



PELLET STOVE

ELENA (LX)

OPERATING AND MAINTENANCE HANDBOOK

Dear Customer,

We want to thank You for choosing one of our production stoves for your purchase. We are confident that we supplied You with a technologically valid product.

In the following pages, we provide You with some instructions, so that You may know and use the product at its best, as well as ordinarily upkeep it.

Our authorized technical service remains at Your complete disposal for any necessity.

Best regards,

Karmek One S.R.L.

PLEASE NOTE:

Karmek One reserves itself to carry out unsubstantial changes to the stove's components, which may not be reported in the present handbook, those being of small entity. Occasional appearance changes from the flyers are due to ordinary seasonal updates.

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A. GENERAL INFORMATION

a.1 General safety rules

ATTENTION PLEASE!!! You can never be too cautious: before the installation read and comply with these fundamental Rules:

- All local regulations, including those referring to national and European laws, must be respected while installing the stove.
- Verify if the electrical system and the mains outlets are able to bear the maximum absorption of the stove, which is reported on the plate. Connect the stove to a norm-compliant, 230v – 50Hz mains outlet. Avoid using adapters, multiple sockets or extensions. Make sure the electrical system is provided with a norm-compliant earthing and differential switch.
- In order to install the stove you must respect the current laws regarding the exhausting through the flue. It is advisable to connect the stove to the flue by a terminal, which should be easy to inspect. We remind you that it is necessary to refer to an authorized assistance center for the installation and periodical maintenance of the stove, so to check the efficiency of the flue draught, before and after the combustion work of the stove.
- While seasonally using the stove, in case of bad draught of unfavorable weather conditions (temperature lesser than 0°C), verify if the flue is perfectly cohibented and not obstructed, so to avoid its freezing and the danger of a reflux.
- In case of fire inside the flue, immediately switch the stove off.
- The stove consumes as much air as it is necessary for the combustion; it is thus advisable to connect the stove to the outside by a suitable piping, ending at the special slot on the back of the stove.
- Given the weight of the stove, before the installation, make sure the pavement is able to bear it.
- If the pavement is made of inflammable material, such as parquet or carpeting, position a plate under the stove to protect it, (consider that, on the front of the stove, the plate should exceed the stove by at least 25/30cm).
- For your safety, it is advisable to maintain a distance of at least 20cm between the hot sides of the stove and possibly inflammable covering materials (such as glass-beaded walls, wallpapers et cetera); otherwise, to use specific insulating materials, available on sale. Please make this consideration also regarding the furniture, armchairs, curtains and so on.

- In order to facilitate the possible interventions by the technical assistance, do not fit the stove inside closed spaces and do not place it adjacent to the walls, for this may compromise the correct afflux of the air.
- The lack of draught by the flue (or, for instance, the obstruction or closing of the air entrance of the grate, or of the grate itself) alters the functioning of the stove, which, while automatically switching-on, may provoke an excessive pellet dosage in the grate, due to delayed fire priming. Excessive smoke in the combustion chamber can cause an automatic priming of the fumes (gas), accompanied by a violent flame; in these conditions, we recommend never opening the combustion chamber door.
- Categorically avoid using inflammable liquids to start the fire; when the stove is on, the pellet lighting is automatic.
- The pellets feeding the stove must necessarily present the characteristics described in this handbook.
- Do not touch the glass when the stove reaches its temperature; be cautious before touching the stove.
- Avoid letting children close to the stove on their own, when it is on, because each hot surface can provoke severe burns.
- Do not perform interventions on the stove, apart from those expected for a regular functioning or suggested in this handbook in order to solve slight problems. In any case, **always unplug the stove from the power supply before an intervention, and operate solely when the stove is cold.**
- It is absolutely forbidden to remove the guard protecting the pellet tank.
- Always make sure and check for the combustion chamber door to be hermetically closed when the stove is lighting or functioning.
- The pellet automatic lighting is the most delicate phase; in order for it to take place without inconveniences, we recommend always to keep the stove and the grate clean.
- If anomalies in the functioning should occur, light the stove again only after fixing the problem at its origin.
- Karmek One Srl is not responsible for inconveniences, tampering, breakages or any other damage due to non-observance of the instructions reported in this handbook.

