KARMEK ONE



HEARTH MODULE

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 module.
- Verify if the electrical system and the mains outlets are able to bear the maximum absorption of the module, which is reported on the plate. Connect the module 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 module you must respect the current laws regarding the exhausting through the flue. It is advisable to connect the module 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 module, so to check the efficiency of the flue draught, before and after the combustion work of the module.
- While seasonally using the module, 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 module off.
- The module consumes as much air as it is necessary for the combustion; it is thus advisable to connect the module to the outside by a suitable piping, ending at the special slot on the back of the module.
- Given the weight of the module, 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 module to protect it, (consider that, on the front of the module, the plate should exceed the module 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 module 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.

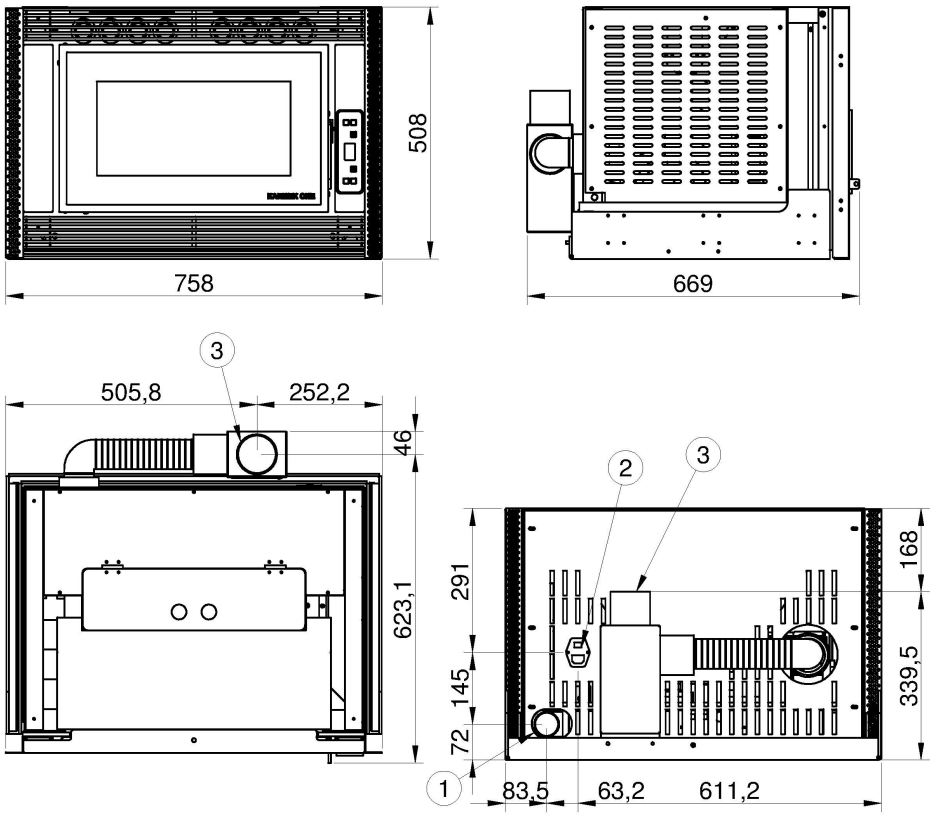
- In order to facilitate the possible interventions by the technical assistance, do not fit the module inside closed spaces and do not place it adjacent to the walls, for this may compromise the correct afflux of the air.
- The lack of draught by the flue (or, for instance, the obstruction or closing of the air entrance of the grate, or of the grate itself) alters the functioning of the module, 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 module is on, the pellet lighting is automatic.
- The pellets feeding the module must necessarily present the characteristics described in this handbook.
- Do not touch the glass when the module reaches its temperature; be cautious before touching the module.
- Avoid letting children close to the module on their own, when it is on, because each hot surface can provoke severe burns.
- Do not perform interventions on the module, 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 module from the power supply before an intervention, and operate solely when the module 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 module 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 module and the grate clean.
- If anomalies in the functioning should occur, light the module 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.
- The handbook is part of the unit, and should be stored and accompany the equipment in case of a change of ownership.

- This appliance is not for use by persons (including children) with reduced physical, sensory, mental abilities or low experience and knowledge, unless they have been supervised or educated to the use of the appliance by the person who is responsible for its security.

a.2 Technical features

In the following table, we provide you with a list explanatory of the technical features:

Nominal power:	**8,0Kw**
Average efficiency:	**88%**
Heating capacity:	**190-210m³**
Power supply:	**230V 50Hz**
Nominal power absorption:	**100W**
Pellet tank capacity:	**15Kg**
Pellet consumption min-max:	**0,8-1,6Kg/h**
Digital control display:	**YES**
Weekly program:	**YES**
Room thermostat:	**YES**
Manual – automatic functioning:	**YES**
Dimensions:	**758x508x669mm**
Weight:	**107Kg**
Fuel:	**pellet Ø6mm**
Fumes joint:	**Ø80mm**
Air inlet:	**Ø50mm**
Minimum distance from adjacent combustible materials:	**200mm**



