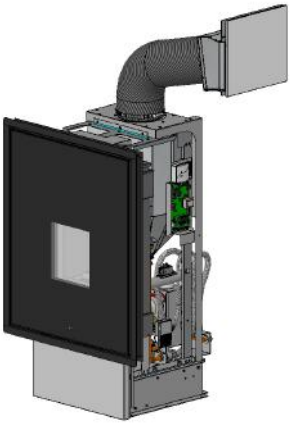
INSTALLATION GUIDE **EN**



INSERT

VIVO 85 PELLET HYDRO

Instructions in English

MCZ

8901507500

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INTRODUCTION

Dear Customer,
our products are designed and manufactured in compliance with European reference Standards for construction products (EN13240 wood-burning stoves, EN14785 pellet-burning appliances, EN13229 fireplaces/wood-burning inserts, EN 12815 wood-burning cookers), with high quality materials and extensive experience in the transformation processes. The products also meet the essential requirements of Directive 2006/95/EC (Low Voltage) and Directive 2004/108/EC (Electromagnetic Compatibility).
To get the best performance, we suggest you read the instructions in this manual carefully.
This installation and use manual forms an integral part of the product: ensure that the manual is always supplied with the device, even if the boiler changes owner. If the manual is lost, you can request another copy from the local technical service or download it directly from the company website.
All local regulations, including those regarding national and European regulations, must be respected when the device is installed.
In Italy, for the installation of devices with biomass lower than 35KW, refer to ministerial decree 37/08, and the qualified installation technician with the appropriate requisites must issue a certificate of compliance for the system installed. (By system one means Stove+Chimney+Air inlet).

REVISIONS TO THE PUBLICATION

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The company reserves the right to make changes to the product at any time without prior notice. The proprietary company reserves its rights according to the law.

CARE OF THE MANUAL AND HOW TO CONSULT IT

- Take care of this manual and keep it in an easily accessible place.
- Should the manual be misplaced or ruined, request a copy from your retailer or directly from the authorised Technical Assistance Department. It can be downloaded from the company website.
- The "**text in bold**" must be read with particular care.
- The "*text in italics*" draws attention to other sections in this manual or clarifications.
- "NOTE" provides the reader with additional information.

SYMBOLS USED IN THE MANUAL

	**ATTENTION:** Read the relative message with care as **failure to observe the information provided could result in serious damage to the product and put the persons who use it at risk**.
	**INFORMATION:** failure to comply with these provisions will compromise the use of the product.
	**OPERATING SEQUENCES:** sequence of buttons to be pressed to access the menus or change settings.
	**MANUAL** carefully read this manual or the relative instructions.

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⚠ SAFETY PRECAUTIONS

- **Installation, electrical connection, function test and maintenance must only be carried out by authorised and qualified personnel.**
- **Install the product in accordance with all local and national legislation and regulations in force in the region or state.**
- **A bad use or unproper maintainance of the product can bring to a serious risk of explosion in the combustion chamber.**
- Only use the fuel recommended by the manufacturer. The product must not be used as an incinerator. It is strictly forbidden to use liquid fuel.
- Do not put any fuel other than wood pellets in the hopper.
- The instructions provided in this manual must always be complied with to ensure the product and any electronic appliances connected to it are used correctly and accidents are prevented.
- **This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance shall not be carried out by children without supervision.**
- The user, or whoever is operating the product, must read and fully understand the contents of this installation guide before performing any operation. Errors or incorrect settings can cause hazardous conditions and/or poor operation.
- Do not climb on or lean on the product.
- Do not put linen on the product to dry. Any drying racks or similar objects must be kept at a safe distance from the product. **Fire hazard.**
- *All liability for improper use of the product is entirely borne by the user and relieves the Manufacturer from any civil and criminal liability.*
- Any type of tampering or unauthorised replacement with non-original spare

parts could be hazardous for the operator's safety and relieves the company from any civil and criminal liability.

- Many of the surfaces of the product get very hot (door, handle, glass, smoke extraction pipes, etc.). **Avoid coming into contact with these parts without adequate protective clothing or suitable means, such as gloves with thermal protection** or "cold handle" operating systems.
- **It is forbidden to operate the product with the door open or the glass broken.**
- The product must be powered by an electrical system that is equipped with an effective earthing device.
- Switch the product off in the event of a fault or malfunction.
- Accumulated unburned pellets in the burner after each "failed start-up" must be removed before lighting again. Check that the burner is clean and positioned properly before lighting again.
- **Shut the stove down in the event of a breakdown or bad running and contact the specialised technician immediately.**
- **Pellets must not be fed manually into the burner – this wrong behaviour can generate an abnormal amount of unburned gas, with a risk of explosion in the chamber.**
- **Accumulated unburnt pellets in the burner after a failed ignitions must be removed before lighting.**
- Failure to clean and maintain the brazier can result in improper running and explosions within the stove. Make sure you remove and clear the holes in the brazier and any loose encrustations every time you empty the ash from the stove or every time you have a failed ignition. Make sure that the holes in the brazier are never reduced in size as this will affect the safe performance of the stove if not maintained.
- Do not wash the product with water. The water could get inside the unit and damage the electrical insulation and cause electric shocks.
- If there is a fire in the flue pipe, extinguish the stove, disconnect it from the power supply and never open the door. Then contact the competent authorities.

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1-WARNINGS AND WARRANTY CONDITIONS

- Do not light the stove with flammable materials if the ignition system breaks down.
- Do not stand for a long time in front of the product in operation. Do not overheat the room you are in and where the product is installed. This could cause injuries and health problems.
- Install the product in a location that does not present a fire hazard and is equipped with power and air supplies and smoke extractors.
- In the event of fire in the chimney, turn off the device, disconnect it from the mains electricity and do not open the hatch. Then contact the competent authorities.
- The product and the cladding must be stored in a dry place and must not be exposed to weathering.
- It is recommended not to remove the feet that support the product in order to guarantee adequate insulation, especially if the flooring is made of flammable materials.
- In the event of a malfunction with the ignition system, do not force it to light by using flammable materials.
- Special maintenance must only be performed by authorised and qualified personnel.
- Assess the static conditions of the surface on which the weight of the product will rest and provide suitable insulation if it is made of flammable material (e.g. wood, fitted carpet or plastic).
- Live electrical parts: only power the product once it has been fully assembled.
- Disconnect the product from the 230V power supply before performing any maintenance operation.
- **IF ANY SMOKE SPILLAGE IS SEEN WITHIN THE ROOM OR THE APPLIANCE SUFFERS FROM AN EXPLOSIVE IGNITION PLEASE TURN OFF THE APPLIANCE, VENTILATE THE ROOM AND CONTACT THE INSTALLER/ SERVICE TECHNICIAN IMMEDIATELY.**

1-WARNINGS AND WARRANTY CONDITIONS

INFORMATION:

Please contact the retailer or qualified personnel authorised by the company to resolve a problem.

- You must only use the fuel specified by the manufacturer.
- When the product is switched on for the first time it is normal for it to emit smoke due to the paint heating for the first time. Therefore make sure the room in which it is installed is well ventilated.
- Check and clean the smoke extraction pipes regularly (connection to the chimney).
- The product is not a cooking appliance.
- Always keep the cover of the fuel hopper closed.
- Store this installation and use manual with care as it must accompany the product for the duration of its useful life. If the product is sold or transferred to another user, ensure the manual is also handed over.

INTENDED USE

The product only works with wood pellets and must be installed indoors.

WARRANTY CONDITIONS

The company guarantees the product, **with the exception of elements subject to normal wear** (listed on the following page), for a period of **2 (two) years** from the date of purchase attested by:

- a document to serve as proof of purchase (invoice and/or receipt) that shows the name of the vendor and the date on which the purchase was made;
- forwarding of the completed certificate of guarantee within 8 days of purchase.

Furthermore, in order for the guarantee to be valid, the device must be installed and calibrated by qualified personnel, and where necessary, the user must be issued with a declaration of conformity and correct functioning of the product.
We recommend performing functional testing of the product before completion with the relevant finishes (claddings, painting of walls, etc.).
Any installation that fails to comply with the regulations in force will invalidate the product guarantee, as will improper use or failure to carry out the maintenance prescribed by the manufacturer.
The guarantee is valid on the condition that the instructions and warnings contained in the use and maintenance manual are observed, and therefore the product is used correctly.
The replacement of the entire system or the repair of one of its components does not extend the guarantee period, and the original expiry date remains unchanged.
The guarantee covers the replacement or free repair **of parts recognised as being faulty at source due to manufacturing defects.**
To benefit from the guarantee, in the event of a fault, the customer must have the guarantee certificate and present it with the proof of purchase document to the Technical Assistance Office.

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1-WARNINGS AND WARRANTY CONDITIONS

EXCLUSIONS

The guarantee does not cover malfunctions and/or damage to the appliance that arise due to the following causes:

- Damage caused during transportation or relocation
- all parts that develop faults due to negligence or improper use, incorrect maintenance, installation that does not comply with the manufacturer's instructions (always refer to the installation and use manual provided with the appliance)
- incorrect dimensioning with regards to the use or faults in the installation or failure to adopt the necessary devices to guarantee proper execution
- improper overheating of the equipment, use of fuels not conforming to the types and quantities indicated in the instructions provided
- further damage caused by incorrect user interventions in an attempt to fix the initial fault
- worsening of the damage due to the continued use of the equipment by the user, once the defect has been noticed
- in the presence of a boiler, any corrosions, incrustations or breaks caused by water flow, condensation, hardness or acidity of the water, improperly performed descaling treatments, lack of water, mud or limescale deposits
- inefficiency of chimneys, flues or parts of the plant affecting the equipment
- damage caused by tampering with the appliance, atmospheric agents, natural disasters, vandalism, electrical discharges, fires, faults in the electric and/or hydraulic system.
- Failure to have the annual stove maintenance performed by an authorised technician or qualified personnel will result in the loss of the warranty.

Also excluded from this guarantee are:

- parts subject to normal wear such as gaskets, glass, claddings and cast iron grids, painted, chrome-plated or gilded parts, handles and electric cables, bulbs, indicator lights, knobs, all parts which can be removed from the hearth.
- Variations in colour of the painted or ceramic/serpentine parts and craquelure ceramics as they are natural characteristics of the material and product use.
- masonry work
- plant parts (if present) not supplied by the manufacturer

Any technical interventions on the product to eliminate the above-said defects and consequent damages must be agreed upon with the Technical Assistance Centre, who reserves the right to accept the relative appointment or not. However, said interventions will not be carried out under warranty but as technical assistance to be granted at part of any eventual and specific agreed conditions and in accordance with the fee in force for the work to be carried out.
The user will also be charged for any costs incurred to remedy the incorrect technical interventions, tampering or damage to the appliance, not attributable to original faults.
Save for the legal or regulatory limits, the guarantee does not cover the containment of atmospheric and acoustic pollution.

The company declines all liability for any damage which may be caused, directly or indirectly, to persons, animals or objects as a consequence of non compliance with any prescription specified in the manual, especially warnings regarding installation, use and maintenance of the appliance.

1-WARNINGS AND WARRANTY CONDITIONS

SPARE PARTS

In the event of a malfunction, consult the retailer who will forward the call to the Technical Assistance Service.

Use only original spare parts. The retailer or service centre can provide all necessary information regarding spare parts.
We do not recommend waiting for the parts to be worn before having them replaced. It is important to perform regular maintenance.

The company declines all liability if the product and any other accessory is used improperly or modified without authorisation.
All parts must be replaced with original spare parts.

WARNINGS FOR THE CORRECT DISPOSAL OF THE PRODUCT.

The owner is the sole party responsible for demolishing and disposing of the product. This must be performed in compliance with laws related to safety and environmental protection in force in his/her country.
At the end of its working life, the product must not be disposed of as urban waste.
It must be taken to a special differentiated waste collection centre set up by the local authorities or to a retailer that provides this service.
Separating and recycling prevents potential negative effects on the environment and health (often caused by inappropriately disposing of product parts). It also allows materials to be recovered in order to obtain significant savings in energy and resources.

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1-WARNINGS AND WARRANTY CONDITIONS

RULES FOR INSTALLATION

The product in question is a stove that uses wood pellets.
Below is a list of the European regulations regarding the installation of the product:
EN 12828 Heating systems design.
IEC 64-8 Electrical systems with rated voltage not exceeding 1000 V AC and 1500 V DC.
EN 1443 General chimney regulation
EN 1856-1 metal smoke ducts
EN 1856-2 metal smoke extraction channels
EN 1457 chimneys - Interior terracotta / ceramic flues
EN 13384-1 Chimneys - Thermal and dynamic fluid calculation methods - Part 1: Chimneys connected to a single appliance
Below are some applicable regulations for Italy:
UNI 10683:2012 Heat generators fuelled by wood or other solid bio-fuels - Test, installation, control and maintenance (for thermochemical power at the firebox lower than 35kW)
UNI/TS 11278 general technical regulation for the choice of smoke duct/flue
UNI 10847:2000 Smoke extractor systems for liquid and solid fuelled generators - Maintenance and control - Guidelines and procedures
UNI 8065 water treatment in civil plants.
UNI 9182 Hot and cold (sanitary) water supply and distribution systems.

Installation must be carried out with reference to the diagram of the heating system prepared in accordance with the standards and local recommendations in force:
In any case, respect:
For the heating system -
Local requirements concerning the chimney connection.
Local requirements for fire-fighting standards.
For electrical parts - **EN 60335 "Safety of electrical household appliances and similar"**
Part 1 - General requirements
Part 2 - Special regulations for appliances with gas, gas oil and solid fuel burners with electrical connections.

2-INSTALLATION

The instructions in this chapter refer explicitly to the Italian installation regulation UNI 10683. In any case, always observe the domestic regulations in force.

PELLETS

Wood pellets are manufactured by hot-extruding compressed sawdust which is produced during the working of natural dried wood. The compactness of the material is guaranteed by the lignin contained in the wood itself and allows pellets to be produced without glue or binders.

The market offers different types of pellets with characteristics that vary according to the wood mixtures used. The most common diameter on the market is 6 mm (although 8 mm diameter is available too) with a length, on average, of between 3 and 40 mm. A good quality pellet has a density of between 600 and 750 or more kg/metres cubed and a water content that accounts for 5 to 8% of its weight. Pellets have technical advantages besides being an ecological fuel, as the wood residue is used completely, thereby achieving cleaner combustion than that of fossil fuels.

Good-quality wood has a calorific value of 4.4 kW/kg (15% moisture, after about 18 months of seasoning), whereas that of pellets is 4.9 kW/kg. To ensure good combustion, the pellets must be stored in a dry place and protected from dirt. Pellets are usually supplied in 15 kg bags, therefore, storing them is very convenient.

Good quality pellets guarantee good combustion, thereby decreasing harmful emissions into the atmosphere.

15 Kg BAG OF FUEL

The poorer the quality of the fuel, the more often the internal parts of the brazier and combustion chamber must be cleaned.

The main quality certifications for pellets currently available on the European market guarantee that the fuel complies with class A1/A2 according to ISO 17225-2 (ex EN 14961). These certifications include, for example, **ENPlus**, **DINplus**, **Ö-Norm M7135,** and in particular, guarantee the following characteristics:

- calorific value: 4.6 ÷ 5.3 kWh/kg.
- Moisture content: ≤ 10% of the weight.
- Percentage of ash: max 1.2% of the weight (A1 less than 0.7%).
- Diameter: 6±1/8±1 mm.
- Length: 3÷40 mm.
- Content: 100% untreated wood without the addition of binding substances (max 5% bark).
- Packaging: in sacks made from ecologically compatible or biologically decomposing material.

The company strongly recommends using certified fuel for its products (ENplus, DINplus, Ö-Norm M7135).
Poor quality pellets or others that do not comply with the characteristics specified previously may compromise the operation of your product and can therefore render the guarantee and product liability invalid.

2-INSTALLATION

FOREWORD

The installation position must be chosen according to the room, to the smoke extraction system, to the chimney flue. Check with local authorities whether there are any restrictive regulations in force regarding the combustion air inlet, the smoke outlet system, the flue or the chimneypot. The manufacturer declines all responsibility in the event of installations that do not comply with the laws in force, incorrect room air exchange, electrical connection non-compliant with the standards and inappropriate use of the appliance. The installation must be carried out by a qualified technician, who must issue a declaration of conformity of the system to the purchaser and will assume full responsibility for final installation and consequent good operation of the product.
In particular one must ensure that:

- there is a suitable combustion air inlet and smoke outlet in compliance with the type of product installed
- other stoves or devices installed do not cause depression in the room where the product is installed (for sealed appliances only, a maximum of 15 Pa of depression in the room is allowed)
- when the product is switched on there is no reflux of smoke in the room
- fumes extraction takes place in total safety (sizing, smoke seal, distances from flammable materials..).

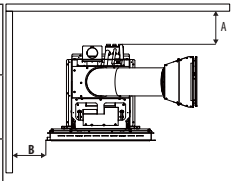
We especially recommend to check the data tags of the flue for the safety distances that must be observed in presence of combustible materials and the type of insulating material to be used. These indications must be followed strictly to prevent serious harm to people and the integrity of the home. The installation of the appliance must ensure easy access to clean the appliance itself, the smoke outlet pipes and the flue. **It is forbidden to install the stove in rooms with a fire hazard. Installation in studio flats, bedrooms and bathrooms is only allowed with sealed or closed appliances equipped with suitable combustion air ducting directly outside. Always maintain adequate distance and protection in order to prevent the product from coming into contact with water.**
In the event there are several appliances installed, the external air inlet must be sized accordingly.

MINIMUM DISTANCES

It is recommended to install the stove detached from any walls and/or furniture, with a minimum clearance to allow effective aeration of the appliance and a good distribution of heat in the room. Comply with the distances from flammable or heat-sensitive objects (sofas, furniture, wood panelling, etc.) as specified below. The frontal distance from flammable materials must be at least as specified in the product's technical data table.
If particularly delicate objects are present, such as furniture, curtains or sofas, increase the stove clearance accordingly.

If the floor is made of wood, it is recommended to fit a floor protection sheet in compliance with the Standards in force in the country of installation.

VIVO 85 PELLET HYDRO	Non-flammable walls	Flammable walls
A=REAR	A = 5 cm	A = 10 cm
B=SIDE	B = 5 cm	B = 10 cm



If the floor is made of combustible material, it is recommended to use protection made of non-combustible material (steel, glass...) that also protects the front from falling combusted material during cleaning operations.
The appliance must be installed on a floor with adequate load capacity.
If the existing construction does not meet this requirement, one must take appropriate measures (for example a load distribution plate).

2-INSTALLATION

FOREWORD

This chapter on the Smoke Flue has been produced in reference to the prescriptions of European regulations (EN13384 - EN1443 - EN1856 - EN1457).

The chapter provides indications for installing an efficient and correct smoke flue but is under no circumstances to substitute the regulations in force, which the qualified technician must be in possession of. Check with local authorities whether there are any restrictive regulations in force regarding the intake of air for combustion, the smoke extraction system, the flue or the chimneypot.

The company declines all liability relating to the poor functioning of the boiler if this is due to the use of an insufficiently sized flue in violation of regulations in force.

SMOKE FLUE

The flue or chimney is of great importance for the proper operation of a solid fuel-burning heating appliance with natural draught, as modern heating appliances have high efficiency with cooler flue gasses and consequently less draught, it is therefore essential that the flue is built up to standard and always kept in perfect working order. A flue that serves a pellet/wood fuelled appliance must be at least category T400 (or greater if the appliance requires, and resistant to soot fires. Smoke must be extracted through a single flue made of insulated steel (A) or an existing flue that complies with the intended use (B).

A simple air shaft in cement must be suitably lined. In both solutions there must be an inspection cap (AT) and/or inspection hatch (AP) - FIG.1.

It is prohibited to connect more than one wood/pellet or any other type of appliance (vent cowling...) to the same flue.

