KARMEK ONE



PELLET BOILER

MILENA

OPERATING AND MAINTENANCE HANDBOOK

Dear Customer,

We want to thank You for choosing one of our production boilers 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 boiler'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.

A. GENERAL INFORMATION

a.1 General safety rules
a.2 Technical features
a.3 Accessory equipment
a.4 Optional equipment
a.5 Identity plate
a.6 Guarantee
a.7 Suitable fuel
a.8 Ordering spares

B. INSTALLATION INSTRUCTIONS

b.1 Initial warnings
b.2 Moving and transporting
b.3 Positioning
b.4 Installing the flue gas outlet
b.5 Installing the combustion air inlet pipe
b.6 Connecting to the power supply
b.7 Connecting to the waterworks

C. OPERATING INSTRUCTIONS

c.1 Initial warnings
c.2 Presentation
c.3 Display
c.4 Lighting the boiler for the first time
c.5 Activating the boiler
c.6 Room temperature setting
c.7 Switching off the boiler
c.8 Managing the automatic lighting (chronothermostat)
c.9 Technical parameters access

D. FUNCTIONS OF THE MECHANICAL AND ELECTRIC COMPONENTS

d.1 Screw motor
d.2 Smoke intake motor
d.3 Safety thermostat
d.4 Electronic card
d.5 General switch
d.6 Circulator
d.7 Expansion vessel
d.8 Manometer
d.9 Fumes probe
d.10 Room probe
d.11 Safety valve
d.12 Air valve
d.13 Sparking plug
d.14 Pressurestat

E. WASTE MATERIAL

F. ORDINARY CLEANING AND MAINTENANCE

f.1 Cleaning and maintenance by the customer
f.2 Periodic maintenance by the Assistance Center

G. ALARMS DISPLAYING

g.1 Fumes temperature probe alarm
g.2 Unsuccessful lighting alarm
g.3 Switching-off while working alarm
g.4 Power failure alarm
g.5 General thermostat alarm
g.6 Room thermocouple alarm
g.7 Circuit pressure alarm
g.8 Display lock

H. SOLUTIONS TO POSSIBLE PROBLEMS

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 boiler.
- Verify if the electrical system and the mains outlets are able to bear the maximum absorption of the boiler, which is reported on the plate.
- Connect the boiler 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 boiler you must respect the current laws regarding the exhausting through the flue. It is advisable to connect the boiler 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 boiler, so to check the efficiency of the flue draught, before and after the combustion work of the boiler.
- The boiler consumes as much air as it is necessary for the combustion; it is thus advisable to connect the boiler to the outside by a suitable piping, ending at the special slot on the back of the boiler.
- Given the weight of the boiler, 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 boiler to protect it, (consider that, on the front of the boiler, the plate should exceed the boiler 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 boiler 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 boiler inside closed spaces and do not place it adjacent to the walls, for this may compromise the

correct afflux of the air.

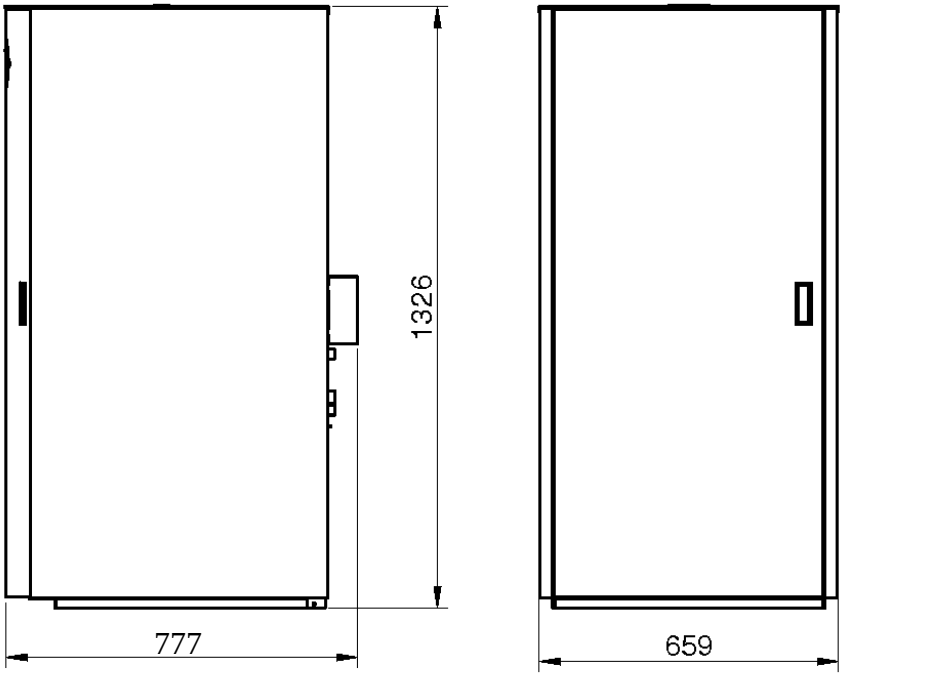
- The lack of draught by the flue (or, for instance, the obstruction or closing of the air entrance of the grate, or of the grate itself) alters the functioning of the boiler, which, while automatically switching-on, may provoke an excessive pellet dosage in the grate, due to delayed fire priming. Excessive 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 boiler is on, the pellet lighting is automatic.
- The pellets feeding the boiler must necessarily present the characteristics described in this handbook.
- Do not touch the glass when the boiler reaches its temperature; be cautious before touching the boiler.
- Avoid letting children close to the boiler on their own, when it is on, because each hot surface can provoke severe burns.
- Do not perform interventions on the boiler, 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 boiler from the power supply before an intervention, and operate solely when the boiler is cold.**
- It is absolutely forbidden to remove the guard protecting the pellet tank.
- In case an intervention to the waterworks is necessary, make sure that the boiler is off, that the water afflux to the boiler is stopped and that the water already in the boiler is completely cooled.
- Always make sure and check for the combustion chamber door to be hermetically closed when the boiler 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 boiler and the grate clean.
- If anomalies in the functioning should occur, light the boiler 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.