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

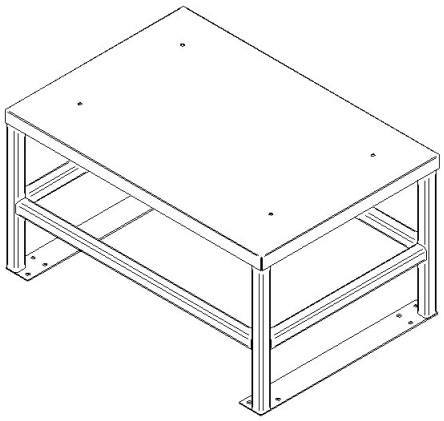
a.3 Accessory equipment

The module is equipped with:

- a remote control;
- a supply cable;
- a sliding support;
- steel profiles;
- a handbook

a.4 Optional equipment

Base: In case the building of a masonry hearth around the module is needed, the base provides the module with a firm support.



a.5 Identity plate

The identity plate is positioned on the back of the module, 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

a.6 Guarantee

The guarantee certificate, which we consigned to you when you purchased the module, 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.7 Suitable fuel

The module 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 module 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 module's guarantee would expire.

a.8 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.

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.

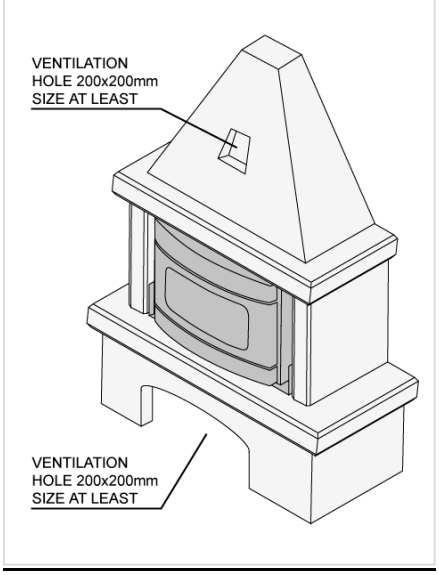
The installation of the device must guarantee an easy access to clean the module, the exhausted gas piping and the flue.

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

Two ventilation holes (200x200mm size at least) must be present in the base of the module and in the ehxaust fan.

In case the holes are not present, the functioning of the module is compromised and the guarantee expires.

Note: The hole in the base of the hearth must coincide with the hole in the base of the module.

