



INSERT

VIVO 80 PELLET HYDRO

Translation of the original instructions

MCZ



8901226100

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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 appliance, even if it 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 observed when the appliance is installed.

In Italy, for the installation of systems with biomass below 35KW, refer to ministerial decree D.M. 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

The content of this manual is strictly technical and the property of MCZ Group Spa.

No part of this manual may be translated into other languages and/or adapted and/or reproduced, even in part, in other mechanical or electronic forms, photocopies, recordings or other, without the prior written authorisation from MCZ Group Spa.

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.



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 alcohol, petrol, liquid fuel for lanterns, diesel, bio-ethanol, fluids for lighting charcoal or similar liquids to light/rekindle the flame in these devices. Keep these flammable liquids well away from the appliance when in use.
- 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 from 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 shall not play with the appliance. Cleaning and user maintenance shall not be made 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.*

1-WARNINGS AND WARRANTY CONDITIONS

- 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 doors/covers on the appliance must remain closed when it is not used.**
- 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 engineer 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 too 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.

1-WARNINGS AND WARRANTY CONDITIONS

- A carbon monoxide alarm must be fitted in the room where the appliance is sited Refer too ADJ part 2.34 through too 2.36 page 41 (**ONLY FOR UK**).
- 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.
- 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 after completing assembly.
- 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 ENGINEER IMMEDIATELY.**

1-WARNINGS AND WARRANTY CONDITIONS

INFORMATION

- In case of any problems, get in touch with your dealer, or a qualified engineer authorised by MCZ, and if a repair is necessary, insist on the use of original spare parts.
- Use only the fuel recommended by MCZ (for Italy pellets with a diameter of 6 mm and for other European countries with a diameter of 6-8 mm) and provided only with an automatic supply system.
- Periodically check and clean the smoke outlet ducts (connection to the flue pipe).
- Accumulated unburnt pellets in the burner after repeated failed ignitions must be removed before lighting.
- The pellet stove is not a cooking appliance.
- Always keep the cover of the fuel hopper closed.
- Keep this instruction manual carefully because it must stay with the stove throughout its working life. If the stove is sold or transferred to another user, always make sure that the booklet goes with the product.
- If it gets lost, ask MCZ or your authorised dealer for another copy.

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, the product must be installed and started by specialised personnel who must, where provided, issue a declaration of conformity of the plant and of the proper functioning of the product, for the warranty to be valid and effective.

We recommend functionally testing the product before completion with the relevant finishes, where provided (claddings, painting of walls, etc.).

Installations not meeting the current standards, improper use and lack of maintenance as expected by the manufacturer, void the product warranty.

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.**

In order to activate the product warranty the commissioning document which is supplied with the appliance and also is available as a download from the Specflue website must be filled in correctly and returned within 14 days (ONLY FOR UK).

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 stove cleaned on an annual basis 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.

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.



15 Kg BAGS OF FUEL

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



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 EN14961-2. 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 1.5% of the weight.
- 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 chimney cap. 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

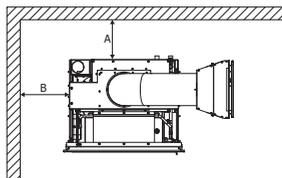
It is recommended to install the stove detached from any walls and/or furniture, with a minimum clearance to allow effective aeration of the appliance and a good distribution of heat in the room. Observe distances from flammable or heat-sensitive objects (sofas, furniture, wood panelling, etc..) as specified below. The front distance from flammable materials must be at least as set out 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 80 PELLET HYDRO	Non-flammable walls	Flammable walls
Hydro Version	A = 50 mm B = 50 mm	A = 100 mm B = 100 mm



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).

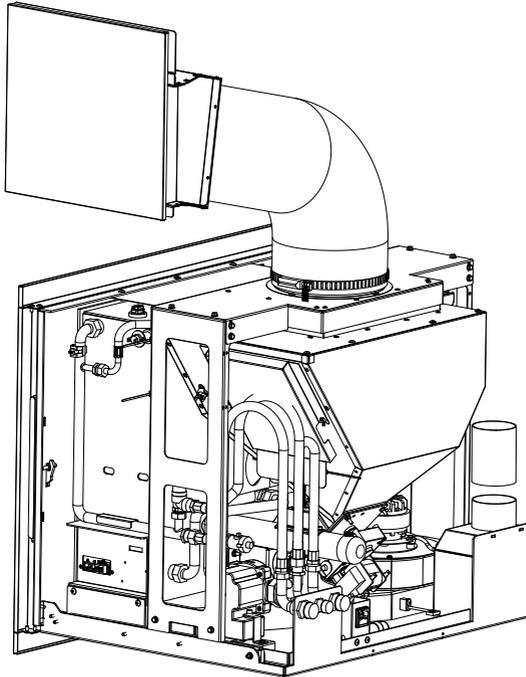
2-INSTALLATION

CONNECTION OF THE SMOKE EXHAUST DUCT

When making the hole for the passage of the smoke discharge pipe, one must take into account the possible presence of flammable materials. If the hole must be made through a wooden wall or thermolabile material, the **INSTALLER MUST** first of all use the appropriate wall fitting (minimum diameter 13 cm) and suitably insulate the pipe of the product that passes through it using adequate insulating materials (1.3 - 5 cm thick with minimum thermal conductivity $0.07 \text{ W/m}^{\circ}\text{K}$).

The same minimum distance must be applied if the pipe of the product must pass through vertical or horizontal sections near the thermolabile wall.

It is recommended to use an insulated double-wall pipe in external sections in order to prevent condensation from forming. The combustion chamber works in negative pressure.



*SMOKE EXHAUST
COUPLING*

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 chimney.

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 cowlng...) to the same flue.

The stove must be connected to a flue pipe or an internal or external vertical duct conforming to EN 1856-1-2 to suit the appliance and types of fuels to be burnt – refer to detailed guidance in sections 2, 3 and 4 (ONLY FOR UK).

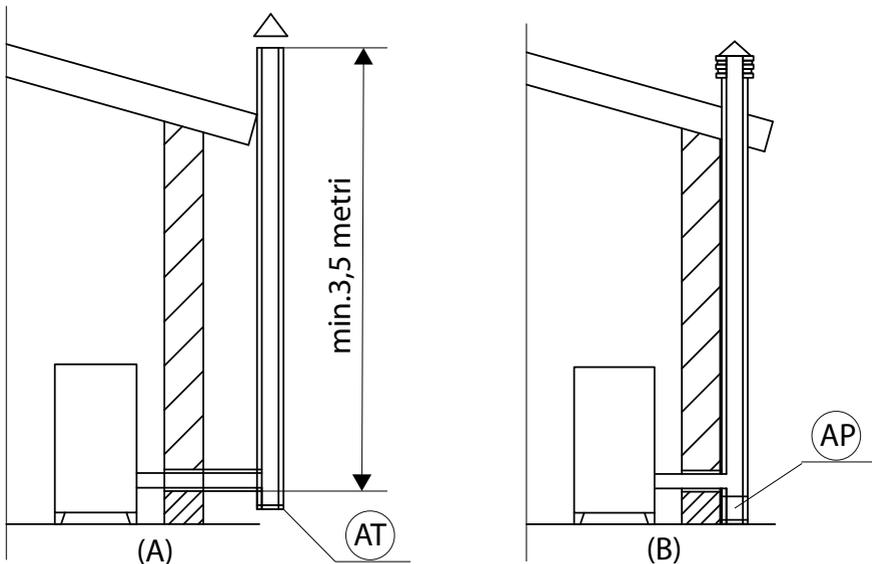


FIGURE 1 - SMOKE FLUE

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 watertight metal hatch.

FLAT ROOF

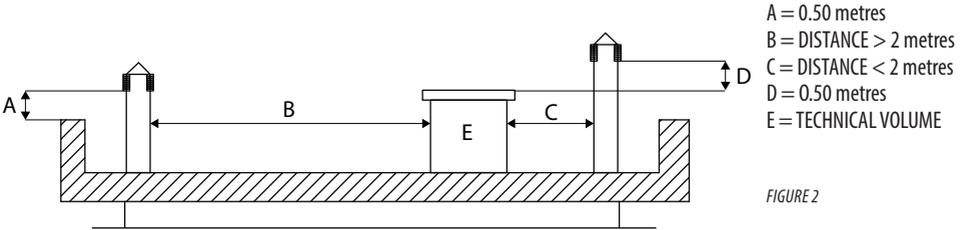


FIGURE 2

ROOF AT 15°

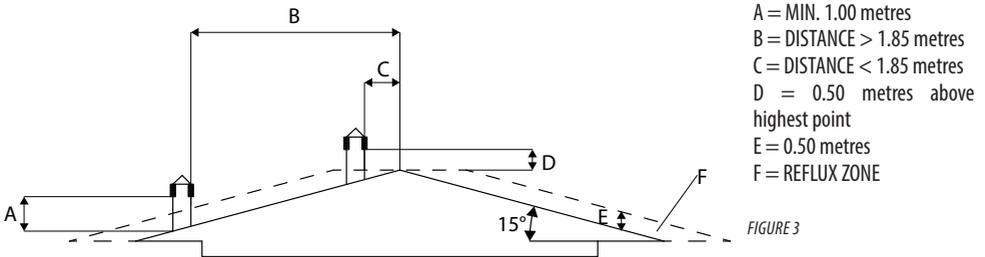


FIGURE 3

ROOF AT 30°

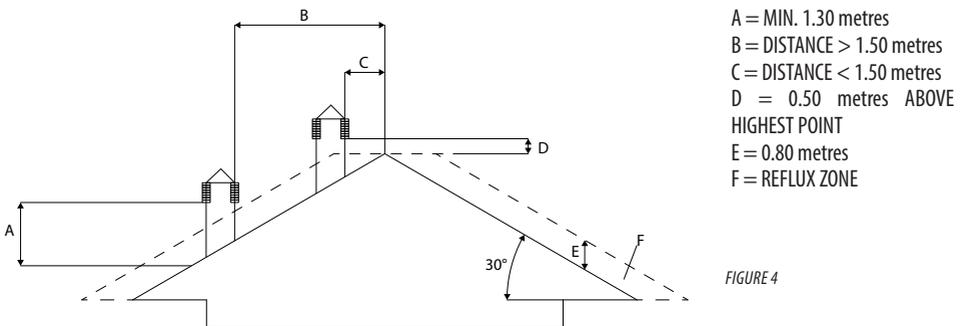


FIGURE 4

2-INSTALLATION

ROOF AT 60°

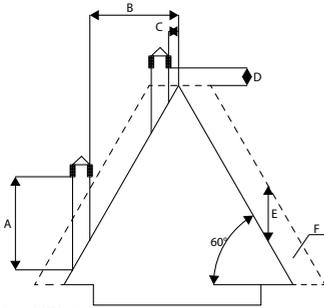


FIGURE 5

- 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°

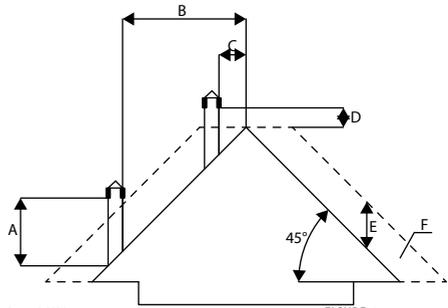


FIGURE 6

- 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 $\varnothing 100\text{mm}$** .

The cross sections/lengths of chimneys must be correctly sized 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:

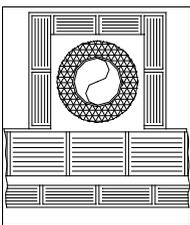
Steel chimney AISI 316 with double chamber insulated with ceramic fibre or equivalent resistant up to 400°C.

Refractory chimney with double insulated chamber and external lightweight concrete cladding with cellular material such as clay.

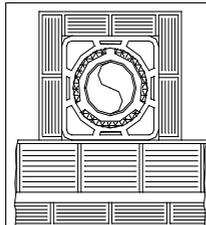
Traditional square-section clay chimney with insulating empty inserts.

Avoid products with an internal rectangular section where the larger side is 1.5 times the smaller side (e.g. 20x40 or 15x30).

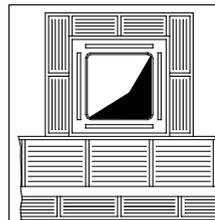
EXCELLENT



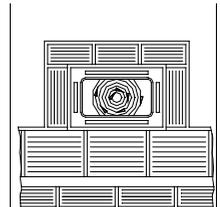
GOOD



POOR



VERY POOR



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 chimney must be cleaned and checked by a qualified chimney sweep at least once a year. Once the maintenance has been performed, request a written declaration that the device is safe.

Failure to clean the system jeopardises the safety.

CHIMNEY

The chimney is a crucial element for the heating appliance to work properly: we recommend a wind proof chimney (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).

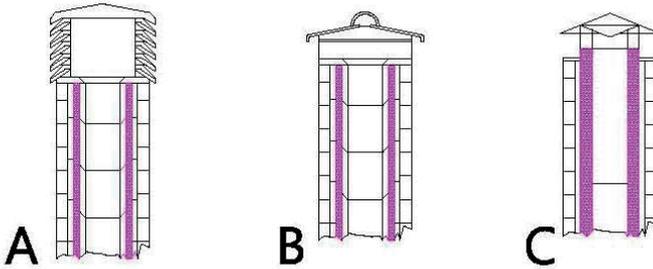
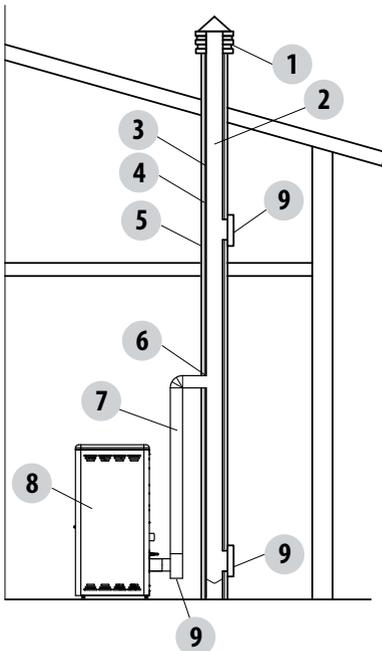


FIGURE 7

CHIMNEY COMPONENTS



KEY:

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

FIGURE 8

2-INSTALLATION

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 intake must have a minimum total net area of 80 cm²: the surface must be increased accordingly if within the room there are other active generators (for example: electric fan for stale air extraction, kitchen hood, other stoves, etc...), which could cause cause depression in the room. One must verify that, with all the equipment on, the pressure drop between the room and the outside does not exceed a value of 4 Pa. 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.

