



CLOSED FIREPLACE

PLASMA 75/85/95/115 WOOD

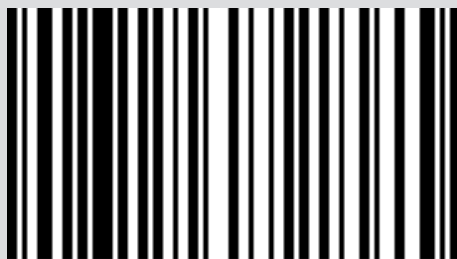
PLASMA 95B/115B WOOD

PLASMA 75/85/95/115 WOOD NATURAL

PLASMA 95B/115B WOOD NATURAL

Instructions in English

MCZ



8901711000

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INTRODUCTION

Dear Customer,

our products are designed and manufactured in compliance with European reference standards for construction products (EN13240 for wood-burning stoves, EN14785 for pellet-burning appliances, EN13229 for fireplaces/wood-burning inserts and EN 12815 for wood-burning range cookers), with high quality materials and extensive experience in transformation processes.

We recommend that you carefully read the instructions contained in this manual to obtain the best performances.

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

All local regulations, including those referring to national and European standards, must be observed when installing the appliance.

In Italy, for the installation of systems with biomass below 35KW, refer to ministerial decree D.M. 37/08, and the qualified installation technician with the appropriate requisites must issue a certificate of compliance for the system installed. (By system we intend Stove+Flue+Air vent)

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 law.

CARE OF THE MANUAL AND HOW TO CONSULT IT

- Take care of this manual and keep it in an easily and rapidly accessible place.
- Should the manual be misplaced or ruined, request a copy from your Retailer or directly from the Manufacturer, specifying the product identification data. You can also download it directly from the company website.
- "**Bold text**" requires particular attention.
- "*Italicised text*" is used to call your attention to other paragraphs in the manual or for any additional clarifications.
- "NOTE" provides the reader with additional information.

SYMBOLS USED IN THE MANUAL

	ATTENTION: Read the corresponding message with care because failure to observe the information provided could result in serious damage to the product and danger to the persons who use it.
	INFORMATION: failure to comply with these provisions will compromise 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, operating 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, bio-ethanol, fluids for lighting charcoal or similar liquids to light/rekindle the flame in these devices. Keep these flammable liquids well away from the appliance when in use.
- Do not insert fuel other than wood in the combustion chamber.
- 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.
- 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 the like 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 of 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 of any civil and criminal liability.

1-WARNINGS AND WARRANTY CONDITIONS

- Many of the surfaces of the product get very hot (door, handle, glass, smoke outlet pipes, etc.). **Avoid coming into contact with these parts, without adequate protective clothing or suitable implements, 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 system.
- Do not wash the product with water.
- 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 outlets.
- Do not use water to put the fire out.
- In the event the chimney catches fire never open the fuel loading door. 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.
- 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 combustible material (e.g. wood, fitted carpet or plastic).

1-WARNINGS AND WARRANTY CONDITIONS

INFORMATION:

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

- You must only use the fuel specified by the manufacturer.
- When the product is switched on for the first time it is normal for it to emit smoke due to the paint heating for the first time. Therefore make sure the room in which it is installed is well ventilated.
- Check and clean the smoke outlet pipes regularly (chimney fitting).
- The product is not a cooking appliance.
- Store this installation guide 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 and must be installed indoors.

WARRANTY CONDITIONS

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

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

Furthermore, in order for the guarantee to be valid, the device must be installed and calibrated by qualified personnel, and where necessary, the user must be issued with a declaration of conformity and correct functioning of the product.

We recommend testing the product before completion with the relative finishes (cladding, painting of walls, etc.).

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

The warranty is valid on the condition that the instructions and warnings contained in the user 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 warranty period, and the original expiry date remains unchanged.

The warranty covers the replacement or free repair **of parts recognised as being faulty at source due to manufacturing defects**. In the event of a fault, to benefit from the warranty, the customer must keep the warranty certificate and provide it with the document given at the time of purchase to the Service Centre.

1-WARNINGS AND WARRANTY CONDITIONS

EXCLUSIONS

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

- Damage caused during transportation and/or handling
- 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 guide provided with the appliance)
- incorrect sizing with regard 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 caused by the user continuing to operate the appliance even after the fault has been noticed
- in presence of a boiler, any corrosion, incrustations or breakages 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 system affecting the appliance
- damage caused by tampering with the appliance, atmospheric agents, natural disasters, vandalism, electrical discharges, fires, faults in the electric and/or hydraulic system.