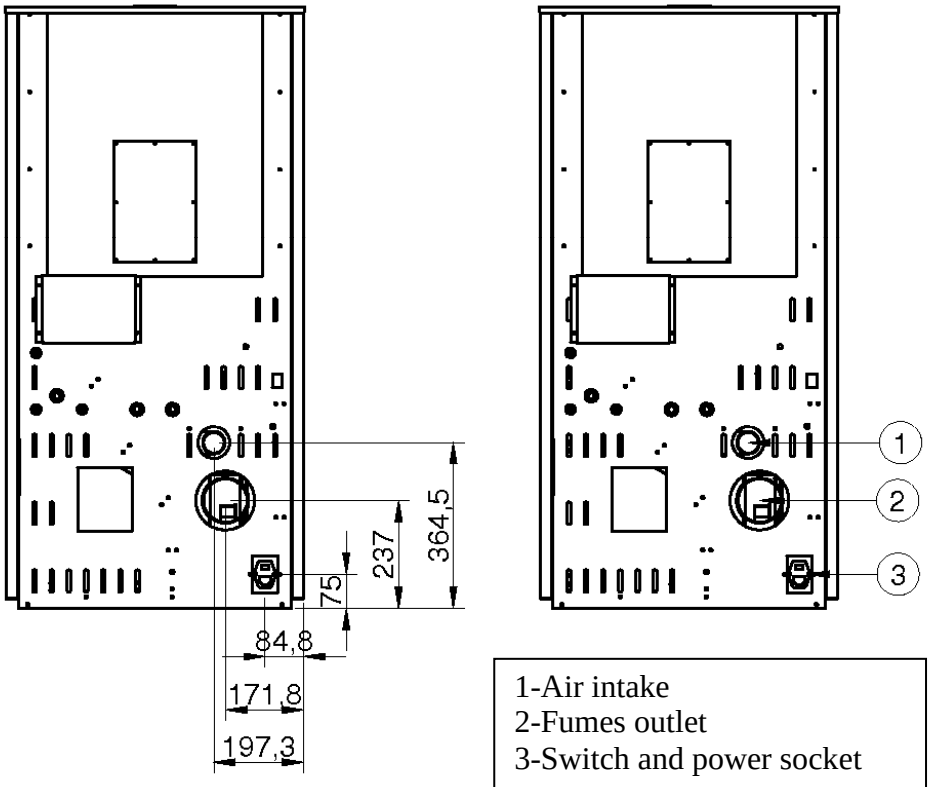
a.2 Technical features

Power at the combustion chamber: #1	
-nominal:	**34 kW**
-reduced:	**9 kW**
Thermal power (water heating): #1	
-nominal:	**26,5 kW**
-reduced:	**7,4 kW**
Boiler class:	**3**
Efficiency (water heating): #1	
-nominal:	**77 %**
-reduced:	**83 %**
Efficiency at the combustion chamber: #1	
-nominal:	**85,5 %**
-reduced:	**94 %**
Measured CO2: #1	
-nominal:	**12 %**
-reduced:	**9,5 %**
Measured CO2 (at 10% of O2): #1	
-nominal:	**450 mg/Nm3**
-reduced:	**170 mg/Nm3**
Measured combustion dusts (al 10% O2): #1	
-nominal:	**7 mg/Nm3**
-reduced:	**5 mg/Nm3**
Fumes temperature: #1	
-nominal:	**255 ℃**
-reduced:	**99 ℃**
Volumetric flow (mass) of combustion gases: #1	
-nominal:	**17,5 g/s**
-reduced:	**5,9 g/s**
Chimney draught requirements:	
-nominal:	**9 Pa**
-reduced:	**6 Pa**
Power supply:	**230 V – 50 Hz**
Power absorption:	**360 W**
Maximum exercise pressure:	**3 Bar**
Nominal exercise pressure:	**1 Bar**
Pump maximum residual prevalence:	**4 m**
Boiler water content:	**22 lt**
Pellet tank capacity:	**85 kg**
Pellet consumption (at minimum-maximum power): #1	**7 – 1,8 kg/hour**
Autonomy (at minimum-maximum power): #1	**10 – 45 hours**
Fumes outlet:	**Ø100 mm**
Combustion air inlet:	**Ø70 mm**
Expansion vessel:	**8 lt**
Fuel:	**wood pellet Ø6mm**
Dimensions:	**777x659x1326 mm**

#1: Data collected testing the boiler with wood pellet fuel with thermic power of 18.67 MJ/kg and humidity 5,1 %.
The data reported are indicative.
Karmek One one reserves itself to carry out any change necessary to improve product performance.

Milena





1-Air intake
2-Fumes outlet
3-Switch and power socket

a.3 Accessory equipment

The boiler is equipped with:

- a supply cable;
- adjustable feet;
- a handbook.

a.4 Optional equipment

External chronothermostat: the boiler is not equipped with this optional device, which is instead installable according to the positioning of the boiler. The aforementioned chronothermostat must be directly connected to the card (see the electric scheme), in addition to the connections to the room probe.

IMPORTANT: in order for the chronothermostat to function correctly, you must exclude the room temperature, bringing it to a 0.8℃ value. The room temperature can then be directly regulated with the chronothermostat.

a.5 Identity plate

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

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

a.6 Guarantee

The guarantee certificate, which we consigned to you when you purchased the boiler, 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 boiler 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 pellet:

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/dm³=1,0-1,4

The boiler 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 boiler'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 boiler, the exhausted gas piping and the flue.

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

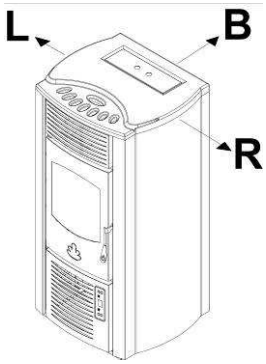
b.2 Moving and transporting

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

b.3 Positioning

For positioning the boiler, 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.

In order to connect the boiler to the waterworks, a performance by a qualified technician or plumber is necessary. 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 boiler 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 100 – 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 100 – 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