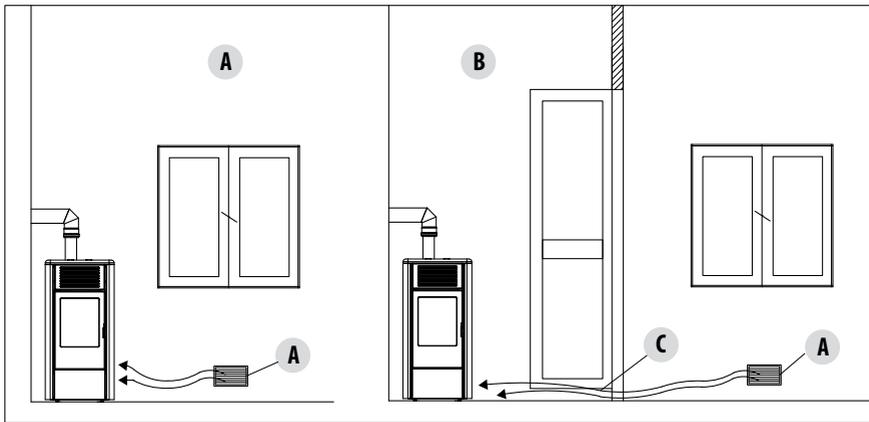
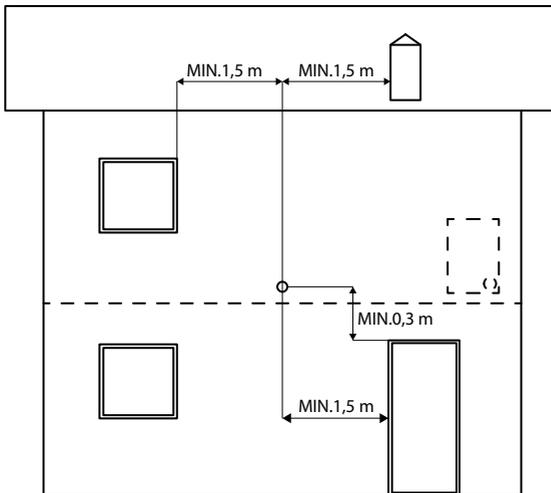


FIGURE 9 A - DIRECTLY FROM OUTSIDE

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

2-INSTALLATION

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 maximum incline of 3% and containing a maximum of 3 90° bends (accessible for inspection - do not count the T joint 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 a smoke duct according to the regulations in force in the country of installation and verify that it is compatible with the product and installation characteristics. The temperature class of the smoke duct must exceed operating temperatures of the appliance.

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

Should there be flammable or heat-sensitive structures, the smoke duct must respect the safety distances specified in the data plate.

SUPPLEMENTARY ISTRUCTIONS ONLY FOR UK

FOR CONNECTION TO THE FLUE PIPE, NOT MORE THAN 150mm OF HORIZONTAL PIPE MUST BE USED AND NOT MORE THAN 4 x 45° bends MUST BE USED. In accordance with UK Building Regulations .

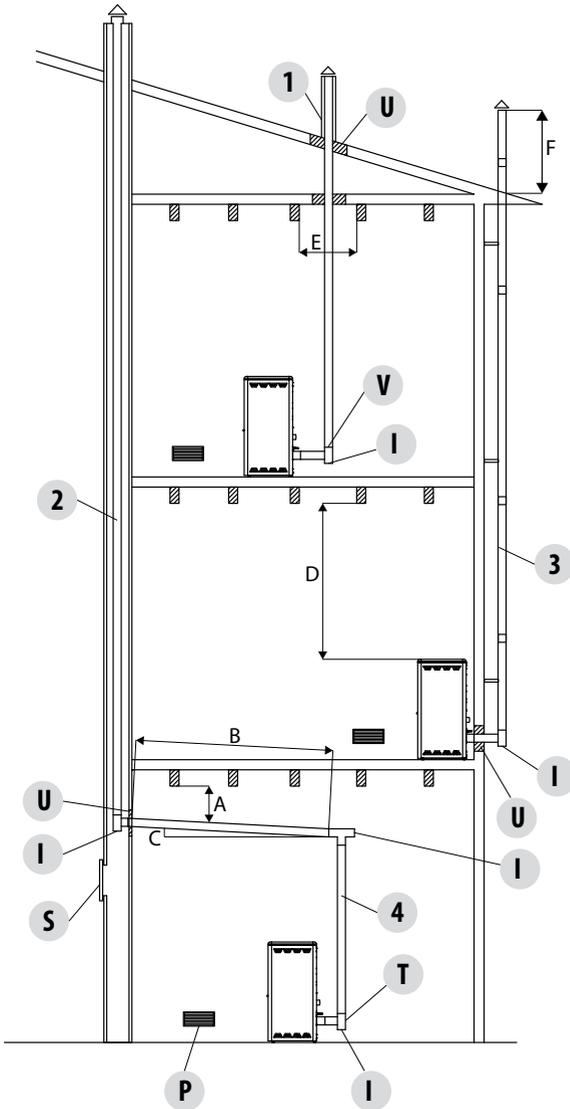
All exterior flue or flue used internally above 1.8m should be twin wall insulated pipe installed in accordance with ADJ reference page 23 section 1.31 and 1.32 and 1.33 & Hetas regulations.

The external fluepipe must have internal dimensions of a minimum of 150mm, and maximum 180mm.

Check with suitable instruments that there is a minimum draught of 5 Pa. on low fire and 10pa on high fire. The flue must always run under negative pressure and a cold flue pull of – 2>3 pascals must be secured.

2-INSTALLATION

EXAMPLES OF CORRECT INSTALLATION



1. Installation of $\varnothing 150\text{mm}$ 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 to holes made in walls.

2. Old flue, minimum pipe $\varnothing 100\text{mm}$ 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 $\varnothing 100\text{mm}$: all securely mounted on the wall. With wind-proof chimney. 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

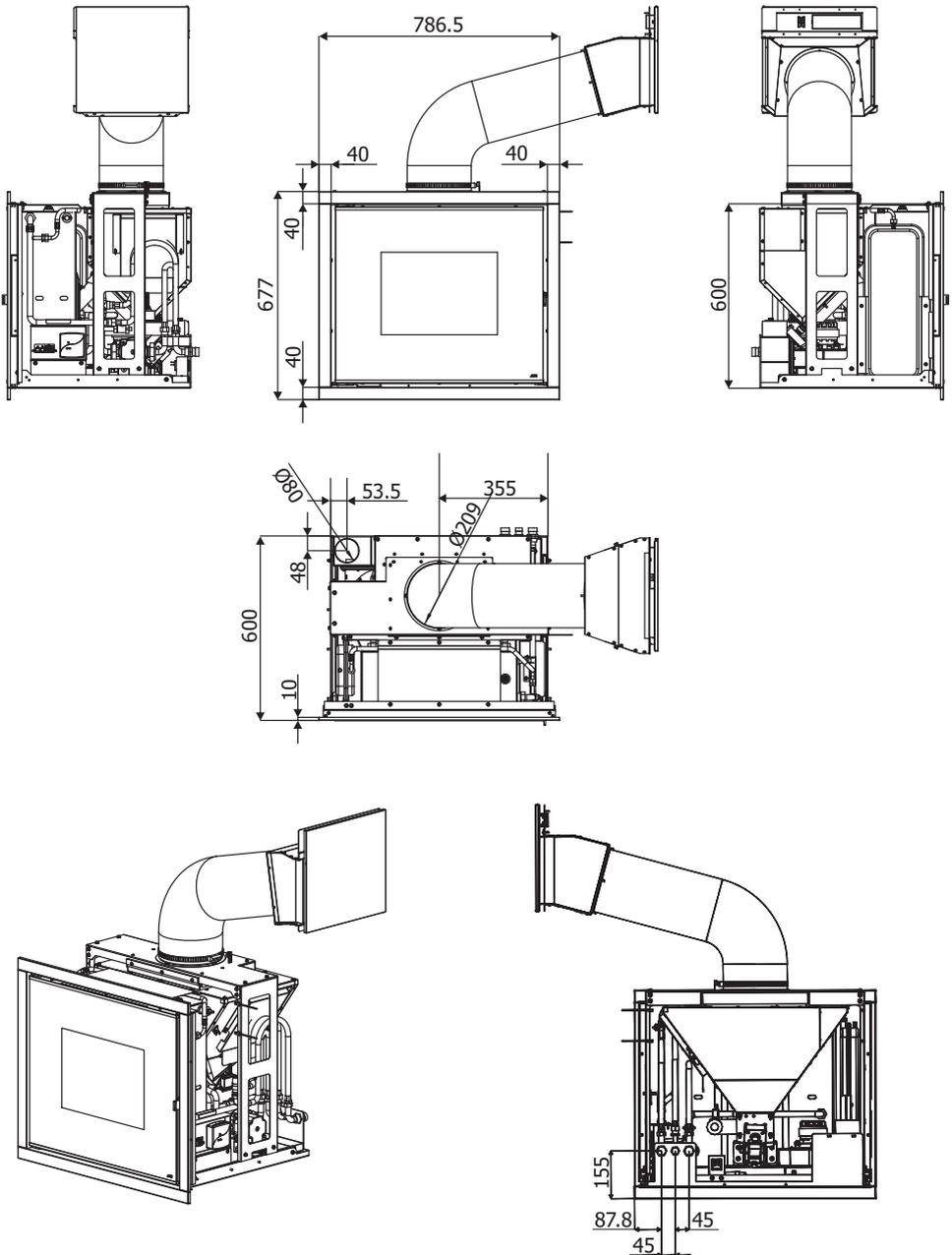
U = INSULATING
 V = ANY REDUCTION FROM 100 TO 80 MM
 I = INSPECTION CAP
 S = INSPECTION ACCESS PANEL
 P = AIR INLET
 T = T JOINT WITH INSPECTION CAP

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

3-DRAWINGS AND TECHNICAL FEATURES

DRAWINGS AND CHARACTERISTICS

VIVO 80 PELLET HYDRO DIMENSIONS (dimensions in mm)



3-DRAWINGS AND TECHNICAL FEATURES

TECHNICAL CHARACTERISTICS	VIVO 80 PELLET HYDRO
Nominal output power	16,9 kW (14534 kcal/h)
Nominal output power (H ₂ O)	14,2 kw (12212 kcal/h)
Minimum output power	4,9 kW (4214 kcal/h)
Minimum output power (H ₂ O)	3,5 kw (3010 kcal/h)
Efficiency at Max	90,1%
Efficiency at Min	95,2%
Temperature of exhaust smoke at Max	150°C
Temperature of exhaust smoke at Min	65°C
Particulate/OGC / Nox (13%O ₂)	20 mg/Nm ³ - 1 mg/Nm ³ - 117 mg/Nm ³
CO at 13% O ₂ at Min and at Max	0,028 – 0,012%
CO ₂ at Min and at Max	6,4 - 9,8%
Recommended draught at Max power***	0,10 mbar - 10 Pa***
Recommended draught at Min power	0,02 mbar - 2 Pa
Maximum operating pressure	2,5 bar - 250 kPa
Mass of smoke	12.5 g/sec
Hopper capacity	20+15 litres
Type of pellet fuel	Pellet diameter 6-8 mm and size 3-40 mm
Pellet hourly consumption	Min ~ 1 kg/h* - Max ~ 3,6 kg/h*
Autonomy	At min ~ 23 h* - At max ~ 7 h*
Heatable volume m ³	363/40 – 415/35 – 484/30 **
Combustion air inlet	External diameter 50 mm
Smoke outlet	External diameter 80 mm
Air inlet	80 cm ²
Nominal electrical power (EN 60335-1)	80 W (Max 420 W)
Supply voltage and frequency	230 Volt / 50 Hz
Net weight	160 kg
Weight with packaging	170 kg
Distance from flammable material (back)	100 mm
Distance from flammable material (side)	100 mm

* Data that may vary depending on the type of pellets used

** Volume that can be heated, according to the power requirement per m³ (respectively 40-35-30 Kcal/h per m³)

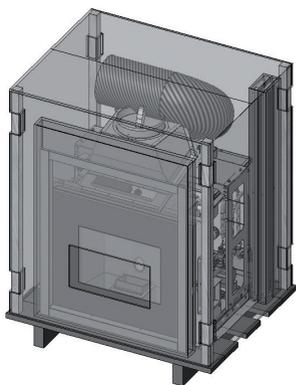
***Value recommended by the manufacturer (non-binding) for optimal product operation

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

4-INSTALLATION AND ASSEMBLY

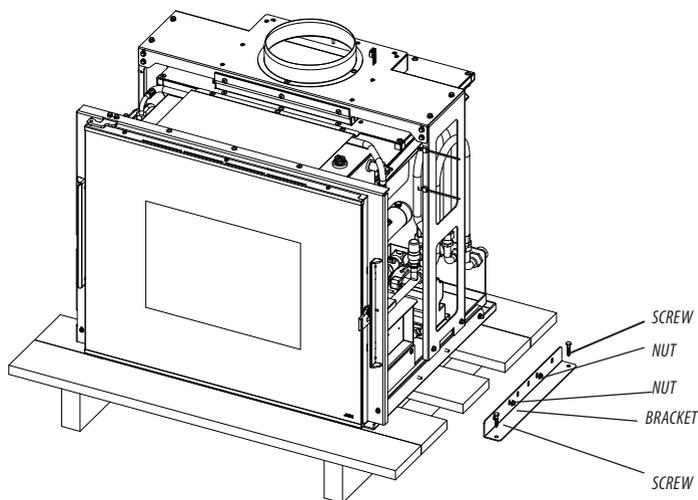
PREPARATION AND UNPACKING

The product is supplied in a single package. Inside the package there are the tube, the loading door, the frame and ventilation grilles. Open the package, remove the product from the pallet and set it in the pre-selected place, making sure this complies with the requirements.



PRODUCT PACKAGING

The two brackets must be removed in order to remove the product from pallet, by loosening the two flanged nuts and the two screws. The appliance must always remain in a vertical position and handled solely with a cart. Pay particular attention to the door and its glass, protecting them from mechanical knocks that would compromise their integrity.



Always handle the product with care. If possible, unpack the product near the place of installation. The materials that make up the packaging are neither toxic nor harmful, and so require no particular disposal measures. Therefore, the end user is responsible for product storage, disposal or possible recycling in compliance with the relative applicable laws.

If the product must be connected to an exhaust pipe that goes through the rear wall (to enter the flue), make sure not to force it in.

4-INSTALLATION AND ASSEMBLY

POSITIONING

Before installing the product assess the optimal position.

One can install the product in a pre-existing traditional fireplace or as a new system.

In addition to lift the product to the recommended height of 600 mm one can purchase a metal support separately (refer to the relative optional accessories price list)

INSTALLATION IN A PRE-EXISTING FIREPLACE

Assess the following elements:

The supporting surface of the product must have the following characteristics:

- support the weight of the product and of any accessories
- consistency such as to allow anchoring by means of plugs for safety
- perfectly level
- the jambs as perpendicular as possible to the surface

The housing compartment must be large enough to accommodate the product.

After verifying the conditions needed for proper installation proceed with the installation of the product:

- fix the base of the product to the supporting surface
- carry out all chimney plumbing and electrical connections in compliance with the regulations in force.

Any space between the cladding walls and the product can be closed via a compensation frame that can be easily disassembled in the event of maintenance of the insert.

It is mandatory to fix the product to the supporting surface, as otherwise the product could tilt when extracted.

One must check that all connections (plumbing and electrical) enable to extract the product.

INSTALLATION AS A NEW SYSTEM

Assess the following elements:

The supporting surface of the product must have the following characteristics:

- support the weight of the product and of any accessories
- consistency such as to allow anchoring by means of plugs for safety
- perfectly level

After verifying the conditions needed for proper installation proceed with the installation of the product:

- fix the base of the product to the supporting surface
- carry out all chimney plumbing and electrical connections in compliance with the regulations in force.

It is mandatory to fix the product to the supporting surface, as otherwise the product could tilt when extracted.

One must check that all connections (plumbing and electrical) enable to extract the product.

- Proceed to assemble the cladding.

It is best to leave the product without cladding for a few days to check the tightness of all plumbing connections.

For any type of installation, both on a new system as on an existing one, it must be possible to inspect the connections of the hoses fitted on the wall, because when the product is extracted one must disconnect the pipes from the system.