Also excluded from this warranty are:

- parts subject to normal wear such as gaskets, glass, cladding and cast iron grilles, painted, chrome-plated or gilded parts, handles and electric cables, bulbs, indicator lights, knobs, all parts which can be removed from the firebox.
- Variations in colour of the painted or ceramic/serpentine parts and crazed 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 defects and consequent damages must be agreed upon with the Service 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 as 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 warranty 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 provision 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 Department.

Only use 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 get worn out 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

INSTALLATION

FOREWORD

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

In particular one must ensure that:

- there is a suitable combustion air inlet and smoke outlet in compliance with the type of product installed
- other stoves or devices installed do not cause depression in the room where the product is installed
- when the product is switched on there is no reflux of smoke in the room
- smoke 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 product 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

We recommend installing the stove away from walls and 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 combustible materials needs to be at least the measurement provided in the product technical data.

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

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).

3-FLUE

FLUE

FOREWORD

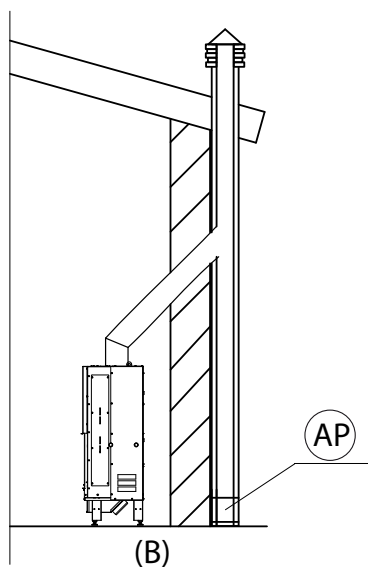
This Flue chapter has been drawn up with reference to the provisions of European regulations (EN13384 - EN1443 - EN1856 - EN1457). The chapter provides indications for installing an efficient and correct flue but is under no circumstances to substitute the regulations in force, which the qualified technician 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 outlet system, the flue or the chimneypot.

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

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 gas and consequently less draught, it is therefore essential that the flue is built to a high standard and always kept in perfect working order. A flue that serves a wood-burning appliance must be at least category T400 (or greater if the appliance requires so) and resistant to soot fires. Smoke must be extracted through a single flue made of insulated steel or an existing flue that complies with the intended use (B).

A simple air shaft made of cement must be suitably lined. In both solutions there must be an inspection cap and/or inspection hatch (AP). It is prohibited to connect more than one wood/pellet or any other type of appliance (vent cowl...) to the same flue.



FLUE

3-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 sealed metal hatch.

The flue needs to be safely connected to a ground contact in observance of regulations in force.

