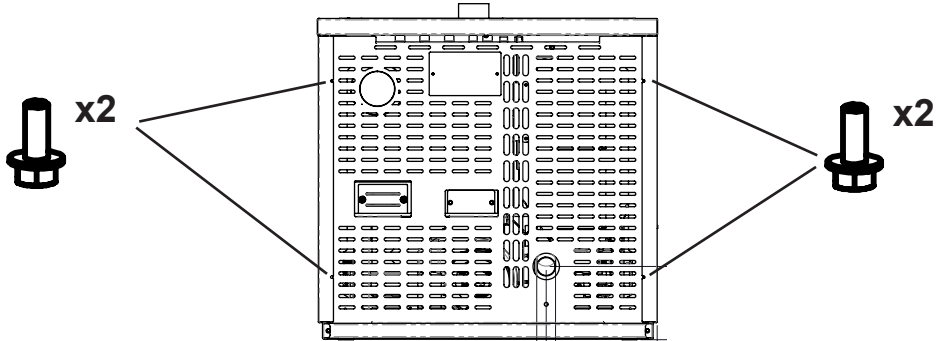
Disposing of electrical equipment separately you avoid negative consequences for the environment and for health deriving from its incorrect disposal, plus it allows you to recycle constructional materials, which contributes in important savings in energy and resources.

**How to remove the fixing plates**

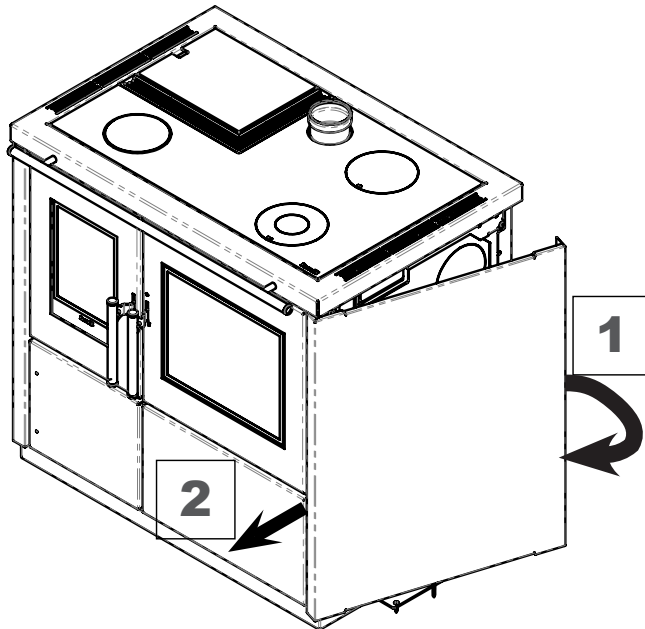
The cooker is secured to the pallet with special plates, to prevent damage during transport.

To remove the plates it is necessary to remove the side panels.

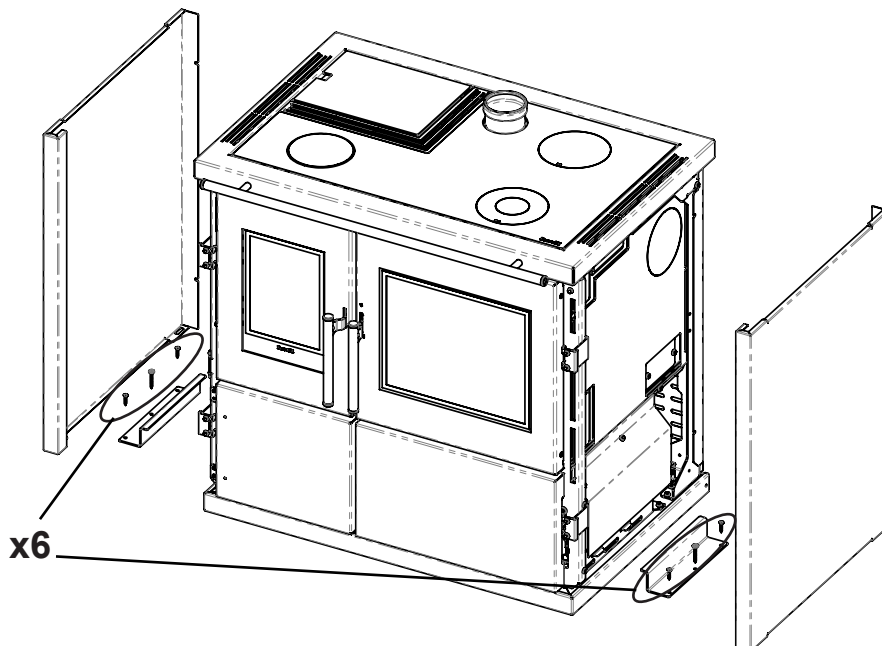
Loosen the fixing screws of the side panels, on the back of the cooker.

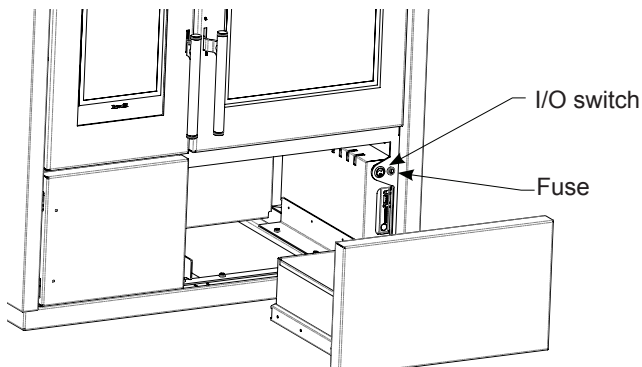


Remove the side panels.



Loosen the fixing screws of the plates on the wooden pallet.



**Wiring**


The power cord of the appliance should only be connected after the end of the installation and assembly of the equipment and must remain accessible after installation.

**Make sure that the power cord (and any other external cables to the unit) does not touch the hot parts.**

If the power supply cable is damaged, it must be replaced by the manufacturer or its after-sales service or by a similarly qualified person, so as to avoid all risks.

The I/O switch in the figure should be set to I to power the cooker. If there is no voltage, check the state of the fuse installed next to the switch (4A fuse). During the periods of inactivity, we recommend you disconnect the power cord of the cooker.

**What to check before turning on the cooker**

Make sure you have removed all parts that pose the risk of burns from the combustion chamber or glass (various instructions or stickers).

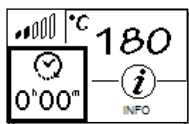
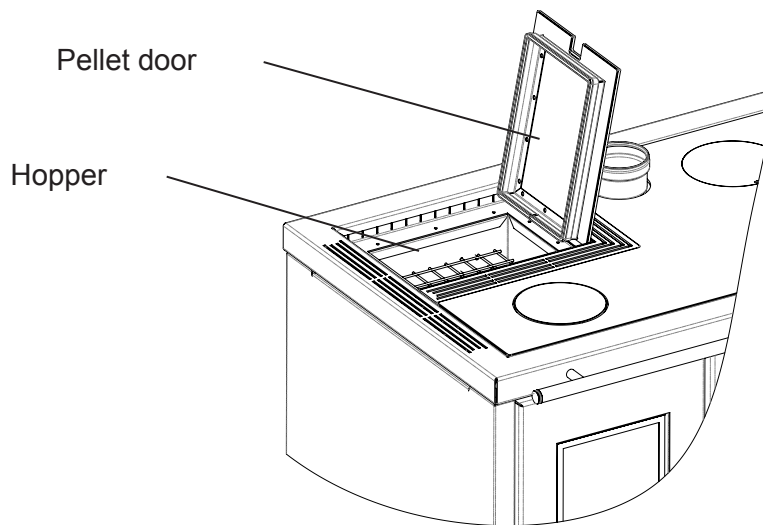
Before turning on the appliance, make sure you have fitted the brazier on the support base and check that the door and the ash pan are properly close.

**How to load the pellets**

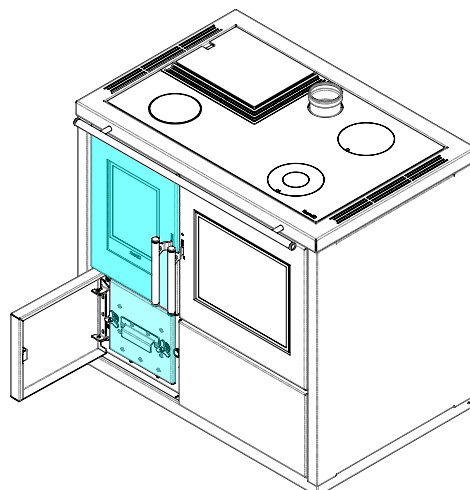
Fuel supply consists in the insertion of pellets from the top of the cooker, by opening the door. During pellet loading prevent the pellet bag from coming into contact with hot surfaces (i.e. the cooktop).



**NEVER INSERT INTO THE TANK OTHER KIND OF FUEL OTHER FROM THE PELLETS  
COMPLYING WITH THE SPECIFICATIONS BELOW**

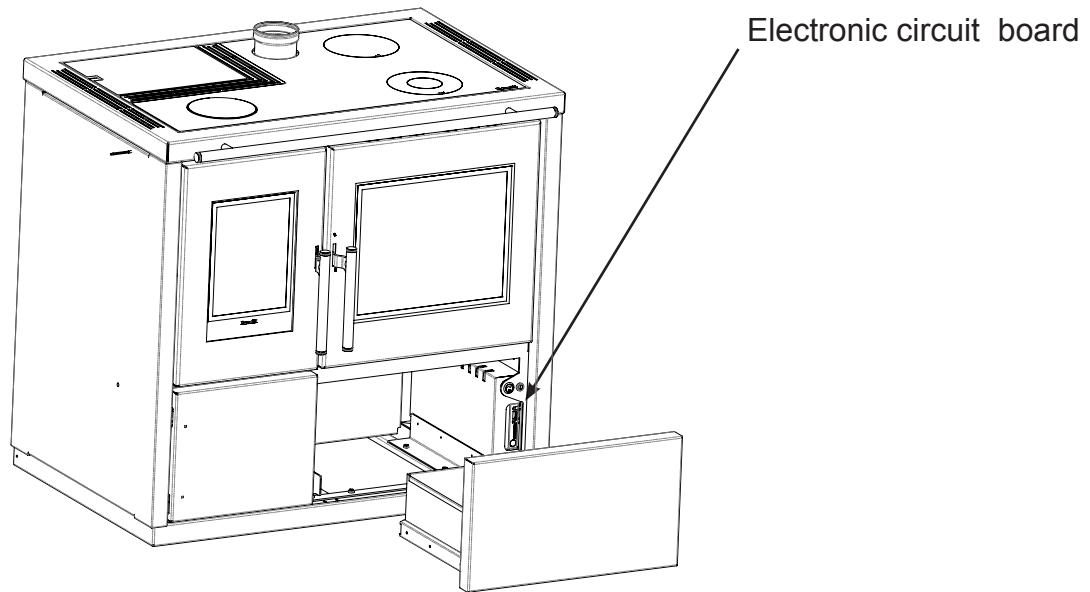


*If the user opens the door or the ash pan during cooker operation, the load of pellets in the brazier is interrupted. Every 5 seconds, a sound signal followed by the appearance of a warning on the screen of your handheld (to the left) warns the user; to resume the regular operation, the doors must be closed. If the safety devices are not restored within one minute, the cooker goes in alarm condition (Alarm 07). In this case, reset the alarm and switch on the cooker again.*

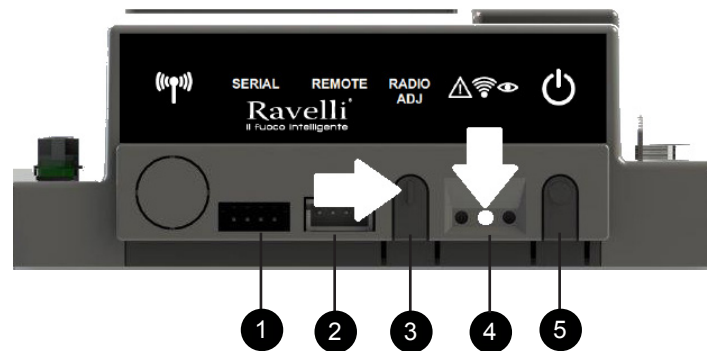


**Description of controls of the electronic board:**

To access the electronic board open the storage box.



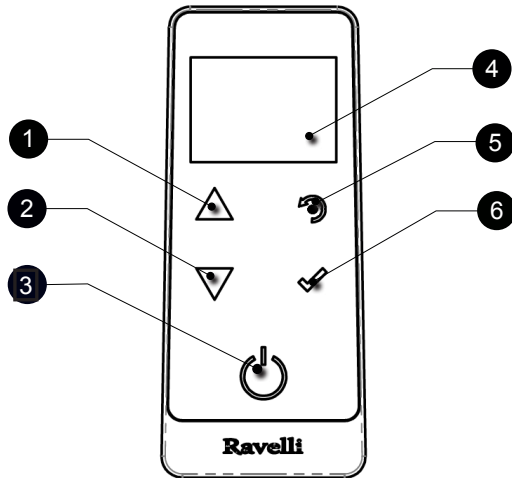
The interface of the electronic board is shown in figure



- 1 Serial port
- 2 Handheld cable connection socket
- 3 ADJ radio: button to connect your handheld to the board
- 4 Signalling LED
  - Red: active alarm
  - Yellow: Waiting communication with the handheld set
  - Green: Cooker switched on
- 5 Cooker ON/OFF key

**Description of the handheld set:**

The handheld set is shown in the picture below:



- 1 Increase button "UP" (selection key)
- 2 Decrease key "DOWN" (selection key)
- 3 ON/OFF button, restore from Sleep mode and reset alarms
- 4 Display
- 5 Key for accessing the MENU and back
- 6 Confirmation key



After a few moments in which the handheld is not in use, the screen backlight turns off. The first pressure of any key with the display active, lights up its backlight, but it is not, however, considered a control.