a.2 Technical features

Nominal power:	10Kw
Efficiency:	87%
Power supply:	230V 50Hz
Power absorption:	90-270W
Pellet tank capacity:	20Kg
Measured CO 13% oxygen at nominal power:	0,01%
Fumes temperature at nominal power:	average 193°C - max 217°C
Pellet consumption (Kg/h):	2 Kg/h
Digital control display:	YES
Weekly program:	YES
Room thermostat:	YES
Manual – automatic functioning:	YES
Adjustable feet:	YES
Dimensions (mm):	Elena acciaio 550x520x1053
Weight:	Elena acciaio 100Kg
Fuel:	pellet Ø6mm
Fumes joint:	Ø80mm
Air inlet:	Ø30mm
Minimum safety distance from inflammable materials:	200mm

a.3 Accessory equipment

The stove is equipped with:

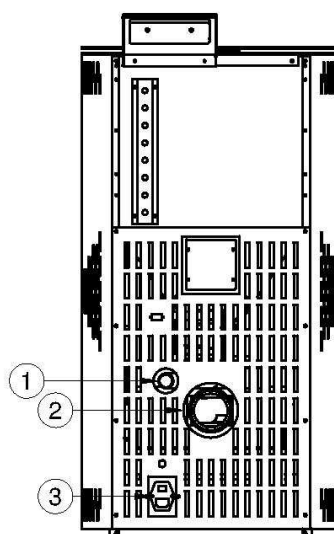
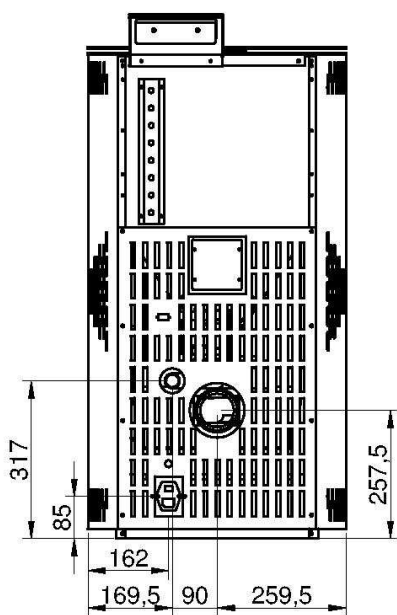
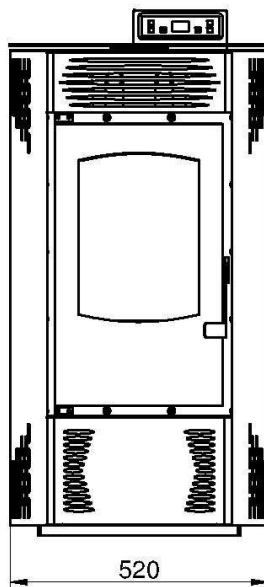
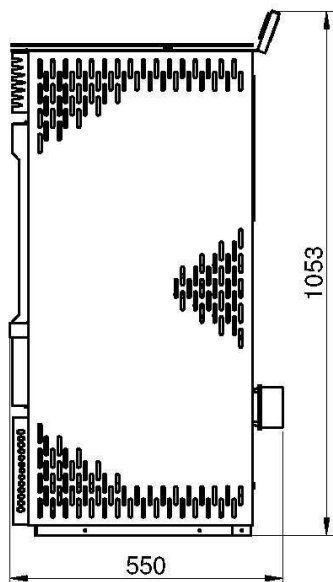
- a remote control (optional);
- a supply cable;
- adjustable feet;
- a handbook.

a.4 Identity plate

The identity plate is positioned on the back of the stove, and it reports the following data:

- commercial brand
- serial number
- model
- thermal power
- efficiency
- measured CO percentage
- warnings.
- supply tension
- absorbed electric supply
- nominal frequency
- minimum distance from adjacent inflammable materials
- conformity to regulations

ELENA



- 1-Combustion air intake
- 2-Fumes strained outlet
- 3-Switch and power socket

a.5 Guarantee

The guarantee certificate, which we consigned to you when you purchased the stove, must be sent to the producer firm Karmek One Srl, 8 days after delivery date the latest; otherwise, the guarantee itself will no longer be valid. The estimated 24-months guarantee is valid exclusively when the installation and test are performed by an authorized Karmek One assistance center.

We would like to make clear that the guarantee expires in case of tampering, breakages, and similar, due to non-observance of the instructions reported in this handbook.

a.6 Suitable fuel

The stove functions solely by pellets, a cylinder-shaped fuel made out of a mixture of various wooden materials; pellets are compliant to DIN 51731 regulations.