FLAT ROOF

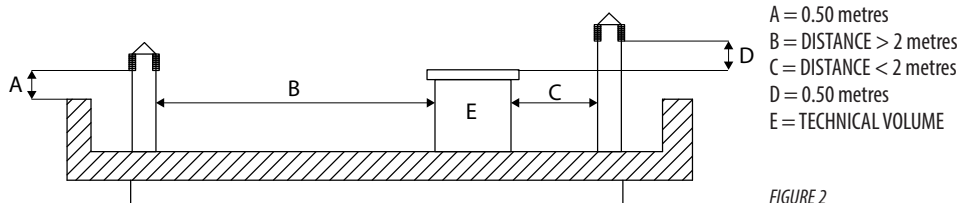


FIGURE 2

ROOF AT 15°

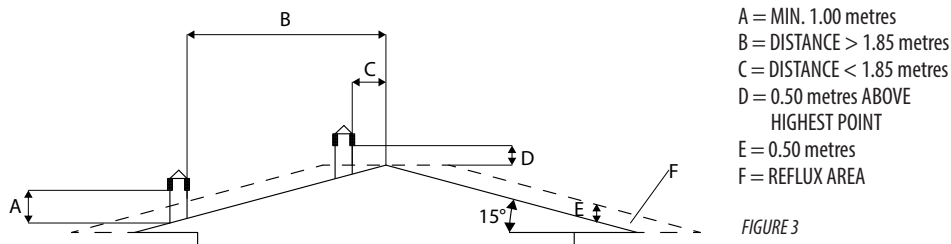


FIGURE 3

ROOF AT 30°

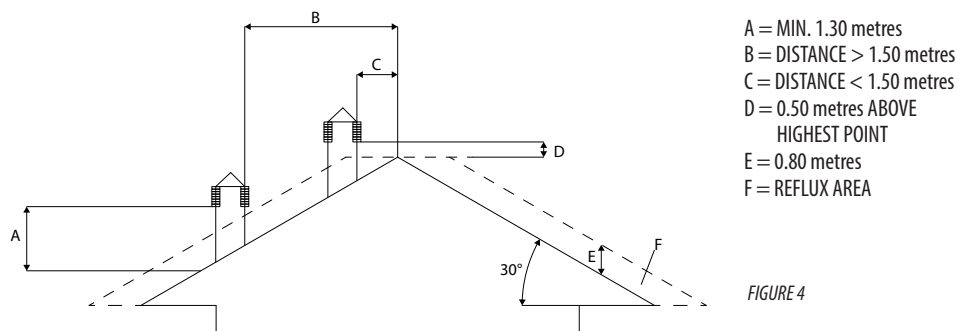


FIGURE 4

3-FLUE

ROOF AT 60°

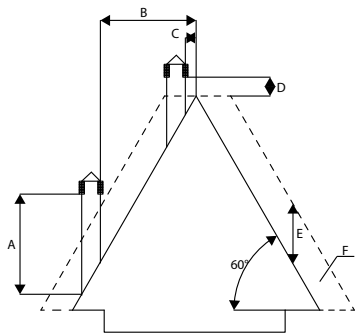


FIGURE 5

- 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 AREA

ROOF AT 45°

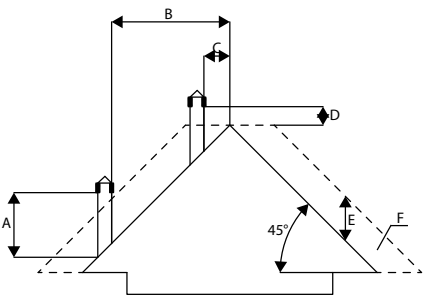


FIGURE 6

- 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 AREA

SIZING

The negative pressure (draught) of a flue depends on its height. Check the negative pressure with the values indicated in the technical characteristics. The minimum height of the flue is 3.5 metres.

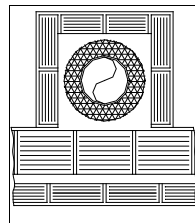
The interior cross-section of the flue can be round (best), square or rectangular (the ratio between the internal sides must be ≤ 1.5) with the sides joined with a minimum radius of 20 mm. The size of the section must be at least equal to that of the appliance outlet (smaller diameters must be confirmed by an adequate system sizing calculation).

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

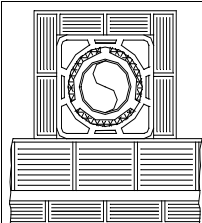
Below is a list of some flues available on the market:

- AISI 316 steel chimney 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).

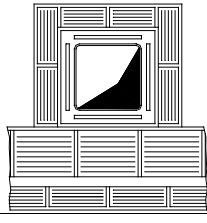
EXCELLENT



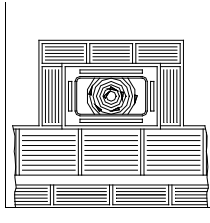
GOOD



POOR



VERY POOR



3-FLUE

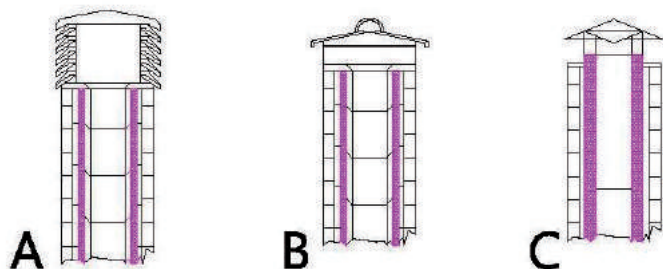
MAINTENANCE

The flue must be kept clean, since the deposit of soot or unburned oils reduces the cross-section reducing the draught, thus compromising the efficient operation of the product and, if large build-ups accumulate, they can catch fire. The flue and chimneypot 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 safety.