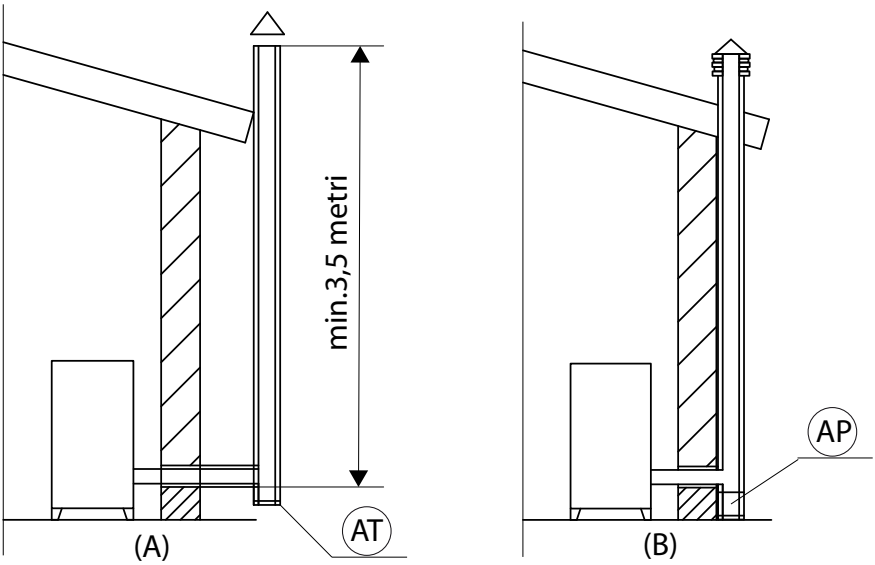


FIGURE 1 - SMOKE FLUE

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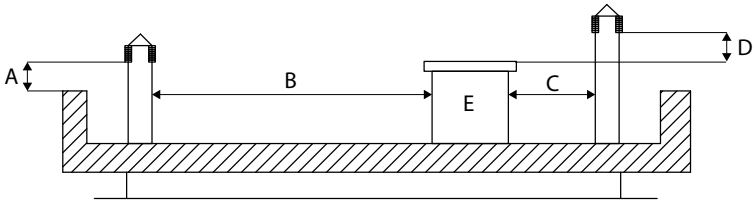
2-INSTALLATION

TECHNICAL CHARACTERISTICS

Have the efficiency of the flue checked by an authorised technician.

The flue must be sealed against flue gasses, in a vertical direction without narrowing, be made with materials impermeable to smoke, condensation, thermally insulated and suitable to resist normal mechanical stress over time (we recommend fireplaces made of A/316 or refractory material with insulated round section double chamber). Be suitably insulated externally to avoid condensation and reduce smoke cooling. It should be separated from combustible or flammable materials with an air gap or insulating materials: check the distance specified by the manufacturer of the fireplace according to EN1443. The chimney opening must be in the same room as the appliance, or at most in the adjoining room, and have a soot and condensation collection chamber beneath the opening, and be accessible via a sealed metal hatch.

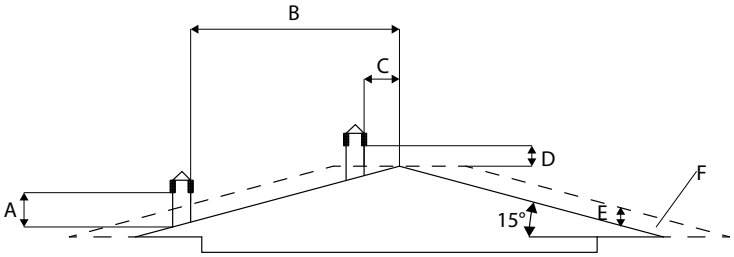
FLAT ROOF



A = 0.50 metres
B = DISTANCE > 2 metres
C = DISTANCE < 2 metres
D = 0.50 metres
E = TECHNICAL VOLUME

FIGURE 2

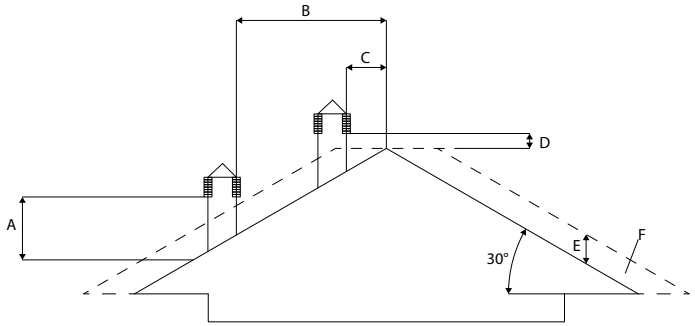
ROOF AT 15°



A = MIN. 1.00 metres
B = DISTANCE > 1.85 metres
C = DISTANCE < 1.85 metres
D = 0.50 metres above highest point
E = 0.50 metres
F = REFLUX ZONE

FIGURE 3

ROOF AT 30°



A = MIN. 1.30 metres
B = DISTANCE > 1.50 metres
C = DISTANCE < 1.50 metres
D = 0.50 metres ABOVE HIGHEST POINT
E = 0.80 metres
F = REFLUX ZONE

FIGURE 4

ROOF AT 60°

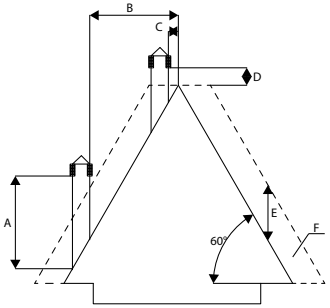


FIGURE 5

A = MIN. 2.60 metres
B = DISTANCE > 1.20 metres
C = DISTANCE < 1.20 metres
D = 0.50 metres ABOVE HIGHEST POINT
E = 2.10 metres
F = REFLUX ZONE

ROOF AT 45°

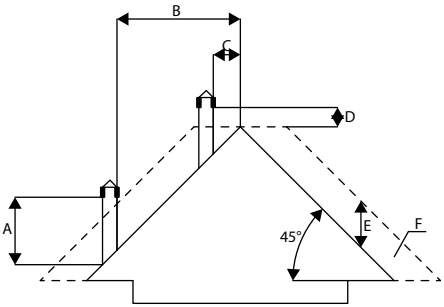


FIGURE 6

A = MIN. 2.00 metres
B = DISTANCE > 1.30 metres
C = DISTANCE < 1.30 metres
D = 0.50 metres ABOVE HIGHEST POINT
E = 1.50 metres
F = REFLUX ZONE

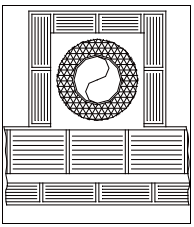
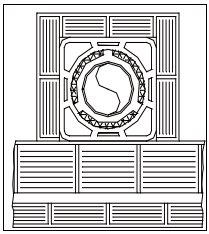
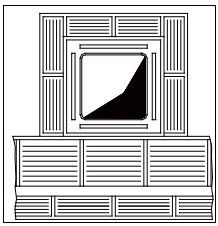
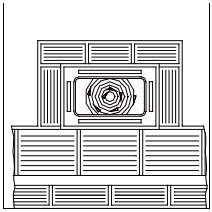
DIMENSIONING

The drop in pressure (draft) of a flue depends on its height. Check the drop in pressure with the values indicated in the technical characteristics. The minimum height of the chimney is 3.5 meters.

The interior cross-section of the flue can be circular (best variation), square or rectangular (the ratio between the interior sides must be ≤1.5) with the sides joined with a minimum radius of 20 mm. The dimension of the cross-section must be **minimum Ø100mm**.

The cross-sections/lengths of the chimneys shown in the technical data tables are indications for correct installation. Any alternative configurations must be correctly dimensioned in accordance with the general method of calculation of UNI EN13384-1 or other proven efficiency methods.

Below is a list of some flues available on the market:

Steel chimney AISI 316 with double chamber insulated with ceramic fibre or equivalent resistant up to 400°C.	Refractory chimney with double insulated chamber and external lightweight concrete cladding with cellular material such as clay.	Traditional square-section clay chimney with insulating empty inserts.	Avoid products with an internal rectangular section where the larger side is 1.5 times the smaller side (e.g. 20x40 or 15x30).
EXCELLENT	**GOOD**	**POOR**	**VERY POOR**
			

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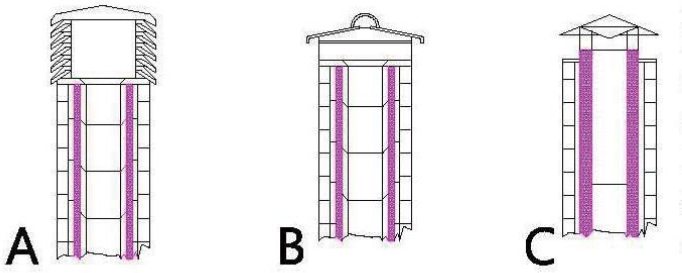
2-INSTALLATION

MAINTENANCE

The flue must be kept clean, since the deposit of soot or unburned oils reduces the cross-section reducing the draft and thus compromising the efficient functioning of the heater and, if large build-ups accumulate, can catch fire. The flue and chimneypot must be cleaned and checked by a qualified chimney sweep at least once a year. Once the inspection/maintenance has been performed, request a written report that the system is safe.
Failure to perform cleaning jeopardises the system's safety.

CHIMNEYPOT

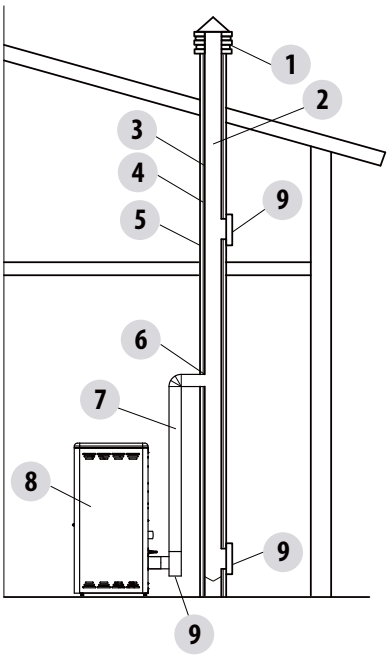
The chimney is a crucial element for the heating appliance to work properly: we recommend a wind proof chimneypot (A), see Figure 7.



The area of the opening for smoke extraction must be at least double the cross-section of the smoke duct/flue system, and arranged so that smoke extraction is ensured even in strong wind. The chimney must prevent rain, snow or animals from entering the chimney. The height of outflow into the atmosphere must be beyond the reflux zone created by the shape of the roof or any obstacles near the outlet (see Figures 2-3-4-5-6).

FIGURE 7

CHIMNEY COMPONENTS



KEY:
(1) CHIMNEYPOT
(2) REFLUX CHANNEL
(3) SMOKE DUCT
(4) THERMAL INSULATION
(5) OUTSIDE WALL
(6) CHIMNEY CONNECTION
(7) SMOKE DUCT
(8) HEAT GENERATOR
(9) INSPECTION ACCESS PANEL

FIGURE 8

EXTERNAL AIR INLET

It is mandatory to provide an adequate external air intake that supplies the combustion air required for the product to work properly. The flow of air between the outside and the installation room may be direct, through an inlet in an external wall of the room; or indirect, via air intake from adjoining rooms and connecting permanently with the installation room (see Figure 9 b). Adjoining areas may not include sleeping areas, garages or general areas with a fire hazard. During installation one must check the minimum clearances required for air intake from outside. Take into account the presence of doors and windows that could interfere with the proper flow of air to the stove (see diagram below).

The air inlet must have a minimum net total area of 80 cm2: the surface must be increased accordingly if there are other active generators (for example: electric fan for stale air extraction, hood, other stoves, etc.), which could cause a depression in the room. Make sure that, with all appliances on, the pressure drop between the room and the outside does not exceed the value of 4 Pa (also for Oyster appliances if the combustion air has not been suitably ducted outside). If necessary increase the intake section of the air inlet, which must be made at floor level and always protected with a bird-proof outer protection grid and in such a way that it cannot be obstructed by any object.

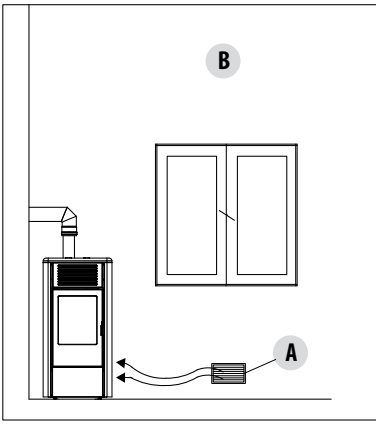


FIGURE 9 A - DIRECTLY FROM OUTSIDE

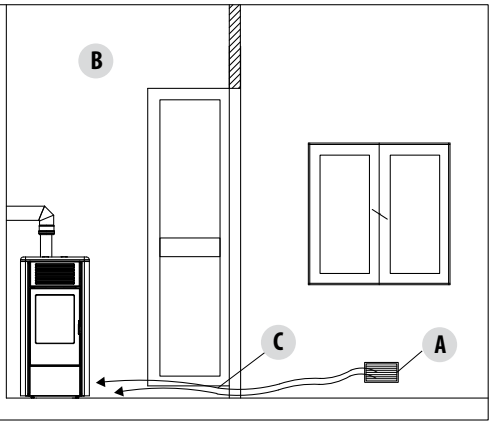
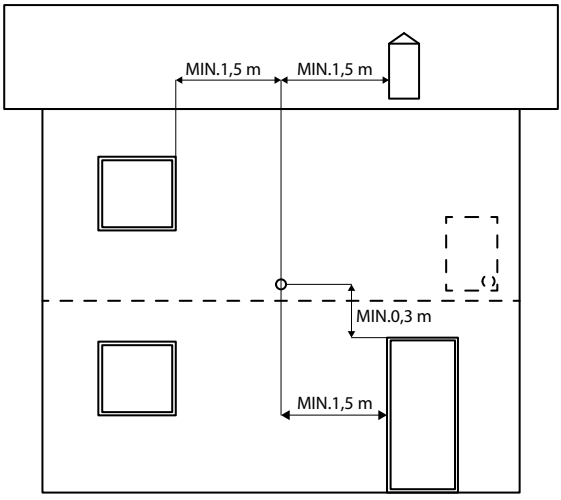


FIGURE 9 B - INDIRECTLY FROM THE ADJACENT ROOM



A=AIR INLET
B=ROOM TO BE VENTILATED
C=INCREASE OF THE GAP UNDER THE DOOR

It is possible to connect the air required for combustion directly to the outside air inlet, with a pipe of at least Ø50mm, with maximum length of 3linear metres; each pipe bend shall be considered equivalent to a linear metre. To attach the pipe see the back of the stove.

For stoves installed in studio flats, bedrooms and bathrooms (where allowed), it is mandatory to connect the combustion air outside. In particular for sealed stoves the connection must be sealed in order not to compromise the overall sealed characteristic of the system.

FIGURE 10

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DISTANCE (metres)	The air inlet must be at a distance of:	
1.5 m	UNDER	Windows, doors, smoke outlets, cavities, ...
1.5 m	HORIZONTALLY	Windows, doors, smoke outlets, cavities, ...
0.3 m	ABOVE	Windows, doors, smoke outlets, cavities, ...
1.5 m	AWAY	from smoke outlet

CONNECTION TO FLUE

The connection between the flue and the appliance must be via a smoke duct that conforms with EN 1856-2. The connecting section must extend no more than 4 m horizontally, with a minimum slope of 3% and with a maximum of 3 90° bends (accessible for inspection - do not count the T fitting at the appliance outlet).

The diameter of the smoke duct must be equal to or greater than that of the appliance outlet (Ø 80 mm).

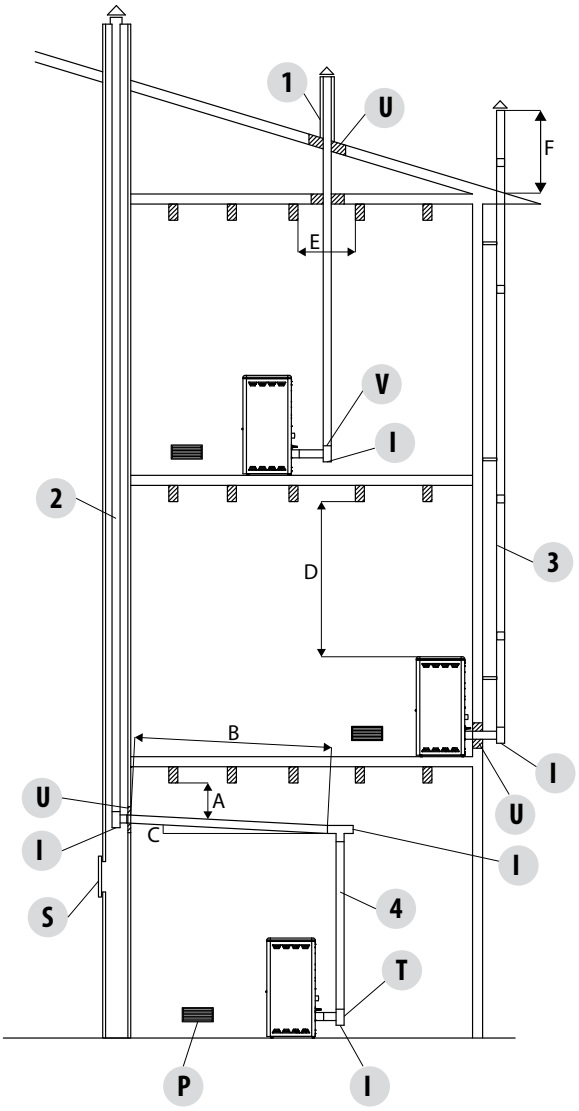
TYPE OF DEVICE	SMOKE DUCT
Minimum vertical length	1.5 metres
Maximum length (with 1 accessible 90° bend)	6.5 metres
Maximum length (with 3 accessible 90° bends)	4.5 metres
Maximum number of accessible 90° bends	3
Horizontal sections (minimum incline 3%)	4 metres

Use smoke ducts with a diameter of 80mm or 100mm depending on the type of system, with silicone gaskets or similar gaskets that can withstand the high operating temperatures of the appliance (min. T200 class P1). **The use of flexible metal tubes in fibre cement or aluminium is prohibited. For direction changes, we always recommend the use of a T joint** with an inspection cap allowing easy access for cleaning the tubes. Always ensure that the inspection cap is replaced and hermetically sealed with the seal in tact after cleaning.

It is prohibited to connect more than one appliance to the same smoke duct, or the discharge from overhead cowling. It is prohibited to extract the products of combustion directly through the wall, whether into indoor spaces or outdoors.

The smoke duct must be a minimum distance of 400 mm from flammable or heat-sensitive structures.

