



PELLET STOVE

ST.MORITZ PN08

Instructions in English

ARCO



8901515700

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INTRODUCTION

Dear Customer,

our products are designed and manufactured in compliance with European reference Standards for construction products (EN13240 wood-burning stoves, EN14785 pellet-burning appliances, EN13229 fireplaces/wood-burning inserts, EN 12815 wood-burning cookers), with high quality materials and extensive experience in the transformation processes. The products also meet the essential requirements of Directive 2006/95/EC (Low Voltage) and Directive 2004/108/EC (Electromagnetic Compatibility).

To get the best performance, we suggest you read the instructions in this manual carefully.

This installation and use manual forms an integral part of the product: ensure that the manual is always supplied with the device, even if the boiler changes owner. If the manual is lost, you can request another copy from the local technical service or download it directly from the company website.

All local regulations, including those regarding national and European regulations, must be respected when the device is installed.

In Italy, for the installation of devices with biomass lower than 35KW, refer to ministerial decree 37/08, and the qualified installation technician with the appropriate requisites must issue a certificate of compliance for the system installed. (By system one means Stove+Chimney+Air inlet).

REVISIONS TO THE PUBLICATION

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

CARE OF THE MANUAL AND HOW TO CONSULT IT

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

SYMBOLS USED IN THE MANUAL

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



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

1-WARNINGS AND WARRANTY CONDITIONS

- Many of the surfaces of the product get very hot (door, handle, glass, smoke extraction pipes, etc.). **Avoid coming into contact with these parts without adequate protective clothing or suitable means, such as gloves with thermal protection** or “cold handle” operating systems.
- **It is forbidden to operate the product with the door open or the glass broken.**
- The product must be powered by an electrical system that is equipped with an effective earthing device.
- Switch the product off in the event of a fault or malfunction.
- Accumulated unburned pellets in the burner after each “failed start-up” must be removed before lighting again. Check that the burner is clean and positioned properly before lighting again.
- Do not wash the product with water. The water could get inside the unit and damage the electrical insulation and cause electric shocks.
- 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.

1-WARNINGS AND WARRANTY CONDITIONS

- 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).
- When the appliance is not used, it must be disconnected from the mains and all the doors/covers on the product must remain closed.
- Live electrical parts: only power the product once it has been fully assembled.
- Disconnect the product from the 230V power supply before performing any maintenance operation.
- Improper use or poor maintenance of the product can cause hazardous situations to arise.
- **It is forbidden to manually load the fuel into the brazier. Failure to follow this warning can lead to hazardous situations.**
- **Before the product is restarted, always remove any unburned pellets building up in the brazier due to failed ignition, the emptying of the tank or any situation that may cause this condition.**

1-WARNINGS AND WARRANTY CONDITIONS

INFORMATION:

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

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

INTENDED USE

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

WARRANTY CONDITIONS

The company guarantees the product, **with the exception of elements subject to normal wear** listed below, 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 testing the product before completion with the relative finishes (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**. To benefit from the guarantee, in the event of a fault, the customer must have the guarantee certificate and present it with the proof of purchase document to the Technical Assistance Office.

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 BAG 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 ISO 17225-2 (ex EN 14961). These certifications include, for example, **ENplus**, **DINplus**, **Ö-Norm M7135**, and in particular, guarantee the following characteristics:

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



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

2-INSTALLATION

FOREWORD

The installation position must be chosen according to the room, to the smoke extraction system, to the chimney flue. Check with local authorities whether there are any restrictive regulations in force regarding the combustion air inlet, the smoke outlet system, the flue or the 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

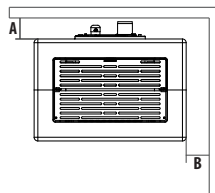
It is recommended to install the stove detached from any walls and/or furniture, with a minimum clearance to allow effective aeration of the appliance and a good distribution of heat in the room. Comply with the distances from flammable or heat-sensitive objects (sofas, furniture, wood panelling, etc.)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

If particularly delicate objects are present, such as furniture, curtains or sofas, increase the stove clearance accordingly.



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

ST.MORITZ PN08	Non-flammable walls	Flammable walls
	A = 5 cm B = 5 cm	A = 5 cm B = 5 cm



If the floor is made of combustible material, it is recommended to use protection made of non-combustible material (steel, glass...) that also protects the front from falling combusted material during cleaning operations.

The appliance must be installed on a floor with adequate load capacity.

If the existing construction does not meet this requirement, one must take appropriate measures (for example a load distribution plate).

2-INSTALLATION

FOREWORD

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

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

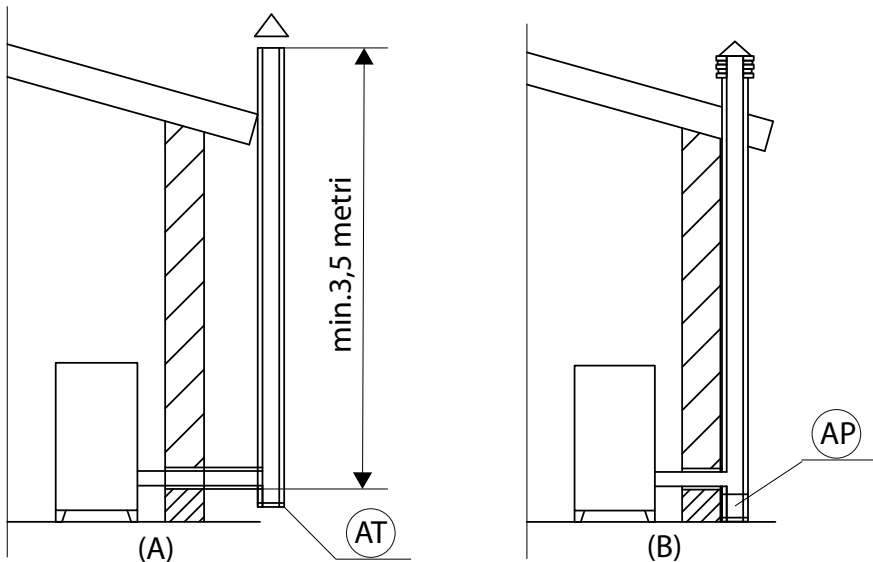


FIGURE 1 - SMOKE FLUE

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 sealed metal hatch.

FLAT ROOF

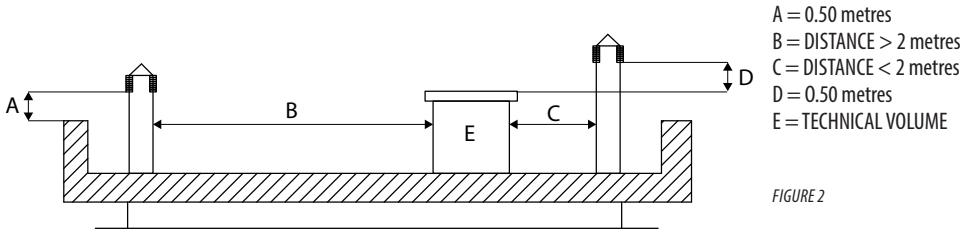


FIGURE 2

ROOF AT 15°

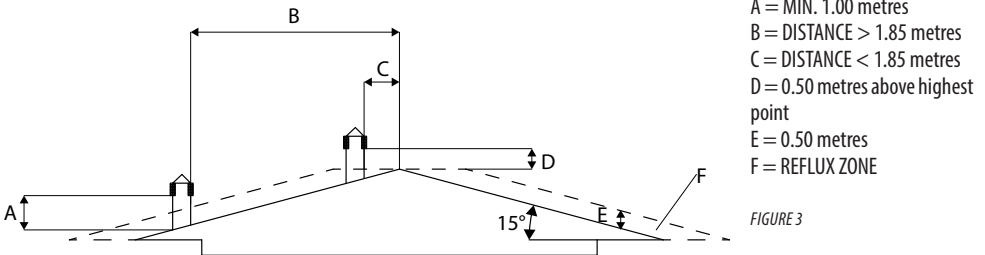


FIGURE 3

ROOF AT 30°

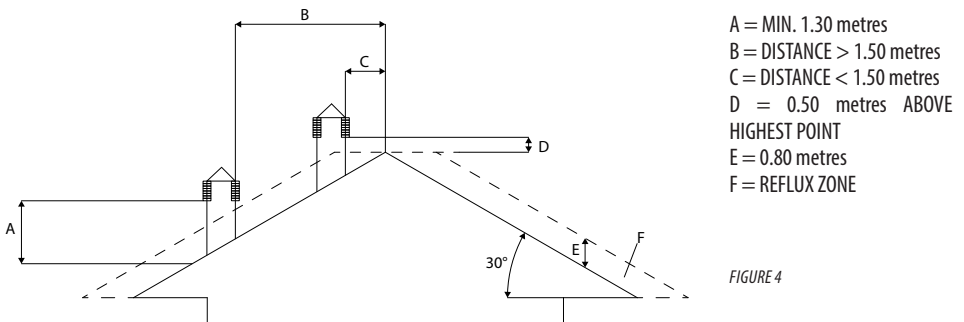


FIGURE 4

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 metres.

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

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

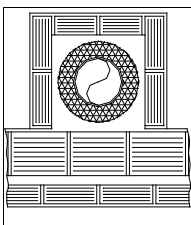
Steel chimney AISI 316 with double chamber insulated with ceramic fibre or equivalent resistant up to 400°C.

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

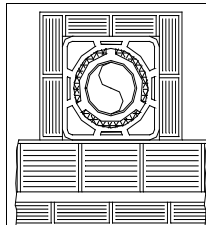
Traditional square-section clay chimney with insulating empty inserts.

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

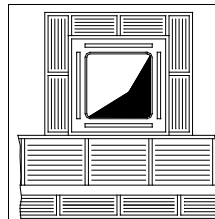
EXCELLENT



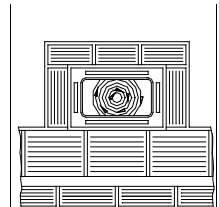
GOOD



POOR



VERY POOR



2-INSTALLATION

MAINTENANCE

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

Failure to perform cleaning jeopardises the system's safety.

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).

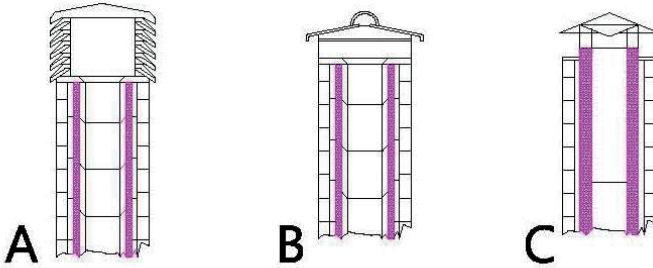
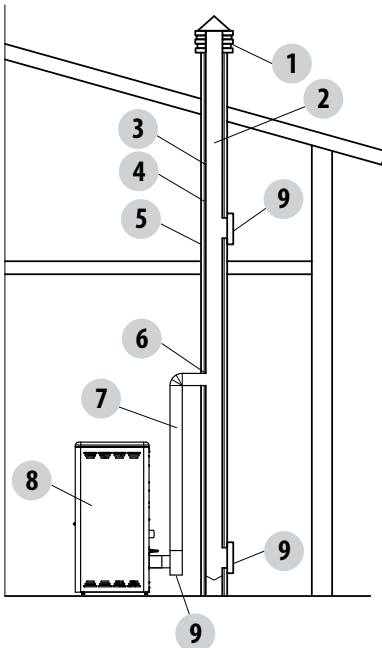


FIGURE 7

CHIMNEY COMPONENTS



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

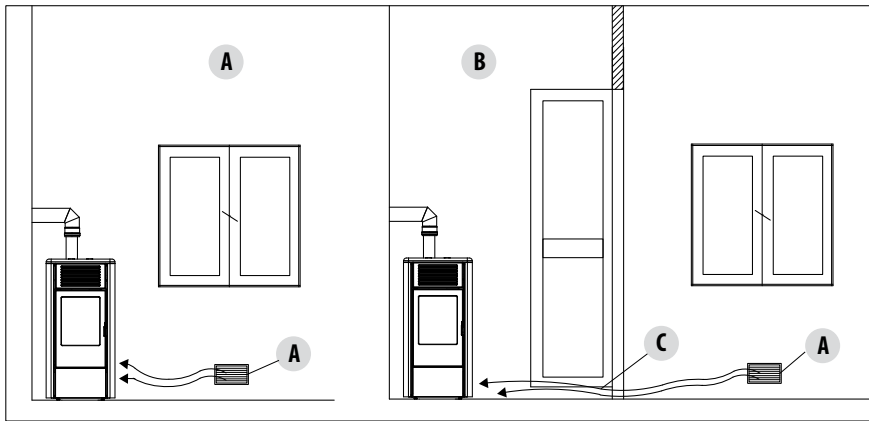
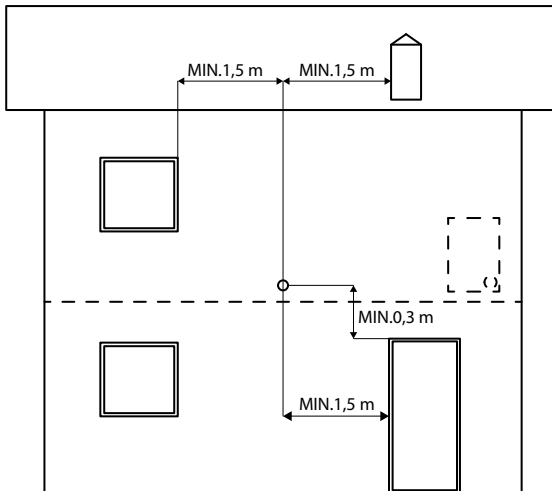


FIGURE 9 A - DIRECTLY FROM OUTSIDE

FIGURE 9 B - INDIRECTLY FROM THE ADJACENT ROOM



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

It is possible to connect the air required for combustion directly to the outside air inlet, with a pipe of at least Ø50mm, with maximum length of 3 linear 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