CHIMNEYPOT

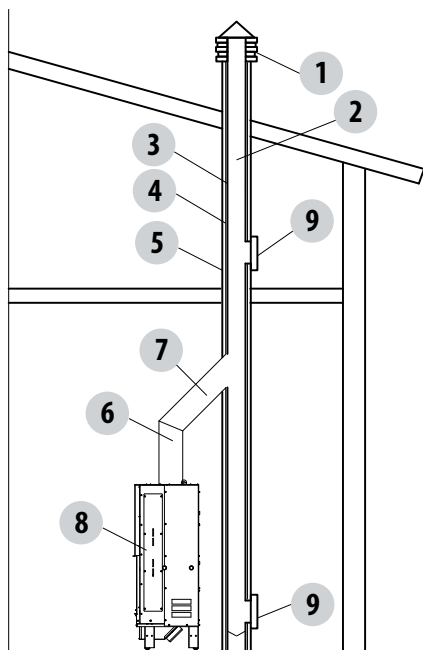
The chimneypot is a crucial element for the heating appliance to work properly: we recommend a wind proof chimneypot (A), see Figure 7.



The area of the opening for smoke extraction must be at least double the cross-section of the flue/lined system, and arranged so that smoke outlet 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 area due to the shape of the roof or any obstacles near the outlet (see Figures 2-3-4-5-6).

FIGURE 7

CHIMNEY COMPONENTS



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

FIGURE 8

3-FLUE

EXTERNAL AIR INLET

It is mandatory to provide an adequate external air inlet 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 (preferable solution see Figure 9 c); or indirect, via air intake from adjoining rooms and connecting permanently with the installation room (see Figure 9 a/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 product (see diagram below).

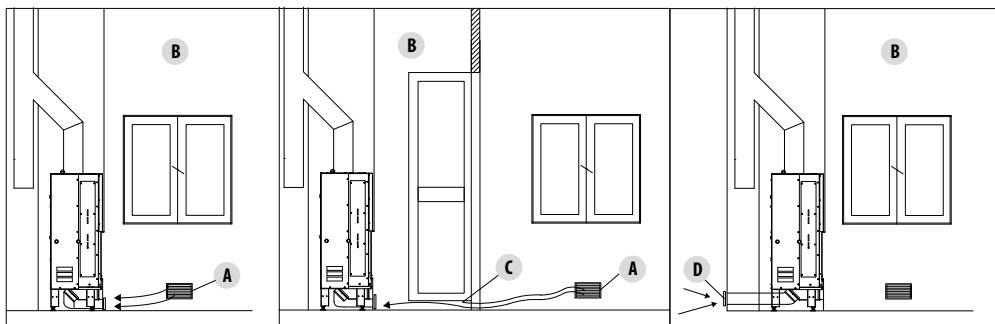
The air inlet must have a minimum total net area of 180 cm² (for fireplaces/inserts): the surface must be increased accordingly if within the room there are other active generators (for example: electric fan for stale air extraction, cook ranger hood, other stoves, etc...), which could cause a depression 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.

You can connect the air required for combustion directly to the external air inlet, with a non-compressible pipe (e.g. spiral). For air ducts up to 3 m, increase the cross-section by approximately 5%, longer ducts increase it by 15%.

FIGURE 9 a - indirectly from inside the room

FIGURE 9 b - indirectly from the adjacent room

FIGURE 9 c - directly from outside



A=INTERNAL AIR INLET

B=ROOM TO BE VENTILATED

C=INCREASE OF THE GAP UNDER THE DOOR

D=EXTERNAL AIR INLET

3-FLUE

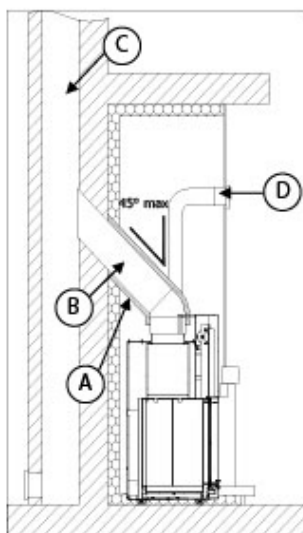
For closed fireplaces installed in studio flats, bedrooms and bathrooms (where allowed), it is mandatory to connect the combustion air to the outside. In particular for sealed products the connection must be sealed in order not to compromise the overall sealed characteristic of the system.