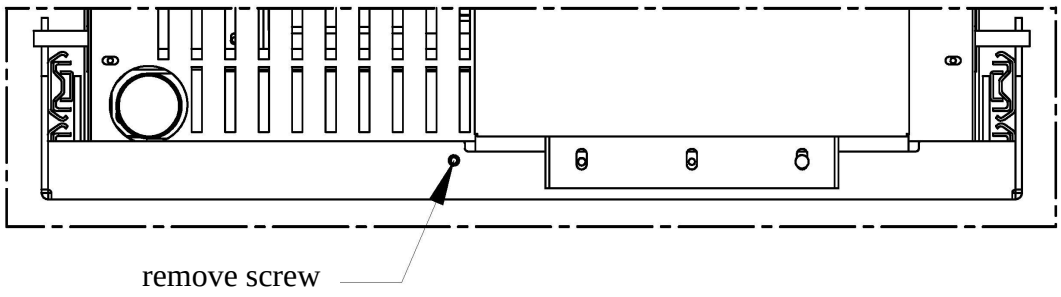


b.2 Positioning

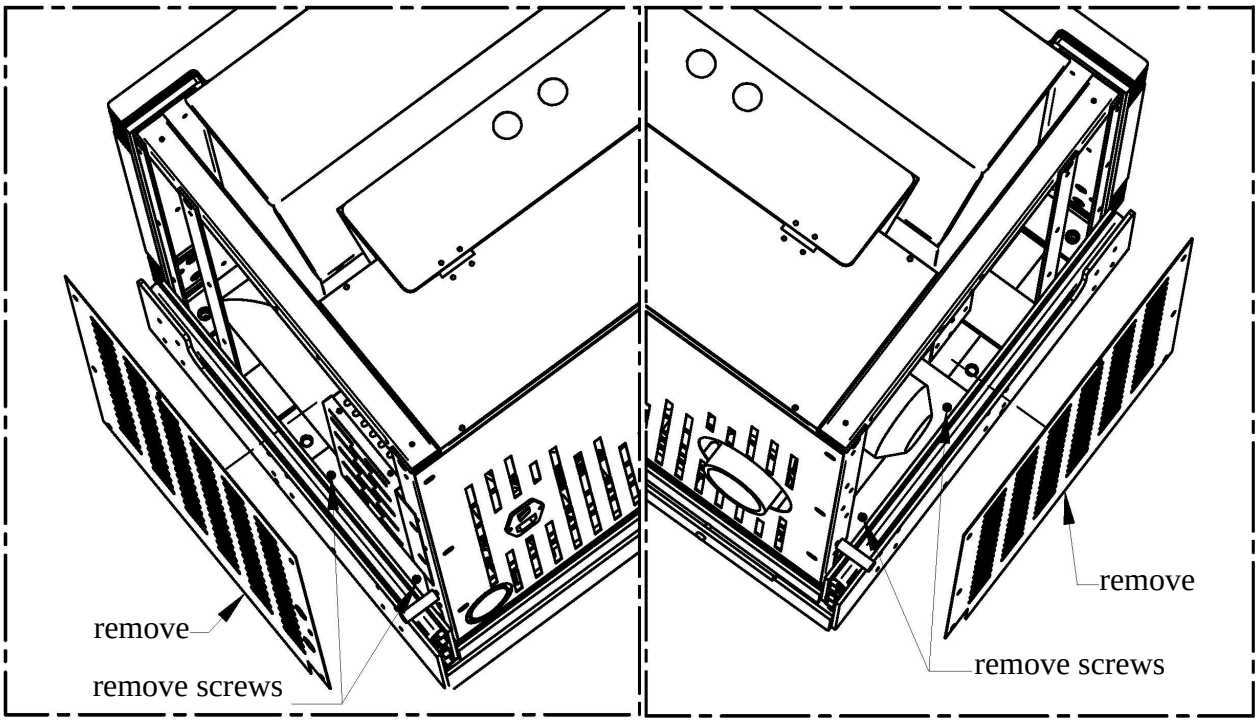
The module is provided as completely assembled.

To mount the module on the hearth, follow these instructions:

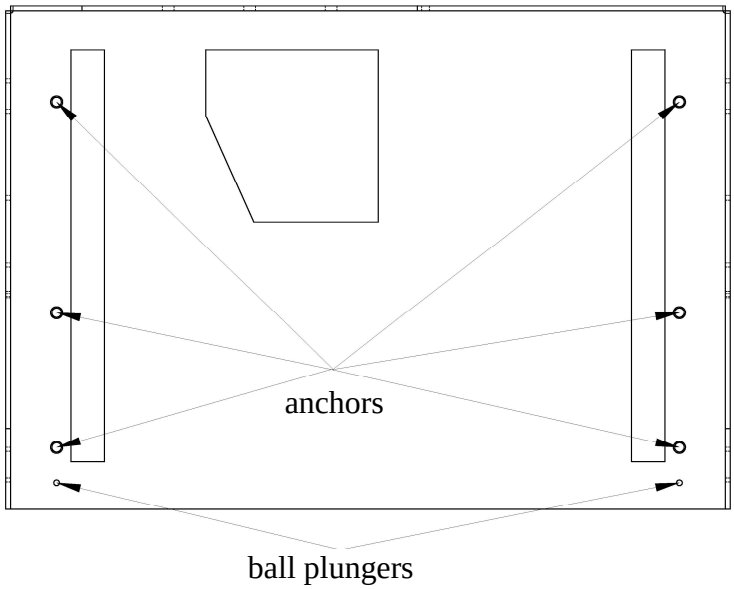
- Remove the central screw on the back to unlock the module.



- Remove unscrewing them the side grids and the indicated screws on both sides of the module, then detach the module itself from the sliding base.



- Place the base of the module in the hearth and secure it <u>with Ø10mm anchors.</u>



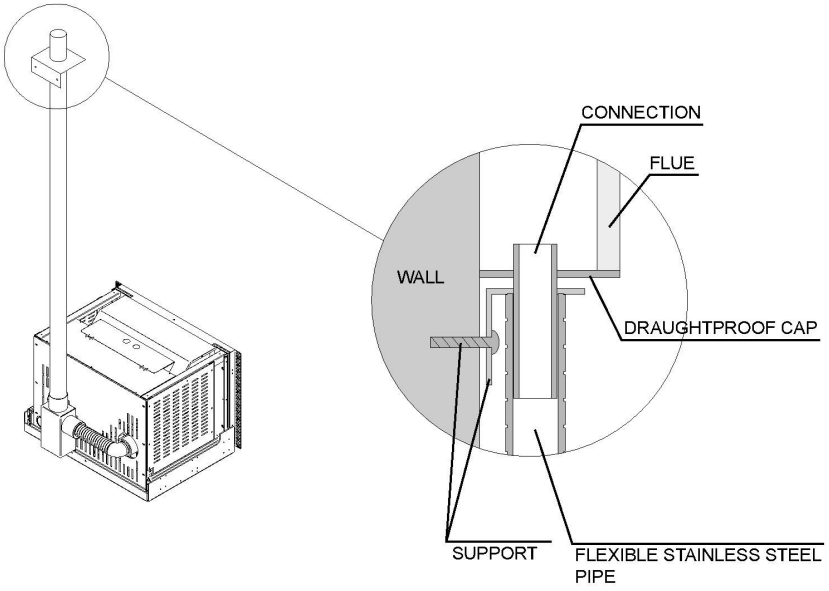
- Adjust the power needed to extract the module by the ball plungers on the base.
- Reassemble the module on the base, then the grids on the module.