EXAMPLES OF CORRECT INSTALLATION



1. Installation of Ø150mm flue with hole for the passage of the tube increased by:
minimum 100 mm around the tube if next to non flammable parts such as cement, brick, etc.; or
minimum 300 mm around the tube (or as prescribed by data tags) if next to flammable parts such as wood etc.
In both cases, install suitable insulation between the flue and the ceiling.
Always check and respect the data tags on the flue, in particular the minimum safety distances from combustible materials.
The previous rules also apply for holes made in walls.
2. Old flue, minimum pipe Ø100mm with the inclusion of an external access door for chimney cleaning.
3. External flue made of insulated stainless steel pipes, i.e. with double walls minimum Ø100mm: all securely mounted on the wall. With wind-proof chimneypot. See fig. 7 type A.
4. Ducting system using T joints that allow easy access for cleaning without having to remove the tubes

FIGURE 11

U = INSULATING
V = ANY REDUCTION FROM 100 TO 80 MM
I = INSPECTION CAP
S = INSPECTION ACCESS PANEL
P = AIR INLET
T = T JOINT WITH INSPECTION CAP

A = MINIMUM 40 MM
B = MAXIMUM 4 M
C = MINIMUM 3°
D = MINIMUM 400 MM
E = HOLE DIAMETER
F = SEE FIG.2-3-4-5-6

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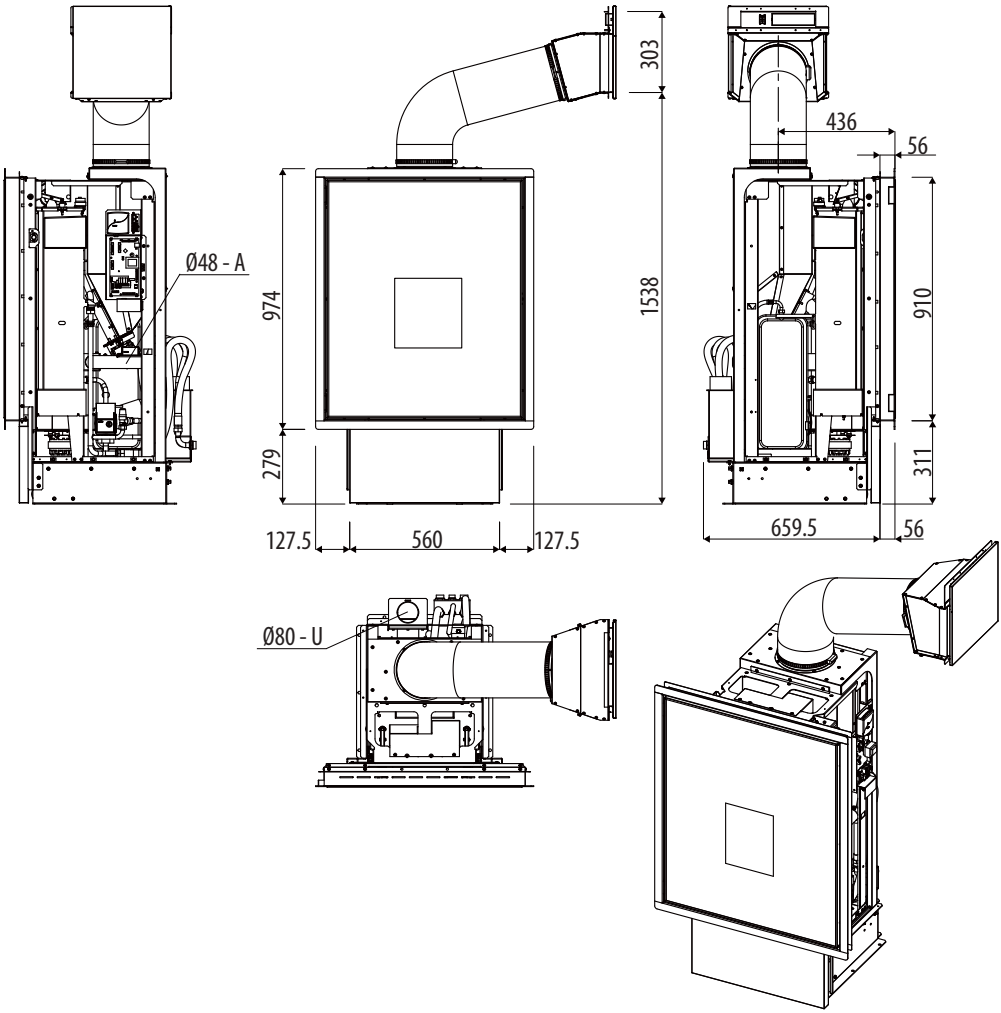
DRAWINGS AND CHARACTERISTICS

DIMENSIONS OF VIVO 85 PELLET HYDRO (dimensions in mm)



A = COMBUSTION AIR
U= SMOKE OUTLET

3-DRAWINGS AND TECHNICAL FEATURES

TECHNICAL CHARACTERISTICS	VIVO 85 PELLET HYDRO
Nominal output power:	22.3 kW (19178 kcal/h)
Nominal power output (H_2O):	18.0 kW (15480 kcal/h)
Minimum power output:	4.4 kW (3784 kcal/h)
Minimum power output (H_2O):	3.0 kW (2580 kcal/h)
Efficiency at Max	92.5%
Efficiency at Min	95.0%
Temperature of exhaust smoke at Max	160°C
Temperature of exhaust smoke at Min	71°C
Particulate/OGC / Nox (13%O_2)	2 mg/Nm^3 - 0.2 mg/Nm^3 - 132 mg/Nm^3
CO at 13% O_2 at Min and at Max	0.040 – 0.012%
CO_2 at Min and at Max	7.03 - 12.49%
Maximum water pressure	2.5 bar - 250 kPa
Recommended draught at Max*** power	0.10 mbar - 10 Pa***
Minimum draft allowed at Min power	0.02 mbar - 2 Pa
Smoke mass	12.6 g/sec
Hopper capacity	44 litres
Type of pellet fuel	Pellet diameter 6-8 mm and size 3÷40 mm
Pellet hourly consumption	Min ~ 0.9 kg/h* - Max ~ 4.9 kg/h*
Autonomy	At min ~ 28 h* - At max ~ 5 h*
Heatable volume m^3	481/40 – 550/35 – 642/30 **
Combustion air inlet	External diameter 50 mm
Smoke outlet	External diameter 80 mm
Air inlet	80 cm^2
Rated electrical power (EN 60335-1)	120 W (max 420 W)
Supply voltage and frequency	230 Volt / 50 Hz
Net weight	190 kg
Weight with packaging	200 kg
Distance from combustible material (back/side/under)	100/100/0 mm
Distance from combustible material (ceiling/front)	800/1000 mm

* Data that may vary depending on the type of pellets used
** Volume that can be heated, according to the power requirement per m^3 (respectively 40-35-30 Kcal/h per m^3)
***Value recommended by the manufacturer (non-binding) for optimal product operation

Tested according to EN 14785 in accordance with European regulation for Construction Products (EU 305/2011).

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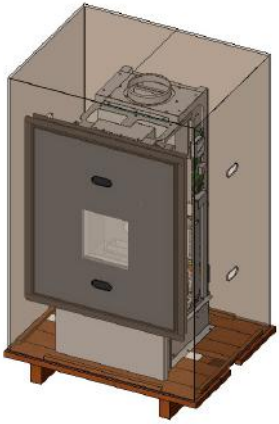
4-INSTALLATION AND ASSEMBLY

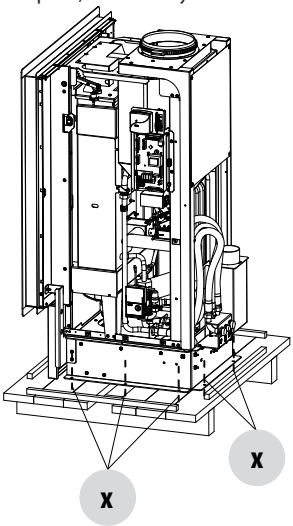
PREPARATION AND UNPACKING

The product is supplied in two packages. The pallet with the Vivo 85 Hydro product, with a box on top, with pipe, loading hatch and ventilation grille.



PRODUCT PACKAGING

Open the packing, remove the product from the pallet and place it in the selected position, ensuring it complies with the specifications.
To remove the product from the pallet, it is necessary to take out screws "x" from the base of the product.



The appliance must always be carried upright with a cart. Pay particular attention to the door and its glass, protecting them from mechanical knocks that would compromise their integrity.
The product must always be moved with care. If possible unpack the product near the place of installation. The packaging materials are neither toxic nor harmful, and therefore no particular disposal measures are required. Therefore, the end user is responsible for product storage, disposal or possible recycling in compliance with the relative applicable laws in force.

4-INSTALLATION AND ASSEMBLY

POSITIONING

Before placing the product, assess optimal positioning condition.

INSTALLATION PREMISE

Evaluate the following elements:
The product's support plane must have the following features:

- withstand the weight of the product and any accessories
- perfectly level

After ascertaining the required conditions for correct installation, proceed with assembling the product:

- perform the various hydraulic and electric connections to the flue, complying with all regulations in force.

It is required to ensure all connections (hydraulic and electric) allow for the product to be extracted.
It is good practice to leave the product without its cladding for a few days to check the tightness of all the hydraulic connections.

For any type is installation, it is necessary to allow access to the hoses installed on the wall for inspection, because when it is time to take the product out, it will be necessary to disconnect the hoses from the system.

The frame and the aesthetic door are already assembled with the product.

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4-INSTALLATION AND ASSEMBLY

PELLET LOADING CHUTE ASSEMBLY

Another choice to be made before placing the product is to define the side where to install the chute for loading the fuel. Vivo 85 Hydro pellet is delivered with two clamps, the connection pipe and the chute with hatch.
The chute may be mounted on the right side, on the left side or at the front. The connection pipe is 1 metre long.

It is obligatory to shorten the connection pipe, depending on positioning (side or front), so that it is properly taut and at a minimum angle with respect to the horizontal, as shown in the drawing. This operation is required for pellet descent.
Before installing the cladding perform a fuel loading test to ensure it descends correctly towards the hopper.
It is obligatory to provide for correct insulation of the pipe in case it is fitted on the left side where the smoke exhaust is. Fire risk!

Chute assembly

In the event of opting for side pipe installation, the distance from the machine axis to the wall must be 80 cm maximum (picture on the side).
To position the chute, proceed as follows:

- Connect the pipe supplied to the product ensuring it is rotated to the side, and fasten it with the clamp.
- Connect the pipe (in the top section) to the mouth of the hatch structure by means of the clamps supplied.
- Position the pipe with the hatch structure so that, when cladding is completed, it may be screwed and fixed to the wall of the cladding at the hole made to insert it.
- To mount the outer hatch, which should only be done when cladding is completed, refer to the suitable paragraph.

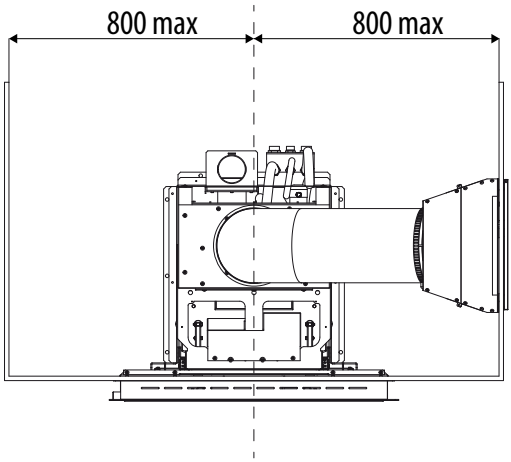
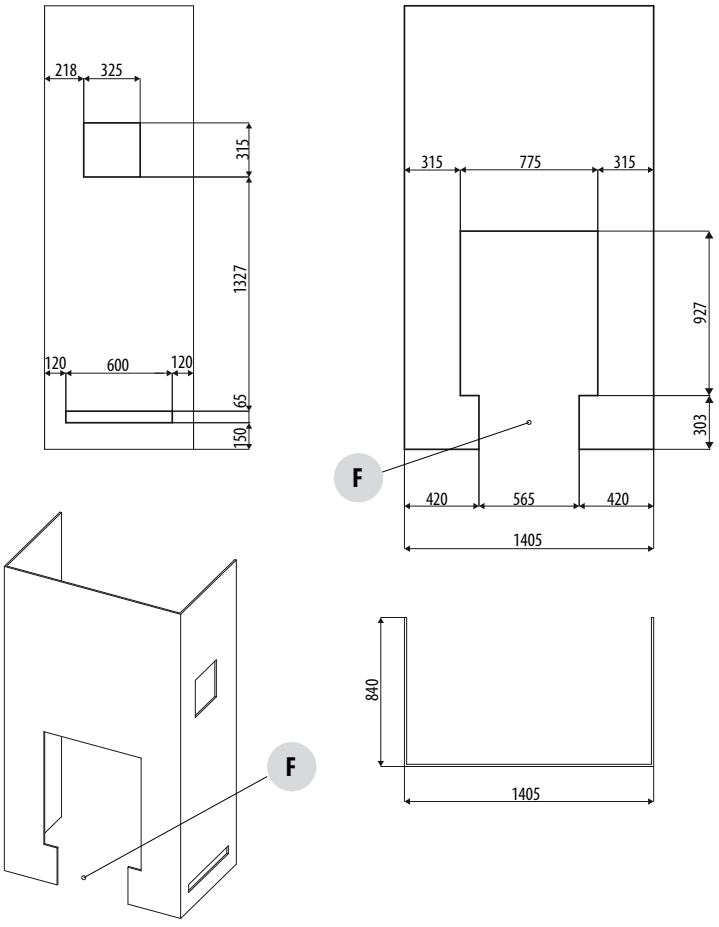


DIAGRAM FOR DRILLING HOLES ON THE CLADDING

PRODUCT HOUSING HOLE

The holes that need to be drilled on the wall are marked in the picture below. These measurements allow the frame to cover the gap that remains between the product and the hole and also allow the product to be removed if maintenance is to be performed and/or parts are



to be replaced.

BOTTOM FRONT PART OF THE PRODUCT

The bottom part of cladding "F" must not be built at the time of installation. The product remains flush with the built wall, and the bottom front part (with the hole on the wall) of Vivo 85 Hydro must be painted with indoor paint used for the wall finish.
This operation is necessary for future removal of the product.

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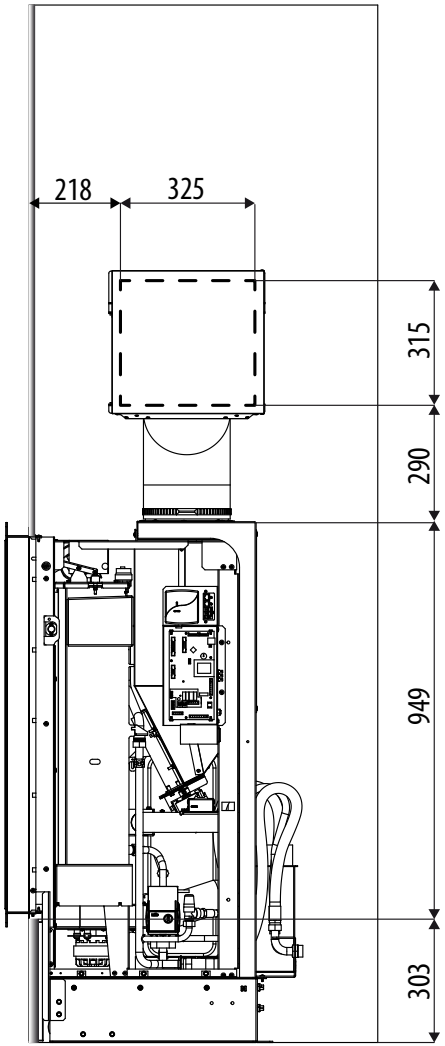
4-INSTALLATION AND ASSEMBLY

HOLE FOR PELLET LOADING HATCH ASSEMBLY

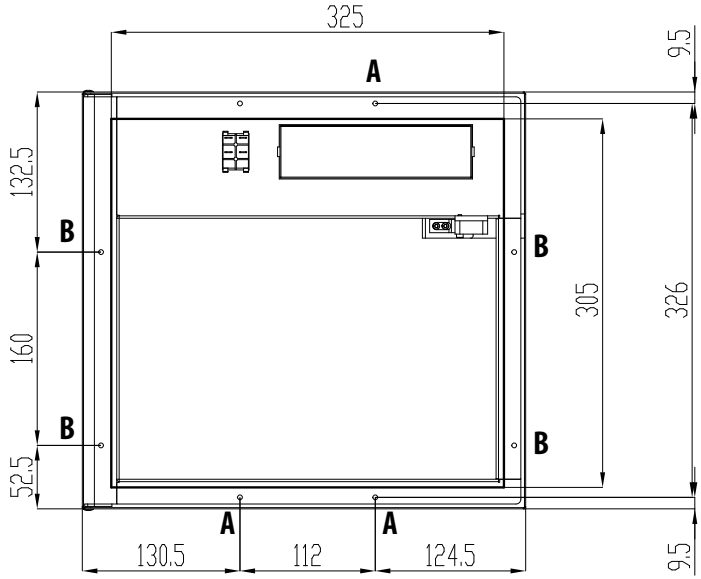
The product can be installed on a masonry base, built at the time of installation, or a support (optional) can be purchased, to raise the product to a suitable height. The measurements, recommended by us, range from 50 to 60 cm under the surface that product sits on.
When drilling the hole for loading hatch assembly, there are compulsory measurements provided by the length of the loading pipe, that need to be observed.
Below is the drawing with the recommended and compulsory measurements for quicker installation.



4-INSTALLATION AND ASSEMBLY

HATCH ASSEMBLY

After performing wiring, before permanently fastening the hatch to the hood, carry out an operation test.
If the test has been successful fasten the hatch to the hood with four screws, using the four holes on the hatch frame marked with letter (B).
The holes marked on the hatch horizontal profiles (A) are used instead to fix the hatch frame to the chute frame, to permanently secure the two elements and close the hood wall in between.
It is necessary to preventively drill a rectangular hole on the wall, at a given height.



PELLET HATCH OPENING/CLOSING

The hatch is fitted with pressure closure and therefore completely lacks any handles or handgrips.
To open or close the hatch, press it in the top left hand corner. It will hook on or unhook from the closure device on the side of the hatch by simple pressure.

CONNECTION OF SWITCH AND CONTROL PANEL

The emergency panel and switch are already fitted onto the pellet loading hatch and are already connected to the relevant cables by the manufacturer. Take the switch cable and connect it to the socket at the rear of the product.
The panel cable instead must be connected to the electrical board in position 1.

- ***Pay the utmost attention when handling panels connected to the relevant cables.***
- ***The cables must remain in areas away from heat or in areas where they cannot be damaged by possible product extraction.***
- ***For correct operation, run the flat cable and the switch cable away from each other, on different routes.***
- ***Do not in any case force insertion of the connector.***
- ***Do not bend and/or twist the cables.***
- ***Do not modify connectors or wiring or panel supports.***

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4-INSTALLATION AND ASSEMBLY

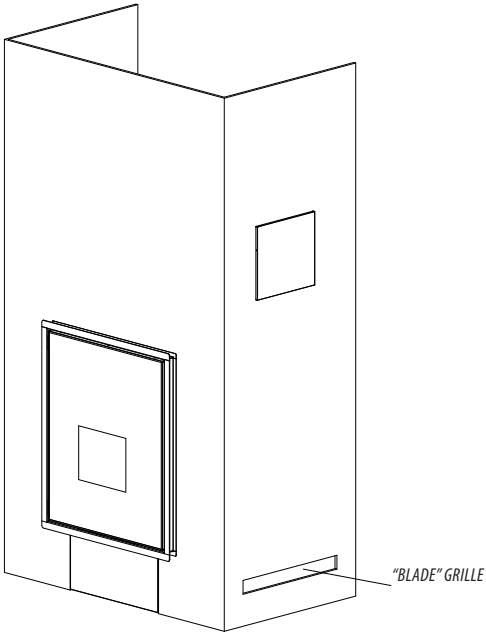
VENTILATION GRILLES

It is obligatory to install the supplied ventilation grilles or grilles that assure the same features and the same air passage section.

The company is not liable for any damage to the structure or to the electric components caused by failure to comply with this warning.

The structure reaches high temperatures and it is **indispensable** to always assure continuous and efficient ventilation inside the cladding. This practice - as well as assuring perfect operation of the product - makes it possible to recover some of the structure's heat, which would be lost if it remained inside the cladding.

The company supplies the "Blade" nozzle for installation in the lower part of the wall as shown in the figure.

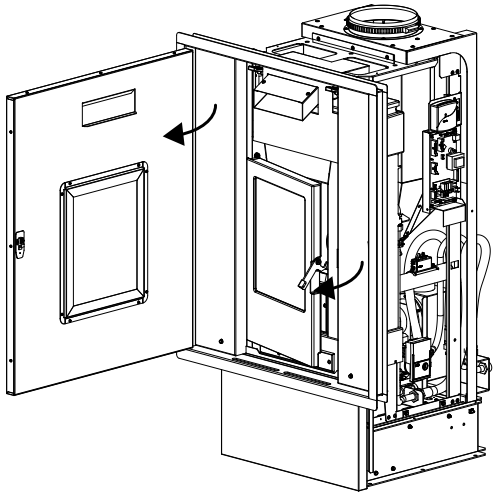


4-INSTALLATION AND ASSEMBLY

OPENING/CLOSING THE DOOR

CAUTION!
The door must be closed properly for the stove to work correctly.
Use suitable protective clothing (for example gloves) to open the door of the stove.

The aesthetic door is fitted with a pressure closure and therefore does not feature any handles or handgrips.
It will hook on or unhook from the closure device on the side of the door by simple pressure. The firebox door, on the other hand, is fitted with a handle; lift it and pull it towards you.



PULLING THE PRODUCT OUT

To perform maintenance of some devices and/or cleaning of certain parts, it is required to extract a part of/or the entire product from its housing. Product extraction is explained below.

CAUTION: THE PRODUCT MUST ONLY BE PULLED OUT WHEN COLD AND THE SUPPLY PRESSURE MUST BE DISCONNECTED IN ADVANCE.
When repositioning the movable part, ensure the two screws that were previously removed to pull the product out, are screwed back in and tightened.
Forgetting to do so may result in the product not working, due to no power supply or leaking soot.