DISTANCE (metres)	The air inlet must be at a distance of:	
1.5 m	BELOW	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	AT A DISTANCE	from smoke outlet

CONNECTION TO THE FLUE

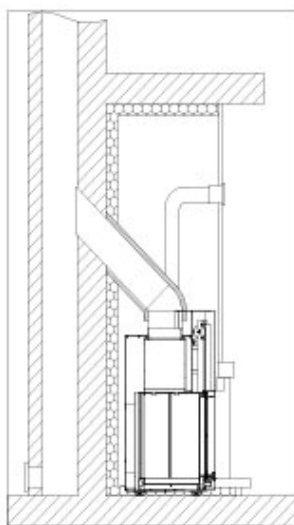
The connection between the flue and the appliance must be via a smoke duct that complies with EN 1856-2. To connect the fireplace to the chimney flue or to a ceiling connection that is not coaxial to the unit's smoke outlet, changes of direction must be made using open bends no greater than 45° with respect to the vertical. The same solution needs to be used to connect the fireplace to the chimney (see figure below)

The diameter of the smoke duct must be equal to or greater than that of the appliance outlet. Any increase in the cross-section is only allowed at the connection to the chimney



EXAMPLE OF CLOSED FIREPLACE FITTING

- A. CERAMIC FIBRE INSULATION
- B. SMOKE FITTING
- C. CHIMNEY FLUE
- D. HOOD GRID



TYPICAL DIAGRAM OF A CORRECTLY LAID CHIMNEY FLUE WITH, AT THE FOOT OF THE EXTERNAL UPDRAFT SECTION, THE POSITIONING OF A CHAMBER WITH A SEALED HATCH TO COLLECT AND REMOVE THE SOLID MATERIALS PRODUCED DURING COMBUSTION.

3-FLUE

TYPE OF SYSTEM	SMOKE DUCT (Smoke connection)
Minimum vertical length	1.5 metres
Maximum length (with 1 a 45° bend max)	4.5 metres

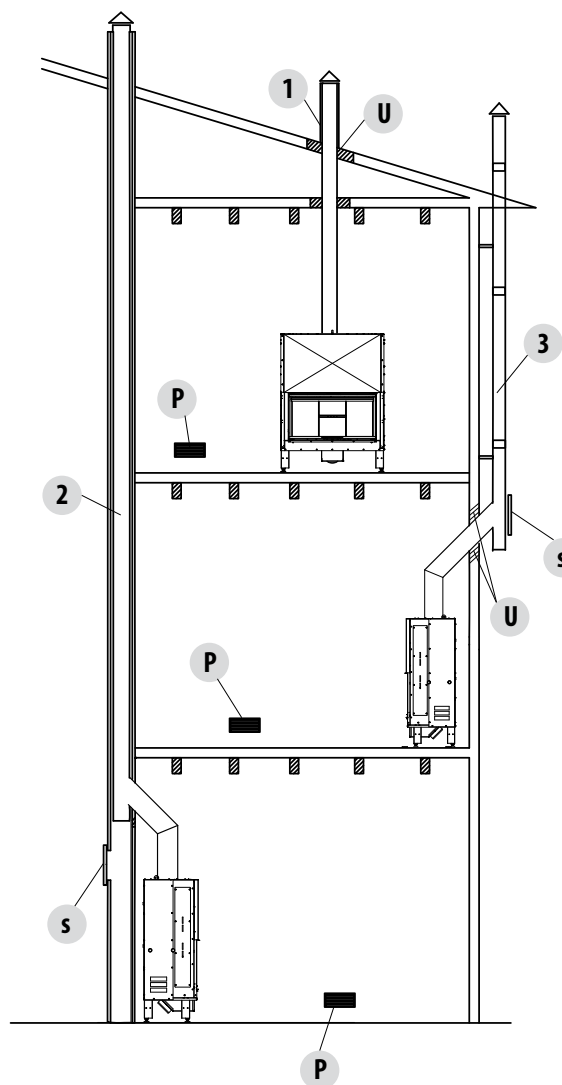
Use smoke ducts that are able to withstand the unit operating temperatures (min. T400). **The use of flexible metal hoses made of fibre cement or aluminium is forbidden. For direction changes, we always recommend the use of a T fitting** with an inspection cap ensuring easy access to clean the pipes. Always ensure that the inspection cap is put back in place and sealed hermetically with the relevant seal intact after cleaning.

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

The smoke duct must be installed observing the safety distances from flammable materials as specified on its rating plate (e.g. G400= 400 mm).

3-FLUE

EXAMPLES OF CORRECT INSTALLATION



1. Installation of Ø200mm flue with hole for the passage of the pipe increased by:
minimum 100mm around the pipe if next to non flammable parts such as cement, brick, etc.; or
minimum 400mm around the pipe (or as required 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 Ø200mm 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 Ø200mm: all securely mounted on the wall. With windproof chimneypot.