b.3 Installing the flue gas outlet

There are two ways to connect the flexible pipe to the flue:

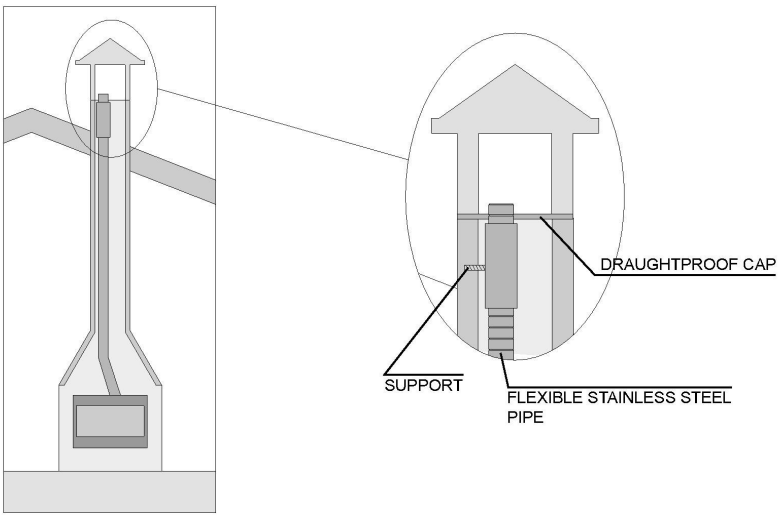
Connection at the bottom of the flue:

Connect to the fumes outlet (Ø80) a T joint. Fix it with two screws. Reach the bottom of the flue with a flexible tube (HT siliconic or double layer stainless steel) , providing a draughtproof connection.



Connection at the top of the flue:

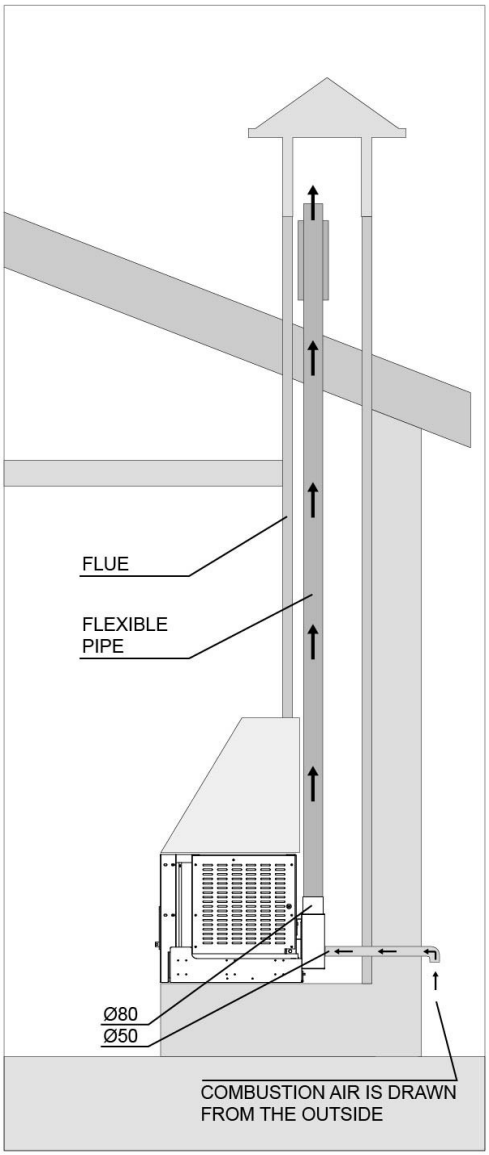
Proceed as in the previous case reaching the top of the flue with the flexible pipe. Make sure the connection is draughtproof.



IMPORTANT!! We recommend having the efficiency and condition of the flue and the compliance with national and local laws for flues checked by a professional installer.

We also recommend the employement of suitable materials.

The information provided are purely indicative for a correct installation, Karmek One srl is not responsible for the installation.



b.4 Connecting to the power supply

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

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

The module must be connected to a norm-compliant, 230v – 50Hz mains outlet.