The following list summarizes the main characteristics of recommended pellets:

Diameter	6-6,5mm
Maximum length	20-25mm
Caloric output	Approx. 4.600 Kcal/Kg
Humidity	<12%
Ash content	<1,5%
Specific weight and density	Kg/dm ³ =1,0-1,4

The stove is built to burn not-resinous, preferably beech-wood pellets; therefore, using pellets whose characteristics are different from the ones listed above reduces its efficiency, provokes a bad combustion and the formation of incrustations.

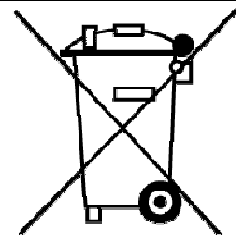
Should you use different pellets from the ones recommended the stove's guarantee would expire.

a.7 Ordering spares

Exclusively authorized Karmek One technical personnel must perform interventions of any entity. Please refer to the authorized assistance center or to your retailer for possible requests of spares.

a.8 Waste material

Do not drop electrical devices among domestic waste. According to the European Directive 2002/96/CE regarding electrical and electronic devices' waste material, and its application in conformity to national regulations, exhausted electrical devices must be collected separately, in order to be reutilized in an eco-friendly way.



B. INSTALLATION INSTRUCTIONS

b.1 Initial warnings

The device must be installed on a pavement that presents an adequate burden capacity. If the existing building does not satisfy this requirement, appropriate measures (for instance a burden distribution plate) must be taken.

The installation of the device must guarantee an easy access to clean the stove, the exhausted gas piping and the flue.

Extraction fans can cause problems, when used in the same room or space of the device.

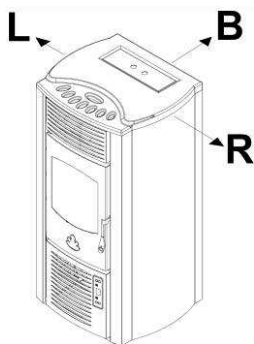
b.2 Moving and transporting

Make sure that the device used for lifting and transporting the stove support its weight, which is reported on the identity plate on the back of the stove. The lifting of the stove is normally performed with an elevation trolley, by inserting the pitchforks in the proper slots of the wooden packing. In order to position the stove inside a room, a good general rule is to lay the stove on the floor gently, with maximum caution and avoiding any violent impact.

b.3 Positioning

For positioning the stove, we suggest you to choose a spot that is as central as possible to the area you wish to heat; this will facilitate a uniform distribution of the heat and will help obtaining an optimum efficiency.

We recommend putting a floor-guarding plate close to the flue or to inflammable materials (such as parquet or carpeting).



For safety reasons, maintain a distance of at least 20cm between the hot sides of the stove and possibly inflammable covering materials (such as glass-beaded walls, wallpapers et cetera); otherwise, use specific insulating materials, available on sale.

L=20 cm min. B=20 cm min. R=20 cm min.

b.4 Installing the flue gas outlet

The installation can be performed either without a masonry flue, or with an existing flue.

FIG 1. INSTALLATION WITHOUT A MASONRY FLUE

Flue gas outlet Ø 80 – Using an easy to inspect T-joint, reach the outside of the building horizontally; proceed vertically until you reach the roof with a cohibented flue, equipped with an anti-wind chimneystack. All the joints must be sealed.

FIG. 2. INSTALLATION WITH AN EXISTING FLUE

Flue gas outlet Ø 80 – Reach the existing flue horizontally, making sure that it presents a minimum section of 200cm² and an easy to inspect base, for its annual cleaning. All the joints must be sealed.

IMPORTANT!! We recommend you to have the installing technician verify the efficiency and the state of the flue, the observance of national and local laws regarding flue gas outlets' joints, and to use appropriate materials.

The information reported above is purely indicative for a correct installation; Karmek One Srl is not responsible for what concerns the installation.