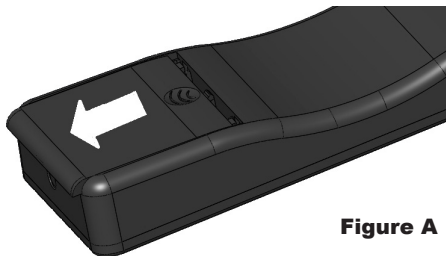


After a further period of inactivity, the display goes in "Sleep" mode, the handheld set screen is obscured to reduce battery consumption, keeping however active the radio communication with the stove. By pressing the key ON/OFF, the display becomes active again.

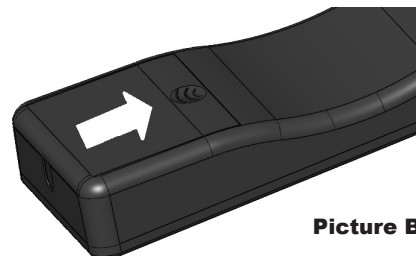
The handheld also acts as a room sensor.

**How to insert the batteries in the handheld set:**

Remove the protective cover of the battery on the back of the remote control as shown in Figure A, and insert the 3 batteries (mini batteries AAA 1.5V) in the housing of the handheld set and observe the poles. Fit the battery compartment lid as shown in figure B



**Figure A**

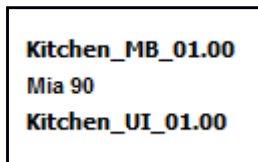


**Picture B**

In case of low battery level, you can also connect your handheld to the electronic board of the cooker using the special cable supplied. To connect the cable, open the battery cover, remove the battery and connect the plug of the cable into the socket.

**Handheld touch radio initialization**

After inserting the batteries or connecting the handheld unit to the electronic board of the cooker, the display will show a short screen indicating the logo Ravelli, the screen with firmware version and the database and, finally, the screen for selecting the menu language.



Select the desired language using the scroll keys and confirm your selection with the confirmation button.

In order to operate correctly, the handheld set should be interfaced with the electronic board installed inside the cooker. For this reason, on display appears the following message:





If the handheld set is used for the first time, select **YES** using the selection keys and confirm with the dedicated key.

On the display of the handheld set appears the following:



Hold down for a few seconds the button of radio communication (RADIO ADJ) of the PCB to initialize the device. The flashing yellow LED indicates that the circuit board is waiting to receive the signal from the handheld set.

By pressing the enter key on the handheld set, the components start communicating with each other. A check sign on the display, accompanied by a sound signal, shows that the initialization of the handheld set has been completed successfully.



When you replace the batteries, you do not have to run the initialization procedure of the handheld set. In this case, when on display appears the message "FIRST INSTALLATION ?", select **NO** and press the confirmation key.

**First pellet load**

Before switching on the cooker for the first time, every time the cooker is in alarm "06- No pellets", and in any case whenever the hopper is completely empty, you must proceed with the initial load of the auger. This phase serves to fill the pellet loading system so that when you turn on your system, it will be ready to load the pellets in the brazier. To do this refer to the dedicated section.

**Operating mode**

The pellet cooker is designed to operate in two different modes: heating mode or cooking mode.

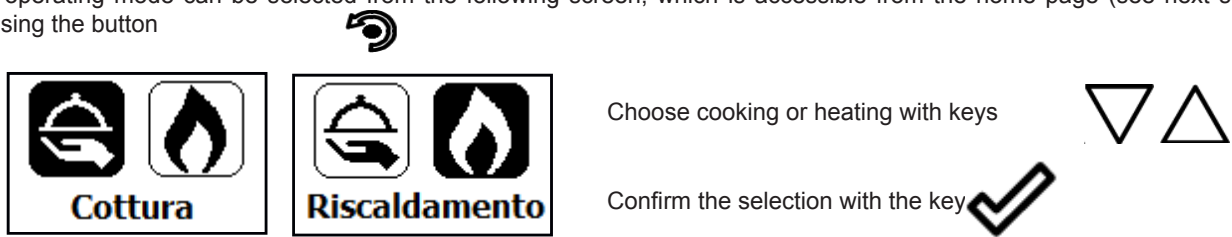
In **heating** mode the cooker works as a normal pellet stove whose function is to heat the surrounding environment. In this way, you can choose the operating power and the desired room temperature.

In this mode you can also use the cooker top as a cooktop. For fast cooking of foods it is recommended that you set the maximum power and place the pot on the oven in cast iron placed above the combustion chamber.

In **cooking** mode, the cooker is designed to cook meals in its oven.

In this mode, the control system adjusts the combustion power to bring the oven to the desired temperature and maintain it. You can also activate the electric grill either with the cooker on or off. The latter function is convenient to use the oven as a food warmer even in hot weather.

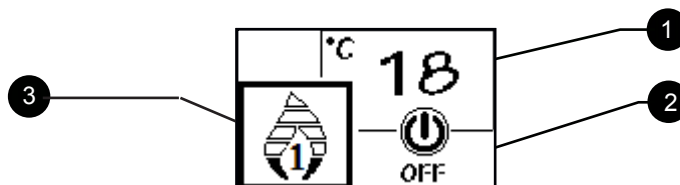
The operating mode can be selected from the following screen, which is accessible from the home page (see next sections) by pressing the button



**Description of the display**

The main screen of the display differs depending on the operating mode of the cooker.

In **HEATING MODE** the home page looks like below.

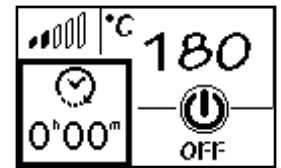
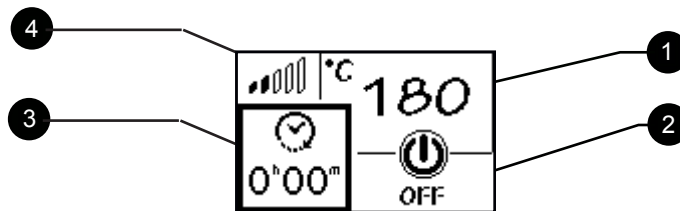


The display is subdivided into three parts:

- 1 It shows the current room temperature measured by the handheld set. In addition, by pressing the DOWN scroll button, you can display the temperature settings, that can be edited using the two scroll keys UP/DOWN. Any change made is confirmed automatically within 3 seconds from the change or by pressing the confirmation key. A sound signal indicates that the change has been confirmed.

- 2 View the operating power of the cooker.  
In addition, by pressing the DOWN scroll button, you can display the power settings, that can be edited using the two scroll keys UP/DOWN. The confirmation of any change takes place automatically within 3 seconds from the change or by pressing the confirmation key. A sound signal indicates that the change has been confirmed.
- 3 View the state of the cooker.

In cooking mode the home page looks like below.



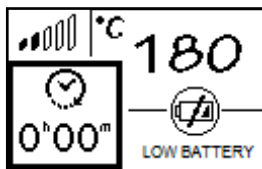
The display is subdivided into four parts:

- 1 View the temperature set of the oven. In addition, by pressing the UP scroll button, you can display the temperature settings, that can be edited using the two scroll keys UP/DOWN. Any change made is confirmed automatically within 3 seconds from the change or by pressing the confirmation key. A sound signal indicates that the change has been confirmed.
- 2 View the state of the cooker.
- 3 View the cooking timer. If cooking has not yet started, it shows the timer set. If cooking began, it shows the remaining heating time. In addition, by pressing the DOWN scroll button, you can display the timer settings, that can be edited using the two scroll keys UP/DOWN. Any change made is confirmed automatically within 3 seconds from the change or by pressing the confirmation key. A sound signal indicates that the change has been confirmed.
- 4 It shows the current temperature of the oven: 1 notch cold oven, 5 notches temperature close to that set.

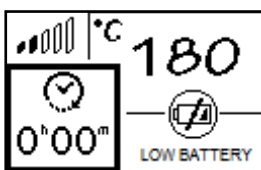
**Please note:**

YOU can set the operating power only in HEATING mode.

**What happens if the batteries are empty?**



If the battery is empty on display appears the symbol that indicates that the battery is empty, while maintaining active the features of your device.



When the battery level does not allow any radio communication, the handheld shows low-battery symbol on full screen, blocking all handheld functions until the batteries are replaced. In this case you can continue to use your handheld by connecting it to the circuit board using the special cable.

**Device switch-on and switch-off**



From the home page, both in HEATING mode and in COOKING mode, you can turn on and/or off the cooker by holding down the ON/OFF button on the handheld set for a few seconds. An acoustic signal warns you that the cooker is on or off. If you cannot use your handheld, you can perform the same action using the appropriate button on the electronic board.

**Sequence of operation phases**

**BRAZIER CLEANING:** before you start loading pellets, the system performs a mechanical cleaning of the brazier to eliminate any residues from combustion of the previous operation. This phase is not performed after initial loading of the auger and after a "failed switch-on".

**IGNITION:** the initial pellet loading phase and waiting phase for the development of flame;

**FLAME PRESENT -** flame stabilization phase and reduction of pellets inside the brazier;

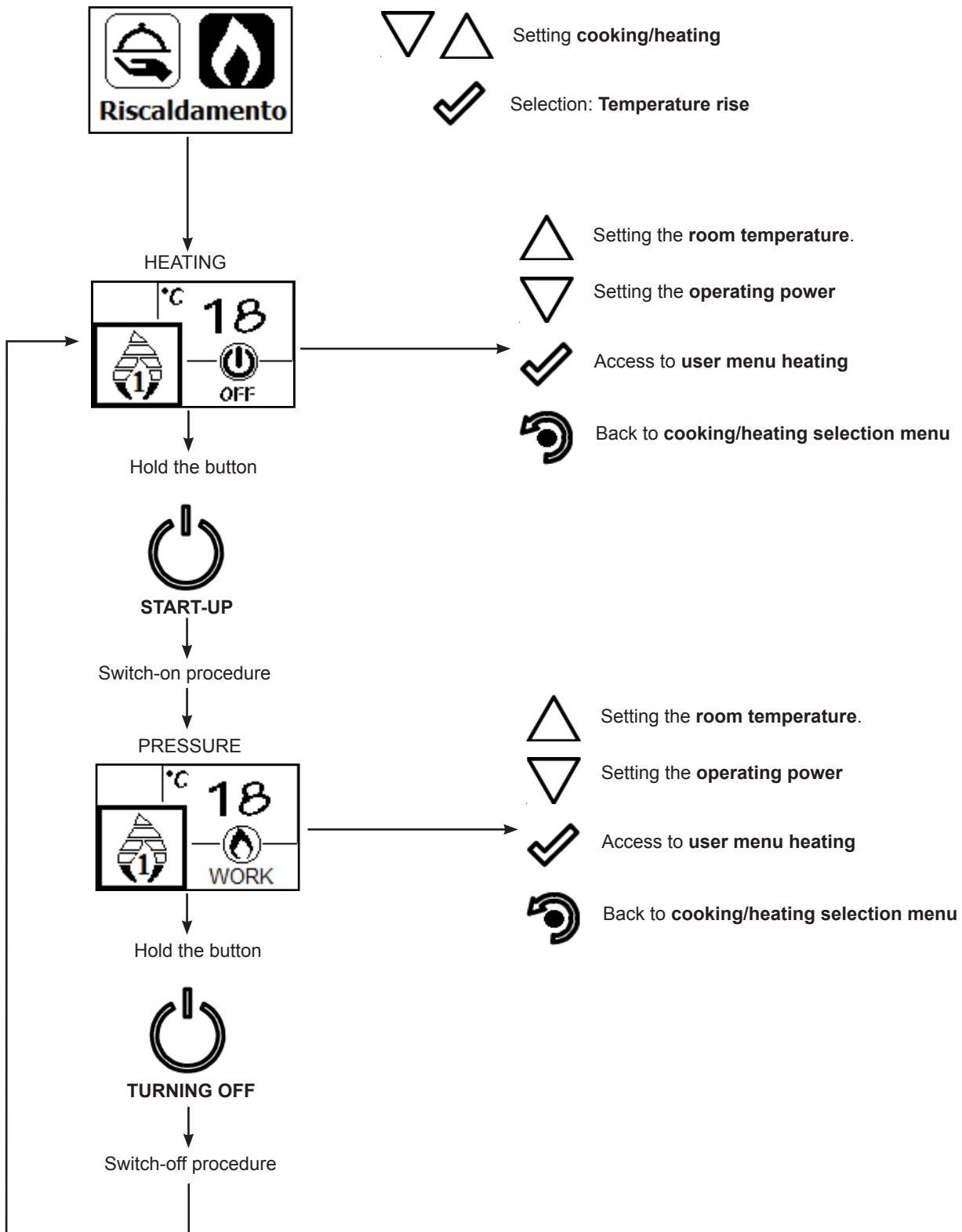
**WORK:** normal operating phase;

**BRAZIER CLEANING:** periodically during operation and for a few seconds, the load of pellets is reduced and the fume Extractor speed is increased, this will detach the residue in the brazier to prevent it from hardening on the walls.

**FINAL CLEANING:** stage where the pellet stops being loaded, the flame goes out quickly and the embers remained are disposed of.