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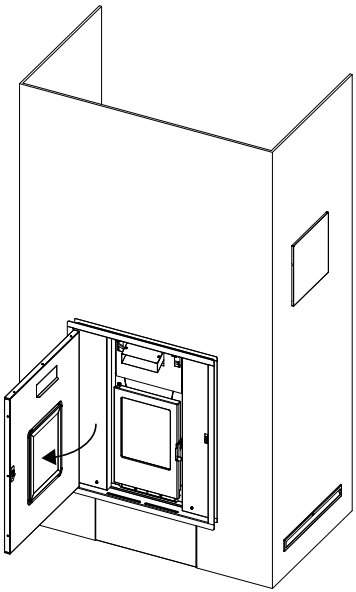
4-INSTALLATION AND ASSEMBLY

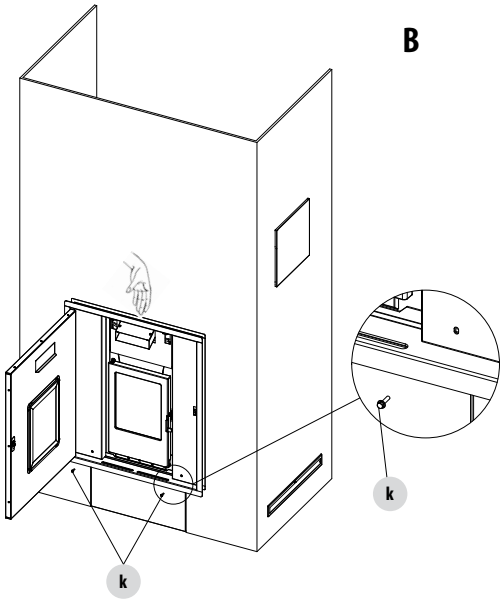
PULLING THE PRODUCT OUT PARTIALLY

- Open the aesthetic door (Fig.A)
- remove the two screws "k" (Fig.B)

A

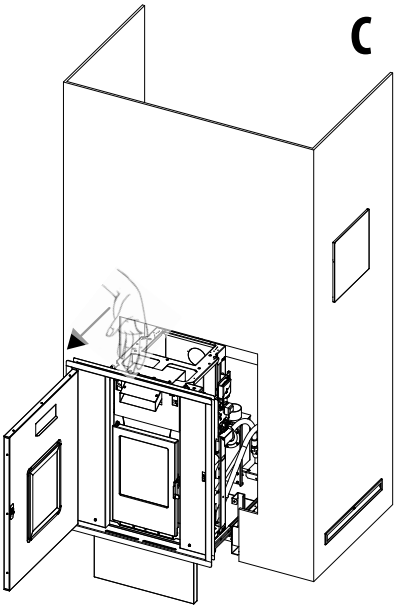


B

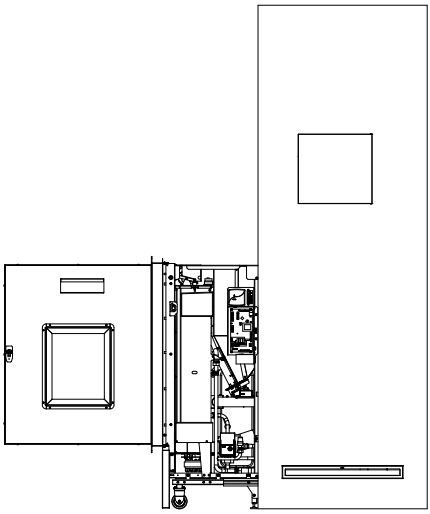


- pull the product out (Fig.C). Once the screws are removed, simply pull slightly towards you to extract the movable part like a standard drawer. The guides are fitted with end-of-travel devices that block the movable part when extracted completely. Every part of the product is accessible (Fig.D).

C



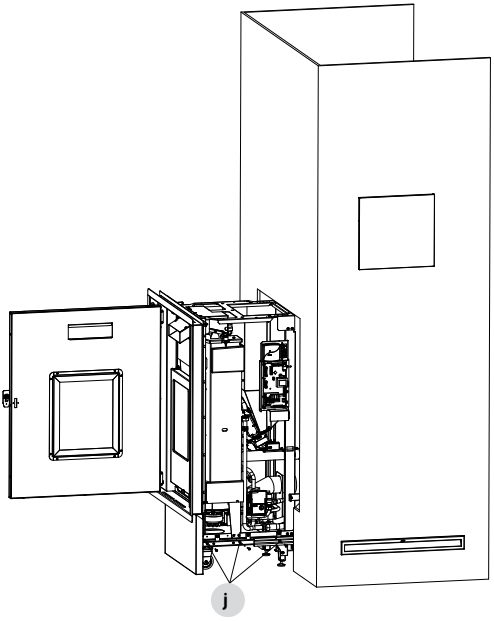
D

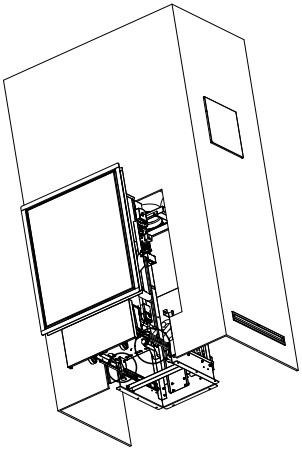


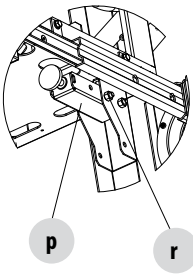
PULLING THE PRODUCT OUT COMPLETELY

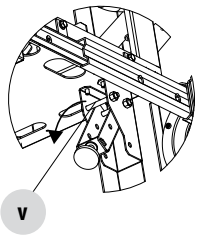
To pull the product out completely, you need to remember to empty out the system and disconnect the pipes from the product.
When the product is partially pulled out, proceed as follows:

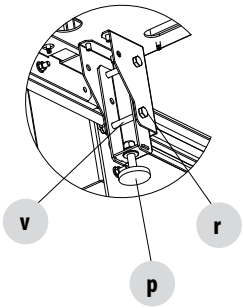
- lower foot "p" by removing bolt "r" and sliding out screw "v"
- turn foot "p" so that it is vertical (it must be touching the ground to provide the product with stability)
- place the previously removed screw "v" in the hole (structure-foot) and tighten bolt "r"
- remove the three screws "j" from the lower guides
- it is now possible to pull the product all the way out (Be careful of the connected pipes!)
- if necessary, adjust the stability of the product by tightening or loosening the foot











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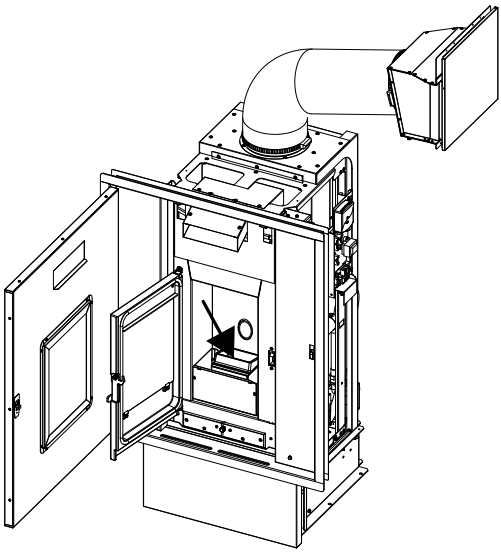
BEFORE START-UP

GENERAL PRECAUTIONS

Remove any objects that may burn from the firebox and glass (instructions manual, various adhesive labels or any polystyrene).
Check that the brazier is positioned correctly and rests properly on the base.



The first start-up may not be successful as the feed screw is empty and does not always manage to load the required amount of pellets in time to light the flame.

CANCEL THE FAILED IGNITION ALARM BY PRESSING AND HOLDING THE ON/OFF KEY FOR A FEW SECONDS. REMOVE THE PELLET LEFT IN THE BRAZIER AND REPEAT THE START-UP.

If the flame fails to ignite, despite a regular flow of pellets, check that the brazier is seated correctly: **it must rest snugly against the interlocking slot and be clean of any ash incrustations.** If no anomaly is found during this inspection, there may be a problem with the product components or installation may not be correct.

REMOVE THE PELLETS FROM THE BRAZIER AND CONTACT AN AUTHORISED TECHNICIAN.
Please ensure the brazier is clear of ALL pellets and ash build up following any failed ignitions. Failure to clear out the brazier prior to resetting may result in further failed ignitions or in certain conditions an explosive ignition.

It is good practice to ensure effective ventilation in the room during the initial start-up, as the product will emit some smoke and smell of paint.

Do not stand close to the boiler and ventilate the room as described. The smell of paint will disappear after about an hour of operation, however, it is not harmful in any case.

The product will be subject to expansion and contraction during the start-up and cooling phases, therefore slight creaking noises may be heard.
This is absolutely normal as the structure is made of laminated steel and must not be considered a defect.

5-PRECAUTIONS BEFORE START-UP

DO NOT EXPECT HEATING EFFICIENCY IMMEDIATELY!!! THE PRODUCT NEEDS SOME RUNNING-IN TIME.

It is extremely important to make sure the product does not reach high temperatures straight away, but to increase the temperature gradually using low power at first.
This will prevent damage to the welds and the steel structure.

Do not touch the product during the first lighting, as it is during this phase that the paint sets. If you touch the paint, you may expose the steel surface.

If necessary, touch up the paint with the spray can of the specific colour.

ELECTRICAL CONNECTION

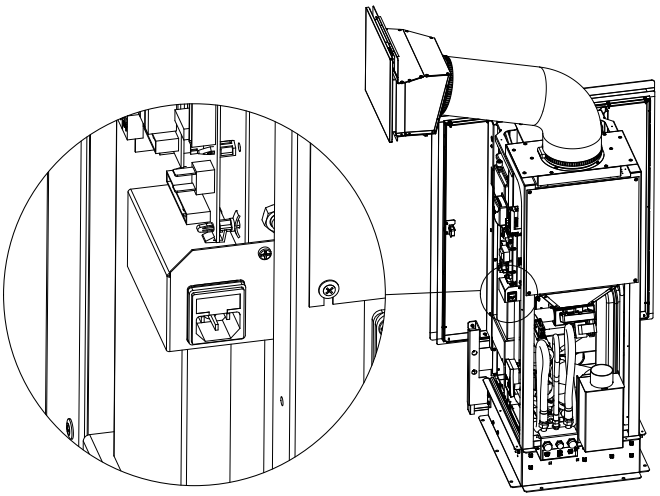
First connect the power cable to the rear of the product and then to a wall socket, which must always remain accessible.
Should this not be possible, during installation insert suitable devices for disconnection from the power mains, in compliance with national electrical installation standards.

It is recommended to disconnect the power cable when the product is not in use.

The product is turned on from the ON/OFF switch on the pellet loading hatch.

Before doing anything to the product, it is necessary to disconnect it from the 230 V power supply.

If during operation or initial ignition you encounter combustion smoke spillage in to the room from the appliance or the flue then please switch off the appliance, ventilate the room and contact the installation / service technician immediately.



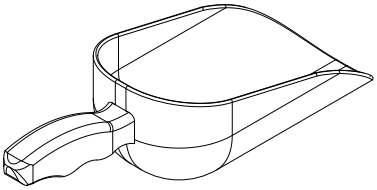
5-PRECAUTIONS BEFORE START-UP

LOADING THE PELLETS

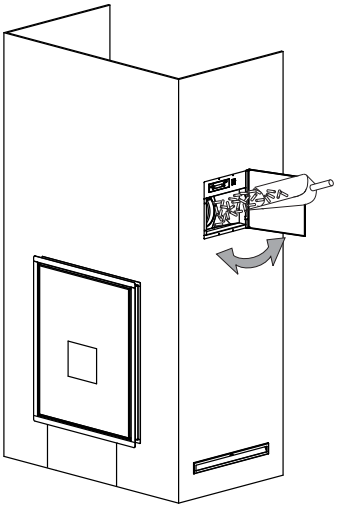
The fuel is loaded through the side or front hatch to be mounted onto the cladding, which allows access to the fuel loading chute.
The loading procedure is facilitated if performed in a number of steps as described below:

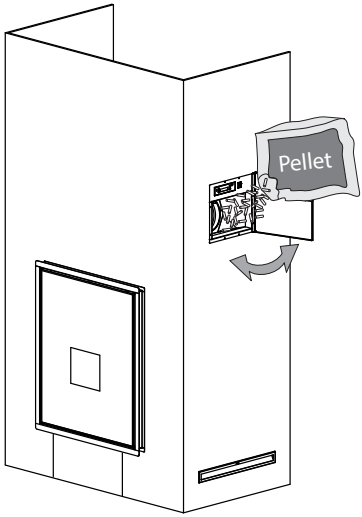
- open the hatch and pour onto the chute half the content directly from the sack or using the scoop supplied (A)
- Wait for the pellets that have accumulated on the chute to slide into the hopper.
- Complete the operation by pouring the second half of the sack with the same procedure.

No other type of fuel other than pellets is to be inserted into the hopper, in compliance with above-mentioned specifications.



SPADE (A)





5-PRECAUTIONS BEFORE START-UP

SAFETY

WHAT TO DO IF SMOKE LEAKS INTO THE ROOM OR IN CASE OF EXPLOSION DAMAGING THE DEVICE: SWITCH IT OFF, VENTILATE THE ROOM AND IMMEDIATELY CONTACT THE INSTALLER/TECHNICIAN IN CHARGE OF ASSISTANCE.

User Training

In ALL cases, the technician in charge of installation and first-start-up MUST carry out a thorough handover of the appliance to the homeowner / end user. The following elements should be covered to the satisfaction of the end user. Failure to do this may result in unsafe use of the appliance:

- Explanation of the appliance and how it works
- Necessity to maintain ventilation to the appliance and the issues that may arise otherwise
- Fuel useage and supply
- How to light the appliance safely
- What to do in the event of failed ignitions
- What to do in the event of alarms (in particular those generated when the appliance runs out of fuel)
- How to maintain the appliance correctly and the importance of carrying out these tasks each month
- It is good practise to agree a date for the fisrt annual service
- Discuss the use of secondary heating systems if applicable
- Explain how the remote control or room stats operate and their optimal positioning

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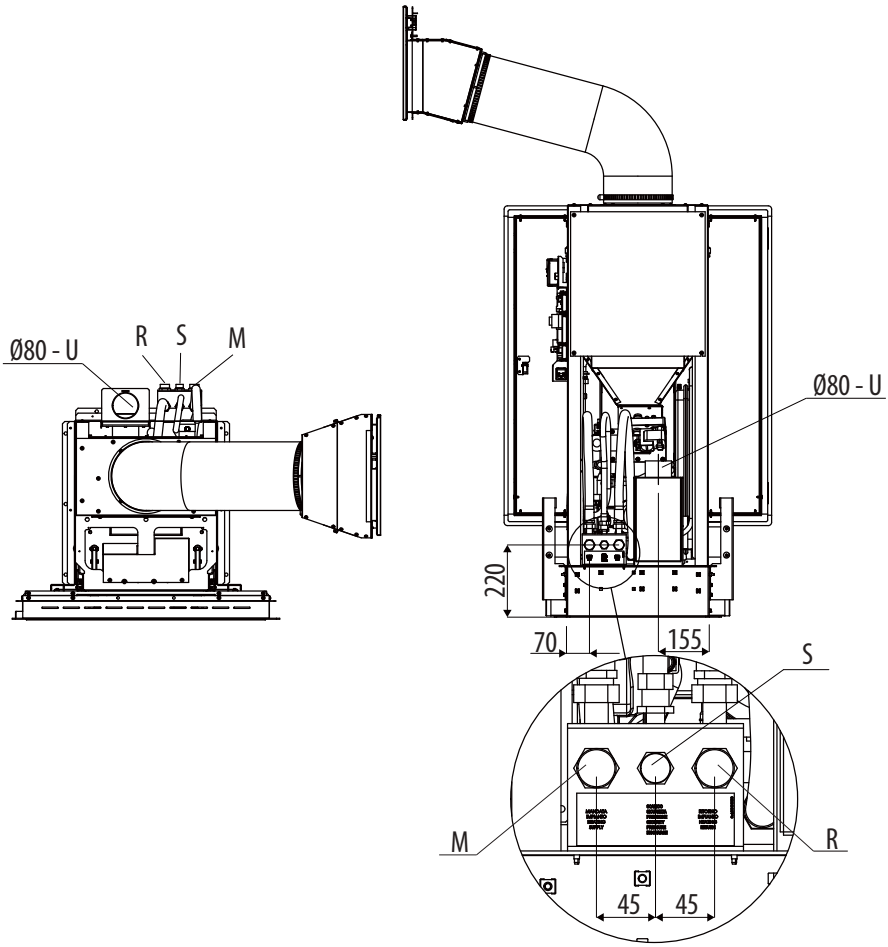
6-HYDRAULIC CONNECTION

HYDRAULIC CONNECTION

IMPORTANT!

The connection of the stove to the plumbing system must be carried out ONLY by authorised personnel who are capable of carrying out installation properly in compliance with current standards in the country of installation. The company will not be held responsible for damage to people or property in the event of failed operation if the aforementioned warning is not observed.

CONNECTION DIAGRAM



M = 3/4"M BOILER DELIVERY
S = 1/2"M BOILER DISCHARGE
R = 3/4" M BOILER RETURN
U = SMOKE OUTLET Ø80 MM

6-HYDRAULIC CONNECTION

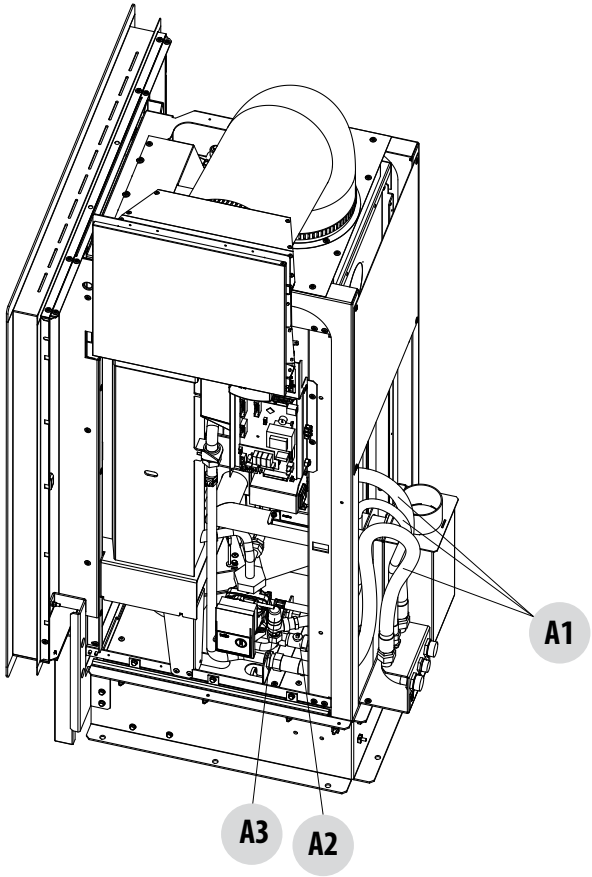
CONNECTING THE SYSTEM

Make the connections to the corresponding fittings shown in the diagram above. Make sure the pipes are not placed under tension or undersized.

If installing the product involves another pre-existing system complete with heating equipment (gas boiler, methane boiler, fuel oil boiler, etc...), it is strongly recommended that you contact a qualified operator who subsequently will be responsible for the compliance of the system with the applicable laws in force.

WE STRONGLY RECOMMEND WASHING THE ENTIRE SYSTEM BEFORE CONNECTING THE PRODUCT IN ORDER TO GET RID OF RESIDUES AND DEPOSITS (SEE PARAGRAPH BELOW).

The pressure discharge valve (S) - see image on previous page - must always be connected to a water drain pipe. The pipe must be adequate to support the water's high temperature and pressure.



A1 = FLEXIBLE PIPES
A2 = BOILER DISCHARGE TAP
A3 = SAFETY VALVE

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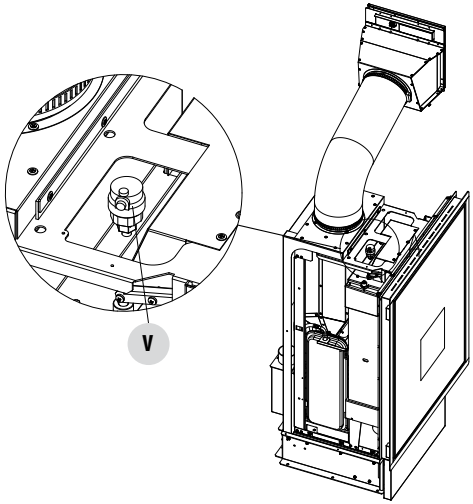
6-HYDRAULIC CONNECTION

CLEANING THE SYSTEM

It is mandatory for the connections to be easy to disconnect by way of unions with rotating connections.

Always install cut-off shutters in the system leading to the product so as to disconnect it from the hydraulic system should it be necessary to move or relocate it, to perform routine and/or special maintenance. Connect the product with hoses to avoid overly-binding it to the system.

In order to protect the thermal system against harmful corrosion, scale or deposits, it is essential to clean the system in accordance with standard UNI-CTI 8065 before installing the product, using appropriate products like Sentinel X300 (new systems), X400 and X800 (old systems) or Fernox Cleaner F3.
Complete instructions are provided with the products but it is possible to contact the manufacturer SENTINEL PERFORMANCE SOLUTIONS LTD or FERNOX COOKSON ELECTRONICS directly for further information.
After cleaning the system, it is recommended to use Sentinel X100 or Fernox Protector F1 inhibitors to protect it against corrosion and deposits.



V = MANUAL VENT VALVE.

It is important to check the concentration of the inhibitor after making any changes to the system and during maintenance checks, following the recommendations of the manufacturers (the retailers can offer tests).
The outlet of the safety valve has to be connected to a collection intake for purging in the event of maintenance.