NOTE: with closed fireplaces maintain the safety distance indications with the included insulation indications.

FIGURE 11

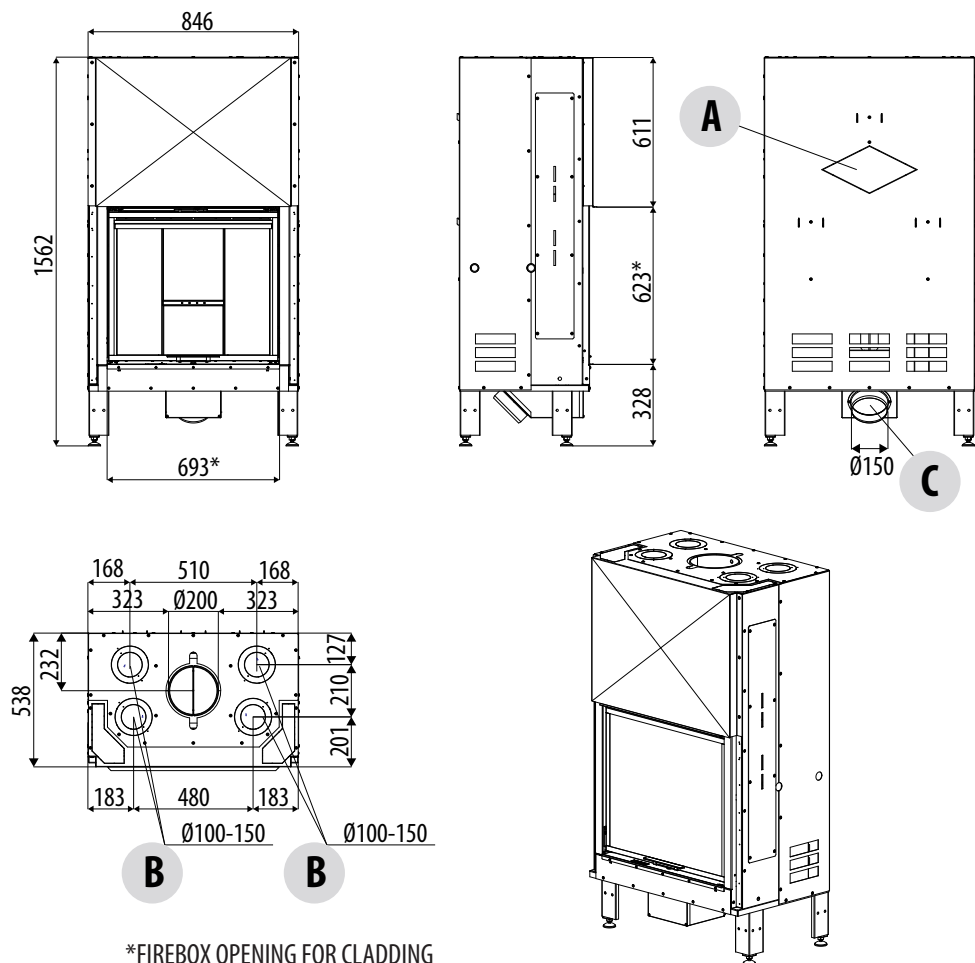
U = insulation

s = inspection access panel

P = air inlet

4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 75 WOOD DIMENSIONS



*FIREBOX OPENING FOR CLADDING

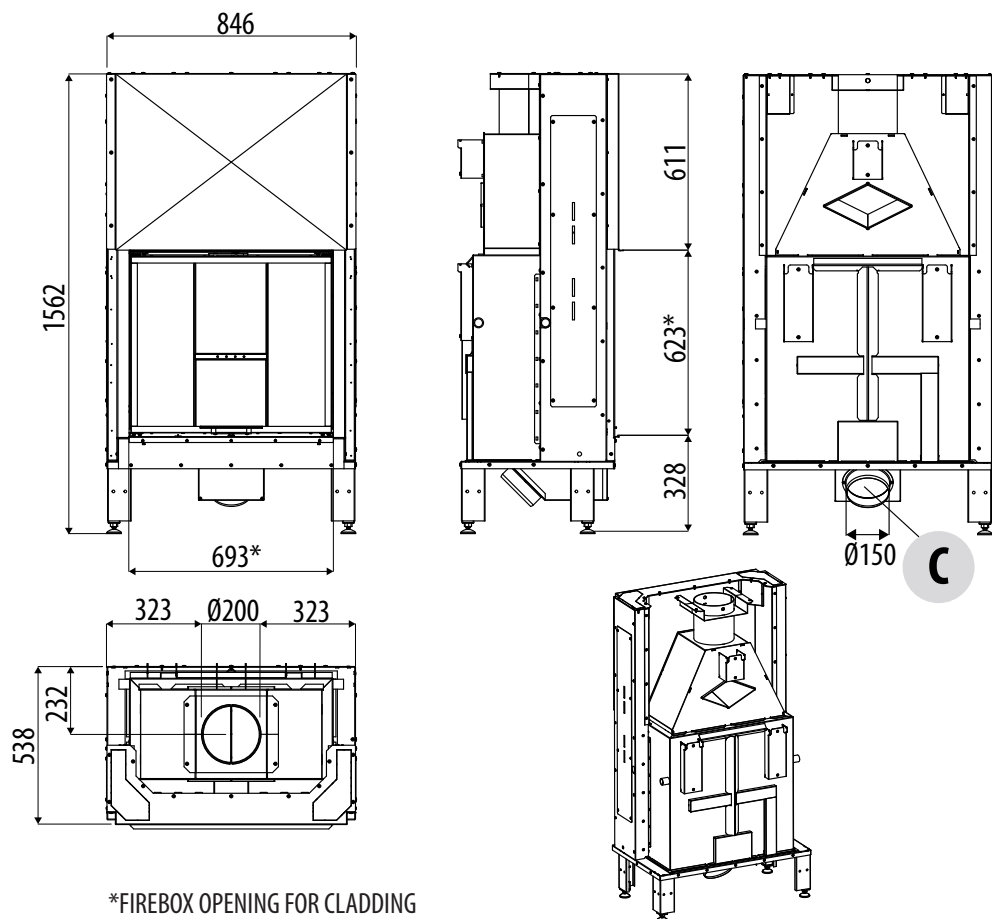
A NATURAL VENTILATION KNOCKOUT HOLE

B KNOCKOUT HOLES Ø 100-150

C COMBUSTION AIR INLET Ø 150

4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 75 WOOD DIMENSIONS NATURAL