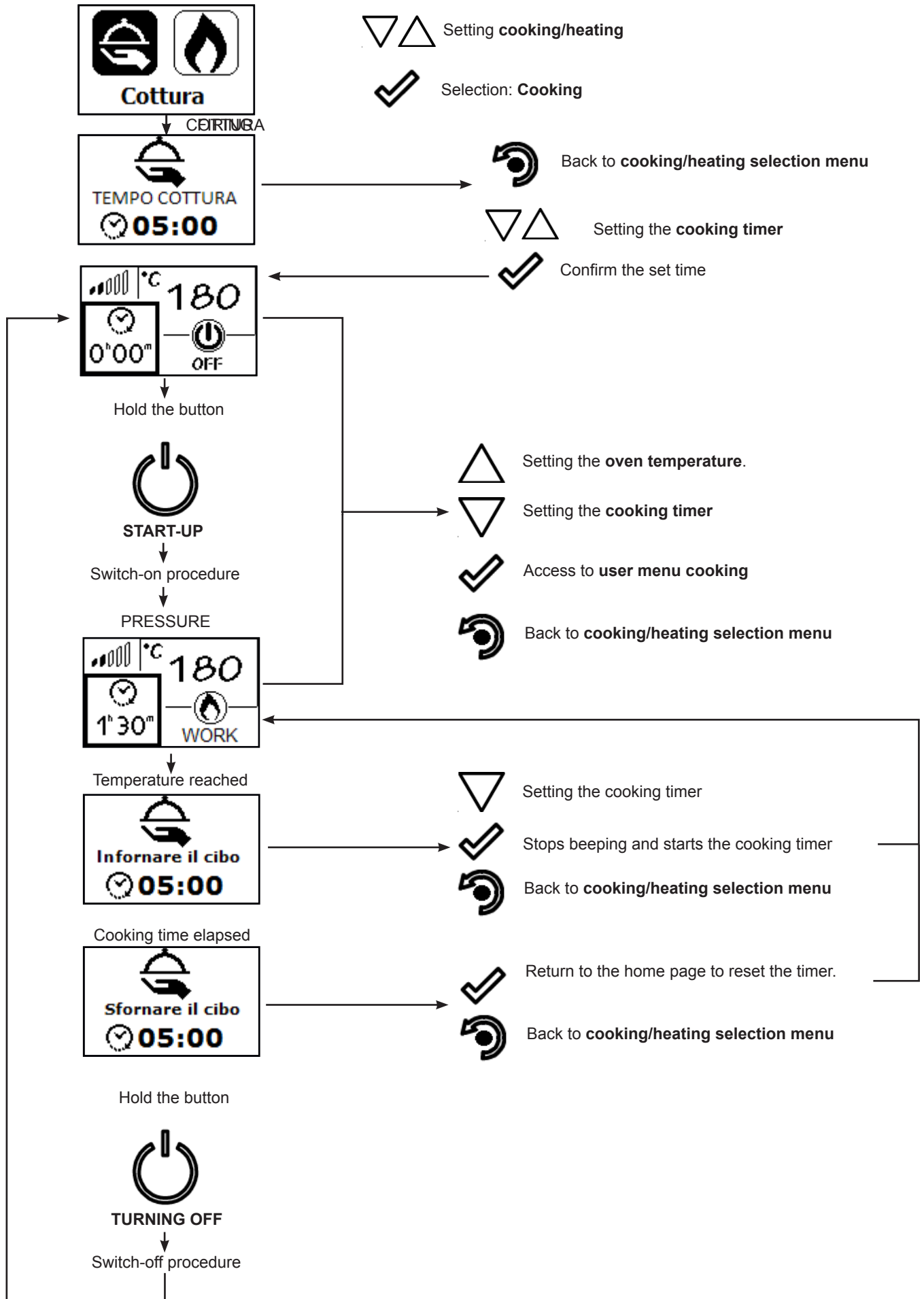
**Heating menu flow chart**

Here is the menu schema in heating mode.



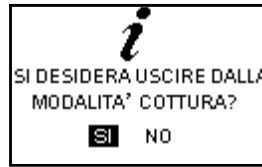
**Cooking menu flow chart**

Here is the operating diagram of the menu in cooking mode.



**Notes on some functions**

- Whenever you select the heating mode from the cooking mode, the following warning appears.



- When you see the warning "Put the food in the oven", a countdown starts, during which the cooker will beep.



Confirms the successful insertion of the food in the oven and starts the cooking timer.

Allows you to change the previously set cooking timer

If by the end of the countdown the user takes no action, the cooking timer turns on automatically.

- When you see the warning "Take the food out of the oven", a countdown starts, during which the cooker will beep and, while waiting for a selection, it will work at minimum power.



Back to home page where you can reset the timer.



Back to **cooking/heating selection menu**



Switch off the cooker

If by the end of the countdown the user takes no action, the cooker turns off.

The cooking end beep stops after turning off of the cooker, while switching from HEATING mode or reset timer mode.

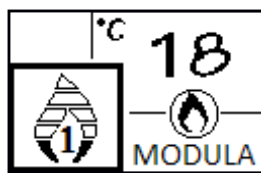
**Brazier cleaning in cooking mode**

When in cooking mode, the cleaning cycle is never performed, except from switch-on phase.

When switching from COOKING to HEATING mode, the system checks whether the maximum cleaning time has been exceeded and, if so, it runs the cleaning cycle, otherwise the cooker will keep on working until that time elapses.

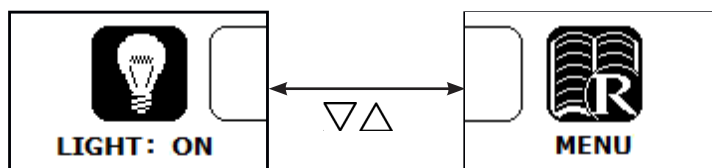
**Modulation**

In Heating mode, when room temperature reaches the set value, the cooker goes into MODULATE stage, where the fuel consumption is minimal.



If you wish to control the cooker's operation by means an external thermostat (optional), this must be connected to the a dedicated connector on the rear side of the cooker; therefore, you will have to enable the function in the special menu "SETTINGS - ENABLE THERMOSTAT." The display will show the word ON t. ext/OFF t. ext depending on the state of the thermostat.

**Heating mode user menu**



Oven light on/off

Settings menu.



Change state

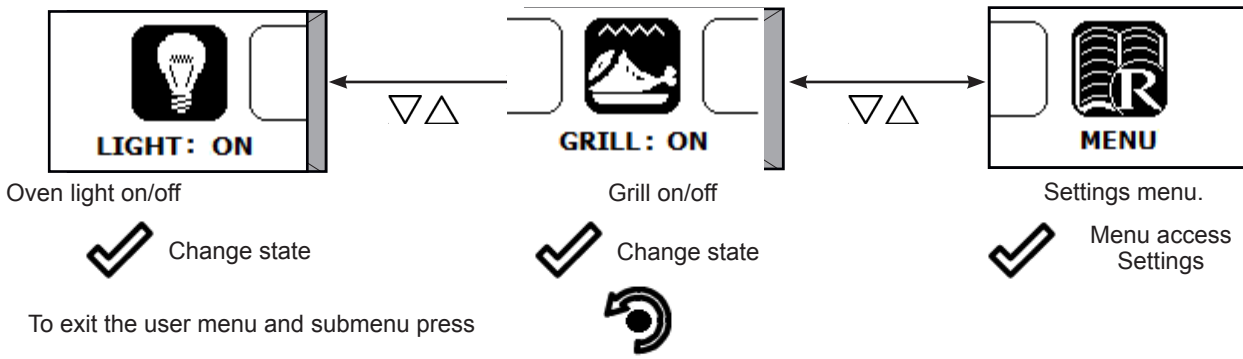


Access to **Settings Menu**

To exit the user menu and submenu press



**Cooking mode user menu**



**Electric grill operation**

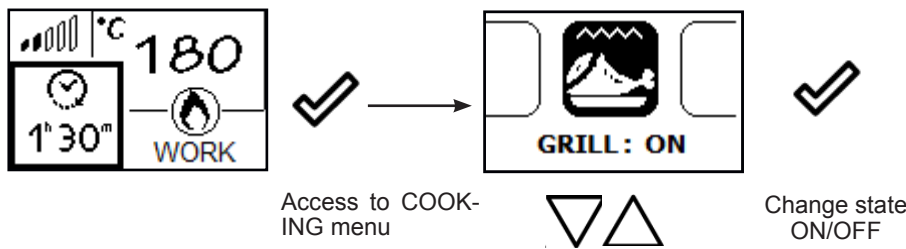
The pellet Cooker oven is equipped with an electric grill.

You can turn on the GRILL for cooking the food either with the pellet cooker in COOKING mode (WINTER mode) or with the cooker off (SUMMER mode).

You cannot turn on the GRILL in the HEATING mode.

**Grill with the cooker on**

When the cooker is on the COOKING mode, the switching on and the control of the GRILL is done manually. It remains on until you turn it off manually.



The system adjusts the combustion power to keep the oven temperature to the set value, while there is no control on the operation of the grill. At this stage the temperature might rise above the set value.

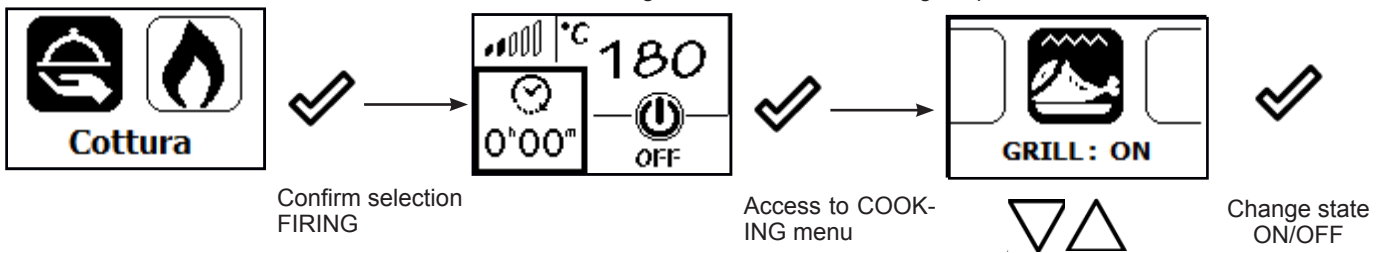
After cooking, the GRILL turns off immediately, while the cooker switches to minimum power, waiting for the user's selection.

**Grill with the cooker off**

This function allows you to use the oven as a food warmer with the cooker off.

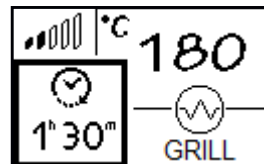
In this mode, the grill is controlled by the system to keep the oven temperature to the set value.

In COOKING mode, from OFF state, enter the User's cooking menu item, move to the grill option and turn on the GRILL.



The system requires that you set the timer.

The home page shows the symbol indicating that the grill is on.



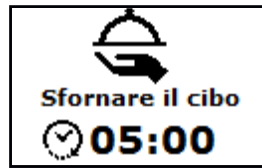
When the oven reaches the set temperature, the display shows the following message.





To confirm the successful insertion of the food in the oven and start the timer, press



Cooking timer expired, the grill will switch off automatically and the following message will appear.





Pressing the button  the display will show the home page.

Pressing the button  the display shows cooking/heating selection page.

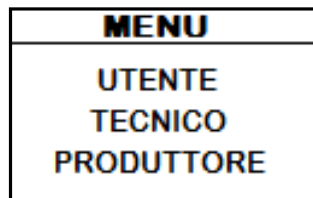


**Settings menu.**

Below are the functions available in the settings menu, accessible in both COOKING mode and HEATING mode, by pressing  and by selecting the appropriate  option.

**Description of menu functions**

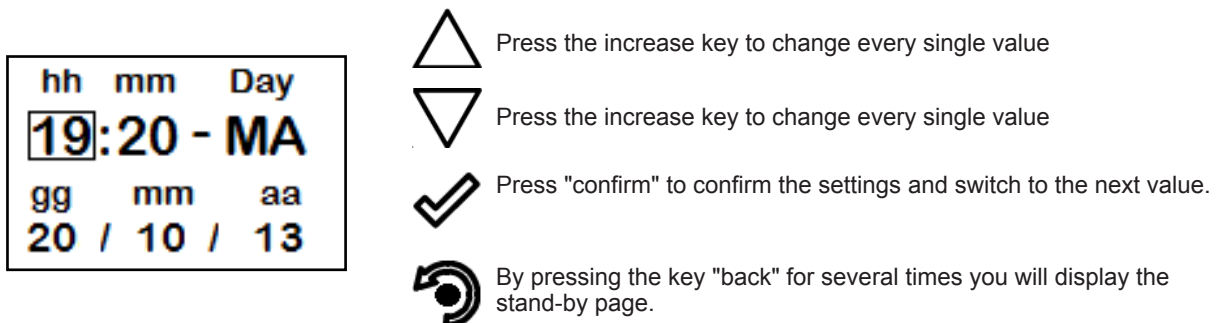
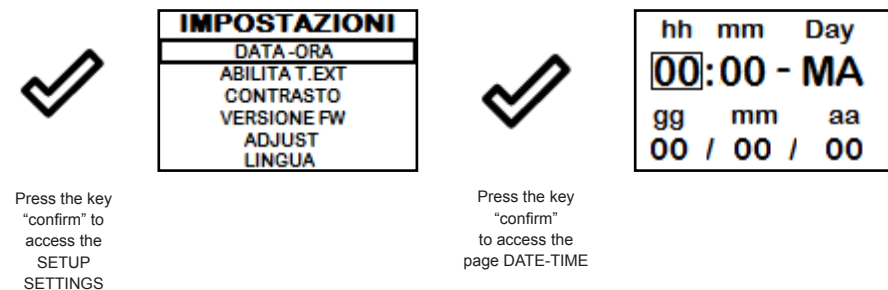
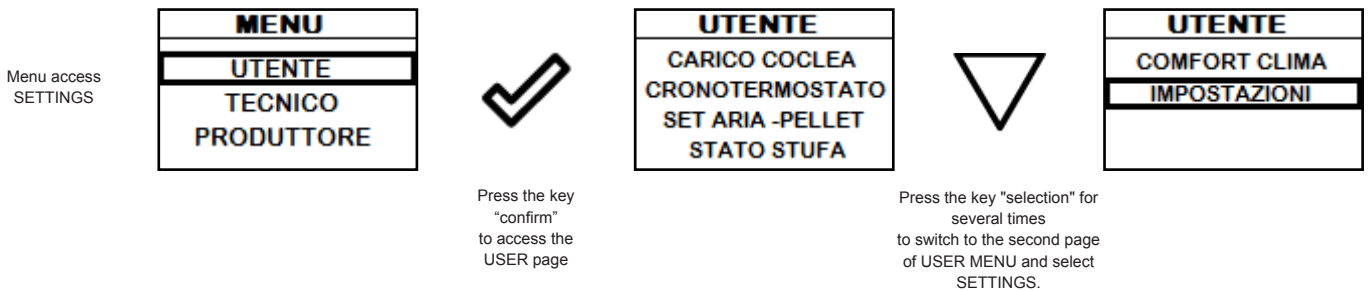
The first screen of the settings menu appears as shown in the diagram. You can only access the USER menu. *The TECHNICIAN and MANUFACTURER menus are protected by password.*



Access to *TECHNICIAN* and *MANUFACTURER* menu is reserved exclusively to qualified technician authorized by Ravelli. Changing parameters contained within these menus could compromise the functionality and safety and makes the warranty void.