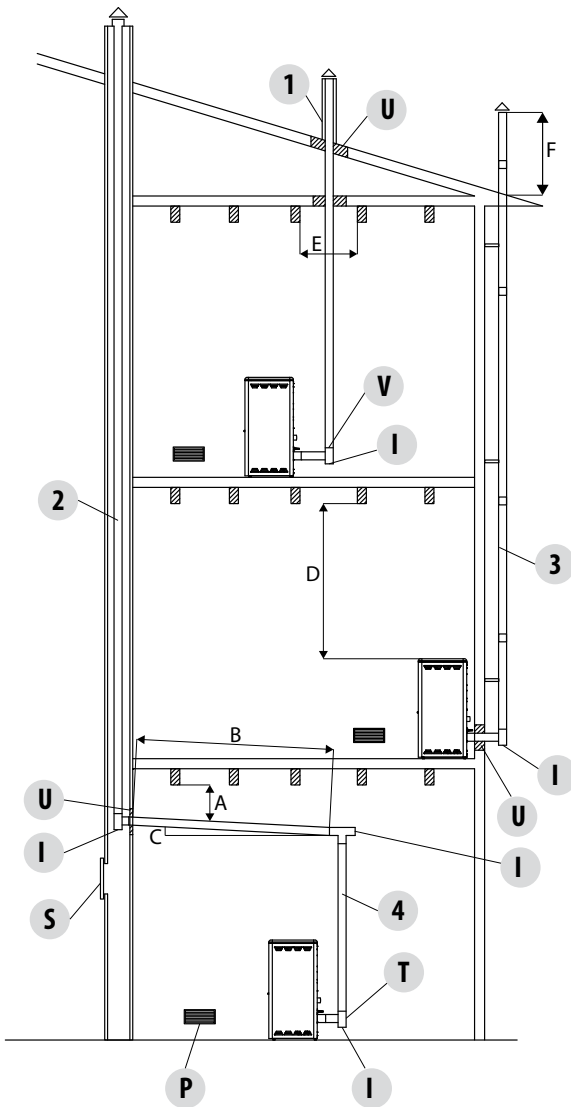
Use smoke ducts with a diameter of 80mm or 100mm depending on the type of system, with silicone gaskets or similar gaskets that can withstand the high operating temperatures of the appliance (min. T200 class P1). **The use of flexible metal tubes in fibre cement or aluminium is prohibited. For direction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

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

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

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 for 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

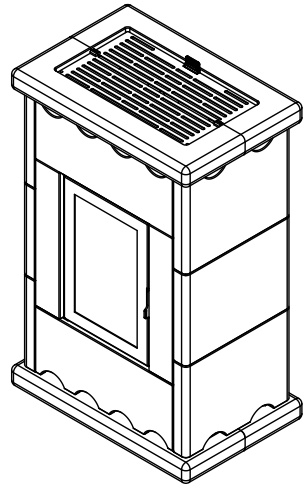
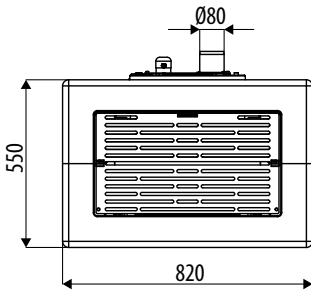
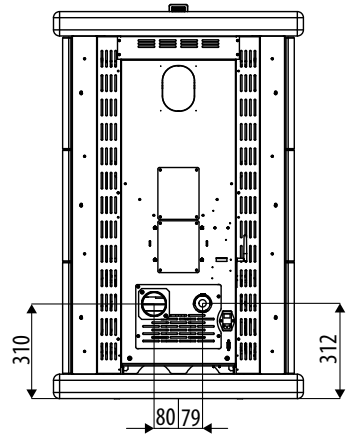
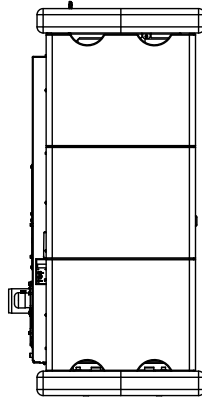
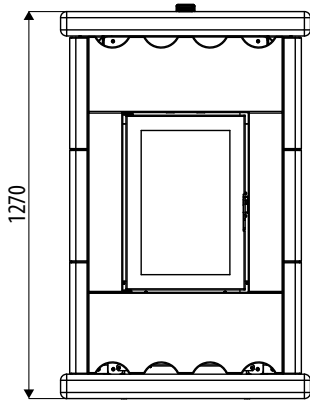
U = INSULATING
 V = ANY REDUCTION FROM 100 TO 80 MM
 I = INSPECTION CAP
 S = INSPECTION ACCESS PANEL
 P = AIR INLET
 T = T JOINT WITH INSPECTION CAP

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

DIMENSIONS ST.MORITZ PN08



3-DRAWINGS AND TECHNICAL FEATURES

TECHNICAL CHARACTERISTICS	ST. MORITZ PN08
Nominal output power	8 kW (6880 kcal/h)
Minimum power output	2,4 kW (2064 kcal/h)
Efficiency at Max	93,0%
Efficiency at Min	93,0%
Temperature of exhaust smoke at Max	160 °C
Temperature of exhaust smoke at Min	110 °C
Particulate /OGC / Nox (13%O ₂)	22 mg/Nm ³ - 3 mg/Nm ³ - 93 mg/Nm ³
CO at 13% O ₂ at Min and at Max	0,024 – 0,015%
CO ₂ at Min and at Max	5,6% - 7,9%
Recommended draught at Max*** power	0,10 mbar - 10 Pa***
Minimum draft allowed at minimum power	0,02 mbar - 2 Pa
Smoke mass	6,9 g/sec
Hopper capacity	47 litres
Type of pellet fuel	Pellet diameter 6-8 mm and size 3 ÷ 40 mm
Pellet hourly consumption	Min ~ 0,8 kg/h* - Max ~ 1,8 kg/h*
Autonomy	At min ~ 28 h* - At max ~ 13 h*
Heatable volume m ³	172/40 – 197/35 – 229/30 **
Combustion air inlet	Ø 50 mm
Smoke outlet	Ø 80
Air inlet	80 cm ²
Rated electrical power (EN 60335-1)	35 W (Max 370 W)
Supply voltage and frequency	230 Volt / 50 Hz
Net weight	380 kg
Weight with packaging	400 kg
Distance from combustible material (back/side/under)	50mm/50mm/0 mm
Distance from combustible material (ceiling/front)	800mm/800 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 (EU 305/2011).

4-UNPACKING

PREPARATION AND UNPACKING

The packaging consists of a recyclable cardboard box in line with RESY standards and a wooden pallet. All packaging materials can be reused for similar use or eventually disposed of as urban solid waste, in compliance with the regulations in force.

After having removed the packaging make sure the product is intact.



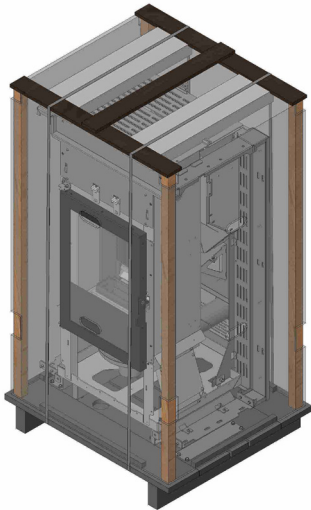
Handle the product with suitable means paying attention to the applicable safety regulations in force. Do not turn the packaging over and handle the majolica parts with care.

The stoves are delivered with two packages, one for the structure and one with the stone cladding. Open the package, remove the cardboard, polystyrene and any straps and position the stove in the preset place making sure that it complies with the requirements.

The stove body or unit must always be kept in a vertical position when handled, and handled using carts only. Pay particular attention to the door and its glass, protecting them from mechanical knocks that would compromise their integrity.

If possible, unwrap the stove near the chosen area of installation.

The packaging materials are neither toxic nor harmful.

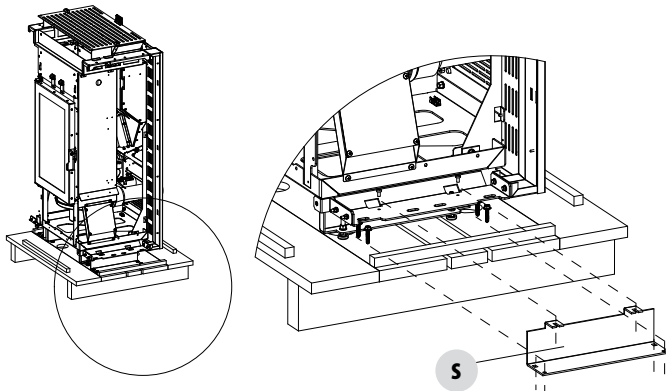


ST.MORITZ STOVE PACKAGING



STONE CLADDING PACKAGING (SERPENTINE)

To remove the stove, remove the six screws and extract plate "S". There are two brackets "S".



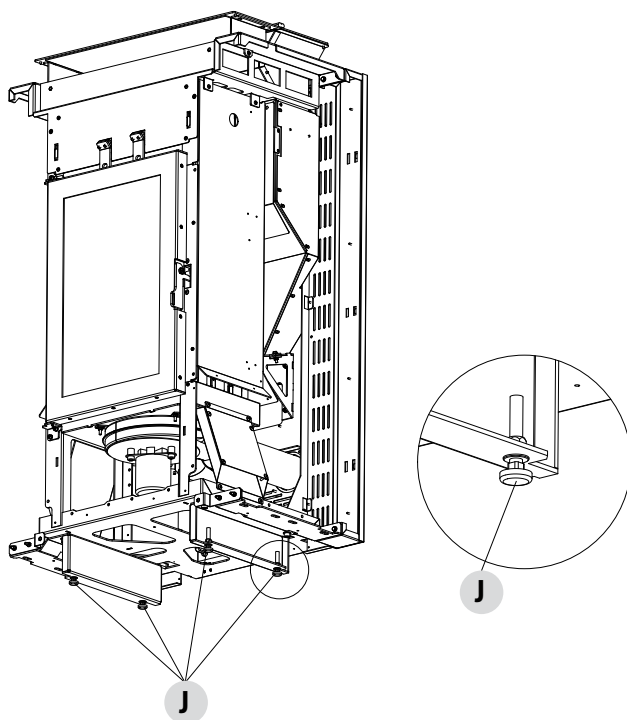
4-UNPACKING

Position the stove and connect it to the flue pipe. Use the four adjustable feet (**J**) to get the stove correctly levelled so that the smoke outlet is lined up with the connecting pipe.

If the stove needs to be connected to an outlet pipe which goes through the rear wall (to connect to the flue), take utmost care to make sure that the joint is not forced.



If the stove smoke outlet is forced or used improperly to lift it or position it, the operation of the stove can be damaged irreparably.



1. TURN THE FEET CLOCKWISE TO LOWER THE STOVE
2. TURN THE FEET COUNTERCLOCKWISE TO LIFT THE STOVE

5-CLADDING ASSEMBLY

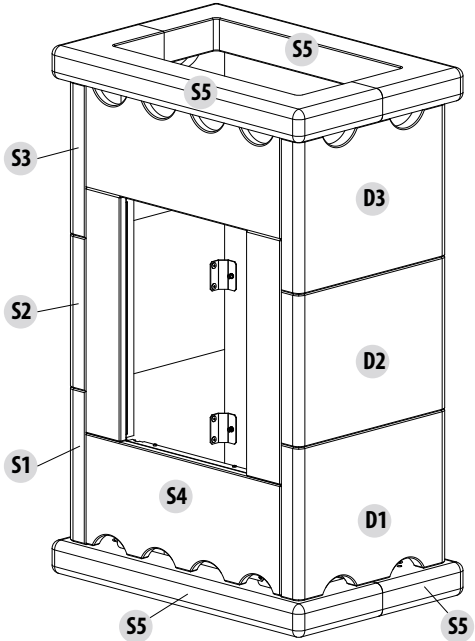
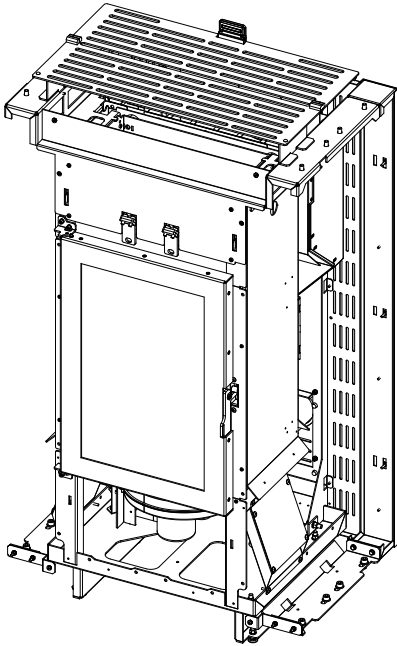


Live electrical parts: only power the product once it has been fully assembled.

On delivery, the stove has no stone cladding, as shown in the image below.

The stone panels have codes on the inside required for correct positioning (see image below). On the right side they are called D1/D2/D3 and on the left side S1/S2/S3, to be placed from the bottom upwards.

Take the stone panels (picture below), prepare them for assembly and follow the instructions on the following pages.