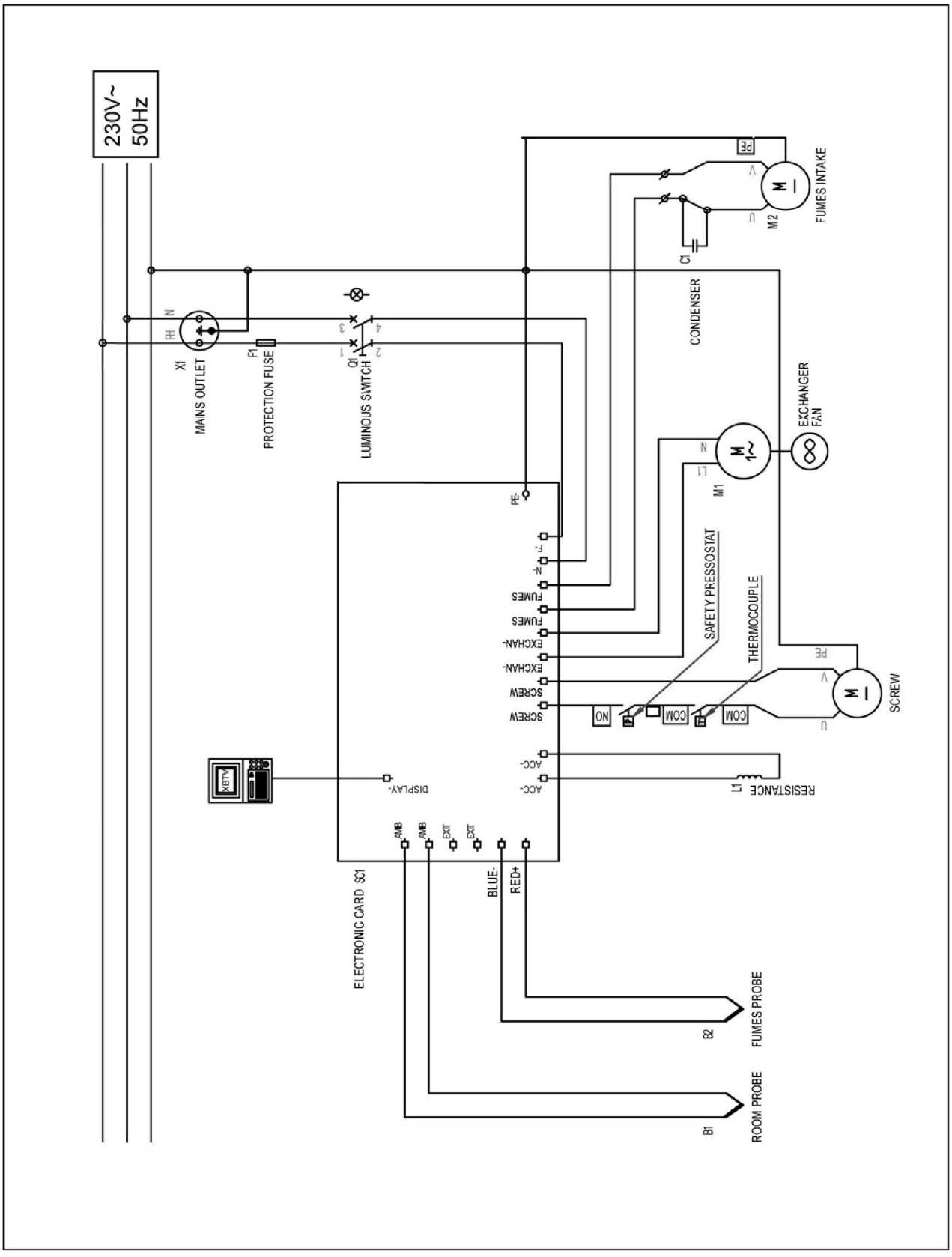
Avoid using adapters, multiple sockets or extensions.

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

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

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

WIRING DIAGRAM



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 elevate 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 module 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 module to perform automatically for a longer time, and they permit a better management of the device.

If the module 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 module will automatically light the flame up again.

The module 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 module is always clean.

c.3 Pellet replenishment

The module in its ordinary position is completely embedded in the wall. When the pellet load is depleted, the module should be extracted sliding it out to make the pellet tank accessible.