**Time and date setting**

Below are given the steps for accessing the relative menu.



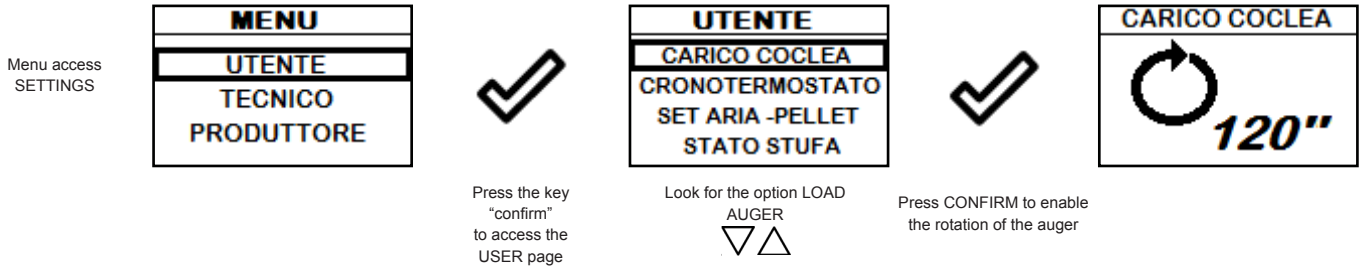


**Loading the auger**



Carry out this operation to facilitate cooker's first start operations; you should also check that you have introduced pellets into the hopper and wait until the cooker is in "SHUTDOWN" or "FINAL CLEANING" mode. The number expressed in seconds indicates the remaining time of the first loading cycle. Once this time has elapsed, the auger stops automatically and then you can switch on the appliance.

Below are given the steps for accessing the relative menu.



At the end of the auger loading, the display shows 0 "and automatically switches to the USER menu page.



Press the key for several times until the Stand-by page is displayed.

**! THE PRESET TIME OF INITIAL LOAD ALSO INCLUDES SUFFICIENT PELLETS TO CARRY OUT THE FIRST IGNITION. AFTER THE INITIAL LOAD NO BRAZIER CLEANING WILL PRECEDE THE IGNITION PHASE.**

**Comfort climate**

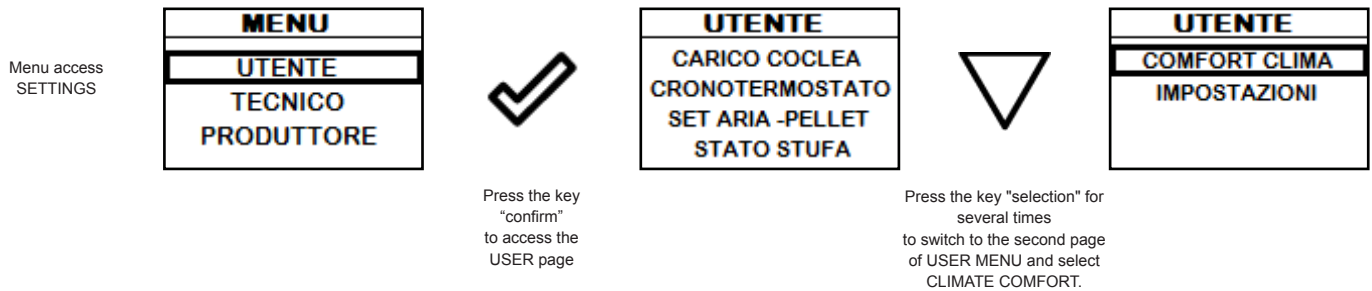


CLIMATE COMFORT function is only active in HEATING mode.

The activation of this function enables the cooker to reduce pellet consumption by activating the modulation phases, after the desired room temperature has been reached. Subsequently, the cooker checks if the temperature is steady for a set time and if this condition is met, it automatically switches off and on display appears the word ECO.

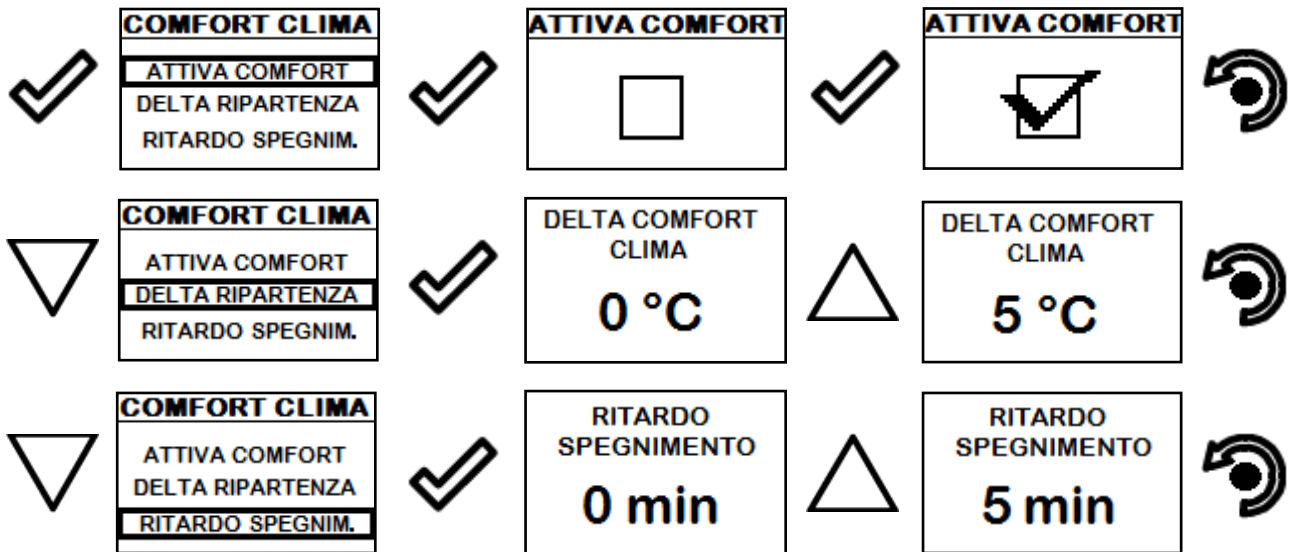
The cooker turns on again when the temperature drops below the set threshold (CLIMATE COMFORT DELTA).


Below are given the steps for accessing the relative menu.



**! THE EXTERNAL THERMOSTAT MUST NOT HAVE VOLTAGE ON THE CONTACTS: MUST BE AN OPEN/CLOSE CONTACT. WE RECOMMEND YOU USE A THERMOSTAT WITH A MINIMUM OFFSET OF 3°C IF YOU INTEND TO USE THE COMFORT CLIMA FUNCTION.**

Once you have accessed the Climate Comfort menu, it is possible to operate on the 3 types of settings dedicated to the function:



 Press the key for several times until the Stand-by page is displayed.

The first setting allows the activation of the CLIMATE COMFORT function. This function is intended to ensure that the room temperature set is maintained steady upon setting the maximum period of "X" minutes (SWITCH-OFF DELAY: before switching to ECO STOP phase. The cooker remains in this state until the temperature drops below the set value (CLIMATE COMFORT DELTA) : 5°C). For example, set room temperature Delta 21°C climate comfort 5°C Delta, 5 min of delay. When the room temperature reaches 21°C, the cooker maintains the temperature for 5 minutes; If the temperature does not drop, it goes off. It will restart when it detects a temperature of 15°C (21°C-5°C -0.5°C tolerance). You can also activate the function using an external thermostat, keeping in mind that this does not include the value of the hysteresis.



*We recommend you use an external thermostat with a histeresys value that can be set to maximum 3°C. Incorrect choice of setting of the external thermostat may activate the switch ON/OFF phases for several times during the day; this may affect the service life of the ignition coil.*

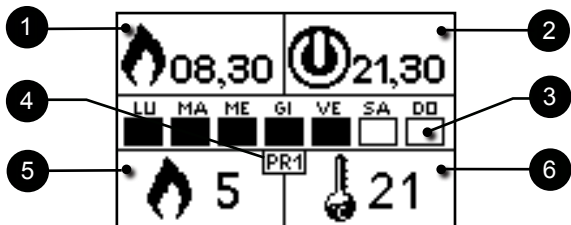
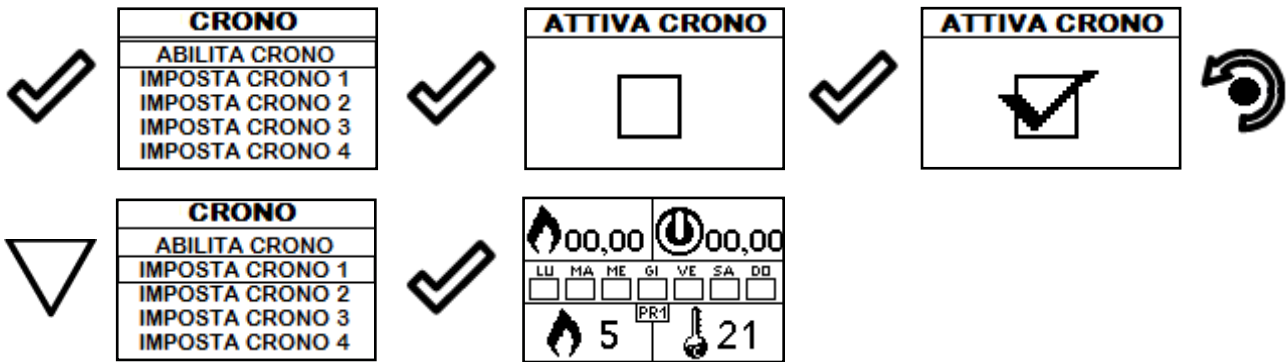
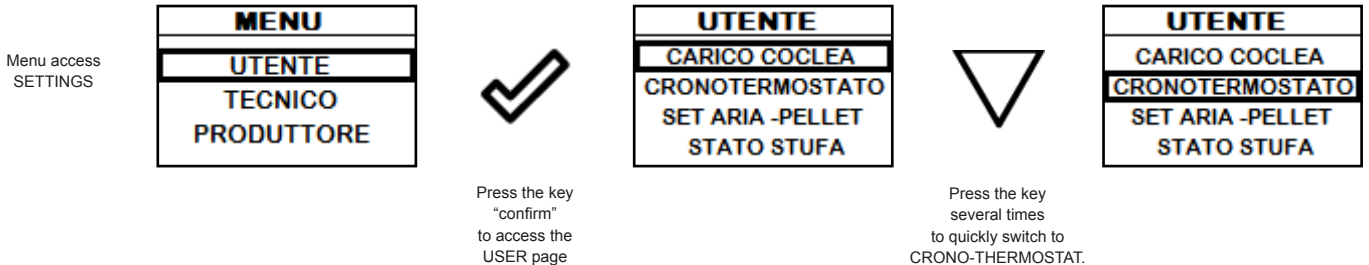
**Chronothermostat**



The PROGRAMMABLE THERMOSTAT function is only active in HEATING mode.

With the Programmable thermostat function, you can set the cooker to switch on and off automatically within four independent time intervals (SET CRONO 1-2-3-4).

Below are given the steps for accessing the relative menu starting from Stand-By mode.



- 1 Set switch-on program
- 2 Set switch-off program
- 3 Day of the week with active program
- 4 Number of "crono" program (1-2-3-4)
- 5 Setting the power upon programming
- 6 Setting ambient temperature

By pressing the Increment key you can change each value and, at step 3, enable the days of the week;

By pressing the Decrement key you can change each value and, at step 3, enable the days of the week;

Press "confirm" to confirm the settings and switch to the next value;

Press the "back" button to return to the CHRONO-THERMOSTAT page.

As per the above example, it has been set as CRONO 1 the switch-on at 08:30 and switch-off at 21.30 from MONDAY to FRIDAY at operating power 5 with room temperature set to 21°C. Follow the same steps to set the programs 2-3-4.

To exit the CHRONO-THERMOSTAT function and return to Stand-by page, press the button repeatedly.



With the cooker off, the switch-on control set by the programmable thermostat remain active even in Cooking mode; in this case, the heating mode is enabled automatically.

