# **INSTALLATION GUIDE**



SEALED PELLET STOVE

# **CURVE COMFORT AIR 8 M1**

# **PART 1 - REGULATIONS AND ASSEMBLY**

**Instructions in English** 





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

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

#### CARE OF THE MANUAL AND HOW TO CONSULT IT

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

#### SYMBOLS USED IN THE MANUAL

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

# A 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 alcohol, petrol, liquid fuel for lanterns, diesel, bioethanol, fluids for lighting charcoal or similar liquids to light/rekindle the flame in these devices. Keep these flammable liquids well away from the appliance when in use.
- Do not put any fuel other than wood pellets in the hopper.
- The instructions provided in this manual must always be complied with to ensure the product and any electronic appliances connected to it are used correctly and accidents are prevented.
- This appliance can be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance shall not be carried out by children without supervision.
- The user, or whoever is operating the product, must read and fully understand the contents of this installation guide before performing any operation. Errors or incorrect settings can cause hazardous conditions and/or poor operation.
- Do not climb on or lean on the product.

- Do not put linen on the product to dry. Any drying racks or similar objects must be kept at a safe distance from the product. **Fire hazard.**
- All liability for improper use of the product is entirely borne by the user and relieves the Manufacturer from any civil and criminal liability.
- Any type of tampering or unauthorised replacement with non-original spare parts could be hazardous for the operator's safety and relieves the company from any civil and criminal liability.
- Many of the surfaces of the product get very hot (door, handle, glass, smoke extraction pipes, etc.). Avoid coming into contact with these parts without adequate protective clothing or suitable means, such as gloves with thermal protection or "cold handle" operating systems.
- It is forbidden to operate the product with the door open or the glass broken.
- The doors/covers on the appliance must remain closed when it is not used.
- The product must be powered by an electrical system that is equipped with an effective earthing device.
- Switch the product off in the event of a fault or malfunction.
- Accumulated unburned pellets in the burner after each "failed start-up" must be removed before lighting again. Check that the burner is clean and positioned properly before lighting again.
- 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.
- Assess the static conditions of the surface on which the weight of the product will rest and provide suitable insulation if it is made of flammable material (e.g. wood, fitted carpet or plastic).
- Live electrical parts: only power the product once it has been fully assembled.
- Disconnect the product from the 230V power supply before performing any maintenance operation.
- Improper use or poor maintenance of the product can cause hazardous situations to arise.
- <u>It is forbidden to manually load the fuel into the brazier. Failure to</u> <u>follow this warning can lead to hazardous situations.</u>
- 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.

#### **INFORMATION:**

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

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

#### **INTENDED USE**

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

#### **PRODUCT PERFORMANCE CHECKS.**

All our products undergo ITT tests carried out by a notified laboratory (system 3) and in accordance with (EU) regulation number 305/2011 "Construction products", according to standard EN 14785:2006 (pellets) and "Machinery Directive" EN 303-5 (boilers). In the case of tests for any market surveillance or inspections by third parties, please consider the following warnings:

- to reach the declared performance levels, the product must perform an operating cycle of at least 15/20 hours beforehand.
- use the average draught of the combustion smoke specified in the "technical product features" table.
- the type of pellets used must comply with current EN ISO 17225-2 regulations.
- the amount of fuel may vary according to the length and calorific value of the fuel. This may require some adjustments to stay in line
  with the hourly consumption specified in the "technical product features" table. A1 pellets ensure an overall calorific value within
  tight margins compared to the test pellets used. However, size considerably influences performance, so on average it must not be
  less than 24 mm long and with a 6mm diameter.
- in the case of a wood-burning product, check the correct residual moisture content of the fuel, which must not be less than 12% or more than 20%. As the moisture increases, different combustion air settings are required. The settings are to be carried out via the combustion air register, thereby modifying the mixture between primary and secondary air.
- it is necessary to check the operation of devices that can affect performance (for example air fans or electrical safety devices) in case
  of damage due to handling.
- maximum performance can be achieved at the maximum flame and ventilation power.
- strictly comply with the withdrawal points specified in regulations both in terms of emissions and temperature.

#### WARRANTY CONDITIONS

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

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

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

We recommend 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.

#### **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.

#### **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.

Information for management of waste electrical and electronic equipment containing batteries and accumulators



This symbol appears on the product, on the batteries, on the accumulators or on their packaging or on their documentation; it indicates that the product and the batteries or the accumulators included must not be collected, recycled or disposed of with household waste at the end of their service life.

Improper management of waste electrical and electronic equipment, batteries or accumulators can cause the hazardous substances contained within to leak out. In order to safeguard the environment and health, the user is required to separate this equipment, and/or the batteries or accumulators included, from other types of waste and take them to the local collection centre. The distributor can be asked to collect the waste electrical and electronic equipment under the conditions and according to the procedures laid down by Legislative Decree 49/2014.

Separate collection and correct treatment of waste electrical and electronic equipment, batteries and accumulators contribute to conserving natural resources, respect for the environment and ensure the protection of health.

For more information on collection centres for waste electrical and electronic equipment, batteries and accumulators, contact the competent public Authorities for issue of the authorisations.

#### WHY A SEALED STOVE?

Products constructed with a perfectly sealed structure do not consume the room's oxygen but draw all the air form the outer environment (if suitably ducted) and may therefore be installed in all dwellings that require a high degree of insulation such as "passive" or "high energy efficiency" houses. Thanks to this technology there is no risk of smoke emissions in the room, hence no air intakes and relevant aeration grilles are required in the installation premises.

Consequently, there will be no more drafts of cold air in the room, which make it less comfortable and reduce the overall efficiency of the system. The sealed stove may even be installed in the presence of forced ventilation or in premises that might have negative pressure with respect to the outside.