INSTALLATION WITHOUT A MASONRY FLUE

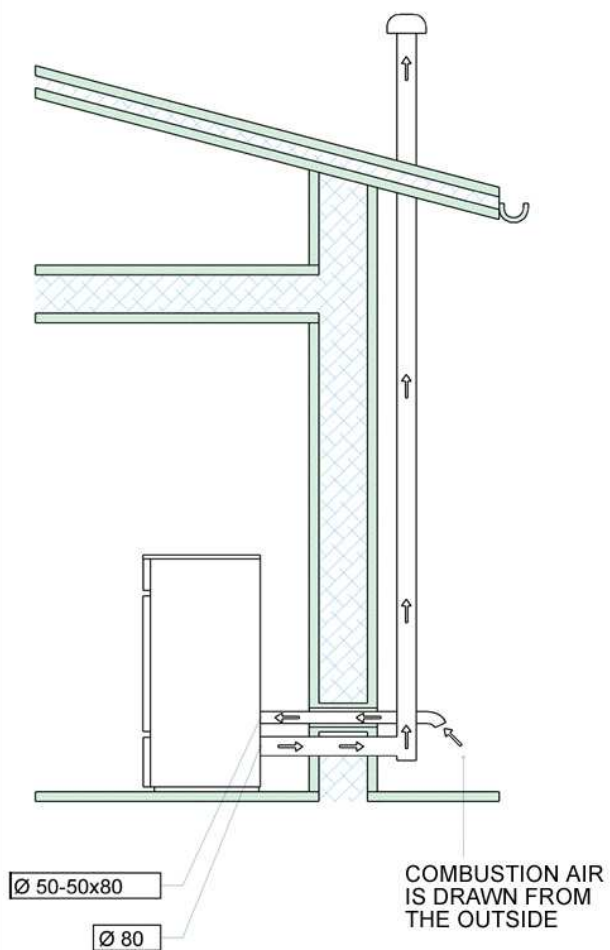


fig. 1

INSTALLATION WITH AN EXISTING FLUE

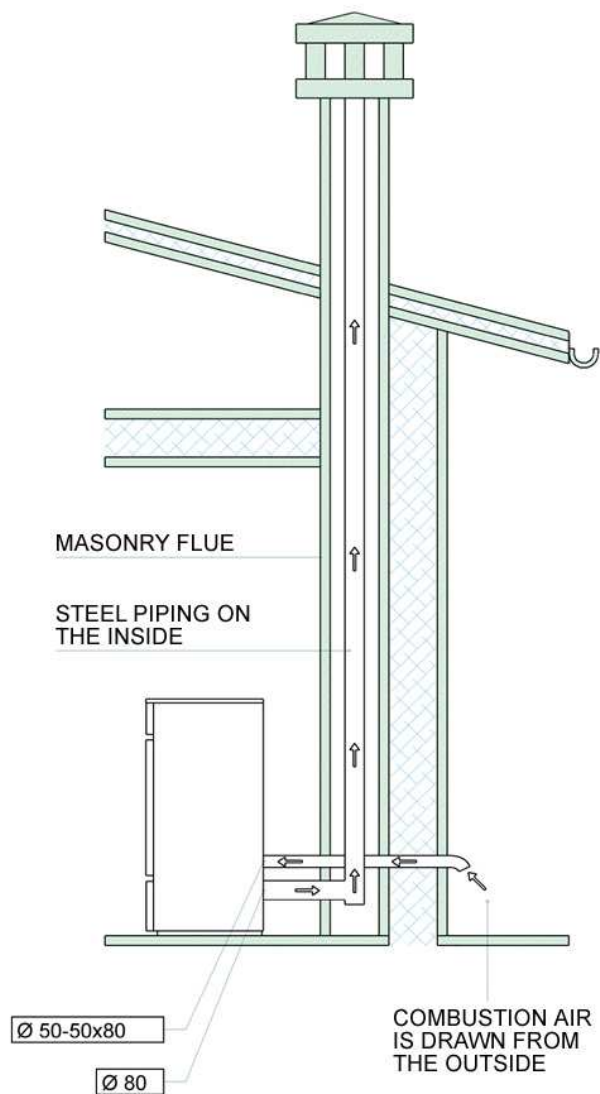


fig. 2

b.5 Installing the combustion air inlet pipe

For any described solution, two alternatives are possible:

- Draw the air directly from the outside through a piping (internal Ø 50mm; max length 1,5m), connected to the air inlet pipe on the back of the stove.
- Draw the air directly from the installation room, given that in the proximity of the stove an air inlet pipe (minimum area 100 cm²) is installed on the sidewall, so that it communicates with the outside.

In both cases, periodically verify that nothing has obstructed the passage of the air.

IMPORTANT: This device cannot be used on a shared flue.

b.6 Connecting to the power supply

Verify if the electrical system and the mains outlets present the capacity to support the maximum absorption of the stove, which is reported on the plate.

Make sure the system is provided with a norm-compliant earthing and differential switch.