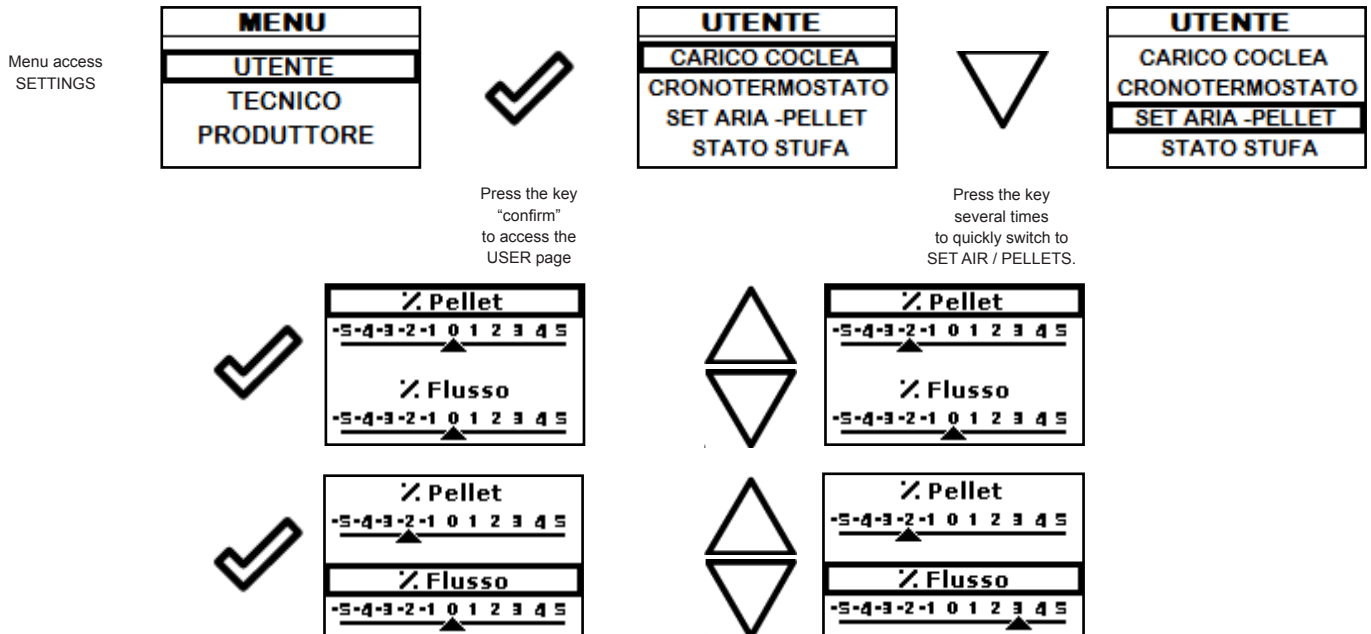
With the cooker switched on, in COOKING mode, or off, only with the grill switched on, the ON/OFF controls set by the programmable thermostat are not taken into account.

### AIR / PELLETS setting

By setting of the PELLELET-FLOW mix you can immediately change the quantity of pellet loaded in the brazier and the air inflow so as to adapt to all types of pellets. In fact, the pellet, by its nature, is variable in grain size and composition: even pellets of the same brand may have different values. We recommend, however, to use pellets certified EN PLUS A1, which is the type of pellets used by Ravelli for fine-tuning and testing.

Usually, the variation must be done on the FLOW percentage to adjust the input air and, therefore, the combustion; should the regulation of flow be insufficient, it may be necessary to also change the percentage of PELLELET load.

Below are given the steps for accessing the relative menu starting from Stand-By mode.



As per the above example, you have set a percentage of -2 for PELLETS and +3 for the FLOW, an indication that a setting like this is a consequence of the fact that the oxygen needed for combustion is insufficient and pellet size is smaller than the average size of 2 cm.



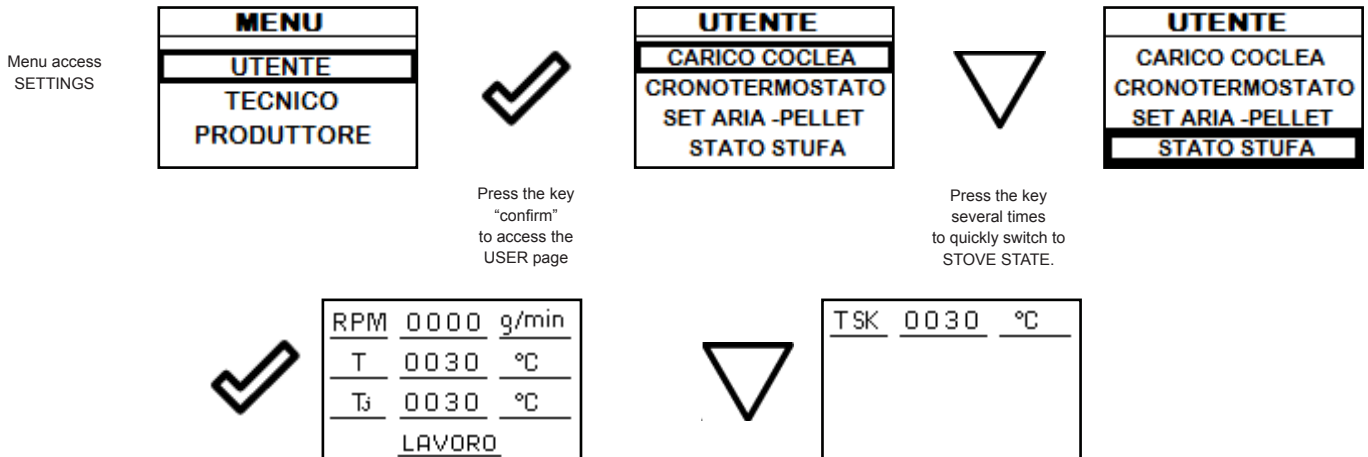
To exit the SET AIR - PELLELET function and return to Stand-by page, press the button for several times.



*Note : The number indicated during the change of parameters refers only to a percentage value that acts on the default parameters set on the electronic board (exclusively in the WORK phase). These values should be changed in the event of poor combustion, due in many cases to the purchase of pellets differing from those used during cooker testing.*

**Stove State**

Below are given the steps for accessing the relative menu from the home page.



Here is the data shown in the STOVE STATE section.

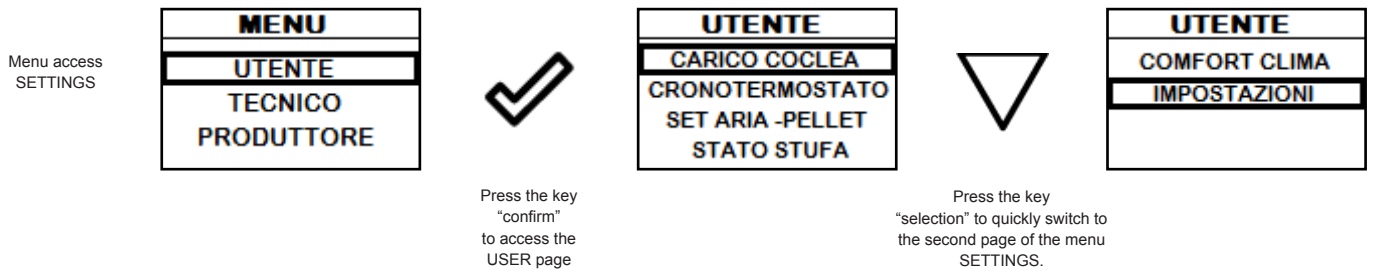
- RPM: fume extractor operating speed;
- T: temperature of the combustion chamber;
- Tj: oven temperature, visible only in HEATING mode (in COOKING mode it is directly visible on the home page);
- T SK: electronic board temperature;
- State of the cooker (WORK, FINAL CLEANING, OFF, etc.).



To exit the STOVE STATE page and return to the home page, press the button repeatedly.

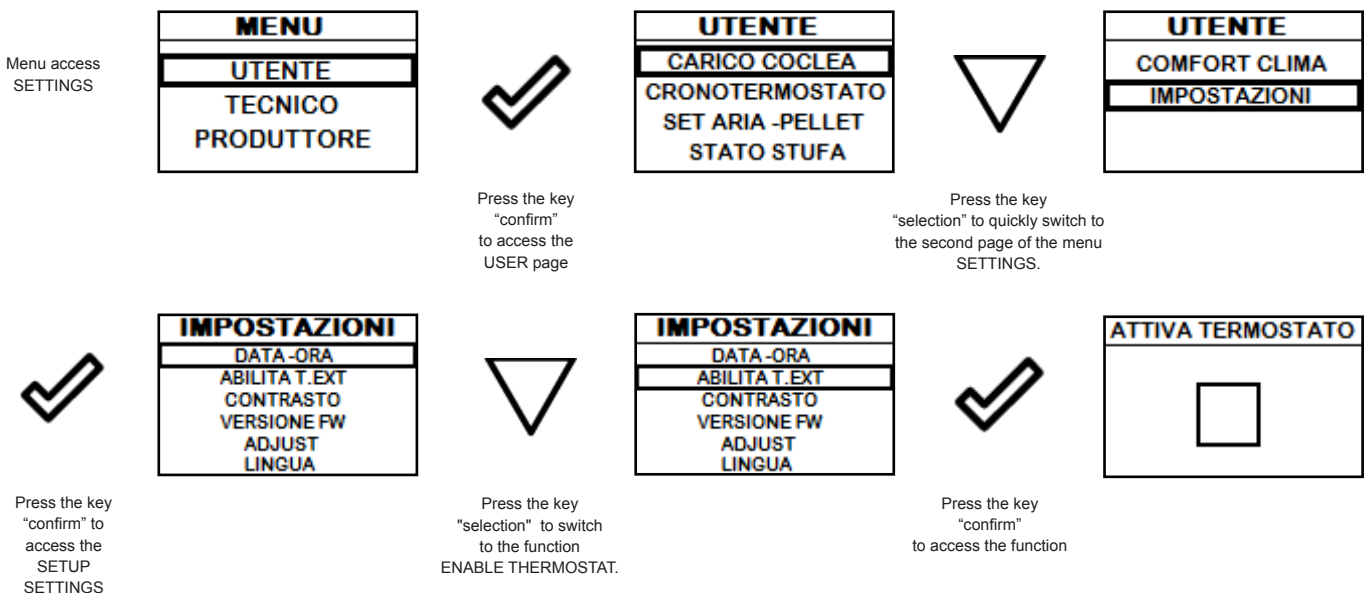
**Settings**

Below are given the steps for accessing the relative menu starting from Stand-By mode.



**Settings > Enable thermostat**

Below are given the steps for accessing the relative menu starting from Stand-By mode.





Press the key "confirm" to enable the function.



By repeatedly pressing the key ou will go back to the "STAND BY" page

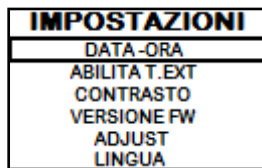
On the home page, instead of the room temperature detected and settable, the message **OFF t. ext** appears if the room where the thermostat is installed has not yet reached the required temperature, or the message **ON t.ext** if the room temperature is reached.

After following the procedure above step by step, you can set the following functions:

### Settings > Contrast



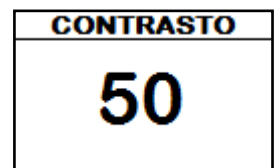
Press the key "confirm" to access the SETUP SETTINGS



Press the key "selection" to switch to the function CONTRAST.



Press the key "confirm" to access the function



Use the UP/DOWN keys to change contrast setting and obtain a better visualisation of the information shwon on the handheld set. The value can vary from 0 to 100. 50 with respect to the standard value.

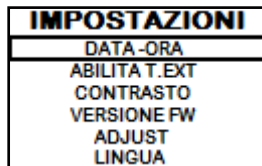


By pressing the following button you will confirm the data and switch to the page within the SETTINGS menu.

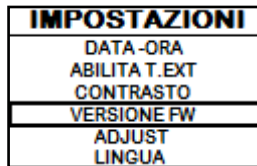
### Settings > Firmware version



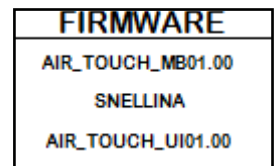
Press the key "confirm" to access the SETUP SETTINGS



Press the key "selection" to switch to the function CONTRAST.



Press the key "confirm" to access the function

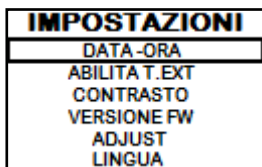


By pressing the following button you will confirm the data and switch to the page within the SETTINGS menu.

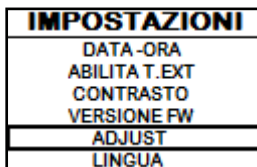
### Settings > Adjust



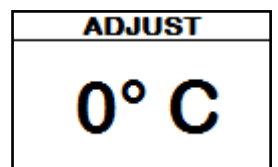
Press the key "confirm" to access the SETUP SETTINGS



Press the key "selection" to switch to the function VERSION FW.



Press the key "confirm" to access the function



Use the UP/DOWN keys to change the value read by the room temperature probe installed inside the handheld set, with respect to a reference value. The value can vary from -10°C to 10°C. The standard value is 0°C.



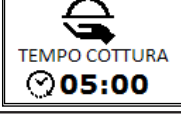
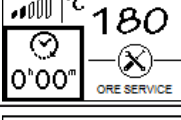
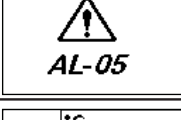

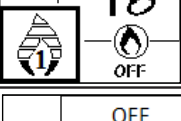
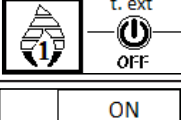
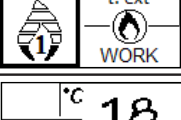
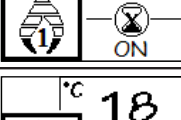
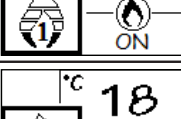
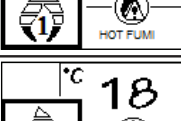




By pressing the following button you will confirm the data and switch to the page within the SETTINGS menu.

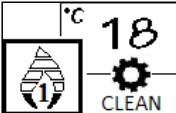
### Settings > Language

To access the next setting, follow the steps given above or simply remove and replace the batteries. The device resets and prompts you again to select the language you want to set.