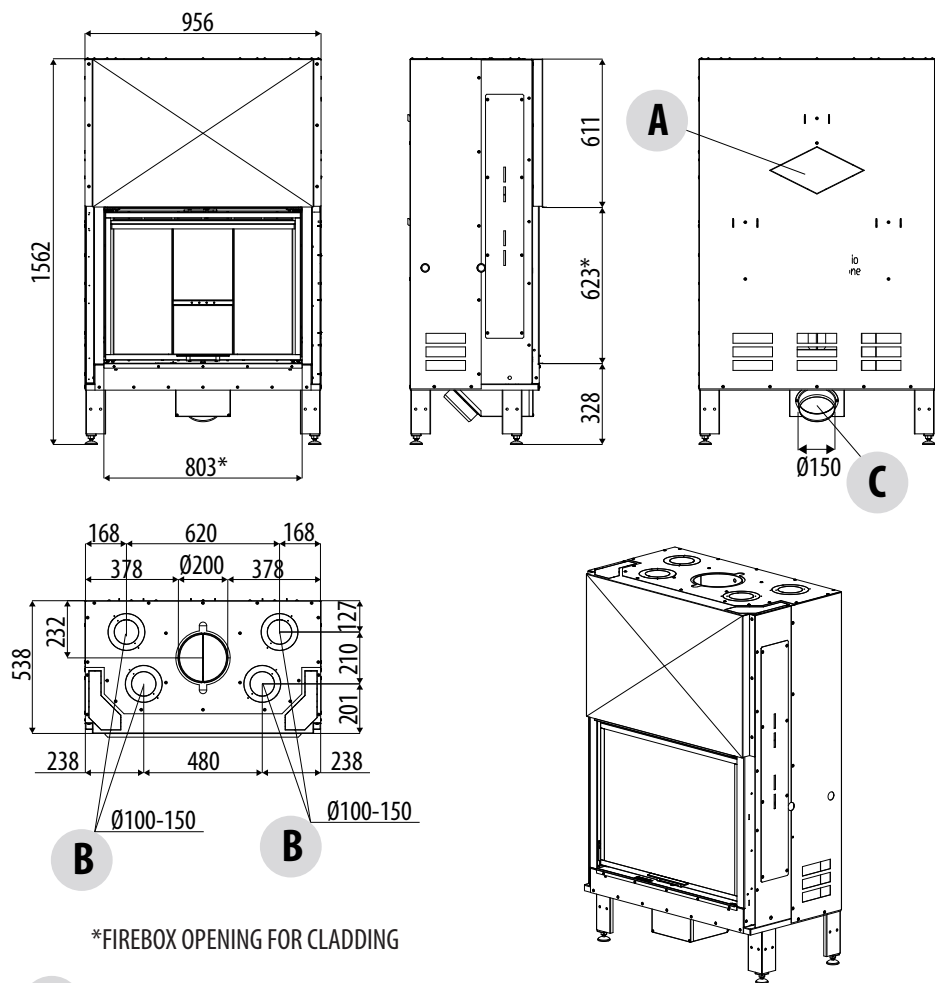


C

COMBUSTION AIR INLET Ø 150

4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 85 WOOD DIMENSIONS



A NATURAL VENTILATION KNOCKOUT HOLE

B KNOCKOUT HOLES Ø 100-150