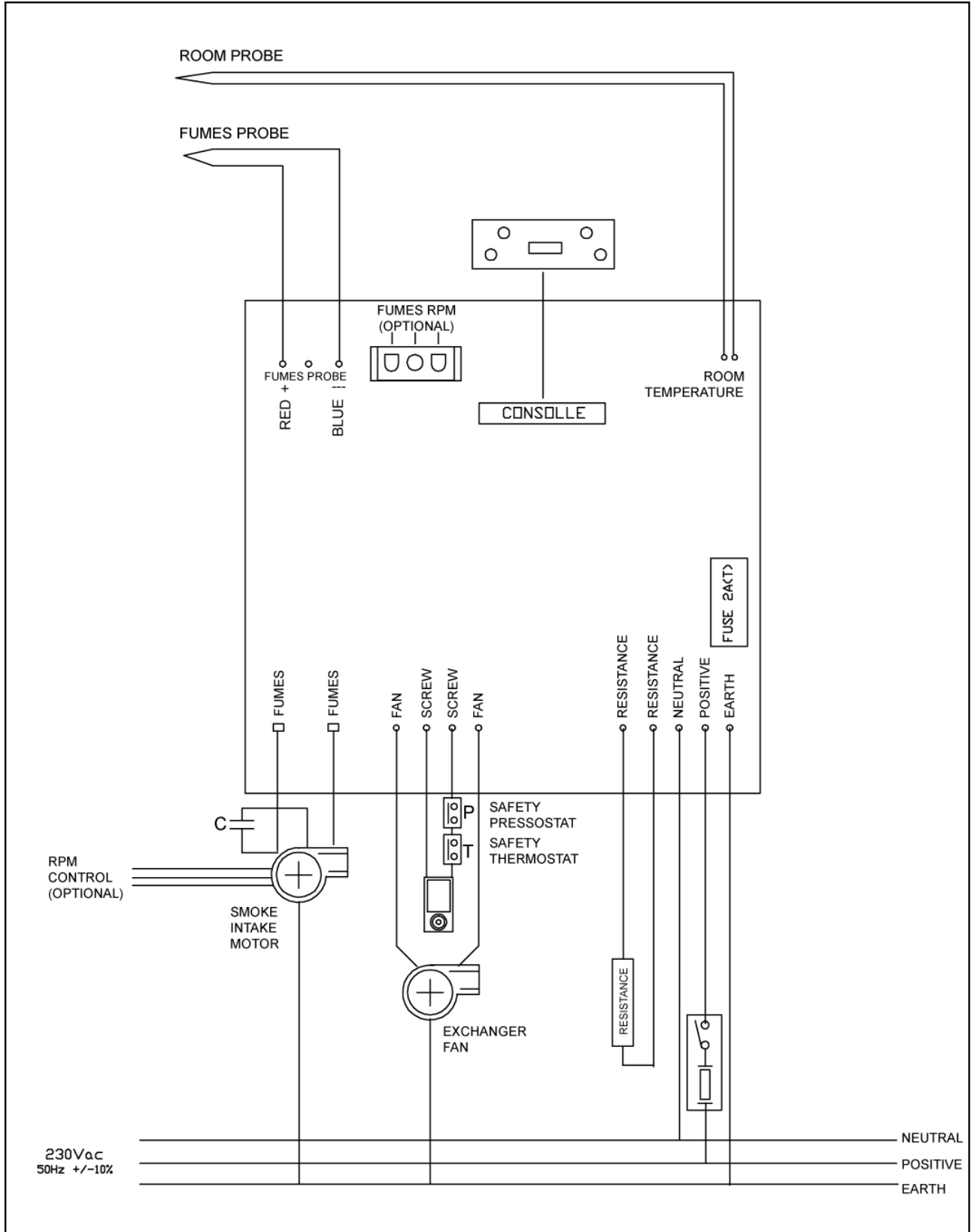
The stove must be connected to a norm-compliant, 230v – 50Hz mains outlet. Avoid using adapters, multiple sockets or extensions.

Make sure the cable connecting to the system is not touching any hot surface of the stove; also make sure the stove is not treading on the cable.

The engine of the stove is protected by a fuse, which is inserted in the general switch on the back of the stove.

Remember always to unplug the stove from the power supply before performing any maintenance and/or control intervention.

ELECTRICAL SCHEME



C. OPERATING INSTRUCTIONS

c.1 Initial warnings

All regulations, included those referring to national and European laws, must be respected when installing the device.

Do not use the device as an incinerator or in any other way than that for which it was designed.

Do not use any fuel other than pellets.

Do not use liquid fuels.

The device, and its external surfaces specifically, reach an elevated temperature when working; handle with care to avoid burns.

Do not perform any unauthorized alteration to the device.