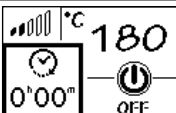
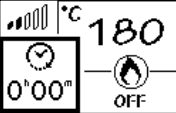
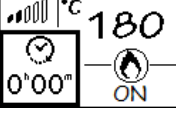
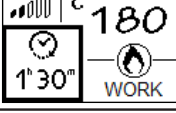

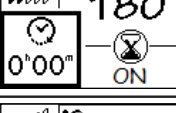
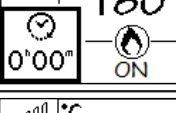
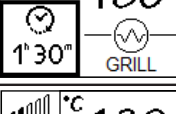

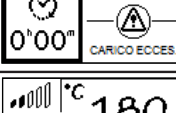
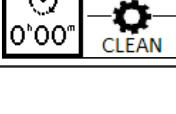
**Synthetic scheme of cooker stages in HEATING mode**

	PHASE	DESCRIPTION
	<b>OFF</b>	The cooker is off
	<b>START-UP</b>	the coil pre-heating phase has started and the pellets start to fall into the brazier. The pellets ignite and take advantage of the heat in the intake air that passes through the incandescent coil tube
	<b>PRESSURE</b>	The cooker has completed the switching-on phase and works at the set capacity.
	<b>WORK MODULA</b>	The desired room temperature is reached.
	<b>THE GRATE</b>	THE periodic cleaning of the brazier is in progress (it does not turn off the cooker).
	<b>ECO STOP</b>	With Climate Comfort active, the cooker switches to automatic switch-off mode when the room temperature set is reached (see the dedicated section).
	<b>FINAL CLEANING</b>	The cooker is in the switch-off phase and the cooling phase has not been completed yet.
	<b>EXTERNAL THERMOSTAT CONNECTED: OFF state</b>	The external thermostat requests the switching-off of the cooker, if the latter is on, or keeps it off.
	<b>EXTERNAL THERMOSTAT CONNECTED: OFF state</b>	The external thermostat requests the switch-on of the cooker, if the latter is off, or keeps it running, if already on.
	<b>START/RESTART WAIT</b>	Cooker switch-on is requested but with the cooker in cooling phase; once this condition is met, it restarts automatically.
	<b>SWITCH ON RESTART</b>	The HOT restart phase is activated. Functioning is similar to the SWITCH ON phase
	<b>HOT SMOKE</b>	The maximum fume temperature threshold has been reached. To facilitate cooling, the cooker brings the power to a minimum with ventilation at power level 5, leading to a decrease in in fume temperature.
	<b>WAIT FOR PELLETS TO FINISH</b>	When the switch-on request from ECO-STOP mode coincides with an automatic switch-off condition (from TIMER), the cooker turns on ensuring total cleaning of the brazier before switching to FINAL CLEANING.
	<b>INFEEED SCREW EXCESSIVE</b>	CONDITION: pellet setting (set pellets +5) is near the continuous load condition. SOLUTION: Set the value back to 0.



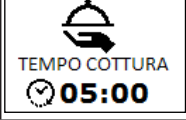
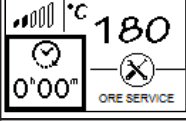
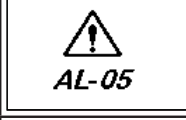
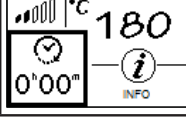



	PHASE	DESCRIPTION
	<b>AUTOMATIC CLEANING SYSTEM ACTIVE</b>	mechanical cleaning of the brazier is in progress (before switch-on or after the preset operating time).

**Synthetic scheme of cooker stages in COOKING mode**

	PHASE	DESCRIPTION
	<b>OFF</b>	The cooker is off
	<b>FINAL CLEANING</b>	The cooker is in the switch-off phase and the cooling phase has not been completed yet.
	<b>START-UP</b>	the coil pre-heating phase has started and the pellets start to fall into the brazier. The pellets ignite and take advantage of the heat in the intake air that passes through the incandescent coil tube
	<b>PRESSURE</b>	The cooker has completed the switching-on phase and works at the set capacity.
	<b>THE GRATE</b>	THE periodic cleaning of the brazier is in progress (it does not turn off the cooker).
	<b>START/RESTART WAIT</b>	Switch-on is requested but with the cooker in cooling phase; once this condition is met, it restarts automatically.
	<b>SWITCH ON RESTART</b>	THE hot restart phase is activated. Functioning is similar to the SWITCH ON phase.
	<b>ACTIVE GRILL</b>	THE grill was activated with the cooker off.
	<b>HOT SMOKE</b>	THE maximum fume temperature threshold has been reached. To facilitate cooling, the cooker switches to minimum with ventilation at power level 5, leading to a decrease in fume temperature.
	<b>INFEEED SCREW EXCESSIVE</b>	CONDITION: pellet setting (set pellets +5) is near the continuous load condition. SOLUTION: Set the value back to 0.
	<b>AUTOMATIC CLEANING SYSTEM ACTIVE</b>	THE mechanical cleaning of the brazier is in progress (in cooking mode only before switching).

**Warning Pop-Up**

	REQUEST	DESCRIPTION
	<b>PUT THE FOOD IN THE OVEN</b>	The oven has reached the set temperature, and you can start cooking.
	<b>TAKE THE FOOD OUT OF THE OVEN</b>	The cooking timer is complete and you can take the food out.
	<b>COOKING TIME</b>	you must set the cooking time.
	<b>SERVICE REQUEST</b>	The threshold value of set work hours has been reached. The symbol displayed remains active throughout the work phase. Non-routine maintenance is required on the cooker.
	<b>ALARM</b>	The cooker is in alarm state; refer to the troubleshooting chapter.
	<b>ANOMALY (general)</b>	The cooker reported a problem (e.g: doors open). Press  to display the message;

**Alarms (table with reference codes)**

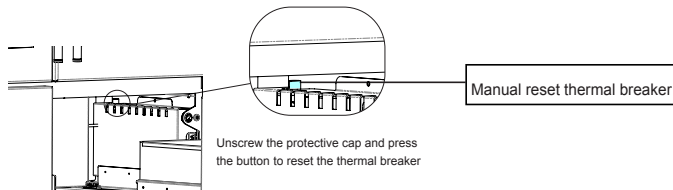
CODE	TITLE	REASON	SOLUTION
AL 01	BLACK OUT	- No voltage during work phase	- Press the switch off key and switch on cooker switch-on
			- If the problem persists, contact the Support Service.
AL 02	FLAME TEMPERATURE PROBE FAULTY	- The flame probe is malfunctioning	- Contact the Support Service
		- The fume probe is disconnected from the electronic board	- Contact the Support Service
AL 03	FLAME OVERTEMPERATURE	-The temperature of the flame is too high	- Contact the Support Service
AL 04	FUME EXHAUST DAMAGED	- Fume extractor encoder is not working or is connected incorrectly	- Contact the Support Service
		- No power to fume extractor.	- Contact the Support Service
		- The fume extractor is blocked	- Contact the Support Service
AL 05	NO SWITCH-ON	- The pellet hopper is empty.	- Check for the presence of pellets in the container. Top up, if necessary.
		- Pellet calibration and suction during ignition phase is incorrect.	- Contact the Support Service
		- The ignition coil is faulty or positioned incorrectly	- Contact the Support Service
AL 06	PELLETS FINISHED	- The pellet hopper is empty.	- Check for the presence of pellets in the container. Top up, if necessary
		- The gear motor is not loading pellets	- Empty the tank to see if there are any objects inside that may prevent the proper operation of the auger. of the auger.
		- Not enough pellets loaded	- Regulate pellets setting from "SET AIR/PELLETS"
			- If the problem persists, contact the Support Service
AL 07	RESET CIRCUIT BREAKER / DOOR OR ASH PAN OPEN	- The manual reset thermostat connected to the hopper was triggered (RESET CIRCUIT BREAKER) / Door, ash pan or pellet door open	- Reset the thermostat by pressing the appropriate button or close the doors.
		- Combustion in the brazier is not optimal due to clogging or obstructions of internal stove ducts inside of the cooker. (RESET CIRCUIT BREAKER)	- Switch off the cooker, clean the brazier, operate tube bundle and adjust the combustion setting the Pellet/Air values
			- Contact the Support Service
AL 08	DEPRESSURIZATION	- The flue is blocked.	- Check the flue is free and clean.
		- The vacuum meter is faulty.	- Contact the Support Service
AL 12	FUME EXHAUST SYSTEM FAILURE	- The fume exhaust system has a loss of performance due to fan obstruction or voltage drop.	- Contact the Support Service
AL 14	SCREW PHASE	- No cable connection to power the gear motor of the auger	- Contact the Support Service
AL 15	SCREW TRIAC	- An internal part of the electronic board that controls the pellet infeed screw is faulty. pellet	- Contact the Support Service
		- Possible voltage drops or incorrect input voltage cooker input	- Check the mains voltage.
AL 19	CLEANER FAILURE	- The cleaner did not complete the movement and is not in the correct position or the fire door is not closed properly.	-Check if the door is closed properly and Reset the alarm and wait until the cooker goes to the state OFF. Cut power off and then power on, the system reactivates the cleaner trying to search the correct position again.
			- If the problem persists, contact the Support Service Technical



EACH ALARM CAUSES THE IMMEDIATE SWITCHING OFF OF THE STOVE. PRESS THE SWITCH-ON BUTTON TO RESET THE ALARM. BEFORE SWITCHING ON THE STOVE, MAKE SURE THE CONDITION THAT CAUSED THE ALARM HAS BEEN RESOLVED.



In the case of alarm 07 THERMAL BREAKER below shows the location where to operate to reset the thermal switch with manual reset.



The reset thermostat reset button is located on the right side of the lower compartment. If you open the storage box you can access the key by unscrewing the protective cap.

### Cleaning should be provided by the user

Before any cleaning operation on the stove, implement the following precautions:

- switch off the stove and from OFF state, disconnect the power cord;
- make sure all the parts of the stove are cold;
- make sure the ash is completely cooled.

To clean the surfaces of the coated metal parts, use a cloth soaked in water or water and soap. Attention! Use of abrasive detergents or diluents can damage the surface of the stove.



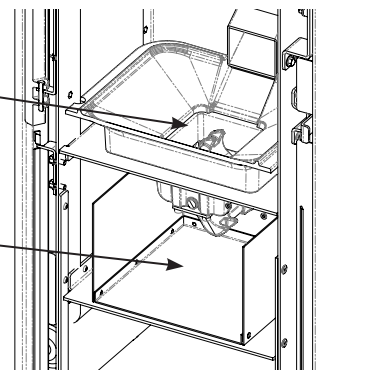
PLEASE READ CAREFULLY THE FOLLOWING INSTRUCTIONS TO PERFORM PROPER CLEANING. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY LEAD TO MALFUNCTIONS OF THE STOVE.

### AUTOMATIC CLEANING SYSTEM

The main feature of this cooker model is the automatic cleaning of the brazier, where combustion takes place. Therefore, it is no longer necessary to ensure a periodic cleaning of the Brazier or every time you switch on the cooker like for other models that do not have this system.

Self-cleaning system working (360° rotation)

View the ash pan where the combustion residue is released by the brazier



THE SELF-CLEANING SYSTEM IS ACTIVATED EVERY TIME YOU SWITCH ON THE COOKER (2 ROTATIONS BY DEFAULT) AND AFTER 6 HOURS (DEFAULT VALUE) OF CONTINUOUS OPERATION. THE SWITCH-OFF AND SWITCH-ON CYCLE OF THE COOKER DURING THE CLEANING PHASE WITH THE SELF-CLEANING SYSTEM TAKES ABOUT 10 MINUTES. DURING COOKER CLEANING AND SWITCH-ON PERIOD, HEATING IS GUARANTEED BY THE THERMAL INERTIA OF THE COOKER.

### Cleaning the ash pan

Remove the pan from the stove and remove the ash collected; be very careful if the brazier is still hot as this can damage the cleaning equipment.

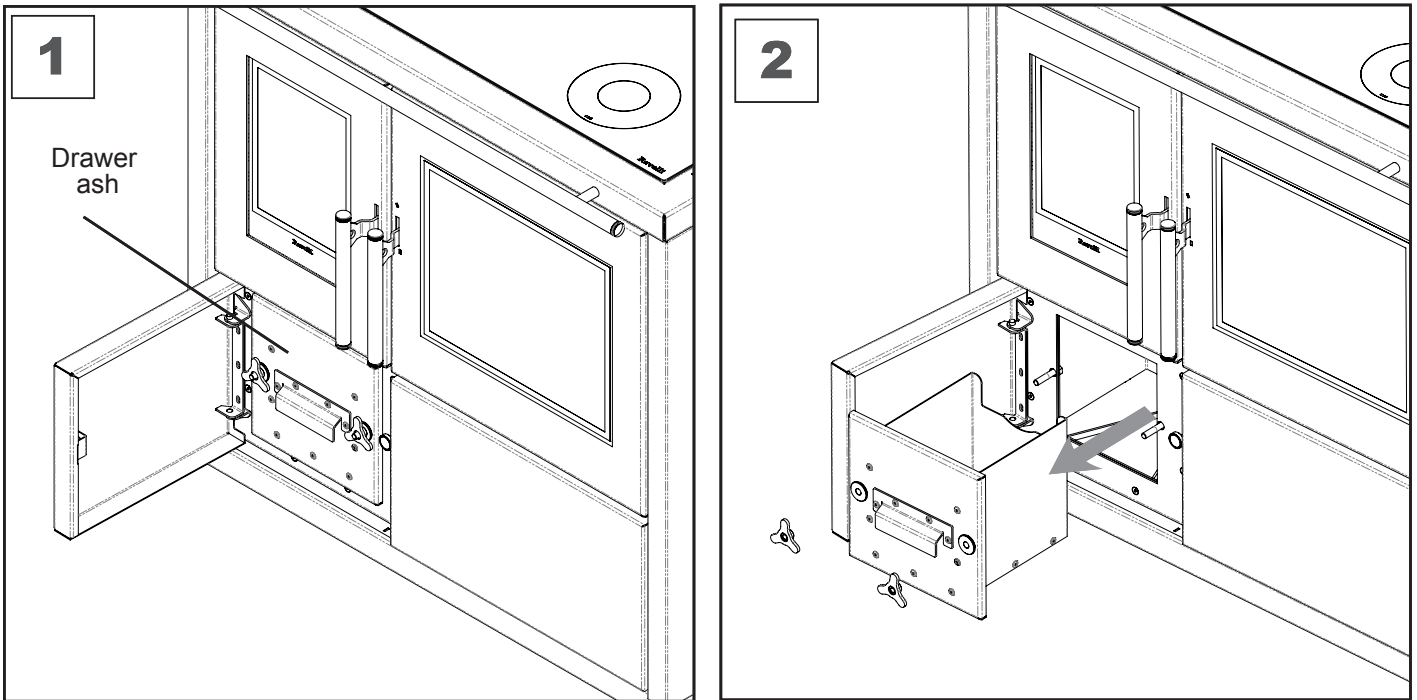


Cleaning operations of the stove depend on the quality of the pellets used and the frequency of use.