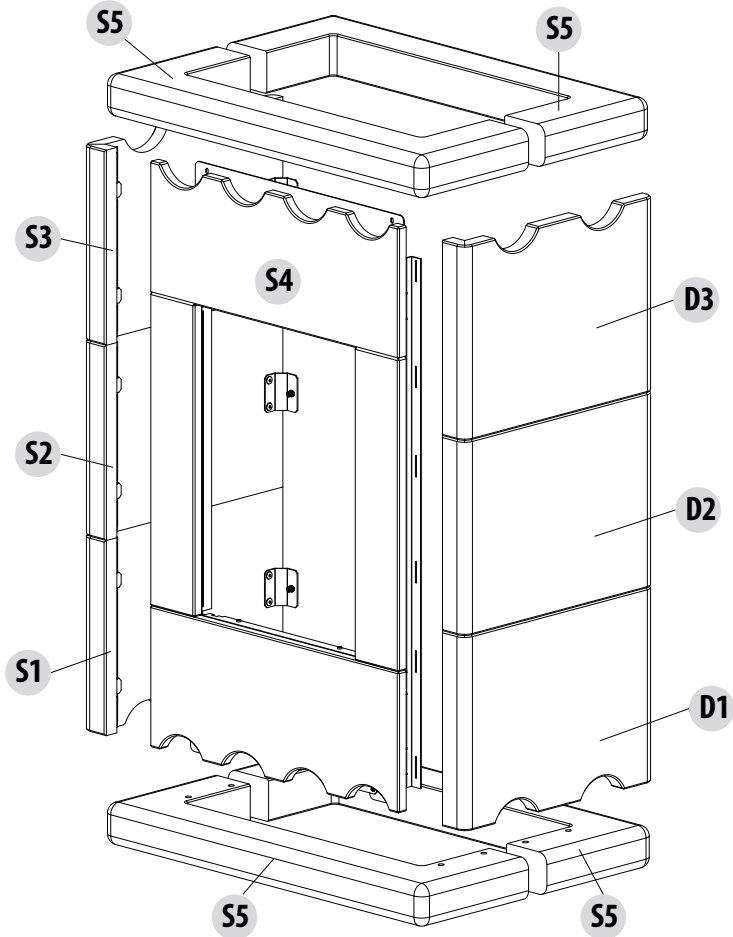
POS.	DESCRIPTION	No.	POS.	DESCRIPTION	No.
S1	LOWER STONE PANEL	2		M8X24 WASHER	16
S2	CENTRAL STONE PANEL	2		M8X15 SCREW	16
S3	UPPER STONE PANEL	2		M5X20 SCREW	6
S4	FRONT STONE PANEL	1		PANEL 4.2X13 SCREW	4
S5	LOWER/UPPER STONE BASE	4		M4X16 SCREW	6
D1	UPPER STONE PANEL	2	Not all screws need to be used.		
D2	CENTRAL STONE PANEL	2			
D3	LOWER STONE PANEL	2			

5-CLADDING ASSEMBLY



Attention! The stones are delicate, therefore handle with care.

The stone panels are marked on the inside as shown in the drawing below. Comply with the markings in the assembly stage.

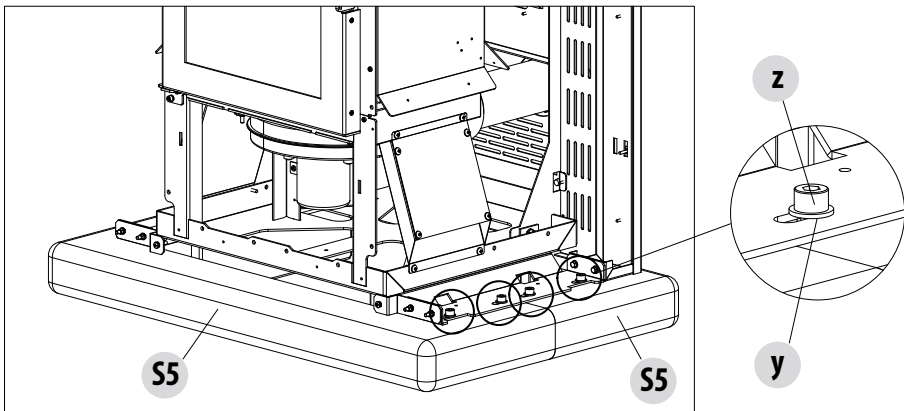
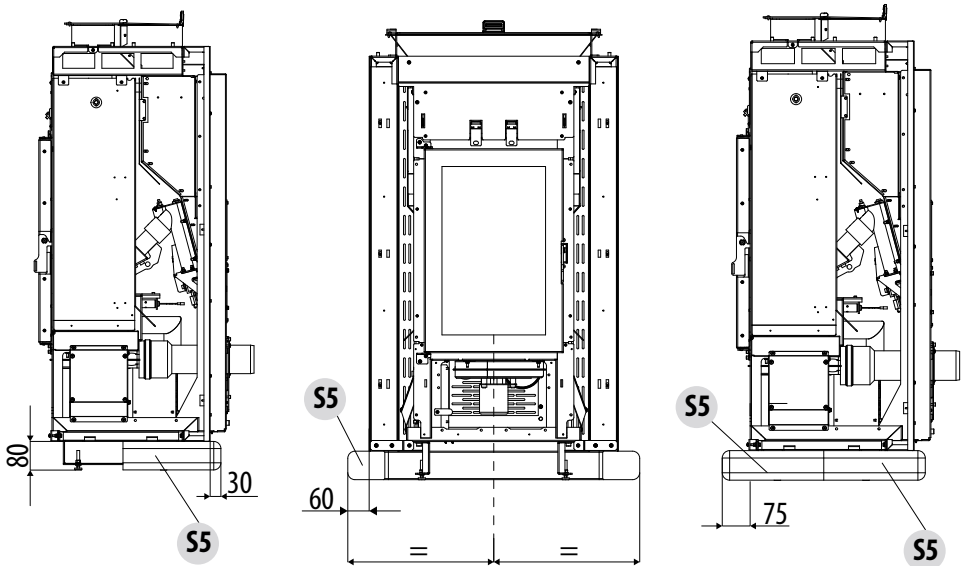


5-CLADDING ASSEMBLY

POSITIONING OF STONE BASE "S5"

To assemble the base proceed as follows:

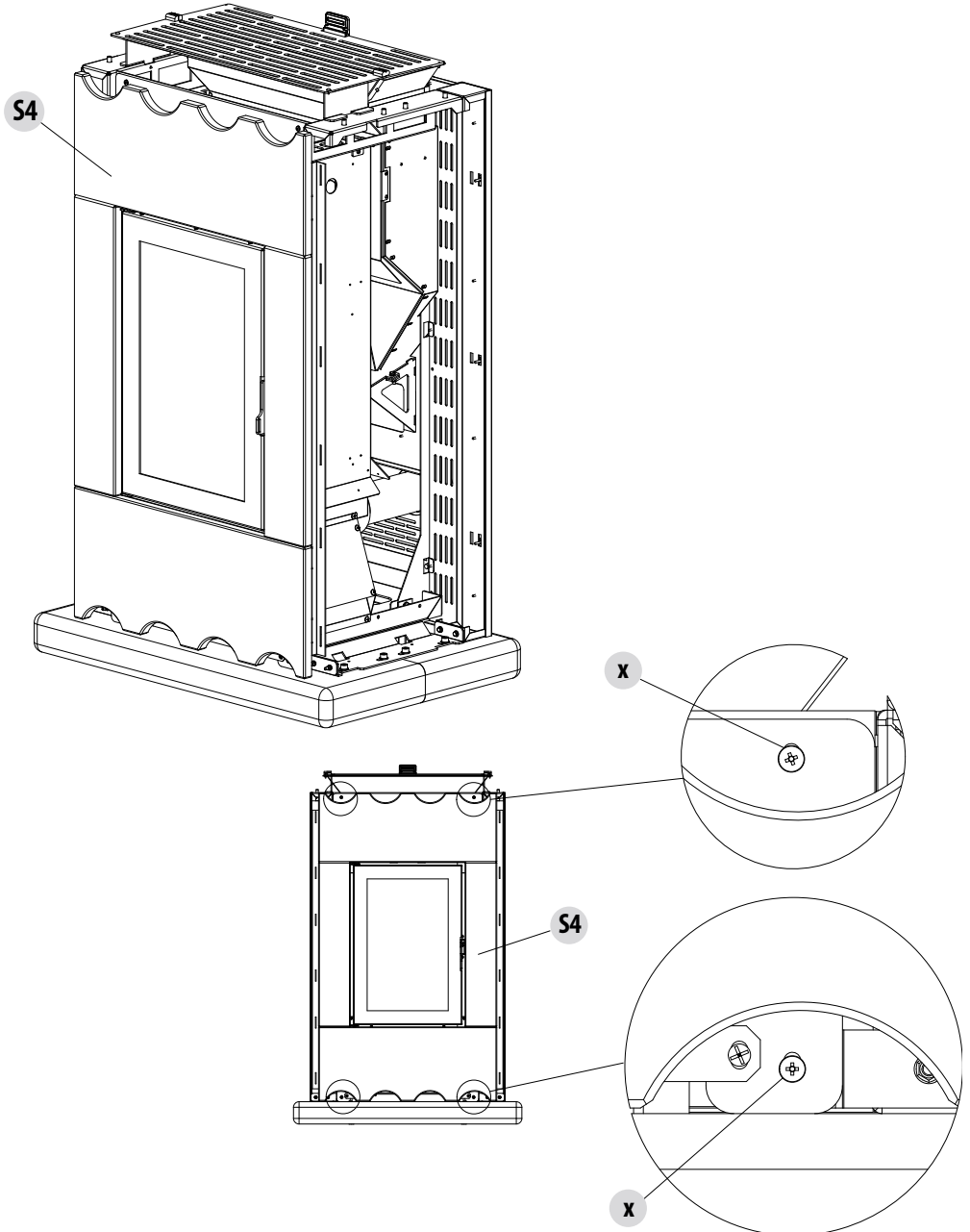
- Take from the packaging 2 "S5" pieces
- adjust the feet of the stove structure at about 8 cm from the floor (adjust foot height if required after inserting panel "S5")
- insert one "S5" piece in the rear of the stove, positioning it at about 3 cm from the back, while panel "S5" must be centred with the stove structure at the front
- at this stage also insert the other base "S5" against the previous one (there is about 7.5 cm at the front between the stone and the structure)
- at this point fasten the two "S5" bases to the structure with 4 M8x15 screws ("z") and 4 M8x24 washers ("y") per side (4 on the right and 4 on the left)



5-CLADDING ASSEMBLY

INSTALLING THE FRONT PANEL

Move panel "S4" close to the structure, centre the firebox door and position it to match the holes (two at the top and two at the bottom). Fasten panel "S4" to the structure using 4 M5x20 screws.

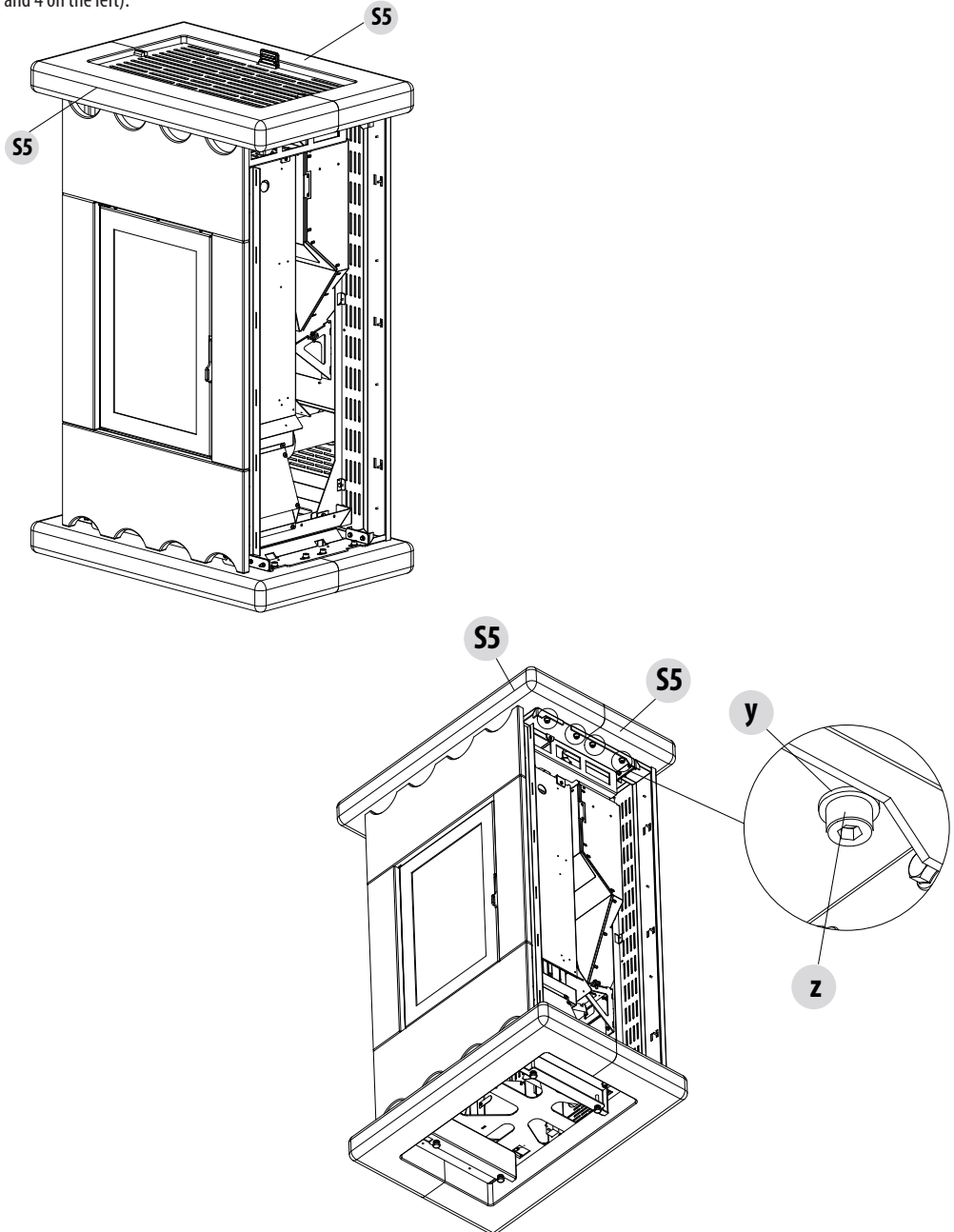


5-CLADDING ASSEMBLY

INSTALLING THE UPPER PANELS

Place the two "S5" panels onto the structure, ensuring they are positioned with the same distances as the base.

