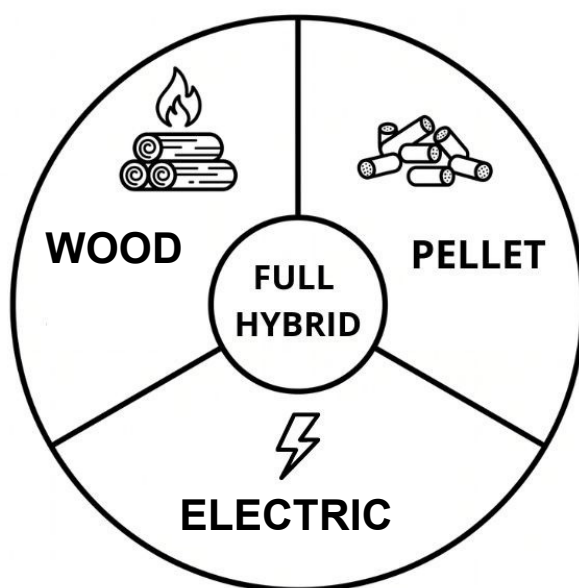


FULL HYBRID

Multi-Energy Heating System



USER MANUAL

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1. INTRODUCTION

Dear Customer,

Thank you for choosing FULL HYBRID, the innovative multi-energy heating system designed by Moretti Design to offer comfort, energy efficiency and continuity of operation in a single product.

Thanks to the integration of different energy sources and an advanced management system, FULL HYBRID is able to adapt its operation to the user's needs and operating conditions, ensuring high performance, ease of use and maximum living comfort.

Before installing, using or doing any work on the product, please read this manual carefully and keep it for future reference.

Compliance with the instructions provided helps ensure proper use of the product, maintenance of performance and safety throughout its life cycle.

NOTE

This manual forms an integral part of the product and must accompany it throughout its useful life. In the event of sale, disposal or transfer of the appliance, the manual shall be delivered to the new user.

1.1 Symbolism used in the manual

The following symbols are used in this manual to draw the user's attention to particularly important information.

Symbol	Indication	Significance
	ATTENTION	Indicates a potentially dangerous situation that could cause injury to persons, damage to the product or to the surrounding environment.
	IMPORTANT	It highlights information that is essential for the correct functioning of the product or for the correct execution of a procedure.
	NOTE	It provides useful information for the correct use of the product or for a better understanding of the procedures described.
	SUGGESTION	It indicates practical advice to improve comfort, energy efficiency and daily use of the product.
	EXAMPLE PRACTICAL	Describes real use situations to facilitate understanding of the system operation.
	TECHNICAL NOTE	Contains technical information intended mainly for qualified service personnel, mainly useful to the technical service centre or for insights into how the product works.

1.2 What is FULL HYBRID

FULL HYBRID is a multi-energy home heating system designed to integrate different energy sources within a single appliance.

The system allows the use of pellets, wood and electric heating, offering the user the possibility of choosing the operating mode best suited to their needs.

The management of energy sources is managed by the user of the FULL HYBRID, which, depending on the selected mode and operating conditions, helps maintain the selected temperature.

The available energy sources are:

Mode	Energy source
PELLETS	Pellets
WOOD	Wood
COMBI	Pellets + Wood + Pellets + ...
ELECTRIC	Electric heater

NOTE

Electric heating is available in three modes of ELECTRIC OPERATION, OFF - MANUAL - AUTO, which based on the user's selection can only operate when the product is in a locked or switched off state. The characteristics of the different modes of operation are described in 6.

1.3 Intended use

FULL HYBRID is intended for domestic space heating only and must be installed and used in compliance with the instructions in this manual and current regulations.

The appliance must be used exclusively with the fuels provided for by the manufacturer and according to the operating methods described in the following chapters.

Any use other than that intended is to be considered improper.

Any use other than that intended by the manufacturer and described in this manual constitutes misuse of the product.

By way of example, but not limited to, the following is prohibited:

- use fuels other than those specified;
- use the product as an incinerator or for waste disposal;
- use flammable liquids or accelerating substances for ignition;
- use the product with the combustion chamber door open, except in cases expressly provided for in this manual;
- install or use the product in environments that do not comply with the prescribed requirements;
- modify, tamper with, or deactivate components, safety devices, or control systems;
- use the product differently than indicated in this manual.

ATTENTION

Improper use of the product can compromise safety, cause harm to people, animals or property, reduce the performance of the appliance and result in the warranty being forfeited. The manufacturer disclaims any liability arising from non-compliant use.

1.4 Responsibility of the user

The user is responsible for the correct use of the product and must use it exclusively according to the instructions given in this manual.

To ensure safety, reliability and performance over time it is necessary to:

- use the product exclusively for the use intended by the manufacturer;
- use only fuels that comply with the characteristics indicated in this manual;
- read and understand the instructions before using the product;
- regularly carry out the cleaning and ordinary maintenance operations under the responsibility of the user;
- keep ventilation openings and air passages free and efficient;
- verify, before each ignition, that the product is in suitable condition for operation;
- do not modify, tamper with, or deactivate safety devices, components, or product adjustments;
- do not perform repairs or technical interventions reserved for the technical service centre;
- Do not allow children to operate the appliance or people unable to use it safely without adequate supervision;
- keep this manual and make it available to all users of the product.

ATTENTION

Do not use the product if you find any operating anomalies, damage to components or safety devices that are not perfectly efficient. Stop using and contact the Technical Service Centre.

1.5 Preliminary checks at first start-up

Before using FULL HYBRID for the first time, check that:

- ✓ The product installation was performed by staff qualified in compliance with the regulations in force in the country of installation.
- ✓ The correct fuel is available for the selected operating mode that you intend to use.
- ✓ The product is properly connected to the electrical supply.

- ✓ All safety warnings, the instructions contained in this manual, and all applicable regulations in the country where the product is installed and used have been read and understood.

2. SAFETY

2.1 General safety warnings

The product has been designed and manufactured to ensure safe and reliable operation when installed, operated and maintained in accordance with the instructions in this manual.

Before using the product, read this manual carefully and keep it for future reference.

Always follow the instructions regarding installation, use, cleaning and maintenance. Failure to follow the instructions can compromise the safety of the product, cause malfunctioning and cause harm to people, animals or property.

Although the appliance is equipped with control and safety systems, some risks may remain during normal operation.

2.2 Risk of burns

During operation and for a certain period after shutdown, some parts of the FULL HYBRID product can reach very high temperatures and pose a risk of burns.

Pay particular attention to the following parts:

- combustion chamber door glass;
- door handle (if placed or stored on or near hot surfaces of the product);
- external metal surfaces;
- hot air outlets;
- internal components of the combustion chamber;
- ducts and fittings of the combustion products evacuation system, where accessible.

Avoid direct contact with hot surfaces during operation and until the appliance is completely cooled.

For door opening and wood loading operations use only accessories supplied by the manufacturer or suitable heat-resistant protective devices.

ATTENTION

Door glass, metal surfaces, and other exposed components can maintain high temperatures even after the product is turned off. Wait for the appliance to cool completely before performing any cleaning, maintenance or inspection operations.

NOTE

The temperature of the accessible surfaces varies depending on the selected operating mode (PELLET, WOOD, COMBI Pellet-Wood or ELECTRIC), the set power and the operating time.

2.3 Door and glass safety

The combustion chamber door shall remain closed during normal operation of the product.

The opening of the door is permitted only for operations provided by the manufacturer, such as:

- loading wood in WOOD - COMBI mode;
- cleaning operations (when the product is completely cold);
- maintenance activities indicated in this manual (when the product is completely cold).

Before opening the door:

- make sure that the opening is done according to the procedures indicated in this manual (unhook the door and wait approximately 10 seconds for the flue gas fan to reach operating speed);
- pay attention to the possible escape of heat, flames or incandescent residues;
- wear heat-resistant protective gloves when necessary.

The door glass is designed to withstand normal operating conditions. Avoid bumps, splashes of water, blows or mechanical stresses that may compromise its integrity.

Do not use the product with damaged glass or deteriorated door seals.

2.4 Permitted fuels

The FULL HYBRID product can only operate using the fuels specified by the manufacturer:

- **PELLETS** of quality compliant with the characteristics indicated in this manual;
- Natural **WOOD** suitable for domestic combustion in accordance with the manufacturer's specifications;

The use of unsuitable fuels can cause:

- bad combustion;
- excessive residue formation;
- performance reduction;
- increased emissions;
- unsafe operating conditions.

It is prohibited to use:

- plastic materials;
- household waste;
- wood treated with paints or chemicals;
- materials impregnated with combustible substances;
- liquid fuels;
- any material other than those expressly authorized by the manufacturer.

2.5 Electrical safety

The product must only be used with an electrical system that complies with current regulations.

Before carrying out any cleaning or maintenance operation:

- turn off the product;
- wait for complete cooling;
- disconnect the power supply if required.

Do not use the product in the presence of damaged cables or deteriorated electrical components.

Any work on the electrical system must be carried out exclusively by qualified personnel.

2.6 Behaviour in the event of anomalies, emergencies and prolonged inactivity

In case of abnormal conditions, such as:

- presence of smoke in the environment;
- unusual odors;
- abnormal noises;
- control malfunctions;
- smoke escape;

Proceed as follows:

1. turn off the product using the available commands;
2. do not open the combustion chamber door unless necessary;
3. wait for the appliance to stop completely and cool down;
4. contact the technical service centre if the problem persists.

Do not use the product again until the cause of the abnormality has been verified.

Before reusing the product after a long period of non-use, check:

- check that the combustion chamber is clean;
- the absence of foreign bodies in the smoke evacuation ducts;
- the presence of the expected fuel;
- that the air intakes are not blocked;
- the integrity of the door and its seals.

2.7 Safety checks before ignition

Before each ignition check that:

- the brazier is clean and correctly positioned;
- the fuel used complies with what is indicated in Chapter 4;
- the pellet tank contains sufficient fuel (if provided by the operating mode);
- the firebox door is completely closed ;
- the glass and gaskets are intact;
- air intakes and ventilation openings are not blocked;
- there are no flammable materials in the vicinity of the product;
- the remote control is functional and correctly connected to the product;
- there are no alarm reports or anomalies on the display.

! IMPORTANT

If any of the above verifications are not met, do not use the product until the correct operating conditions are restored.

3. INSTALLATION

3.1 General installation information

The correct installation of the FULL HYBRID product is a fundamental requirement to ensure the safe operation of the appliance, the maintenance of the performance declared by the manufacturer and the correct functioning of the control and safety systems present. Installation must be performed exclusively by qualified technical personnel, in compliance with:

- of the applicable legislation in force in the country of installation;
- of the applicable technical standards;
- of the requirements contained in this manual;
- of the indications given in the manufacturer's technical documentation.

For solid fuel appliances intended for domestic heating, the following where applicable.

- **UNI EN 16510-1** – Solid fuel household appliances – General requirements and test methods;
- **UNI EN 13384** – Chimneys – Thermal and fluid dynamic calculation methods;
- **UNI EN 15287** – Chimneys – Design, installation and commissioning of chimney systems;
- **UNI 10683** – Wood-fired heat generators or other solid biofuels – Installation requirements (for installations in Italy);
- any further national, regional or local provisions in force in the country of installation.

The choice of the room, the construction of the system for evacuating combustion products, the management of combustion air, the electrical connection and compliance with safety distances must be carried out in accordance with the provisions of the applicable standards and the manufacturer's requirements.

Before commissioning, all the checks required by current legislation and the manufacturer's procedures must be carried out, in order to verify:

- the conformity of the installation;
- the correct creation of connections;
- the correct functioning of the device;
- the effectiveness of control and safety devices.

The FULL HYBRID product must only be installed using suitable components, materials and accessories that comply with the legislative provisions, applicable technical standards and requirements of the manufacturer.

Do not make any changes to the appliance, system or related components. The use of components, accessories or spare parts that are not original or not authorized by the manufacturer may compromise the safety, correct operation and conformity of the product.

Failure to comply with installation requirements may result in unsafe operating conditions. The manufacturer is not liable for damages resulting from non-compliant installations, improper use, unauthorized modifications or interventions carried out by unqualified personnel.

3.2 Installation room requirements

The installation room must be suitable for the presence of a solid fuel apparatus and must ensure environmental conditions suitable for operation of the product.

Installation in premises is not permitted:

- with potentially explosive atmosphere;
- used for storing of easily flammable materials;
- containing substances that may compromise combustion or safety;
- not compatible with the intended use of the appliance.

The installation room must also provide access for:

- access to the combustion chamber door;
- loading wood in WOOD and COMBI mode;
- ordinary cleaning operations;
- the planned maintenance interventions.

The following minimum volumes are required for FULL HYBRID models:

Model	Certified rated power	Minimum volume of the premises
FULL HYBRID 9	8,2 kW	41 m ³ (calculation: $8.2 \times 5 = 41,0 \text{ m}^3$)
FULL HYBRID 14	13,0 kW	65 m ³ (calculation: $13.0 \times 5 = 65,0 \text{ m}^3$)

NOTE

The above values apply regardless of the fuel used. Therefore, the minimum volume of the room must be respected both during pellet operation and during wood operation, as well as in the combined operating modes.

The ability of the floor or support surface to support the total weight of the FULL HYBRID product (250 kg) shall be verified prior to installation.

The installation surface must be:

- stable;
- resistant;
- made of suitable materials;
- resistant to the temperatures generated by the appliance.

Where necessary, suitable technical solutions for load distribution must be adopted.

3.3 Presence of other appliances in the premises

The presence of other appliances or systems that change the conditions of the environment must be assessed before installation.

In particular, the following must be considered:

- kitchen extractor hoods;
- extraction fans;
- controlled mechanical ventilation (VMC) systems;
- other heat generators;
- appliances fuelled with gas, diesel or other fuels.

Such appliances must not create conditions which could compromise:

- the availability of air necessary for combustion;
- the correct functioning of the device;
- the proper evacuation of combustion products.

3.4 Safety distances from combustible materials

Safety distances shall be maintained with respect to all combustible or heat-sensitive materials in the vicinity of the appliance, such as, by way of example:

- furniture and furnishing accessories;
- wooden paneling and paneling;
- curtains and draperies;
- fabrics and carpets;
- plastic materials;
- combustible insulating elements;
- other materials which may deteriorate or ignite as a result of prolonged exposure to heat.

Distances shall be measured between the outer surface of the appliance and the nearest combustible material, according to the diagrams in the figure below.

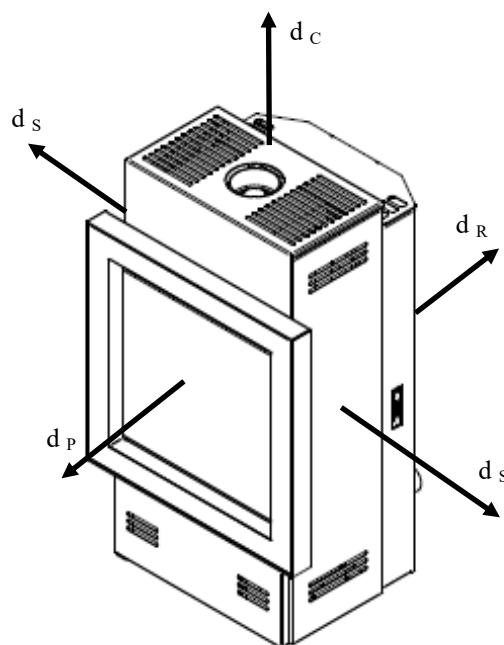


FIGURE 1 – Minimum safe distances from combustible materials

TABLE 1 – Minimum safe distances from combustible materials

Symbol	Description	Minimum distance
d_R	Minimum distance to rear combustible materials	100 mm
d_S	Minimum distance to combustible materials side	200 mm
d_C	Minimum distance to combustible materials ceiling	750 mm
d_P	Minimum distance to combustible materials adjacent (e.g. furniture)	1000 mm
d_F	Minimum distance to combustible materials floor in front	-
d_L	Minimum distance to combustible materials side radiant area	-
d_B	Minimum bottom clearance to combustible materials	-
d_{non}	Minimum distance from non-combustible wall	-
s	Protective insulation according to the constructor instructions	-

3.5 Heat-sensitive materials

Where non-combustible materials sensitive to high temperatures are present in the vicinity of the appliance, appropriate protective measures must be taken to avoid deterioration, deformation, discolouration or other damage caused by exposure to heat.

Particular attention must be paid, by way of example, to the following materials and surfaces:

- walls with decorative or delicate finishes;
- painted surfaces;
- plastic or synthetic coatings;
- decorative elements;
- furniture or furnishings;
- any other material which may be altered following prolonged exposure to heat.

The qualified installer is required to check the suitability of the materials in the installation environment and to take appropriate protective measures, where necessary, in compliance with current regulations and the instructions in this manual.

Do not place combustible materials:

- above the device;
- in front of the combustion chamber door;
- near hot surfaces;
- at the hot air outlets.

It is prohibited to use the appliance as a support surface for objects or materials.

The manufacturer disclaims all liability for damage resulting from the installation of the appliance in the vicinity of unsuitable or inadequately protected materials.

3.6 Room-sealed installation

The FULL HYBRID product, in the versions prepared, can be installed in a hermetic configuration, in compliance with the manufacturer's requirements and the technical regulations in force in the country of installation.

In a hermetic installation, the air required for combustion is taken directly from outside the building using a dedicated duct, without using the air from the installation room. Combustion products are instead evacuated outside through a flue system that complies with current regulations.

This configuration allows to limit the influence of the conditions of the room on the combustion process and is particularly suitable in buildings with high airtightness or equipped with mechanical ventilation systems, provided that the entire system is designed and built in accordance with current regulatory requirements.

The hermetic installation must be performed only by qualified technical personnel, using suitable components that comply with the product specifications.

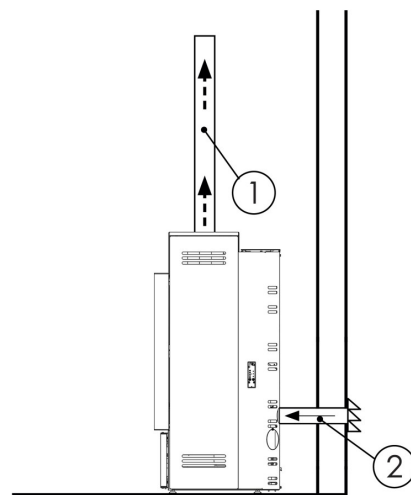


FIGURE 2 – Example of hermetic installation of the FULL HYBRID product

LEGEND

Ref.	Description
1	System for evacuating combustion products (chimney) to the outside
2	Combustion air intake with direct external connection

NOTE

The possibility of creating a hermetic installation depends on the configuration of the system and the regulatory requirements in force in the country of installation. The installer is required to verify compliance before the appliance is put into service.