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 5 and 30 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-guality wood has a calorific value of 4.4 kW/kg (15% moisture, after about 18 months of seasoning), whereas that of pellets is 4.9 kW/kg. To ensure good combustion, the pellets must be stored in a dry place and protected from dirt. Pellets are usually supplied in 15 kg bags, therefore, storing them is very convenient.

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



15 Kg BAG OF FUEL



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

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

- calorific value: 4.6 ÷ 5.3 kWh/kg. .
- Moisture content:  $\leq 10\%$  of the weight.
- Percentage of ash: max 1.2% of the weight (A1 less than 0.7%).
- Diameter:  $6\pm 1/8\pm 1$  mm.
- Length:  $\leq$  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.

#### FOREWORD

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

In particular one must ensure that:

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

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

In the event there are several appliances installed, the external air inlet must be sized accordingly.

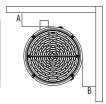
#### **MINIMUM DISTANCES**

It is recommended to install the stove detached from any walls and/or furniture, with a minimum clearance to allow effective aeration of the appliance and a good distribution of heat in the room. Observe the distances from flammable or heat-sensitive objects (sofas, furniture, wood panelling, etc..) as specified. The front distance from inflammable materials must be at least 80 cm. 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.

	Non-flammable walls	Flammable walls
CURVE COMFORT AIR 8 M1	A = 10  cm B = 15  cm	A = 12 cm B = 20 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).

#### 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.

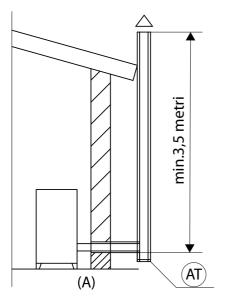
#### **SMOKE FLUE**

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.

(\*) unless there are national derogations (for instance in Germany), which under suitable conditions allow for the installation of several appliances in the same fireplace. In any case, strictly follow the product/installation requirements of the relative regulations/legislation in force in that country



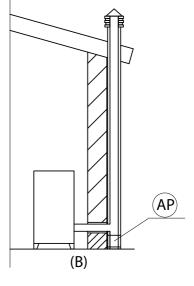


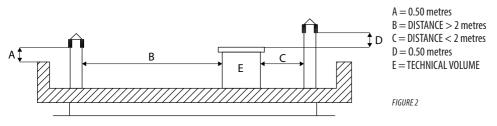
FIGURE 1 - SMOKE FLUE

#### **TECHNICAL CHARACTERISTICS**

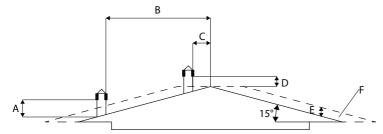
Have the efficiency of the flue checked by an authorised technician.

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

#### **FLAT ROOF**

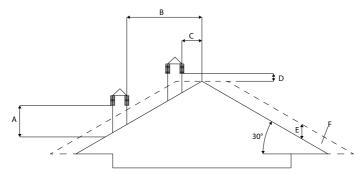


ROOF AT 15°



 $\begin{array}{l} A = MIN. 1.00 \mbox{ metres} \\ B = DISTANCE > 1.85 \mbox{ metres} \\ C = DISTANCE < 1.85 \mbox{ metres} \\ D = 0.50 \mbox{ metres} \mbox{ above highest} \\ point \\ E = 0.50 \mbox{ metres} \\ F = REFLUX \mbox{ ZONE} \end{array}$ 

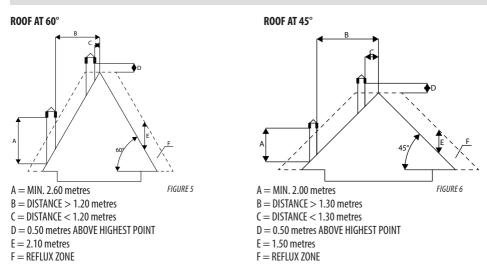
ROOF AT 30°



 $\begin{array}{l} A = \text{MIN. 1.30 metres} \\ B = \text{DISTANCE} > 1.50 metres} \\ C = \text{DISTANCE} < 1.50 metres} \\ D = 0.50 metres} \\ ABOVE \\ HIGHEST POINT \\ E = 0.80 metres \\ F = REFLUX ZONE \end{array}$ 

FIGURE 4

FIGURE 3



#### DIMENSIONING

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

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

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

POOR

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.

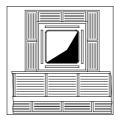
Avoid products with an internal rectangular section where the larger side is 1.5 times the smaller side (e.g. 20x40 or 15x30).

#### EXCELLENT









#### VERY POOR



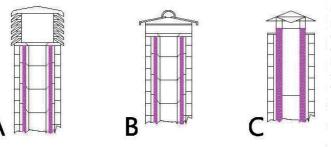
#### MAINTENANCE

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

Failure to clean the system jeopardises the safety.

#### CHIMNEY

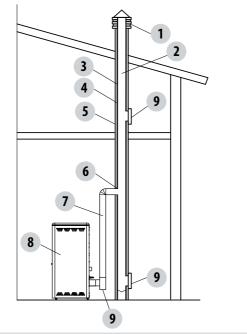
The chimney is a crucial element for the heating appliance to work properly: we recommend a wind proof chimney (A), see Figure 7. The area of the opening for smoke extraction must be at least double the cross-section of the smoke duct/flue system, and arranged so



that smoke extraction is ensured even in strong wind. The chimney must prevent rain, snow or animals from entering the chimney. The height of outflow into the atmosphere must be beyond the reflux zone created by the shape of the roof or any obstacles near the outlet (see Figures 2-3-4-5-6).