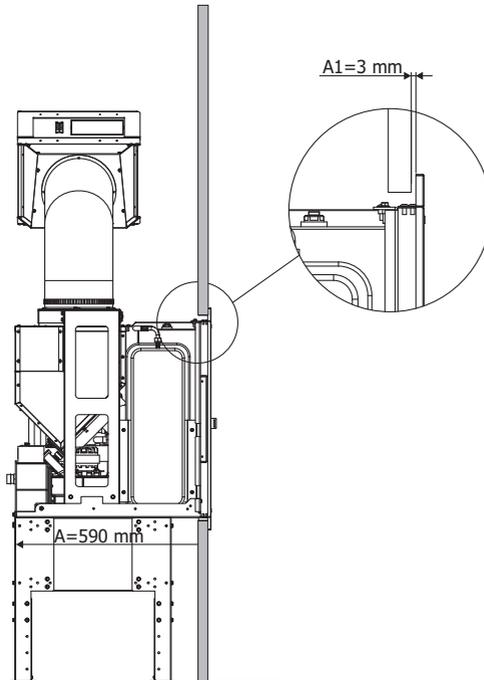
4-INSTALLATION AND ASSEMBLY

FASTENING TO THE BASE OF THE INSERT

It is mandatory to anchor the product to a support as the authorised technician can remove the combustion chamber from its seat by means of two extendable guides while performing the annual maintenance.

Fasten the insert as follows:

- measure the distance (A) from the edge of the frame to the outer edge of the support for it to be adequately set back into place.
 $A=590\text{ mm}$ (measurement from the edge of the frame to the outer edge of the support).
 $A1=3\text{ mm}$ (measurement from the outer edge of the wall to the edge of the frame).
- Remove compensation frame C (see the relative paragraph).
- Loosen the lower screws (B) under the frame.
- Then remove the machine and separate it from its support (D).
- Set the support (D) away from the wall at the previously measured distance.
- Fasten the support (D) to the base (E) or to the optional support with the screws supplied, making sure that the support anchor surface (D) and the wall are perpendicular.
- Set the machine back on the support (D), insert the screws (B) again, making sure the machine and the support are well secured in order to guarantee product operation.

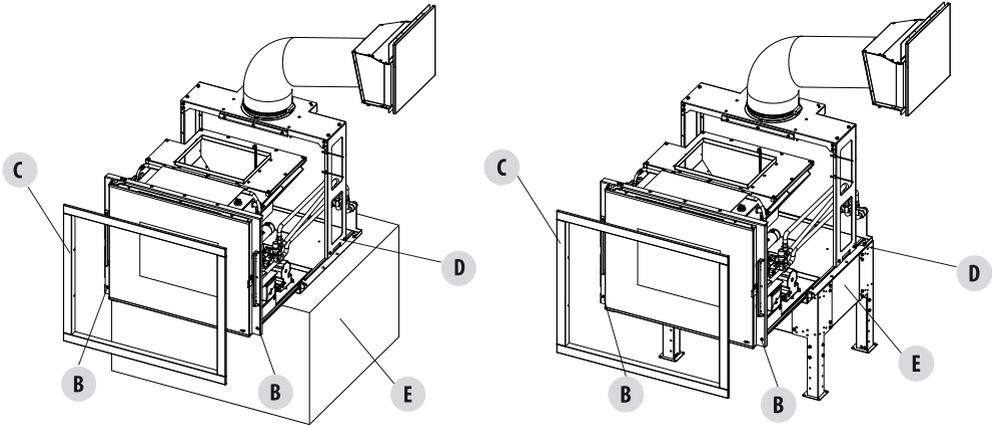


It is very important to make sure the positioning measurements of the product base have been respected and the support anchor surface and the wall are perpendicular. Also make sure that the screws secure the machine to the support.

The product can be installed at the desired height by constructing a suitable platform. This support must be made of non-flammable material.

The company declines all liability for any damage to objects and persons if the above-mentioned precautions are not complied with.

4-INSTALLATION AND ASSEMBLY



PELLET LOADING CHUTE ASSEMBLY

Another decision to be made before positioning the product is to define the side on which to install the chute for loading fuel. The pellets fuelled Vivo 80 Hydro is delivered with two clamps, the connection pipe and chute with hatch.

The chute can be fitted on the right side, on the left side or frontally. The connection pipe is 1 metre long.



It is mandatory to shorten the connection pipe, depending on its positioning (side or front), so that it is well taut and forms a minimum angle with respect to the horizontal as shown in the drawing. This operation is necessary for the pellets' descent.

Before setting up the cladding carry out a fuel loading test to assess its proper descent towards the hopper.

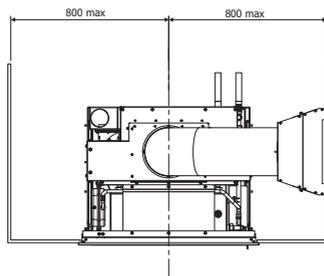
It is mandatory to insulate the pipe properly in the event this is fitted on the left side in correspondence of the smoke evacuation duct. Fire hazard!

Chute assembly

In the event one decides to position the pipe laterally, the distance from the machine axis to the wall must be at least 80 cm (figure shown here).

To position the chute act as follows:

- Connect the supplied pipe to the product paying attention that it is rotated sideways, and fasten it with the clamp.
- Connect the pipe (in the upper part) to the opening of the door structure with the supplied clamp.
- Position the pipe with the door structure so that, when the cladding is complete, one can screw and fasten it to the cladding wall in correspondence of the hole made for its insertion.
- To assemble the external door, which must only be done when the cladding is complete, refer to the relative section.



4-INSTALLATION AND ASSEMBLY

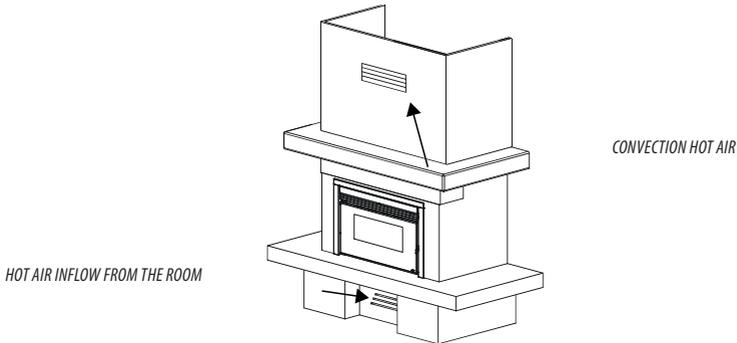
HOOD VENTILATION GRILLES

Foreword

Depending on how the product is positioned, one must provide grilles for ventilation.

If inserted in existing cladding, the ventilation grilles on the cladding will be used.

If used as a new installation, the company recommends installing the ventilation grilles as described in the following paragraph.



HOOD VENTILATION GRILLES FOR NEW CLADDING

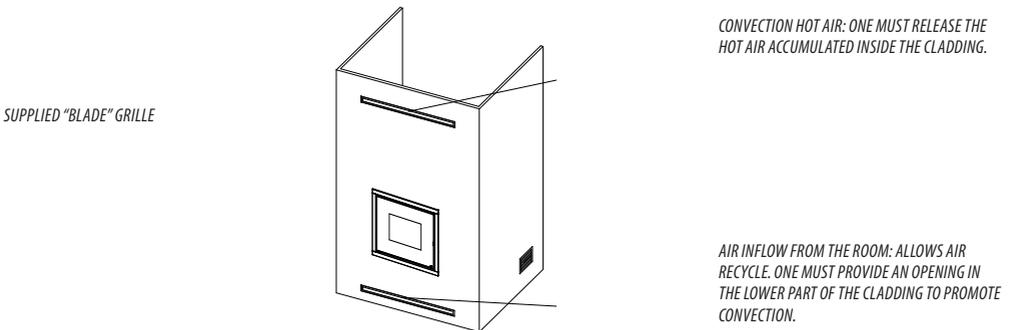
It is mandatory to install the hood ventilation grilles of the manufacturer or grilles that can guarantee the same functions and the same air passage section.

The company cannot be held liable for any damage caused to the structure or the electrical components if this precaution is not complied with.

The structure becomes very hot and it is **essential** that constant and efficient ventilation is always guaranteed inside the cladding.

This allows to recover part of the structure heat that would otherwise be lost if left inside the cladding, whilst guaranteeing perfect product operation.

The company supplies the "Blade" nozzle that is to be installed in the upper part of the insert as shown in the figure.



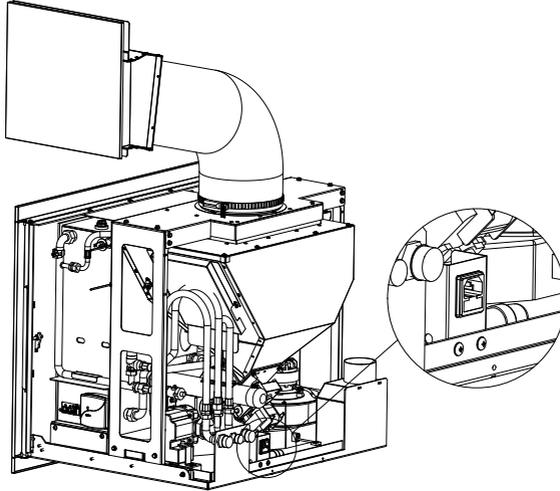
4-INSTALLATION AND ASSEMBLY

ELECTRICAL CONNECTION

First connect the power cable to the rear part of the product and then to a wall socket, which must always be accessible.

Should this not be possible, during installation, insert appropriate power supply disconnection devices, in compliance with the national regulations regarding electrical installations.

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



SETTING UP THE CLADDING

The product must be fully tested before the cladding is applied. The company cannot be held liable for any damage to the cladding should operating anomalies arise, which were not verified before the cladding was applied to the product.

IT IS MANDATORY to check the tightness of all the pipes through which smoke passes (smoke fitting, gaskets and flue coupling) before setting up the cladding.

READ THE "OPERATION TEST" CHAPTER BEFORE STARTING ANY PRODUCT CLADDING OPERATION.

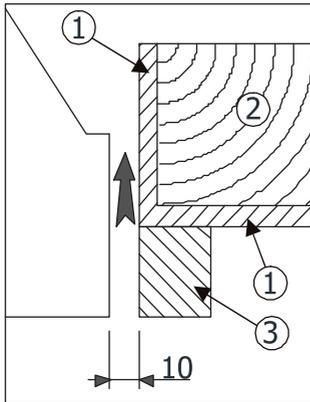
The product and the cladding parts must be fastened together **WITHOUT COMING INTO CONTACT WITH THE STEEL STRUCTURE** in order to prevent heat from being transmitted to the marble and/or stone and to allow for normal thermal expansion. Pay attention to the wood finishes, such as beams or shelves.

It is recommended to set up the counter hood made of 15 to 20 mm thick fireproof plasterboard with a freestanding frame made of a galvanised profile to prevent bearing the weight on the cladding components (wooden beams or marble lintels), which do not have a freestanding structure and **in order to intervene easily in case of anomalies and/or future maintenance**. Dry mount the hearth of the **cladding, leaving a 1 cm gap** between the insert and the hearth for insulation.

4-INSTALLATION AND ASSEMBLY

WOODEN BEAM INSULATION

If you wish to mount a wooden beam, it must be protected with adequate insulation from the hot parts in order to prevent the risk of fire or damage to the cladding.



- 1 - INSULATION APPLIED OR TO BE APPLIED
- 2 - WOODEN BEAM
- 3 - MARBLE OR OTHER MATERIAL

STANDARD CLADDING ASSEMBLY

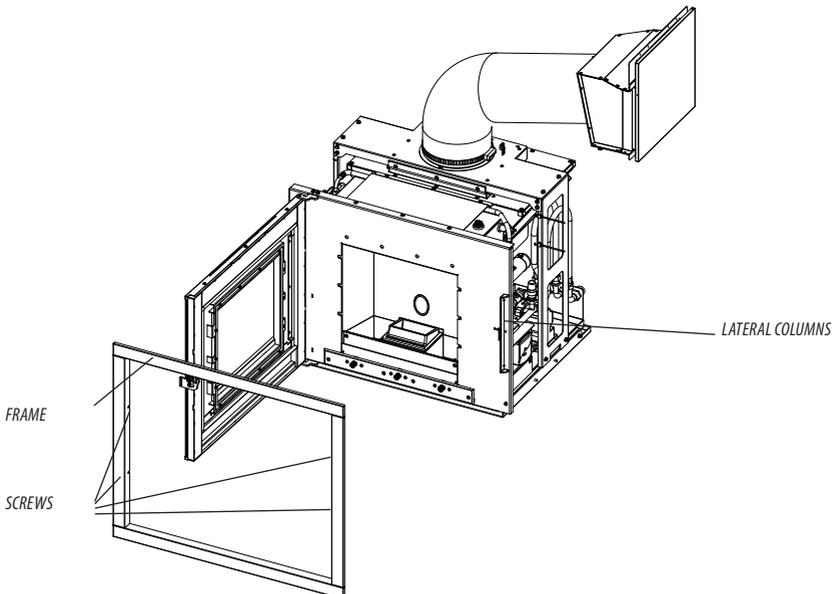
The installation guide found in each specific cladding must be referred to for the assembly of MCZ product specific claddings.

FRAME ASSEMBLY

Once the cladding and/or the plasterboard wall is set up, fit the frame.

This frame is meant for finishing and covering the gap between the metal structure of the product and the cladding.

The four screws for fixing the frame are already screwed to the lateral columns. Simply open the door of the product, insert the frame as shown in the figure, loosen the screws fixed to the columns and tighten them fastening the frame to the structure.



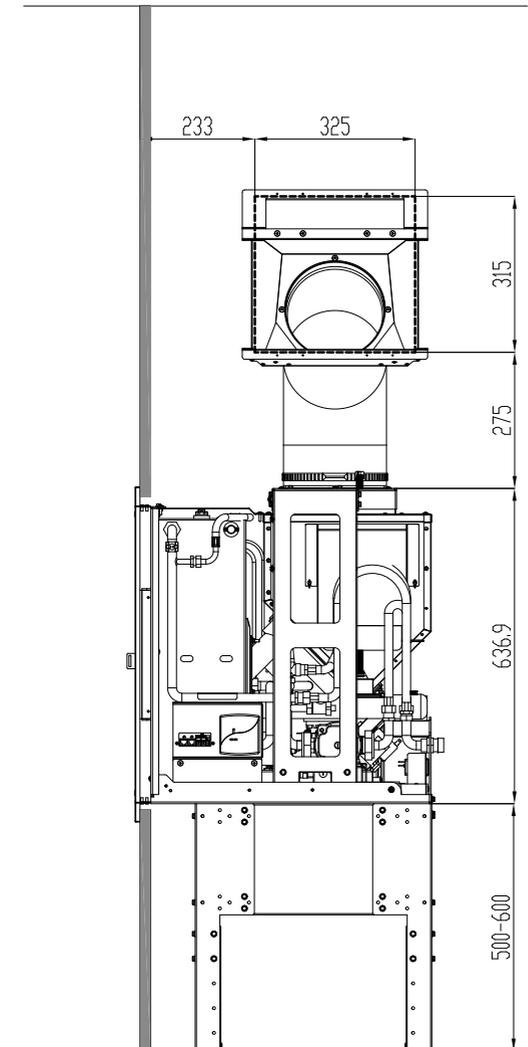
4-INSTALLATION AND ASSEMBLY

DIAGRAM FOR MAKING HOLES IN THE CLADDING PELLET LOADING DOOR INSERTION HOLE

The product can be installed on a brick base built on site or one can purchase the support (optional) that enables to raise the product to a suitable height. The recommended measurements go from 50 to 60 cm below the product support surface.

To make the hole for inserting the loading door there are standard measures required by the same length of the loading pipe.