ATTENTION

Do not modify, obstruct or disconnect the combustion air supply duct or the combustion products evacuation system (chimney). Any unauthorized modification can compromise the safety, proper functioning of the product and the conformity of the installation.

3.7 Traditional installation

The appliance can draw combustion air from the installation room or directly from the outside, according to the configuration provided by the manufacturer and made by the qualified installer in compliance with current legislation.

If air is drawn from the room, permanent ventilation openings and all the requirements set out in current legislation must be guaranteed to ensure the correct supply of combustion air.

3.8 Ventilation of the room and adduction of combustion air

Operating Mode	Combustion air adduction
PELLET	Combustion air is supplied according to the installation configuration provided by the manufacturer (air intake from the room or by means of a dedicated external air intake).
WOOD	Combustion air is supplied according to the installation configuration provided by the manufacturer (withdrawal from the environment or by means of a dedicated external air intake).
COMBI (Pellet-Wood)	The combustion air is supplied according to the installation configuration intended for pellet and wood operation.
ELECTRIC	Electric heating operation does not require Combustion air. However, the requirements relating to the ventilation of the room and the safety requirements of the installation remain valid.

TABLE 2 – Adduction of product combustion air FULL HYBRID

NOTE

The proper operation of the product depends on the installation configuration defined during assembly. Any changes to the air intakes, combustion air supply ducts or ventilation system of the room may compromise the safety, proper functioning and performance of the appliance.

The installation room must have permanent ventilation in accordance with current regulations and appropriate to the configuration of the system.

Ventilation of the premises must ensure:

- adequate air exchange;
- the correct functioning of the device;
- the regular disposal of combustion products;
- the maintenance of the safety conditions laid down in the regulations in force.

! IMPORTANT

Ventilation openings should not be obstructed, reduced or modified during use of the product.

TABLE 3 – Venue ventilation requirements

Requirement	Requirement
Ventilation of the room	It must comply with the regulations in force in the country of installation.
Permanent openings	They must ensure proper air exchange and must be kept free at all times.
Ventilation grates	They shall not reduce the useful section required for the passage of air.
Changes to installation	No changes shall be made to openings or ventilation systems without technical verification.
Verification of installation	It must be carried out by staff qualified technician.

When the product uses the air from the room for combustion, permanent ventilation openings shall be provided.

Openings must:

- ensure an adequate supply of combustion air;
- be permanent and non-obstructible;
- be made and positioned in such a way as to ensure correct air exchange;
- be kept free of any obstruction at all times.

Permanent ventilation openings must always be kept free and must not be:

- scaled down;
- closed;
- covered;
- obstructed, even partially.

Where they are protected by means of grids, nets or other protective equipment, they shall:

- do not reduce the useful air passage section;
- allow normal cleaning and maintenance operations;
- prevent the entry of foreign bodies without compromising the correct flow of air.

NOTE information on the sizing of ventilation openings

The sizing of permanent ventilation openings must be carried out by the qualified installer in accordance with the product installation configuration, the manufacturer's requirements, the regulations in force in the country of installation and any applicable local provisions.

For information, some installation configurations may provide for a sizing proportional to the power of the appliance (e.g. cm²/kW) with any minimum values of the useful section of the opening.

The final sizing must take into account:

- combustion air supply mode;
- possible hermetic configuration of the device;
- power of the device;
- characteristics of the installation room;
- any local regulatory requirements.

Informative EXAMPLE

Where the applicable legislation provides for a requirement of 6 cm²/kW and a reference power of 13 kW is considered, the theoretical calculation of the useful section of the opening shall be as follows

$$13 \text{ kW} \times 6 \text{ cm}^2/\text{kW} = 78 \text{ cm}^2$$

In case a regulatory minimum value of the opening section is provided, this value shall be respected (for example **100 cm²**).

As an indication, for solid fuel appliances the commonly adopted reference value for the verification of installation conditions is 4 Pa, except for various requirements provided for by the applicable legislation or the specific conditions of the installation site.

The presence of:

- extractor hoods;
- controlled mechanical ventilation (VMC) systems;
- aspirators;
- other air extraction devices;

it must be evaluated during installation in order to verify that it does not compromise the adduction of combustion air and the correct functioning of the appliance.

Combustion air shall not be taken from premises or environments which could compromise the safety of the appliance and installation or the quality of combustion.

Combustion air is not permitted to be drawn from:

- garage;
- garages;
- bedrooms;
- bathrooms and rooms for hygienic-sanitary use;
- common rooms of the building;
- rooms with potentially explosive atmospheres;
- premises containing flammable, corrosive or dangerous substances.

It is also prohibited to draw combustion air from crawl spaces or from areas located less than 0.5 m from the aeration openings of the crawl spaces, unless otherwise provided for by applicable current legislation.

To ensure proper combustion and smooth operation of the FULL HYBRID product, the installation room must not be subject to depression conditions that compromise the adequate inflow of combustion air.

As a reference value, the pressure difference between the installation room and the external environment must be compatible with the correct functioning of the appliance and must not exceed the values permitted by current legislation and the manufacturer's requirements. As an indication, for solid fuel appliances the commonly adopted reference value for the verification of installation conditions is 4 Pa, except for various requirements provided for by the applicable legislation or the specific conditions of the installation site.

The presence of:

- extractor hoods;
- controlled mechanical ventilation (VMC) systems;
- aspirators;
- other air extraction devices;

it must be evaluated during installation in order to verify that it does not compromise the adduction of combustion air and the correct functioning of the appliance.

3.9 System for evacuation of combustion products

The proper functioning of the FULL HYBRID product depends significantly on the suitability of the combustion product evacuation system.

The flue system must be designed, sized, installed and maintained in compliance with the technical regulations and legislative provisions in force in the country of installation.

For installations carried out in Italy, the following apply where relevant:

- D.M. 37/08 as amended ;
- UNI 10683;
- UNI EN 13384-1;
- UNI EN 1856-1;
- UNI EN 1856-2;
- UNI EN 15287;
- UNI EN 16510-1;
- any existing regional and local provisions.

For other countries, the applicable national rules must be respected.

The combustion product evacuation system must be dedicated exclusively to the product installed and made with certified components, suitable for use with biomass-fired generators.

3.9.1 The flue

The flue is the system intended for the evacuation of combustion products to the external terminal outlet.

It must be:

- dedicated exclusively to the installed product;
- sized according to the characteristics of the device;
- certified and compliant with current regulations;
- resistant to operating temperatures;
- corrosion resistant;
- inspectable;
- easily cleanable.

The chimney must also:

- ensure stable draft;
- limit the formation of condensates;
- allow the collection of any condensates;
- avoid interference with other systems.

It is not permitted to connect the product to collective or shared flues with other generators, except as expressly provided for by current regulations.

3.9.2 Chimney

The chimney forms the terminal of the flue system and must ensure the correct evacuation of combustion products under all normal operating conditions.

It must be installed in accordance with current regulations and the requirements of the manufacturer of the flue system, ensuring:

- protection from the ingress of rain, snow and foreign bodies;
- the free escape of combustion products;
- correct operation even in the presence of wind;
- the placement outside the reflux zones.

The following figures and Table 5 give examples of correct installation of the chimney and the main quotas to be respected in accordance with current regulations.

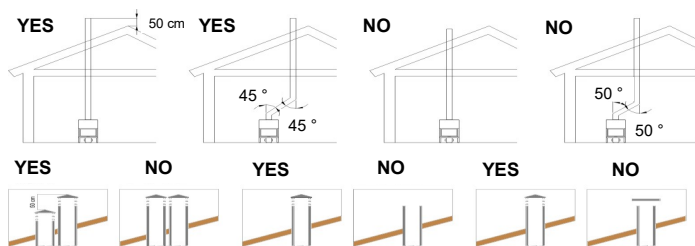


FIGURE 3

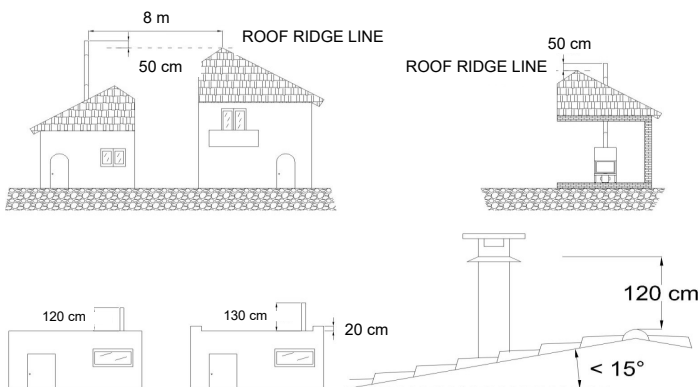


FIGURE 4

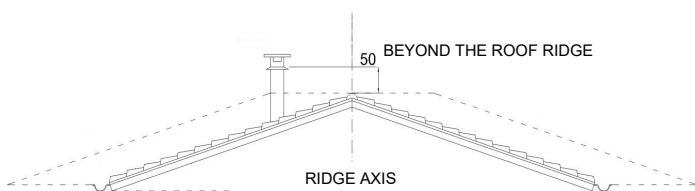


FIGURE 5

TABLE 5

α	A	H	Z
ROOF PITCH	DISTANCE BETWEEN THE ROOF RIDGE CENTERLINE AND THE UPSLOPE SIDE OF THE CHIMNEY	MINIMUM HEIGHT ABOVE THE ROOF (MIN. h)	BACKFLOW ZONE HEIGHT
15°	1,85 m	1,00 m	0,50 m
30°	1,50 m	1,30 m	0,80 m
45°	1,30 m	2,00 m	1,50 m
60°	1,20 m	2,60 m	2,10 m

3.9.3 Connecting the product to the flue system

The connection of the product to the combustion products evacuation system shall be performed using only components conforming to the manufacturer's specifications.

For the FULL HYBRID product, the connection must be made using a smoke channel with a diameter of Ø130 mm, unless otherwise indicated in the technical documentation of the installed model.

Before commissioning, the installation technician must verify that:

- the flue system complies with current regulations;
- there are no obstructions;
- all connections are perfectly hermetic;
- the path of the smoke channel is inspectable.

⚠ ATTENTION

The first section of the smoke channel is subject to the highest temperatures of the entire system and must be made exclusively with components certified for their intended use.

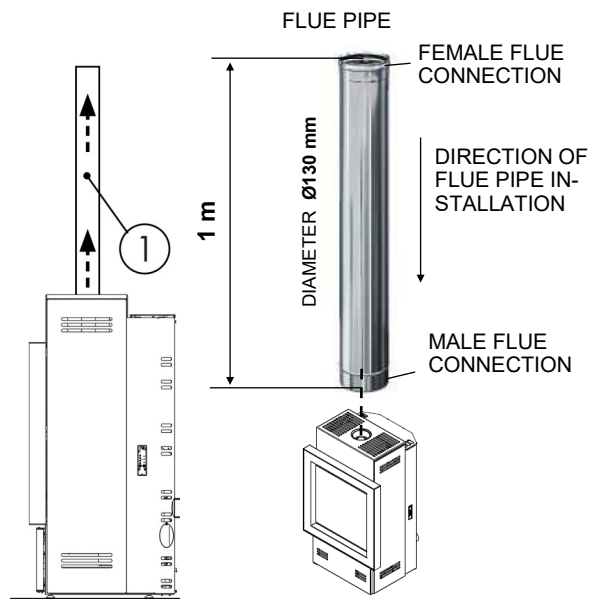


FIGURE 6 - Installation of a single straight section of the flue pipe.

3.9.4 Draught requirements

The proper functioning of the FULL HYBRID product also depends on the draft value available in the flue system.

The draft must comply with the requirements of UNI EN 16510, UNI EN 15287-1, UNI 10683 (where applicable) and the technical specifications declared by the manufacturer. The actual value shall be verified by the qualified installer during the first commissioning of the appliance.

For this product the nominal reference value is:

Parameter	Value
Nominal draught	12 Pa $\pm$ 2 Pa

Values of draught lower or higher than the specified ones may cause:

- ignition difficulties;
- abnormal shutdowns;
- smoke leakage;
- increased emissions;
- greater formation of residues;
- reduced efficiency;
- activation of safety devices.

TABLE 6 indicativa

Measured value	Assessment	Possible effects
<10 Pa	draught insufficient	difficult ignition, smoke, alarms
10–14 Pa	optimal range	regular operation
>14 Pa	high draught	rapid combustion, higher consumption

ⓘ NOTE

The values reported constitute a technical reference. The draught check must be carried out by qualified personnel using suitable instruments.

3.9.5 Installation examples

The figures shown on the following pages illustrate some typical flue system installation configurations. The examples are for illustrative purposes only and do not replace the system design or the checks required by the applicable regulations.

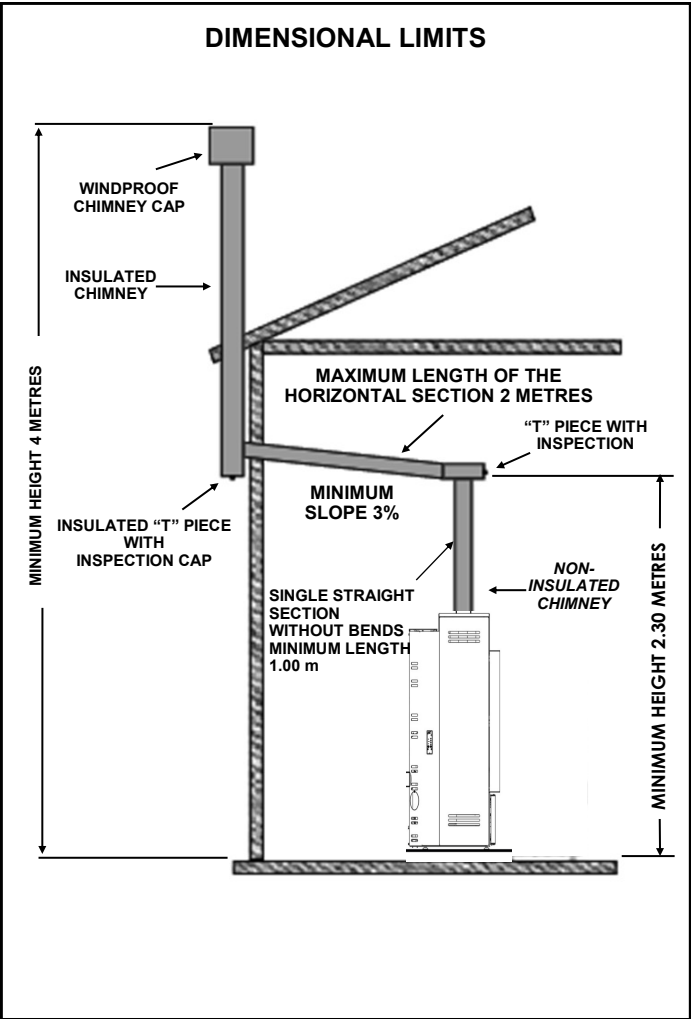


FIGURE 7 A – Installation showing the dimensional limits

 TECHNICAL NOTE

The configurations shown are for illustrative purposes only and do not replace the system sizing and checks required by the applicable regulations. The conformity of the installation must always be verified by the installer according to the product characteristics and the specific installation conditions.

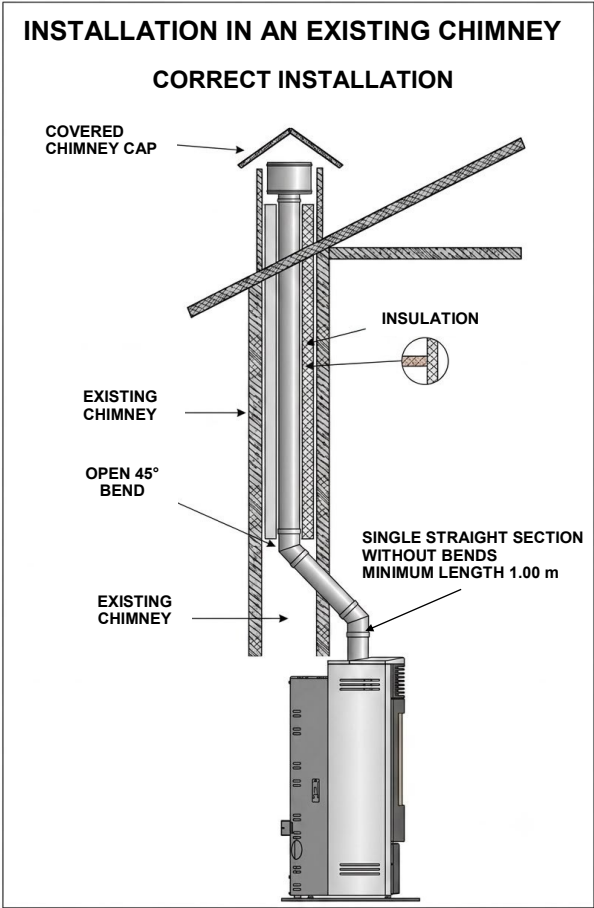


FIGURE 7 B – Installation in an existing chimney

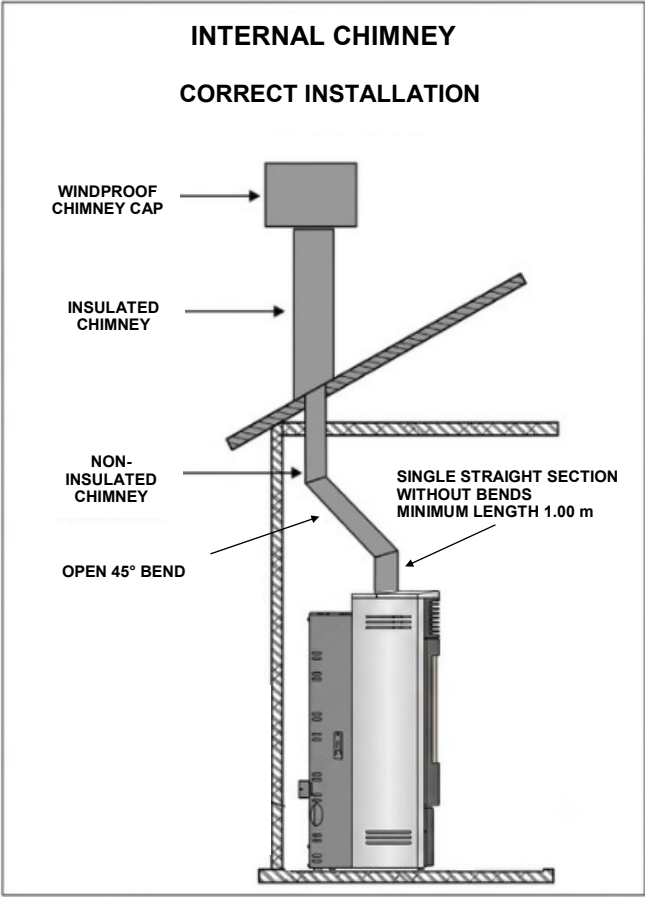


FIGURE 7 C – Installation of an internal chimney

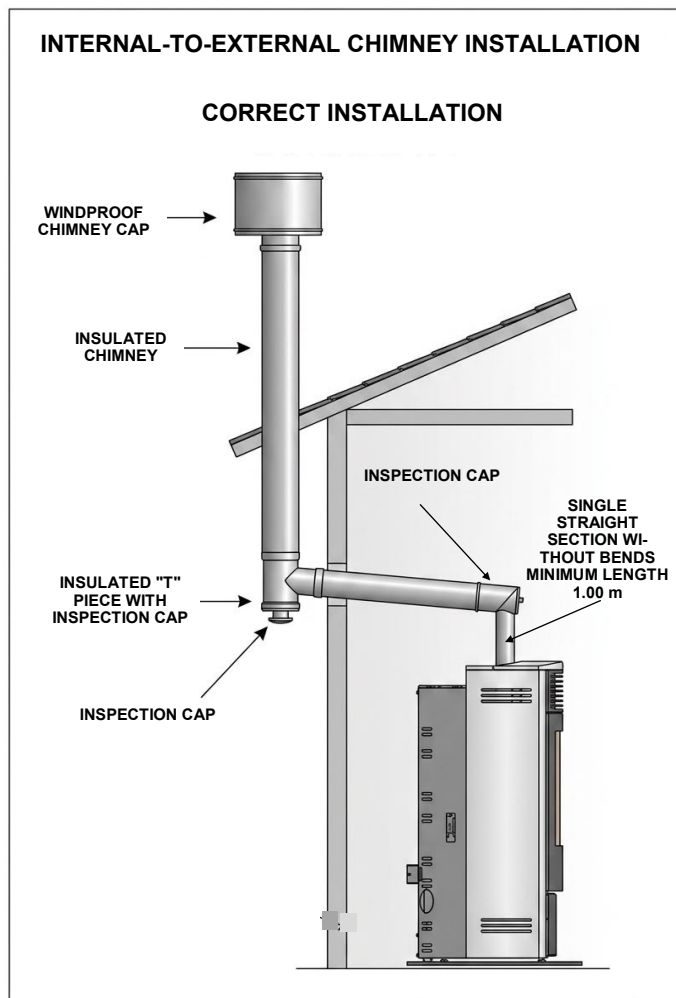


FIGURE 7 D – Installation of internal - external chimney.