FIGURE 7

#### **CHIMNEY COMPONENTS**



KEY: (1) CHIMNEY (2) 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

#### **EXTERNAL AIR INLET**

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

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

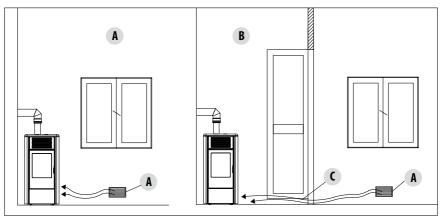


FIGURE 9 A - DIRECTLY FROM OUTSIDE

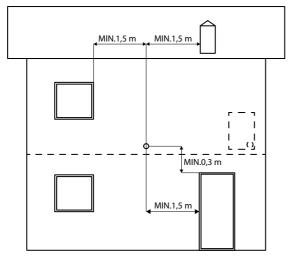


FIGURE 9 B - INDIRECTLY FROM THE ADJACENT ROOM

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

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

FIGURE 10

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

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).

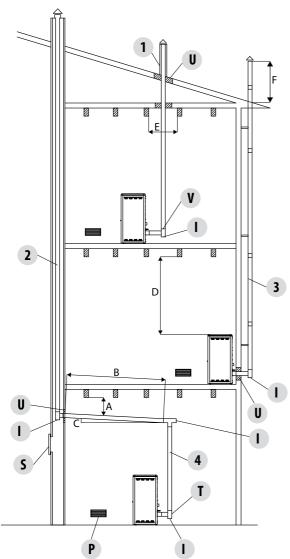
TYPE OF DEVICE	SMOKE DUCT
Minimum vertical length	1.5 metres
Maximum length (with 1 accessible 90° bend)	6.5 metres
Maximum length (with 3 accessible 90° bends)	4.5 metres
Maximum number of accessible 90° bends	3
Horizontal sections (minimum incline 3%)	4 metres

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 cowling. It is prohibited to extract the products of combustion directly through the wall, whether into indoor spaces or outdoors.

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

#### **EXAMPLES OF CORRECT INSTALLATION**



**1.** Installation of Ø150mm flue with hole for the passage of the tube increased by:

minimum 100 mm around the tube if next to non flammable parts such as cement, brick, etc.; or

minimum 300 mm around the tube (or as prescribed by data tags) if next to flammable parts such as wood etc.

In both cases, install suitable insulation between the flue and the ceiling.

Always check and respect the data tags on the flue, in particular the minimum safety distances from combustible materials.

The previous rules also apply for holes made in walls.

**2.** Old flue, minimum pipe Ø100mm with the inclusion of an external access door for chimney cleaning.

**3.** External flue made of insulated stainless steel pipes, i.e. with double walls minimum Ø100mm: all securely mounted on the wall. With wind-proof 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

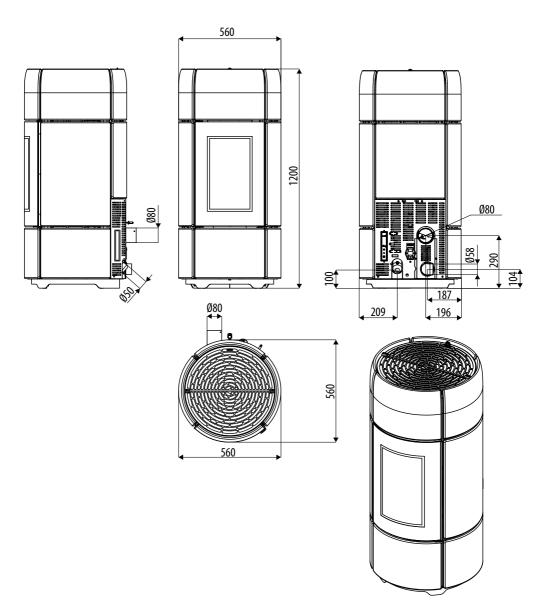
U = INSULATING

V = ANY REDUCTION FROM 100 TO 80 MM

- I = INSPECTION CAPS = INSPECTION ACCESS PANEL
- S = INSPECTION ACCESS PANE P = AIR INLET
- P = AIR INLEI
- T = T JOINT WITH INSPECTION CAP
- A = MINIMUM 40 MM
- B = MAXIMUM 4 M
- $C = MINIMUM 3^{\circ}$ D = MINIMUM 400 MM
- E = HOLE DIAMETER
- F = SEE FIG.2-3-4-5-6

# **DRAWINGS AND CHARACTERISTICS**

### **CURVE COMFORT AIR 8 M1 STOVE DIMENSIONS**



## **3-DRAWINGS AND TECHNICAL FEATURES**

TECHNICAL CHARACTERISTICS	CURVE COMFORT AIR 8 M1
Energy Efficiency Class	A+
Nominal output power	8,1 kW (6966 kcal/h)
Minimum power output	2,3 kW (1978 kcal/h)
Efficiency at Max	90,9%
Efficiency at Min	92,6%
Temperature of exhaust smoke at Max	188 °C
Temperature of exhaust smoke at Min	89 °C
Particulate /OGC / Nox (13%0,)	17 mg/Nm3 - 1 mg/Nm3 - 142 mg/Nm3
CO at 13% $O_2$ at Min and at Max	0,043 - 0,002%
$CO_2$ at Min and at Max	6,4% - 14,0%
Recommended draught at Max*** power	0,10 mbar - 10 Pa***
Minimum draft allowed at minimum power	0,05 mbar - 5 Pa
Smoke mass	4,3 g/sec
Hopper capacity	32 litres
Type of pellet fuel	Pellet diameter 6 mm and size 3/40 mm
Pellet hourly consumption	Min ~ 0,5 kg/h* - Max ~ 1,8 kg/h*
Autonomy	At min ~ 40 h* - At max ~ 11 h*
Heatable volume m <sup>3</sup>	174/40 – 199/35 – 232/30 **
Combustion air inlet	Ø 50 mm
Smoke outlet	Ø 80 mm
Air intlet	80 cm <sup>2</sup>
Rated electrical power (EN 60335-1)	81 W (Max 380 W)
Supply voltage and frequency	230 Volt / 50 Hz
Net weight	170 kg
Weight with packaging	180 kg
Distance from combustible material (rear\sides\floor):	120/200/0 mm
Distance from combustible material (ceiling\front):	800/1000 mm

\* Data that may vary depending on the type of pellets used \*\* Volume that can be heated, according to the power requirement per m<sup>3</sup> (respectively 40-35-30 Kcal/h per m<sup>3</sup>) \*\*\*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 with the stove structure and one with the ceramic 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.