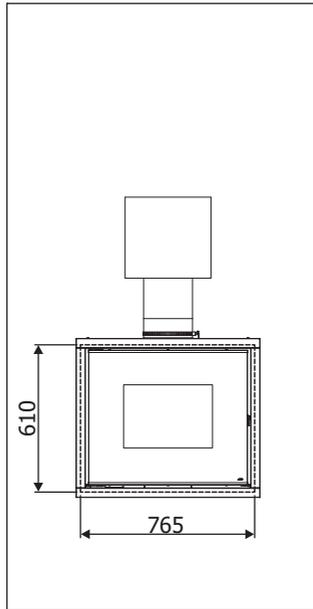
Below is the drawing with the recommended and required measurements in order to ease fast installation.



4-INSTALLATION AND ASSEMBLY

PRODUCT INLET HOLE

The hole to be made in the wall must be 765*610 mm. 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.



SWITCH AND CONTROL PANEL CONNECTION

The emergency panel and switch are already fitted on the pellets loading door and are already connected to the relative cables by the manufacturer. Take the switch cable and connect it to the socket on the rear of the product.

The control panel must instead be connected to the circuit board in position 1.



- ***Pay utmost attention when handling panels connected to the relative cables.***
- ***Cables must stay in areas away from heat or in areas where they cannot be damaged in the event of extracting the product.***
- ***For proper operation make the flat cable and the switch cable pass far from each other, with different paths.***
- ***Do not force insertion of the connector under any circumstances.***
- ***Do not fold and/or twist the cables.***
- ***Do not modify the connectors or cabling or panel supports.***

DOOR ASSEMBLY

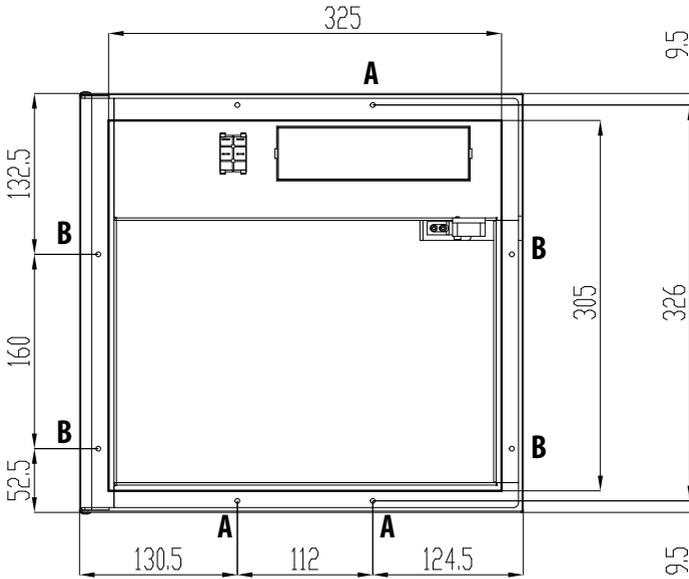
Once the electrical cabling is complete, before fixing the hood door permanently, carry out an operation test.

If the test has a positive outcome, fix the door to the hood with four screws, using the four holes present on the door frame and indicated with the letter (B).

The holes indicated on the horizontal profiles of the door (A) are instead for fixing the door frame to the chute frame to permanently fasten the two elements, enclosing the hood wall in the middle.

One must preventively make a rectangular hole in the hood at a height determined by how the optional support has been installed or by how the brickwork platform has been constructed.

4-INSTALLATION AND ASSEMBLY



PELLETS DOOR OPENING/CLOSING

The door is fitted with a pressure closure and is therefore completely free of handles or grips.

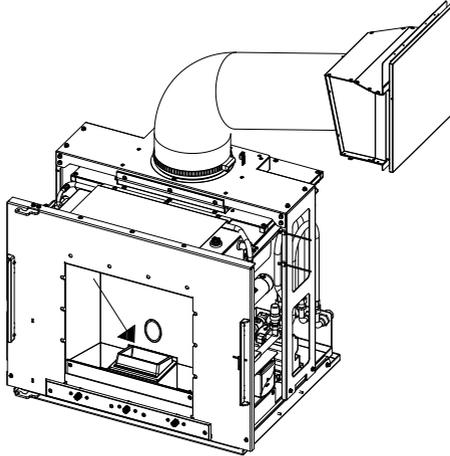
To open or close the door, press the upper left corner. With a simple press this will hook on or unhook from the closure latch placed on the door frame.

5-PRECAUTIONS BEFORE START-UP

GENERAL PRECAUTIONS

Remove all components that could burn from the firebox and glass (instructions, various adhesive labels and any polystyrene).

Check that the brazier is positioned correctly and rests properly on the base.



After a long period of inactivity, remove any pellets left in the hopper (using a vacuum cleaner with a long pipe), as they could have absorbed moisture, thereby altering their original characteristics and no longer being suitable for combustion.



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 the brazier in time for the fire to be regularly ignited.

If a flame does not ignite after a number of failed start-ups, even though the pellet supply is correct, make sure the brazier is set in place correctly, which must be **interlocked in its seat and free from any ash deposits**. 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.



Avoid touching the product during the initial start-up, as the paint hardens during this phase. 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.



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



ATTENTION!

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.

Do not stand close to the product and air the room. The smoke and smell of paint will disappear after about an hour of operation, however, remember they are not harmful in any case.

The product will be subject to expansion and contraction during the start-up and cooling phases, therefore light creaking noises may be heard.

This is absolutely normal as the structure is made of laminated steel and must not be considered a defect.

It is extremely important to make sure the product is not immediately overheated and the temperature is increased gradually, initially using low power.

5-PRECAUTIONS BEFORE START-UP



It is good practice to guarantee 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 product and air the room. The smoke and smell of paint will disappear after about an hour of operation, however, remember they are not harmful in any case.

The stove will be subject to expansion and contraction during the start-up and cooling phases, therefore light creaking noises may be heard.

This is absolutely normal as the structure is made of laminated steel and must not be considered a defect.

Make sure the plumbing system is sealed perfectly and that there are no leaks or pressure drops.

Make sure that all cut-off valves between the product and the system are open.

Make sure you have bled all air out of the system before start-up.

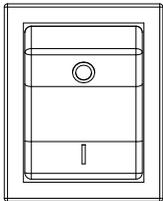
Make sure that internal devices work properly (flow switches, thermostats, etc.). Make sure that the combustion chamber and the chimney are clean, and that the plumbing circuit is free of obstructions.

The basic settings ensure proper operation and prevent overheating during the first ignitions.

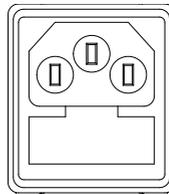
SETTINGS TO BE CARRIED OUT BEFORE THE INITIAL START-UP SWITCHING ON/OFF

Once the power cable is connected in the rear part of the product, bring the switch, which is in the pellets loading door, to position (I). The illuminated pushbutton switch will turn on.

The product remains switched off and the panel shows a first screen displaying OFF, by pressing any button a screen displaying MENU will appear.



I/O SWITCH



CONNECT THE POWER
CABLE

The product is switched on and off by pressing key **B** on the control panel for 2 seconds.

After a start-up phase that lasts approximately 15 minutes, the product starts to work in steady-state conditions.

After switching off the product by pressing key **B** on the control panel, the cooling stage begins, which involves interruption of fuel loading, brazier cleaning and ventilation until the product is sufficiently cool.

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 it runs out of pellets in the hopper (see alarm A02). It is useful to prevent failed start-ups (alarm A01) due to the hopper being empty.

To activate the FEED SCREW LOADING function, with the product switched off, from the control panel enter the SETTINGS entry, select FEED SCREW LOADING and ON. When the pellets start falling into the brazier deactivate FEED SCREW LOADING and switch on the product

5-PRECAUTIONS BEFORE START-UP

This will prevent damaging the welds and the steel structure.



DO NOT EXPECT HEATING EFFICIENCY IMMEDIATELY!!!

ATTENTION!

If during operation or initial ignition you encounter 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 engineer immediately.

LOADING THE PELLETS

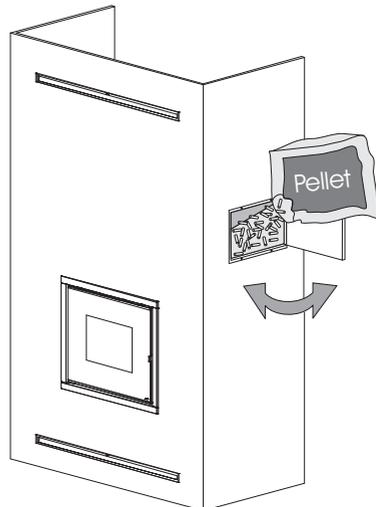
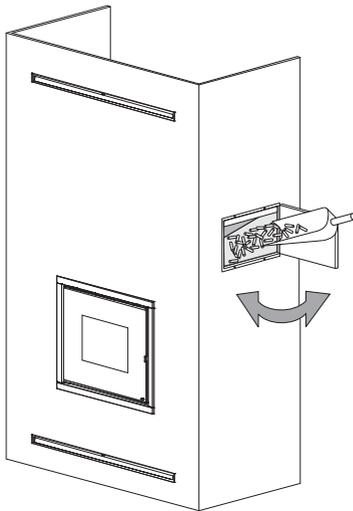
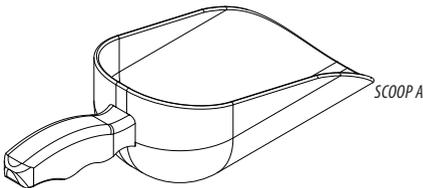
Fuel loading is achieved via the lateral or frontal door to be fitted on the cladding, which enables access to the fuel loading chute.

The loading procedure is facilitated if performed in several steps as described below:

- open the door and pour half the contents directly from the sack or using the supplied scoop (A) onto the chute.
- Wait for the pellets accumulated on the chute to enter 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, in compliance with above-mentioned specifications, is to be inserted into the hopper.



5-PRECAUTIONS BEFORE START-UP

SAFETY

PROCEDURE TO FOLLOW 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 ENGINEER IMMEDIATELY.

User Training

In ALL cases the installation and commissioning engineer 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 usage 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 first annual service
- Explain the importance of the CO alarm in accordance with approved document J of the building regs (ONLY FOR UK)
- Explain the need for the flue draft stabiliser and its position within the flue system (ONLY FOR UK)
- Discuss the use of secondary heating systems if applicable
- Explain how the remote control or room stats operate and their optimal positioning
- Explain the need for the appliance data plate in accordance with approved document J of the building regulations (ONLY FOR UK)

The commissioning process and paperwork should also be explained to the homeowner. A copy of the base settings on the commissioning paperwork should also be left with the appliance (ONLY FOR UK).

6 - HYDRAULIC CONNECTION

PLUMBING CONNECTION

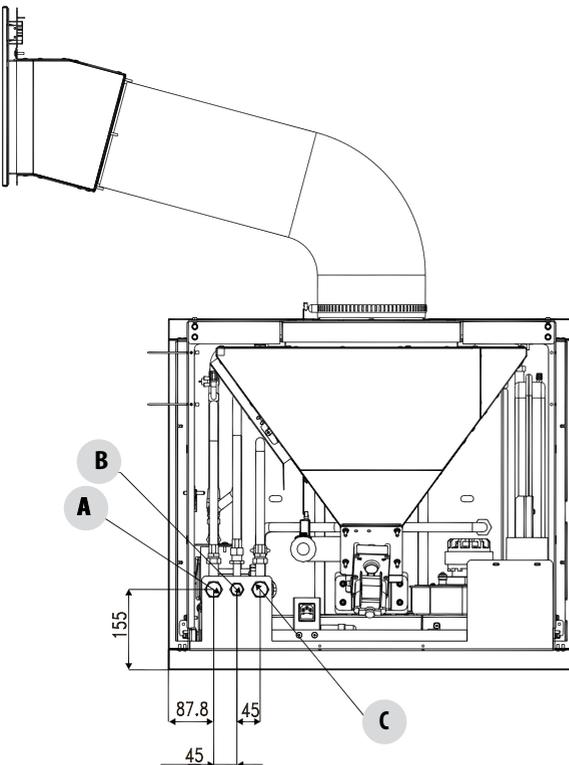
IMPORTANT!



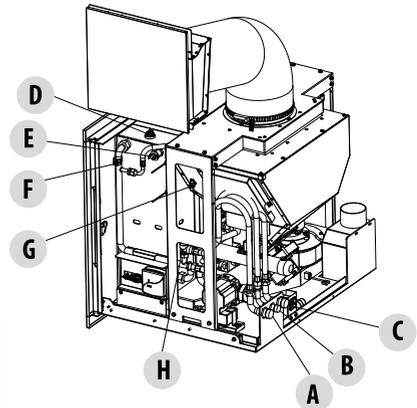
The connection of the stove to the plumbing system must be carried out **ONLY** by specialised personnel capable of carrying out state of the art installation, in compliance with the standards in force in the country of installation. The company will not be held responsible for damage to persons or things in the event of failed operation if the aforementioned warning is not complied with

It is important that **ONLY** qualified engineers are used to fit and commission the appliance in ALL cases. The installing engineer **MUST** hold a QCF recognised biomass qualification. Any company using sub-contractors **MUST** ensure they also hold the relevant qualifications (ONLY FOR UK).

CONNECTION DIAGRAM



A = 3/4" M BOILER DELIVERY
B = 1/2" M BOILER DISCHARGE
C = 3/4" M BOILER RETURN



A = BOILER DELIVERY
B = BOILER DISCHARGE
C = BOILER RETURN
D = VENT
E = KLIXON 95°C OVERLOAD PROTECTOR
F = H2O TEMPERATURE PROBE
G = KLIXON 110°C OVERLOAD PROTECTOR
H = 3 BAR 1/2" SAFETY VALVE

6 - HYDRAULIC CONNECTION

SYSTEM CONNECTIONS

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

If installation of the product involves interaction with another, pre-existing system complete with heating equipment (gas boiler, methane boiler, diesel boiler, etc.), call in qualified personnel, who subsequently will be responsible for conformity of the system in compliance with the applicable law in force.

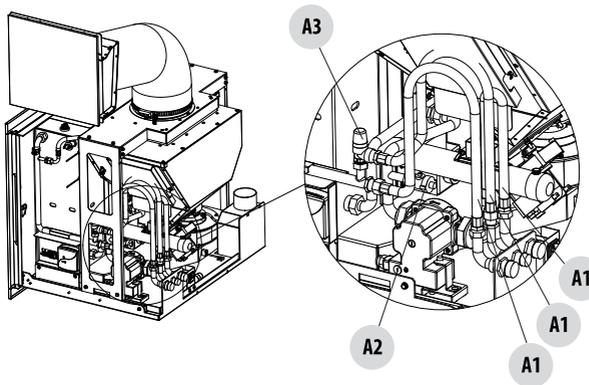


IT IS STRONGLY RECOMMENDED TO WASH THE ENTIRE SYSTEM BEFORE CONNECTING IT IN ORDER TO GET RID OF RESIDUES AND DEPOSITS.

Upstream from the product, always install gate valves so as to disconnect it from the plumbing system should it be necessary to move it, or when it requires routine and/or special maintenance. Connect the product using hoses in order not to constrain it excessively to the system.



The pressure discharge valve (B) is always connected to a water drain pipe. The pipe must be adequate to support the water's high temperature and pressure.



A1 = HOSES
A2 = BOILER DISCHARGE TAP
A3 = SAFETY VALVE

SYSTEM WASHING

It is mandatory for the connections to be easily disconnectable via unions with swivel fittings. Fit suitable gate valves on the heating system pipes.