4. PERMITTED FUELS

FULL HYBRID is a multi-energy heating system designed to use exclusively the fuels and energy sources specified by the manufacturer. The use of fuels compliant with the characteristics indicated in this manual is essential to ensure:

- safe operation of the product;
- correct energy efficiency;
- low emissions into the atmosphere;
- regular operation of the combustion systems;
- durability of the components;
- maintenance of warranty conditions.

The use of non-compliant or unauthorized fuels may compromise product performance, cause operating faults, increase the frequency of maintenance operations, and result in damage not covered by the warranty.

4.1 Pellet

The product is designed to operate with certified wood pellets, certified according to UNI EN ISO 17225-2, quality class A1, and having the characteristics specified by the manufacturer.

To ensure correct operation, it is recommended to use pellets with the following characteristics:

- nominal diameter: 6 mm;
- length compliant with the UNI EN ISO 17225-2 standard;
- moisture content $\leq 10\%$;
- low ash content;
- high mechanical durability;
- absence of additives, binders, or foreign substances.

The pellets must be stored in a dry environment, protected from moisture and atmospheric agents. Before use, check that the fuel is intact, free from excessive dust, and shows no signs of deterioration.

The use of high-quality pellets helps ensure:

- regular ignition;
- efficient combustion;
- reduced formation of ash and deposits;
- fewer cleaning and maintenance operations;
- improved energy performance of the product.

Characteristic	Recommended value
Reference standard	UNI EN ISO 17225-2
Quality class	A1
Diameter	6 mm
Length	$3.15 \div 40$ mm
Moisture content	$\leq 10\%$
Ash content	$\leq 0.7\%$
Lower calorific value	≥ 4.6 kWh/kg
Mechanical durability	$\geq 98\%$
Dust content	Minimum possible

4.2 Wood

Use only natural untreated wood, properly seasoned and with a moisture content below 20%.

To achieve efficient combustion and limit the formation of deposits in the flue gas circuit, the use of hard wood species, well seasoned and with dimensions compliant with the specifications provided in this manual, is recommended.

The wood must be stored in a dry, well-ventilated place, protected from weather and avoiding direct contact with the ground.

The use of properly seasoned wood allows:

- improving the efficiency of the generator;
- reducing fuel consumption;
- limiting the formation of soot and creosote;
- reducing emissions into the atmosphere;
- preserving the efficiency of the flue gas evacuation system.

The main recommended wood species are listed in Table 6.

TABLE 6 - Main wood species

Wood species	Calorific value	Recommended seasoning time
Beech	Very high	18–24 months
Hornbeam	Very high	18–24 months
Oak	High	24 months
Ash	High	18 months
Acacia (Black locust)	High	18–24 months
Olive	Very high	24 months
Birch	Medium	12–18 months
Poplar	Low	12 months
Fir	Low	12 months
Pine	Low	12 months

4.3 Prohibited fuels

To ensure safe operation, compliance with the declared performance, and conformity of the product, only the fuels specified in this manual may be used.

It is strictly forbidden to introduce into the combustion chamber or the pellet hopper any fuels or materials other than those expressly authorized by the manufacturer.

In particular, do not use:

- painted, varnished, impregnated, or chemically treated wood;
- wood containing adhesives, synthetic resins, or other surface treatments;
- particleboard, MDF, OSB, plywood, or other engineered wood products;
- pellets that do not comply with the characteristics specified by the manufacturer or are not certified according to UNI EN ISO 17225-2;
- coal, coke, or other fossil fuels;
- biomass other than wood pellets and natural firewood;
- household waste, laminated paper, treated cardboard, plastic materials, rubber, or textiles;
- flammable liquids such as gasoline, alcohol, diesel fuel, solvents, or other fire accelerants.

The use of non-permitted fuels or materials may result in:

- hazardous conditions for people, animals, and property;
- fire or damage to the product;
- irregular combustion and increased atmospheric emissions;
- the formation of deposits, soot, and creosote in the flue gas system;
- reduced efficiency and energy performance;
- damage to the internal components of the appliance;
- the need for extraordinary maintenance;
- invalidation of the product warranty;
- performance that no longer complies with the values declared by the manufacturer.

⚠ ATTENTION

Never use the product as an incinerator for the disposal of waste or combustible materials of any kind.

The use of fuels other than those specified constitutes improper use of the product and may compromise operational safety, invalidate the warranty, and cause the appliance to no longer comply with the performance declared by the manufacturer.

Material not to be used	Reason
Green or unseasoned wood	High moisture content, reduced efficiency, increased smoke, soot, and creosote formation.
Painted or varnished wood	Produces harmful emissions and may damage the appliance and the chimney.
Pressure-treated or chemically treated wood	May release toxic and corrosive substances during combustion.
Particleboard	Contains adhesives and resins that are unsuitable for combustion.
MDF	Contains synthetic adhesives that produce harmful emissions.
Plywood and laminated wood	Contain adhesives and resins that are not compatible with the product.
Treated pallets	May contain preservatives, paints, or chemical treatments.
Wood waste	Non-compliant fuel and prohibited.
Laminated paper, plastic, and rubber	Produce toxic emissions and may damage the product.
Coal and coke	Fuels not specified by the manufacturer and incompatible with the appliance.

4.4 Electric heating

The product incorporates an electric heating system that does not require the use of solid fuels.

The correct operation of the system requires the product to be connected to an electrical system that complies with the applicable regulations and to be supplied in accordance with the technical specifications provided in this manual.

NOTE

The operating modes of the electric heating system are described in Section 6.6.

5. PRODUCT FEATURES

5.1 Product identification

The FULL HYBRID system is an appliance designed for space heating through the integrated use of different energy sources.

Each product is identified by a data plate affixed to the appliance, containing the main information required for proper identification and traceability.

For any request for technical assistance, spare parts supply, or communication with the service center, the information shown on the product data plate must be provided.

The main identification data include:

- product model;
- serial number;
- year of manufacture;
- appliance rated characteristics;
- electrical data;
- information relating to the applicable certifications.

The metal data plate must not be removed, altered, or made illegible.

5.2 Main components

The following figure identifies the main components of the product.

Ref.	Description
1	Firebox door
2	Ceramic glass
3	Combustion chamber
4	Pellet hopper
5	Ash drawer
6	Emergency panel (WIKEY)
7	Remote control
8	Hot air outlet
9	Electric heating unit
10	Flue outlet
11	Manual flue bypass lever

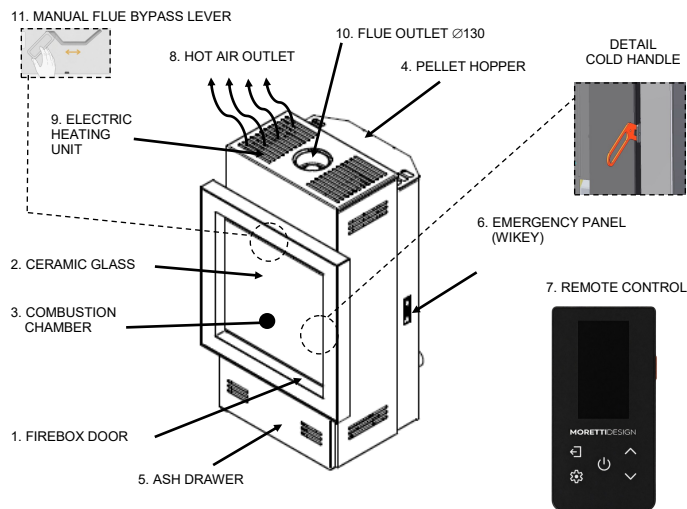


FIGURE 8 - Numbered main components

NOTE

The actual product configuration may vary depending on the installed model in case of ducting systems (optional).

5.3 Dimensions and overall dimensions

The product dimensions must be taken into consideration for the correct positioning of the appliance in the installation environment and to ensure easy access during normal use and maintenance operations.

The main dimensional characteristics are:

- overall height;
- width;
- depth;
- total weight;
- pellet hopper capacity;
- dimensions of the wood loading compartment;
- position of the main connections.

The specific dimensions may vary depending on the model. For complete data, refer to the product technical data sheet.

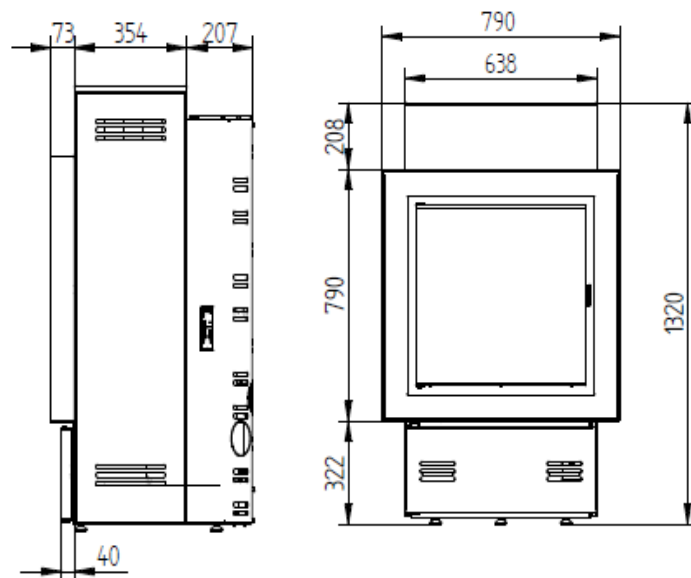


FIGURE 9 - Dimensions and overall dimensions

5.4 Combustion chamber

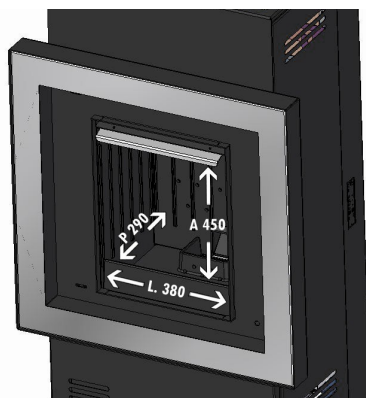
The combustion chamber is one of the main components of the FULL HYBRID system and is designed to ensure efficient combustion, uniform heat distribution, and high living comfort.

The combustion compartment allows the use of wood and supports the integrated operation of the operating modes that involve the presence of a flame inside the appliance.

The combustion chamber is used in the following operating modes:

- **PELLET**, for automatic heating management through controlled fuel feeding;
- **WOOD**, for traditional operation with manual loading and ignition of the wood;
- **COMBI Pellet-Wood**, for the integrated management of the two energy sources and continuous living comfort.

To achieve optimal performance and preserve product efficiency, use only certified pellets and natural, dry, properly seasoned wood, in accordance with the instructions provided in this manual.



(L) Width: 380 [mm]
(A) Height: 450 [mm]
(P) Depth: 290 [mm]

FIGURE 10 – Combustion chamber dimensions

5.5 Main technical data

The technical characteristics of the product may vary depending on the model and the installed configuration.

The following table shows the main identification data of the FULL HYBRID system.

Characteristic	Value
Electrical power supply	230 V ~ 50 Hz
Usable energy sources	Pellet, Wood, Electric
Pellet hopper capacity	30 kg (46 litres)
Pellet 9 energy efficiency	80%
Pellet 14 energy efficiency	87%
Wood energy efficiency	77%
Flue outlet diameter	130 mm
Total mass (kg)	250 kg
Energy efficiency class	A+

Characteristic	PELLET 14	PELLET 9	WOOD 9
Total power (kW)	14	9	9.3
Nominal power (kW)	13	8.2	8.1
Min-max consumption (kg/h)	1.15 - 2.98	1.15 - 1.87	2.2
Pellet hopper capacity (kg)	30	30	30
Total efficiency (%)	91	91	86
Flue outlet diameter (mm)	130	130	130
Total mass (kg)	250	250	250
Heated area (m ²)	≈ 100	≈ 70	≈ 60
Energy Efficiency Index (EEI)	128	121	116
Appliance type	CC, CC50		
Combustion chamber dimensions (W × D × H)	380 × 290 × 450 mm		

Characteristics of the integrated electric support

Characteristic	Value
Minimum-maximum power consumption (kW)	0.7 – 1.65
Electrical power supply	230 V / 50 Hz, 1-phase
Air output (m ³ /h)	30

5.6 Metal data plate

The metal data plate affixed to the product shows the identification data and the main technical characteristics of the appliance, in compliance with the applicable regulations.

The data plate allows product identification and must remain intact, legible, and permanently attached to the appliance throughout its entire service life.

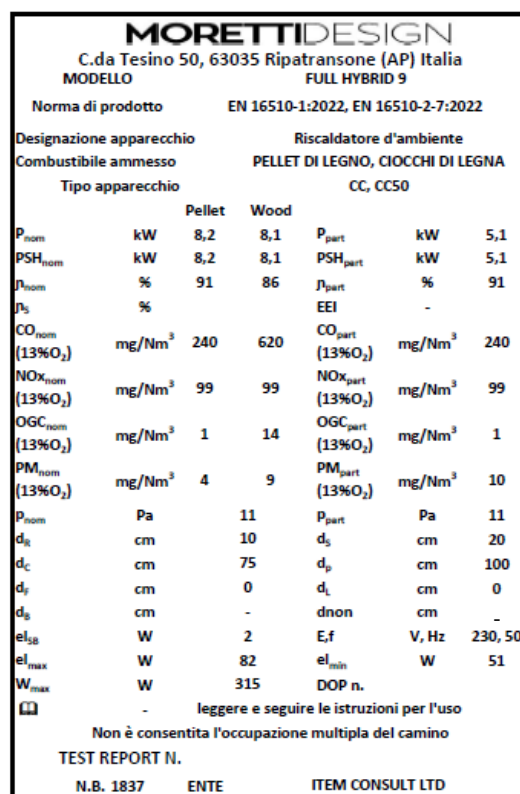
The position of the metal data plate is indicated in the product technical documentation.

The main data shown on the data plate include:

- manufacturer name;
- appliance model;
- serial number;
- year of manufacture;
- number and reference of the applicable standards;
- appliance type;
- permitted fuels;
- nominal heat output;
- efficiency;
- declared emission values;
- electrical supply characteristics;
- electrical power consumption;
- any additional technical characteristics required by regulations.

The information shown on the data plate must be used as a reference for product identification, technical Requesting Technical Assistances, and any spare parts supply.

In case of deterioration or illegibility of the data plate, contact an authorized service center.



6. GETTING TO KNOW THE PRODUCT

6.1 The FULL HYBRID system

FULL HYBRID is a domestic heating system designed to offer maximum flexibility of use thanks to the possibility of using different energy sources within the same appliance.

The product integrates three heating systems:

- pellet combustion;
- wood combustion;
- electric heating through an integrated electric heating element.

The user can select the desired operating mode via the remote control, depending on the available fuel and heating requirements.

Product management is entrusted to the electronic control unit, which continuously monitors the main operating parameters to ensure safety, efficiency, and comfort.

The following operating modes are available:

- PELLET
- WOOD
- COMBI Pellet-Wood
- ELECTRIC

The characteristics of each mode are described in the following sections.

FULL HYBRID can use three different energy sources.

Pellet

Pellet allows fully automatic operation. Ignition, fuel feeding, combustion regulation, and shutdown are managed by the electronic control unit. Use only pellets that comply with the characteristics specified in Chapter 4.

Wood

Wood combustion is started by the user through manual fuel loading. To ensure correct operation, only natural, dry, and properly seasoned wood logs, compliant with the instructions provided in Chapter 4, must be used.

Electric heating

The product incorporates a heating system using an electric heating element.

This mode does not require the use of solid fuels and is managed according to the operating mode selected by the user.

6.2 Operating logic

Before ignition, the user selects the desired operating mode via the remote control (PELLET, WOOD, COMBI Pellet-Wood, or ELECTRIC). During operation, the electronic control unit continuously monitors the main product parameters through the installed sensors, including:

- room temperature (detected by the remote control);
- flue gas temperature;
- temperature of the internal product sensors;
- combustion status;
- safety devices.

Depending on the selected mode, the system automatically manages:

- ignition phases;
- combustion process;
- temperature control;
- safety devices;
- controlled shutdown procedures.

The user can set or modify:

- the desired room temperature;
- combustion power (when provided by the selected mode);
- the speed of the room fans and any ducting system (if available);
- automatic or manual management mode of the available functions;
- product shutdown.

When AUTOMATIC mode is active, the software automatically adjusts the operating power according to the set room temperature, helping to maintain the desired comfort level and optimize consumption.

During operation, the remote control constantly displays the product status, the main operating information, and any information messages or alarm warnings.

! IMPORTANT

The operating mode must be selected before switching on the product. Any changes of mode during operation are permitted only in the cases provided by the management software.