Fasten panel "S5" to the stove structure from underneath the top using 4 M8x15 screws ("z") and 4 M8x24 washers ("y") (4 on the right and 4 on the left).



5-CLADDING ASSEMBLY

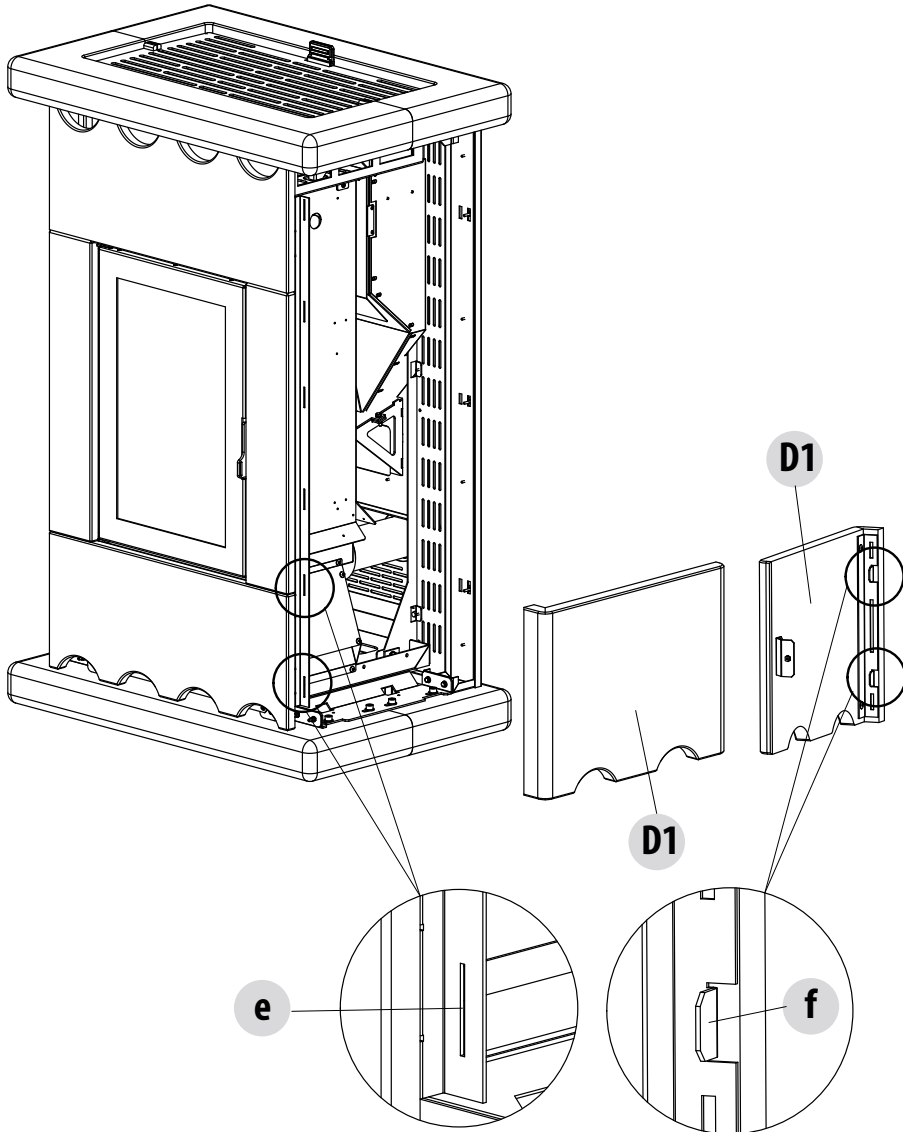
INSTALLING THE SIDE LOWER PANEL

To install the side panels proceed as follows:

- take panel D1
- insert edges "f" on the panel into holes "e" on the structure
- ensure side panel "D1" is aligned with the front panel
- should it not be so, carry out adjustment (next paragraph)



Attention! The fixing system of side panels is the same for all stones ("S1"/"S2"/"S3"/"D1"/"D2"/"D3"). However, it is required to adjust the panel before inserting the top panel.

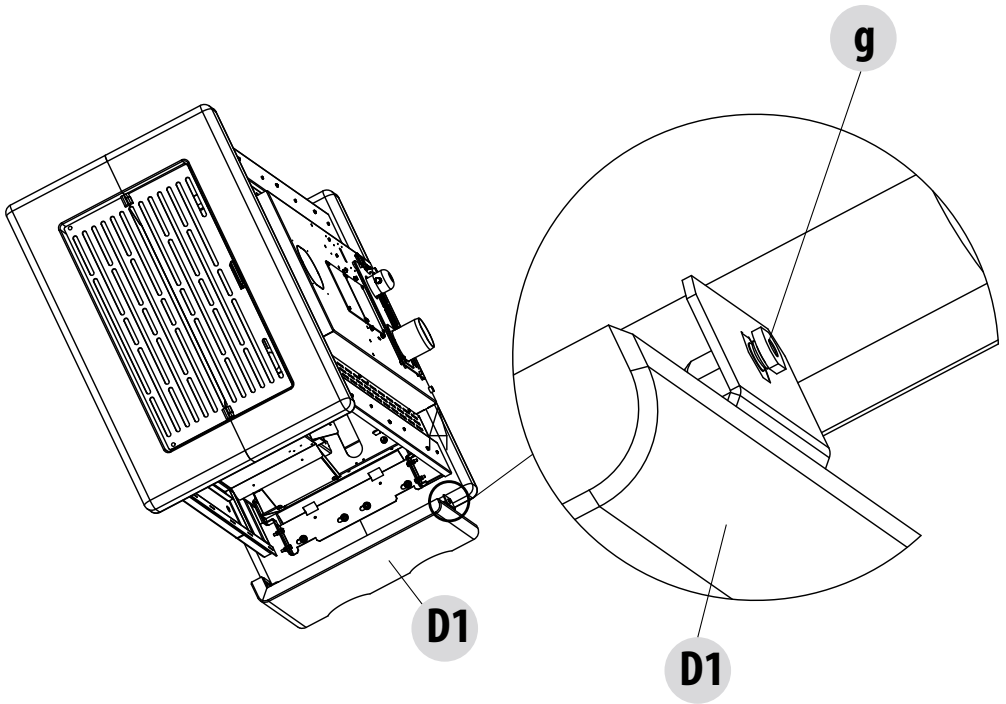


5-CLADDING ASSEMBLY

ADJUSTING THE SIDE PANELS

In the rear of the panel is a plate with a screw "g" that is snug onto the structure. If the stone panel "D1" (subsequently "D2" or "D3") is not aligned with the front panel, act as follows:

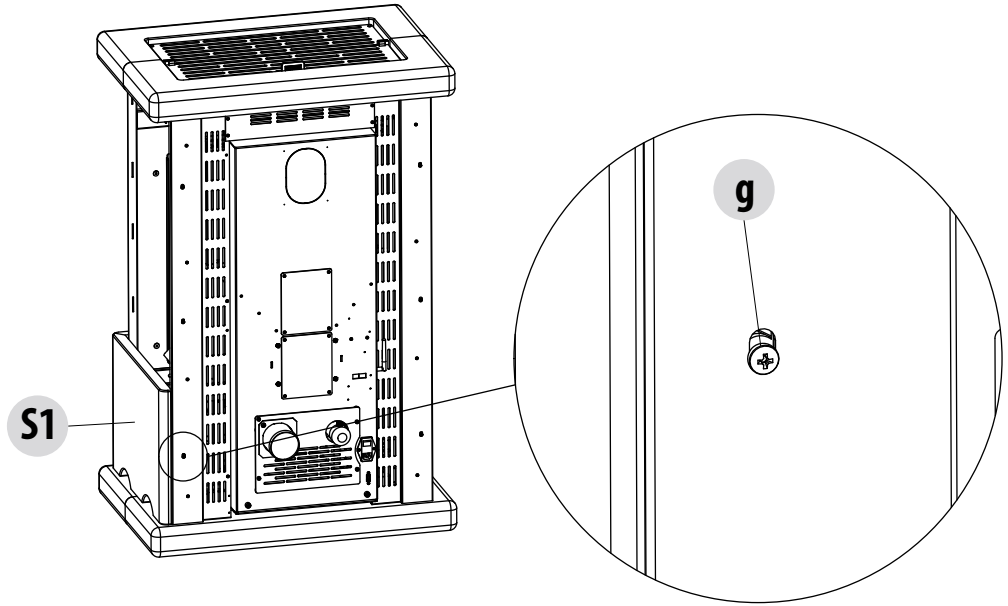
- extract panel "D1" from the structure
- screw in or out screw "g" until finding the right adjustment between side and front panel
- subsequently fix the panels (see next paragraph)
-



5-CLADDING ASSEMBLY

FIXING THE SIDE PANELS

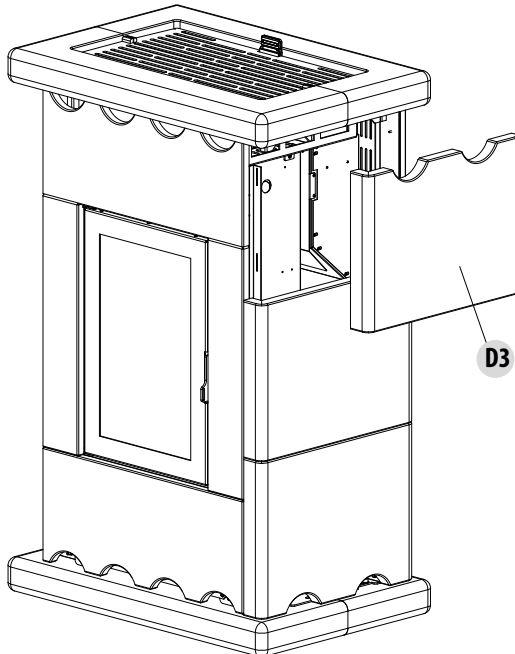
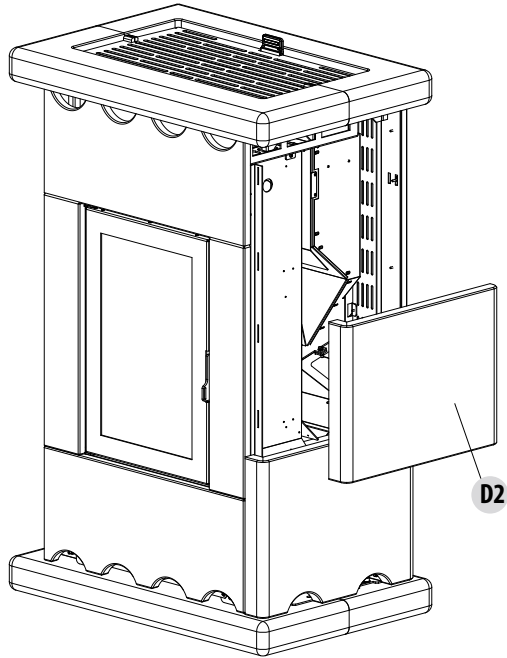
After carrying out all panel adjustments, secure it to the structure using a screw "g" M4x16. This operation applies to all side panels.



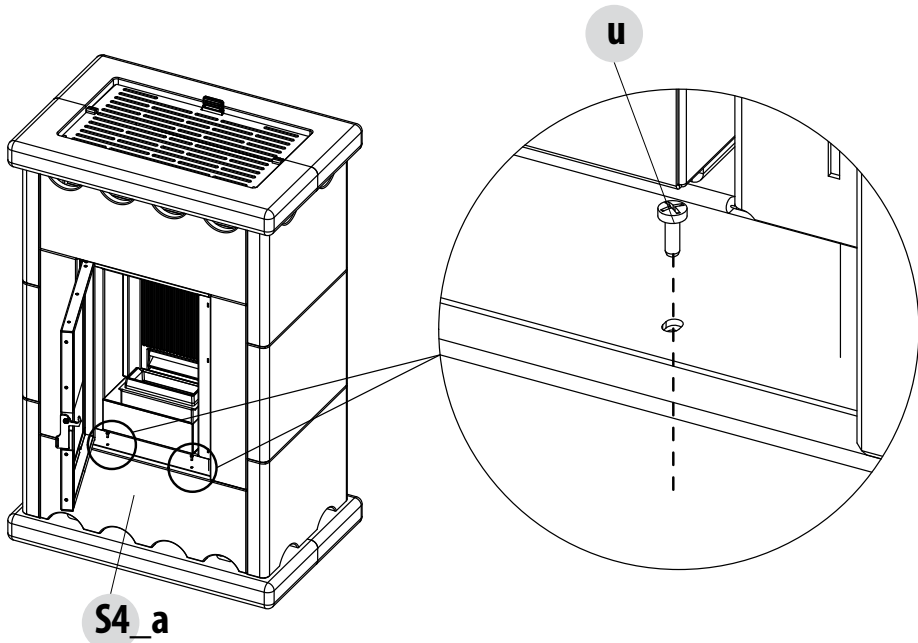
5-CLADDING ASSEMBLY

CENTRAL AND UPPER PANEL

Carry out the same operations as for the lower panel.