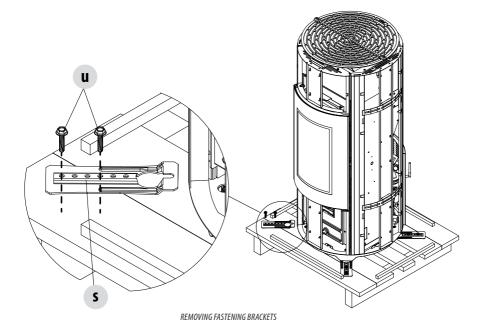




CURVE STOVE STRUCTURE PACKAGING

CURVE STOVE CERAMIC CLADDING PACKAGING

## **4-UNPACKING**



To remove the stove from the pallet, you must remove the two screws "u" and plate "s" from the stove's foot. There are four brackets "s".

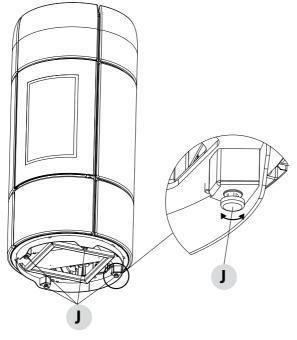
## **4-UNPACKING**

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 COUNTER CLOCKWISE TO RAISE THE STOVE

On delivery, the Curve stove has no ceramic cladding, as shown in the image below. The fixing brackets are in part already mounted on the structure and in part on the ceramics (see explanations below).

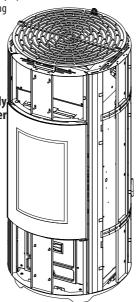
Take the box with the ceramics (figure below) and prepare them for installation. The ceramic surfaces are to be assembled to the structure in accordance with the indications on the following

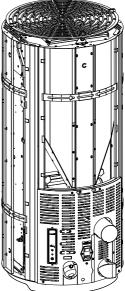
 $\triangle$ 

pages.

Live electrical parts: only power the product after completing assembly.

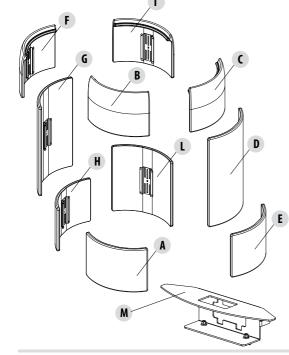
STOVE WITHOUT CLADDING





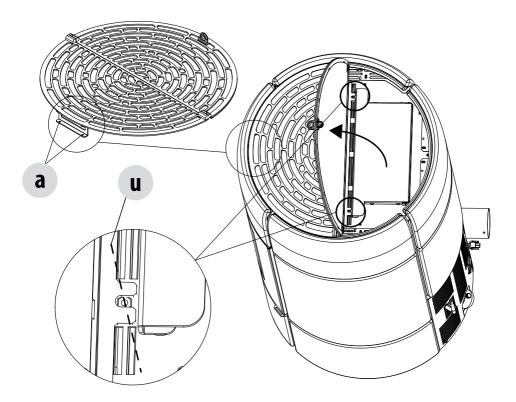
The ceramics are delicate, therefore handle with care.

POS.	DESCRIPTION	No.
A-E-H	BOTTOM CERAMIC PANELS	3
B-C-F-I	TOP CERAMIC PANEL	4
D-G	SIDE CENTRAL CERAMIC PANEL	2
L	BOTTOM REAR PANEL	1
k	SCREWS TO FIX THE CERAMIC PANELS (not reported in the drawing to the side)	40
М	TEMPLATE TO FIX THE CERAMIC PANELS	1



#### **DISASSEMBLING THE TOP**

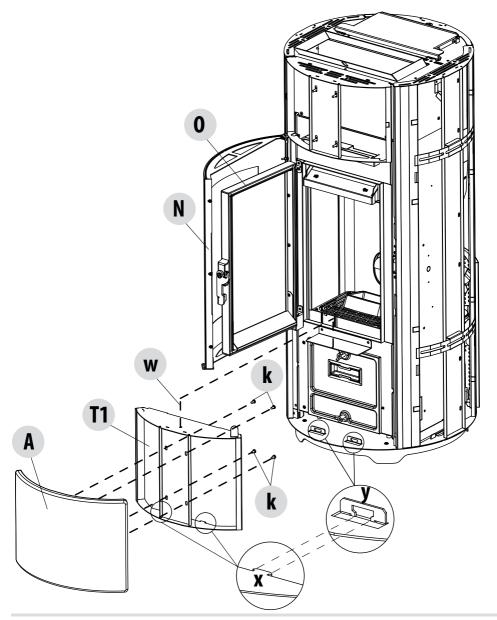
The top is centrally secured to the structure via two "u" screws. Lift the door on the tank side (rear semicircle) and remove the two "u" screws. At the front instead, the bracket on the top must be placed on the structure of the stove via two rubber pads ("a"). Ensure the top is placed safely until the ceramic cladding is installed.