6.3 PELLET mode

The PELLET mode uses only pellets as fuel and is designed to ensure fully automatic operation of the product.

Once started, FULL HYBRID independently manages all combustion phases, from ignition to shutdown, automatically adjusting operation according to the settings defined by the user and the parameters detected by the sensors.

This mode is recommended when continuous, automatic heating is required with minimal intervention by the user.

The PELLET mode offers the following advantages:

- automatic ignition;
- automatic fuel feeding;
- automatic combustion regulation;
- automatic maintenance of room temperature;
- high operating comfort;
- optimized consumption.

6.3.1 How it works

After selecting the PELLET mode and giving the ignition command, the product automatically performs the start-up cycle.

During operation, the electronic control unit continuously monitors the main operating parameters, including flue gas temperature, room temperature, and combustion status, automatically adjusting operation to maintain the set conditions.

The user only needs to check the availability of pellets in the hopper, set the desired room temperature, and perform the normal cleaning operations specified in this manual.

6.3.2 Ignition

Ignition occurs automatically through the integrated electric ignition system.

After the start command, the electronic control unit automatically performs:

- preliminary checking of the safety devices;
- pellet ignition;
- combustion stabilization;
- transition to normal operation.

During this phase, no intervention by the user is required.

6.3.3 Combustion regulation

During operation, combustion is automatically managed by the electronic control unit.

The user can set the power management mode via the remote control by choosing between:

- **MANUAL**, with direct selection of the power level;
- **AUTOMATIC**, in which the product independently adjusts the power according to the set room temperature.

The power adjustment modes are described in the "Power" Menu.

6.3.4 Automatic power management

When **AUTOMATIC** mode is active, the software continuously compares the room temperature detected by the sensor integrated in the remote control with the value set by the user.

Depending on the difference between the two values, the control unit automatically increases or decreases the combustion power to help achieve and maintain the desired room temperature.

! NOTE

The **AUTOMATIC** mode only affects the combustion power and does not change the selected operating mode.

6.3.5 Shutdown

Shutdown is managed automatically by the electronic control unit.

After the shutdown command, the product stops pellet feeding and automatically completes the shutdown cycle, keeping the necessary cooling and safety devices active until the procedure is completed.

6.3.6 Practical example

The user wants to heat the home while maintaining a room temperature of 22 °C.

After checking that there is sufficient pellet in the hopper, the user selects the PELLET mode via the remote control, sets the desired temperature, and starts the product.

FULL HYBRID automatically manages ignition, combustion, power regulation, and shutdown, maintaining the set room temperature without requiring further intervention.

6.4 WOOD mode

The WOOD mode uses only wood logs as fuel for room heating. In this mode, ignition and wood loading are carried out manually by the user, while the electronic control unit continuously monitors the main operating parameters, automatically managing the product control and safety devices.

This mode is recommended for users who wish to use wood as the only energy source while maintaining automatic control of the main system functions.

6.4.1 How it works

After selecting the WOOD mode, the user starts the fire manually. During operation, the electronic control unit continuously monitors the main product parameters, including flue gas temperature, internal temperatures, and combustion status, ensuring correct operation and compliance with safety conditions.

The user must load the wood when necessary and keep the firebox in the correct operating conditions.

6.4.2 Ignition

Wood ignition is carried out manually by the user.

For correct ignition, it is recommended to arrange the kindling material and wood logs according to the instructions shown in the figure.

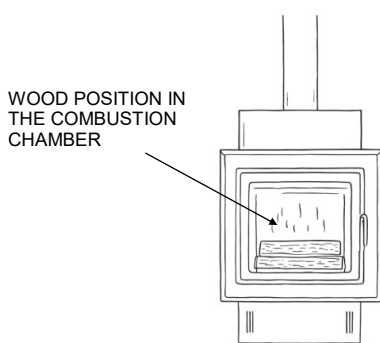


FIGURE 11 - Wood positioning in the combustion chamber

During this phase, the control unit monitors the operating parameters and checks the correct development of the combustion.

6.4.3 Combustion regulation

In WOOD mode, the user can select the desired power level via the remote control. The control unit automatically adjusts the flue fan speed, increasing or decreasing the draft and adapting the combustion intensity to the selected level.

Five power levels are available:

- **P1**: minimum power;
- **P2**;
- **P3**;
- **P4**;
- **P5**: maximum power.

The selected power remains active until a new setting is made by the user.

6.4.4 Combustion management

During operation, the electronic control unit continuously monitors the combustion parameters through the sensors installed on the product.

Unlike the **PELLET** mode, fuel feeding is not automatic and wood loading must be carried out manually by the user.

6.4.5 Shutdown

Shutdown occurs naturally at the end of wood combustion or can be carried out by interrupting the heating cycle according to the procedures provided for the product.

During the final phase, the control unit continues to monitor the operation of the safety devices and keeps the systems required for product cooling active until the cycle is completed.

6.4.6 Practical example

The user wants to heat the home using only wood.

After selecting the **WOOD** mode, the user loads the combustion chamber with wood logs that comply with the characteristics specified by the manufacturer and performs manual ignition.

During operation, the user can select the desired power level via the remote control. The control unit automatically adjusts the flue fan according to the set power level, continuously monitoring combustion and safety devices.

The manual flue bypass lever

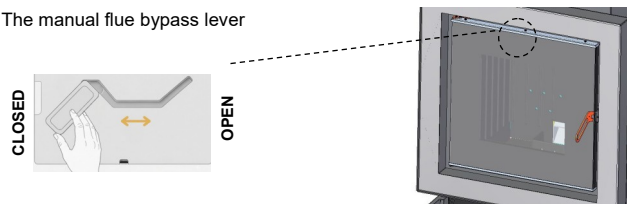


FIGURE 12 - Flue bypass lever

N.B. Leave the lever always in the open position in all operating modes.

6.4.7 Wood operation in the absence of electricity

In the event of a power supply interruption, the stove can only be used in WOOD mode, using the natural draft of the flue system. Under these conditions, all electrically powered components are deactivated, including the electronic control unit, fans, pellet loading system, and all automatic management devices.

To ensure correct flue gas evacuation, it is necessary to open the manual emergency valve by following the instructions provided in this manual. Once combustion has stabilized, the valve can be adjusted using the dedicated lever to optimize the natural draft of the flue system according to the combustion conditions.

If, during operation without electrical power, it is necessary to reload the wood, fully open the manual valve using the lever and wait until there are no live flames or smoke escaping from the firebox, but only a bed of embers remains. At this point, open the door, load the wood, close the firebox, and once stable combustion has been restored, adjust the valve again using the lever according to the flue draft conditions.

When the electrical power supply is restored, no operation is required: the stove will automatically resume normal operation according to the mode set before the power interruption.

6.5 COMBI Pellet-Wood mode

The COMBI Pellet-Wood mode allows the automatic use of both available energy sources, combining the convenience of pellets with the advantages of wood combustion.

In this mode, the system automatically manages the transition between pellet and wood according to the operating logic provided by the control software, without requiring manual intervention during normal operation.

The objective is to ensure heating continuity, optimizing the use of the two fuels according to the combustion status.

The COMBI mode allows:

- using automatic pellet ignition;
- using wood as the main fuel during operation;
- maintaining heating continuity even at the end of wood combustion;
- reducing user intervention;
- increasing operating comfort.

6.5.1 How it works

After the product start-up, the system initially uses pellets to perform automatic ignition and create the optimal conditions for starting wood combustion.

When wood combustion becomes stable, the electronic board automatically stops pellet feeding and continues operation using only wood.

During operation, the system continuously monitors the main operating parameters, automatically managing the transition between the two fuels when provided by the product operating logic.

6.5.2 Automatic Pellet-Wood transition management

During operation in COMBI mode, FULL HYBRID automatically manages the different operating phases.

The operating logic includes:

1. automatic ignition using pellets;
2. start of wood combustion;
3. automatic interruption of pellet feeding when wood combustion becomes stable;
4. wood operation;
5. automatic reactivation of pellet operation when wood combustion ends or is no longer sufficient to maintain the required heating.

The entire management of the transition between pellet and wood is completely automatic.

6.5.3 Changing the operating mode

The COMBI mode can be selected:

- before switching on the product;

If the product is started directly in COMBI mode, it is not possible to subsequently select the PELLET or WOOD mode without completing the shutdown cycle.

TABLE 7 – Changing the operating mode

Modalità attuale	Modalità selezionabile	Operazione consentita
PELLET	COMBI Pellet-Wood	☑ Permitted
WOOD	COMBI Pellet-Wood	☑ Permitted
COMBI Pellet-Wood	PELLET	☒ Not permitted (switch off the product)
COMBI Pellet-Wood	WOOD	☒ Not permitted (switch off the product)

! IMPORTANT

To switch from PELLET or WOOD mode to COMBI mode, the new mode must be selected before the next ignition.

6.5.4 Practical example

The user selects the COMBI Pellet-Wood mode and starts the product.

1. The system automatically ignites the pellet.
2. The wood is previously loaded into the firebox.
3. When the wood reaches stable combustion, the pellet is automatically deactivated.
4. The product continues to operate exclusively with wood.
5. When the wood runs out and the flue gas temperature decreases, the system automatically reactivates the pellet, maintaining the set room temperature without interrupting heating.

6.6 ELECTRIC mode

In **ELECTRIC mode**, room heating is provided exclusively by the integrated electric heater, without using pellets or wood.

The operation of the heater is managed by the electronic control unit, according to the mode selected by the user.

Electric heating can be managed in **OFF**, **MANUAL**, or **AUTOMATIC** modes, described in the following sections.

6.6.1 How it works

The integrated electric heating system can operate as the only heat source or as an automatic support to the other operating modes, depending on the selected management mode.

The electronic control unit automatically controls the activation of the heater and the power level used according to the user settings and the product operating conditions.

The electric heater has two power levels.

TABLE 8 – Electric heater power levels

Level	Thermal power	Room ventilation
Power 1	750 W	Speed 1
Power 2	1500 W	Speed 2

The power level used depends on the selected operating mode and the settings defined by the user.

The following electric heating management modes are available:

- OFF
- MANUAL
- AUTOMATIC

The characteristics of the different modes are described in the following sections.

6.6.2 OFF mode

When the OFF mode is selected, electric heating remains deactivated.

The product uses exclusively the energy source provided by the selected operating mode (PELLET, WOOD, or COMBI Pellet-Wood), without activating the electric heater.

6.6.3 MANUAL mode

When electric heating is set to MANUAL mode, the product uses exclusively the integrated electric heater for room heating.

This mode can only be selected when the product is in the OFF state.

The user can select one of the two available power levels.

The system keeps heating active until the set room temperature is reached, then automatically deactivates the heater.

NOTE

During operation in MANUAL mode, neither pellets nor wood are used.

6.6.4 AUTOMATIC mode

When AUTOMATIC mode is selected, the electric heater normally remains deactivated.

If the product enters a BLOCK condition, the electronic control unit can automatically activate the electric heater to ensure heating continuity in the room.

Activation occurs using the power level previously set by the user.

When normal operating conditions are restored, the system automatically deactivates the electric heater and resumes the previously selected operating mode.

NOTE

The automatic activation of the electric heater is a normal product function and does not indicate the presence of a malfunction.

6.7 What happens after ignition

After receiving the ignition command, FULL HYBRID automatically starts the sequence provided for the selected operating mode.

During this phase, the system:

- checks the status of the safety devices;
- monitors the main operating parameters;
- performs the operations required to start the selected mode;
- brings the product into normal operating conditions.

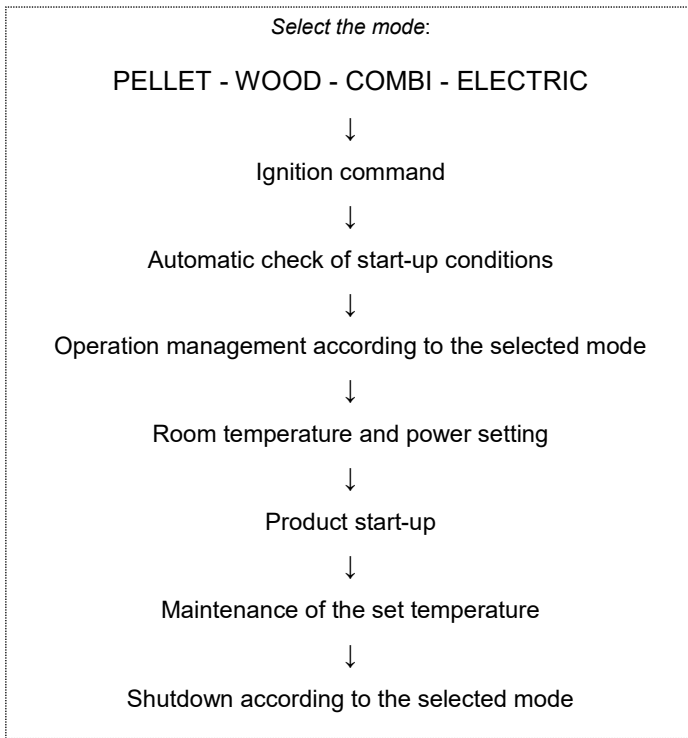
Once the start-up phase has been completed, the product automatically manages operation according to the logic described for the selected operating mode (PELLET, WOOD, COMBI Pellet-Wood, or ELECTRIC).

During operation, the electronic control unit continuously monitors the product parameters and automatically performs the necessary adjustments to maintain the expected operating conditions.

! IMPORTANT

During the automatic start-up and stabilization phases, no intervention by the user is required, except where expressly provided for the WOOD mode.

Mode	Start-up	Combustion management	User intervention
PELLET	Automatic	Automatic	Pellet loading
WOOD	Manual	System-assisted	Wood ignition and reloading Pellet and wood loading
COMBI	Automatic	Automatic	
ELECTRIC	Automatic	Automatic	No fuel



7. REMOTE CONTROL

The remote control is the main interface for managing and controlling the FULL HYBRID product.

Through the remote control, it is possible to switch the product on and off, select the desired operating mode, set the room temperature, adjust both the heating power and combustion power, and access the main configuration functions.

The remote control communicates with the generator via a wireless connection and allows the user to manage all available functions in a simple and intuitive way.

To ensure correct operation, the remote control must be used in compliance with the instructions provided in this manual.

The remote control consists of:

- **graphic display**, for displaying operating information;
- **control buttons**, for managing the main functions;
- **integrated room sensor**, used to detect the temperature of the room where the device is positioned;
- **wireless communication system**, for connection with the product.

The remote control allows control of all available energy modes of the FULL HYBRID system:

- **PELLET**: operation using pellet fuel;
- **WOOD**: operation using wood combustion;
- **COMBI Pellet-Wood**: automatic combined management between pellet and wood operation;
- **ELECTRIC**: operation using the electric heating system.

7.1 Main functions

Through the remote control, it is possible to:

- switch the product on and off;
- select the operating mode;
- set the desired room temperature;
- adjust the room ventilation level (Heating Power);
- adjust the combustion level (Combustion Power);
- activate and modify the functions available in the settings menu;
- display the operating status of the product;
- receive any error notifications or operating warnings.

The remote control also allows continuous monitoring of the product operating conditions through the information displayed on the screen.

7.2 Control buttons

The remote control is equipped with dedicated buttons for managing the main functions.

The functions associated with the buttons may include:

ON/OFF button

Permette l'accensione e lo spegnimento del prodotto.

Durante la pressione prolungata il comando viene interpretato come richiesta di avvio o arresto del funzionamento.

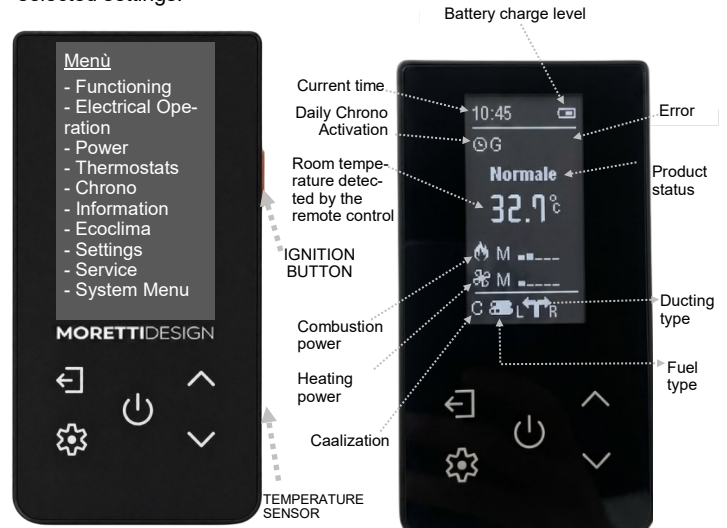
Increase and decrease buttons

They allow the user to:

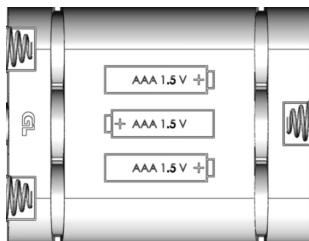
- modify the set room temperature;
- adjust the combustion power;
- adjust the heating power;
- modify the values available in the menus;
- scroll through the different screens;
- select the various available functions.

MENU button

Allows access to the remote control settings and confirmation of the selected settings.



Button	Function	Description
	Sleeping Mode	From the main screen, pressing the button  activates the Sleeping Mode. In this condition, the display remains operational but enters a low-power state, reducing battery consumption. To restore normal operation, simply press the button again  .
	Standby Mode	The Standby Mode is activated by pressing and holding the button for 3 seconds from the main screen. In this condition, the display switches off completely in order to further reduce energy consumption. This mode is recommended in case of prolonged non-use of the remote control (for example: SUMMER). When the display is in Standby Mode, normal operation is restored by pressing the button twice and then performing the double confirmation.  .
	On / Off	The appliance is switched on or off by pressing the ON/OFF button for approximately 3 seconds.
	Unlocking	The system unlock function is activated by pressing and holding the button for 3 seconds.
	Exit	The function allows exiting the menus and returning to the previous navigation level of the interface.
 	Modify Power	The function allows the adjustment of the combustion power level.
	Menu and Submenu Scrolling	The function allows navigation within the menus and submenus, including the increase and decrease of values and room temperature.
	Setting	The function allows access to the submenus and saving the set data.



Battery charge level (3 X AAA - 1,5V)

	Battery charge at maximum level		
	Battery charge at 2/3 level		Battery charge depleted; replace the batteries as soon as possible.
	Battery charge at 1/3 level		The icon flashes.

7.3 Quick access buttons

Room temperature adjustment

The remote control allows the user to set the desired room temperature by means of the quick adjustment buttons located on the device. The set temperature (set-point) is compared with the room temperature detected by the integrated sensor in the remote control. Depending on the selected operating mode and the settings defined by the user, the product manages its operation in order to reach and maintain the desired room temperature.