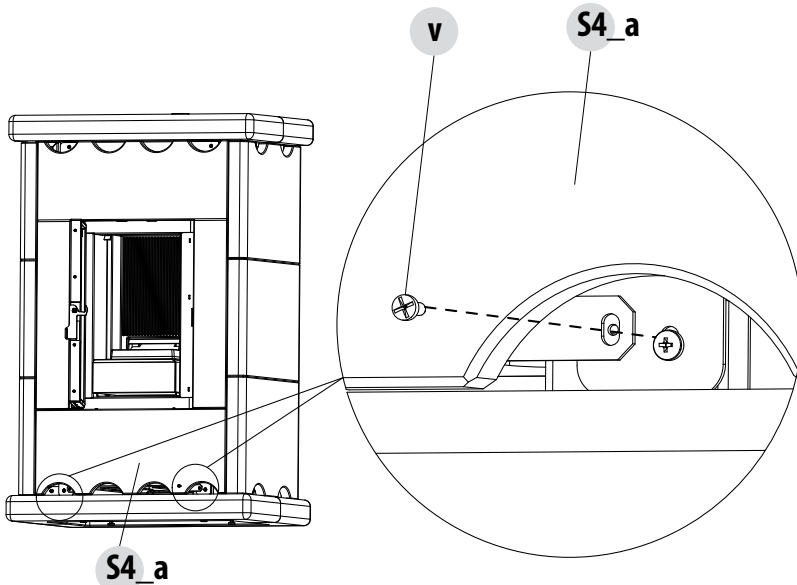
6-DISASSEMBLING THE PANEL FOR FAN CLEANING



Proceed as follows to remove only the lower plate for fan maintenance:

- open the firebox door
- remove the two screws "u"
- in the lower part remove the two screws "v"

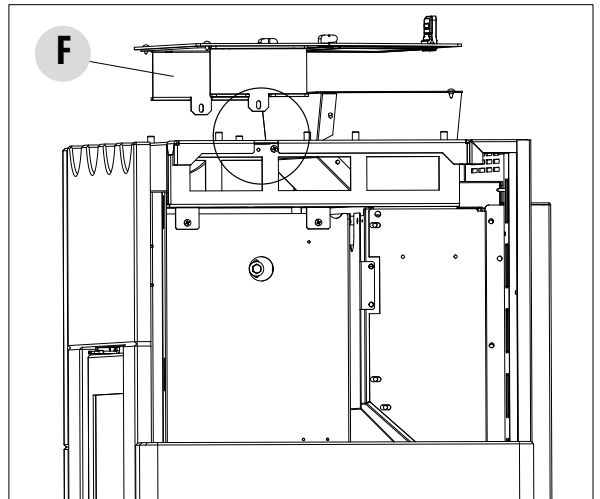
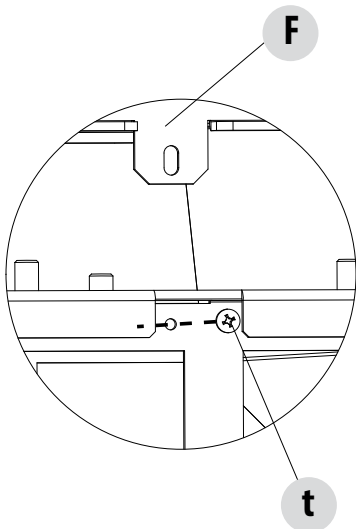
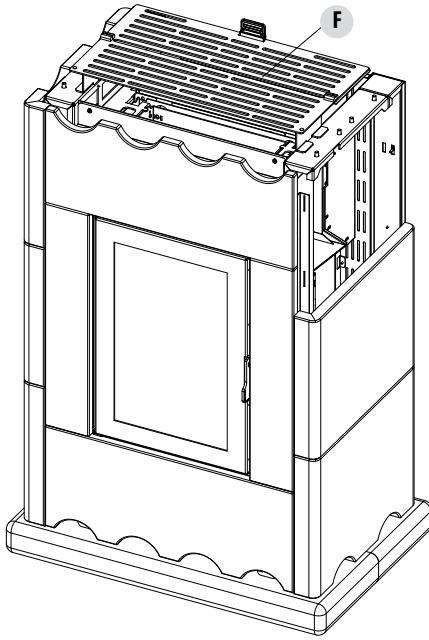
At this point it is possible to remove the stone panel S4_a



7-TOP DISASSEMBLY

TOP DISASSEMBLY

To remove the metal top "F" it is required to remove stone panel "D3" and "S3". Next, unscrew the two "t" screws on the right and left of the structure, extract the edge of the top from the structure and remove it.



8-ELECTRICAL CONNECTION

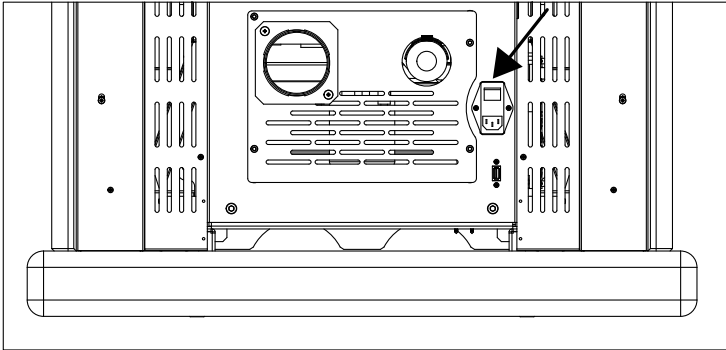
ELECTRICAL CONNECTION

First connect the power cable to the back of the stove and then to a wall socket.

The main switch must only be activated to switch the stove on; otherwise, it is advisable to keep it switched off.



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

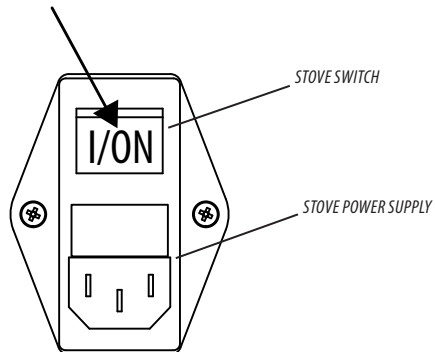


ELECTRICAL STOVE CONNECTION

STOVE POWER SUPPLY

After connecting the power cable to the back of the stove, turn the switch at the back to position (I).

The luminous switch button will light up.



The switch on the back of the stove is used to power the system.

On the rear of the stove there is a fusebox which is located near the power socket. Open the fusebox cover with a screwdriver and replace the fuse if necessary (3.15 A delayed) - seek assistance from an authorised and qualified technician.

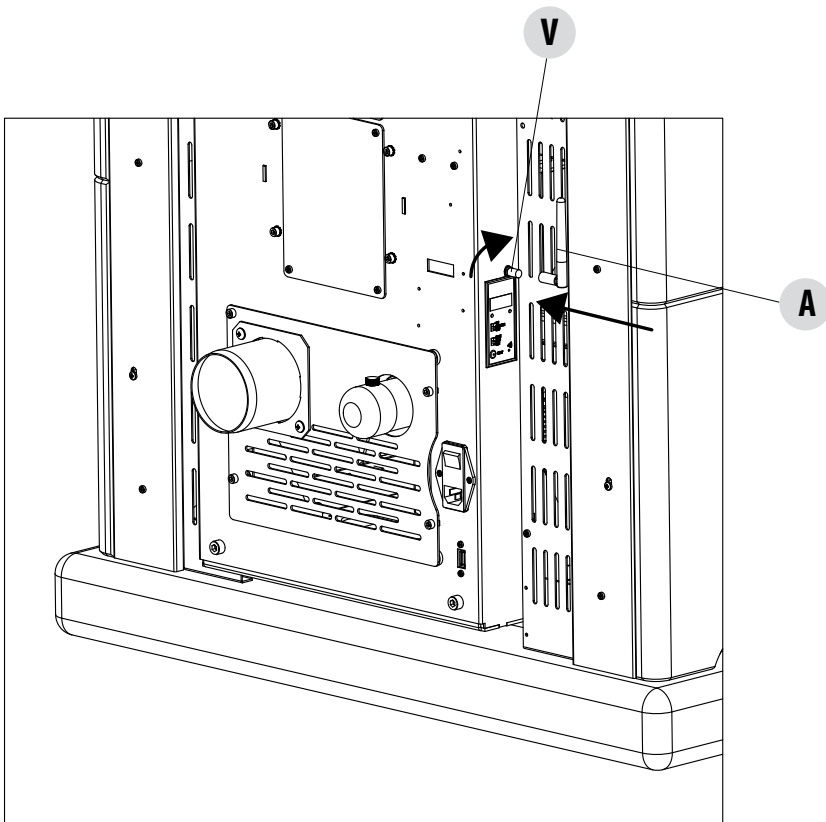
9-ANTENNA ASSEMBLY

ASSEMBLY OF CONTROL PANEL ANTENNA

- Take the antenna "A" from the bag containing the instructions
- Screw the antenna "A" clockwise on screw "V" near the control panel until the mobile part is positioned upwards.



Attention! Tighten the antenna completely without forcing it to prevent reception damage.



10-LOADING THE PELLETS

LOADING THE PELLETS

The fuel is loaded at the top of the stove by lifting the door by its rubber handle. Pour the pellets in slowly so that it is deposited at the bottom of the hopper.



If loading pellets when the stove is running, open the door of the tank using the stove mitten that comes with the stove itself.

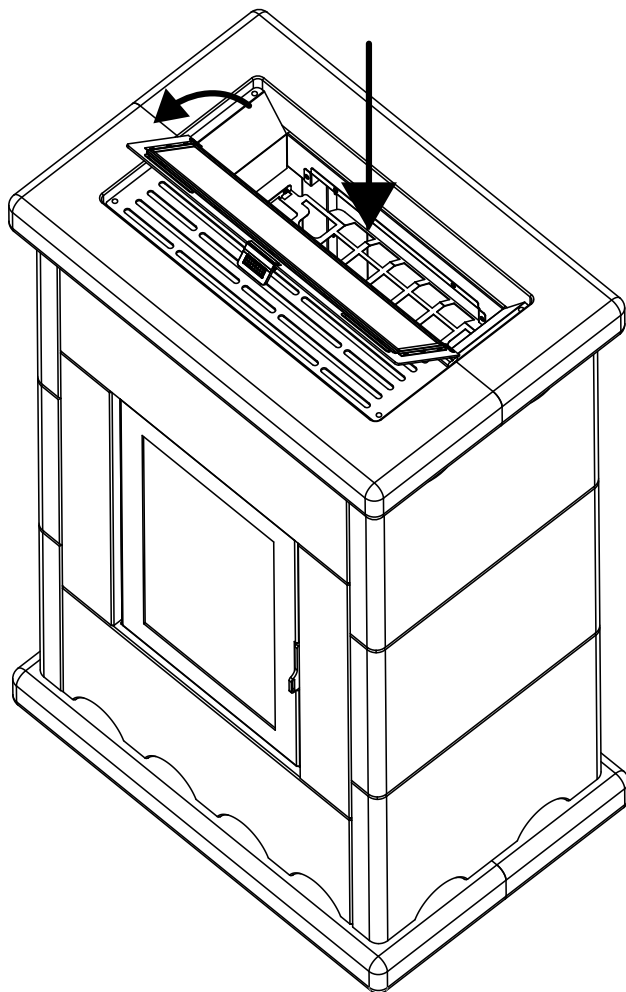
When loading, do not let the pellet bag come into contact with hot surfaces.

Never remove the protection grid inside the hopper.

No other type of fuel other than pellets is to be inserted into the hopper, in compliance with above-mentioned specifications. Store the spare fuel at an adequate safe distance.

Do not pour pellets directly onto the brazier but only into the hopper.

When the appliance is running and when it is turned off, most of the stove surfaces are very hot (door, handle, glass, smoke outlet pipes, etc.). Therefore it is recommended to avoid coming into contact with these parts.



11-FIRST START-UP

PRECAUTIONS BEFORE START-UP

GENERAL PRECAUTIONS

Remove any objects that may burn from the brazier (manual, various adhesive labels or any polystyrene).

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



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



ELIMINATE THE ALARM CONDITION OF A FAILED START-UP BY POSITIONING THE OF THE EMERGENCY PANEL TO OFF FOR ABOUT 20 SECONDS AND BRINGING SELECTOR "D" BACK TO THE REMOTE POSITION. REMOVE THE PELLET LEFT IN THE BRAZIER AND REPEAT THE START-UP. (SEE "SAFETY DEVICES/ALARMS" PARAGRAPH)

Switch-on/off from the emergency panel

If the remote control is faulty or the batteries are flat, the product can be operated in safe mode via the rear emergency panel.

In this configuration, the stove can only operate in manual mode and with the possibility to choose between 3 power levels.

• SWITCHING THE STOVE ON WITHOUT THE REMOTE CONTROL

To switch the stove on move selector "D" to the ON position. The RED LED goes off upon start-up, while the GREEN LED starts to flash until the start-up stage is complete. Once the product is in steady state, the GREEN LED remains on.

• CHOOSING THE POWER WITHOUT THE REMOTE CONTROL

One can choose between 3 heating powers:

MIN-MED-MAX (selector "E")

The **MINIMUM** power corresponds to the 1st power;

The **MEDIUM** power corresponds to the 3rd power;

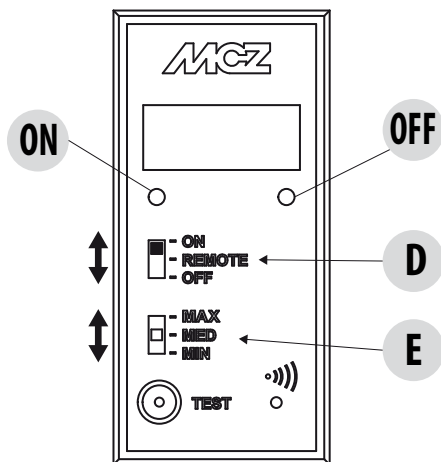
The **MAXIMUM** power corresponds to the 5th power;

• SWITCHING THE STOVE OFF WITHOUT THE REMOTE CONTROL

To switch the stove off move selector "D" to the "OFF" position.



Once the remote control is restored, remember to set selector "D" back to the "REMOTE" position, otherwise the product will ignore the remote control commands.



11-FIRST START-UP

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



REMOVE THE PELLETS FROM THE BRAZIER AND CONTACT AN AUTHORISED TECHNICIAN.