To protect the heating system from harmful corrosion, fouling or deposits, it is of the utmost importance, before installing the product, to wash the system in compliance with UNI-CTI 8065, using appropriate products such as, for example, Sentinel X300 (new systems), X400 and X800 (old systems) or Fernox Cleaner F3.

Complete instructions are provided with the products but, for further clarifications, please directly contact the manufacturer SENTINEL PERFORMANCE SOLUTIONS LTD or Fernox COOKSON ELECTRONICS.

After flushing the system, to protect it against corrosion and deposits, we recommend the use of inhibitors such as Sentinel X100 or Fernox Protector F1.

It is important to check the concentration of the inhibitor after each change to the system and during maintenance as prescribed by manufacturers (specific tests are available at dealers).

The discharge of the safety valve must be connected to a collecting funnel for conveying the possible dredges in case of intervention.



Attention: failure to clean the heating system and the addition of a suitable inhibitor will void the warranty of the equipment and other accessories such as for example pumps and valves.

6 - HYDRAULIC CONNECTION

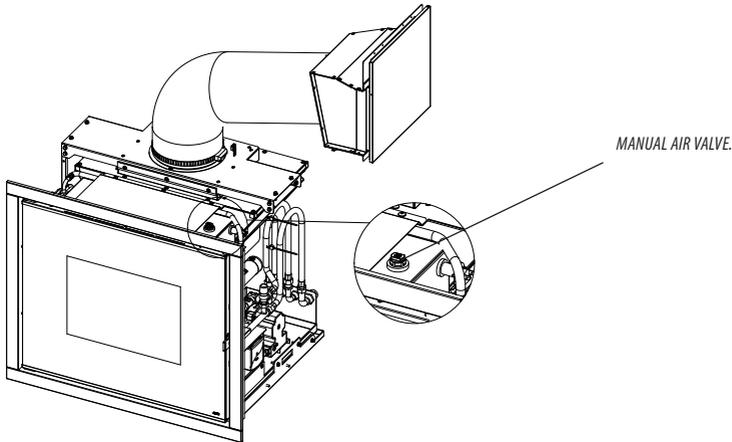
SYSTEM FILLING

To load the heating system use the predisposed loading tap in the main boiler. During this operation, any air in the system is released via the air valve located in the upper part of the product.

To allow the valve to release air it is recommended to loosen the screw on the valve itself (see figure). The filling pressure of the system **WHEN COLD** must be **1 bar**. If during operation the system pressure drops (due to evaporation of gases dissolved in the water) to values lower than the minimum ones indicated above, the user must use the filling tap to bring the pressure back up to its initial pressure.

For proper operation of the stove **WHEN HOT**, the pressure in the boiler must be **1.5 bar**.

Upon completion of this filling operation, always close the tap.



Attention: do not mix the heating water with antifreeze or corrosion substances in the wrong concentrations. It can damage the seals and cause the onset of 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 **ASK YOUR PLUMBER FOR HIS 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 hydraulic shock absorbers to prevent water hammering along the fittings and pipes.**

If you have very extensive systems (with a large amount of water) or which require frequent refilling, the installation of water softening systems.



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

EXAMPLE INSTALLATION DIAGRAMS



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

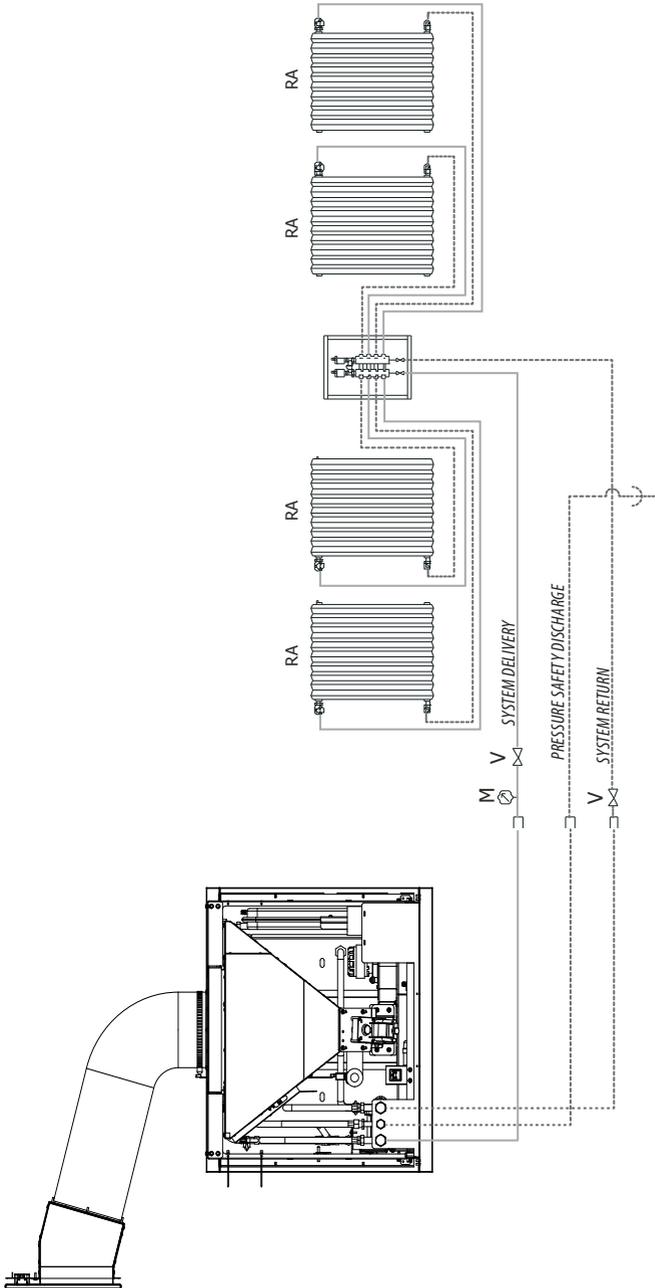
KEY

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

6 - HYDRAULIC CONNECTION

INSTALLATION DIAGRAM FOR HEATING WITHOUT DOMESTIC WATER KIT

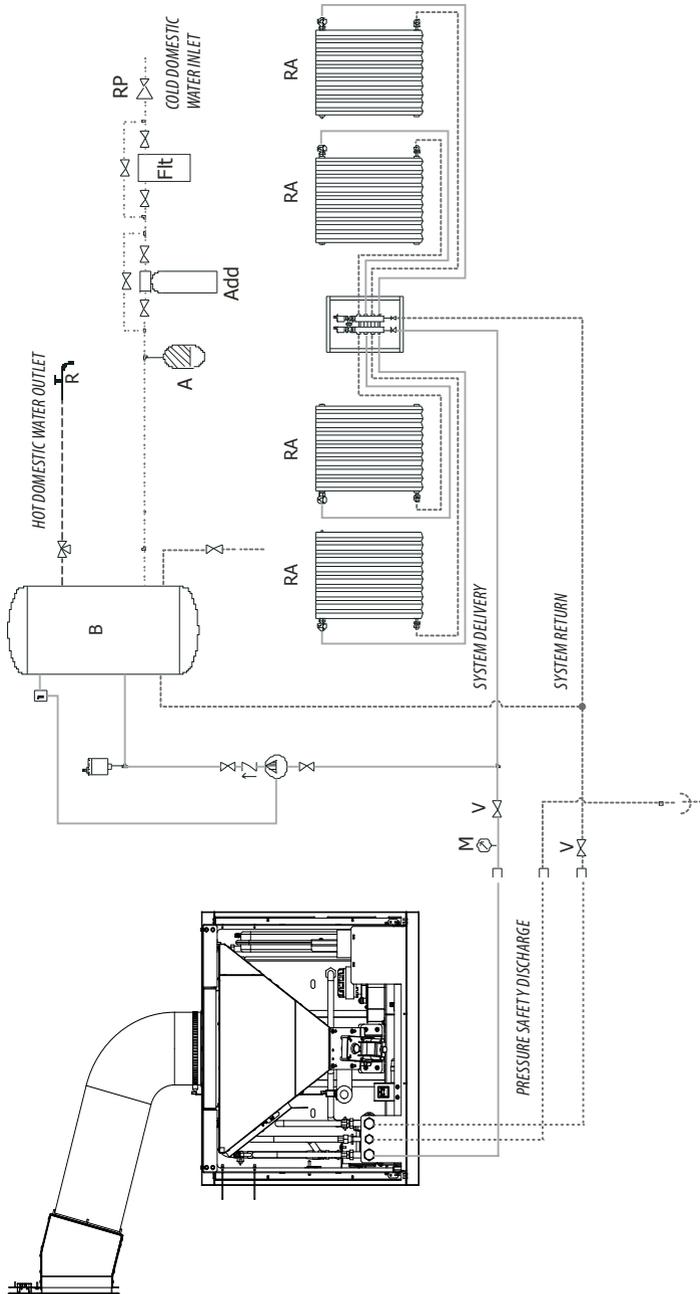
This diagram is purely a guideline and therefore has no project value.



6 - HYDRAULIC CONNECTION

INSTALLATION DIAGRAM FOR HEATING COMBINED WITH A BOILER

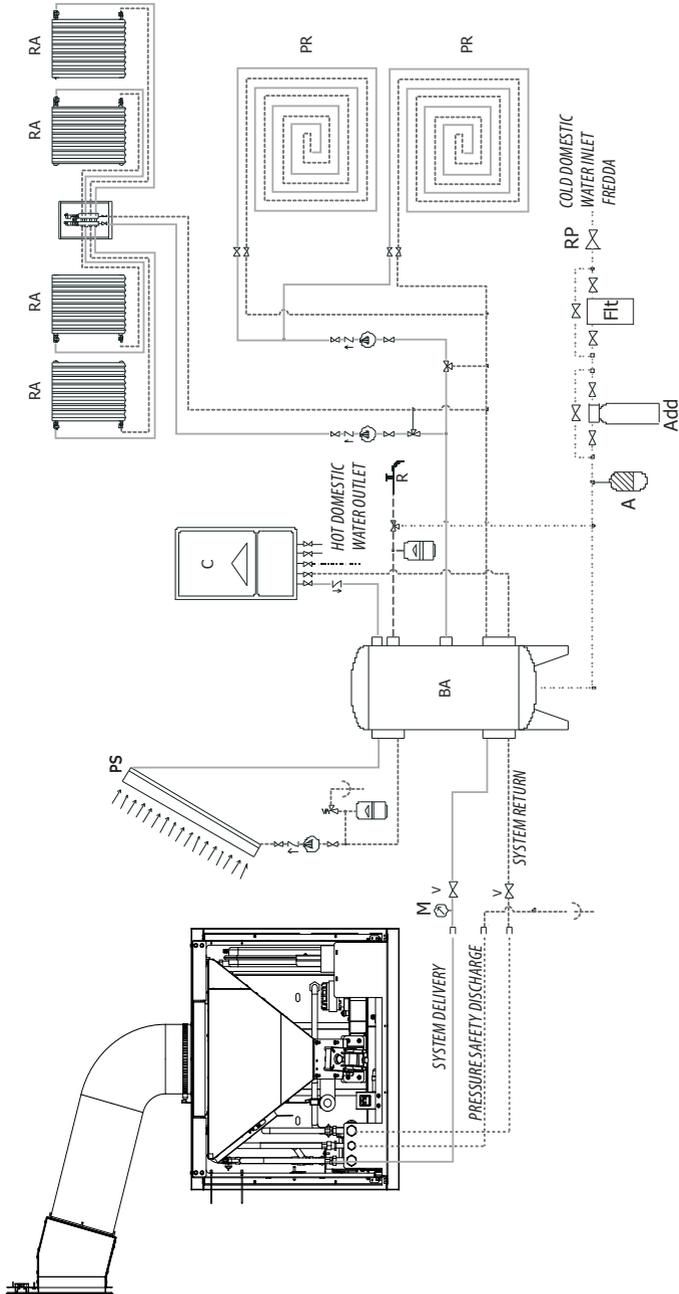
This diagram is purely a guideline and therefore has no project value



6 - HYDRAULIC CONNECTION

INSTALLATION DIAGRAM COMBINED WITH A STORAGE TANK

This diagram is purely a guideline and therefore has no project value.



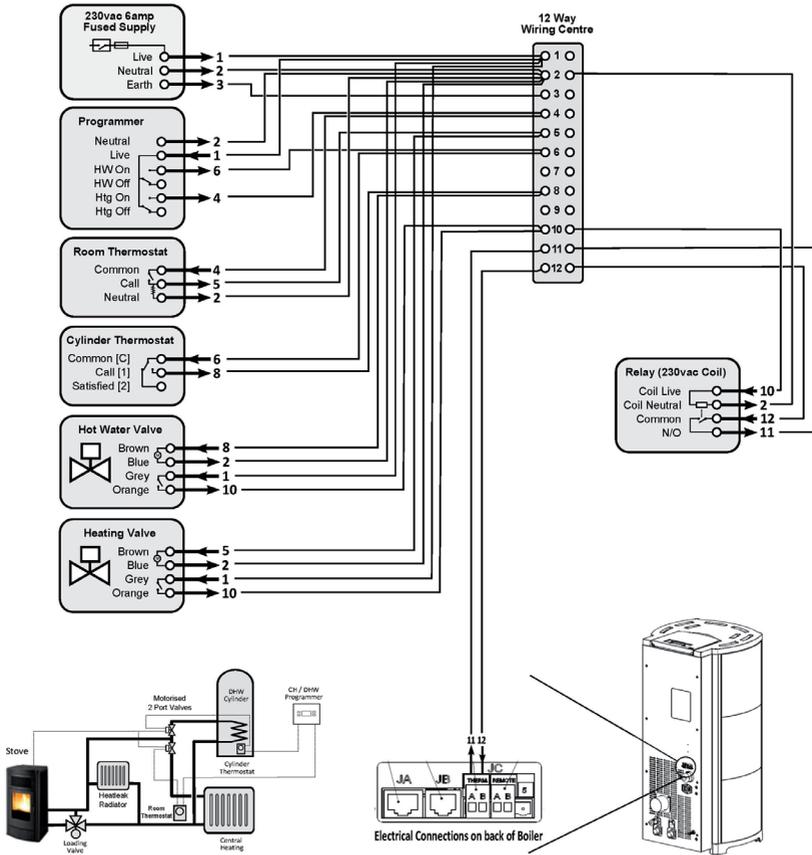
6 - HYDRAULIC CONNECTION

ONLY FOR UK

MCZ Hydro Stoves (Active System) VIVO 80 HYDRO

Wiring for S-Plan Systems

These notes must be read in conjunction with the full installation instructions



Simplified Schematic of S-Plan System

WARNING: The external thermostat terminals on MCZ stoves and boilers are volt-free. **On no account must a mains voltage signal be connected.**

6 - HYDRAULIC CONNECTION

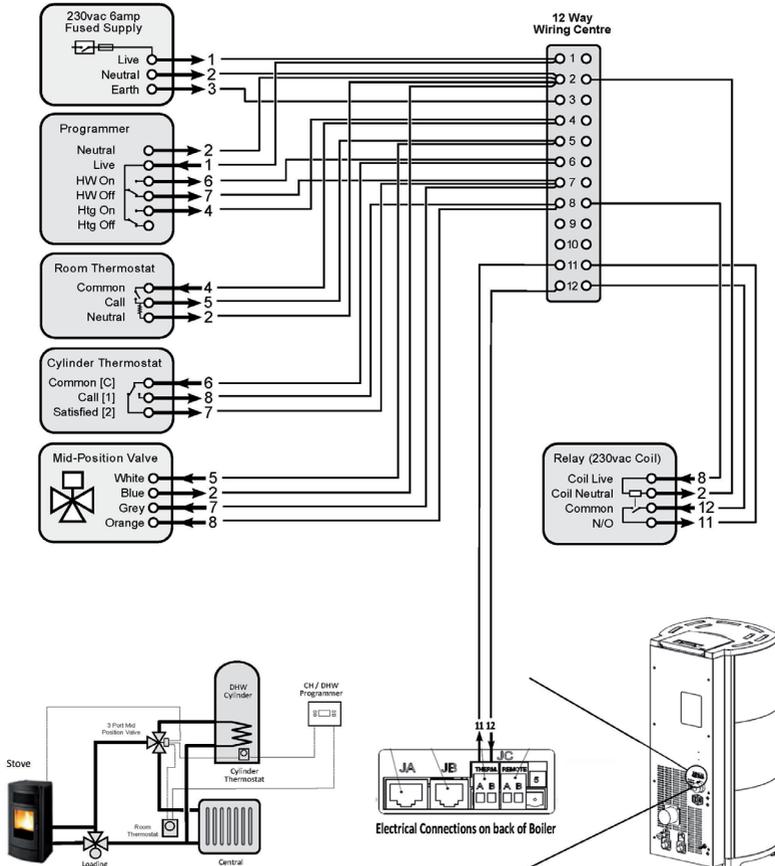
ONLY FOR UK

MCZ Hydro Stoves (Active System)

VIVO 80 HYDRO

Wiring for Y-Plan Systems

These notes must be read in conjunction with the full installation instructions



Simplified Schematic of Y-Plan System

WARNING: The external thermostat terminals on MCZ stoves and boilers are volt-free. On no account must a mains voltage signal be connected.