To ensure correct room temperature detection, it is recommended to:

- position the remote control in the room to be heated, in a location that allows correct room temperature detection;
- avoid direct exposure to sunlight or heat sources;
- do not place the remote control near doors, windows, or air currents;
- do not cover the remote control during operation.

NOTE

The accuracy of room temperature regulation depends on the correct positioning of the remote control, which integrates the sensor used by the product for room temperature control.

Combustion power adjustment

The remote control allows the user to set the product combustion power through the Power menu.

Two management modes are available:

- **MANUAL**
- **AUTOMATIC**

MANUAL Mode

In **MANUAL** mode, the user directly selects the combustion power level according to their requirements.

Five power levels are available, from P1 to P5, where:

- **P1** corresponds to the minimum power;
- **P5** corresponds to the maximum power.

The set power level remains active until a new selection is made by the user.

AUTOMATIC Mode

In **AUTOMATIC** mode, the system automatically manages the combustion power according to the room temperature set on the remote control.

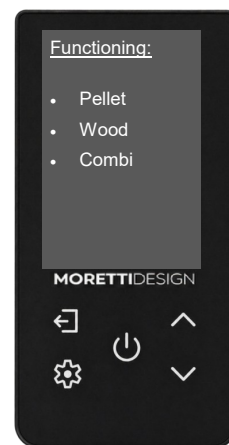
The software automatically increases or decreases the product power in order to help reach and maintain the selected set-point.

NOTE

The **AUTOMATIC** mode adjusts only the combustion power. The product operating mode (**PELLET**, **LEGNA**, **COMBI Pellet-Legna**) remains the one selected by the user.

7.4 Operating mode selection

The remote control allows the user to select the product operating mode according to heating requirements and the fuel to be used. The mode must be selected before switching on the product, except in the cases expressly provided for in this manual.



- PELLET Mode

1. Access the **Menu**.
2. Select the **Functioning** item.
3. Select **PELLET**.
4. Confirm the selection.

By selecting the **PELLET** mode, the product uses exclusively pellet as fuel.

After the start command, the system automatically performs the procedures required for combustion start-up and operation control.

The user can set:

- the desired room temperature (set-point);
- the combustion power, according to the selected operating mode;
- the heating power, according to the selected operating mode.

During operation, the system automatically monitors the main operating parameters and manages the safety functions provided by the manufacturer.

- WOOD Mode

To select the **WOOD** mode:

1. Access the **Menu**.
2. Select the **Functioning** item.
3. Select **WOOD**.
4. Confirm the selection.

The **WOOD** mode allows the product to operate through wood combustion.

The ignition, loading, and any subsequent refuelling of the wood must be carried out by the user according to the instructions provided in this manual.

During operation, the system automatically monitors the main combustion parameters and manages the devices required for correct operation and for maintaining the safety conditions specified by the manufacturer.

- COMBI Mode Pellet-Wood

To select the **COMBI Pellet-Wood** mode:

1. Access the **Menu**.
2. Select the **Functioning** item.
3. Select **COMBI Pellet-Wood**.
4. Confirm the selection.

The **COMBI Pellet-Wood** mode allows the combined use of pellet and wood according to the product operating logic.

After the start command, the product automatically starts pellet combustion. Subsequently, the user can ignite the wood according to the instructions provided in this manual.

When the wood combustion becomes stable, the system automatically switches to wood operation.

If the wood combustion ends and there is still a heat demand, the product automatically reactivates pellet operation in order to maintain the set room temperature.

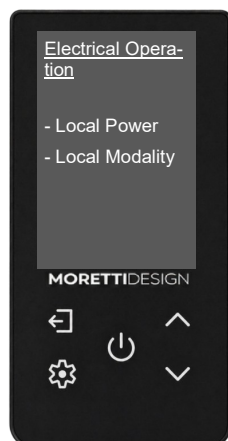
NOTE

The transition management between pellet and wood is completely automatic. For the operating methods and the permitted transitions between the different operating modes, refer to the relevant sections.

7.5 "Electrical Operation" Menu

To configure the electric heating:

1. Access the **Menu**.
2. Select the **Electrical Operation** item.
3. Select the **Local Power** (P1 or P2).
4. Select the **Local Modality** (OFF, MANUAL or AUTO).
5. Confirm the selection.



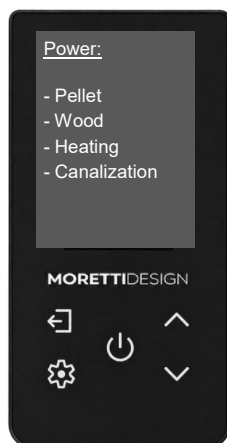
The electric heating system can be configured according to the user's requirements by selecting the desired operating mode and power level. The user sets:

- the electric heating management mode (**OFF**, **MANUAL** or **AUTO**);
- the electric heater power level (**P1** or **P2**);
- la temperatura ambiente desiderata tramite il radiocomando.

The system automatically manages the activation and shutdown of the electric heater according to the selected mode and the operating logic provided by the product.

7.6 "Power" Menu

The **Power** menu allows the configuration of the combustion power management modes and the product ventilation systems, according to the selected operating mode.



- PELLET

Two management modes are available for pellet combustion:

- **MANUAL**
- **AUTOMATIC**

MANUAL Mode

In **MANUAL** mode, the user directly selects the combustion power level according to their requirements.

Five power levels are available, from **P1** to **P5**, where:

- P1 corresponds to the minimum power;
- P5 corresponds to the maximum power.

The set power level remains active until a new selection is made by the user.

AUTOMATIC Mode

In **AUTOMATIC** mode, the system automatically manages the combustion power according to the room temperature set on the remote control.

The software automatically increases or decreases the product power in order to help reach and maintain the selected set-point.

NOTE

The **AUTOMATIC** mode adjusts only the combustion power. The product operating mode (**PELLET**, **WOOD**, **COMBI Pellet-Wood**) remains the one selected by the user.

- WOOD

In **WOOD** mode, only MANUAL management of the combustion power is available.

The user directly selects the desired power level according to their requirements.

Five power levels are available, from P1 to P5, where:

- **P1** corresponds to the minimum power;
- **P5** corresponds to the maximum power.

The set power level remains active until a new selection is made by the user.

The power adjustment modifies the combustion air management and flue gas extraction, adapting the product operation to the selected level.

NOTE

In **WOOD** mode, the combustion power is not automatically adjusted according to the room temperature. The user maintains control of the set power level.

- HEATING

The Heating menu allows the user to set the room fan management mode.

Three modes are available.

MANUAL Mode

The user directly selects the fan speed.

Five ventilation levels are available:

- **P1 = minimum speed;**
- **P5 = maximum speed.**

AUTOMATIC Mode

The system automatically adjusts the room fan speed according to the product operating conditions.

OFF Mode

The room fan remains disabled.

- CANALIZATION

The Canalization menu allows the management of the fan dedicated to hot air canalization.

Three modes are available.

MANUAL Mode

The user directly selects the ducting ventilation level.

Five adjustment levels are available:

- **P1 = minimum ventilation;**
- **P5 = maximum ventilation.**

AUTOMATIC Mode

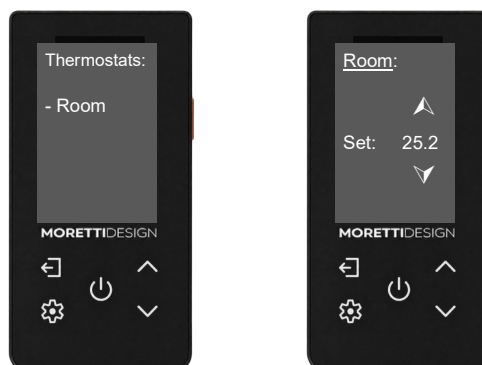
The system automatically adjusts the ducting fan speed according to the product operating conditions.

OFF Mode

The ducting ventilation remains disabled.

7.7 "Thermostats" Menu

The Thermostats menu allows the user to set the desired room temperature used by the product as a reference for heating regulation.



- ROOM

To modify the room temperature:

1. Access the **Menu**.
2. Select **Thermostats**.
3. Select **Room**.
4. Set the desired temperature using the increase (▲) and decrease (▼) buttons.
5. Confirm the selection.

The set temperature (set-point) is compared with the temperature detected by the room sensor integrated into the remote control. The product automatically adjusts its operation to maintain the desired temperature.

NOTE

To ensure correct room temperature detection:

- position the remote control in a representative location of the room;
- avoid direct exposure to sunlight or heat sources;
- do not place the remote control near doors, windows, or air currents;
- do not cover the remote control during operation.

7.8 "Chrono" Menu

The **CHRONO** function allows the automatic programming of the product start and stop times, adapting its operation to the user's requirements.

Programming is available exclusively in **PELLET** and **COMBI Pellet-Wood** operating modes.

Through the **PROGRAM** menu, the user can configure the automatic start and stop times, allowing the product to start and stop according to the set time schedules.

The use of the **CHRONO** function allows the room to be already heated at the desired times without requiring manual intervention to switch on the product.



The use of the **CHRONO** function allows the user to:

- automatically program the product start-up;
- automatically program the shutdown;
- reduce manual interventions;
- improve living comfort;
- optimize fuel usage according to the operating schedules.

Practical example

The user leaves home at 08:00 and returns at 18:00.

By setting an appropriate schedule, the product can automatically start before the return time, ensuring that the room has already reached the desired temperature upon arrival.

NOTE

During operation in **COMBI Pellet-Wood** mode, if the firebox door is opened to reload wood, the product automatically switches the combustion to **NORMAL** status for approximately **5 minutes**, even if it was operating in **MODULATION** mode, in order to promote the re-ignition and recovery of wood combustion.

After this interval, the system automatically resumes the normal operating logic associated with the selected mode.

NOTE

For the **CHRONO** function to operate correctly, the system date and time must be set correctly.

Setting only the time schedules does not enable automatic operation: the desired **CHRONO** mode (**Daily**, **Weekly**, or **Week End**) must also be explicitly activated.



The **PROGRAM** menu provides three programming modes:

- **DAILY**
- **WEEKLY**
- **WEEK END**

The selected mode allows the user to set the automatic start-up and shutdown times of the product according to their requirements.

The settings are stored in the electronic control board and are automatically executed until they are modified or disabled.

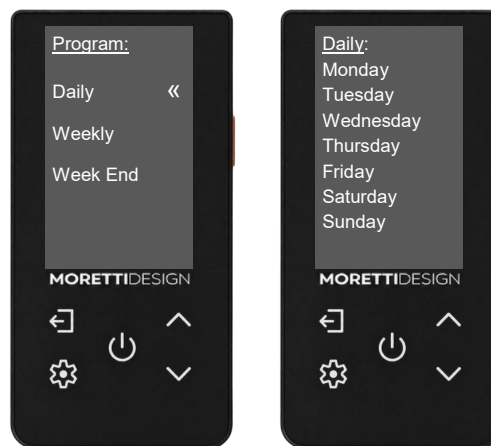
For each program, it is possible to configure:

- start-up time;
- shutdown time;
- enable or disable the individual time slot;
- validity period of the selected schedule.

Once saved, the schedule is automatically executed by the system.

TECHNICAL NOTE

The **DAILY**, **WEEKLY**, and **WEEK END** modes maintain independent settings from one another.



IMPORTANT NOTE

In all programming modes (**DAILY**, **WEEKLY**, and **WEEKEND**), if the operating period must extend beyond midnight, it must be divided into two consecutive time slots.

Set the first time slot with the **OFF** time at **23:59** and the next time slot with the **ON** time at **00:00**.

This setting allows the product to continue operating correctly throughout the night.

- DAILY Programming

The **DAILY** programming mode allows each day of the week to be configured independently.

For each day, three independent time slots are available, each consisting of:

- start-up time;
- shutdown time.

This mode is recommended when the operating schedule changes frequently throughout the week.

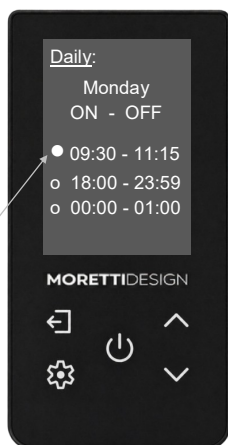
Practical example

The user wishes to use the product only on Wednesday evening. They can program Wednesday only, without modifying the settings for the other days of the week.

NOTE

The settings are applied exclusively to the selected day. Check that the desired time slot is enabled.

Enable and activate the desired time slot



- WEEKLY Programming

The WEEKLY programming mode allows the same configuration to be applied to all days of the week.

Three programmable time slots are available, valid from **Monday** to **Sunday**.

This mode is recommended when the operating schedules remain constant throughout the entire week.

Practical example

	Time slot	Start-up	Shutdown
→ ●	1st	06:30	08:00
→ ●	2nd	18:00	23:59
○	3rd	00:00	03:00

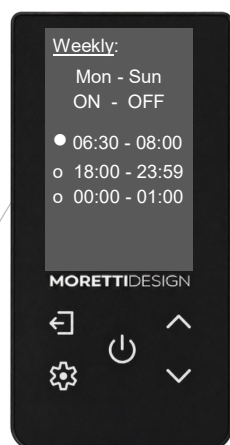
The settings are automatically applied to all days of the week.

TECHNICAL NOTE

Changing a time slot automatically updates the entire weekly programming.

Check that the desired time slots are enabled.

Enable and activate the desired time slot



- WEEKEND Programming

The WEEK END programming mode allows the management of two different periods separately:

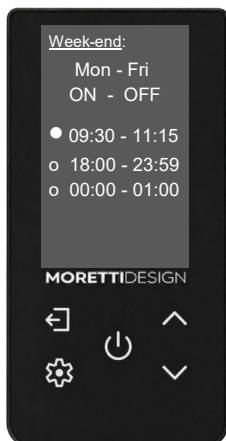
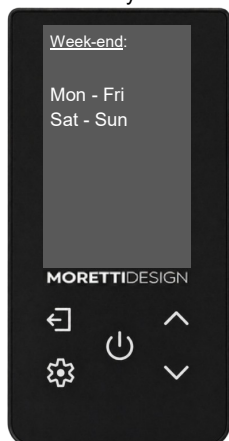
- Monday - Friday
- Saturday - Sunday

For each period, three independent time slots are available, which can be configured according to the user's requirements.

This mode is particularly useful when the operating schedules on working days differ from those during the weekend.

TECHNICAL NOTE

The weekday and weekend schedules are stored separately and can be modified at any time.



- CHRONO Management via APP

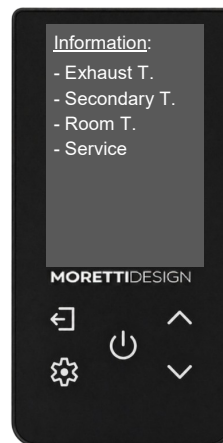
If the product is equipped with the dedicated APP, the CHRONO function can also be managed via smartphone.

The APP allows the user to view the programming status and the currently active time slot, as well as modify the settings remotely.

The main available functions include:

- modification of programmed time slots;
- activation or deactivation of time slots;
- display of the active schedule.

7.9 "Information" Menu



The FULL HYBRID system continuously monitors the temperatures detected by the sensors installed in the product and by the room sensor integrated into the remote control.

The control unit uses these data to automatically manage and optimize the combustion and the system operation.

The Information menu allows the user to view the main detected values.

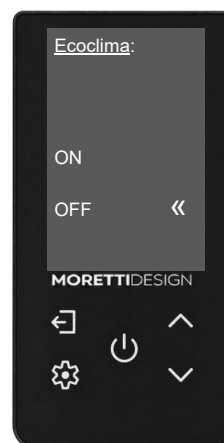
7.10 "Ecoclimate" Menu

The ECOCLIMA function is disabled by default (OFF) and can be activated by the user through the dedicated menu.

When the ECOCLIMA function is active, the product automatically manages shutdown and subsequent restart according to the detected room temperature, with the aim of avoiding continuous operation when additional heating power is not required.

The operation follows the logic below:

- the product normally heats the rooms until the set temperature is reached;
- when the room temperature reaches the set-point value, a **240-second** countdown starts;
- if, for the entire duration of the countdown, the room temperature remains above the set value (considering the hysteresis provided by the software), the product automatically performs the shutdown procedure and enters the **STAND-BY** state;
- during the **STAND-BY** state, the product continues monitoring the room temperature;
- when the room temperature falls below the threshold defined by the software, the product automatically performs a new start-up procedure and resumes normal operation.

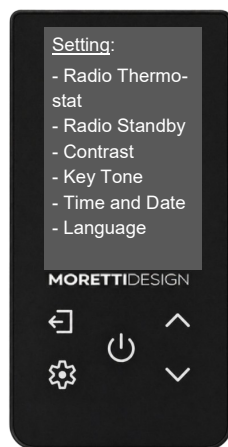


NOTE

The ECOCLIMA function allows the product to automatically stop operation when the room temperature remains consistently equal to or higher than the set value, and to restart the product when heating power is required again.

- **Exhaust Temperature (°C):** indicates the combustion flue gas temperature detected by the dedicated sensor.
- **Secondary Temperature (°C):** indicates the temperature detected by an internal product sensor, used by the control unit for monitoring and managing operation.
- **Room Temperature (°C):** indicates the room temperature detected by the sensor integrated into the remote control.
- **Service (h):** indicates the total number of product operating hours, useful for planning maintenance activities.

7.11 "Settings" Menu



The **Settings** menu allows the user to configure the main remote control settings and customize some operating functions.

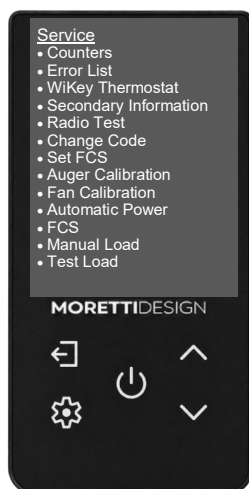
The following items are available:

- **Radio Thermostat** Allows the user to enable (**ON**) or disable (**OFF**) the temperature sensor integrated into the remote control, used for room temperature control.
- **Radio Standby** Allows the user to activate the remote control **Standby** mode, reducing battery consumption when the device is not in use.
- **Contrast** Allows the user to increase or decrease the display contrast using the increment and decrement buttons, improving readability according to lighting conditions.
- **Key Tone** Allows the user to enable (**ON**) or disable (**OFF**) the acoustic signal emitted when pressing the remote control buttons.
- **Time and Date** Allows the user to set or modify the system date and time. Correct setting is required for the operation of the **CHRONO** function.
- **Language** Allows the user to select the language used for displaying menus and messages on the remote control display.

7.12 "Service" Menu

The Service menu is reserved exclusively for the **technical service centre** and contains functions dedicated to product diagnostics, configuration, and maintenance.

Access to this menu is permitted only to qualified and authorized personnel.



⚠ ATTENTION

The settings contained in the **Service** menu affect the operation and safety parameters of the product. Modification of the values by the user may compromise the correct operation of the appliance, cause operating faults and result in the loss of warranty coverage.