Please ensure the brazier is clear of ALL pellets and ash build up following any failed ignitions. Failure to clear out the brazier prior to resetting may result in further failed ignitions or in certain conditions an explosive ignition.



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

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

The boiler will be subject to expansion and contraction during the lighting and cooling down stages, and may therefore make slight creaking noises.

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



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

It is extremely important to make sure the boiler does not reach high temperatures straight away, but to increase the temperature gradually using low power at first.

This will prevent damaging the ceramic or serpentine stone tiles, the welds and the steel structure.



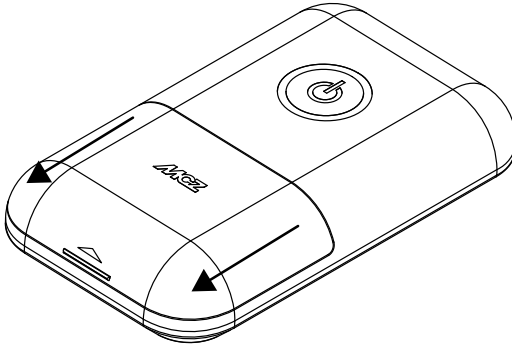
Do not touch the boiler during the first lighting, as it is during this phase that the paint sets. If you touch the paint, you may expose the steel surface.

If necessary, touch up the paint with the spray can of the specific colour. (See "Pellet stove accessories")

12-REMOTE CONTROL MAX

GENERAL FEATURES OF THE LCD REMOTE CONTROL

The remote control works at a transmission frequency of 434.5 MHz. Power the product with 3 AAA batteries as follows:
Remove the battery compartment cover by pressing and lifting according to the arrow
Insert the batteries observing the correct polarity (+) and (-)
Close the battery compartment cover.



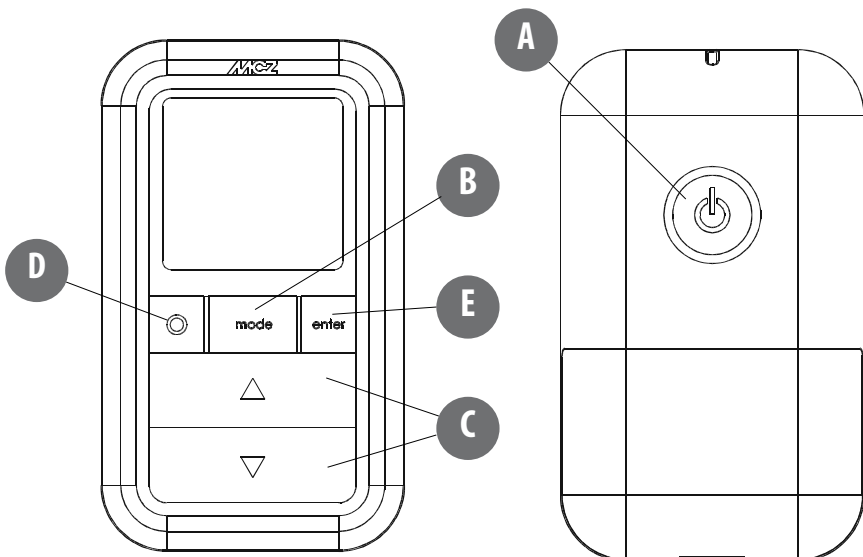
When the remote control is powered it automatically prompts to set the time.

The remote control has a special icon on the display to indicate when the batteries are almost flat. If the flat battery icon appears, the batteries are almost flat and the remote control is about to switch off.

Used batteries contain metals which are harmful to the environment, so they must be disposed of separately in appropriate containers.

GRAPHIC APPEARANCE

In the instructions we will often refer to the indications of the keys shown in the figure. Always keep it at hand for simplicity's sake.



12-REMOTE CONTROL MAX

REMOTE CONTROL OPERATION

General rules

By pressing key **A** for 1" the product is switched on and off. Key **C** is used to make all changes. Key **E** is used to confirm the changes. By pressing key **B** one selects the product operating mode. Use key **D** to see the SLEEP setting.

Whichever the mode is, press key **A** briefly (or leave the keypad idle for 7") to go back to the initial display.

INITIAL SETTINGS

Setting the time

Both with the remote control on and off, by pressing keys **B+E** at the same time for 3" one accesses the time/day setting mode.

The hour digits will start to flash; they can be changed with key **C**. By pressing key **E** the changes are confirmed. At this point the minutes digits will start to flash.

Follow the same modify/confirm procedure, one will then go onto the time display mode (12h or 24h) and finally the day will start to flash. Confirm this data to exit the settings.

NOTE: each time the remote control is powered, the time is reset and the display automatically enters the time setting mode.

°C – °F setting

Only with the stove switched off, by pressing key **B** for 5" one changes the unit of measure of the temperature, from Celsius to Fahrenheit and vice versa.

SETTING THE OPERATING MODE

With the remote control switched on, key **B** allows to set one of the 4 product operating modes. Figure 1-2-3-4 displays the 4 basic displays, respectively:

Manual, Automatic, Timer and Eco mode.

MANUAL Mode (MAN)

In this mode one can set the flame power manually (5 levels - act directly on key **C** to change). **Figure 1**

AUTOMATIC Mode (AUTO)

In this mode one can set the desired room temperature, and the stove will modulate the flame power automatically to reach the temperature. **Figure 2**

FIG.1



FIG.2



12-REMOTE CONTROL MAX

TIMER Mode (TIMER)

Select this operating mode to switch the product on and off automatically, according to 6 customised time slots (P1 – P6). The following can be set for each time slot:

- Switch-on time
- Switch-off time
- Desired room temperature in the time slot
- Days of the week in which the time slot is active

When the stove is switched on (manually via key **A** or automatically via a time slot) the product works in the automatic mode described above. A time slot appears automatically when it is active (P1 in **figure 3**) and the desired temperature is changed according to the value set in the time slot. However, the user can always modify this value as desired and in real time.

Refer to the relevant paragraph to learn how to set the time slots.

FIG.3

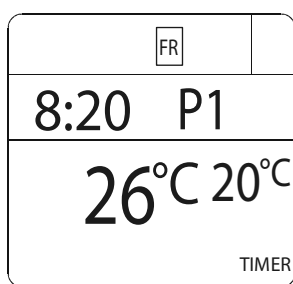


FIG.4



FIG.5



ECO Mode (ECO)

This mode is activated/disabled with the remote control switched on by pressing key **B** for 5".

ECO is an automatic mode with the only difference that if the set temperature is reached and remains so for the following 20 minutes (despite flame modulation), the product switches off and remains on stand-by until the room temperature drops 2 degrees below the desired temperature (and in any case for at least 5 minutes from the last shutdown). The product is then switched on again. **Figure 4** If the room is not sufficiently insulated, flame modulation does not allow the set temperature to stay satisfied for 20 consecutive minutes and the product will not switch off.

NOTE: It is recommended to use the ECO mode only in well-insulated rooms in order to prevent start-up and shutdown from occurring within short periods of time.

The remote control remains on even when the product is off when in ECO mode, in order to indicate that this shutdown is only temporary. Obviously, if the product is switched off via key **A**, ECO mode is exited and the product remains off.

Up to 6 automatic start-up and shutdown time slots (E1 – E6) can also be set in ECO mode, which are independent from those of TIMER mode (P1 – P6). If they have been activated, TIMER-ECO appears on the display (**figure 5**) permanently, even if the remote control is switched off.

Refer to the relevant paragraph to learn how to set the time slots.

NOTE: If the remote control is switched off due to TIMER, ECO cannot be restarted until the user intervenes (key **A) or when the next valid time slot starts. Combined use of TIMER and ECO modes requires a good knowledge of the product operating logic.**

12-REMOTE CONTROL MAX

Sleep function

The sleep mode allows to quickly set the time at which the product must switch off. This function is only available in MAN and AUTO mode. It is set as follows: from the POWER setting (by pressing key **D** - see previous paragraph), press key **D** again to access the SLEEP mode setting.

Via key **C** one can adjust the shutdown time in 10 minute intervals.

By confirming with **D** or **E** one goes back to the basic display, in which the sleep mode shutdown time is any case visible (**figure 7**).

To disable the SLEEP mode simply access the settings, decrease the time until the dashes appear and confirm.

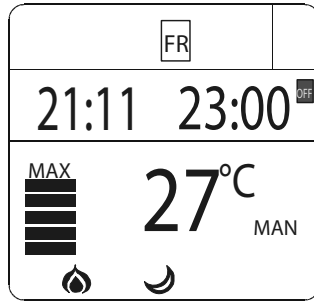


FIG.7

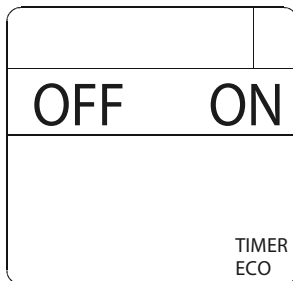
12-REMOTE CONTROL MAX

TIMER settings

TIMER time slot display

In TIMER mode, to display the time slots simply press key **D** for 2". With key **C** one can scroll the 6 time slots freely, quickly checking the saved settings (figure 8). By pressing key **D** or **A** one goes back to the basic display.

Modifying the TIMER time slots



To modify a time slot, display it as described in the previous paragraph and then press key **E**. The first parameter to be set will start to flash, i.e. room temperature. Press key **C** to modify the value and key **E** to confirm and set the next parameter. The parameters of a time slot can be set in the following sequence:

- Room temperature. Can be set between 5° and 35°C. 2 dashes "--" appear if set below 5°C or above 35°C, and if this is confirmed, the programme is disabled (therefore, the product will not be switched on).
- Switch-on time. The value is adjusted in 10 minute intervals (from 00:00 to 23:50)
- Switch-off time. The value is adjusted in 10 minute intervals (from 00:10:00 to 24:00).
- Days of the week in which the programme is active. Monday (MO) will start to flash, followed by the other days of the week. Use key **C** to activate/disable the day. The activated days will be displayed on a dark background. When the Sunday (SU) setting is complete, press key **E** to exit the editing page and return to the time slots display.

By pressing key **D** at any time one exits the time slot editing mode, saving all variations confirmed with key **E** up to that time, and one goes back to the time slot display condition.

While by pressing key **A** (or leaving the keypad idle for 30") one goes directly to the basic display, saving all variations confirmed with key **E** up to that time.

Activating the TIMER-ECO time slots

In ECO mode one can activate up to 6 time slots, customising switch-on and switch-off (E1 – E6): by pressing key **D** for 2" the TIMER activation/disabling function will appear (figura 9). If the ON option is confirmed one can display/modify the 6 time slots of the TIMER-ECO with the same procedure described previously for the TIMER. By confirming the OFF option, the TIMER is disabled and the product goes back to operate in ECO mode without active time slots.

REMOTE CONTROL SYNCHRONIZATION

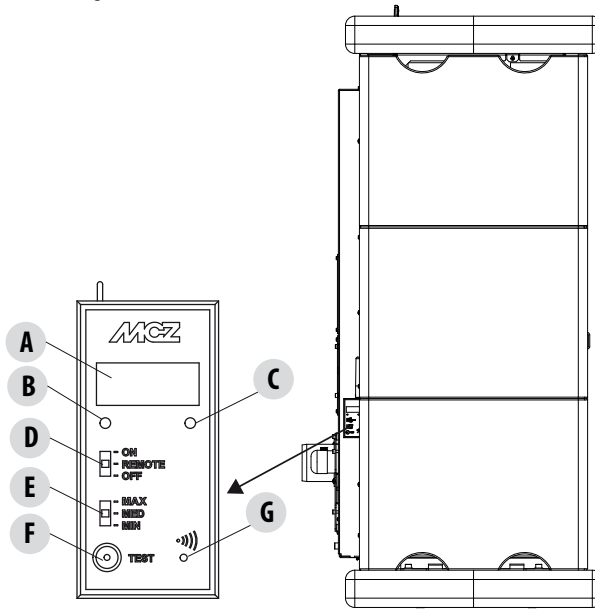
When the product is started up for the first time, it may be necessary to synchronize the new remote control with the stove. To do this, follow these simple instructions:

- connect the socket to the stove and turn on the power switch
- make sure the selector D on the emergency panel is in the REMOTE position
- when the first message appears on the emergency panel's display, use a pointed object to press the chased G button (toothpick, etc.)
- the panel's display will show 3 flashing lines "----". Press the remote control's on/off button to launch the learning process.

The three flashing lines will disappear from the display and the stove will learn the remote control's new communication address. The learning process is also confirmed by 4 audio signals.

13-EMERGENCY PANEL

There is an emergency panel on the side-rear part of the stove, designed to detect any malfunctions and also for product control if the remote control is not working.



KEY

A - DISPLAY; indicates a series of information on the stove, as well as the identification code of any malfunction.

B - GREEN LED that indicates:

- OFF = Stove off
- FLASHING ON = Stove in ignition stage
- FIXED ON = Stove on

C - RED LED that indicates:

- OFF = Stove on
- ON WITH SLOW FLASHING = Stove in shutdown stage
- ON WITH FAST FLASHING = Stove in alarm conditions (combined with a beep sound for the first 10 minutes)
- FIXED ON = Stove off

D - Three-position selector for the following functions

- OFF = Stove switched off manually without remote control
- REMOTE = Stove controlled **exclusively** from the remote control
- ON = Stove switched on manually without the remote control

E - Three-position selector to select the power

- MIN = Selector to make the stove work at MINIMUM power without the remote control and with selector 4 on ON
- MED = Selector to make the stove work at MEDIUM power without the remote control and with selector 4 on ON
- MAX = Selector to make the stove work at MAXIMUM power without the remote control and with selector 4 on ON

F - Button for diagnostic functions relating to the operating status of the stove

G - Button to put the stove in communication with a new remote control (via the procedure explained below)



SELECTOR "D" MUST BE SET ON "REMOTE" TO MAKE THE STOVE OPERATE WITH THE REMOTE CONTROL.

14-SAFETY DEVICES

SAFETY DEVICES

The product is fitted with the following safety devices.