The ash pan must be cleaned every 30 days. The frequency depends however on the time of use of the cooker and the type of pellets used.

To access the pan, open the door (1), unscrew the wing nuts and remove it (2).

**N.B.:the operation should be carried out only with the cooker cooled down**



#### Cleaning glass

The glass of the door should be cleaned with the cooker cooled down using a cotton cloth or paper towel.

For stubborn stains we recommend you use a damp (water) cloth and ash collected after burning (which has abrasive properties). There are special glass cleaning products and appropriate means for cleaning stoves and fireplaces available on the market.



**DO NOT SWITCH ON THE STOVE IF YOU NOTICE ANY DAMAGES ON GLASS SURFACE.  
CONTACT THE TECHNICAL SUPPORT SERVICE TO HAVE IT REPLACED.**

#### Cleaning the internal vermiculite (Firex 600)



The FIREX 600 products stand out due to the fact that they are heat resistant, lightweight and have excellent insulation capacity, with consequent improvement of combustion and performance of the cooker.

During combustion, the FIREX 600 whitens due to Pyrolysis, making the flame light and bright. Therefore, if combustion is suitably regulated, the original colour of the internal part of FIREX 600 remains unchanged.

This means that the colour of vermiculite during combustion indicates whether the latter is correct or not:

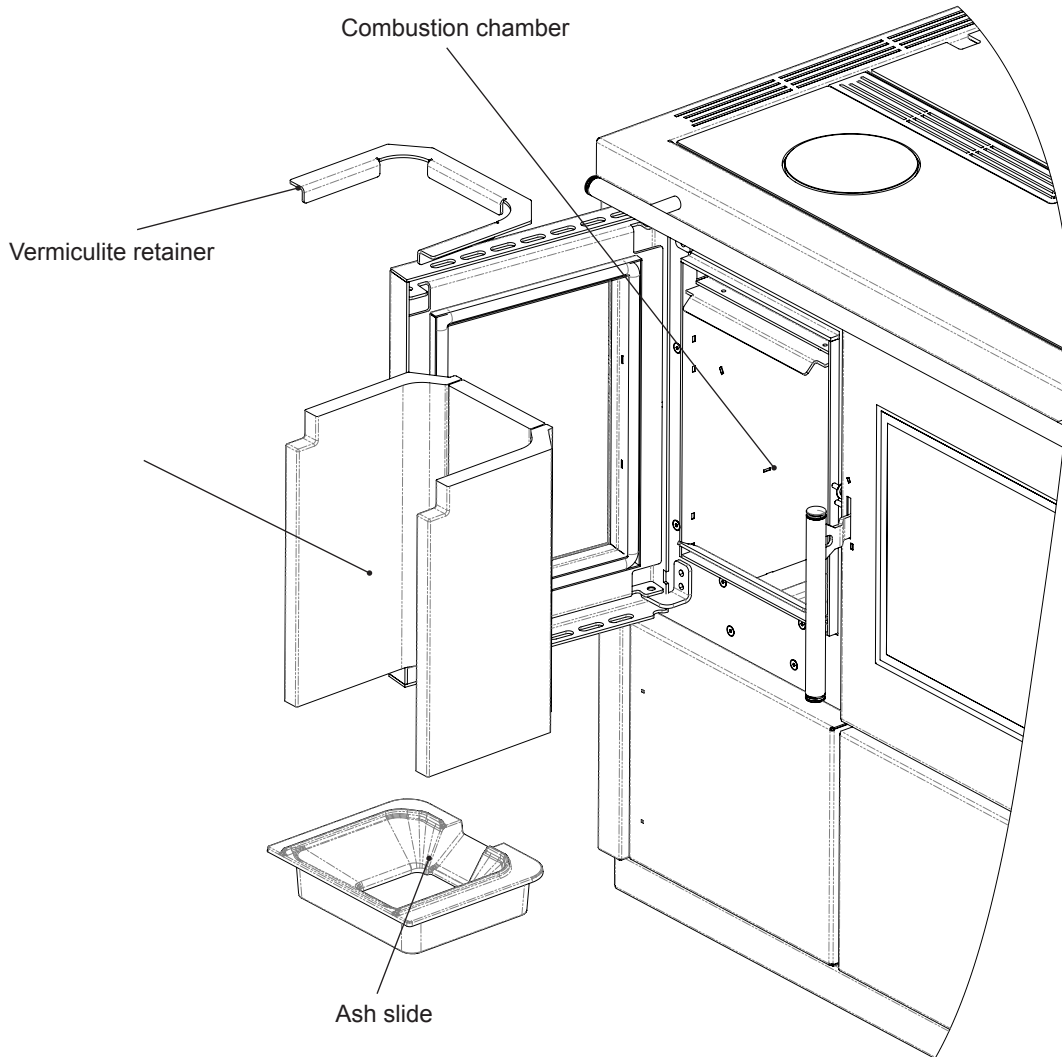
FIREX 600 LIGHT = OPTIMAL COMBUSTION

FIREX 600 DARK = BAD COMBUSTION

The firex 600 does not require any special maintenance: it must only be cleaned from dust with a brush if you want to remove the ash built up during combustion.

- You should not use abrasive sponges to clean the more stubborn residues as it could compromise the thickness of the FIREX 600, creating critical breaking points.
- It is not advisable to use the vacuum cleaner hose in direct contact with FIREX 600.
- It is not advisable to use damp clothes to clean the FIREX 600.

The FIREX 600 is resistant to heat but not to shock: handle with care when removed.  
 After a few hours of operation the FIREX 600 might present a slight abrasion: this is completely normal, as the flame creates tiny scratches in the panel, without compromising the same.  
 The service life of FIREX 600 depends exclusively on the way in which maintenance is performed.



**Cleaning the glass of the cooktop**

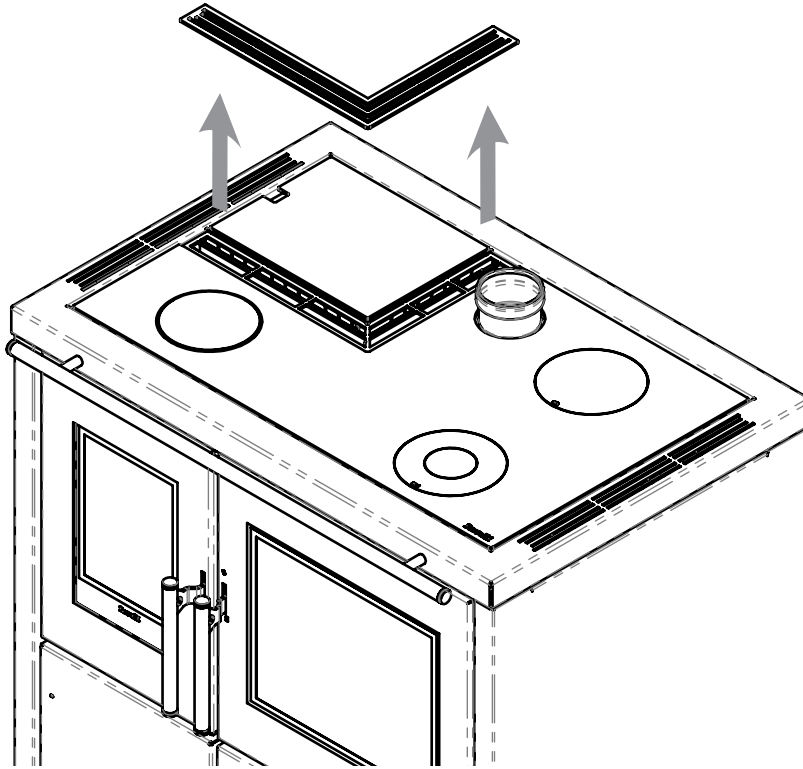
The glass of the cooktop must be cleaned with the cooker cooled down. You can use the products available on the market that are normally used for cleaning of hobs, degreasers and glass cleaning products.

Use a soft cloth, do not use steel wool that could damage the glass.

**Cleaning the upper ventilation grid**

To clean the upper ventilation grid you have to remove it from its seat and clean it.

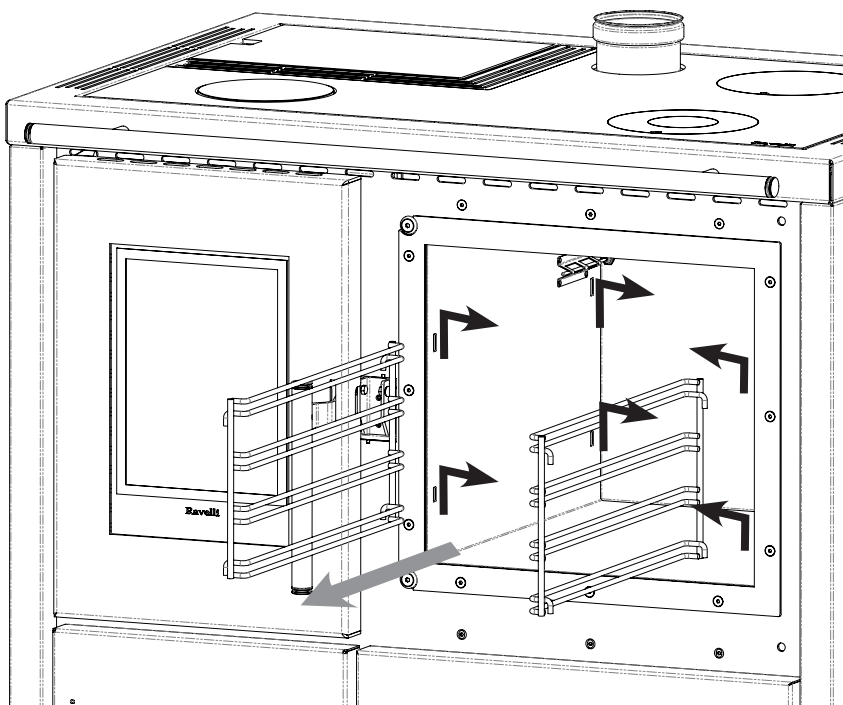
Do not use scouring pads that may scratch the coating.


**Cleaning the oven racks**

To facilitate cleaning, you can remove the oven racks and the side supports.

To remove the side supports:

- 1) raise them and bring them to the center of the oven

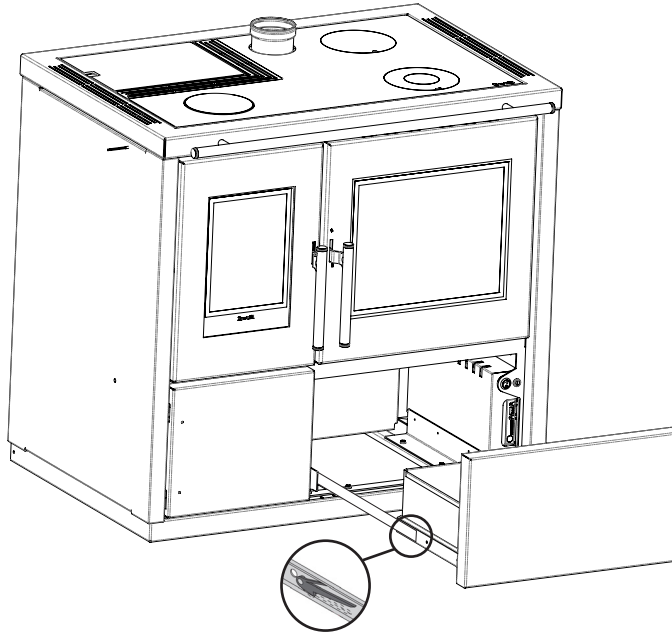




### Removing the storage box

To facilitate cleaning of the storage box, you can take it out completely.

To remove the pan you need to unlock the side guide rails, using the special stopper, on both sides.

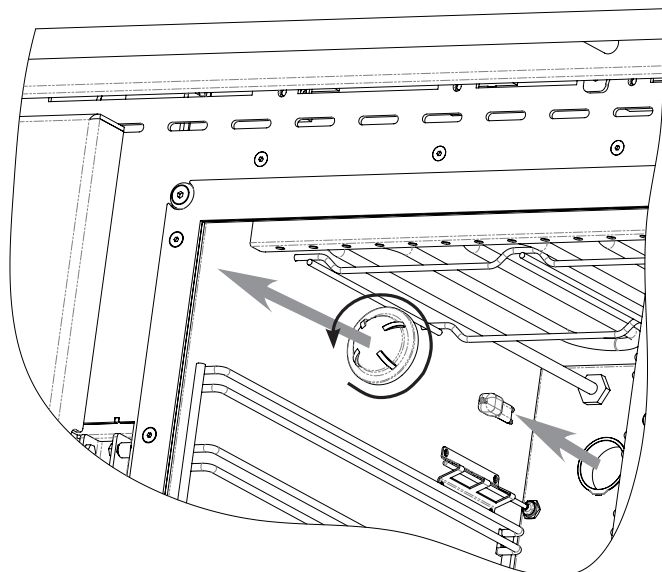


### Replacing the light bulb

The light bulb of the oven is installed on the back side of the oven, on top left.