Only use original spares, recommended by the building firm.

c.2 Introduction

The pellet stove combines the heat of a flame with the comfort of an automatic management of the temperature, of the lighting and the switching-off, with the possibility of a multiple days programming. The automatic loading and the consistent capacity of the tank allow the pellet stove to perform automatically for a longer time, and they permit a better management of the device.

If the stove reaches the set values and the temperature keeps constant for a certain amount of time (defined by the building firm), the device will not furthermore feed the flame. When the fumes' temperature falls at a value defined by the building firm, the stove will automatically light the flame up again.

The stove must always function with its door peremptorily closed.

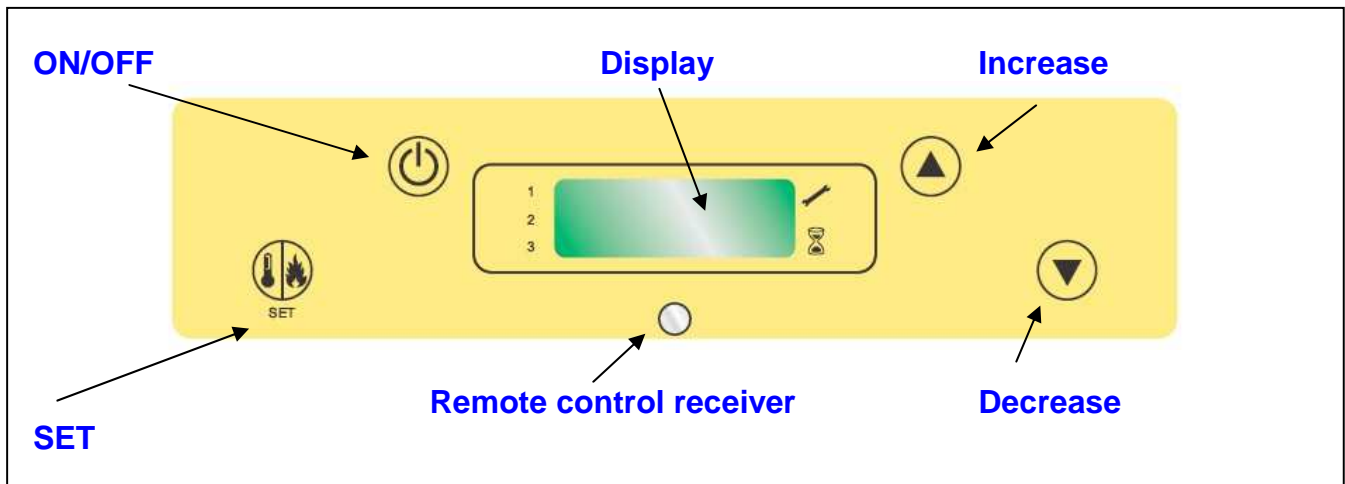
It is necessary that outlet system of the flue gas be properly sealed.

To ensure a good efficiency and a correct functioning, it is necessary that the stove is always clean.

c.3 Display

In the following scheme, we report the various functions of the display.

IMPORTANT: If the temperature is not set within a few seconds, the display will automatically return to the previous screenshot.



c.4 Lighting the stove for the first time

A skilled technician must perform the first lighting; otherwise, the guarantee will expire.

c.5 Activating the stove

When the pellet tank is filled for the first time, you must remember that the screw tube, which feeds the grate, is completely empty; therefore, when you light the stove for the first time you must manually insert the pellets and light the stove.

Press the key "ON/OFF" until the message "ON AC" appears on the display.

While lighting, the stove begins pre-heating the resistance for approximately 1 minute.

After the pre-heating, the message "AR" appears; this means that the screw is loading the pellets at a speed, which is defined by the technical settings (which can be modified).

The fuel loaded in the grate meets the incandescent resistance and will burn, provoking the beginning of the combustion.

When the pellets inside the grate are completely burned, the stove proceeds in its normal functioning.

c.6 Room temperature setting

The stove is equipped of a thermostat with a room temperature survey probe, which is located on the back. Its use permits to stabilize and maintain the temperature in the room where it is situated.

To modify the room temperature it is sufficient to keep pressed the key “SET”, and then to regulate the increase and decrease of the temperature with the keys “▲/▼”.

c.7 Switching off the stove

You can switch the stove off by pushing the key “ON/OFF” for a few seconds. The message “OFF” will appear on the display; the pellet flow is interrupted and the speed of the smoke intake motor will increase to lower the temperature. The stove will complete its cycle and will switch off automatically.