SMOKE TEMPERATURE PROBE

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

PELLET HOPPER TEMPERATURE PROBE

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

ELECTRICAL SAFETY

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

SMOKE FAN BREAKAGE

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

GEAR MOTOR BREAKAGE

If the gear motor stops, the product switches off and the relative alarm is signalled.

TEMPORARY POWER CUT

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

FAILED START-UP

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



TAMPERING WITH THE SAFETY DEVICES IS PROHIBITED.

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

15-ALARMS

ALARM ALERTS

In the event an operating anomaly occurs the stove starts switching off due to the alarm and informs the user of the type of fault that has taken place via a 3 digit code which stays displayed on the rear emergency panel.

The alarm is indicated permanently by the relative 3 digit code, by a flashing red LED that lights up on the emergency panel and an intermittent sound signal for the first 10 minutes of the alarm. Read the instructions in the following 2 paragraphs to cancel the alarm status and restore the normal operating mode of the stove.

The following table describes the possible alarms indicated by the stove, associated to the respective code that appears on the emergency panel and helpful tips to solve the problem.

MESSAGE ON DISPLAY	TYPE OF PROBLEM	SOLUTION
A01	The flame does not light	Check the level of pellets in the tank. Check that the brazier is correctly positioned in its seat and has no build-up or unburned material. Make sure the ignition plug warms up. Thoroughly empty and clean the brazier before restarting.
A02	The flame is goes out unexpectedly	Check the level of pellets in the tank. Check that the brazier rests correctly in its seat and has no visible deposits of unburned pellets.
A03	The temperature of the pellet hopper exceeds the required safety threshold. The structure overheats due to reduced heat dissipation.	The structure is too hot because the product has been used for too long at the maximum power or there is poor ventilation. When the product is sufficiently cold, press button B on the control panel or OFF on the remote control to cancel alarm A03. Once the alarm is cancelled, the product can be switched on normally.
A04	The temperature of the exhaust smoke has exceeded certain preset safety limits.	The stove switches off automatically. Let the stove cool down for a few minutes and then switch it on again. Check the smoke expulsion and the type of pellets used.
A05	Chimney flue clogged - wind - door open.	Check the smoke duct and make sure the door is closed.
	The smoke extractor fails to guarantee sufficient primary air, required for correct combustion.	Draught difficulties or brazier clogged. Check whether the brazier is clogged and clean it, if necessary. Check and if necessary clean the smoke duct and air inlet.
A08	Abnormal operation of smoke fan	Check cleanliness of the fumes fan compartment and check if dirt is blocking it. If this is not enough, the smoke fan is faulty. Contact an authorised service centre to have it replaced.
A09	The smoke probe is faulty and does not detect the exhaust smoke temperature properly.	Contact an authorised service centre to have the component replaced.

15-ALARMS

A11	Pellet supply fault	Contact an authorised service centre to have the component replaced.
A12	The remote control has been out of the reception range of the stove for over three hours (or the batteries are flat). NOTE: only in this case, the stove does not enter the shutdown stage due to an alarm, and continues to work in the mode set by the remote control via the last command.	Move the remote control within the reception range of the stove (or change the remote control batteries in the event they are flat). The alarm alerts will disappear as soon as the appliance receives a new signal from the remote control. A simple way of forcing signal transmission to the stove is by pressing button B (which changes the operating mode from manual to automatic and vice versa).
A13	Electronic control unit overheating	The structure is too hot because the product has been used for too long at the maximum power or there is poor ventilation. When the stove is sufficiently cold, press button B on the control panel or OFF on the remote control to cancel alarm A13. Once the alarm is cancelled, the product can be switched on normally.
A14	Faulty air flow rate sensor	This alarm does not block the stove, just a warning is displayed. Contact an authorised service centre to have the component replaced.
SER	Routine maintenance alert	When this flashing message appears upon start-up it indicates that the preset operating hours before maintenance is due have elapsed and that an MCZ qualified technician must be contacted for maintenance.

Exiting the alarm conditions

Follow the procedure described below to restore normal stove operation after an alarm has been triggered:

- Put selector D on the rear emergency panel on OFF for a few seconds, until the 3 digit alarm identity code disappears. The red LED stops flashing and the sound signal is silenced by performing the steps below.
- Put selector D back in the REMOTE position, to control the operation of the stove via the remote control.
- Switch off the remote control and switch it on again if one wants to restart the stove.



Only if alarm A12 is triggered (no communication between the remote control and the stove), the stove stay on according to the last mode set and automatically exits the alarm mode when the first signal is received from the remote control.

15-ALARMS

Mechanical stove block

The following conditions may cause the mechanical stove block:

- Structure overheating ("A03")
- Smoke overheating ("A04")
- During stove operation air has entered the combustion chamber or there is an obstruction in the chimney flue ("A05")

The block is signalled on the display and with a sound signal. In this situation the shutdown stage is activated automatically. When this procedure is started, any test operation to restore the system is useless. The display signals the cause of the blockage.

SOLUTIONS:

If "**A03**" appears: the structure is too hot because the product has been used for too long at the maximum power or there is poor ventilation. When the product is sufficiently cold, press button B on the control panel or **OFF** on the remote control to cancel alarm **A03**. Once the alarm is cancelled, the product can be switched on normally.

If "**A04**" appears: The stove switches off automatically. Let the stove cool down for a few minutes and then switch it on again. Check the smoke expulsion and the type of pellets used.

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 flue. (it is recommended that this operation is carried out by an MCZ qualified technician.

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

16-RECOMMENDATIONS FOR SAFE USE



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

We would like to inform you that we are aware of cases of malfunctioning of domestic pellet-fuelled heating products, mainly due to incorrect installation and inappropriate maintenance.

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

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

The combination of one or more of these factors could generate important malfunctioning conditions.

To keep this from occurring, it is fundamental to guarantee that the product is installed in compliance with standards in force.

Furthermore it is of the utmost importance to respect the following simple rules:

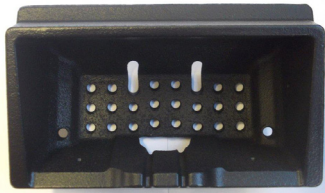
- Every time the brazier is removed for cleaning, it must always be put back properly in the work position before using the product, completely removing any residual filth left on the support base.
- Pellets must never be loaded in the brazier manually, either before ignition or during operation.
- The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

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

If the above-mentioned precautions are not taken, and during ignition the brazier is overloaded with pellets thus generating anomalous smoke in the combustion chamber, carefully follow the indications below:

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

17-CLEANING



EXAMPLE OF A CLEAN BRAZIER



EXAMPLE OF A DIRTY BRAZIER

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



CAUTION!

All the cleaning operations of all parts must be performed with the product completely cold and the plug disconnected.

Disconnect the product from the 230V power supply before performing any maintenance operation.

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

DAILY OR WEEKLY CLEANING PERFORMED BY THE USER

Brazier cleaning

Before ignition, always clean the “A” 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. **You may only use a vacuum cleaner to remove ash when it is completely cold.** In this case, use a suitable vacuum cleaner to remove small sized particles. .



REMEMBER THAT ONLY A CORRECTLY POSITIONED AND CLEAN BRAZIER CAN GUARANTEE IGNITION AND OPTIMAL OPERATION OF YOUR PELLET PRODUCT. IN CASE OF FAILED IGNITION AND AFTER ANY OTHER LOCK STATE OF THE PRODUCT, IT IS ESSENTIAL TO EMPTY THE BRAZIER BEFORE EVERY 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 pan cleaning

Remove and empty the “B” ash tray. Wipe away any residual ash before reinserting the pan. 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.**

CLEANING THE GLASS

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



ATTENTION!

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

17-CLEANING

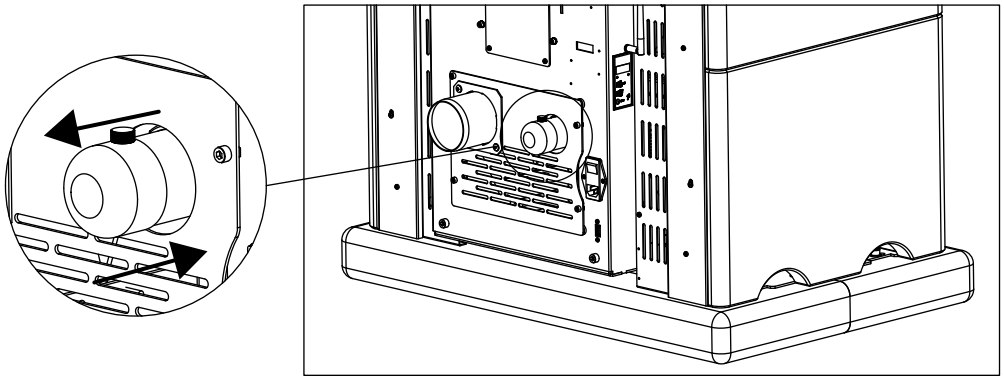
CLEANING THE AIR FILTER

When the stove is installed, one must fit the rear of the stove with the wire mesh air filter, whose purpose is to prevent dirt entering the motor body and the internal sensor.

It is recommended to check that the filter is clean every 15/20 days. If needed remove fluff or the material that has deposited on it.

Inspection and cleaning are required more frequently if there are pets in the house.

To clean, simply turn the knob that holds the filter on the air intake pipe and remove the filter by turning it in the direction indicated by the arrow. To clean it use a brush or a damp cloth or compressed air.



The filter is made of metallic mesh and is soft and flexible to the touch therefore, when cleaning, be careful not to crush or damage it. In the event of breakage it must be replaced.

ATTENTION!

Never let the stove work without the air filter fitted. MCZ cannot be held liable for any damage caused to the internal components if this requirement is not complied with.

17-CLEANING

PERIODIC CLEANING PERFORMED BY A QUALIFIED TECHNICIAN CLEANING THE HEAT EXCHANGER AND THE LOWER COMPARTMENT

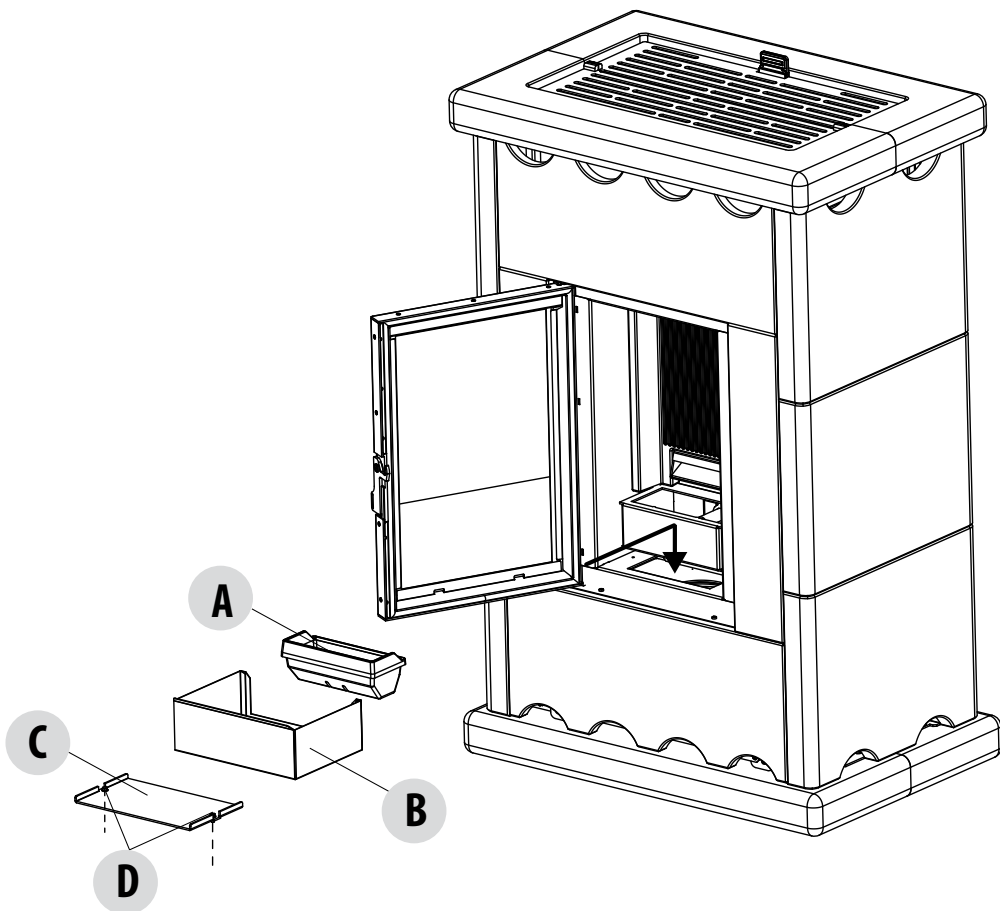
Half-way through the winter season, **but especially at the end**, the compartment through which the exhaust smoke passes will need to be cleaned.

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.

CLEANING THE LOWER COMPARTMENT

Open the stove door, remove brazier "A" and clean around it. After that, extract ash drawer "B", remove the two screws "D" and then plate "C". Clean everything with the vacuum cleaner and reassemble the parts. If necessary replace the gasket underneath plate "C".

We recommend performing this operation after cleaning the upper exchanger.