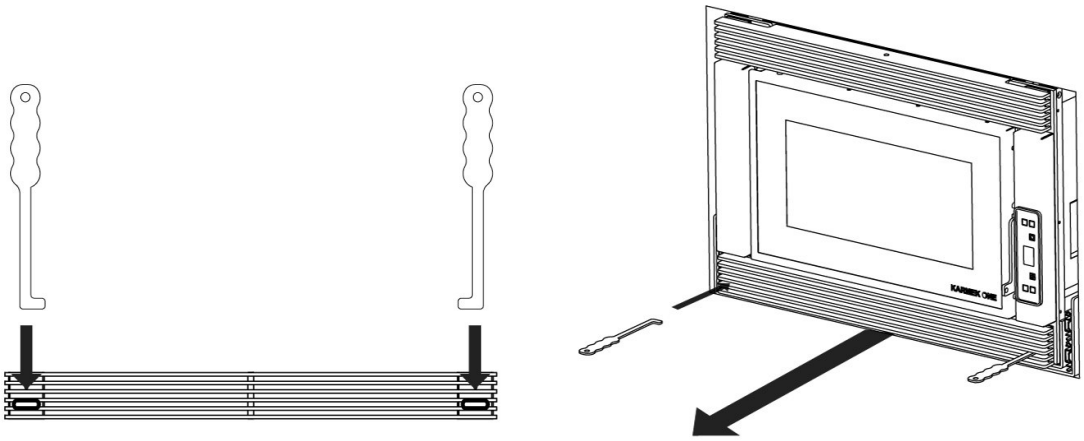
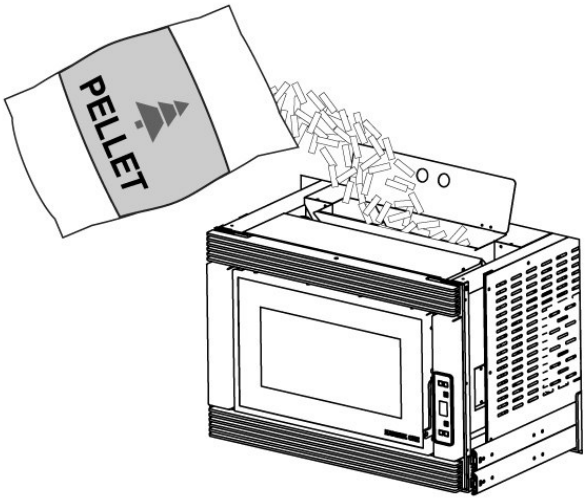
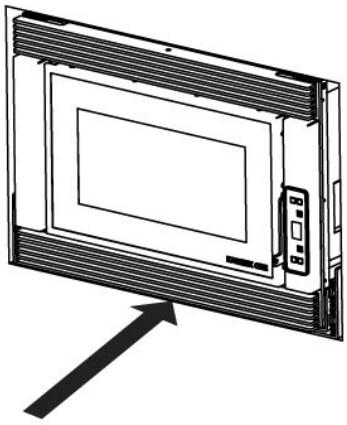
BEFORE extracting the module, **make sure it is turned off and completely cooled down.**

Insert the provided tools in the slots inside the front lower grid, then, using the tools as handles, pull the module out until it stops and the tank lid is accessible.

Open the tank lid and pour the pellet in it.

Close the pellet tank lid.

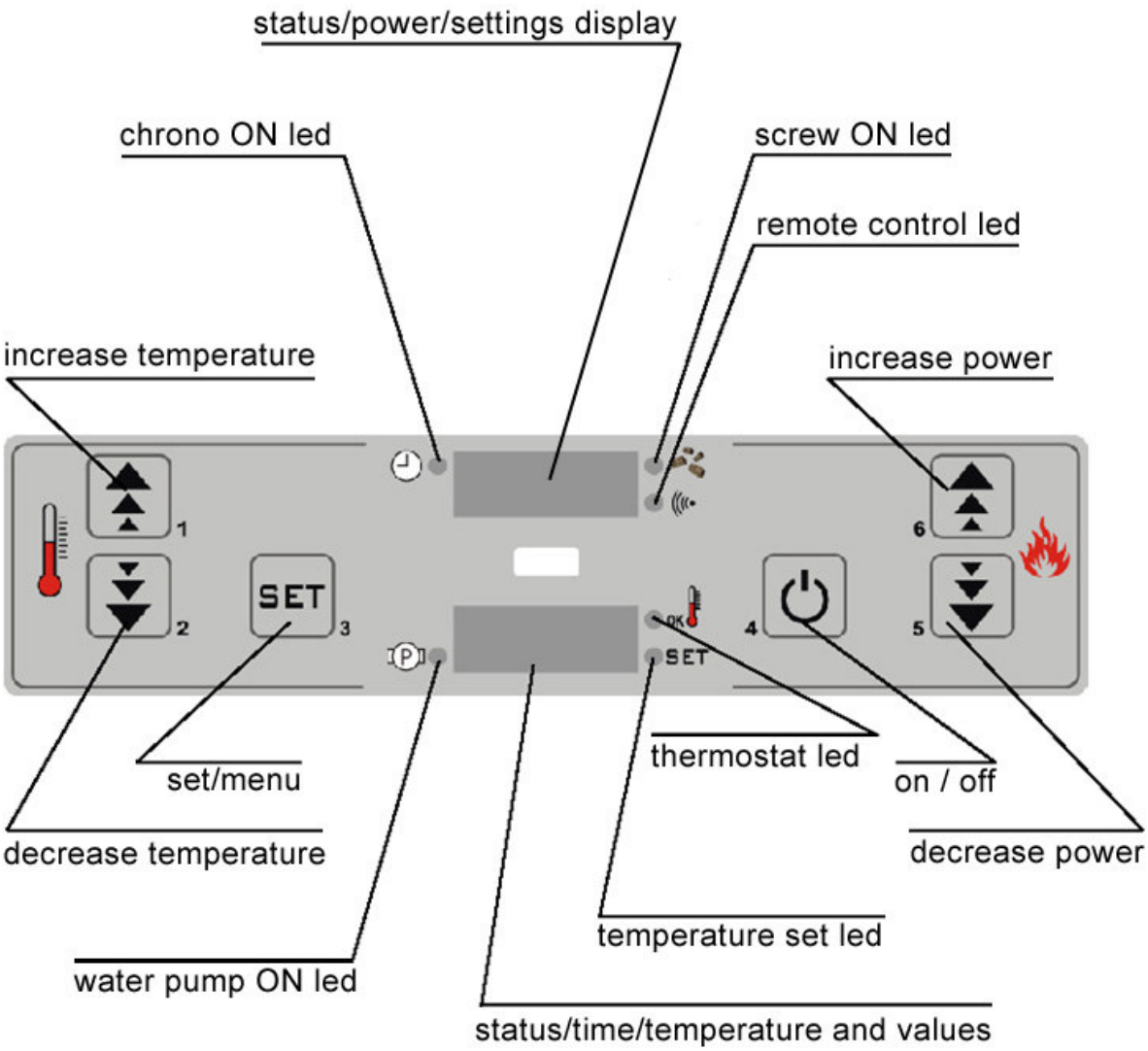
Push the module back in the wall until it stops. Make sure it is completely inserted.