6 - HYDRAULIC CONNECTION

ONLY FOR UK

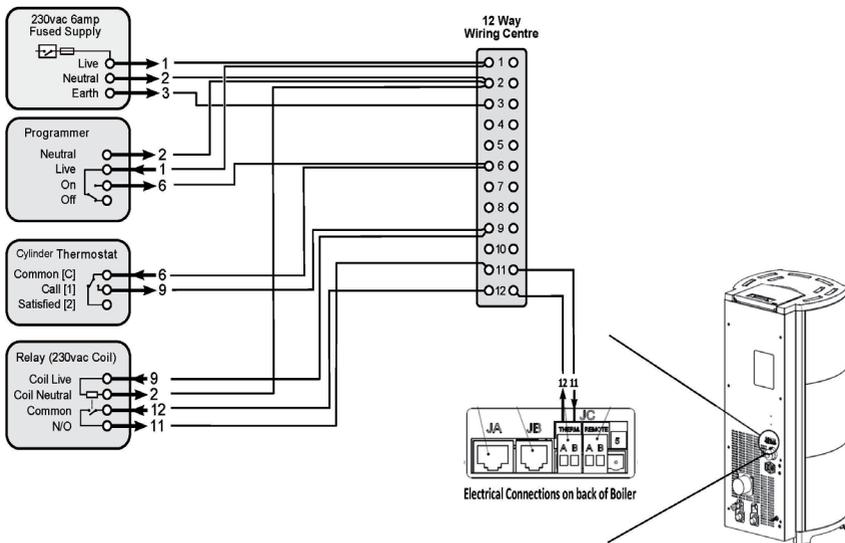
MCZ Hydro Stoves (Active System)

VIVO 80 HYDRO

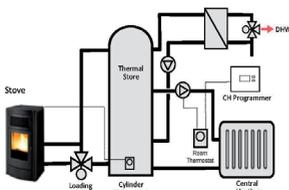
These notes must be read in conjunction with the full installation instructions

Wiring for Thermal Store or Buffer Systems where time control is by use of external programmer.

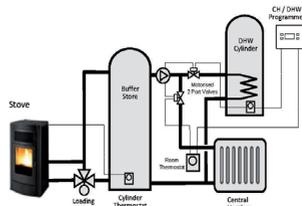
Note: Separate controls are required for operation of the Central Heating and DHW zones (not shown), and those controls are not interlocked with the stove and cylinder thermostat.



WARNING: The external thermostat terminals on MCZ stoves and boilers are volt-free. On no account must a mains voltage signal be connected.



Simplified Schematic of Thermal Store System



Simplified Schematic of Buffer Store System

6 - HYDRAULIC CONNECTION

ONLY FOR UK

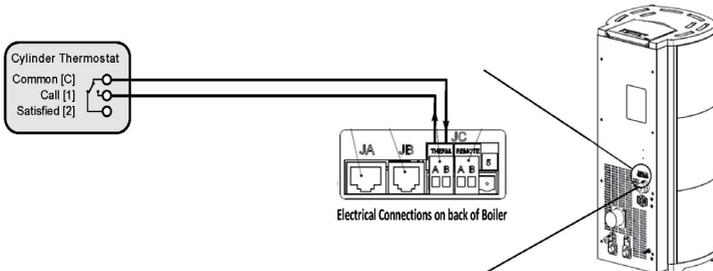
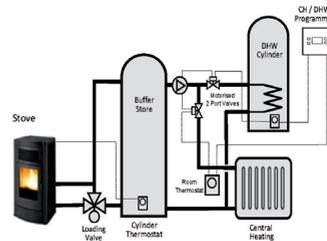
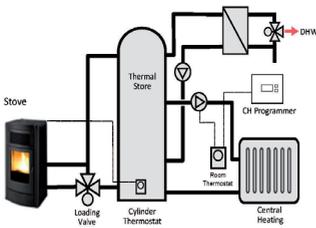
MCZ Hydro Stoves (Active System)

VIVO 80 HYDRO

Wiring for Thermal Store or Buffer Systems where time control is by use of onboard programmer in stove.

These notes must be read in conjunction with the full installation instructions

Note: Separate controls are required for operation of the Central Heating and DHW zones (not shown), and those controls are not interlocked with the stove and cylinder thermostat.



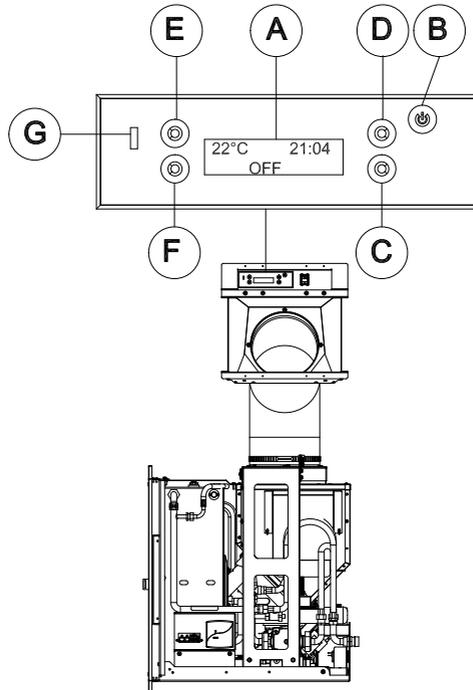
WARNING: The external thermostat terminals on MCZ stoves and boilers are volt-free.
On no account must a mains voltage signal be connected.

7 - CONTROL PANEL

CONTROL PANEL LOGIC

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

- The control panel backlight switches off after about 30" seconds of keypad inactivity. To switch the backlight on again simply press any of the panel buttons.
- The first screen that appears displays the product operating status (ON, OFF, START-UP, SHUTDOWN..) which alternates according to any activated settings (CHRONO, SLEEP, AUTO ECO..)
- By pressing any of the 4 keys around the display (C D E F) one enters the product operation setting screen (flame and ventilation level, set temperature, automatic mode...). From this level the 4 keys around the display take on "dedicated" functions i.e. they are directly referred to the corresponding wording that appears in the 4 corners of the display (e.g.: the wording at the top on the right refers to key D).
- When modifying a setting on any menu level and the change is not confirmed via the "OK" key, leaving the keypad inactive for a few seconds, the initial screen reappears automatically and the changes are not saved.
- If from any menu level one briefly presses the on/off key (B), the display automatically goes back to the initial screen (product operation status) without saving any unconfirmed changes with the "OK" key.
-



KEY

- A. Display that indicates a variety of product information besides the identification code of any malfunction.
- B. ON/OFF key or ESC (exit from menu).
- C. Programme choice key (following screen).
- D. Programme choice key (following screen).
- E. Programme choice key (following screen).
- F. Programme choice key (following screen).
- G. Receiver for remote control (if present)

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

7 - CONTROL PANEL

SETTING THE CURRENT TIME AND DATE

By pressing the MENU key SET will appear. Enter SET to change:

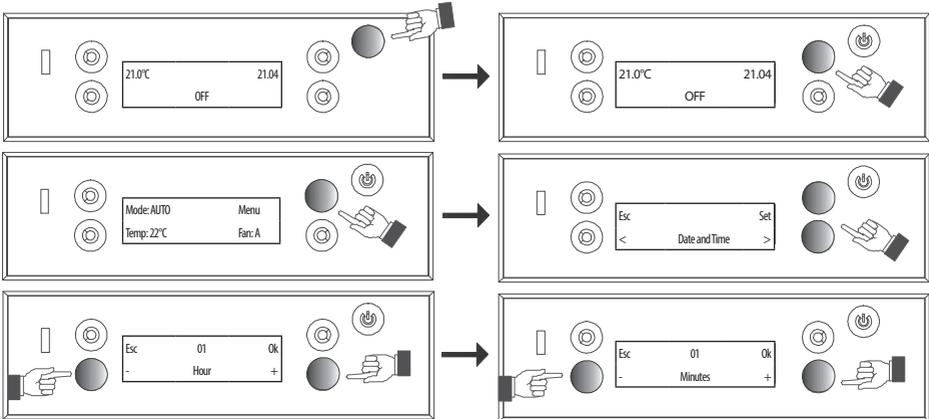
- hour
- minutes
- day
- day number
- month
- year

For example if we need to change the time, when HOUR appears on the display press SET, the hour will start to flash in the centre of the display, then with the keys at the bottom on the left or right change the hour and then the minutes, day, etc. with the same procedure as needed. All changes made must be confirmed by pressing the OK key otherwise they will not be saved. The ESC key allows to go back to the previous screen without saving the changes.

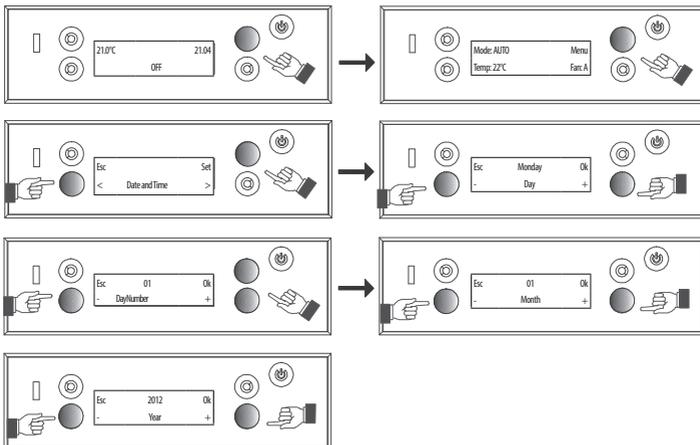


If the control panel keypad stays inactive for 10 seconds one goes back to the start-up screen without saving the changes.

SETTING THE TIME



SETTING THE DAY/DAY NO./MONTH/YEAR



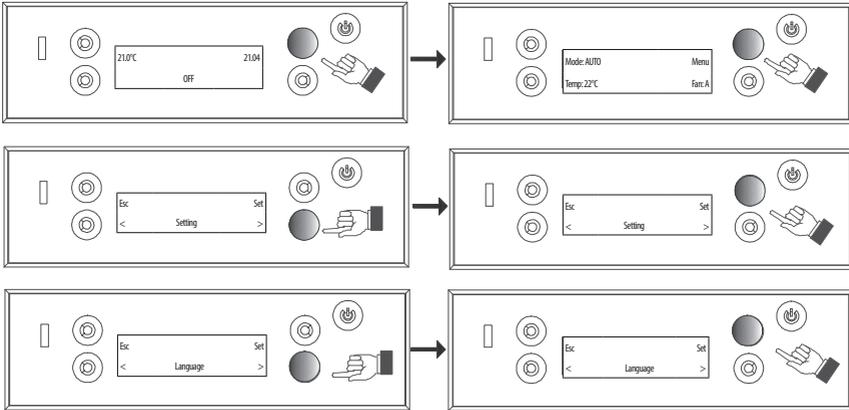
7 - CONTROL PANEL

SETTING THE LANGUAGE

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

By convention the days of the week are indicated with abbreviations deriving from the language set on the panel. In the case of English:

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



RECIPE SELECTION PROCEDURE

On the control panel menu, "Recipe" appears under the settings menu. This function is for increasing or decreasing pellets loading into the hopper and is represented as follows:

- To increase: +1 +2 +3 that corresponds to 10-20-30% more compared to the standard recipe set by the company.
- To decrease: -1 -2 -3 that corresponds to 10-20-30% less compared to the standard recipe set by the company.

CHIMNEY SWEEP FUNCTION



ATTENTION.

The "Chimney sweep" function is a technical function aimed at a specialised technician for product calibration (where required by law) therefore the user must absolutely not activate it.

To activate the Chimney Sweep function one must enter in MENU-SETTINGS-CHIMNEY SWEEP (after the °C-°F entry).

Once the function has been activated the stove will work at maximum power (loading, smoke ventilation, room ventilation) without listening to any modulation/shutdown requests of the external (thermostat, eco-stop, modem, home automation control) and internal probes. The only limit that must stay active is the safety threshold of 85°C in the boiler, and relative electronic shutdown in the event of exceeding this parameter.

The test will work until the technician decides to disable the function by pressing esc or the on/off button.

SETTING WATER TEMPERATURE IN BOILER

The stove has already got a series of standard parameter settings which allow it to operate properly (water temperature 65°C). The water temperature is shown on the control panel display.

If the user wishes to change the parameters relating to the temperature 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.

7 - CONTROL PANEL

The default temperature is 65°C and it can not be set below 50°C or above 80°C.

To adjust it: press any button; press the "menu" button, via the scrolling buttons display the "SET TEMP.H2O" screen; press the "SET" button; set the desired temperature via the "<>" scrolling buttons; confirm the temperature with the "OK" button.

MANDATORY EXTERNAL ROOM THERMOSTAT (3) OR STORAGE TANK CONNECTION

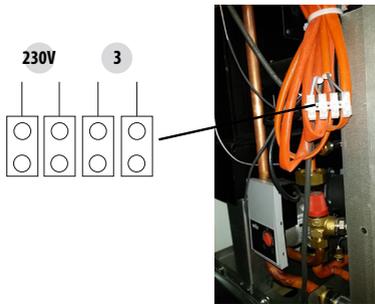
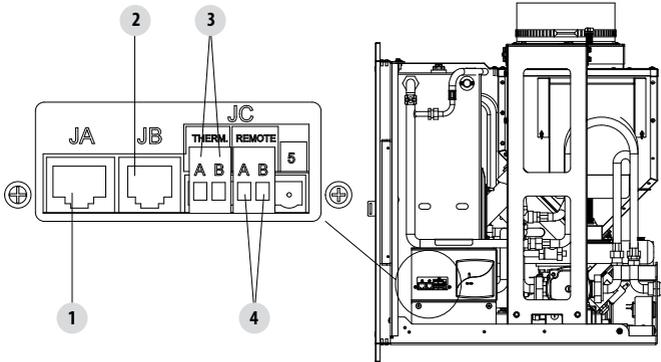
It is necessary to connect the stove to external thermostat "3" or a storage tank; it is also possible to set up a connection with home automation control unit "4". If you wish to connect the modem, you must do so with terminal "2".