LOWER COMPARTMENT CLEANING

17-CLEANING

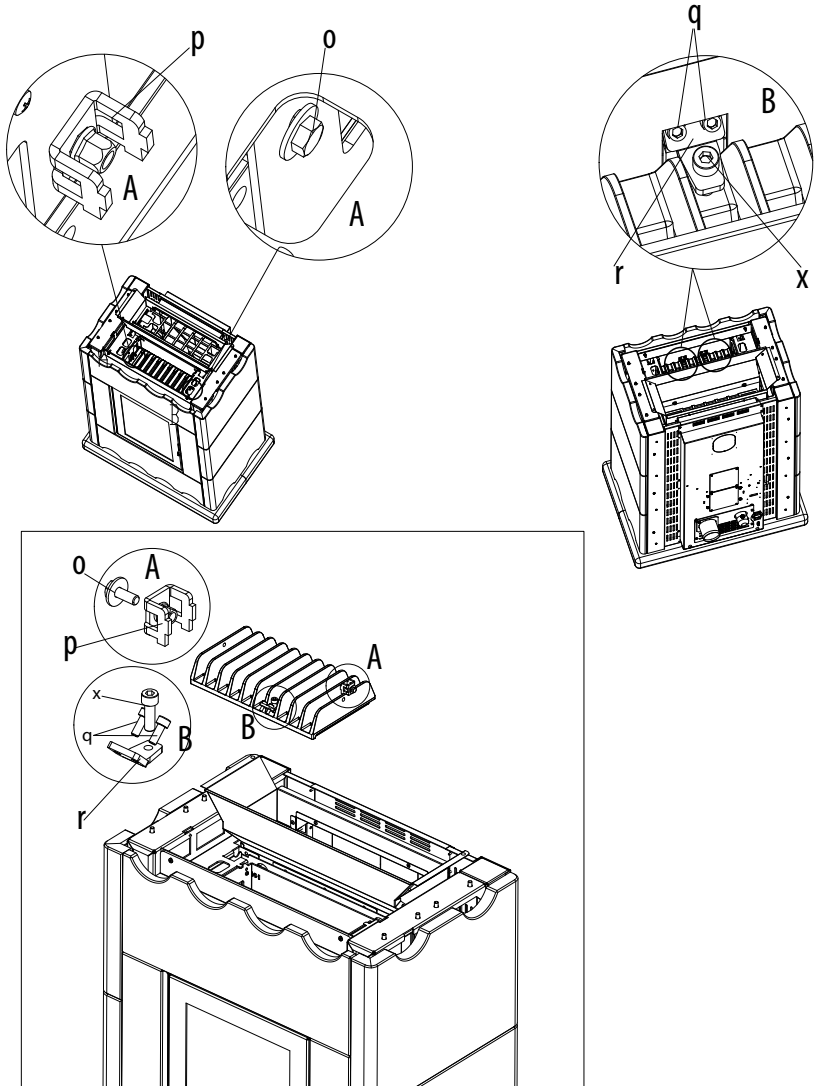
CLEANING THE EXCHANGER

Remove the top when the stove is cold. Next, at the front of the stove, near the exchanger, remove plates "r" by loosening screws "q" and loosening screw "x". On the side of the exchanger, loosen screws "o" and remove plates "p" (one on the right and one on the left). If needed replace the gasket.



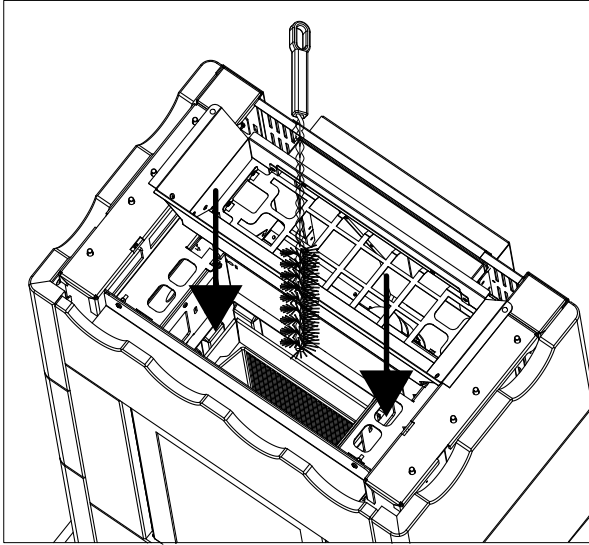
ATTENTION!

Correctly replace the gasket.



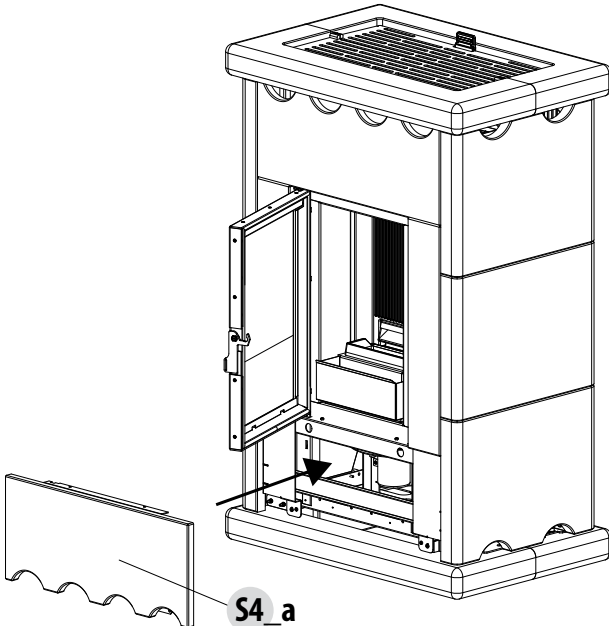
17-CLEANING

The exchanger can now be lifted and the walls of the hearth can be scraped with a stiff rod or a bottle brush, so that the dirt falls into the lower compartment.



CAUTION:
the exchanger must be cleaned at the end of the season by an authorised and qualified technician so that any worn seals may be replaced.

FAN MAINTENANCE



To access the fan it is required to remove the stone panel underneath the door.
To remove the lower plate, see the specific chapter in section 6 of this manual.

17-CLEANING

CLEANING THE SMOKE EXHAUST SYSTEM AND GENERAL CHECKS

Clean the smoke extractor system, especially around the "T" joints, elbows and any horizontal sections of the smoke duct. For information on periodically cleaning the flue, contact a skilled chimney sweep.

Check the seal of the ceramic fibre gaskets on the door of the stove. If necessary, order new replacement seals from the retailer or contact an authorized service centre to carry out this task.



CAUTION:

The frequency with which the smoke outlet system is cleaned depends on the use of the boiler and the type of installation.

We recommend relying on an authorised service centre for end-of-season cleaning and maintenance, as they will carry out all of the previously mentioned work and inspect the stove components.

17-CLEANING

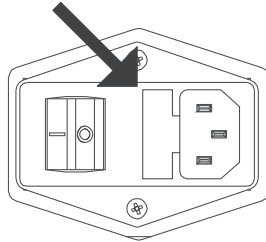
END-OF-SEASON SHUTDOWN

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 with a long pipe.

When not in use the appliance must be disconnected from the mains power supply. It is recommended to remove the power cable for additional safety, especially in the presence of children.

The service fuse may have to be replaced if the control panel display does not switch on when the product is switched on again by pressing the main switch on its side.

There is a fusebox on the side of the product, near the power socket. Open the fusebox cover with a screwdriver and replace the fuses if necessary (3.15 A delayed) - seek assistance from an authorised and qualified technician.



CHECKING THE INTERNAL COMPONENTS



ATTENTION!

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

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

PARTS/INTERVAL	1 DAY	2-3 DAYS	15/20 DAYS	1 YEAR
Brazier	•			
Ash pan	•			
Glass		•		
Upper exchanger				•
Lower exchanger				•
Smoke duct				•
Gaskets				•
Air filter			•	
Remote control battery				•

18-FAULTS/CAUSES/SOLUTIONS



ATTENTION!

All repairs must only be carried out by a specialised technician, with the product switched off and the plug disconnected.

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The pellets are not fed into the combustion chamber.	The pellet hopper is empty.	Fill the hopper with pellets.
	Sawdust has blocked the feed screw.	Empty the hopper and remove the sawdust from the feed screw by hand.
	Faulty gear motor.	Replace the gear motor.
	Faulty circuit board.	Replace the circuit board.
The fire goes out or the boiler stops automatically.	The pellet hopper is empty.	Fill the hopper with pellets.
	The pellets are not fed.	See the previous anomaly.
	The pellet temperature safety probe has been triggered.	Let the product cool down, restore the thermostat until the lockout is off and switch the appliance back on. If the problem persists contact Technical Assistance.
	Chrono active.	Check if the chrono setting is active.
	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.	Check the flow of fuel following the instructions in the manual.
	The combustion chamber is dirty.	Clean the combustion chamber, following the instructions in the manual.
	Clogged outlet.	Clean the smoke duct.
	Faulty smoke extraction motor.	Check the motor and replace it, if necessary.

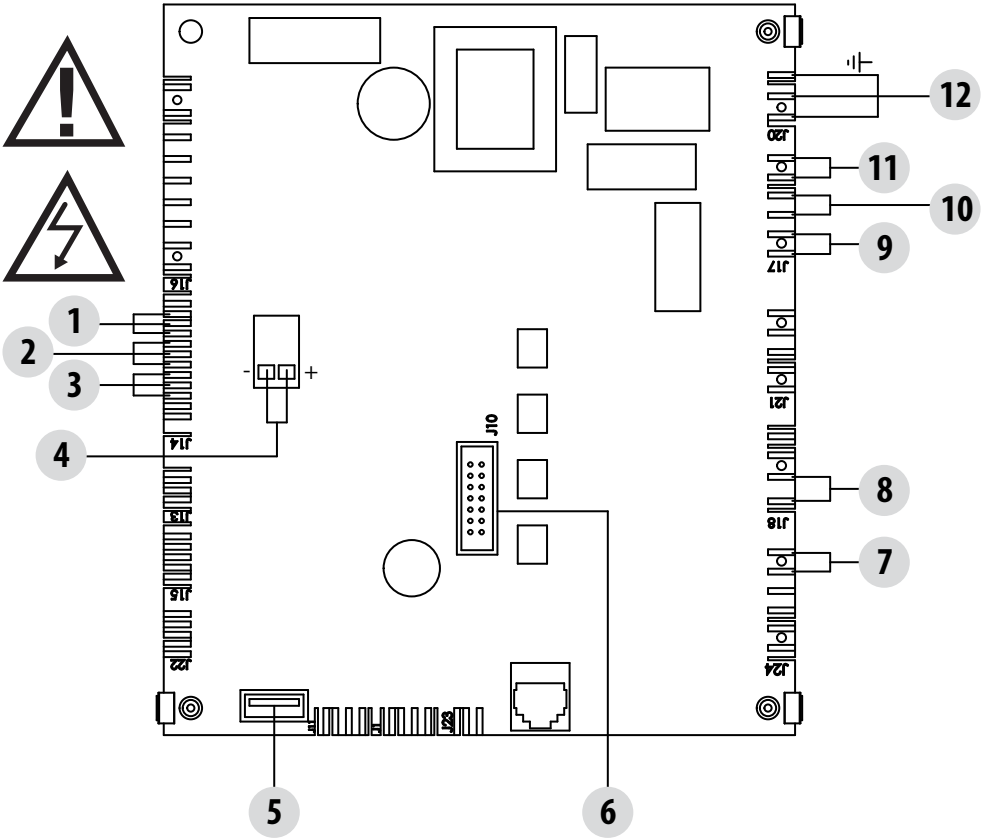
18-FAULTS/CAUSES/SOLUTIONS

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The product works for a few minutes and then switches off.	Start-up phase is not completed.	Repeat start-up.
	Temporary power cut.	Switch it back on.
	Clogged smoke duct.	Clean the smoke duct.
	Faulty or malfunctioning temperature probes.	Check and replace the probes.
Pellets accumulate in the brazier, the glass of the door gets dirty and the flame is weak.	Insufficient combustion air.	Make sure that the air inlet in the room is fitted and clear. Clean the brazier and check that all the holes are clear. Perform a general cleaning of the combustion chamber and the smoke duct. Check the condition of the door gaskets.
	Damp or unsuitable pellets.	Change the type of pellets.
	Faulty smoke evacuation motor.	Check the motor and replace it, if necessary.
The smoke evacuation motor does not work.	No electrical supply to the stove.	Check the mains voltage and the protection fuse.
	The motor is faulty.	Check the motor and capacitor and replace them, if necessary.
	Defective circuit board.	Replace the circuit board.
	The control panel is broken.	Replace the control panel.
The convection air fan never stops.	Thermal probe defective or faulty.	Check the probe and replace it, if necessary.
	Fan faulty.	Wait a few minutes and check motor operation, replace it if necessary.
	The product has not reached the shutdown temperature yet.	Wait.

18-FAULTS/CAUSES/SOLUTIONS

ANOMALY	POSSIBLE CAUSES	SOLUTIONS
The air fan does not switch on.	The product has not reached the temperature.	Wait.
The remote control does not work.	The remote control battery is flat.	Replace the battery.
	Remote control faulty.	Replace the remote control.
The product always runs at maximum power when in automatic mode.	The room thermostat is in the maximum position.	Reset the temperature of the remote control.
	Malfunctioning temperature probe.	Check the probe and replace it if necessary.
	Faulty or malfunctioning control panel.	Check the panel and replace if necessary.
The product does not switch on.	No power supply.	Check that the plug is inserted and the main switch is in the "I" position.
	Fuse tripped due to a fault.	Replace the fuse with one of the same characteristics (5x20 mm T 3.15A).
	Check the brazier.	Clean the brazier and remove any deposits or residues of non-burned pellets.
	Check the position of the brazier.	Put the brazier back in its place.
	Check that the ignition plug warms up.	Check and if necessary, replace.
	Clogged smoke outlet or smoke duct.	Clean the smoke exhaust and/or the smoke duct.
	Faulty ignition plug.	Replace the ignition plug.

19-CIRCUIT BOARD



MOTHERBOARD WIRING KEY

1. SMOKE FAN ENCODER	8. AIR FAN
2. GEAR MOTOR ENCODER	9. GEAR MOTOR
3. PRESSURE TRANSDUCER	10. SMOKE FAN
4. SMOKE TEMPERATURE PROBE	11. SPARK PLUG
5. SOFTWARE UPDATE	12. SWITCH
6. EMERGENCY PANEL	
7. HOPPER OVERLOAD CUT-OUT	

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

ARCO

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