The menu includes the following functions:

- Counters

Allows viewing of the main product operating counters, such as:

- total operating hours;
- number of ignitions;
- number of failed ignitions.

- Error List

Allows viewing of the history of alarms and faults recorded by the electronic control board. This information is used by the technical service centre to facilitate product diagnostics.

- WiKey Thermostat

Allows viewing and configuration of the Wikey system parameters (L7, L8 and L9). Function reserved exclusively for the technical service centre.

- Secondary Information

Displays diagnostic information used by the technical service centre during inspection and service operations.

- Radio Test

Function for checking the correct connection and communication between the remote control and the product. Use reserved for the technical service centre.

- Change Code

Allows the remote control to be paired with the electronic control board. In the event of a failed connection between the remote control and the electronic control board, follow the procedure below:

Disconnect the product from the electrical power supply.

Select a new code.

Press the button  and, within 3 seconds, restore the electrical power supply to the product.

If the message "Transfer failed" is displayed, repeat the procedure by selecting a different code. If the message persists after repeating the procedure, contact the technical service centre.

- Auger Calibration

Function intended for adjusting the pellet feeding parameters. Use exclusively reserved for the technical service centre.

- Fan Calibration

Function intended for adjusting the flue gas fan parameters. Use exclusively reserved for the technical service centre.

- Automatic Power

Displays and allows configuration of technical parameters used by the electronic control board. Function reserved for the technical service centre.

- Manual Load

Technical function used during product configuration and service operations. Use reserved for the technical service centre.

- Test Load

Function for checking the correct operation of the pellet feeding system. Use reserved for the technical service centre.

ⓘ NOTE

The functions available in the Service menu are intended exclusively for technical service centre personnel. The user must not modify the parameters or use the functions contained in this menu, as they may compromise the correct operation of the product.

7.13 "System" Menu

The System menu contains the configuration parameters and advanced settings of the electronic control board.

Access is password protected and reserved exclusively for technical service centre personnel.

⚠ ATTENTION

Modification of the parameters contained in this menu is permitted exclusively to authorised technical personnel. Incorrect settings may compromise product operation and void the warranty conditions.

8. EMERGENCY CONTROL PANEL

The product is equipped with an emergency control panel that allows the main control operations to be performed even when the remote control is not available.

The emergency control panel allows the user to:

- check the product status;
- switch on the system;
- switch off the system;
- perform some basic operations;
- increase or decrease the various power levels;
- increase or decrease the heating power.

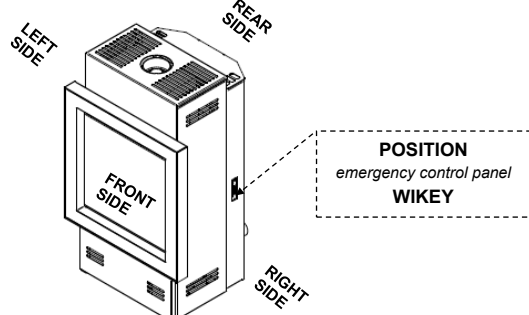
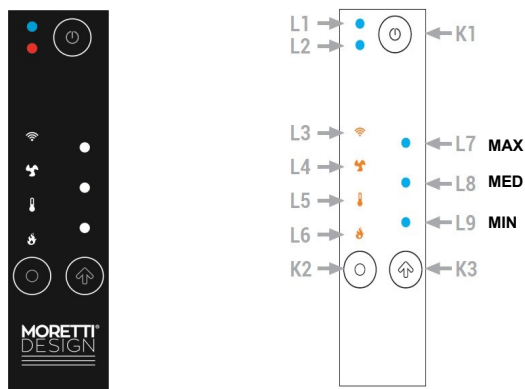


FIGURE 13 – Location of the emergency control panel

Using the emergency control panel can be useful in the following cases:

- radio control not available;
- dead radio control batteries;
- temporary communication problems;
- check the condition of the product directly on the appliance according to the color of the LED.
- setting up or restoring your local WiFi connection

FIGURA 14 – Panel control emergency description



- Meaning of LEDs

Led	Symbol	Description
L1		Led Multicolor: Blue: Product off Fixed Green: Product ON Flashing green: On / Off in progress Alternating red: Presence of an anomaly or error
L2		Function Indicator -Service-
L3	WiFi symbol	Fixed Led: WiFi configured and connected Flashing Led: WiFi Configuration Mode
L4	Heating symbol	View and select Heating Power (Led L7, L8, L9).
L5	Thermometer symbol	View and select the Local Environment Thermostat (Led L7, L8, L9).
L6	Flame symbol	View and select Combustion Power (Led L7, L8, L9)
L7	Maximum	View of selected level (Low L9, Medium L8, Maximum L7)
L8	Medium	
L9	Minimum	

NOTE

LEDs L7, L8 and L9 indicate the value of the function selected by the key K2.

	Click	Long press
K1		On, off and reset lock (pressure 3 seconds)
K2	Select the function to display (L4, L5, L6)	Enable local WiFi configuration (3 seconds pressure)
K3	Change the value of the selected function	

8.1 Changing the main settings

The emergency panel allows you to change some essential settings directly via the K2 and K3 buttons.

To change a value:

1. Press the K2 key until you select the desired function:

- L4 = Heating Power;
- L5 = Local Environment Thermostat;
- L6 = Combustion Power.

2. Press the K3 key to enter edit mode.

3. The LED of the selected function will start flashing, while LEDs L7, L8 and L9 will indicate the currently set value.

4. Press K3 again to change the available value.

5. After a few seconds without further operations, the system automatically stores the selected setting.

NOTE

The selected value is automatically stored after approximately 5 seconds of inactivity or when switching to the next function using the K2 key.

Led Value	0	Min	Medium	Max	Auto (for powers only)
L7	○	○	○	●	●
L8	○	○	●	●	●
L9	○	●	●	●	●

8.2 Switching on and off via emergency control panel

- To turn on the product:

1. Check that the product is electrically powered.
2. Press and hold the K1 key for approximately 3 seconds.
3. Wait for the automatic procedure to start.

During power-on, the L1 LED flashes green to indicate that the system is performing the intended operational checks.

- To turn off the product:

1. Press and hold the K1 key for approximately 3 seconds.
2. Wait for the automatic shutdown procedure to complete.

During shutdown the L1 LED flashes green until the cycle is complete.

ATTENTION

Do not disconnect the power supply during the off cycle.

8.3 WiKey emergency control panel -Reset-

In case of connection problems between the product, the APP or the radio control, you can perform the WiFi configuration recovery of the WiKey emergency panel.

Operational procedure

1. Press and hold the K2 key (⊙) for approximately 8 seconds.
2. Next, press and hold the K3 key (⬆) for about 8 seconds.
3. Wait for the recovery procedure to complete.

Once the operation is complete, you may need to reconfigure your WiFi network using the APP.

NOTE

Restoring the WiFi configuration does not change the product's operating settings or the combustion parameters previously set.

ATTENTION

Reset your WiFi configuration only if absolutely necessary or following the instructions of the technical service centre.

9. SMARTPHONE APPLICATION

The WiKEY module allows remote control of the appliance through the **4HEAT** smartphone application, available for Android® and iOS® devices.

The system allows monitoring and management of the main operating functions of the generator through Wi-Fi connection and Internet access.

- Operating principle

The application works exclusively in the **PELLET** and **COMBI Pellet-Wood operating modes** previously selected through the remote control.

During the configuration phase, the WiKEY module generates a local Wi-Fi network called **WiFi "4HEAT"**, to which the smartphone must temporarily connect.

Once the configuration through the APP has been completed, the module is associated with the home Wi-Fi network and communicates with the dedicated cloud server.

Once the procedure has been completed, the user can control the appliance locally or remotely through an Internet connection.

Safety and warnings

For the correct operation of the system it is necessary that:

- the WiKEY module is correctly installed and powered;
- the Wi-Fi signal is stable at the installation point;
- the router uses a 2.4 GHz Wi-Fi network;
- the Internet connection is active and working.

⚠ WARNING

Networks configured exclusively in 5 GHz mode do not allow the association of the WiKEY module and may prevent the completion of the configuration.

🔧 TECHNICAL NOTE

The configuration and management of the WiKEY module take place through the **4HEAT** application and through the buttons present on the WiKEY emergency panel.

Installer responsibility

Check:

- the correct connection of the WiKEY module;
- the presence of Wi-Fi coverage at the installation location;
- the correct completion of the configuration procedure;
- the correct operation of the application at the end of the commissioning.



Application installation

For the configuration of the WiKEY module and the remote management of the appliance, it is necessary to install the **4HEAT** application on your smartphone.

Operating procedure

1. Download and install the **4HEAT** application through the relevant store.
2. Start the application.
3. Create a new user account or log in with existing credentials.
4. Temporarily deactivate the smartphone mobile data connection.
5. Deactivate any automatic reconnection functions to Wi-Fi networks.
6. Access the **4HEAT** application.
7. Select the **WiKEY** function.
8. Follow the guided procedure displayed by the application until completion of the configuration.

🔧 TECHNICAL NOTE

During the procedure, a temporary connection to the Wi-Fi network generated by the WiKEY module is required.

At the end of the configuration, the module will be associated with the home Wi-Fi network and will be available for remote control via Internet.

Android®
QR Code Google Play



iOS®
QR Code App Store

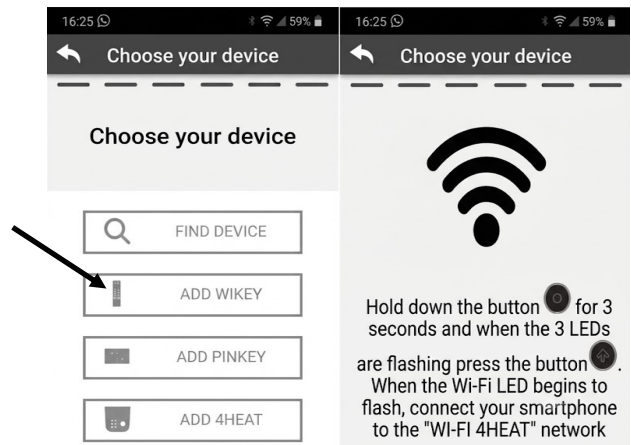


FIG. A

FIG. B

Wi-Fi mode activation

To enable the Wi-Fi configuration mode of the device, proceed as follows:

1. Press and hold the **Circle button (K2)** for approximately 3 seconds. (K2)
2. Press the **Arrow button (K3)** once. (K3)
3. Connect the smartphone to the Wi-Fi network "**4HEAT**" generated by the WiKEY module.
4. Open the **4HEAT** application and follow the guided procedure to associate the device with the home Wi-Fi network.

At the end of the procedure, check that the Wi-Fi connection has been activated and configured.

🔧 TECHNICAL NOTE

During the configuration, it is necessary to have the access credentials for the home Wi-Fi network.

The association procedure may require a few minutes depending on the characteristics of the network and the quality of the available signal. The operating instructions for the activation of the Wi-Fi mode and for the association of the WiKEY module with the home network are displayed directly by the **4HEAT** application during the guided configuration phase.

9.1 Application functions

Main functions

The application allows:

- switching the appliance on and off remotely;
- displaying the operating status of the system;
- setting the desired room temperature;
- modifying the operating power;
- managing the hourly programming (CHRONO);
- displaying any alarms or anomalies;
- consulting the main available operating parameters;
- controlling the appliance even outside the home through an Internet connection.

Safety and warnings

The availability of the remote functions depends on:

- correct configuration of the WiKEY module;
- availability of the home Wi-Fi network;
- active and working Internet connection;
- availability of the dedicated cloud service.

In case of loss of the remote connection, the appliance continues to operate according to the settings previously stored by the electronic control unit.

🔧 TECHNICAL NOTE

Any application updates may modify the graphic appearance of the screens and the organization of the menus without altering the main functions described in this manual.

The images and screens shown in this document are indicative and may differ from the version installed on the user's device.

9.2 Notifications and remote control

The APP can send notifications related to the product status and the main operating information.

For example:

- confirmation of start-up or shutdown;
- achievement of the set temperature;
- status of the product in which it is located;
- any alarm messages;

The notifications allow monitoring the operation of the system even when you are not at home.

⚠ WARNING

To ensure the correct operation of the remote control, it is necessary to keep the data connection active and periodically check the status of the home network.

- Frequently asked questions

Will the product switch on by itself?

Yes, if an active programming is present and the required operating conditions are met.

Can I change the times at any moment?

Yes, the programmed times can be changed at any moment through the remote control.

Does the programming automatically change the selected mode?

No.

The programming manages the operating times but does not change the operating mode selected by the user.

Do I have to reset the programming after each use?

No.

The stored programs remain available until they are modified or deleted.

10 . CLEANING AND ROUTINE MAINTENANCE

To maintain the performance, energy efficiency and safety conditions of the product over time, it is necessary to regularly carry out the cleaning and routine maintenance operations described in this chapter. The operations illustrated can be carried out directly by the user and concern exclusively the routine interventions necessary for the normal use of the product.

Regular cleaning contributes to:

- maintaining efficient combustion;
- promoting the correct operation of the FULL HYBRID system;
- reducing the formation of combustion residues;
- limiting the occurrence of anomalies;
- preserving the performance and heating comfort.

Extraordinary maintenance operations, technical checks, adjustments and interventions on internal components must be carried out exclusively by the authorized technical service centre.

The user must follow the instructions provided in this manual and use the product exclusively under the conditions specified by the manufacturer.

⚠ WARNING

Before carrying out any cleaning or routine maintenance operation:

- switch off the product and wait for the completion of the shutdown procedure;
- wait for the complete cooling of all surfaces and combustion residues;
- do not disconnect the electrical power supply until the automatic shutdown procedure has been completed;
- when necessary, use suitable personal protective equipment (for example gloves);
- remove the ash only when it is completely extinguished and cooled;
- use exclusively the accessories and tools provided by the manufacturer;
- do not use abrasive products, solvents or flammable substances.

Extraordinary maintenance operations, interventions on internal components and product adjustments must be carried out exclusively by the authorized technical service centre.

Failure to comply with these instructions may compromise the safety of the product and cause damage.

10.1 Safety warnings before cleaning

Before carrying out any cleaning or routine maintenance operation, it is necessary to adopt some simple precautions to operate in safe conditions and preserve the integrity of the product.

Before intervening:

- switch off the product using exclusively the provided shutdown command;
- wait for the completion of the automatic shutdown procedure;
- allow the product and all its components to cool completely;
- check that the burner pot, the combustion chamber and the ash drawer do not contain materials that are still incandescent;
- use exclusively the accessories supplied or recommended by the manufacturer.

During cleaning operations:

- do not use water, liquid detergents or flammable products;
- do not use sharp metal or abrasive tools that may damage the product surfaces;
- do not modify, remove or tamper with components of the generator;
- do not carry out interventions on electrical devices or internal components reserved for qualified personnel.

At the end of the operations, check that:

- the burner pot is correctly repositioned;
- the ash drawer is completely inserted, if present;
- the combustion chamber door is perfectly closed;
- no tools, residues or foreign bodies remain inside the combustion chamber.

⚠ WARNING

Non utilizzare aspiratori domestici non idonei per l'aspirazione delle ceneri. Le ceneri apparentemente spente possono contenere residui incandescenti in grado di danneggiare l'apparecchio o provocare principi d'incendio. Utilizzare esclusivamente un aspiracenere idoneo e solo dopo il completo raffreddamento del prodotto.

NOTE

The operations described in this chapter concern exclusively the cleaning and routine maintenance that can be carried out by the user. Extraordinary maintenance interventions, technical adjustments and replacement of components must be carried out exclusively by an authorized technical service centre.

10.2 Daily cleaning of the product

Daily cleaning contributes to maintaining high product performance, promotes regular combustion and reduces the accumulation of residues inside the combustion chamber.

The operations described in this paragraph must be carried out exclusively with the product completely switched off, after completion of the automatic shutdown procedure and complete cooling of all surfaces.

Regular cleaning of the product allows:

- maintaining efficient combustion;
- facilitating subsequent start-ups;
- reducing the formation of encrustations and deposits;
- preserving the correct operation of the FULL HYBRID system;
- contributing to maintaining the performance declared by the manufacturer.

Table 12 shows the main recommended daily cleaning operations.

Operation	Frequency
Burner pot check and cleaning	Before each start-up
Emptying of combustion residues, if necessary	Daily
Visual check of the combustion chamber	Daily
Check of the correct closing of the door	Before each start-up
Fuel availability check	Before each start-up

TABLE 12 – Daily cleaning operations

The frequency of the cleaning operations may increase depending on the intensity of use, the quality of the fuel used and the operating conditions of the product.

10.3 Burner pot cleaning

The burner pot is the component in which pellet combustion takes place. To ensure regular ignition, efficient combustion and the correct operation of the product, it is necessary to check its condition and carry out its cleaning before each start-up or whenever combustion residues are present that may obstruct the passage of combustion air.

Before carrying out the cleaning, make sure that the product is completely switched off, that it has completed the automatic shutdown procedure and that all parts are completely cooled.

To carry out the cleaning:

1. Open the combustion chamber door using the appropriate handle.
2. Remove the burner pot following the procedures provided for the installed model.
3. Carefully remove ash, clinker and any combustion residues.
4. Check that all air passage holes are completely free and not obstructed.
5. Check that the burner pot does not have deformations, cracks or other damage.
6. Correctly reposition the burner pot in its seat, checking its perfect support and correct insertion.
7. Completely close the combustion chamber door before proceeding with the next start-up.

WARNING

Do not use the product with the burner pot missing, deformed, damaged or incorrectly positioned. Incorrect positioning may compromise combustion, cause operating anomalies and result in the intervention of the safety devices.

WARNING

Do not use water or detergents for cleaning the burner pot. Carry out the cleaning exclusively dry using suitable accessories.

NOTE

The quantity of residues present in the burner pot depends on the quality of the pellet used, the operating conditions and the product usage time. In the presence of fuels with a high ash content, it may be necessary to carry out the cleaning more frequently.

WARNING

La Cleaning the burner pot is particularly important before ignition in **PELLET and COMBI Pellet-Wood modes**, since any obstructions of the air passage holes may compromise the ignition of the combustion and the correct automatic operation of the system.

In **WOOD mode**, it is however recommended to check that the burner pot is clean and correctly positioned before use.

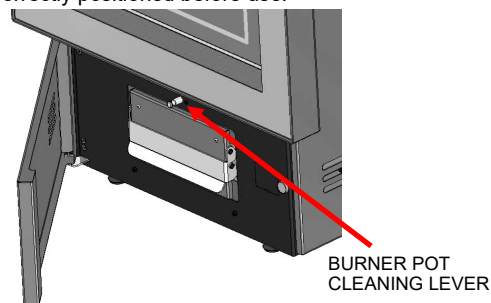


FIGURE 16 – Burner pot cleaning

10.4 Ash removal

During the normal operation of the product, combustion residues consisting mainly of ash and small unburnt deposits accumulate.