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 (to be carried out by a specialised technician)
2	MODEM CONNECTION
3	EXTERNAL ROOM THERMOSTAT CONTROL UNIT CONNECTION
4	HOME AUTOMATION CONTROL UNIT CONNECTION
5	WIRELESS PROGRAMMABLE THERMOSTAT (OPTIONAL)

7 - CONTROL PANEL

AUTOMATIC MODE WITH AUTO-ECO

This mode changes the behaviour of the product in **automatic mode**: upon reaching the temperature set by the user, the product modulates at power 1 for a short period of time and then, if the temperature remains constant and higher than that set, it switches off. The appliance switches back on automatically only when the room/water require heat again (not before an interval necessary for the product to cool down). This option is recommended only if the product operates in rooms where heat dissipation is minimum over time.

ACTIVATION /DEACTIVATION OF AUTO-ECO MODE

This mode optimises product consumption in the event the product operates 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 at the bottom on the right to scroll until SETTINGS appears, press the button at the top on the left relative to SET, scroll once again with the button at the bottom on the right until AUTO-ECO appears. Select SET again at the top on the right and set OFF or ON with the button at the bottom on the right or left 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

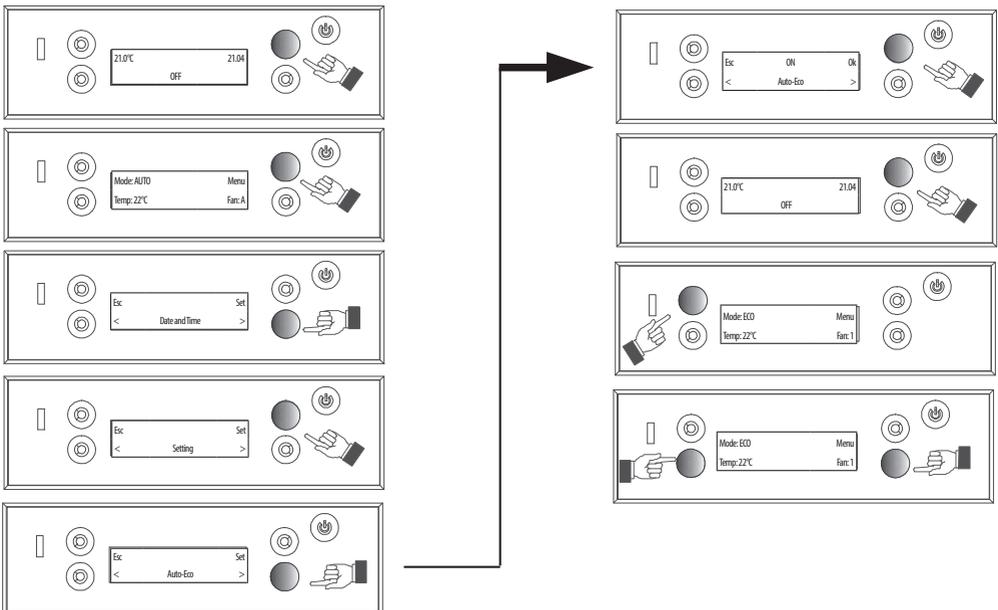
If the room temperature detected by the probe and shown on the control panel is 15°C and the temperature is set at 20°C, the product will switch to the 5th power (according to a preset ramp-up) and once it has reached a temperature of 20°C, the stove will modulate and then automatically switch off temporarily (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 20°C are reached again. If the temperature read by the room probe continues to exceed that set on the thermostat (e.g. 20-21°C), the stove will remain switched off.

In this mode, the user can switch the stove on by resetting the thermostat to a temperature that is higher than that in the room, 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 when last used.

SLEEP FUNCTION

This function can only be displayed with the product switched on, and its purpose is to make the selection of a programmed shutdown faster, without needing to programme the internal **CHRONO-TIMER** of the product.



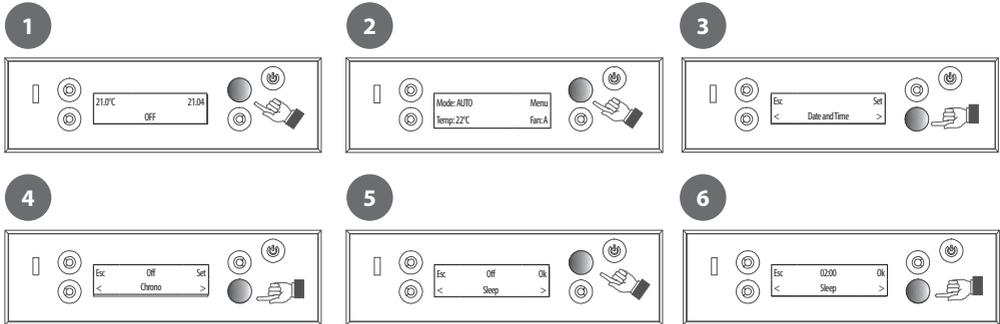
7 - CONTROL PANEL

To explain **SLEEP** function simply, one can say that it allows to switch off the product starting from a minimum of + 10 minutes compared to the hour displayed and to a maximum of 23.50 hours. To set the function press Menu with the key at the top on the right then Date and Time appears on the screen, then scroll with the key at the bottom on the right until Sleep appears, confirm with the Set key. With the key at the bottom on the right set the shutdown time. To confirm the selection press the key relative to **OK** (at the top on the right) otherwise with **ESC** (at the top on the left) one exits and the settings are not saved. If the **SLEEP** function is active with **CHRONO** active, the first has priority, so the product will not switch off at the time programmed on the timer but instead at the time established by the sleep function.



Once the sleep function has been set, the first screen alternately displays the product status (on/off) and the wording sleep HH.MM. (HOURS-MINUTES).

During adjustment of the sleep function, by pressing and holding the right arrow key, when one reaches 23.50 of the current day, the panel proposes to stop: release it and press it again to go onto the following day.



7 - CONTROL PANEL

CHRONO FUNCTION

This function mode allows to programme start-up and shutdown of the product automatically. Usually stoves have the **CHRONO** mode deactivated.

The basic settings of the **CHRONO** mode are:

- Choice of start-up/shutdown times
- Choice of day of programme activation



Setting the current day and time is essential for the proper operation of the chrono function.

CHRONO ACTIVATION AND SETTING A WEEKLY PROGRAMME

Explained below is how **to activate the CHRONO function by choosing a weekly or daily programme:**

press the Menu button, on the menu scroll to date and time with the relative key until CHRONO appears. Then press the SET key in order to enter a programme. P00 appears at the centre of the display between Esc and Ok, by scrolling with the keys below one can choose between 10 pre-set weekly programmes within the product control panel.

According to the tables shown in section "Pre-set weekly and daily programmes", choose the program which best meets our home's heating requirements and memorise the program number on the control panel display, confirm with the OK key. If none of the pre-set 10 programmes meet our personal heating requirements, one can build a personal weekly program as one wishes (see next paragraph).



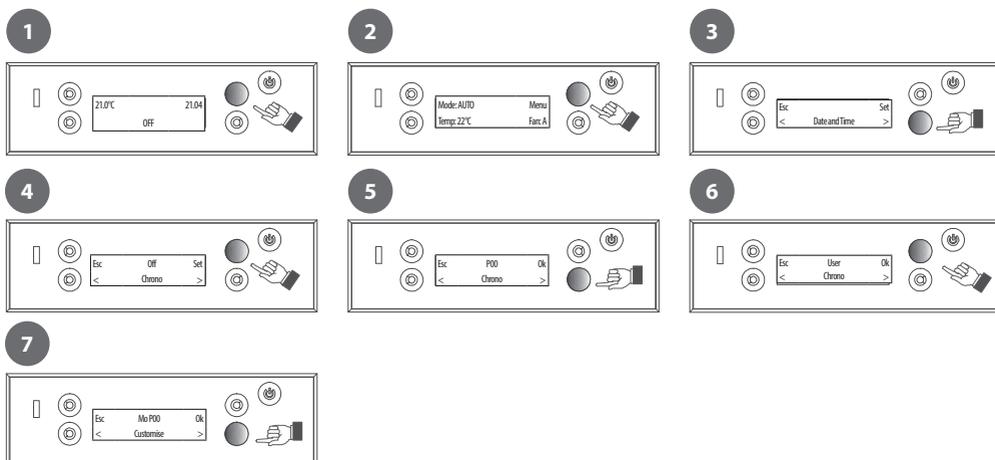
If the keypad stays inactive for 10 seconds the display of the control panel automatically exits the chrono setting mode and does not confirm the last setting entered.

To confirm the CHRONO selection press OK.



ATTENTION!

The CHRONO function can be activated/deactivated both with the product switched on and off. If a chrono programme has been activated, the first screen alternately displays the product operation status (on/off/start-up...) and the wording "CHRONO P01 active" (example).



7 - CONTROL PANEL

SETTING A CUSTOMISED PROGRAMME

The selectable daily programmes are 62 and one can choose a different program for every day of the week.

To activate this option proceed as described above to set a weekly programme, only that instead of selecting one of the programs contained in the weekly programmes table (from P01 to P10) select the USER programme. Once the USER programme has been selected, press SET and the wording Mo P00 (where P00 flashes) appears in the centre of the display, while in the lower part CUSTOMISE appears, by pressing the relative key (at the bottom on the right or left) one can enter the daily programme. By scrolling with the key at the bottom on the right or left of the control panel, one can choose the desired programme from 1 to 62. Once the desired programme has been chosen for the active day (e.g. no.32 for day MO = Monday) press the OK key at the top on the right and the wording Tu P00 (where the wording P00 will flash) will appear on the display, continue with this programming procedure up to day Su=Sunday.

If for a day of the week one does not wish to set any programme, select program 00, confirm with OK and continue programming.



If there is a chrono programme active but the user decides to switch the product on or off beforehand, the command given by the user will be considered more important than the chrono one and therefore overrides it. The following chrono command is obviously ignored.

Example: if the chrono programme entails switching the appliance on at 10:00 but the user is cold at 9:00 and wishes to switch it on, the product can be switched on by pressing button no.5. At 10:00 the chrono programme, which entailed switching the stove on, will be ignored because the appliance is already on.



IMPORTANT NOTE

Product start-up requires 10/15 minutes.

Take this into account when setting the start time. Likewise, stove shutdown requires about 30 minutes, during which the heat stored up by the stove is released into the room.



Keep this in mind for substantial fuel savings.

CHRONO DEACTIVATION

To deactivate the CHRONO mode access the programming menu again and confirm OFF.

7 - CONTROL PANEL

PRE-SET WEEKLY AND DAILY PROGRAMMES

WEEKLY PROGRAMMES

The weekly programmes chosen by the manufacturer and memorised within the product control panel have been designed to meet the requirements of most users who leave their home during working hours (labourers, shopkeepers, employees, shift workers, etc.) as well as those who stay at home for most of the day (housewives, elderly people, etc.).

It has also been designed for those who use the product in a holiday home that is lived in only at week-ends (e.g. mountain chalet) and who wish to find the environment already heated upon arrival. For those with even more particular needs and none of these ten weekly programmes meet their requirements, one can instead customise the weekly programme using seven different programmes for each day of the week

Weekly programmes		Hourly timetable																									
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	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P02	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P03	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P04	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P05	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P06	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P07	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P08	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P09	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										
P10	<i>Mon-Fri</i>																										
	<i>Sat-Sun</i>																										

7 - CONTROL PANEL

DAILY PROGRAMS

<i>Daily programs</i>	<i>Hourly timetable</i>																											
	<i>No.</i>	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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7 - CONTROL PANEL

Daily programs	Hourly timetable																										
	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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7 - CONTROL PANEL

PRACTICAL EXAMPLE OF DAILY PROGRAMMING

SETTING A DAILY PROGRAM

Take for example a user who has not established daily schedules (freelancer, etc..) but who roughly knows that he is in the house the following days at the following times:

MONDAY at home until 10:00 and from 17:00 onwards
TUESDAY at home until 08:00 and from 14:00 onwards
WEDNESDAY he stays at home all day and does not wish to set any program
THURSDAY he stays at home all day
FRIDAY at home until 9:00, from 12:00 to 15:00 and from 18:00 onwards
SATURDAY at home from 18:00 onwards only
SUNDAY at home from 14:00 onwards only

Based on these schedules we can choose the programs that best meet this behaviour from the table shown above.

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

Detects the temperature of the smoke, thereby enabling start-up or stopping the product when the smoke temperature drops below the preset value.

PELLET HOPPER TEMPERATURE PROBE

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

BOILER TEMPERATURE PROBE (ALARM A18)

If the water temperature reaches the shutdown temperature (95°C) the product switches off.

WATER TEMPERATURE PROBE (ALARM A17)

When the water temperature reaches 80°C the product gradually starts to decrease its power to 85°C. If 85°C are exceeded there is a safety shutdown; the product restarts when the structure has cooled down sufficiently.

ELECTRICAL SAFETY

The product is protected against sudden current surges by a main fuse in the power supply panel on the rear part of the product. Other fuses that protect the electronic boards are found on the latter.

SMOKE FAN FAULT

If the fan stops, the electronic board promptly blocks the supply of pellets and the alarm is displayed.

GEAR MOTOR FAULT

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 restarts.

FAILED START-UP

If no flame is developed during start-up, the product will go into alarm status.

ANTIFREEZE FUNCTION

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

PUMP ANTI-SEIZURE FUNCTION

if the pump is not used for prolonged periods, it is activated periodically for 1 minute every 24 hours to prevent it from seizing up.



IT IS FORBIDDEN TO TAMPER WITH THE SAFETY DEVICES.



The product can be started-up and the automatic function of the probe restored only after having eliminated the cause that triggered 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.

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 three digit code, a flashing red LED that lights up on the emergency panel and an intermittent buzzer for the first 10 minutes. 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 resolve the problem.

MESSAGE 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 rests correctly in its seat and has no visible deposits or unburnt pellets. Check whether the ignition plug becomes hot. Empty and clean the brazier before relighting..
A02	The fire goes off abnormally.	Due to the hopper being empty (no fuel).
A03	The pellet hopper temperature exceeds the intended 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 cancel the alarm. Once the alarm has been cancelled, the appliance can be switched on.
A04	The temperature of the exhaust smoke has exceeded the preset safety limits.	The appliance 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 a correct combustion.	Insufficient draught or clogged brazier. Verify whether the brazier is clogged and clean it, if necessary. Check and if necessary clean the smoke duct and air inlet.
A08	Faulty smoke fan.	Verify whether the smoke fan compartment is clean, and particularly if it is blocked by dirt. If this does not suffice, 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 correctly.	Contact an authorised service centre to have the component replaced.

8-SAFETY DEVICES AND ALARMS

A10	The spark plug is faulty.	Contact an authorised service centre to have the component replaced.
A11	Pellets supply fault.	Contact an authorised service centre to have the component replaced.
A14	Faulty air flow rate sensor.	This alarm does not block the system and only a warning screen is displayed. Contact an authorised service centre to have the component replaced.
A17	Water temperature excessively high due to: <ul style="list-style-type: none"> • Stove at maximum power, radiators closed. • Oversized system, e.g. small room, high capacity product 	This alarm does not block the system and only a warning screen is displayed. Check that all radiators are open, if the alarm persists contact an authorised assistance centre.
A18	Water tank temperature too high.	This alarm intervenes if the water contained in the system does not circulate and therefore the temperature rises. Check and eventually unseize the pump. Contact a service centre to have the component replaced if needed.
SERVICE	Routine maintenance alert.	This flashing message upon start-up indicates that the preset operating hours before maintenance is due have elapsed and a qualified technician, recommended by the manufacturer, must be contacted for maintenance to be performed.