<table>
<tr><th colspan="2">INSERT THE TOOLS INSIDE THE SLOTS AND EXTRACT THE MODULE</th></tr>
<tr><td colspan="2"></td></tr>
<tr><th>REPLENISH THE MODULE</th><th>PUSH COMPLETELY BACK IN POSITION</th></tr>
<tr><td>
</td><td></td></tr>
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c.4 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.5 Lighting the module for the first time

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

c.6 Activating the module

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 module for the first time you must manually insert the pellets and light the module.

Press the key n. 4 “ON/OFF” until the message “FAN CARD” appears on the display.

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

After the pre-heating, the message “LOAD WOOD” 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 switchboard infers through the probe that the temperature is high enough, the module is brought to the control mode, which will make the message “FIRE ON” appear on the display. In the while, the pellet supply is increased to raise the temperature even higher, with a defined gradient (approximately 3°C per minute).

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

To load the pellets, remove the lid from the upper part of the module and fill the tank completely, without removing the protecting wire netting. If you load the module when it is on, mind its hot surfaces. After this operation, replace the lid.

c.7 Room temperature setting

The module 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 push the key n. 3 “SET” for a while, then to regulate the increase and decrease of the temperature with the keys n. 1 and 2.

IMPORTANT:

WHEN THE ROOM TEMPERATURE IS REACHED, THE MODULE AUTOMATICALLY MODULATES THE PELLET SUPPLYING BY USING THE NECESSARY FUEL TO MAINTAIN THE SET TEMPERATURE (“RIS” MODE).

c.8 Switching off the module

You can switch the module off by pushing the key n. 4 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 module will complete its cycle and will switch off automatically.

In case of involuntary switching off, it is sufficient to push the key n. 6 for approximately 2 seconds. This operation will immediately restart the working phase “ON”; the complete lighting phase can be spared if the temperature of the fumes is higher than 50°-60°.

c.9 The remote control

The provided remote control permits to perform the following functions:

- to light and to switch off the module:

point the remote control while pushing the upper keys, marked by the symbol “+”

- to vary the power of the flame:

push the “+” and “-“keys marked by the fire symbol

- to regulate the room temperature:

push the “+” and “-“keys marked by the thermometer symbol



c.10 Managing the automatic lighting (chronothermostat)

The automatic lighting function permits to weekly program the lighting and switching off of the module. Through this function, it is possible to set two daily lightings; it is also possible to avoid extra programming, by memorizing the set data. Press the “set” key twice to access the setting.

Clock set

UT1	Clock day	OFF; Day1, Day2…Day7
UT2	Clock hours	From 00 to 23
UT3	Clock minutes	From 00 to 59

Chrono set

UT5	Start program 1	From 00:00 to 23:50, 10’ step
UT6	Stop program 1	From 00:00 to 23:50, 10’ step
UT7	Daily lighting/switching off	Between on/off for 1 to 7 days
UT8	Start program 1	From 00:00 to 23:50, 10’ step
UT9	Stop program 1	From 00:00 to 23:50, 10’ step
UT10	Daily lighting/switching off	Between on/off for 1 to 7 days

UT01: You need this setting to set the current day of the week or to unset the program, according to the scheme reported below.