In case of involuntary switching off, the stove must complete the switching off cycle before being activated again.

c.8 The remote control

The optional remote control permits to perform the following functions:

- to light and to switch off the stove: push the key “ON/OFF”
- to access the menus: push the key “SET”
- to modify the room temperature, program or pellet load: push the keys “▲/▼”



c.9 Managing the automatic lighting (chronothermostat)

The automatic lighting function permits to weekly program the lighting and switching off of the stove. Through this function, it is possible to set three daily lightings; it is also possible to avoid extra programming, by memorizing the set data.

Press for 2" the key "SET" to access the setting.

The message "Prog" will appear on the display; with the "▲/▼" keys it is possible to select the following settings:

- **Pr OF:** Enables or disables timer .

To enable the timer press the key "SET" and by the "▲/▼" keys cycle through the options until the display shows the "ON" message.

Confirm with "SET" and press the key "ON/OFF" to exit program.

- **SET:** Time and date set.

To set current time press for 2" the key "SET" and by the "▲/▼" keys cycle through the options until the display shows the "SET" message. Confirm with "SET".

Set current time with the "▲/▼" keys: each pressure of the ▲ key increases time by 15'; each pressure of the ▼ key decreases time by 1'. Confirm setting with "SET".

Set the day of the week by the "▲/▼" keys.

Day 1	Monday
Day 2	Tuesday
Day 3	Wednesday
Day 4	Thursday
Day 5	Friday
Day 6	Saturday
Day 7	Sunday
OFF	Chronothermostat disabled

Confirm setting with "SET" and exit program with "ON/OFF".

c.10 Pellet load variation

In case of great differences between the characteristics of the suggested kind of pellet and the used one, it is possible to modify to a certain extent the pellet load rate.

Press for 2" the key "SET" and press it again until the message "CP" appears on the display. With the "▲/▼" keys set the desired parameters according to this reference table:

-1 = -10%	-2 = -20%	-3 = -30%
+1 = +10%	+2 = +20%	+3 = +30%

Confirm with "SET" and exit pressing "ON/OFF".

D. FUNCTIONS OF THE MECHANICAL AND ELECTRIC COMPONENTS

d.1 Screw motor

The screw motor drives the screw, which brings the pellets from the tank to the grate.



d.2 Smoke intake motor

The smoke intake motor is fixed on the extraction turbine on the back of the stove. Its function is to intake and to expel the fumes that form in the combustion chamber. This operation permits a perfect combustion and a better thermic efficiency.



d.3 Centrifugal fan

The centrifugal fan intakes the room air and returns it hot, by pushing it through the exchanger tubes.



d.4 Electronic card

The electronic card guarantees the correct functioning and the maximum safety of the stove, in the management of all of its functions.



d.5 General switch

This electronic component of the stove is composed by a 4A fuse and by an electronic filter that protect the stove from electrical overload and electromagnetic inconveniencies.



d.6 Fumes probe

The fumes probe surveys the fumes' temperature in the intake turbine, and it operates when the temperature reaches 270°C, driving the stove to the conservation mode "RIS"



d.7 Room probe

The room probe is positioned on the back of the stove and it surveys the temperature of the room where the stove is located.



d.8 Sparking plug

The sparking plug permits the primer of the flame inside the grade. The lighting of the pellets occurs because of the overheating of the plug and the heating of the air inside the combustion chamber.



d.9 Thermocouple

The thermocouple junction is positioned on the side of the tank, and it operates by unsetting the functioning of the screw when the temperature previously defined in the tank is reached.



E. ORDINARY CLEANING AND MAINTENANCE

e.1 Cleaning and maintenance by the costumer

Before lighting the stove, it is advisable to clean the inside of the stove.

- Open the door and vacuum the fire table.
- Remove the grate, verify its cleanliness and clean the holes if necessary.
- Vacuum the grate space and clean the contact borders.
- Replace the grate, making sure that its borders adhere perfectly to their designed place.
- Empty the ashtray.
- Close the ashtray and the door.

e.2 Periodic maintenance by the Assistance Center

Every 6 months

- Generally clean the inside and outside of the fumes pipe of the stove.
- Remove the furnace's internal covering; accurately clean and remove the incrustations inside the crucible and its space.
- Clean the fans and check the mechanism of the plays and of the fixings.
- Clean, inspect and remove the incrustations of the lighting resistance and its space.
- Clean the display and the remote control.
- Inspect the electrical cables, the connections and the supply cable.
- Clean the pellet tank and check the screw.
- Perform a functional test, load the screw, and light the stove.