Attention: failure to clean the thermal system or to use an adequate inhibitor will invalidate the warranty of the appliance and of the other accessories like the pump and valves.

FILLING THE SYSTEM

The filling tap set up for the main boiler will be used to load the heating system. During this operation, any air in the system is released through the manual vent located at the top of the product.
To allow the valve to release any air, we recommend loosening the screw on top of it (see figure). The filling pressure of the system **WHEN COLD** must be **1 bar**. During operation, if the system pressure drops (due to evaporation of dissolved gases in the water) to values lower than the minimum indicated above, the user must use the filling tap to bring the pressure back up to its normal pressure.
For proper operation of the stove **WHEN HOT**, the pressure in the boiler must be **1.5 bar**.
Upon completion of this operation, always close the tap.

Attention: do not mix heating water with incorrect concentrations of anti-freeze or anti-corrosion substances. This could damage the gaskets and cause noise during operation.

6-HYDRAULIC CONNECTION

WATER CHARACTERISTICS

The characteristics of the water used to fill the system are very important to prevent the build-up of mineral salts and the formation of incrustations along the pipes, in the boiler and in the heat exchangers.

Therefore, please GET YOUR PLUMBER'S ADVICE CONCERNING:

- ***Hardness of water circulating in the system, to prevent problems of incrustation and limescale, especially in the domestic water heat exchanger. (> 25° French).***
- ***Installation of a water softener (if water hardness exceeds 25° French).***
- ***Filling the system with treated water (demineralised).***
- ***Possibly providing an anti-condensation circuit.***
- ***Installation of plumbing bumpers to prevent the phenomenon known as "water hammer" from occurring along the fittings and pipes.***

For those who have very extensive systems (with large amounts of water) or which require frequent refilling, to install water softening systems.

It should be remembered that incrustations drastically reduce performance due to low thermal conductivity.

EXAMPLE INSTALLATION DIAGRAMS

The following diagrams are to be used only as a guideline. For proper connection, always follow the notes of the plumbing and heating installer. The plumbing system must meet local, regional, or national requirements in force. Installation and verification of operation is to be performed only by specialised, authorised personnel. The manufacturer will not be held liable for non-compliance with the provisions listed above.

KEY

M	Pressure gauge	**BA**	Storage boiler
V	Valve	**RA**	Radiators
A	Water hammer absorber	**PR**	Radiant panels
Flt	System filter	**PS**	Solar panels
RP	Pressure reduction valve	**R**	Tap
Add	Softener	**V1**	Thermostatic diverter valve
C	Methane gas boiler		
B	Storage cylinder		

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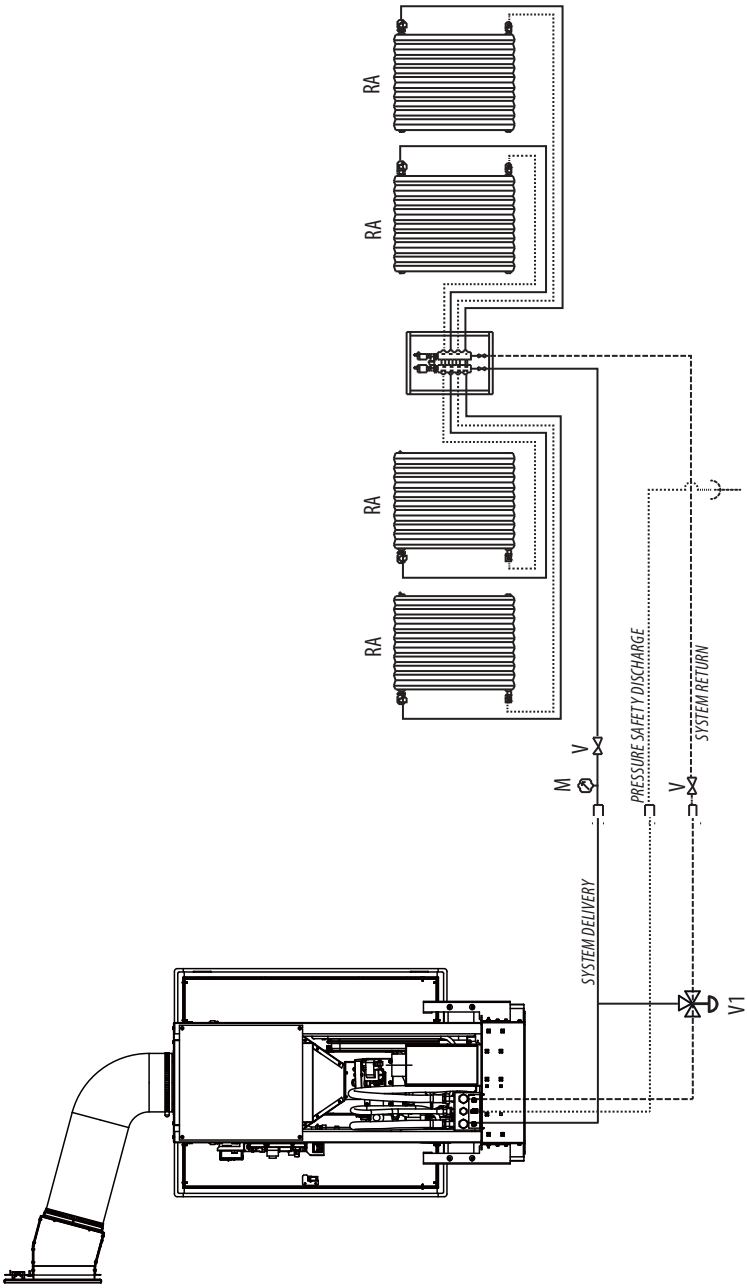
6-HYDRAULIC CONNECTION

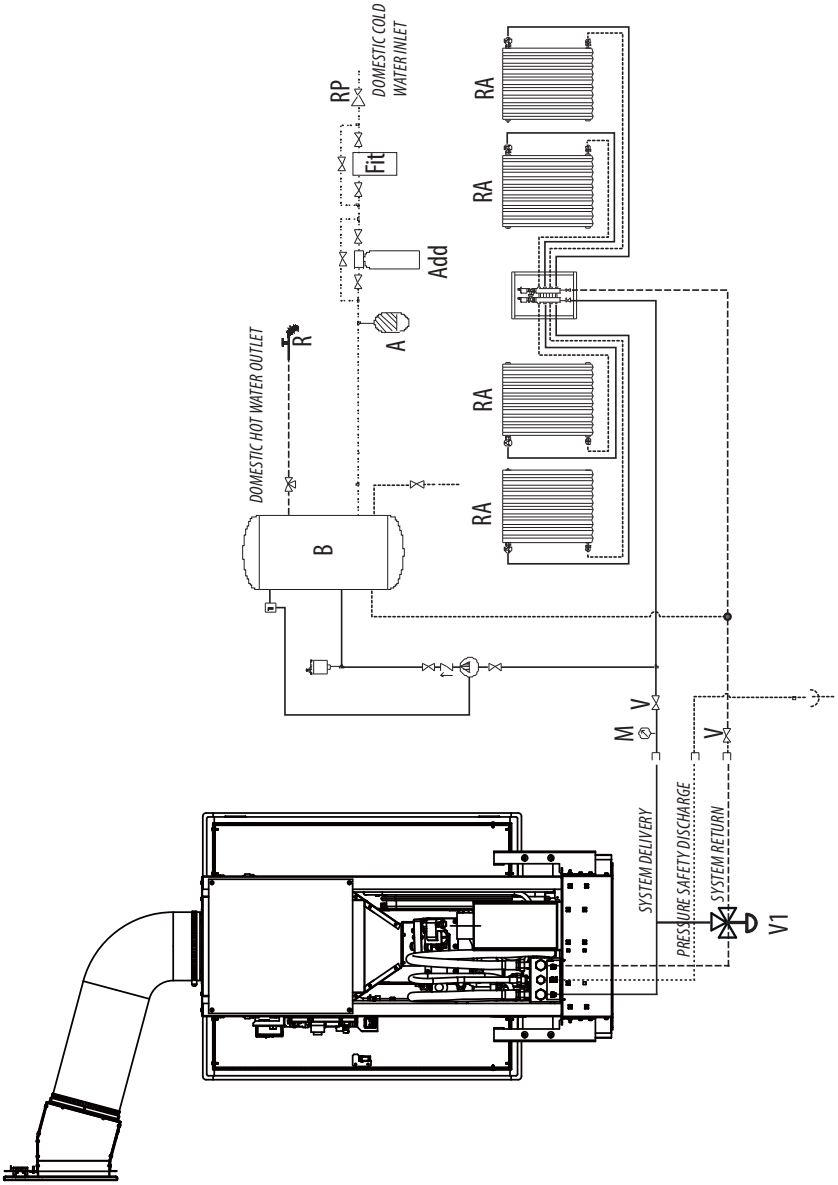
INSTALLATION DIAGRAM FOR HEATING SYSTEM WITHOUT DOMESTIC HOT WATER KIT

This diagram is provided by way of example and, accordingly, is not a project drawing.



HEATING INSTALLATION DIAGRAM IN COMBINATION WITH A STORAGE CYLINDER

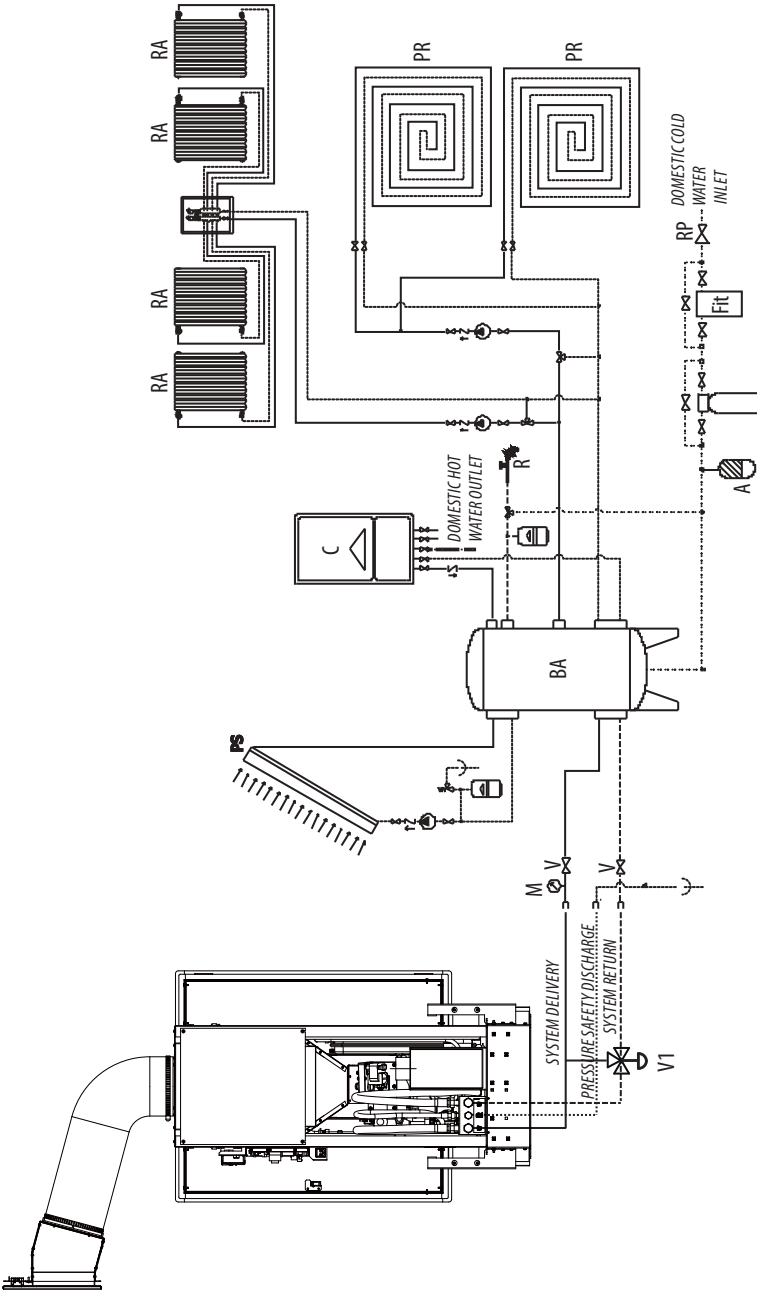
This diagram is provided by way of example and, accordingly, is not a project drawing



6-HYDRAULIC CONNECTION

INSTALLATION DIAGRAM IN COMBINATION WITH A STORAGE TANK

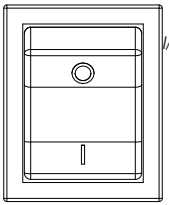
This diagram is provided by way of example and, accordingly, is not a project drawing.



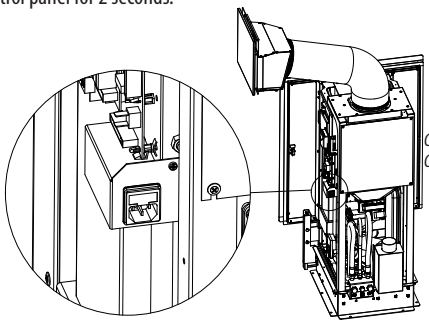
SETTINGS TO BE CARRIED OUT BEFORE THE INITIAL START-UP

ON/OFF

When the power supply cable is connected to the bottom of the product, place the switch, which is on the pellet loading hatch, in position (I). The luminous switch button will light up.
The product stays off and an initial screen page appears on the panel with the word OFF. Press any key and MENU will appear on the screen.
The product is turned on and off by pressing **B** on the control panel for 2 seconds.



I/O SWITCH



CONNECT THE SUPPLY CABLE

The start-up phase lasts approximately 15 minutes after which the product enters the steady state.
When the product is turned off by pressing **B** on the control panel, the cooling procedure starts, which means that fuel is no longer loaded, the brazier is cleaned and ventilation runs until the product is cool enough.

FEED SCREW LOADING

This function can only be activated when the product is off and allows the pellets to be loaded into the loading system (feed screw). It can be used each time the pellets finish in the hopper (see alarm A02). It is also useful to prevent failed start-ups (alarm A01) due to the hopper being empty.
To activate the CARICA COCLEA (LOAD FEED SCREW) function, with the product switched off, on the control panel go to IMPOSTAZIONI (SETTINGS), select CARICA COCLEA (LOAD FEED SCREW) and ON. When the pellets start descending into the brazier, deactivate the CARICA COCLEA (LOAD FEED SCREW) system and turn the product on.

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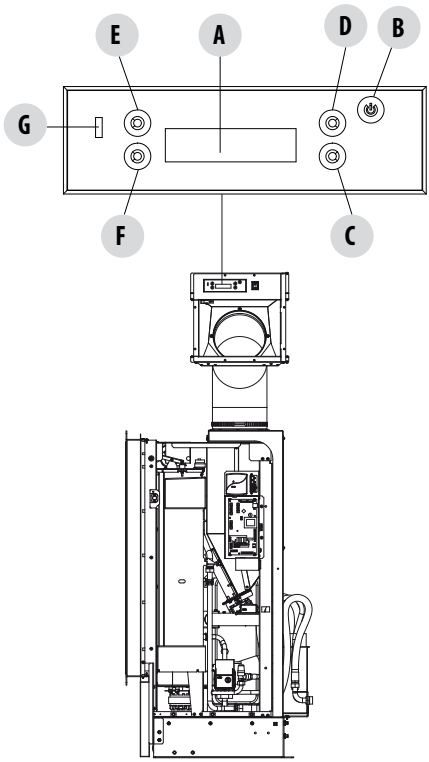
6-HYDRAULIC CONNECTION

CONTROL PANEL LOGIC

Some useful information is provided below to understand the navigation logic and use of the control panel:

- The brightness of the control panel switches off after approximately 30 seconds if the keyboard is not used. To turn the back-lighting on again, simply press any button on the panel.
- The first screen to appear displays the product operation status (ON, OFF..) and alternates with any active settings (CRONO, SLEEP, AUTO, ECO..)
- Press any one of the 4 keys near the display (C D E F) to enter the product operation setting screen (flame and ventilation level, set temperature, automatic mode..). On this level, the 4 keys around the display become "dedicated" functions, i.e. they refer directly to the words that appear in the 4 corners of the screen (ex: the word in the top right corner refers to key D).
- If you change a setting on any menu level and do not confirm it with the "OK" key, by leaving the keyboard inactive for a few seconds, the initial screen automatically re-appears and the changes will not be saved.
- If, on any level of the menu, you press the on/off key (B) briefly, the screen automatically goes back to the initial view (product operation status) without saving any changes that have not been confirmed with the "OK" key.



KEY

A. Display; this provides a series of information about the product, as well as the identification code of any malfunction.
B. Power on/off key (ON/OFF) or ESC (exit the menu).
C. Programme selection key (next screen).
D. Programme selection key (next screen).
E. Programme selection key (next screen).
F. Programme selection key (next screen).
G Remote control receiver (when applicable)

PLEASE NOTE It is possible to set the language on the control panel.

SETTING CURRENT TIME AND DAY

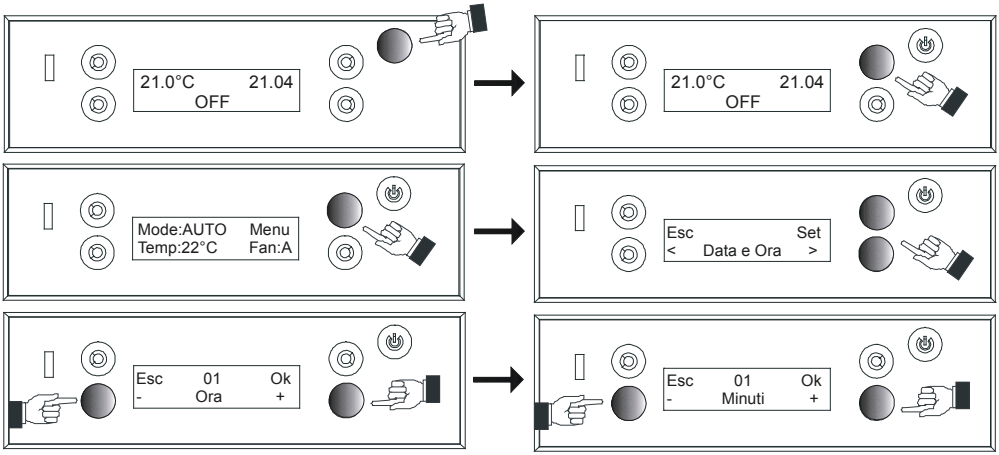
Press the relative MENU key and SET will appear. Enter SET and the programme will appear to change:

hour - minutes - day of week - day of month - month - year

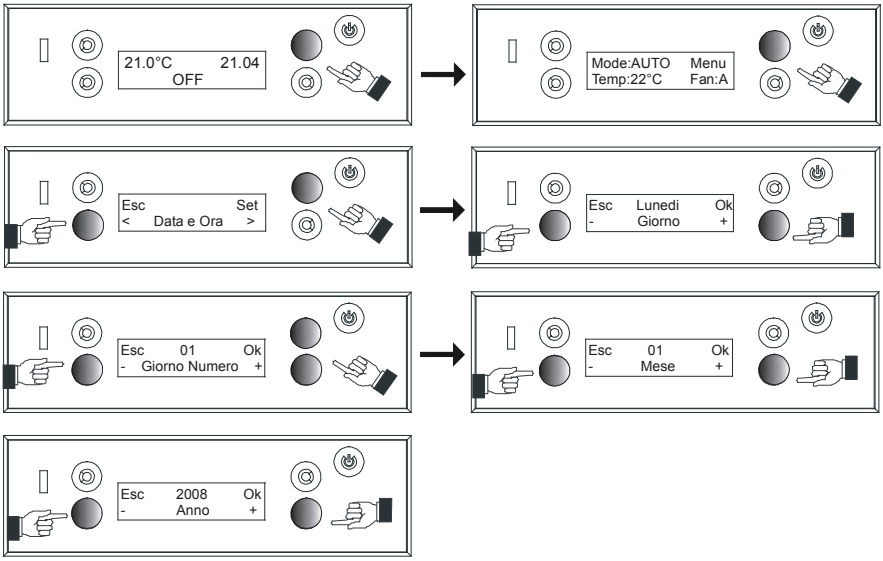
For example, if you need to change the time, when ORA (HOUR) appears on the screen, press SET, and the hour will start flashing in the middle of the screen. Then, using the keys on the bottom left or right, change the hour, followed by the minutes, day etc...etc... in the same way, according to the current time and date. Each change must be confirmed by pressing the OK key, otherwise it will not be saved. The ESC key takes you back to the previous screen without saving the changes.

If the control panel is inactive for 10 seconds, it goes back to the home page without saving the changes.