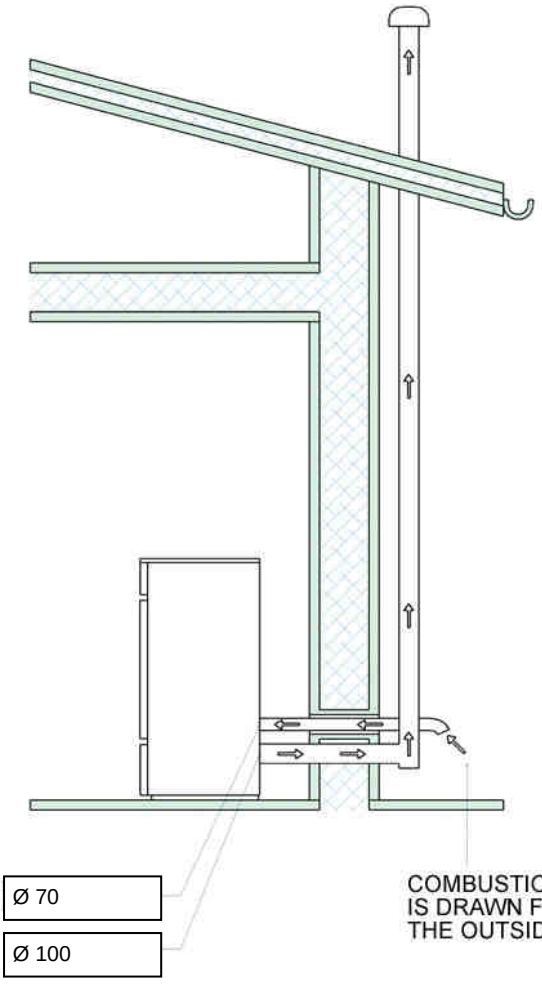


fig. 1

INSTALLATION WITH AN EXISTING FLUE

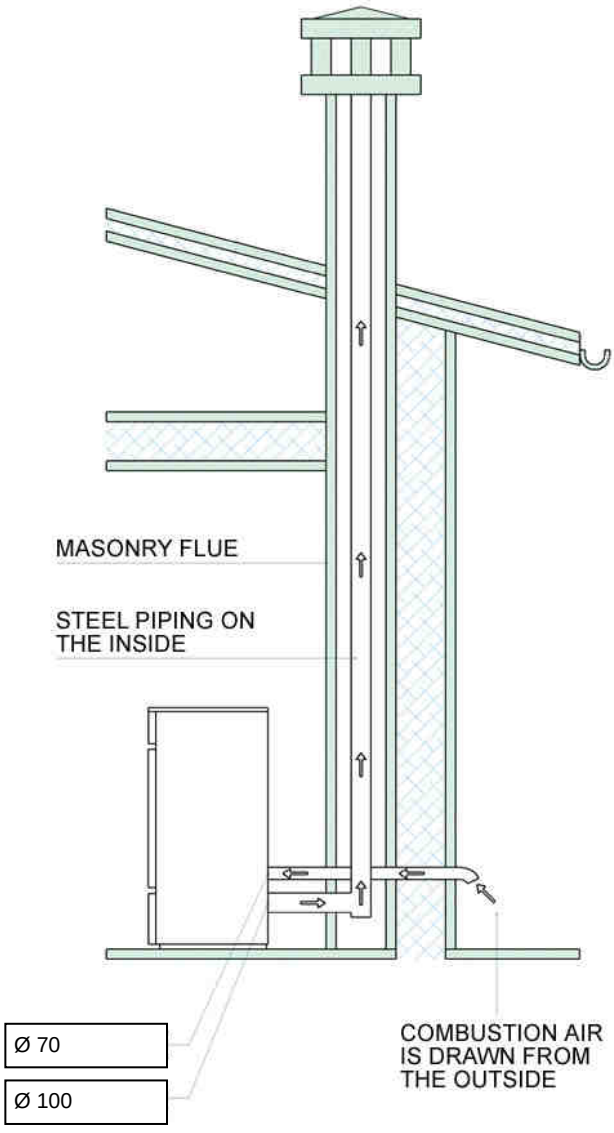


fig. 2

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 70mm; max length 1,5m), connected to the air inlet pipe on the back of the boiler.
- Draw the air directly from the installation room, given that in the proximity of the boiler