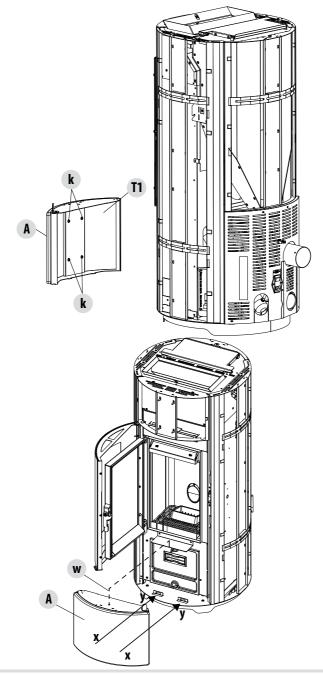
#### **INSTALLING THE FRONT LOWER PANEL**

To assemble the ceramic panel proceed as follows:

- • open decorative door "N" and also firebox door "O" (see opening instructions)
- • remove frame "T1" from the structure by also taking out screw "w", lifting frame "T1" so that the two joints "x" come out of holes "y" in place on the stove's structure
- • then take ceramic panel type "A" and secure it to frame "T1" with the four screws ("k") supplied with the ceramic panels.



now take frame assembly "T1" and ceramic panel "A" and place the latter on the structure by inserting the two joints "x" in the holes
on structure "y". Secure everything to the structure with screw "w".



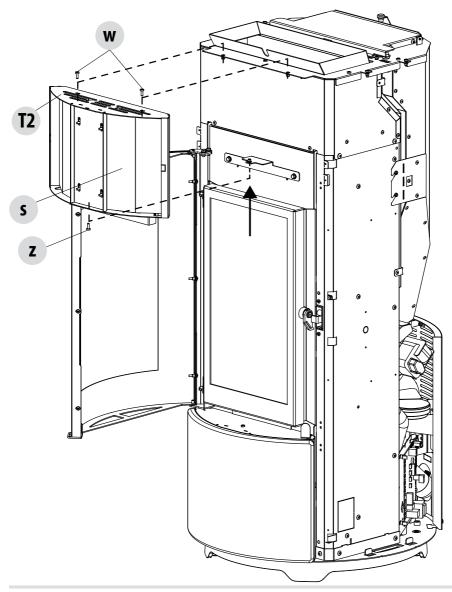
#### **INSTALLING THE FRONT UPPER PANEL**

The assembly procedure is similar to the previous one:

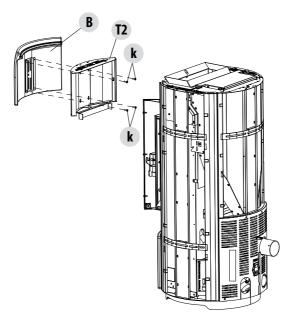
- from the structure, remove frame "T2" by taking out the two screws "w" at the top and screw "z" from below.
- a protection for ceramic panel "s" is secured to frame "T2" and fixed with two screws
- to secure ceramic panel "B", eliminate the two screws and continue by following the instructions and using the screws supplied with the ceramic panel

 $\underline{\mathbb{A}}$ 

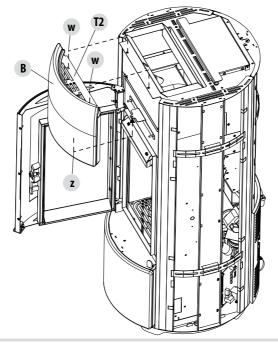
Attention! To position the top ceramic panel, use template "M" supplied (see explanation in the following pages).



take ceramic panel type "B" and secure it to frame "T2" with the four screws ("k") supplied with the ceramic panels.



now take the frame assembly "T2" and ceramic panel "B" and place back the latter on the structure via the two screws "w" at the top and the "z" screw at the bottom (to be secured under the ceramic panel)

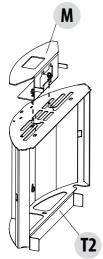


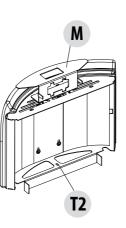
#### HOW TO USE THE TEMPLATE TO SECURE THE TOP FRONT CERAMIC PANEL

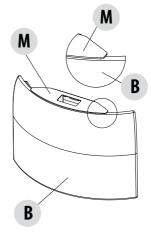
After removing frame "T2" from the structure of the stove, in line with the instructions reported in the above paragraph, take template "M" to position the ceramic panel and secure it at the top of frame "T2" with the screws supplied.

As described above, secure ceramic panel "B" to frame "T2" by ensuring that the top of the ceramic panel rests against template "M". After mounting ceramic panel "B", remove template "M", which will be used for the other ceramic panels.

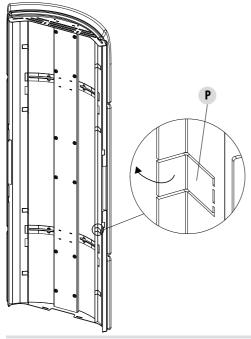
Secure the frame with the ceramic panel to the stove, as specified in the instructions.







**CERAMIC ADJUSTMENT FLAPS** 



The frame of the ceramic panels is fitted with flaps ("P"), which are required to ensure the ceramic parts remain in place and that during operation they do not generate vibrations.

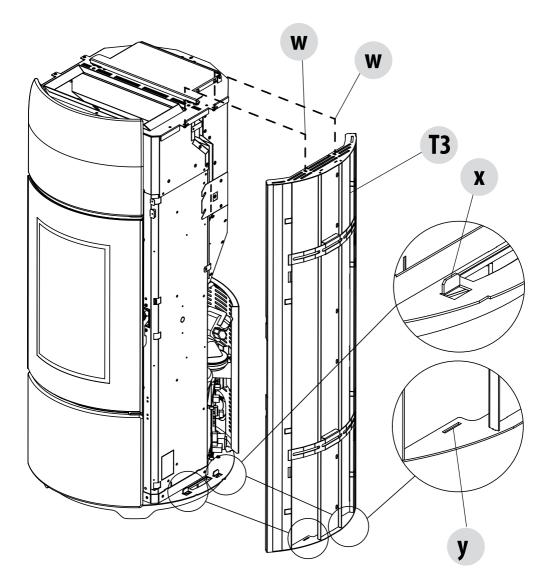
Try and mount the ceramic panels as described in these pages. If the panel remains loose in relation to the frame, push out flaps "P" so that they touch the ceramic surface, thereby ensuring the ceramic panels remain fixed in place.