SETTING THE TIME



SETTING DAY OF WEEK/DAY OF MONTH/MONTH/YEAR



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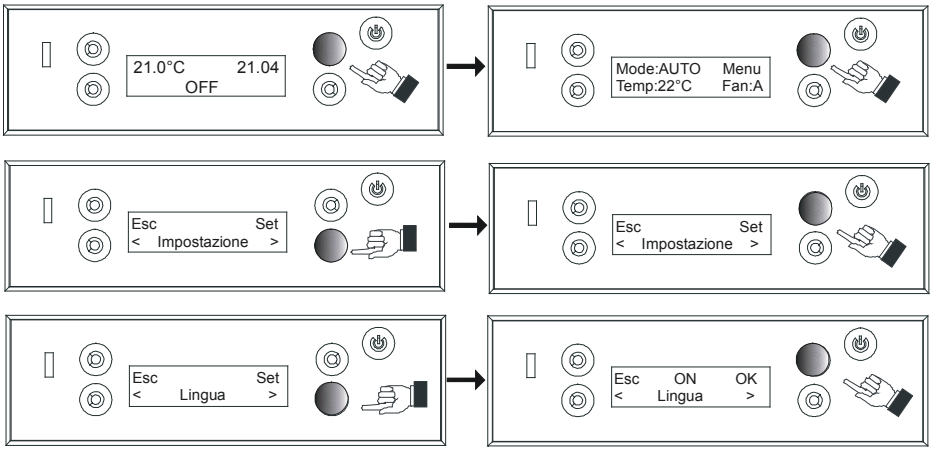
6-HYDRAULIC CONNECTION

LANGUAGE SETTINGS

Press the **MENU** key then scroll with the keys on the bottom right or left, until **IMPOSTAZIONI (SETTINGS)** appears, press **SET** and **LINGUA (LANGUAGE)**, will appear, press **SET** again and set the required language.

By standard, the days of the week are identified by acronyms based on the language selected on the panel. In English, for example:

MO	Monday	TH	Thursday	SU	Sunday
TU	Tuesday	FR	Friday		
WE	Wednesday	SA	Saturday		



ROOM VENTILATION

The product is equipped with a internal fan to expel hot heating air, and can be adjusted to 5 different speeds at any time.

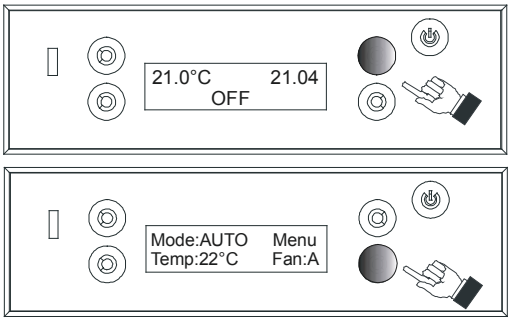
There are **5** selectable speeds plus an automatic function.

To select the speed, after pressing the button on the bottom right, press it to increase or decrease ventilation power. In addition to the **5 speeds** there is another option called **AUTO** function (highlighted on the panel after the 5 speeds with an **A**). This function autonomously selects fan speed based on flame power.

This option can be selected by simply pressing the key on the bottom right again, scrolling through the various speeds 1-2-3-4-5, the letter A will appear on the control panel.

The room fan will only come on when the exhaust smoke temperature is greater than 100°C.

If the keyboard on the control panel remains inactive for 10 seconds, it automatically exits fan adjustment mode and confirms the last entered setting.



6-HYDRAULIC CONNECTION

RECIPE SELECTION PROCEDURE

On the control panel menu, the word "Ricetta (Recipe)" will appear under the settings menu. This function is designed to increase or decrease hopper pellet loading, and is represented as follows:

- To increase it: +1 +2 +3 equal to 10-20-30% more than the standard factory setting recipe.
- To decrease it: -1 -2 -3 equal to 10-20-30% less than the standard factory setting recipe.

CHIMNEY SWEEP FUNCTION

CAUTION.
The "Spazzacamino (Chimney sweep)" function is a technical function provided for specialised technicians, for product calibration (when required by law), which the User must never run.

To start the Chimney Sweep function you need to enter MENU-IMPOSTAZIONI (SETTINGS)-SPAZZACAMINO (CHIMNEY SWEEP) (after °C-°F). When the function is running, the stove will operate at maximum power (loading, smoke ventilation, room ventilation) without taking into consideration any change/off requests from the external (thermostat, eco-stop, modem, home automation control) and internal probes. The only limit that needs to stay active is the 85°C safety threshold in the boiler, and the relative electronics will switch off if this parameter is exceeded.
The test will work until the technician decides to disable the function by pressing esc of the on/off button.

REGULATING WATER TEMPERATURE IN BOILER

The stove is already set with a series of standard parameters which make correct operation possible (water temperature 65°C). The water temperature will be displayed on the control panel screen.
If the user wishes to change the temperature parameters, he/she can do so as follows:
T H2O - Maximum temperature of water in boiler. Upon reaching this temperature, the stove will reduce its performance to prevent overheating.
The default temperature is 65°C and it can not be set below 50°C or over 80°C.
To adjust it: press any key; press "menu"; use the scroll keys to view the "SET TEMP.H20" screen; press the "SET" key; set the required temperature using the "<>" scroll keys; confirm the temperature with "OK".

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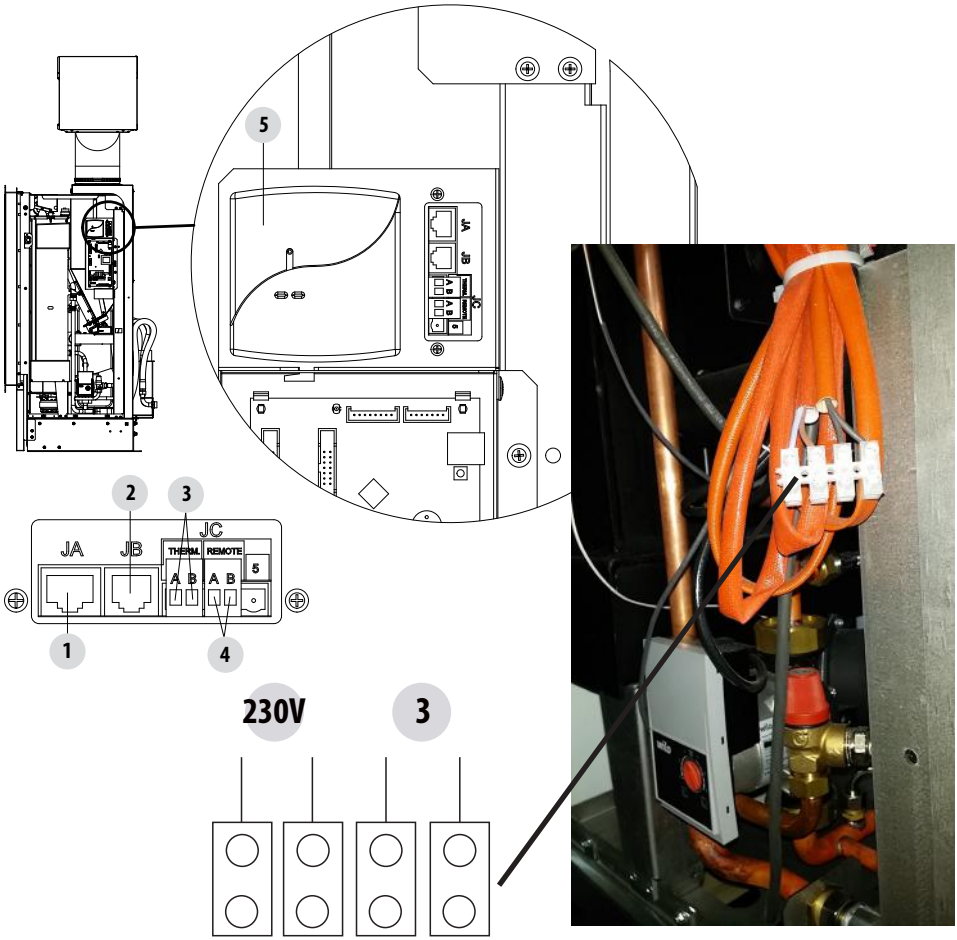
6-HYDRAULIC CONNECTION

COMPULSORY CONNECTION FOR EXTERNAL ROOM THERMOSTAT (3) OR STORAGE TANK

It is necessary to connect the stove to external thermostat "3" or a storage tank; it is also possible to set up a connection with home automation control unit "4". If you wish to connect the modem, you must do so with terminal "2".
For the connection it is necessary to connect the cables to the product board in the positions identified below.
The terminal in the photo **provides a 230V** power supply for any thermostats. Check the required supply voltage in the instructions for the thermostat being installed.
It is not necessary to activate the room thermostat or storage tank from the control panel when the default is active.
We recommend having installation carried out by an authorised technician, in compliance with regulations in force in the country of use.



1	COMPUTER CONNECTION (set up by an authorised technician)
2	MODEM CONNECTION
3	EXTERNAL ROOM THERMOSTAT CONTROL UNIT CONNECTION
4	HOME AUTOMATION CONTROL UNIT CONNECTION
5	WIRELESS CHRONO-THERMOSTAT (OPTIONAL)

AUTOMATIC MODE WITH AUTO-ECO

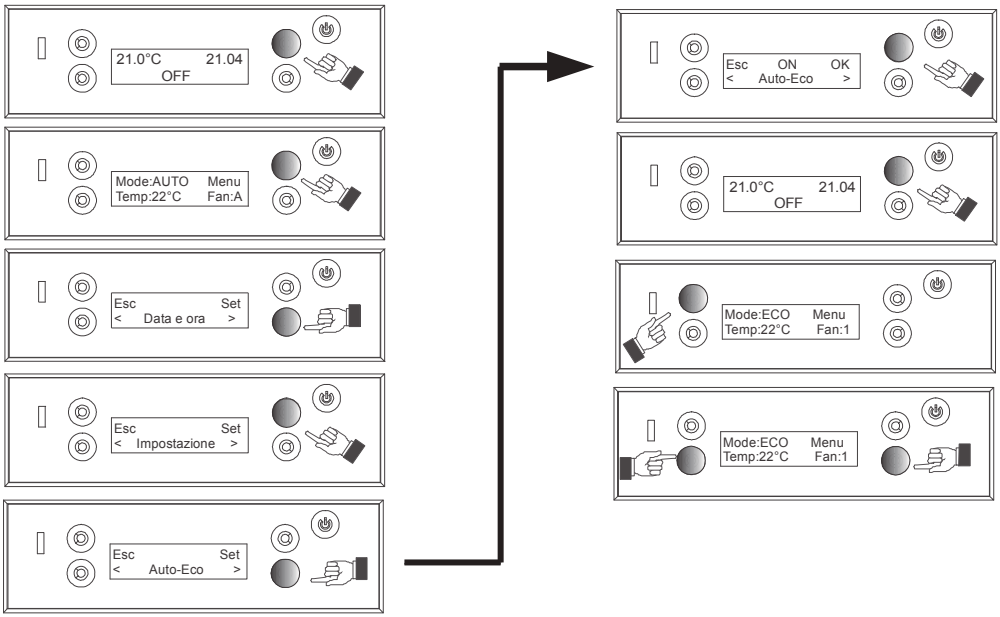
This mode changes product operation to **automatic**: when the user-set temperature is reached, the product switches to power 1 for a brief amount of time and then, if the temperature stays stable and higher than the set value, it switches off. The appliance only automatically switches back on when the room/water request more heat (not before the required product cooling period). This option is only recommended if the product runs in rooms where heat dispersion in minimal over time.

ACTIVATION /DE-ACTIVATION OF AUTO-ECO MODE

This mode optimises product consumption if it runs in well insulated rooms.
AUTO-ECO appears on the control panel display when this option is activated.
Press any button on the first screen with OFF and MENU will appear on the screen. Use the button in the bottom right corner to scroll until IMPOSTAZIONI (SETTINGS) appears, press the button in the top left corner relative to SET, scroll once again with the bottom right button until AUTO-ECO appears. Select SET once again in the top right corner and set OFF or ON from the bottom left corner and press OK to save the setting. When you return to the main menu you will note that the Mode setting is ECO, then press the bottom left or right buttons to set the respective temperature and speed of the fans for the hot air expulsion. Follow the same procedure to disable the AUTO-ECO function.

Example of AUTO-ECO mode operation

If the room temperature detected by the probe and shown on the control panel is 15°C and the temperature is set to 20°C, the product will move to the 5th power (according to a preset ramp-up) and once the target temperature is reached (20°C), the stove will modulate and then automatically switch off temporarily (STANDBY). When room temperature drops below the set value on the control panel (e.g. 18°C), and sufficient switch-off time has elapsed, the product will automatically restart and run until it reaches 20°C again. If the room probe temperature reading continues to exceed the thermostat setting (e.g. 20-21°C), the product will stay off.
In this mode, the user can switch the product on by resetting the thermostat to a temperature that is higher than the room temperature, or by switching the appliance off by pressing button B for a few seconds and then switching it back on by pressing the same button.
There is no need to reset the "**AUTO-ECO**" mode as this is saved from the previous use.



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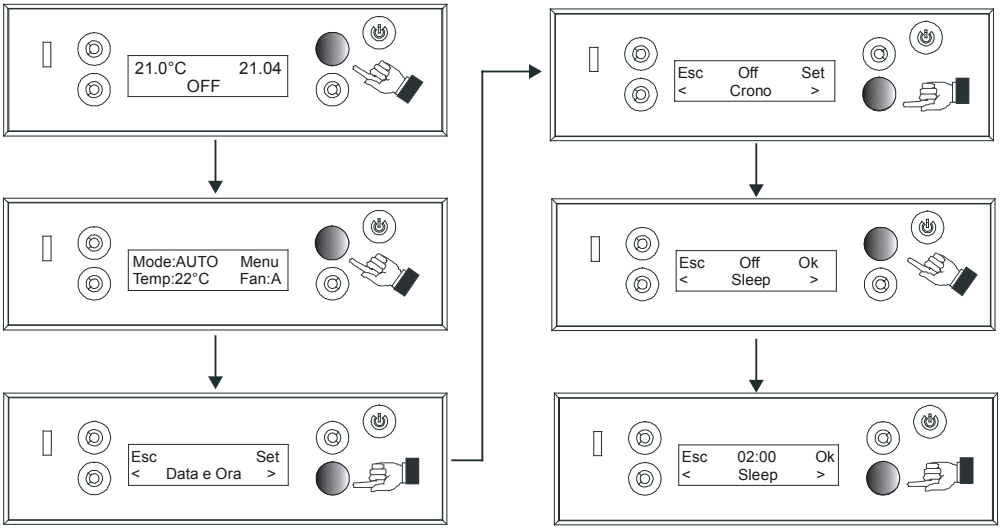
SLEEP FUNCTION

This function is only visible when the product is on, and it has the purpose of making programmed power-off selection quicker, without having to programme the **CRONO (CHRONO)** built into the product.
A simple explain of the **SLEEP** function, is that it makes it possible to switch the product off starting from a minimum of + 10 minutes from the current time and a maximum of 23.50 hours. To set the function press Menu with the key on the top right, and the words Date and Time will appear on the screen. Then use the key on the bottom right to scroll until the word Sleep appears, and then confirm with the Set key. With the key on the bottom right, set the power-off time. To confirm your selection, press the key for **OK** (top right) otherwise **ESC** (top left) to exit without saving any settings. If you activate the **SLEEP** function when **CRONO (CHRONO)** is active, the first function has the priority, therefore the product will not switch off at the time set on chrono, rather, at the time set on sleep.

When sleep is set, the home page alternates between displaying product status (on/off) and the words HH.MM. (HOURS-MINUTES).
While you are adjusting sleep , hold down the right arrow key when you get to 23.50 of the current day the panel will suggest a stop: release it and press it again to switch to the next day.



6-HYDRAULIC CONNECTION

CRONO (CHRONO)

This operating mode makes it possible to programme switching the product on and off automatically.
Stoves normally have their **CRONO (CHRONO)** mode deactivated.

The fundamental settings of the **CRONO (CHRONO)** mode are:

- Power on/off time selection
- Programme activation day selection

The current date and time setting is essential for correct chrono operation.

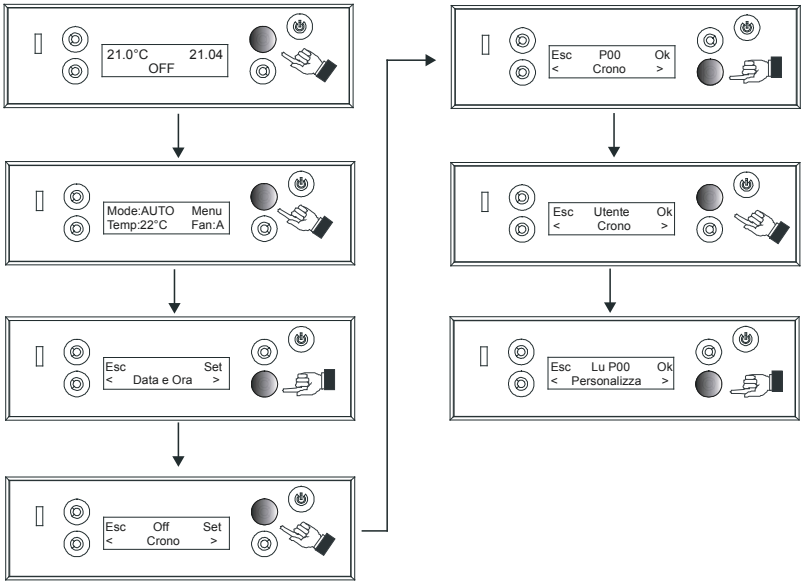
ACTIVATING CRONO (CHRONO) AND SETTING A WEEKLY PROGRAMME

Below is an explanation of how to **activate the CRONO (CHRONO) function by choosing a weekly or daily programme:**
press the Menu button and scroll through the date and time menu with the relative key until CRONO (CHRONO) appears. Then, press the SET key accordingly to enter a programme. P00 appears in the centre of the screen between Esc and Ok. by scrolling with the keys below it is possible to choose from the 10 pre-set weekly programmes on the product control panel.
From the tables provided in the "Pre-set weekly and daily programmes", choose the programme that most suitably fulfils the heating requirements of your home and save the programme number on the control panel screen, confirm with OK. If none of the 10 pre-set programmes fulfil your personal heating needs, it is possible to build a customised weekly programme as needed (see paragraph below).

If the keyboard remains inactive for 10 seconds, the control panel screen automatically exits chrono adjustment mode and does not confirm the last setting to be entered.

Press OK to confirm CRONO (CHRONO) selection.

CAUTION!
CRONO (CHRONO) function can be activated/deactivated when the product is on or off. If a chrono programme is activated, the initial screen will switch between product operation status (on/off/ignition...) and the words "CRONO P01 attivo (CHRONO P01 active)" (example).



SETTING A CUSTOMISED PROGRAMME

There are 62 selectable daily programmes and it is possible to choose a different programme for every day of the week.
To activate this option proceed as described above to set a weekly programme, except, instead of selecting one of the programmes contained in the weekly programmes table (**between P01 and P10**) select the UTENTE (USER) programme. When you have selected the UTENTE (USER) programme, press SET to make 'Lu P00' (with flashing P00) appear in the middle of the screen, while PERSONALIZZA (CUSTOMISE) will appear in the area below. By pressing the relative button (bottom right or left) it is possible to enter the daily programme. By scrolling with the bottom right or left key of the control panel, it is possible to choose the required programme between 1 and 62. When you have chosen the required programme for the active day (ex. No. 32 for day LU = Lunedì (MO = Monday)) press OK on the top right and 'Ma P00' will appear on the screen (with P00 flashing), proceed with this programming mode until day Do=domenica (Su=Sunday).
If, for one day of the week, you do not wish to set any programme, select programme 00 and confirm with OK and continue with programming.

If a chrono programme is active but the user decides to turn the product on/off beforehand, the command given by the user overrides the chrono function, and will therefore be carried out. The following chrono command will therefore be ignored.
Example: if chrono is set up to turn the appliance on at 10:00 but the user feels cold at 9:00 and wants to turn it on, he/she can press key No. 5 to turn the product on. At 10:00, when chrono was supposed to turn on, this function will be ignored because the appliance is already running.

IMPORTANT NOTE
It takes 10/15 minutes for the product to start running.
Take this into account when setting the start time. Likewise, product shutdown requires about 30 minutes, during which time the heat stored up by the stove continues to be released into the room.

Keep this in mind for substantial fuel savings.

CRONO (CHRONO) DEACTIVATION

To deactivate CRONO (CHRONO), go back to the programming menu and confirm OFF.

PRE-SET WEEKLY AND DAILY PROGRAMMES

WEEKLY PROGRAMMES

The weekly programmes set by the manufacturer and saved in the product control panel have been developed to satisfy the most part of the users who are either out of the house during work hours (labourers, shop owners, office workers, shift workers, etc..) or people who spend most of the day at home (home-makers, elderly, etc..).