an air inlet pipe (minimum area 100 cm^2) 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 boiler, which is reported on the plate.

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

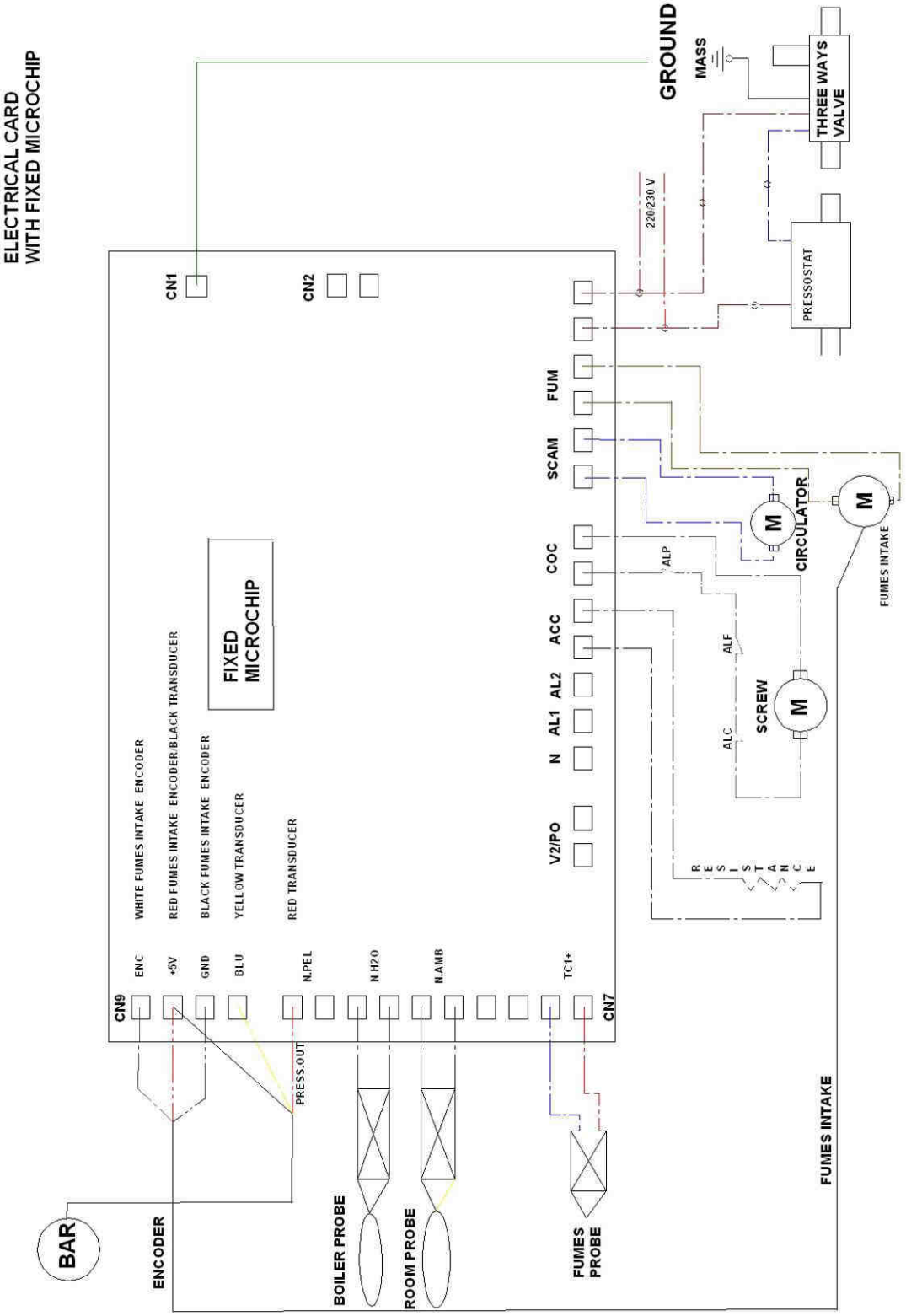
The boiler must be connected to a norm-compliant, 230v – 50Hz mains outlet. Avoid using adapters, multiple sockets or extensions.