#### SIDE PANEL ASSEMBLY

Attention! The frame features slotted holes, thereby allowing for a slight adjustment of the ceramic panels. A template will be provided to the customer to position the ceramic panels from above.

Proceed as follows:

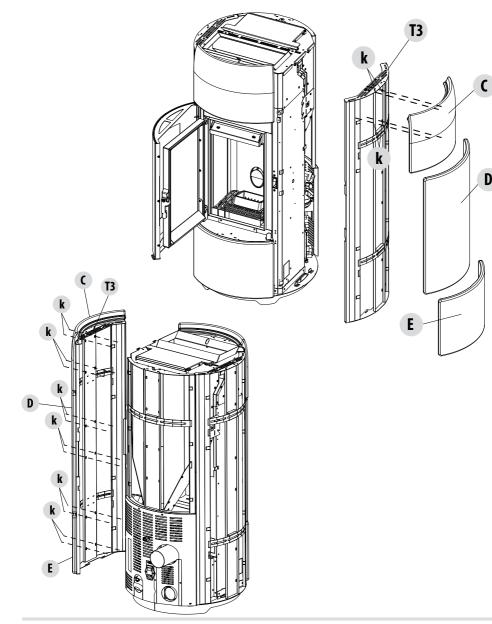
- from the structure, remove frame "T3" by taking out the two screws "w"
- Lift frame "T3" so that holes "y" on the frame can come out from hooks "x" on the structure



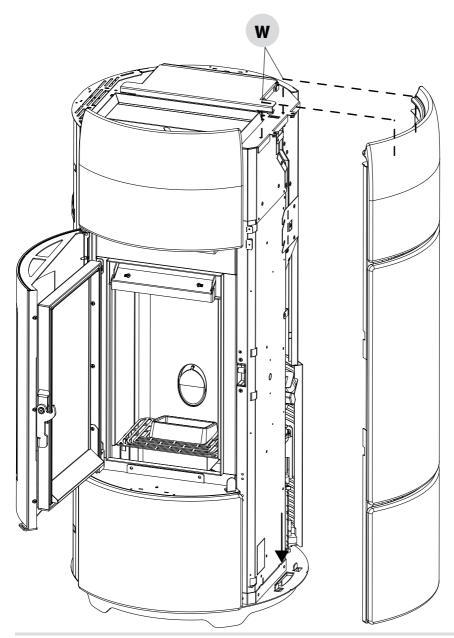
- now take a type "C" ceramic panel, position it on the frame with the template supplied and secure it to frame "T3".
- try and place back frame "T3" with the first ceramic surface "C" and ensure it is aligned with top front ceramic surface "B"; if they are not aligned, go ahead with a new adjustment

D

- then secure ceramic panel type "D" and type "E" by again using the positioning template
- secure ceramic panels "D" and "E" with screws "k" supplied
- try and fit the frame on the structure again and adjust ceramic panel "D" and "E" if necessary



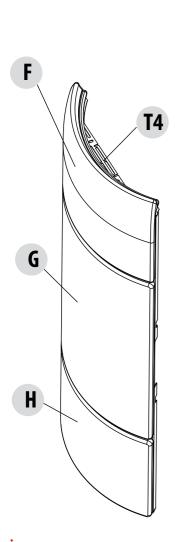
- with the ceramic panels mounted, go ahead with the final fixing to the structure
- at the bottom, insert the holes of the frame of the ceramic panels to the hooks on the structure and go ahead with the fixing with the two screws "w" at the top

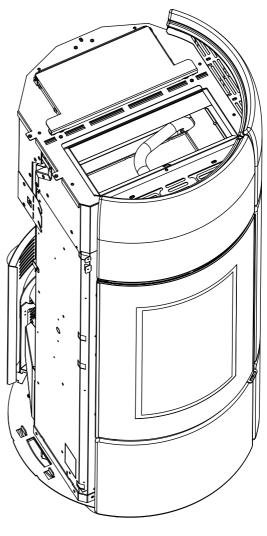


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Proceed in the same way also for the panel on the left-hand side of the stove:

- remove frame "T4" from the stove
- secure ceramic panels "F", "G" and "H" by taking into account the adjustments for an alignment with the other ceramic surfaces already installed





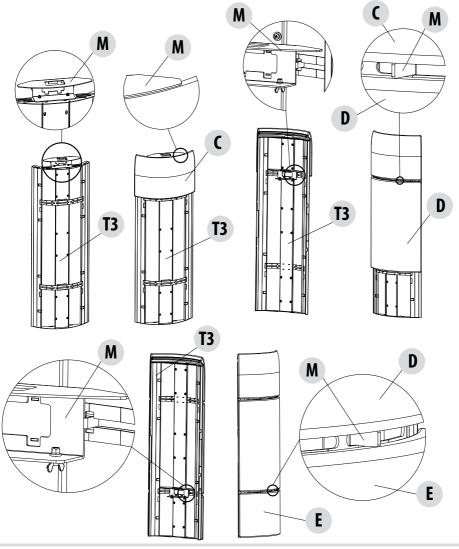
#### HOW TO USE THE TEMPLATE TO SECURE THE SIDE CERAMIC PANEL (same procedure for the right and left panel)..

#### Attention! With template "M" start to position the first ceramic panel at the top.

After removing frame "T3" from the structure of the stove, in line with the instructions reported in the above paragraph, take template "M" to position the ceramic panel and secure it at the top of frame "T3" with the screws supplied.

As described above, secure ceramic panel "C" to frame "T3" by ensuring that the top of the ceramic panel rests against template "M". Remove template "M" and place it under ceramic panel "C". Then place ceramic panel "D" on the panel and secure it. Then remove template "M" again and position it under ceramic panel "D" to fix it to ceramic panel "E" with the same system. Remove template "M" to fix the next ceramic panels.

Secure the frame with the ceramic panel to the stove, as specified in the instructions.