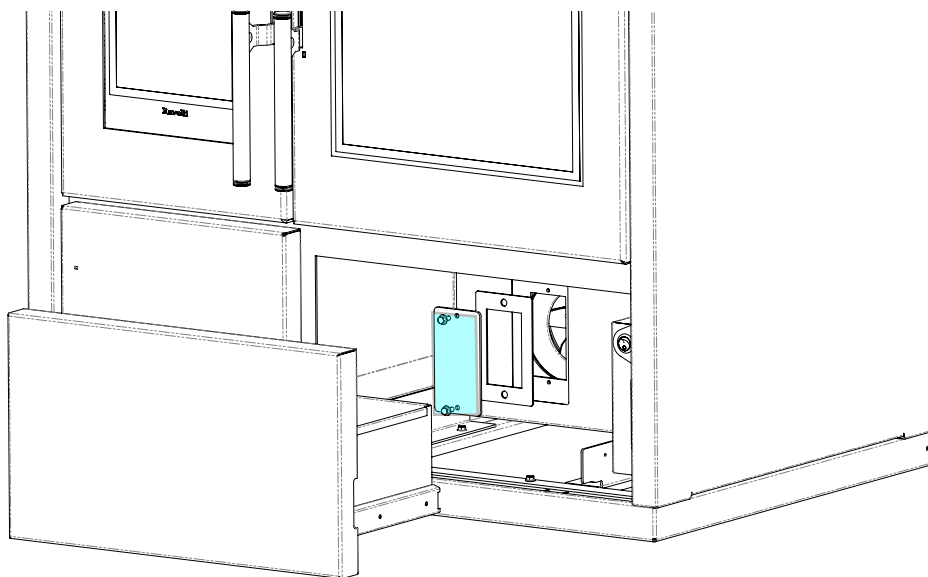
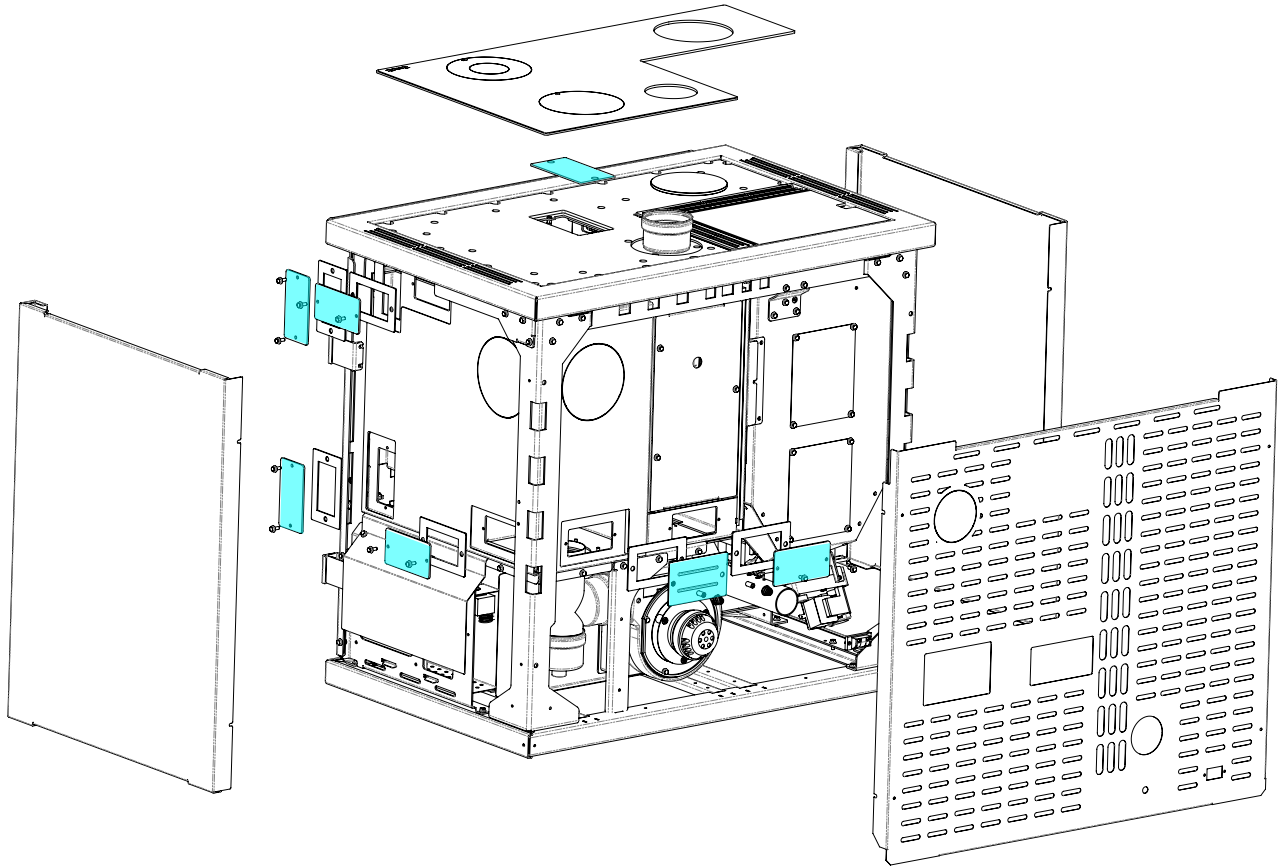
To replace the light bulb, proceed as follows.

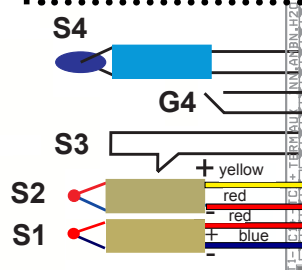
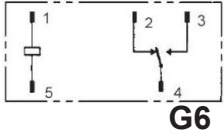
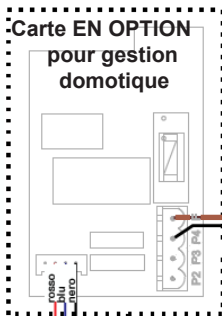
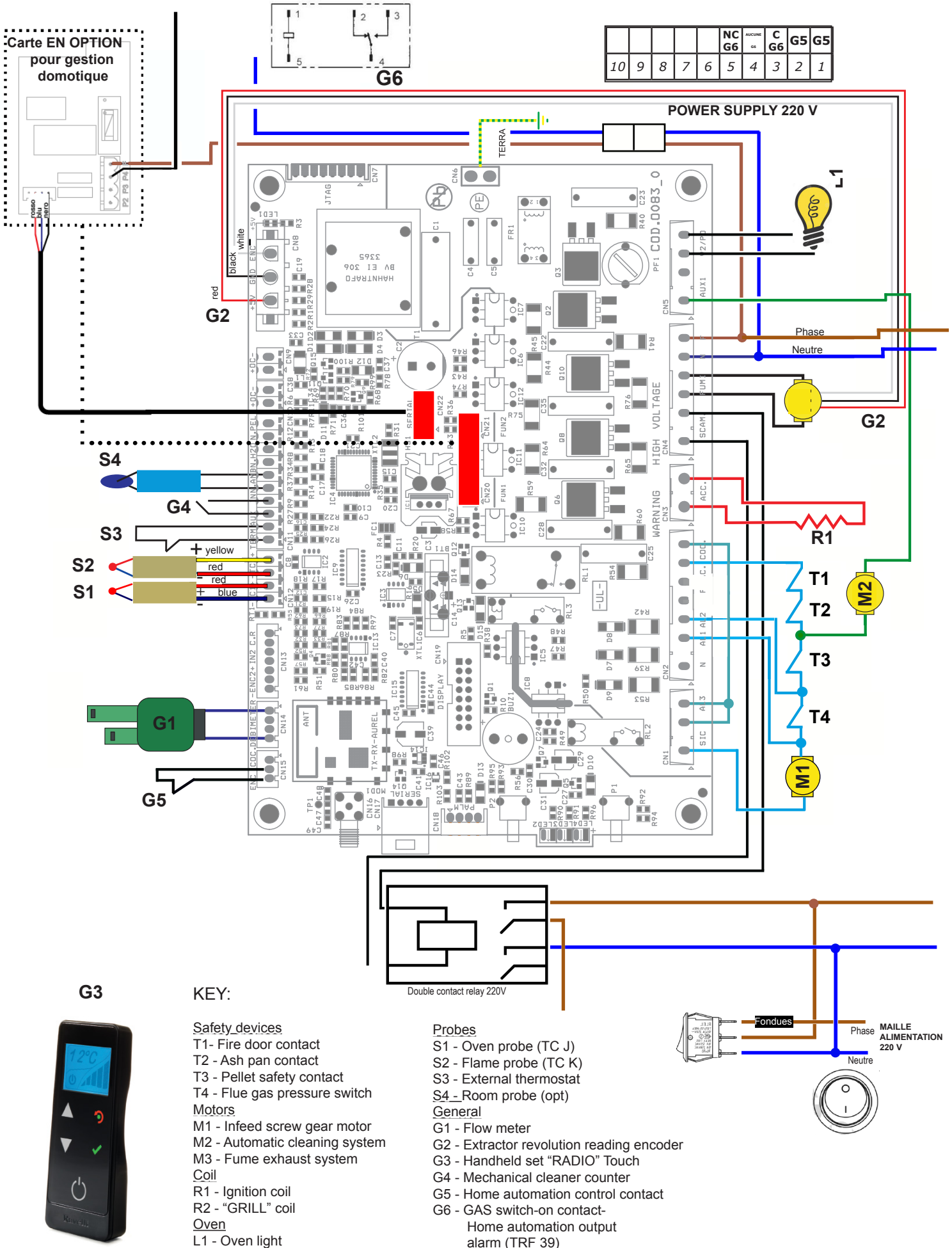
- 1) Unscrew the transparent cap that covers the bulb (a)
- 2) remove the bulb (b) from the socket
- 3) Insert the new bulb
- 4) Tighten the transparent cap.



**Cleaning the flue**

For this type of cleaning, you have to contact the Technical Support Service of Ravelli.  
 Access to the exhaust circuit for cleaning is possible thanks to the special trap doors highlighted in figures.  
 When closing the trap doors, check if the gaskets are intact and, if necessary, replace them with new ones.





**G3**



**KEY:**

Safety devices

- T1 - Fire door contact
- T2 - Ash pan contact
- T3 - Pellet safety contact
- T4 - Flue gas pressure switch

Motors

- M1 - Infeed screw gear motor
- M2 - Automatic cleaning system
- M3 - Fume exhaust system

Coil

- R1 - Ignition coil
- R2 - "GRILL" coil

Oven

- L1 - Oven light

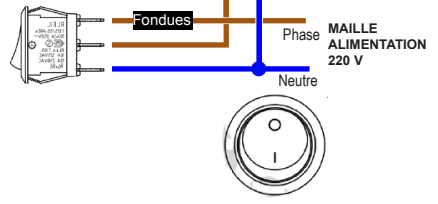
Probes

- S1 - Oven probe (TC J)
- S2 - Flame probe (TC K)
- S3 - External thermostat
- S4 - Room probe (opt)

General

- G1 - Flow meter
- G2 - Extractor revolution reading encoder
- G3 - Handheld set "RADIO" Touch
- G4 - Mechanical cleaner counter
- G5 - Home automation control contact
- G6 - GAS switch-on contact-  
Home automation output  
alarm (TRF 39)

Double contact relay 220V



Below are summarised the checks and/or maintenance interventions required for the proper operation of the cooker.

PARTS / FREQUENCY	1 DAY	2-3 DAYS	30 DAYS	60-90 DAYS	1 SEASON
Ash pan (approximate time)			●		
Glass		●			
Suction duct*					●
Door gasket/ash pan *					●
Vent pipe					●
Combustion chamber			●		
Vacuum pellet tank			●		
Electrical-mechanical parts*					●

Key:

\*\* Operations to be carried out by authorized technical staff.

## Warranty

### Warranty certificate

Aico SpA would like to thank you for purchasing one of our pellet Cookers and invites you to:

- read the instructions for installation, use and maintenance of the cooker.
- note the warranty conditions reported below.

The warranty form attached to the cooker must be compiled and stamped by the installer to activate the warranty.

**Otherwise the warranty shall not enter into effect.**

### Warranty terms and conditions

**The warranty** covers workmanship defects, provided that the product was not subject to breakages caused by improper use, negligence, incorrect connection, tampering or installation errors.

Not covered by the warranty:

- vermiculite (firex 600)
- the door glass;
- the fibre seals;
- the paint;
- cast iron combustion chamber;
- the resistor;
- ceramic-glass cooktop;
- the coil of the electric grill.
- any damage due to inadequate installation and/or tampering with the cooker and/or negligence of the user.

Use of poor quality pellets or any other material which could damage the components of the cooker shall void the warranty and relief the manufacturer from all liability.

Therefore, we recommend you use pellets that meet the requirements in the specific chapter.

All damages caused by transport are not recognised, therefore we recommend you carefully check the goods on receipt, immediately advising the dealer of any damage.

The warranty form must be detached and sent within 8 days of purchase to the following address:

**Aico SpA**  
**Via Kupfer, 31**  
**25036 Palazzolo s/O**  
**Brescia (ITALY)**

### Info and Troubleshooting

For any information or support request, please contact the local dealer or support centre as they are authorized to provide solutions to all requests and intervene directly, when necessary.

**Gas boiler contact (Optional)**

The cooker features (optional) a contact that switches on the gas boiler if the cooker goes in alarm state.

- The output must be connected to the terminal on the cooker – G6 (on relay NC contact)
- The output behaves as follows: when the cooker goes in alarm state, it de-energizes the relay that turns on the NC contact to which you can conveniently connect the ignition contact of the gas boiler. Contact that activates as soon as the cooker goes in switch-on mode.

**Home automation (Optional)**

The cooker may feature the option to manage an electronic board input contact and a signal output STOVE STATE in order to interface the product with an advanced home automation system. Below is the description of home automaton system operation so as to interface it even with programmable home automation systems.

- The input should be connected to the terminal on the board – G5
- The output must be connected to the terminal on the sboard – G6 (on relay NO contact)
- To turn on or off the cooker, you must give a pulse of at least 1s to the G5 input (contact closure for at least 1s); between one pulse and the other must be a pause of at least 1 s.
- The output behaves as follows: upon each ignition, it activates for 2s, upon each switch-off it activates for 4s, in alarm mode it remains always active (there is always a pause of 1s between one activation and the next; example if switch-on occurs right after a shutdown the output behaves as follows: ON for 2s / OFF for 1s / ON for 4s).
- If an larm is triggered, the home automation cannot reset it (to reset the alarm please refer to ALARMS chapter).











# RAVELLI

*il fuoco intelligente*

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