The periodic removal of ashes contributes to maintaining combustion efficiency, promotes the correct passage of combustion air and reduces the accumulation of residues inside the combustion chamber.

The frequency of the operation depends on the intensity of use of the product, the operating mode and the quality of the fuel used.

Before proceeding with ash removal, make sure that:

- the product is completely switched off;
- the automatic shutdown procedure has been completed;
- all surfaces and combustion residues are completely cooled.

To carry out ash removal:

1. Open the combustion chamber door.
2. Carefully remove the ash present in the burner pot and in the combustion chamber using a suitable ash vacuum cleaner or the accessories recommended by the manufacturer.
3. Empty the ash drawer, if present, avoiding the dispersion of residues into the environment.
4. Check that there are no ash accumulations in the combustion air passage areas.
5. Correctly reposition all removed components and completely close the combustion chamber door.

WARNING

Ashes may contain materials that are still incandescent even several hours after the product has been switched off. Carry out the removal only after complete cooling and use non-combustible containers for their disposal.

WARNING

Do not use domestic vacuum cleaners for ash suction. Use exclusively a suitable ash vacuum cleaner for this type of use.

NOTE

An excessive amount of ash inside the combustion chamber may compromise the correct flow of combustion air, reduce combustion efficiency and increase the frequency of cleaning operations.

IMPORTANT

In **WOOD** and **COMBI Pellet-Wood modes**, the quantity of ash produced may vary depending on the quality of the wood and the combustion conditions. It is recommended to regularly check the level of residue accumulation and remove it when necessary, without waiting for the complete filling of the combustion chamber or the ash drawer.

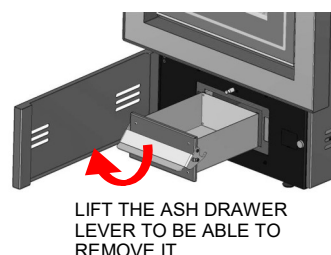


FIGURE 17 – Ash removal

10.5 Combustion chamber check

Before each start-up and at the end of the daily cleaning operations, it is recommended to carry out a visual check of the combustion chamber to verify that it is in suitable conditions for the correct operation of the product.

The visual check allows the identification of any abnormal accumulation of combustion residues or situations that could compromise ignition, combustion quality and the regular operation of the system.

Check in particular that:

- the burner pot is correctly positioned in its seat;
- the combustion chamber is free from excessive accumulations of ash and residues;
- there are no foreign bodies inside the firebox;
- the internal surfaces do not show visible anomalies or evident damage;
- the combustion chamber door closes correctly and the gasket is intact, clean and properly adherent.
- check that the flue bypass control lever is in the position provided for the operating mode used, as described in paragraph 6.5.8.

If anomalies, deformations of the components, damaged gaskets or any other condition that may compromise the safety or the correct operation of the product are detected, stop using the product and contact an authorized technical service centre.

⚠ WARNING

Do not use the product if the combustion chamber door does not close correctly or has damaged, worn or not perfectly adherent gaskets. An airtight closure may compromise combustion, reduce the performance of the product and cause the safety devices to intervene.

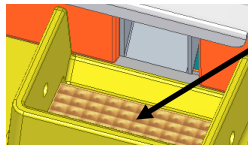
⚠ WARNING

Do not remove, modify or replace components of the combustion chamber. Any intervention other than the routine cleaning operations described in this manual must be carried out exclusively by qualified personnel.

ℹ NOTE

A regular visual check of the combustion chamber allows the timely identification of any anomalies and contributes to maintaining the efficiency, safety and performance of the product over time.

COLD HANDLE LEVER
RIGHT SIDE DOOR OPENING



BURNER POT
AND
COMBUSTION
CHAMBER

FIGURE 18 – Combustion chamber check

10.6 Periodic cleaning of the product

To maintain the efficiency, performance and safety of the product over time, in addition to the daily cleaning operations, it is necessary to periodically carry out some cleaning operations of the main parts accessible to the user.

The frequency of the operations may vary depending on:

- the intensity of use of the product;
- the operating mode used;
- the quality of the fuel used;
- the conditions of the flue system.

All operations must be carried out exclusively with the product completely switched off, after completion of the automatic shutdown procedure and complete cooling of all surfaces.

Table 12 shows the main recommended periodic cleaning operations.

Operation	Frequenza consigliata
Door glass cleaning	When necessary
Combustion chamber cleaning	Periodically
Ash drawer cleaning	Periodically or when necessary
Door gasket check	Periodically
Check of the air inlets and ventilation grilles	Periodically

TABLE 12 – Periodic cleaning operations

⚠ WARNING

Do not use sharp metal tools, abrasive products or corrosive substances for cleaning the product surfaces. The use of unsuitable products may damage the finishes, the ceramic glass and the gaskets.

ℹ NOTE

Regular periodic maintenance contributes to maintaining high product performance, reduces the risk of anomalies and extends the life of components subject to normal wear.

10.7 Glass cleaning

During normal operation, deposits may form on the internal surface of the door glass. Their quantity mainly depends on the quality of the fuel used, the combustion conditions and the methods of use of the product.

Regular cleaning allows maintaining good visibility of the flame and contributes to the correct maintenance of the appliance.

Cleaning must be carried out exclusively with the product completely switched off and with the glass completely cold.

Proceed as follows:

1. open the firebox door;
2. clean the glass using a soft cloth or specific products for biomass appliance glass;
3. remove any residues without using metal tools or abrasive materials;
4. close the door correctly.

⚠ WARNING

Do not clean the glass when it is hot. Thermal shock may cause damage.

ℹ NOTE

The formation of slight hazing on the glass during operation is a normal phenomenon. Excessive deposits may indicate unsuitable fuel or the need to carry out the cleaning operations provided for in this manual.



FIGURE 19 – Glass cleaning

10.8 Combustion chamber cleaning

The combustion chamber must be kept clean to ensure efficient combustion and reduce the accumulation of residues.

With the product completely cold:

1. open the firebox door;
2. remove the combustion residues present in the chamber;
3. preferably use a suitable ash vacuum cleaner for biomass appliances;
4. check that there are no ash accumulations in the accessible areas;
5. close the door correctly.

⚠ WARNING

Do not use water or other liquids for cleaning the combustion chamber.

ℹ NOTE

The cleaning frequency depends on the quality of the fuel and the intensity of use of the product.

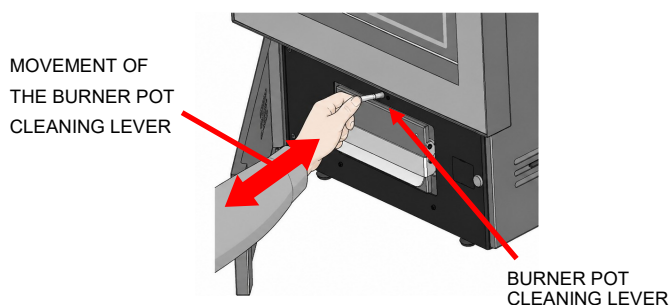


FIGURE 20 – Burner pot cleaning

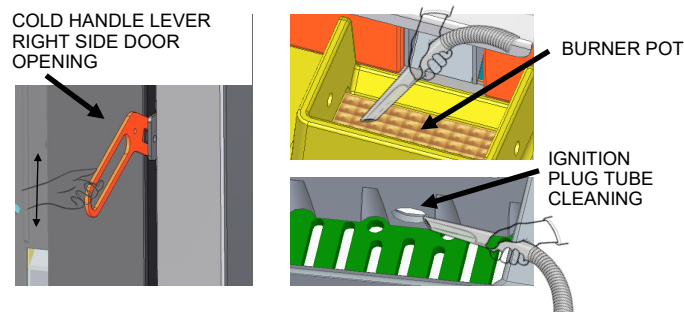


FIGURE 21 – Internal cleaning of the burner pot and ignition plug tube

10.9 Ash drawer cleaning

The ash drawer collects the residues produced by combustion and must be emptied regularly.

With the product completely switched off and cold:

1. remove the ash drawer;
2. completely empty the contents into a suitable metal container;
3. remove any residues present in the compartment;
4. correctly reinsert the drawer into its seat.

⚠ WARNING

Ashes may retain incandescent embers even several hours after the product has been switched off.

Dispose of ashes exclusively in non-combustible metal containers and wait for complete cooling before final disposal.

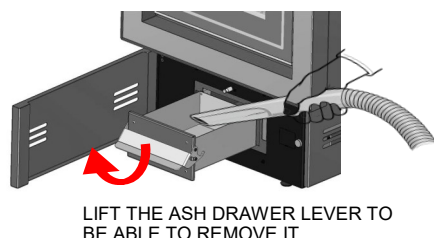


FIGURE 22 – Ash drawer cleaning

10.10 Door gasket check

The door gaskets ensure the correct sealing of the combustion chamber and contribute to the regular operation of the product.

The user must periodically check their condition, verifying that they are:

- intact;
- continuous along the entire perimeter;
- correctly positioned;
- free from deformations, wear and detachments.

⚠ ATTENZIONE

Do not use the product if the gaskets are damaged, deteriorated or do not ensure the correct closing of the door.

In such cases, contact the authorized technical service centre.

📌 NOTE

The replacement of the gaskets must be carried out exclusively with original Moretti Design spare parts.

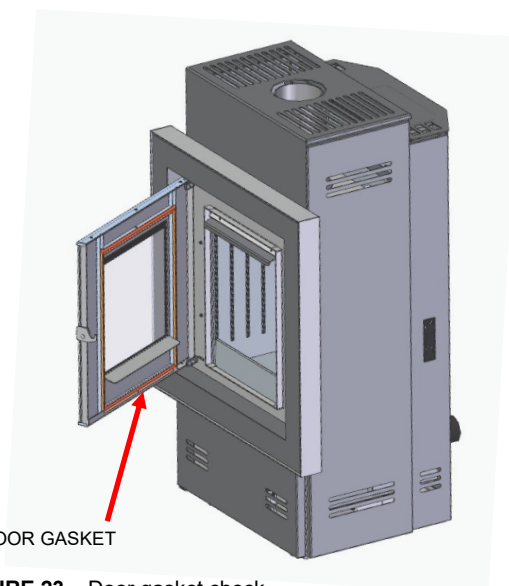


FIGURE 23 – Door gasket check.

10.11 Periodic checks by the user

- Check of the general condition of the product

- visual check of the integrity of the external surfaces;
- check for the absence of deformations, damage or visible anomalies;
- check that the door and the closing systems operate correctly;
- check that there are no abnormal noises or behaviours during operation.

- Check of the correct operation during use

- check of the regular start-up of the product;
- check for the absence of abnormal smoke leaks;
- check of the correct combustion in relation to the selected mode;
- check for the absence of alarm messages on the remote control.

- Fuel level check

PELLET mode

The user must periodically check the presence of pellet in the hopper and ensure that the fuel used complies with the characteristics indicated in this manual.

Do not use damp, deteriorated pellet or pellet containing impurities.

WOOD mode

The user must use only wood suitable for combustion, properly seasoned and free from treatments, paints or chemical substances.

- Check of the conditions of the remote control and control devices

Periodically check that:

- the remote control is working;
- the display is readable;
- there are no anomalies or messages;
- the commands given are correctly received by the product.

In case of unavailability of the remote control, use the WiKEY emergency panel as described in the dedicated chapter.

- Check of the installation conditions

The user must periodically check that:

- the distances around the product are kept free;
- there are no combustible materials near the hot surfaces;
- the room ventilation openings are free;
- the flue terminal has no visible obstructions.

- Frequency of checks

The frequency of the checks depends on:

- the mode of use of the product;
- the number of operating hours;
- the quality of the fuel used;
- the environmental installation conditions.

It is recommended to carry out the periodic checks regularly and in any case before use after long periods of inactivity.

📌 IMPORTANT NOTE

The operations described in this chapter are checks and ordinary activities that can be carried out by the user.

The technical maintenance operations, combustion parameter checks, safety device inspections and interventions on internal components must be carried out exclusively by qualified personnel or by the authorized technical service centre.

10.12 Periodic maintenance by the technical service centre

The periodic maintenance of the appliance must be carried out exclusively by qualified and authorized technical service centre, according to the regulations in force, the manufacturer's instructions and the specific characteristics of the FULL HYBRID product.

The purpose of the technical maintenance is to maintain over time:

- the operating safety of the appliance;
- the combustion efficiency;
- the correct operation of the control systems;
- the reliability of the mechanical, electrical and electronic components;
- compliance with the operating conditions provided for by the manufacturer.

The frequency of the maintenance operations must be assessed according to:

- the operating hours of the appliance;
- the type and quality of the fuel used;
- the installation conditions;
- the methods of use of the product;
- the requirements given in this manual and in the technical documentation.

During the periodic maintenance, the technical service centre must check the general condition of the appliance and of the main functional systems. The inspection activities may include:

Inspection of the PELLET combustion system

Check of:

- condition of the burner pot and the combustion chamber;
- correct operation of the pellet feeding system;
- presence of any deposits or encrustations that may compromise the combustion;
- correct operation of the ignition devices;
- efficiency of the flue gas evacuation system.

Inspection of the WOOD combustion system

Check of:

- condition of the combustion chamber;
- condition of the internal surfaces subject to wear;
- integrity of the gaskets;
- correct operation of the loading door;
- absence of anomalies due to the use of non-compliant fuel.

Inspection of the FULL HYBRID system

Check of the correct operation of the combined management of the energy sources:

- PELLET mode;
- WOOD mode;
- COMBI Pellet-Wood mode;
- ELECTRIC mode.

The following must be checked:

- correct switching between the available modes;
- operation of the safety devices;
- correct operation of the automatic management systems.

Inspection of the FCS (Fire Control System)

If present in the appliance configuration, the technical service centre must check:

- correct operation of the combustion control system;
- efficiency of the pressure sensor/depressimeter;
- correct reading of the flue gas circuit conditions;
- absence of anomalies or messages.

Inspection of the flue gas circuit and safety components

The following must be checked:

- condition of the internal ducts involved in the passage of the flue gases;
- condition of the fans;
- correct operation of the probes;
- integrity of the electrical connections;
- correct operation of the safety devices.

Inspection of the electrical components

The following must be checked:

- electrical cables and connections;
- internal connections;
- electronic board;
- electric heater and dedicated fan for the ELECTRIC mode;
- any signs of overheating or deterioration.

At the end of the intervention, the technical service centre must verify the correct operation of the appliance and record the operations carried out according to the procedures provided for by the assistance service.

IMPORTANT NOTE

The routine maintenance carried out by the user does not replace the periodic technical maintenance carried out by qualified personnel.

Correct use, regular cleaning and periodic inspections contribute to maintaining the safety, performance and efficiency of the product over time.

10.13 Periods of inactivity and restart after a long period

If the product is not used for a prolonged period, it is recommended to prepare it correctly before shutdown and carry out some checks before restarting it.

Before the period of inactivity

Before leaving the product unused for a long period:

- carry out a complete cleaning of the appliance as described in this chapter;
- remove ash and combustion residues from the combustion chamber and the burner pot;
- check that the flue gas path and the ventilation openings are free from obstructions.

For PELLET operation

- empty the pellet hopper if a long period of inactivity is expected;
- do not leave pellet inside the hopper if it may absorb moisture;
- before restarting, check that the feeding system is free from any residues.

For WOOD operation

- do not leave wood residues or embers inside the combustion chamber;
- make sure that the combustion chamber is clean and dry.

ELECTRIC mode operation does not require any specific operations during the period of inactivity.

Restart after a long period

Before restarting the product:

- check that the appliance does not show any visible damage or anomalies;
- check that the air inlets and the flue gas evacuation system are free from obstructions;
- check the integrity of the door gaskets;
- use only fuel compliant with the requirements of this manual;
- carry out a first start-up, checking that the product starts correctly.

During the first operation after a long period of inactivity, slight smells caused by the combustion of dust deposited on the internal surfaces or slightly longer stabilization times than normal may occur. These conditions are generally temporary.

If the product does not start correctly, displays alarm messages or presents operating anomalies, stop using it and contact an authorized technical service centre.

11. TROUBLESHOOTING

During operation, FULL HYBRID continuously monitors the main operating parameters through the electronic control board and the installed safety devices.

If a non-compliant condition is detected, the product may:

- display an information message;
- display an alarm message;
- stop the product for safety reasons.

The user may carry out only the checks described in this chapter. Any intervention on the internal components must be carried out exclusively by an authorized technical service centre.

Before contacting the technical service centre, check that:

- the product is supplied with electrical power;
- the door is correctly closed;
- the fuel used is compliant with the requirements of this manual;
- a sufficient quantity of pellet or wood is available;
- the routine cleaning operations described in Chapter 10 have been carried out;
- there are no visible obstructions in the air inlets or hot air outlets;
- the remote control does not display information messages that can be easily resolved.

Many anomalies can be eliminated by carrying out the normal cleaning and routine maintenance operations.

Main anomalies

Problem encountered	Possible checks
The product does not start	Check the electrical power supply, the fuel, that the door is closed and the burner pot is clean.
The pellet does not ignite	Check the presence and quality of the pellet and the cleanliness of the burner pot.
The wood is difficult to ignite	Use dry and properly seasoned wood.
The product stops during operation	Check the presence of the fuel and the messages displayed on the remote control.
The flame is weak or unstable	Check the quality of the fuel and the cleanliness of the combustion chamber.
The glass blackens quickly	Check the fuel used and carry out the routine cleaning.
There is a large amount of ash	Use compliant fuel and carry out the prescribed maintenance.
The ELECTRIC mode does not work	Check the electrical power supply, the selected mode and the set temperature.
An alarm message is displayed	Refer to Appendix A and follow the instructions provided.

11.1 Combustion problems

Incorrect combustion may depend on:

- non-compliant fuel;
- wet fuel;
- dirty burner pot;
- dirty combustion chamber;
- insufficient air supply;
- failure to carry out the periodic maintenance.

Before restarting the product:

- carry out the prescribed cleaning operations;
- check the fuel used;
- make sure that the door is completely closed.

If the problem occurs again, stop using the product and contact the technical service centre.

11.2 ELECTRIC mode problems

If the electric heating does not operate correctly, check:

- the presence of the electrical power supply;
- the selected operating mode;
- the set room temperature;

Do not intervene on the electrical components of the appliance.
For any persistent anomaly, contact the technical service centre.

11.3 When to contact the technical service centre

Contact an authorized technical service centre in the following cases:

- the product does not start after the permitted checks;
- the product repeatedly enters lockout;
- a persistent alarm is displayed;
- smoke escapes into the room;
- abnormal smells are present;
- the combustion remains irregular after cleaning;
- the flue gas evacuation system presents anomalies;
- the electric operation presents persistent anomalies;
- interventions on the internal components are required.

Before requesting assistance, provide:

- product model;
- serial number;
- date of purchase;
- operating mode used (PELLET, WOOD, COMBI Pellet-Wood or ELECTRIC);
- description of the anomaly;
- any message displayed on the remote control.