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

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

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

ELECTRICAL SCHEME

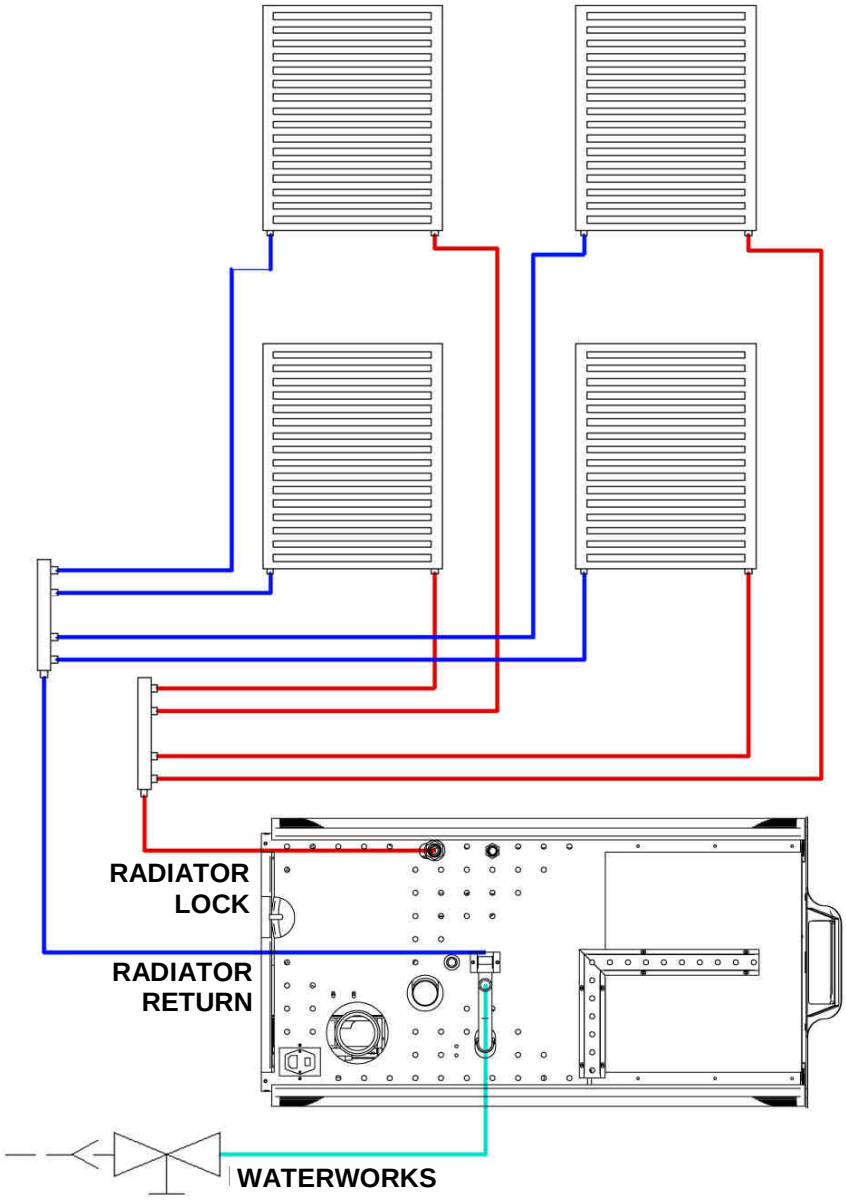


b.7 Connecting to the waterworks

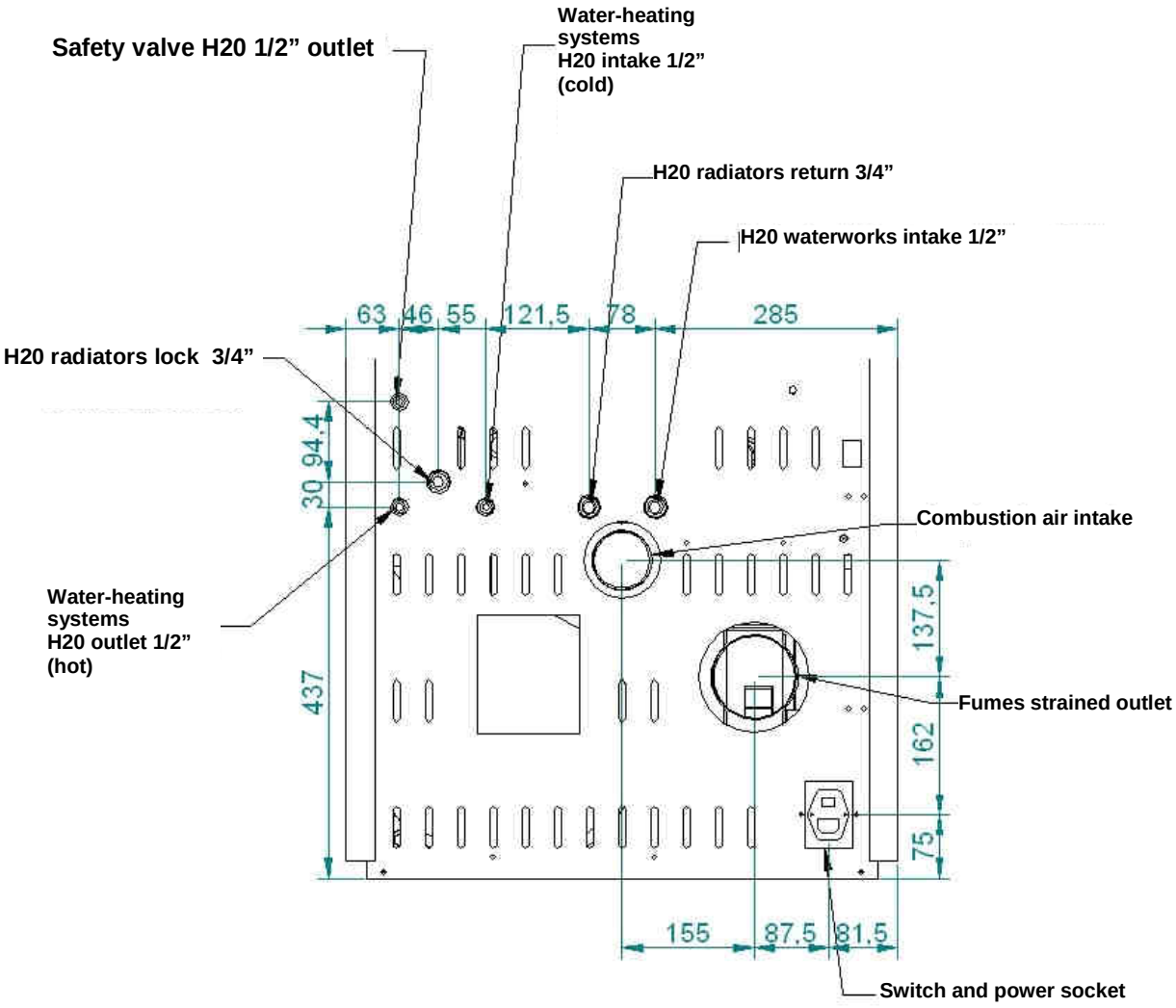
The pellet boiler is equipped with a heating water circuit, completed of circulator, safety valve, temperature probe and pressurestat. The heating circuit can be connected directly to the system (radiators and other exchangers), without any additional components.

When connecting the boiler with the waterworks, you must be make sure that the equipped joints are compatible with those of the system; otherwise, perform the connection with suitable joints. Connect the boiler correctly, as shown in the picture (see below).