DELETING THE ALARM STATUS



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

ATTENTION!

If during operation or initial ignition you encounter 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 engineer immediately

If an alarm is triggered, normal product operation is restored by pressing and holding the on/off key. If the cause that triggered the alarm does not persist, after a brief verification, the product exits the alarm state and can be restarted.

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, air that has not been controlled has entered the combustion chamber or the chimney is clogged (“**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 cancel alarm **A03**. Once the alarm is deleted, the product can be switched on.

If “**A04**” appears, the product will shutdown automatically, let it cool down for a few minutes and then switch it on again.

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

If “**A18**” appears: the stove switches off due to the boiler overheating. This can be caused by water not circulating (pump blocked or faulty). Check the circulation pump is working properly and then cancel the alarm and switch the stove on again.

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

9 - RECOMMENDATIONS FOR A 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.

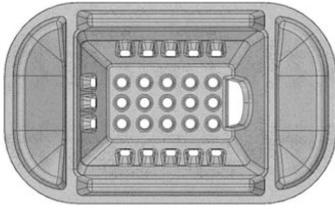
Compliance with these indications is absolutely sufficient to guarantee proper operation and to avoid any type of problems with the product.

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.

10-MAINTENANCE AND CLEANING



EXAMPLE OF A CLEAN BRAZIER



EXAMPLE OF A DIRTY BRAZIER

Only a proper maintenance and cleaning of the product can assure you the correct functionality and a safe use of your stove.



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 high quality pellets.

DAILY OR WEEKLY CLEANING PERFORMED BY THE USER

Brazier cleaning

Before ignition, always clean the 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 THE IGNITION AND OPTIMAL OPERATION OF YOUR PELLET PRODUCT. IN CASE OF FAILED IGNITION AND AFTER ANY OTHER LOCK STATE OF THE PRODUCT, IT IS ESSENTIAL TO EMPTY THE BRAZIER BEFORE PROCEEDING TO RESTART.

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.

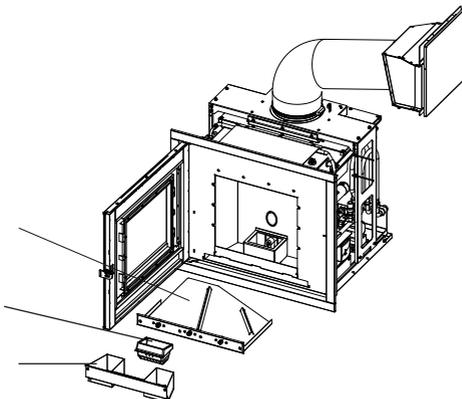
Ash tray cleaning

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

REMOVABLE DRAWER

BRAZIER

ASH PAN



CLEANING THE ASH COLLECTION COMPARTMENT

10-MAINTENANCE AND CLEANING

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 spray cleaner on the painted parts or the door gaskets (ceramic fibre cord).

PERIODIC CLEANING PERFORMED BY A QUALIFIED TECHNICIAN

PULLING THE PRODUCT OUT

Part of the product must be extracted from its seat for maintenance to be performed on certain devices and to clean certain parts. The mobile part is fitted on sliding guides, which facilitate the handling process. The compensation frame must be removed by following the instructions in this manual before pulling the product out in order to prevent any damage during maintenance. The two lower front screws must be removed from the product in order to pull it out.

Once the screws are removed, simply exert slight force towards you to pull the mobile part like a drawer. The guides have an end-of-travel that block the mobile part when extracted completely.



ATTENTION: THE PRODUCT MUST ONLY BE PULLED OUT WHEN COLD AND THE POWER SUPPLY MUST BE DISCONNECTED IN ADVANCE.

When the mobile part is set back in place, make sure the two screws removed previously are tightened well. The product may not work if the above is not done, due to no power supply or leaking soot.

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 walls of the steel firebox, especially the rear panel, with a scraper (supplied), in order to get rid of the incrustations caused by soot. Incrustations act as insulation and the thicker they are, the less heat is transmitted to water and to the structure in general.

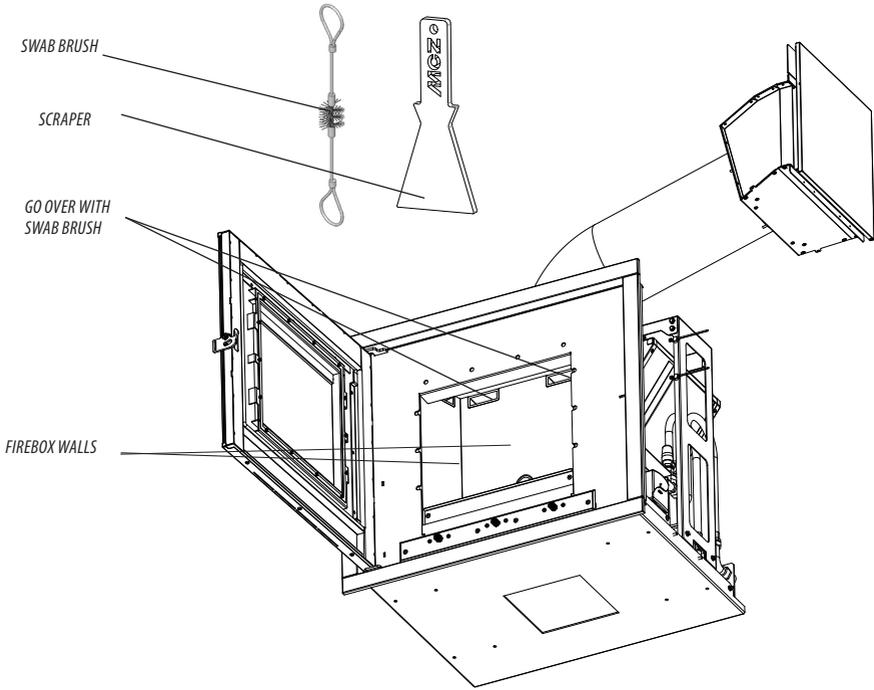
Also clean the exchanger pipes going into the four holes at the top (two on the left and two on the right inside the fireplace) with the swab brush (supplied).

To finish cleaning, at this point, empty the brazier and the ash pan; in order to get rid of the soot removed in the previous operations one must also empty the extractable drawer which is located under the ash pan.

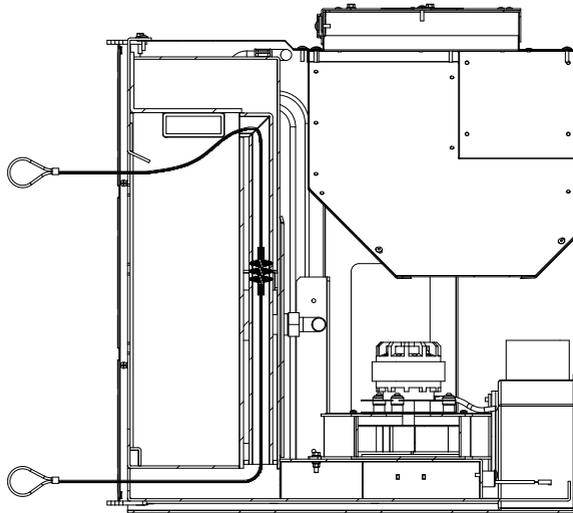
To pull out the drawer one must remove the three screws.

Reassemble everything following the operations described above in reverse order.

10-MAINTENANCE AND CLEANING



PELLET STOVE BRUSH OPERATION



10-MAINTENANCE AND CLEANING

CLEANING THE SMOKE DUCT AND FITTING

When the product is extracted, you can intervene on the smoke fan (1) from the left side for cleaning and maintenance purposes. Clearly, the smoke evacuation fan must be removed for such maintenance to be performed.

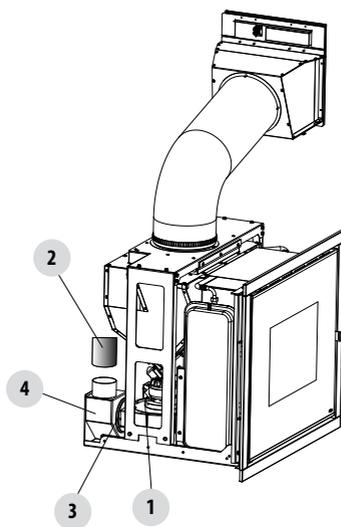
A gasket (3) is applied on the fan outlet, which guarantees the tightness with the smoke fitting (2). Always verify that this gasket is intact and if necessary, replace it. The gasket can also be adjusted via a screw. The pressure on the fitting can be increased or decreased by loosening the screw.

The flue connection to its ash collection compartment (4) is located in the rear/lateral part of the product, in line with the fan outlet. Also clean this compartment with a vacuum cleaner by inserting the nozzle on the fan inlet hole.

Then clean the smoke exhaust, especially around the fittings, bends and any horizontal sections. For information on cleaning the flue, contact a chimney sweeper.



ATTENTION: the frequency with which the smoke exhaust system must be cleaned depends on the use of the product and the type of installation.



OTHER CHECKS

All the tightness gaskets fitted on the components subject to maintenance (smoke extraction fan, inspection sections, etc.) must be replaced when these are removed for maintenance purposes. Verify the tightness of the gaskets on the hearth door and if necessary, contact an authorised service centre for them to be replaced.

The company recommends contacting an authorised service centre for end-of-season maintenance and cleaning as the above-mentioned operations will be performed together with a general inspection of the components.

10-MAINTENANCE AND CLEANING

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 that has a long pipe.

The product must be disconnected from the mains when it is not used.

CHECKING THE INTERNAL COMPONENTS



ATTENTION!

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

It is recommended to perform this routine maintenance annually (with a scheduled service contract), which focuses on a visual and functional verification of the internal components. The following is a summary of the necessary checks and/or maintenance for the product to work correctly.

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						•
Product						•
Circulation pump						•
Plate heat exchanger						•
Plumbing components						•
Electromechanical components						•

11-PROBLEMS/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 in which the appliance will be installed is adequately ventilated.

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
Pellets are not being 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 electronic board.	Replace the circuit board.
The fire goes out or the appliance 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.	Check the circulation pump is working properly and eventually replace the component.	

11-PROBLEMS/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 spark 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 there is an air inlet in the room and it is not clogged. 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 state 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 powered.	Check the mains voltage and the protection fuse.
	The motor is faulty.	Check the motor and capacitor and replace them, if necessary.
	Defective electronic board.	Replace the electronic board.
	The control panel is faulty.	Replace the control panel.

11-PROBLEMS/CAUSES/SOLUTIONS

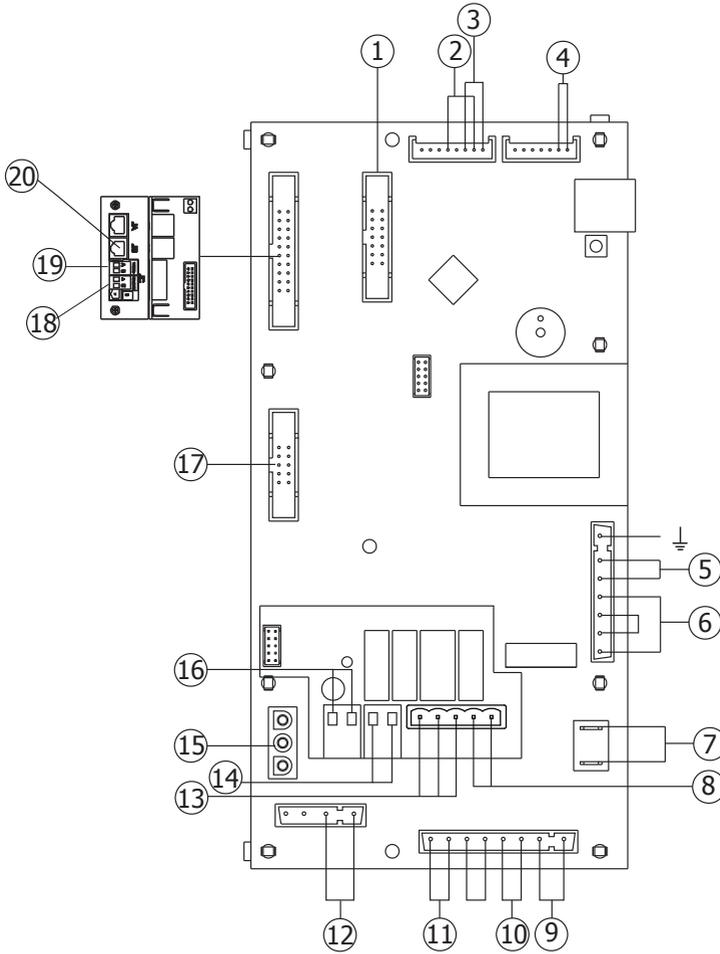
ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The product always runs at maximum power when in automatic mode.	The room thermostat is in the maximum position.	Set the thermostat temperature again.
	Faulty temperature probe.	Check the probe and replace it, if necessary.
	Faulty or malfunctioning control panel.	Check the panel and replace it, if necessary.
	Thermostat is set to minimum.	Set the thermostat temperature again.
The product does not start.	No power.	Check that the plug is inserted and the main switch is in the "I" position.
	Faulty pellet or water probe.	Wait for the water or pellet tank to cool down and restart the product.
	Blown fuse.	Replace the fuse.
	Clogged smoke exhaust 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 from any deposits or residues of unburned pellets.
	Check the position of the brazier.	Set the brazier back on its seat.
Check whether the spark plug warms up.	Check and if necessary, replace.	

11-PROBLEMS/CAUSES/SOLUTIONS

ANOMALIES RELATED TO THE PLUMBING SYSTEM

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
No increase in temperature with stove in operation.	Incorrect combustion setting.	Check recipe.
	Boiler/system dirty.	Check and clean the boiler.
	Product power insufficient.	Check that the stove is properly sized for the requirements of the system.
	Poor pellets quality.	Use of MCZ pellets.
Condensation in boiler.	Incorrect temperature setting.	Set the stove to 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.	Set the room thermostat at a higher temperature, if needed replace it (if remote).
	Circulator does not run 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 if necessary.
	Radiators have air in them.	Bleed the radiators.
Hot water is not provided.	Circulator (pump) blocked.	Free the circulator (pump).

12-WIRING DIAGRAMS



MOTHERBOARD WIRING KEY

- | | |
|---|---|
| 1. CONTROL PANEL | 11. TANK TEMPERATURE OVERLOAD PROTECTOR |
| 2. FLOW METER (if provided) | 12. ROOM FAN (if provided) |
| 3. WATER TEMPERATURE PROBE | 13. THREE-WAY DIVERTER VALVE (if provided) |
| 4. SMOKE PROBE | 14. ANOMALY SIGNAL (N.A., max 230V 3A) |
| 5. POWER SUPPLY | 15. SMOKE EXTRACTOR FAN REVOLUTIONS CONTROL |
| 6. SPARK PLUG | 16. EXTERNAL AUX SIGNAL (N.C., max 230V 3A) |
| 7. SMOKE EXPULSION FAN | 17. AIR FLOW RATE SENSOR |
| 8. PUMP | 18. HOME AUTOMATION CONTROL UNIT |
| 9. WATER TEMPERATURE OVERLOAD PROTECTOR | 19. CLEAN CONTACT ROOM THERMOSTAT |
| 10. GEAR MOTOR | 20. MODEM |

N.B. The wiring of the individual components is fitted with pre-wired connectors of different sizes.



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