It is also designed for people who use the product in a second home, where they only spend weekends (ex. home in the mountains) and who want the house to be warm when they get there. For anyone with more specific needs which none of these ten weekly programmes are able to satisfy, it is possible to customise the weekly programme using seven different programmes for each single day of the week.

Weekly programmes		*Time table*
No.	*Days*	0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00 22.00 23.00 0.00
P01	*Mon-Fri*	
	Sat-Sun	
P02	*Mon-Fri*	
	Sat-Sun	
P03	*Mon-Fri*	
	Sat-Sun	
P04	*Mon-Fri*	
	Sat-Sun	
P05	*Mon-Fri*	
	Sat-Sun	
P06	*Mon-Fri*	
	Sat-Sun	
P07	*Mon-Fri*	
	Sat-Sun	
P08	*Mon-Fri*	
	Sat-Sun	
P09	*Mon-Fri*	
	Sat-Sun	
P10	*Mon-Fri*	
	Sat-Sun	

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DAILY PROGRAMMES

Daily programmes	*Time table*																								
No.	0.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	0.00
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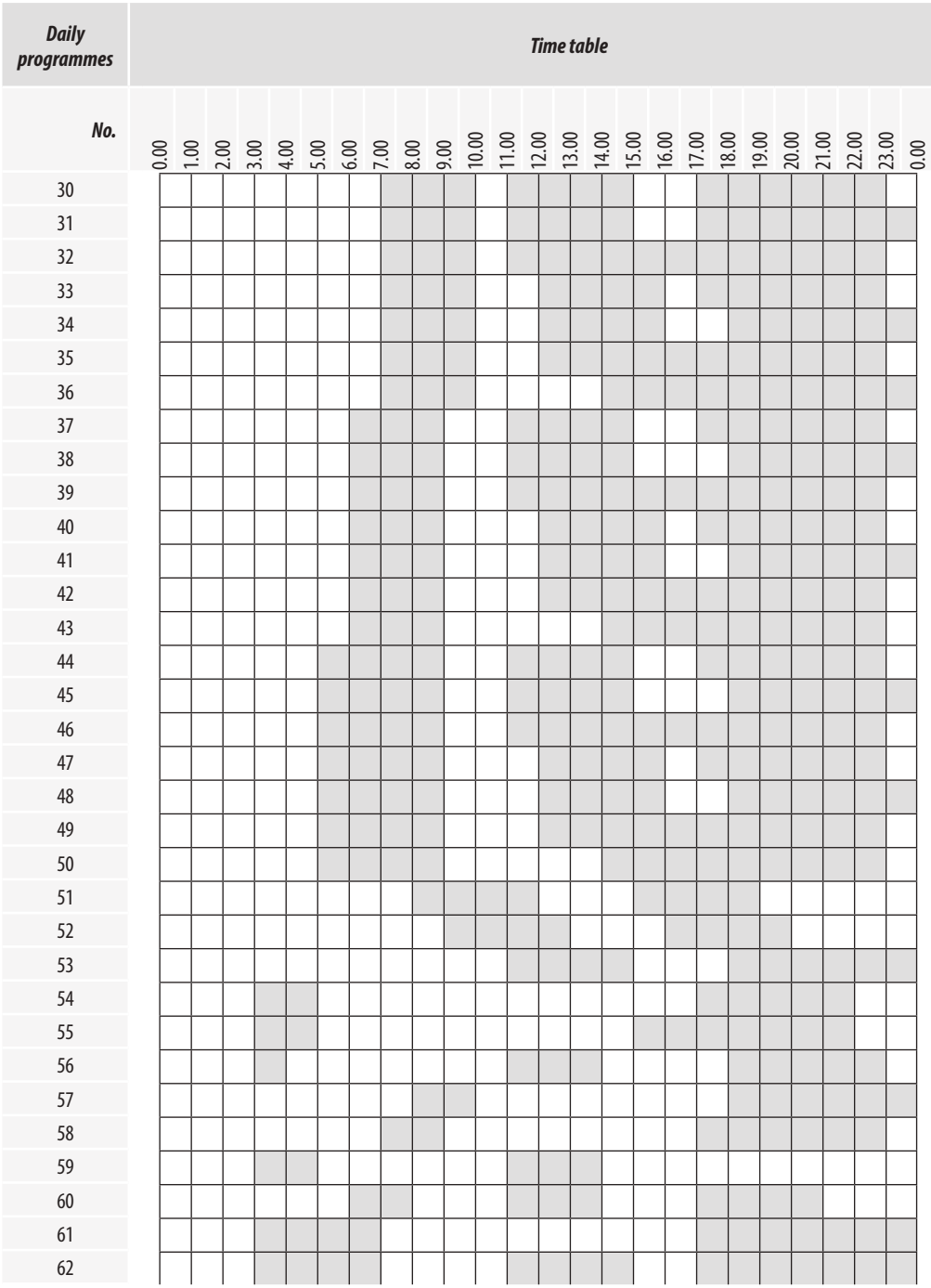

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PRACTICAL EXAMPLE OF DAILY PROGRAMMING

SETTING A DAILY PROGRAMME

Let's take, for example, a user without set daily hours (self-employed, etc..), yet who knows that he/she will be in the house on the following days at the following times:

MONDAY at home until 10:00 and after 17:00
TUESDAY at home until 8:00 and after 14:00
WEDNESDAY at home all day and does not wish to set a programme
THURSDAY at home all day
FRIDAY at home until 9:00, from 12:00 and 15:00 and after 18:00
SATURDAY at home only after 18:00
SUNDAY at home only after 14:00

Based on these schedules we choose from the previously illustrated table, the daily programmes that are the best fit.

MONDAY Programme **20**
TUESDAY Programme **43**
WEDNESDAY Programme **00**
THURSDAY Programme **13**
FRIDAY Programme **34**
SATURDAY Programme **10**
SUNDAY Programme **08**

8-SAFETY DEVICES AND ALARMS

SAFETY DEVICES
The product is supplied with the following safety devices:

SMOKE TEMPERATURE PROBE
It detects the temperature of the smoke, thereby enabling start-up or stopping the product when the temperature drops below the preset value.

PELLET HOPPER TEMPERATURE PROBE
If the temperature exceeds the preset safety value, it immediately stops product operation, which must cool down before the probe is restored and the product restarted.

BOILER TEMPERATURE PROBE (ALARM A18)
If the water temperature is close to the stop temperature (95°C), the product will switch off.

WATER TEMPERATURE PROBE (ALARM A17)
When the water temperature reaches 80°C the product starts gradually decreasing its power to 85°C. If it exceeds 85°C, it will run a safety stop; the product switches back on when the structure has cooled to the right temperature.

ELECTRICAL SAFETY
The product is protected against power surges by a general fuse located in the control panel on the back of the product. Other fuses that protect the electronic boards are found on the latter.

SMOKE FAN BREAKAGE
If the fan stops, the circuit board promptly blocks the supply of pellets and the alarm is displayed.

GEAR MOTOR BREAKAGE
If the gear motor stops, the product continues to work until the minimum cool level is reached.

TEMPORARY POWER CUT
If a power cut occurs during operation, the product automatically sets itself in cooling mode when the power is restored and then it restarts.

FAILED START-UP
If no flame lights during start-up, the product will go into alarm conditions.

ANTI-FREEZE FUNCTION
If the probe in the boiler detects a water temperature of less than 5°C, the circulation pump is automatically activated to keep the system from freezing.

PUMP ANTI-SEIZURE FUNCTION
if the pump is not used for prolonged periods, it is activated at regular intervals of 1 minute every 24 hours of inactivity, to keep it from seizing up.

TAMPERING WITH THE SAFETY DEVICES IS PROHIBITED.

It is possible to turn the product back on and therefore restore the automatic operation of the probe only after having eliminated the cause of the intervention of the safety system. This manual will help you understand which anomaly has occurred, and explain how to intervene according to the alarm message displayed on the product.

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8-SAFETY DEVICES AND ALARMS

ALARM ALERTS

If an operating anomaly occurs, the product enters the shutdown phase due to an alarm and informs the user regarding the type of fault by means of a 3 digit code that remains displayed on the emergency panel.
The alarm is indicated permanently by the relative 3 digit code, by a flashing red LED that lights up on the emergency panel and an intermittent sound signal for the first 10 minutes of the alarm. Read the instructions in the following 2 paragraphs to cancel the alarm status and restore the normal operating mode of the stove.
The following table describes the possible alarms indicated by the product, associated to the respective code that appears on the emergency panel and helpful tips to solve the problem.

WRITTEN ON THE DISPLAY	TYPE OF PROBLEM	SOLUTION
A01	The fire does not ignite.	Check the level of pellets in the tank. Check that the brazier is correctly positioned in its seat and has no build-up or unburned material. Make sure the ignition plug warms up. Thoroughly empty and clean the brazier before restarting.
A02	The fire goes out abnormally.	The fire goes out as there is no fuel (tank empty).
A03	The temperature of the pellet hopper exceeds the required safety threshold. The structure overheats due to reduced heat dissipation.	The structure is too hot because the product has been used for too long at the maximum power or due to poor ventilation or because the air fans are faulty. When the product is sufficiently cold, press button B on the control panel to delete the alarm. Once the alarm is deleted, the appliance can be switched back on.
A04	The temperature of the exhaust smoke has exceeded certain preset safety limits.	The product switches off automatically. Let the product cool down for a few minutes and then switch it on again. Check the smoke expulsion and the type of pellets used.
A05	Clogged flue-wind-door open.	Check the smoke duct and make sure the door is closed.
A06	The smoke extractor fails to guarantee sufficient primary air, required for correct combustion.	Draught difficulties or brazier clogged. Check whether the brazier is clogged by scaling and clean it, if necessary. Check and if necessary clean the smoke duct and air inlet.
A08	Faulty smoke fan.	Check cleanliness of the fumes fan compartment and check if dirt is blocking it. If this is not enough, the smoke fan is faulty. Contact an authorised service centre to have it replaced.

A09	The smoke probe is faulty and does not detect the exhaust smoke temperature properly.	Contact an authorised service centre to have the component replaced.
A10	The ignition plug is faulty.	Contact an authorised service centre to have the component replaced.
A11	Pellet supply fault.	Contact an authorised service centre to have the component replaced.
A14	Faulty air flow rate sensor.	This alarm does not block the stove, just a warning is displayed. Contact an authorised service centre to have the component replaced.
A17	Water temperature too high due to: • Stove running at maximum power, closed radiators. • The system is over-sized ex. small room, high capacity product	This alarm does not block the stove, just a warning is displayed. Ensure that all of the radiators are open, if the alarm continues, contact an authorised assistance centre.
A18	Water tank temperature too high.	This alarm is triggered when the water in the system does not circulate and the temperature increases as a result. Check and re-enable the pump if necessary. If necessary, call the assistance centre to have the component replaced.
SErvice	Routine maintenance alert.	When this flashing message appears upon start-up it indicates that the preset operating hours before maintenance is due have elapsed and that a qualified manufacturer technician must be contacted for maintenance.

DELETING THE ALARM STATUS

If an alarm is triggered, hold-down the on/off key to reset normal product operation. If the cause that triggered he alarm does not persist, after a brief verification, the product exits the alarm state and can be switched back on again.

NEVER open the stove door whilst it is either in the initial start-up or on its shut down cycle, pellets will still be smoldering or therefore volatiles may be present.

CAUTION!

If during operation or initial ignition you encounter combustion smoke spillage in to the room from the appliance or the flue then please switch off the appliance, ventilate the room and contact the installation / service technician immediately.

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8-SAFETY DEVICES AND ALARMS

BLOCKED PRODUCT

The following may cause the product to be mechanically blocked:

- structure overheating ("**A03**").
- smoke overheating ("**A04**").
- During product operation, uncontrolled air has entered the combustion chamber or there is an obstruction in the flue ("**A05**").
- Boiler overheating ("**A18**")

SOLUTIONS:

if "**A03**" appears: the structure is too hot because the product has been used for too long at the maximum power or due to poor ventilation or because the air fans are faulty.

When the product is sufficiently cold, press button **B** on the control panel to delete alarm **A03**. Once the alarm is deleted, the product can be switched back on.

If the "**A04**" alarm appears, the product switches off automatically. Let it cool for a few minutes and then switch t back on.

If the "**A05**" alarm appears: the door has been left open for too long or a significant amount of air has entered (ex. missing smoke fan inspection cap). If these causes are excluded, check and if necessary clean the smoke duct and chimney.

If the "**A18**" alarm appears: the stove switches off when the boiler overheats. This may be caused by the lack of water circulation (blocked or failed pump). Check correct pump operation

The product can be switched on again only after having eliminated the cause permanently.

9-RECOMMENDATIONS FOR SAFE USE

ONLY CORRECT INSTALLATION AND APPROPRIATE MAINTENANCE AND CLEANING OF THE APPLIANCE CAN GUARANTEE CORRECT OPERATION AND SAFE USE OF THE PRODUCT

We would like to inform you that we are aware of cases of malfunctioning of domestic pellet-fuelled heating products, mainly due to incorrect installation and inappropriate maintenance.
We would like to assure you that all of our products are extremely safe and certified according to European standards of reference. The ignition system has been tested with the utmost attention to enhance ignition efficiency and to prevent any type of problem, even in the worst operating conditions. In any case, like for any other pellet-fuelled product, our appliances must be installed correctly and undergo regular periodical cleaning and maintenance to guarantee safe operation. Our studies show us that malfunctioning is mainly due to the combination of part or all of the following factors:

- Brazier holes obstructed or brazier deformed, due to lack of maintenance and conditions which can cause delayed ignitions, generating an anomalous production of unburned gases.
- Insufficient combustion air due to a reduced or clogged air inlet duct.
- Use of smoke ducts nonconforming to regulatory installation requirements, failing to guarantee an adequate draught.
- Partially clogged chimney, due to lack of maintenance, reducing the draught and making ignition difficult.
- End chimneypot nonconforming to the indications of the instruction manual, and therefore not suitable to prevent potential inverse draught.
- This factor is crucial when the product is installed in especially windy areas, such as coastal regions.

The combination of one or more of these factors could generate important malfunctioning conditions.
To keep this from occurring, it is fundamental to guarantee that the product is installed in compliance with standards in force.
Furthermore it is of the utmost importance to respect the following simple rules:

- Every time the brazier is removed for cleaning, it must always be put back properly in the work position before using the product, completely removing any residual filth left on the support base.
- Pellets must never be loaded in the brazier manually, either before ignition or during operation.
- The accumulation of unburned pellets ensuing a failed ignition must be removed before repeating ignition. Also check that they are fed correctly and that the combustion air inlet/smoke outlet are regular.
- If ignition fails repeatedly, immediately suspend use of the product and contact a qualified technician to check its operation.

Compliance with these indications is absolutely sufficient to guarantee proper operation and to avoid any type of problems with the product.
If the above-mentioned precautions are not taken, and during ignition the brazier is overloaded with pellets thus generating anomalous smoke in the combustion chamber, carefully follow the indications below:

- Do not disconnect electrical power to the product for any reason whatsoever: this would stop the smoke extractor, releasing smoke into the environment.
- Take the precaution of opening the windows to ventilate the installation room from any smoke in the environment (the chimney might not work properly).
- Do not open the fire door: this would compromise regular operation of the smoke extraction system to the chimney.
- Just switch the stove off by acting on the on-off button on the control panel (not the rear power supply socket button!) and move away until smoke has completely evacuated.
- Before attempting re-ignition, clean the brazier and its air passage holes completely of all deposits and unburned pellets. Put the brazier back in place, removing any residue from its support base. If ignition fails repeatedly, immediately suspend use of the product and contact a qualified technician to check its operation and the chimney.

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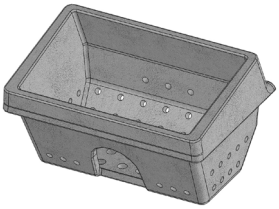
10-CLEANING AND MAINTENANCE



EXAMPLE OF A CLEAN BRAZIER

EXAMPLE OF A DIRTY BRAZIER

Only by properly servicing and cleaning the product is it possible to ensure its safety and correct operation.

ATTENTION!
All the cleaning operations of all parts must be performed with the product completely cold and the plug disconnected.
Disconnect the product from the 230V power supply before performing any maintenance operation.

The product requires little maintenance if used with certified good quality pellets.

DAILY OR WEEKLY CLEANING PERFORMED BY THE USER

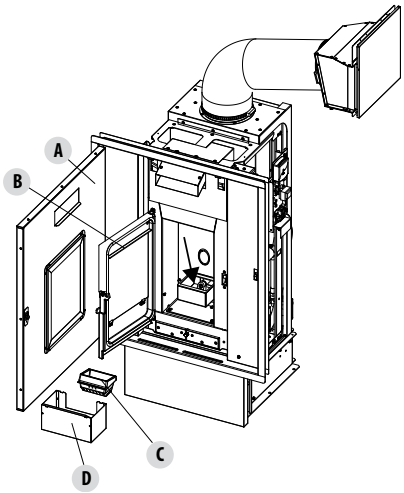
Brazier cleaning

Before ignition, always clean the "C" brazier and remove any ash or incrustation from it that might obstruct the air flow holes, paying attention to hot ash. In the case of ignition failure, or if fuel in the tank runs out, unburned pellets may accumulate in the brazier. Always empty the residue in the brazier before each start-up. Only if ash is completely cold may a vacuum cleaner be used to remove it. In this case, use a suitable vacuum cleaner to remove small sized particles.

REMEMBER THAT ONLY A CORRECTLY POSITIONED AND CLEAN BRAZIER CAN GUARANTEE IGNITION AND OPTIMAL OPERATION OF YOUR PELLET PRODUCT. IN CASE OF FAILED IGNITION AND AFTER ANY OTHER LOCKOUT STATUS OF THE PRODUCT, IT IS ESSENTIAL TO EMPTY THE BRAZIER BEFORE STARTING IT BACK UP AGAIN.

For the brazier to be cleaned properly, remove it from its housing completely and thoroughly clean all the holes and the grate on the bottom. If good quality pellets are used, you will normally only need to use a brush to restore the optimal operating conditions of the component.

CLEANING THE ASH COLLECTION COMPARTMENT



10-CLEANING AND MAINTENANCE

Ash pan cleaning
Remove and empty ash pan "D". Wipe away any residual ash before reinserting the pan. Your experience and the quality of the pellets will determine the ash pan cleaning frequency. However, it is recommended not to exceed 2 or 3 days.

CLEANING THE GLASS
It is recommended to clean the ceramic glass with a dry brush, or if it is very dirty, spray a little specific detergent and clean with a cloth.

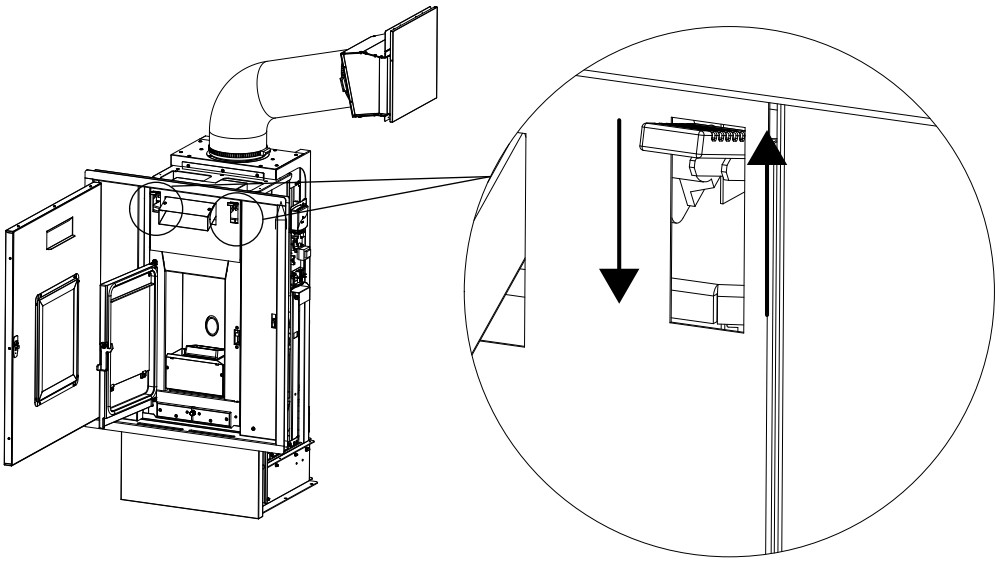
ATTENTION!
Do not use abrasive products and do not spray the glass cleaning product on the painted parts and on the door gaskets (ceramic fibre cord).