Day1	Monday
Day 2	Tuesday
Day 3	Wednesday
Day 4	Thursday
Day 5	Friday
Day 6	Saturday
Day 7	Sunday
OFF	Unset chronothermostat

UT05/UT06: they indicate the starting and stopping time of the Program 1, if the UT01 setting is set on the weekly mode (different from OFF)

UT07: it modifies the weekdays you wish the Program 1 to be on. By pressing the “2” key you run over the days, and by pressing the “1” key you set or unset the program.

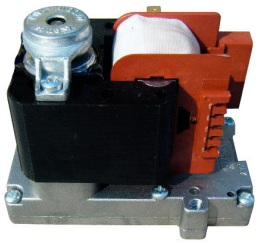
UT08/UT09: they indicate the starting and stopping time of the Program 2, if the UT01 setting is set on the weekly mode (different from OFF)

UT10: it modifies the weekdays you wish the Program 2 to be on. By pressing the “2” key you run over the days, and by pressing the “1” key you set or unset the program.

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 module. 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 Radial fan

The radial 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 module, in the management of all of its functions.



d.5 General switch

This electronic component of the module is composed by a 4A fuse and by an electronic filter that protect the module 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 module to the conservation mode "RIS"



d.7 Room probe

The room probe is positioned on the back of the module and it surveys the temperature of the room where the module 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 module, it is advisable to clean the inside of the module.

- Open the door and vacuum the fire table.
- Remove the great, 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 module.
- 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 module.

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; on the first line the message ALAR appears, while on the second line the typology of the anomaly is displayed. The occurring of an alarm provokes the immediate stop of the module, and only after solving the problem it is possible to restart the module, 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.

Fumes temperature probe	ALARM SOND FUMI
Unsuccessful lighting	ALARM NO FIRE
Switching-off while working	ALARM NO FIRE
Power failure alarm	ALARM NO FIRE
Room thermocouple	ALARM ON T o 81°C

f.1 Fumes temperature probe alarm

It occurs in case of breakdown or disconnection of the fumes temperature probe. The module will switch off automatically; then check for the wires to be properly connected, or substitute the fumes probe if necessary.

f.2 Unsuccessful lighting alarm

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

f.3 Switching-off while working alarm

It occurs if the flame runs out, or if the fumes temperature is lower than the minimum working threshold. The module immediately activates the switching-off procedure.

f.4 Power failure alarm

When the module 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 module restarts its normal activities.

f.5 Room thermocouple alarm

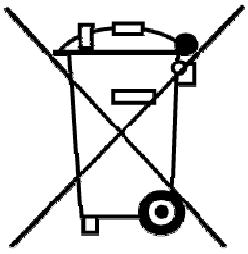
It occurs in case of disconnection, damage or work interruption of the probe that surveys the temperature of the room where the module is positioned. The module sets the “RIS” mode. Contact the authorized assistance center to check or substitute the probe.

G. SOLUTION TO POSSIBLE PROBLEMS

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
The display is blank and the keys do not work.	Lack of power.	Check if the power supply cable is connected.
	Anomalies in the connection between the display and the card.	Check if the display and the card are properly connected.
The remote control functions poorly.	Excessive distance from the module.	Get closer to the module.
	Remote control batteries.	Check and substitute the batteries.
Unsuccessful lighting.	Accumulation of too many pellets in the grate.	Clean the grate.
The module does not light automatically.	The resistance does not reach its temperature	Check the electric cables and fuses. Call the assistance center to substitute the resistance, if damaged
	Damaged or exhausted resistance.	Substitute the resistance.
	The pellets do not descend.	IMPORTANT: unplug the module before: - checking if the pellets are embedded in the chute. - checking if screw is blocked - check the door seal.
The module is blocked.	Excessive use without cleaning the grate.	Clean the grate.
	Empty tank.	Load the pellets in the tank.
	Screw without pellets.	Fill the tank and proceed as indicated for the first lighting of the module.
The module is blocked for an unsuccessful pellet supply.	Technical problem with the screw.	IMPORTANT: unplug the module before - ridding the screw of possible obstructions - ridding the chute of possible obstructions - removing the pellet dust accumulation from the bottom of the tank.

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
The module is precociously jammed, and presents an irregular combustion.	Flue jammed or too long.	See the paragraph about the installation of the module. Check if the flue is clean.
	Too humid pellets.	Check the quality of the pellets.
	Excessive quantity of pellets in the tank.	Contact the authorized assistance center.
	Wind contrary to the outlet flow.	Check the anti-wind terminal and/or install it if necessary.
	Insufficient intake in the grate.	Check if the grate is correctly positioned and if it is clean; check if the air intake pipe is clean. Contact the authorized assistance center.
	Recent change in the kind of pellets used.	Contact the authorized assistance center.
Smell of smoke in the room – The module switches off.	Bad combustion.	Contact the authorized assistance center.
	Malfunctioning of the fumes fan.	
	The installation of the flue was incorrectly performed.	

H. 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.	



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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.