In order to avoid malfunctioning or damages to the boiler, qualified personnel must perform the connection to the waterworks.



Connections



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

If the boiler reaches a temperature of 60℃ inside the thermo chamber, it activates the provided system circulator, permitting the diffusion of the heat inside the building. The lighting temperature of the circulator can be modified. If the boiler exceeds by 10℃ the set value 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 boiler will automatically light the flame up again.

The boiler must always function with its door peremptorily closed.

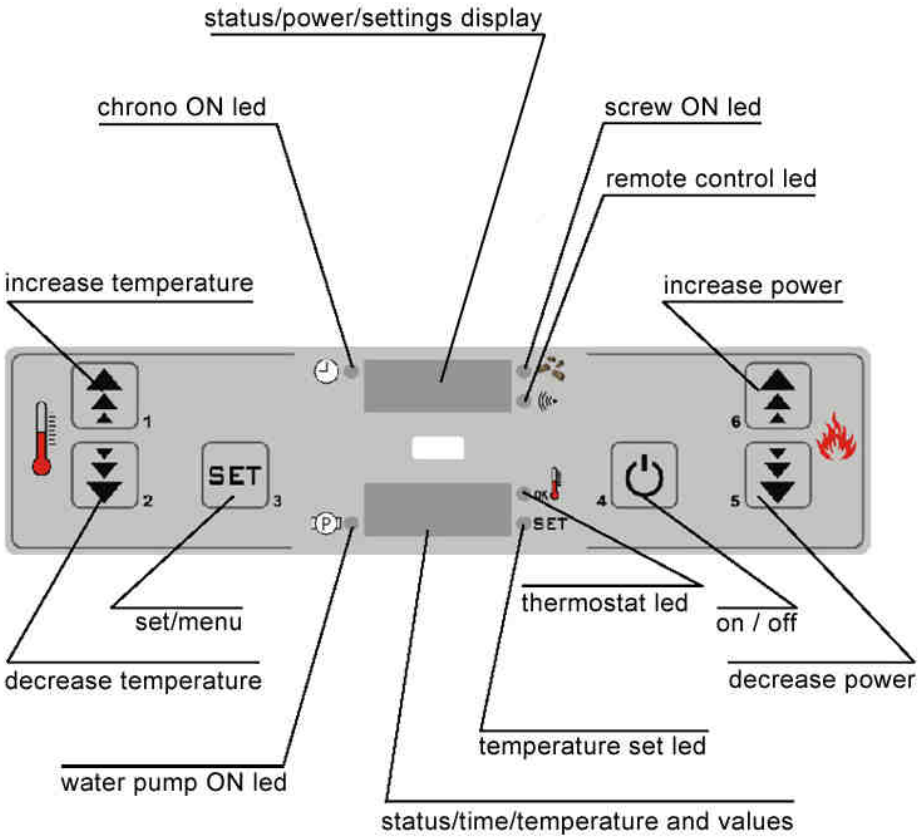
It is necessary that outlet system of the flue gas be properly sealed.

To ensure a good efficiency and a correct functioning, it is necessary that the boiler 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 boiler for the first time

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

c.5 Activating the boiler

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

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

While lighting, the boiler 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 boiler 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℃ per minute).

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

The water pressure for the lighting of the boiler goes from o.5 to 1.5bars. It is possible to display the internal pressure of to the system by pressing the key n. 2 for a few seconds.

c.6 Room temperature setting

The boiler 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 BOILER AUTOMATICALLY MODULATES THE PELLET SUPPLYING BY USING THE NECESSARY FUEL TO MAINTAIN THE SET TEMPERATURE (“RIS” MODE).

c.7 Switching off the boiler

You can switch the boiler 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 boiler 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.8 Managing the automatic lighting (chronothermostat)

The automatic lighting function permits to weekly program the lighting and switching off of the boiler. 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 once to set the water temperature.

Press the “set” key twice to set the room temperature.

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 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.

c.9 Technical parameters access

UT04: Key to access technical parameters.

IN ORDER TO AVOID MALFUNCTIONING OR DAMAGES TO THE BOILER, THE PARAMETERS ADJUSTMENT MUST BE PERFORMED BY QUALIFIED PERSONNEL.

To access the technical parameters, Press and hold the “SET” key (3) until UT01 appears on the upper display.

Press three times “SET” key (3) until UT04 appears on the upper display.

Proceed by inputs with the “TEMPERATURE INCREASE” key (1) until the parameter A9 appears on the lower display.

Confirm the operation with the “SET” key (3).

The upper display will show the parameter number, and the lower display will show the parameter field to be modified.

Modify the value of the parameter with the “TEMPERATURE INCREASE” OR “TEMPERATURE DECREASE” keys (1 or 2).