CLEANING THE HEAT EXCHANGER
The compartment through which the exhaust smoke passes must be cleaned at the end of the winter season.
This cleaning process is mandatory in order to facilitate the general removal of all combustion residue, before it becomes very difficult to remove it due to the humidity compacting it over time.
If necessary, clean it more often.

It is good practice to guarantee effective ventilation in the room while cleaning the product.

When the appliance is cold, clean the steel walls of the firebox, especially the back of it, with a scraper/pallet (included), to remove any build-up caused by soot. Build-up acts as insulation, and the thicker it is, the less heat is transferred to the water and to the structure in general.
When cleaning is finished, re-assemble everything by following the instructions in reverse order.

CLEANING THE UPPER EXCHANGER
Open aesthetic door "A" and clean the turbulators. Lower and raise the two levers located inside aesthetic door "A" several times.
Doing so will remove any soot that has deposited in the exchanger's smoke ducts during normal boiler operation.



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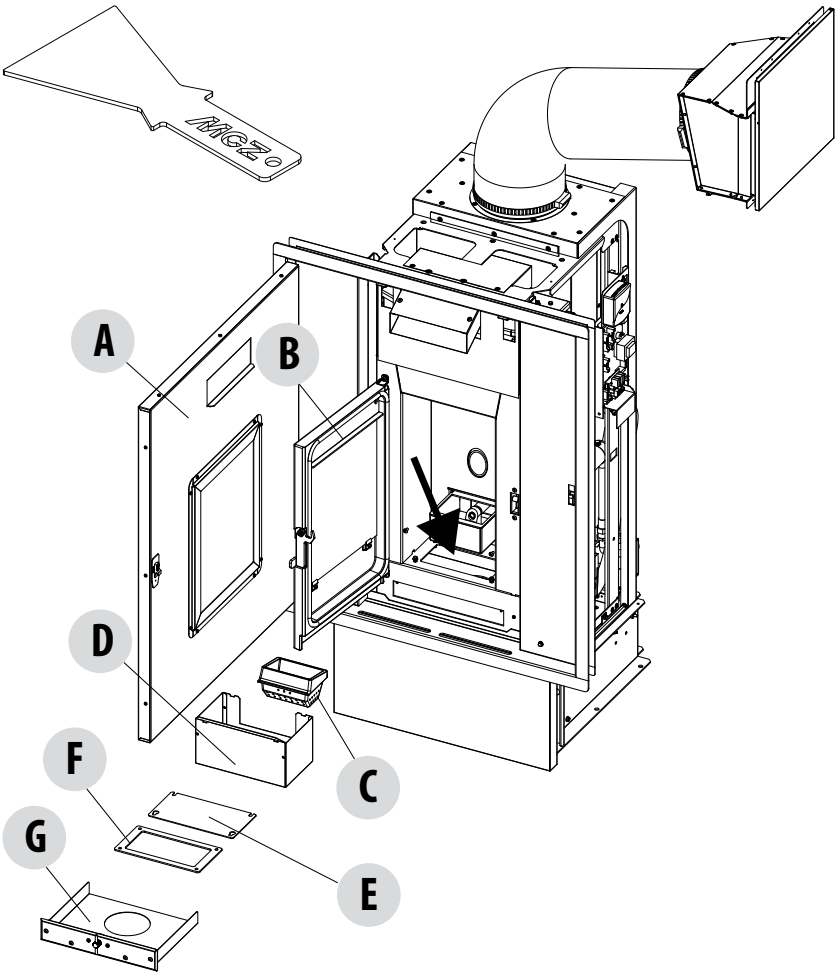
10-CLEANING AND MAINTENANCE

CLEANING THE LOWER COMPARTMENT

Open aesthetic door "A", open firebox door "B" and begin cleaning.
Clean around the brazier "C". Remove the pan "D" and the brazier "C". Loosen the screws and remove the fumes plug "E" and using the nozzle of a vacuum cleaner, remove any ash and soot that may have built up in the lower exchanger indicated by the arrow.
Before putting the cap "E" back in, we recommend changing gasket "F".
Before removing ash using a vacuum cleaner, we recommend cleaning the internal walls of the stove using the supplied scraper/pallet.
To finish cleaning it is now necessary to empty the brazier and the ash pan, plus, to remove the soot that was removed during the previous operations, it is also necessary to empty out removable pan "G"
To pull the pan out you will need to turn the closing handle.

SCRAPER TO CLEAN THE WALLS OF THE PRODUCT.

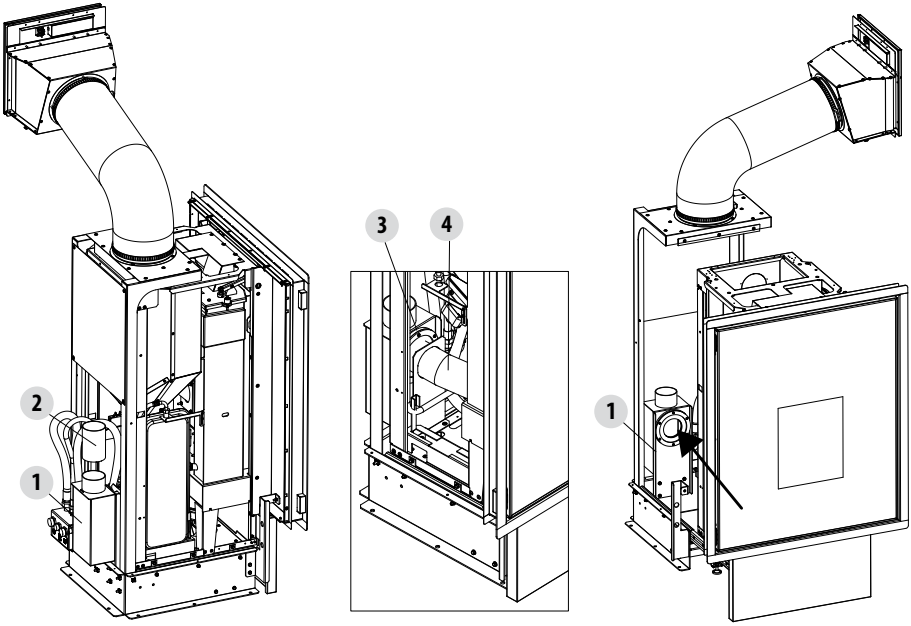


10-CLEANING AND MAINTENANCE

PERIODIC CLEANING PERFORMED BY A QUALIFIED TECHNICIAN

CLEANING THE SMOKE DUCT AND FITTING

To clean and maintain the smoke fan (1) you need to pull the product out of its housing. The fan is located in the middle, under the firebox. Clearly, the smoke evacuation fan must be removed to perform these maintenance operations.
The smoke fan is coupled to the flue connection by a pipe (4). There is a gasket (3) on the end of this pipe (the end towards the flue connection) to maintain a tight seal with the smoke fitting (2). Always ensure this gasket is intact and if necessary, replace it. The gasket can also be adjusted via a screw. The pressure on the fitting can be increased or decreased by loosening the screw.
The flue connection is housed, with its ash collection compartment (1), on the rear/side of the product, where the smoke outlet pipe is. Also clean this compartment with a vacuum cleaner by inserting the nozzle on the pipe inlet hole.
Then clean the smoke exhaust system, especially around the fittings, curves and any horizontal sections. For information on cleaning the flue, contact a chimney sweeper.



ATTENTION: the frequency of cleaning the smoke exhaust system depends on product use and the type of installation.

OTHER CHECKS

All gaskets fitted on components subject to maintenance (smoke extraction fan, inspection panels, etc...) must be replaced when these parts are taken down for maintenance. Verify the tightness of the gaskets on the firebox door and if necessary, contact an authorized service centre for them to be replaced.

The company recommends relying on an authorised service centre for end-of-season cleaning and maintenance, as they will carry out all of the previously mentioned work and also a general check of the components.

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10-CLEANING AND MAINTENANCE

REPLACING THE OVERPRESSURE DISCHARGE FOR THE COMBUSTION CHAMBER

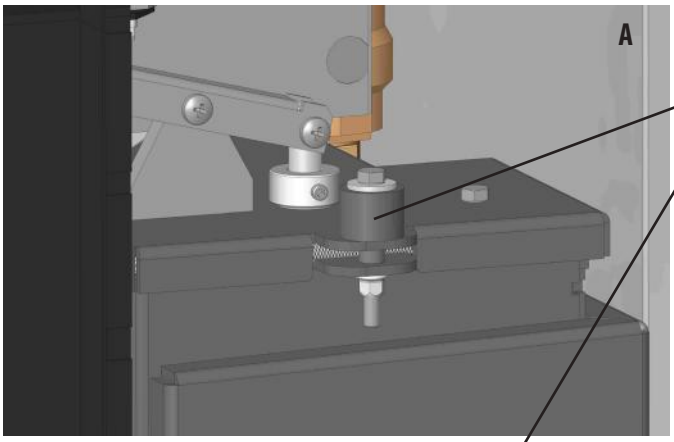
Overpressure rubber bushing "G" of the combustion chamber (fig. A) may get worn and/or damaged, it is therefore necessary to replace it once a year to ensure correct system operation.

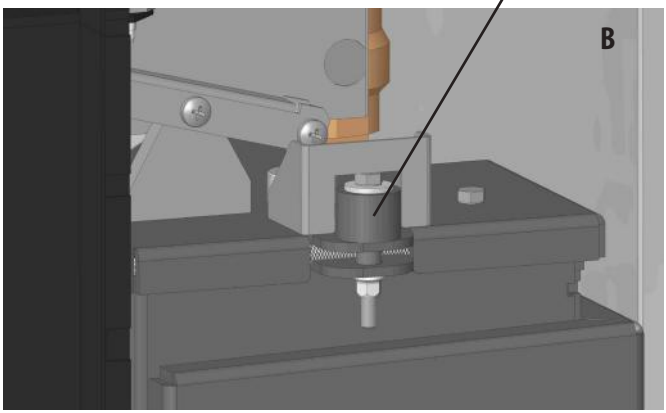
To replace it, follow the instructions below

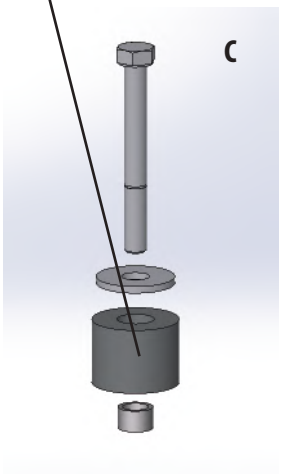
- Take the product out of its housing
- Unscrew the screw-washer-rubber bushing-roller shown in figure A/C (on both sides of the cover). It is now possible to assemble the new kit:
- Prepare the screw-washer-rubber bushing-roller aligned as shown in fig. C and screw them into the structure.
- Tighten the screw all the way.

Now ensure that the compression of the rubber bushing is correct using the template supplied with the kit:

- Place the template on the cover (fig. B); the head of the screw must be touching the element above it. If necessary, tighten or loosen the screw so that it is touching the upper element.







10-CLEANING AND MAINTENANCE

END-OF-SEASON SHUTDOWN

At the end of each season, before switching the product off, it is recommended to remove all the pellets from the hopper with a vacuum cleaner with a long pipe.

When not in use, the product must be disconnected from the mains power supply.

CHECKING THE INTERNAL COMPONENTS

ATTENTION!

The internal electromechanical components must only be checked by qualified personnel whose technical expertise includes combustion and electricity.

We recommend that an annual maintenance service is carried out with a scheduled service contract. This service is essentially a visual and functional inspection of the following components: The following is a summary of the checks and/or maintenance that are indispensable for the correct operation of the product.

PARTS/INTERVAL	1 DAY	2-3 DAYS	7 DAYS	30 DAYS	60-90 DAYS	1 YEAR
Brazier	•					
Ash pan	•					
Glass		•				
Lower compartment			•			
Complete exchanger					•	
Smoke duct				•		
Door gasket					•	
Internal parts						•
Chimney						•
Circulation pump						•
Plate heat exchanger						•
Plumbing components						•
Electro-mechanical parts						•
Overpressure silicon damper for combustion chamber						•

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11-FAULTS/CAUSES/SOLUTIONS

ATTENTION!
All repairs must only be carried out by a specialised technician, with the product switched off and the plug disconnected.
If the product is NOT used as described in this manual, the manufacturer declines all liability for any damage caused to persons and property.
All the necessary measures and/or precautions must be adopted when performing maintenance, cleaning and repairs.

- ***Do not tamper with the safety devices.***
- ***Do not remove the safety devices.***
- ***Connect the product to an efficient smoke expulsion system.***
- ***Verify that the room where the appliance will be installed is adequately ventilated.***

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The pellets are not fed into the combustion chamber.	The pellet hopper is empty.	Fill the hopper with pellets.
	Sawdust has blocked the feed screw.	Empty the hopper and remove the sawdust from the feed screw by hand.
	Faulty gear motor.	Replace the gear motor.
	Faulty circuit board.	Replace the circuit board.
The fire goes out or the boiler stops automatically.	The pellet hopper is empty.	Fill the hopper with pellets.
	The pellets are not fed.	See the previous anomaly.
	The pellet temperature safety probe has been triggered.	Let the product cool down, restore the thermostat until the problem is resolved and switch the product back on. If the problem persists contact Technical Assistance.
	The door is not closed properly or the gaskets are worn.	Close the door and replace the gaskets with original ones.
	Unsuitable pellets.	Change the type of pellets with those recommended by the manufacturer.
	Low pellet supply.	Have the fuel flow rate checked by Technical Assistance.
	The combustion chamber is dirty.	Clean the combustion chamber in accordance with the installation guide.
	Clogged outlet.	Clean the smoke duct.
	Faulty smoke extraction motor.	Check the motor and replace it, if necessary.
	Water tank temperature too high.	Ensure that the water circulation pump is operating correctly, and replace the part if necessary.

11-FAULTS/CAUSES/SOLUTIONS

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The product works for a few minutes and then switches off.	Start-up phase is not completed.	Repeat start-up.
	Temporary power cut.	Wait for the automatic restart.
	Clogged smoke duct.	Clean the smoke duct.
	Faulty or malfunctioning temperature probes.	Check and replace the probes.
	Faulty ignition plug.	Check the spark plug and replace it, if necessary.
Pellets accumulate in the brazier, the glass of the door gets dirty and the flame is weak.	Insufficient combustion air.	Make sure that the air inlet in the room is fitted and clear. Check that the combustion air filter on the Ø 5 cm air inlet pipe is not clogged. Clean the brazier and check that all the holes are clear. Perform a general cleaning of the combustion chamber and the smoke duct. Check the condition of the door gaskets.
	Damp or unsuitable pellets.	Change the type of pellets.
	Faulty smoke evacuation motor.	Check the motor and replace it, if necessary.
The smoke evacuation motor does not work.	The product is not electrically powered.	Check the mains current and the protection fuse.
	The motor is faulty.	Check the motor and capacitor and replace them, if necessary.
	Faulty electronic board.	Replace the electronic board.
	Faulty control panel.	Replace the control panel.

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11-FAULTS/CAUSES/SOLUTIONS

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The product always runs at maximum power when in automatic mode.	The room thermostat is in the maximum position.	Reset the temperature of the thermostat.
	Malfunctioning temperature probe.	Check the probe and replace it if necessary.
	Faulty or malfunctioning control panel.	Check the panel and replace it, if necessary.
	Thermostat is set to minimum.	Reset the temperature of the thermostat.
The product does not switch on.	No current.	Check that the plug is inserted and the main switch is on "I".
	Pellet or water probe fault.	Wait for the pellet or water tank to cool down and turn the product back on again.
	Blown fuse.	Replace the fuse.
	Clogged smoke outlet or smoke duct.	Clean the smoke exhaust and/or the smoke duct.
	An alarm has been triggered.	Verify the type of alarm and proceed accordingly.
	Check whether the brazier is clean.	Clean the brazier to remove any deposits or residues of non-burned pellets.
	Check the position of the brazier.	Put the brazier back in its place.
	Check that the ignition plug warms up.	Check and if necessary, replace.

11-FAULTS/CAUSES/SOLUTIONS

ANOMALIES RELATED TO THE HYDRAULIC CIRCUIT

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
No increase in temperature with stove in operation.	Incorrect combustion adjustment.	Check recipe.
	Dirty boiler/system.	Check and clean the boiler.
	Low product power.	Check that the product is properly sized for the requirements of the system.
	Poor pellet quality.	Use MCZ pellets.
Condensation in boiler.	Incorrect temperature setting.	Set the product at a higher temperature.
	Insufficient fuel consumption.	Check recipe.
Radiators cold in winter.	Room thermostat (local or remote) set too low. If remote thermostat, check if it is defective.	Adjust the room thermostat to a higher temperature, replace it if necessary (if remote).
	Circulator not running because blocked.	Free up the circulator by removing the plug and turning the shaft with a screwdriver.
	Circulator does not run.	Check the electrical connections of the circulator; replace it if necessary.
	There is air in the radiators.	Vent the radiators.
No hot water delivery.	Blocked circulator (pump).	Re-enable the circulator (pump)

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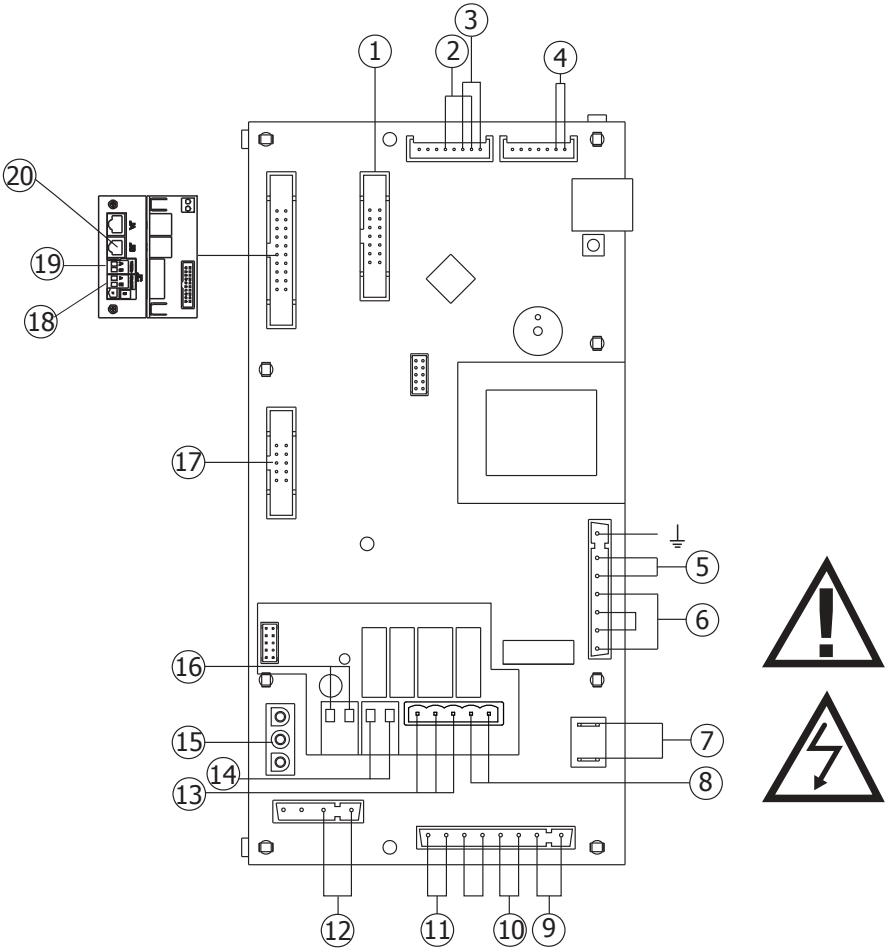
12-WIRING DIAGRAMS



MOTHERBOARD WIRING KEY

1. CONTROL PANEL
2. FLOW SWITCH (if there is one)
3. WATER TEMPERATURE PROBE
4. SMOKE TEMPERATURE PROBE
5. POWER SUPPLY
6. SPARK PLUG
7. SMOKE EXTRACTOR FAN
8. PUMP
9. WATER TEMPERATURE OVERLOAD CUT-OUT
10. GEAR MOTOR
11. TANK TEMPERATURE OVERLOAD CUT-OUT
12. ROOM FAN (if there is one)
13. 3-WAY DIVERTER VALVE (if there is one)
14. EXTERNAL AUX SIGNAL (N.O., max 230V 3A)
15. SMOKE EXTRACTOR FAN REVOLUTION CONTROL
16. ANOMALY SIGNAL (N.C., max 230V 3A)
17. AIR FLOW RATE SENSOR
18. HOME AUTOMATION SYSTEM
19. ROOM THERMOSTAT WITH POTENTIAL-FREE CONTACT
20. MODEM

PLEASE NOTE The electrical wiring of individual components is fitted with pre-wired connectors of different sizes.

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