Every 12 months:

In addition to all the operations required every 6 months:

- Substitute the lighting cartridge (in case of a daily use with more than three lightings a day).
- Inspect and clean the fumes' channel.
- Inspect and check the flue's draught (possibly, perform or order a cleaning).

F. ALARMS DISPLAYING

The alarms are displayed on the command panel; the occurring of an alarm provokes the immediate stop of the stove, and only after solving the problem it is possible to restart the stove, following the instructions already reported on this handbook.

Here below we report a list of the alarms with their possible causes and the possible resolution of the problem.

Smoke intake motor failure	H2
Fire not present	H3 (SF on the display)
Unsuccessful lighting	H4 (AF on the display)
Power failure	H5
Thermocouple failure	H6
Smoke temperature exceeds maximum value	H7

f.1 Smoke intake motor failure

The smoke intake motor is not functioning. The stove begins immediately the switching off procedure.

f.2 Fire not present

The fire is not on. The stove begins immediately the switching off procedure.

f.3 Unsuccessful lighting

It occurs when the lighting phase is unsuccessful; or in case the stove does not reach the lighting temperature, at a gradient of 3°C per minute. The stove will automatically activate the switching-off procedure.

f.4 Power failure

When the stove is on, the lack of the power supply provokes the stop of its electric devices. If the re-establishment of the power supply takes place within a few seconds, the stove restarts its normal activities.

f.5 Thermocouple failure

Thermocouple temperature exceeded. Have an authorized assistance center verify or replace the thermocouple.

f.6 Smoke temperature exceeds maximum value

The fumes probe is out of order or disconnected. The stove begins immediately the switching off procedure. Verify the electrical connections and replace the fumes probe if needed.

G. SOLUTION TO POSSIBLE PROBLEMS

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
The display is blank and the keys do not work.	Lack of power. Anomalies in the connection between the display and the card.	Check if the power supply cable is connected. Check if the display and the card are properly connected.
The remote control functions poorly.	Excessive distance from the stove. Remote control batteries.	Get closer to the stove. Check and substitute the batteries.
Unsuccessful lighting.	Accumulation of too many pellets in the grate.	Clean the grate.
The stove does not light automatically.	The resistance does not reach its temperature Damage or exhausted resistance. The pellets do not descend.	Check the electric cables and fuses. Call the assistance center to substitute the resistance, if damaged Substitute the resistance. IMPORTANT: unplug the stove before: <ul style="list-style-type: none"> - checking if the pellets are embedded in the chute. - checking if screw is blocked - check the door seal.

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
The stove is blocked.	Excessive use without cleaning the grate. Empty tank. Screw without pellets.	Clean the grate. Load the pellets in the tank. Fill the tank and proceed as indicated for the first lighting of the stove.
The stove is blocked for an unsuccessful pellet supply.	Technical problem with the screw.	<p>IMPORTANT: unplug the stove before</p> <ul style="list-style-type: none"> - ridding the screw of possible obstructions - ridding the chute of possible obstructions - removing the pellet dust accumulation from the bottom of the tank.
The stove is precociously jammed, and presents an irregular combustion.	<p>Flue jammed or too long.</p> <p>Too humid pellets.</p> <p>Excessive quantity of pellets in the tank.</p> <p>Wind contrary to the outlet flow.</p> <p>Insufficient intake in the grate.</p> <p>Recent change in the kind of pellets used.</p>	<p>See the paragraph about the installation of the stove.</p> <p>Check if the flue is clean.</p> <p>Check the quality of the pellets.</p> <p>Contact the authorized assistance center.</p> <p>Check the anti-wind terminal and/or install it if necessary.</p> <p>Check if the grate is correctly positioned and if it is clean; check is the air intake pipe is clean.</p> <p>Contact the authorized assistance center.</p> <p>Contact the authorized assistance center.</p>

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
Smell of smoke in the room – The stove switches off.	Bad combustion. Malfunctioning of the fumes fan. The installation of the flue was incorrectly performed.	Contact the authorized assistance center.



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e-mail info@karmek.it

GUARANTEE CONDITIONS:

AT THE END OF EACH SEASON, IT IS OBLIGATORY TO HAVE THE AUTHORIZED ASSISTANCE CENTER PERFORM A GENERAL CLEANING OF THE STOVE; OTHERWISE, THE GUARANTEE WILL EXPIRE.