Press the “SET” key (3) to confirm the entered value. The display will propose the following parameter.

Press the “SET” key (3) to run over the parameters.

Press the “ON/OFF” key (4) to exit.

N.B. To access the technical settings, the UT01 setting must have a value different than “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 boiler. Its function consists of in taking and expelling the fumes that form in the combustion chamber. This operation permits a perfect combustion and a better thermic efficiency.



d.3 Safety thermostat

The safety thermostat is situated on the left side of the boiler. It operates by switching the boiler off when the maximum threshold of the water temperature is reached. To restart the boiler it is necessary to operate with the manual restart key.



d.4 Electronic card

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



d.5 General switch

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



d.6 Circulator

It allows the water to circulate inside the heating waterworks. It activates automatically when the water reaches a temperature set in the electronic card. It is possible to increase or decrease the water door through three different speeds of the motor rotation.



d.7 Expansion vessel

The expansion vessel is a component of the water circuit of the boiler, and has a total volume of 6 liters.



d.8 Manometer

The manometer surveys the exercise pressure of the system, which, in normal conditions, varies between 1 and 1.5 bars.



d.9 Fumes probe

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



d.10 Room probe

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



d.11 Safety valve

The safety valve operates in case of an anomalous increase of the pressure inside the system, by discharging the water until the pressure returns to the set value.

Intervention pressure 3 bars.



d.12 Air valve

The air valve has the function to discharge possible air presences inside the system.



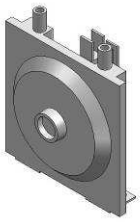
d.13 Sparkling plug

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.

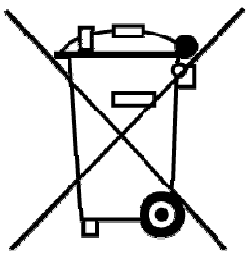


d.14 Pressurestat

The pressurestat unsets the functioning of the screw rotation motor if an obstruction in the flue gas outlet occurs.



E. 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.	

F. ORDINARY CLEANING AND MAINTENANCE

f.1 Cleaning and maintenance by the costumer

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

- 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.

f.2 Periodic maintenance by the Assistance Center

Every 6 months

- Generally clean the inside and outside of the fumes pipe of the boiler.
- 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 boiler.

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).

G. 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 boiler, and only after solving the problem it is possible to restart the boiler, 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
General safety thermostat	ALARM SIC FAIL
Room thermocouple	ALARM ON T o 81℃
Pressure transducer of the water circuit	ALARM PRES
Display lock	BLOCC

g.1 Fumes temperature probe alarm

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

g.2 Unsuccessful lighting alarm

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

g.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 boiler immediately activates the switching-off procedure.

g.4 Power failure alarm

When the boiler 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 boiler restarts its normal activities.

g.5 General thermostat alarm

When the safety general thermostat surveys a temperature, which is higher than the reaction threshold, it operates to stop supplying the screw, and the system switches off. The boiler can again be turned on only after manually restarting the thermostat.

g.6 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 boiler is positioned. The boiler sets the “RIS” mode. Contact the authorized assistance center to check or substitute the probe.

g.7 Circuit pressure alarm

It occurs when the transducer surveys a pressure lower than 0.7 bars or higher than 1.5 bars. The boiler immediately activates the switching off procedure.

g.8 Display lock alarm

Safety display lock. Press and hold down buttons 1 and 2 at the same time for 20 seconds.

H. SOLUTIONS 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 boiler. Remote control batteries.	Get closer to the boiler. Check and substitute the batteries.
Unsuccessful lighting.	Accumulation of too many pellets in the grate.	Clean the grate.

PROBLEM	POSSIBLE CAUSE	SOLUTIONS
The boiler does not light automatically.	The resistance does not reach its temperature	Check the electric cables and fuses.
	Damage or exhausted resistance.	Call the assistance center to substitute the resistance, if damaged Substitute the resistance.
	The pellets do not descend.	IMPORTANT: unplug the boiler before: - checking if the pellets are embedded in the chute. - checking if screw is blocked - check the door seal.
The boiler 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 boiler.
The boiler is blocked for an unsuccessful pellet supply.	Technical problem with the screw.	IMPORTANT: unplug the boiler 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 boiler is precociously jammed, and presents an irregular combustion.	Flue jammed or too long.	See the paragraph about the installation of the boiler. 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 is 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 boiler switches off.	Bad combustion.	Contact the authorized assistance center.
	Malfunctioning of the fumes fan.	
	The installation of the flue was incorrectly performed.	



Legal head office:

Via Martiri delle foibe, 17

31015 Conegliano (TV)

phone 0438 1883101 fax 0438 1883103

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.