WARNING

Do not disassemble the product and do not intervene on the internal components.

Any intervention on the electrical, electronic, combustion systems or on the safety devices must be carried out exclusively by qualified and authorized personnel.

11.4 Appendix A - Complete list of alarm codes

NOTE
The codes and descriptions may vary depending on the software version and the installed configuration. Always refer to the indications displayed by the product.

ERROR	DESCRIPTION	CAUSES	OPERATIONS TO BE PERFORMED	SOLUTIONS
Er01	Turn off due to safety thermostat intervention	HEATING FAN FAILURE	Reset the alarm and verify the proper function of the fan	If the fan is Failure, contact an authorised technician
		HIGH TEMPERATURE IN PELLET TANK	Reset the alarm and turn on the stove, if the error reoccurs turn off the stove	If the safety alarm persists, contact an authorised technician
		THERMOSTAT FAILURE	Reset the alarm and turn on the stove, if the error occurs immediately, it is likely that the thermostat is Failure	
		CONTROL UNIT FAILURE	Reset the alarm and turn on the stove, if the error occurs immediately, it is likely that the control unit is Failure	
Er02	Switch off due to chimney flue Occlusion It can only intervene if the Exhaust Fan is active	CHIMNEY FLUE OCCLUDED	Reset the alarm and check, if you need to clean your chimney flue	If the safety alarm persists, contact an authorised technician
		WIND IN THE CHIMNEY FLUE	Reset the alarm and check if the flue needs to be installed according to standard regulations and directions contained in this manual	
		PRESSURE SWITCH FAILURE	Reset the alarm and turn on the stove, if the error occurs immediately, it is likely that the pressure switch is Failure	
		CONTROL UNIT FAILURE	Reset the alarm and turn on the stove, if the error occurs immediately, it is likely that the control unit is Failure	
Er03	Turn off due to low fume temperature	PELLET TANK EMPTY	Reset the alarm and check if there are any pellets in the tank	Refill pellet tank
		BLOCKED AUGER	Reset the alarm, clean burner and turn the stove on again	If the safety alarm persists, contact an authorised technician
		AUGER MOTOR FAILURE		
		EXHAUST FUME SENSOR FAILURE		
Er05	Turn off due to high smoke temperature	DIRTY STOVE	Reset the alarm and turn on the stove, if the error reoccurs, the stove probably needs to be cleaned	If the safety alarm persists, contact an authorised technician
		EXHAUST FUME SENSOR FAILURE	If the fume temperature is high even during the shutdown phase, thermocouple is Failure	
Er07	Turn off due to Encoder error	NO SIGNAL TO ENCODER	Reset the alarm and turn on the stove, if the error reoccurs, then the exhaust fan or control unit is Failure	If the safety alarm persists, contact an authorised technician
Er08	Turn off due to Encoder error	ENCODER CONFIGURATION ERROR	Reset the alarm and turn on the stove, if the error reoccurs, then the exhaust fan or control unit is Failure	If the safety alarm persists, contact an authorised technician
Er11	The error occurs due to problems with the internal clock	CLOCK ERROR	Turn off the main switch, reset the time and date (page 11), then Reset the alarm. If the error persists, replace the battery on the control unit, reset the time and date, then Reset the alarm	If the error persists, contact an authorised technician
Er12	Ignition failure	EMPTY PELLET TANK	Reset the alarm and check if there are any pellets in the tank	Refill pellet tank
		IGNITION RESISTANCE FAILURE	Reset the alarm, clean the burner then turn on, if the following ignitions are not successful then the ignition resistance must be replaced	If the error persists, contact an authorised technician
		DIRTY BURNER	Reset the alarm, clean burner then turn on again	Clean burner
Er15	Turn off due to power failure	BLACKOUT	Power failure	If the safety alarm persists, contact an authorised technician

ERROR	DESCRIPTION	CAUSES	OPERATIONS TO BE PERFORMED	SOLUTIONS
Er16	Turn off due to RS485 communication error	TOUCH DISPLAY DOES NOT COMMUNICATE WITH THE CONTROL UNIT	Sbloccare e verificare se il display è correttamente collegato al cavo	If the error persists, contact an authorised technician
Er17	Turn off due to failed air flow regulation	MALFUNCTION OF THE FCS	Reset the alarm and restart the boiler	If the error persists, contact an authorised technician
Er21	Turn off due to missing reading from secondary probe	SECONDARY PROBE BROKE	Reset the alarm, clean the burn pot then turn on the stove	If the error persists, contact an authorised technician
Er39	Turn off due to flowmeter error	FLOWMETER (FCS) INCORRECTLY CONNECTED OR FAILURE	Reset the alarm and turn on the stove	If the error persists, contact an authorised technician
Er41	Turn off due to minimum air flow in Check Up or in Normal and Modulation not achieved	FLOWMETER (FCS) INCORRECTLY CONNECTED OR FAILURE	Reset the alarm and turn on the stove	If the error persists, contact an authorised technician
Er42	Turn off due to maximum airflow exceeded	INCORRECT READING FROM PART OF FLOWMETER (FCS)	Reset the alarm and turn on the stove	If the error persists, contact an authorised technician
Er44	Turn off because of open front door	FRONT DOOR OPEN FOR MORE THAN 120 SECONDS	Unlock and check if the doors have been closed correctly	If the error persists, contact an authorised technician
Er84	Turn off due to air valve not closing properly	AIR VALVE FAILURE	Reset the alarm and turn on the stove	If the error persists, contact an authorised technician
Port	Turn off due to open door	FRONT DOOR OR PELLET DOOR OPEN	Check if the front door is closed correctly	If the error persists, contact an authorised technician
Service	Acoustic alarm	MESSAGE THAT INDICATES THE ACHIEVEMENT OF THE SCHEDULED FUNCTIONING HOURS	The stove needs a maintenance and cleaning procedure	If the error persists, contact an authorised technician
WIFI	WiFi !	WiFi disconnected	Reset the alarm and turn on the stove	If the error persists, contact an authorised technician

12. WARRANTY

This chapter describes the conditions of the commercial warranty offered by Moretti Design for the FULL HYBRID product.

This commercial warranty is in addition to the rights granted to the consumer by the legal warranty of conformity provided for by the regulations in force in the country where the product was purchased and does not limit or replace them.

For any request relating to the warranty, the user must contact the dealer from whom the product was purchased or a technical service centre authorized by Moretti Design.

The commercial warranty starts from the date of purchase of the product, proven by a valid fiscal document (invoice, receipt or other equivalent document provided for by the regulations of the country of purchase).

To allow correct management of any Requesting Technical Assistance, it is recommended to keep:

- the purchase document;
- the installation documentation;
- the first start-up report, where provided;
- this use and maintenance manual.

The commercial warranty is valid provided that:

- the product has been installed in compliance with the regulations in force and the instructions given in this manual;
- the product is used exclusively for the purposes provided for by the manufacturer;
- only fuels compliant with the characteristics indicated in this manual are used;
- the prescribed cleaning and routine maintenance operations are carried out;
- technical interventions are carried out exclusively by technical service centre authorized;
- the product has not been modified, tampered with or repaired by unauthorized personnel.

WARNING

Failure to comply with the installation, use and maintenance instructions may result in the commercial warranty of the manufacturer becoming void.

12.1 Warranty Coverage

The commercial warranty covers exclusively defects attributable to:

- manufacturing defects;
- material defects;
- assembly defects recognized by the manufacturer.

If it is established that the defect falls within the conditions provided for by the commercial warranty, the manufacturer will carry out the intervention according to the organizational and commercial procedures in force.

12.2 Exclusions from the warranty

The commercial warranty does not cover damage or anomalies resulting from:

- installation not compliant with the regulations in force or the manufacturer's instructions;
- improper use or use different from that provided for;
- use of fuels not compliant with the specifications indicated in this manual;
- failure to perform the prescribed cleaning and maintenance operations;
- normal wear of components subject to wear;
- interventions carried out by unauthorized personnel;
- modifications, tampering or alterations to the product;
- use of non-original or unauthorized spare parts;
- anomalies of the electrical system, the flue system or the installation not attributable to the product;
- accidental events, fire, flooding, overvoltage, atmospheric events, natural disasters or other force majeure events.

All interventions made necessary by use not compliant with the instructions given in this manual are also excluded from the commercial warranty.

12.3 Components subject to normal wear

During normal use, some components are subject to natural deterioration and their replacement is part of the normal maintenance of the appliance.

By way of example, the components subject to wear include:

- gaskets;
- ceramic glass;
- burner pot;
- ignition plug;
- components directly exposed to combustion;
- remote control batteries;
- other components subject to wear due to normal use.

NOTE

The replacement of components subject to normal wear does not, in itself, constitute an intervention covered by the commercial warranty.

12.4 Moretti Design Warranty Conditions

Moretti Design may provide specific additional commercial conditions for certain components or services.

In particular:

- the ignition plug benefits from a **6-month** commercial coverage, provided that all the conditions established by the manufacturer are respected;

To benefit from any extensions or additional commercial conditions, all the requirements established by the manufacturer must be met, including, where provided:

- registration of the product on the official Moretti Design portal;
- first start-up carried out by an authorized technical service centre;
- compliance with the installation, use and maintenance instructions.

The applicable commercial conditions are those in force at the time of purchase of the product.

12.5 Requesting Technical Assistance

To request a warranty intervention or technical assistance, contact the dealer from whom the product was purchased or a technical service centre authorized by Moretti Design.

To facilitate the management of the request, it is advisable to provide:

- product model;
- serial number;
- date of purchase;
- purchase document;
- description of the anomaly found;
- any message displayed on the remote control.

12.6 Product identification

For any Requesting Technical Assistance, it is necessary to provide the identification data of the appliance.

The information is shown on the identification plate applied to the product and includes, depending on the model:

- model;
- serial number;
- main technical data;
- manufacturer identification data.

12.7 Original spare parts

To ensure the maintenance of the performance, reliability and safety conditions of the product, only original Moretti Design spare parts must be used.

The supply of original spare parts is reserved for the authorized assistance network and authorized dealers, according to the procedures established by the manufacturer.

The use of non-original or unauthorized components may compromise the correct operation of the appliance, the user's safety and result in the loss of the commercial warranty.

13. ENVIRONMENTAL INFORMATION

The FULL HYBRID product is designed to ensure high performance, energy efficiency and a reduction of the environmental impact throughout the entire life cycle.

Correct use of the appliance, the use of compliant fuels, the performance of periodic maintenance and the correct disposal of the materials at the end of the service life contribute to the protection of the environment and the recovery of resources.

At the end of the service life, the product and its components must be disposed of in accordance with the regulations in force in the country of installation.

13.1 Disposal of the product

At the end of the service life, the product must not be disposed of together with unsorted municipal waste.

The appliance contains materials that can be recovered or recycled, including:

- steel;
- cast iron (where provided);
- ceramic glass;
- insulating materials;
- electrical and electronic components;
- wiring;
- plastic materials.

The product must be delivered to an authorized collection center or according to the procedures provided for by the regulations in force in the country of installation.

Correct disposal allows the recovery of recyclable materials and contributes to the reduction of the environmental impact.

⚠ WARNING

Before disposal:

- disconnect the product permanently from the power supply;
- make sure that there are no fuels or combustion residues inside the appliance.

13.2 Waste electrical and electronic equipment (WEEE)

The product contains electrical and electronic components subject to the regulations on waste electrical and electronic equipment (WEEE).

These components include, by way of example:

- remote control;
- electronic boards;
- electric motors;
- fans;
- sensors;
- wiring;
- control and command devices.

These components must not be disposed of together with household waste, but must be delivered to authorized collection centres or according to the procedures provided for by the competent authorities.

The correct treatment of WEEE promotes the recovery of raw materials and contributes to the protection of the environment and public health.

13.3 Remote control batteries

The batteries of the remote control must be removed and disposed of separately from the appliance.

Do not dispose of the batteries in the environment and do not dispose of them together with household waste.

Deliver them to the appropriate collection points, in accordance with the regulations in force.

13.4 Disposal of the packaging

The packaging used for the transport of the product is made of recyclable materials.

After installation, separate the different materials and deliver them through the separate waste collection system provided for in the country of installation.

The packaging may include:

- cardboard;
- wood;
- plastic;
- protective films;
- filling materials.

⚠ WARNING

The packaging materials must be kept out of the reach of children until their correct disposal.

13.5 Responsible use of the appliance

To contribute to the reduction of the environmental impact and maintain the product performance at a high level, it is recommended to:

- use only fuels compliant with the characteristics indicated in this manual;
- perform the cleaning and routine maintenance operations regularly;
- observe the scheduled maintenance intervals;
- use the product only according to the methods provided for by the manufacturer;
- provide for the correct disposal of the product and its components at the end of the service life.

The adoption of such practices contributes to reducing energy consumption, maintaining the appliance performance at a high level and limiting the environmental impact.

13.6 Product lifetime and sustainability

Moretti Design designs its products with particular attention to safety, energy efficiency, construction quality and long service life.

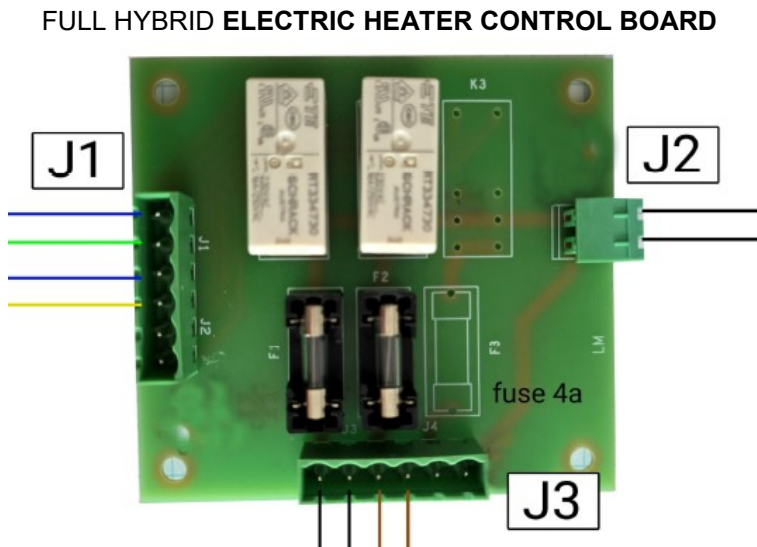
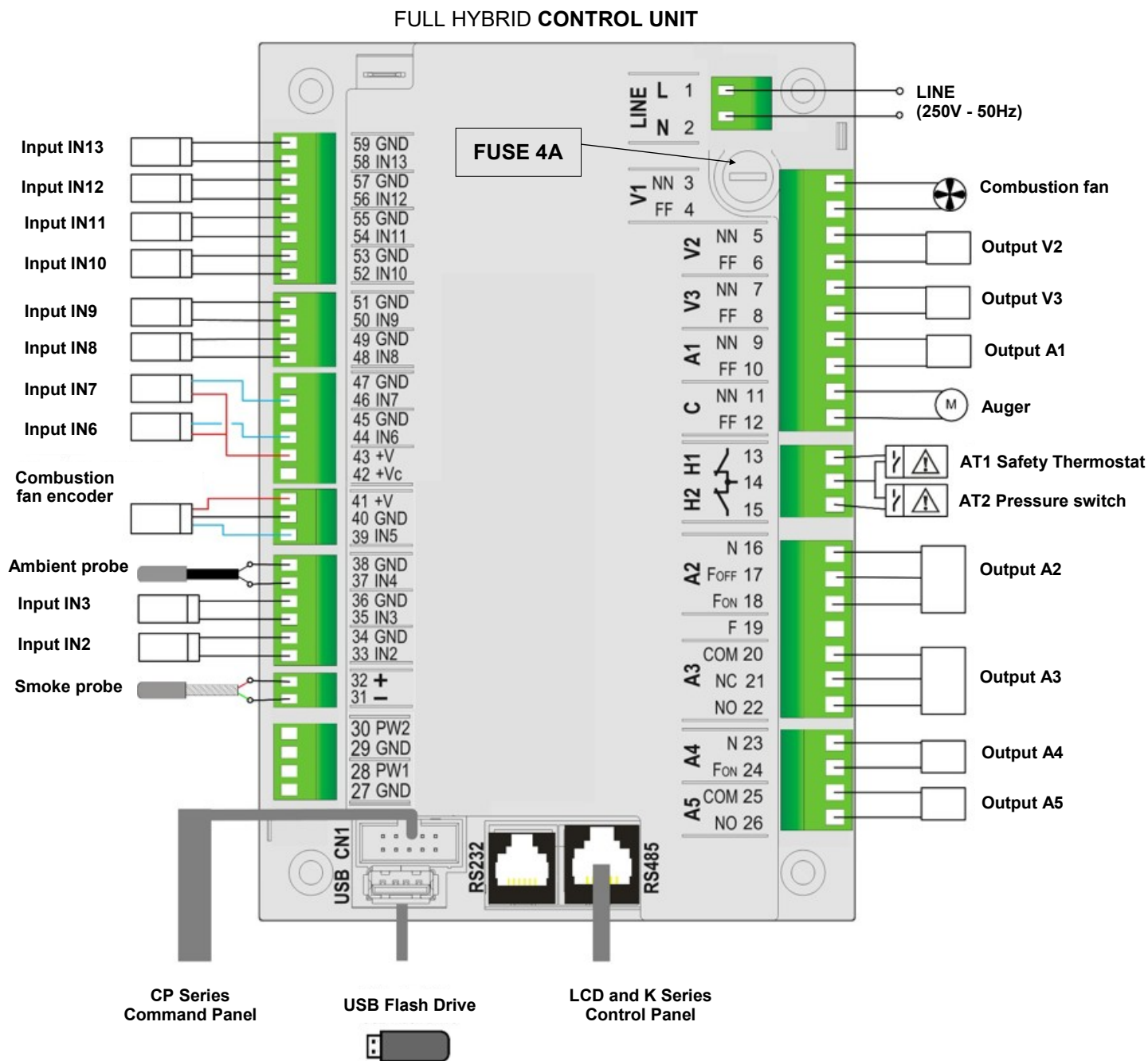
To maintain the product performance unchanged and contribute to reducing its environmental impact, it is recommended to:

- use only fuels compliant with the characteristics indicated in this manual;
- perform the cleaning and routine maintenance operations regularly;
- observe the scheduled periodic maintenance operations;
- use only original Moretti Design spare parts for replacement operations.

Correct maintenance contributes to extending the service life of the product, maintaining its efficiency and reducing the consumption of resources.

At the end of the service life, the product must be delivered to the collection systems provided for by the regulations in force, promoting the recovery of materials and the protection of the environment.

APPENDIX B - Wiring Diagram



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MORETTI DESIGN

Moretti Design
ITALY
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The Moretti Design assumes no responsibility for any errors in this manual and the right to modify without notice features of its products