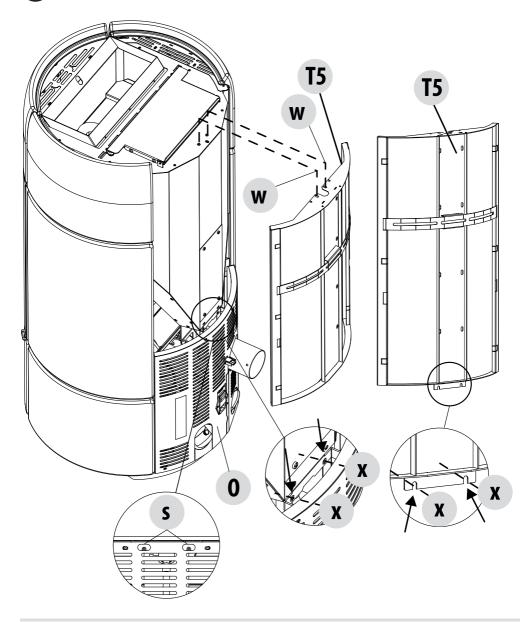
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#### **REAR PANEL ASSEMBLY**

- Remove frame "T5" from the structure by taking out the two screws "w" at the top and loosen the two screws "x" at the bottom
- lift frame "T5" from the structure of the stove and remove it

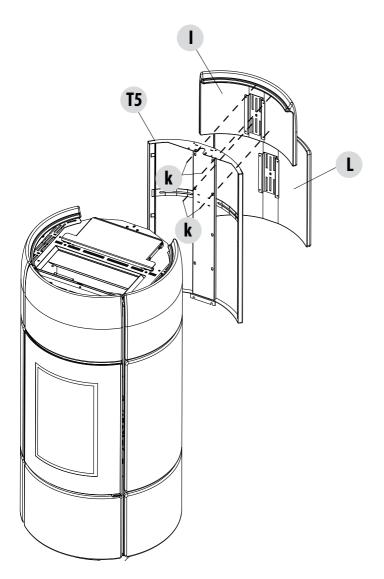


NOTE: there is no need to remove panel "0" to remove panel "T5". On panel "0" there are two holes that can be used for loosening and two screws "x" to take out panel "T5".



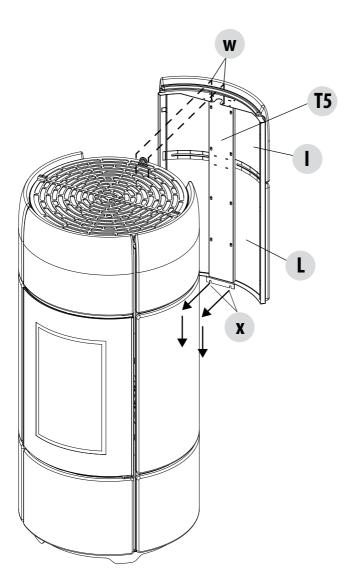
# 5-CLADDING ASSEMBLY

- take ceramic panel type "I" and secure it to frame "T5" via the four screws "k" (consider it as the base to start fixing the template)
- then secure ceramic panel type "L" by again using the positioning template
- secure ceramic panel "L" to frame "T5" via the four screws "k"
- try and secure the frame with the ceramic panels on the structure to check the alignment with the other ceramic panels; perform
  the necessary adjustments as required



# **5-CLADDING ASSEMBLY**

 when the checks have been carried out, secure frame "T5" with the ceramic panels on the structure, by using the two screws "x" to secure the bottom of the panel and the two screws "w" to fix the top

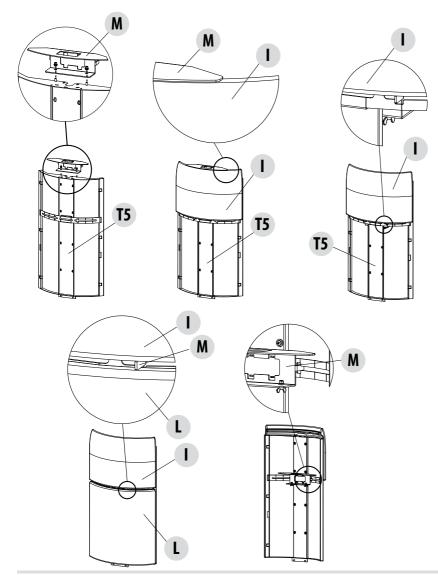


# 5-CLADDING ASSEMBLY

### HOW TO USE THE TEMPLATE TO SECURE THE REAR CERAMIC PANEL

#### Attention! With template "M" start to position the first ceramic panel at the top.

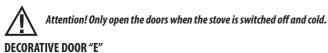
After removing frame "T5" from the structure of the stove, in line with the instructions reported in the above paragraph, take template "M" to position the ceramic panel and secure it at the top of frame "T5" with the screws supplied and pre-secured to the template. As described above, secure ceramic panel "C" to frame "T5" by ensuring that the top of the ceramic panel rests against template "M". Remove template "M" and place it under ceramic panel "I". Then place ceramic panel "L" on the panel and secure it. Remove template "M" to fix the next ceramic panels. Secure the frame with the ceramic panel to the stove, as specified in the instructions.

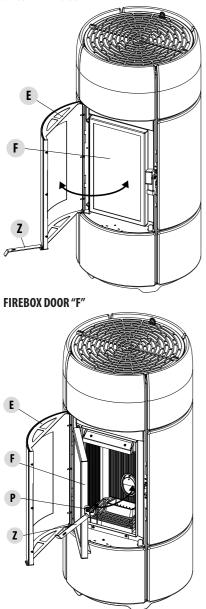


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## **6-OPENING THE DOORS**

The Curve stove is fitted with two doors. To open decorative door "E", insert cold handle "Z" into the designated joint on the door itself. To open firebox door "F", insert the cold handle into the hole of handle "P" and pull.



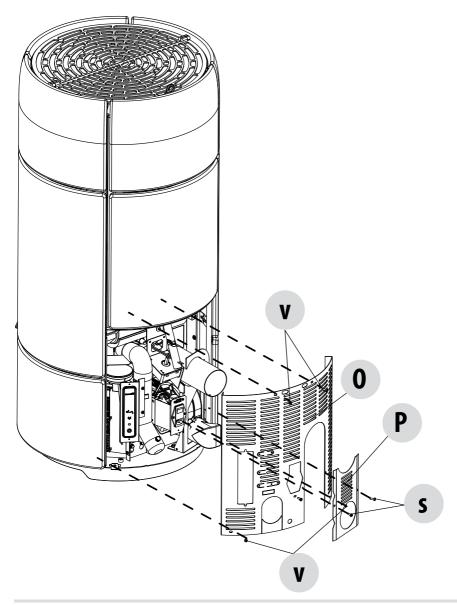


# 7-REMOVING THE BACK FOR MAINTENANCE

### **REAR PANEL**

If it is necessary to intervene on any stove component, proceed as follows to remove the rear panel "0".

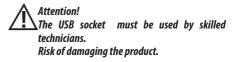
- remove the two screws "s", so that element "P" can be removed
- remove the four screws "v"
- now panel "O" can be completely removed from the structure of the stove (even when the stove has been installed, therefore with the smoke pipe connected)



### **USB SOCKET**

There is a USB socket on the back of the stove, if a software update is required; the ceramic/metal parts do not have to be removed to reach the socket directly in the circuit board (pos. 2 in the PCB).



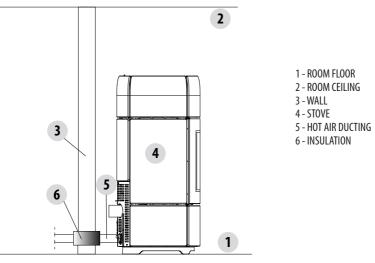


### **Comfort Air ducting**

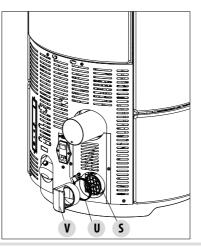
Comfort Air stoves can channel the air into other rooms through the connection with the accessory pipes to the rear "S" shaped flange provided as standard. The recommended maximum duct length is 8 metres per fan. It is advisable to set up ducts of similar length to distribute the hot air evenly in the various rooms.



The air outlet pipe can reach very high temperatures, even up to 150°C: insulate it properly with suitable materials in areas where it may come into contact with flammable surfaces or surfaces that are affected by temperature (e.g. discolouration of paint, ducts for electric cables, plasterboard, etc.). Also protect people and animals from voluntary or accidental contact. Comply with the regulations and laws in force in the region where the product is installed. It is recommended to insulate the entire length of the pipe in order to reduce dispersion and increase heat output in the room.



If you do <u>not</u> wish to channel the air, the hot air may be let out through the rear "V" vent without connecting any pipe. The "V" vent and the "U" clamp used for fastening are found in a plastic bag inside the hopper of the stove.

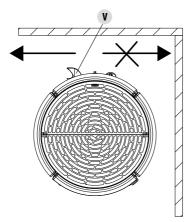


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Attention! It is mandatory to install the vents with "V" netting (1 or 2 depending on the type of appliance) on the rear "S" output for safety purposes and to prevent the rear wall from being hit directly by the hot air flow, generating halos, blackening or even dangerous heating in the case of flammable walls.

When positioning the stove near a wall (see image below) direct the hot air "V" vent towards the free part. If this warning is not complied with, the manufacturer cannot be held liable for any damage to property and/or persons.

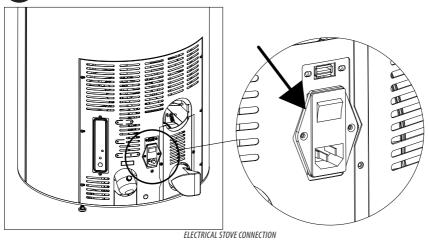


#### **ELECTRICAL CONNECTION**

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.

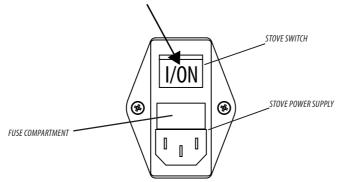




The cable must never come into contact with the smoke exhaust pipe or any other part of the stove.

#### **STOVE POWER SUPPLY**

After connecting the power cable to the back of the stove, turn the switch to (I) or **ON**. The stove is then powered.



There is a fuse box also in the switch block next to the power socket. Open this compartment by simply lifting the cover, using a screwdriver as a lever from inside the power outlet compartment. Inside there are two fuses (3.15 A delayed), which may need to be replaced if the stove is not powered (e.g. the ON/OFF button does not go on or the control panel display does not light up) - operation to be implemented by an authorised and skilled technician.

## 9-LOADING THE PELLETS

#### LOADING THE PELLETS

The fuel is loaded from the top of the stove by lifting rear top hatch "S" and pellet loading door "T". To open door "T", insert the cold handle into the designated hole "f".

Pour the pellets in slowly so that they are 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.

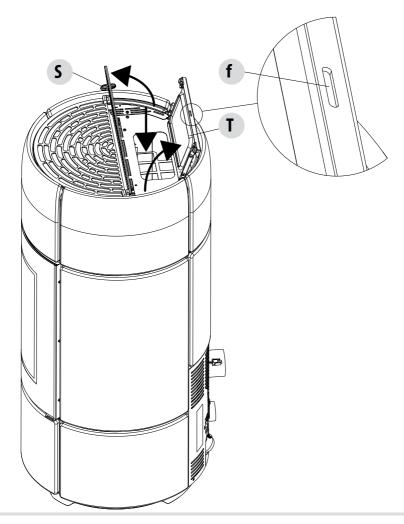
When loading, do not let the pellet bag come into contact with hot surfaces.

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.





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