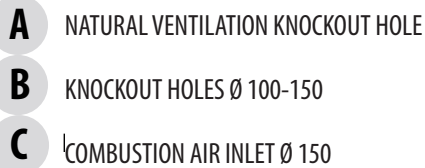
C COMBUSTION AIR INLET Ø 150

PLASMA 85 WOOD DIMENSIONS NATURAL



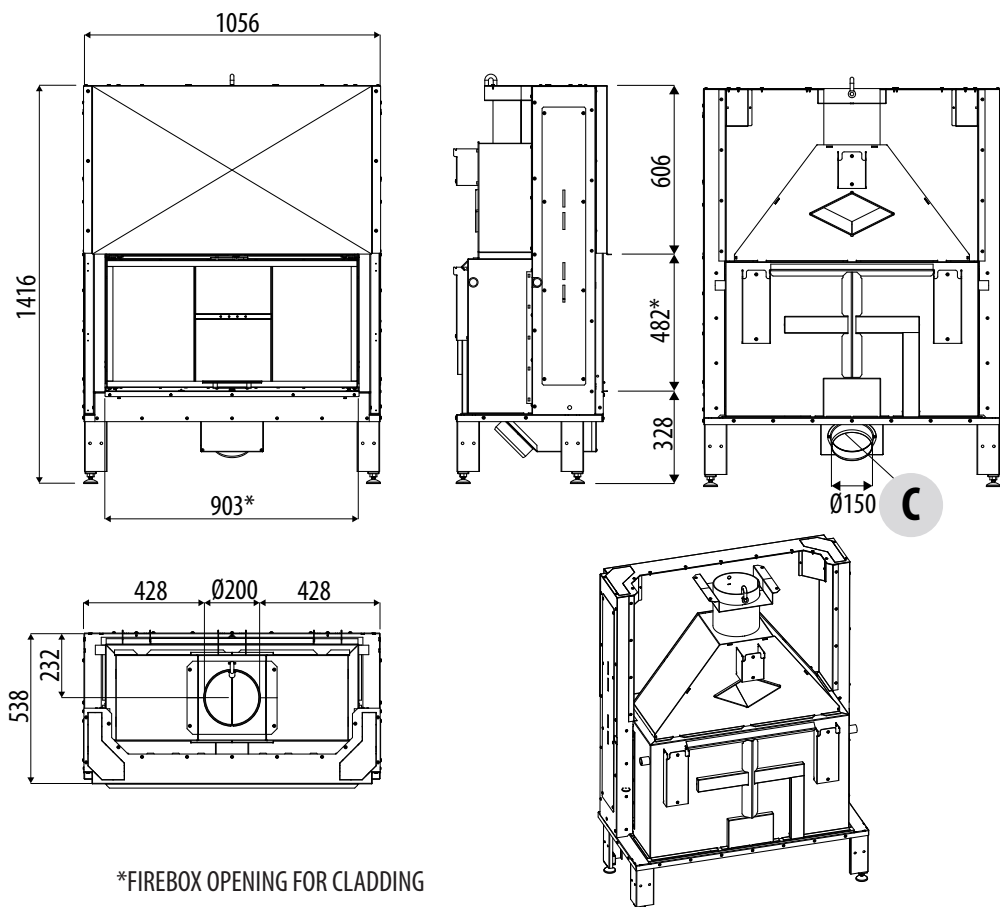
C COMBUSTION AIR INLET Ø 150

PLASMA 95 WOOD DIMENSIONS



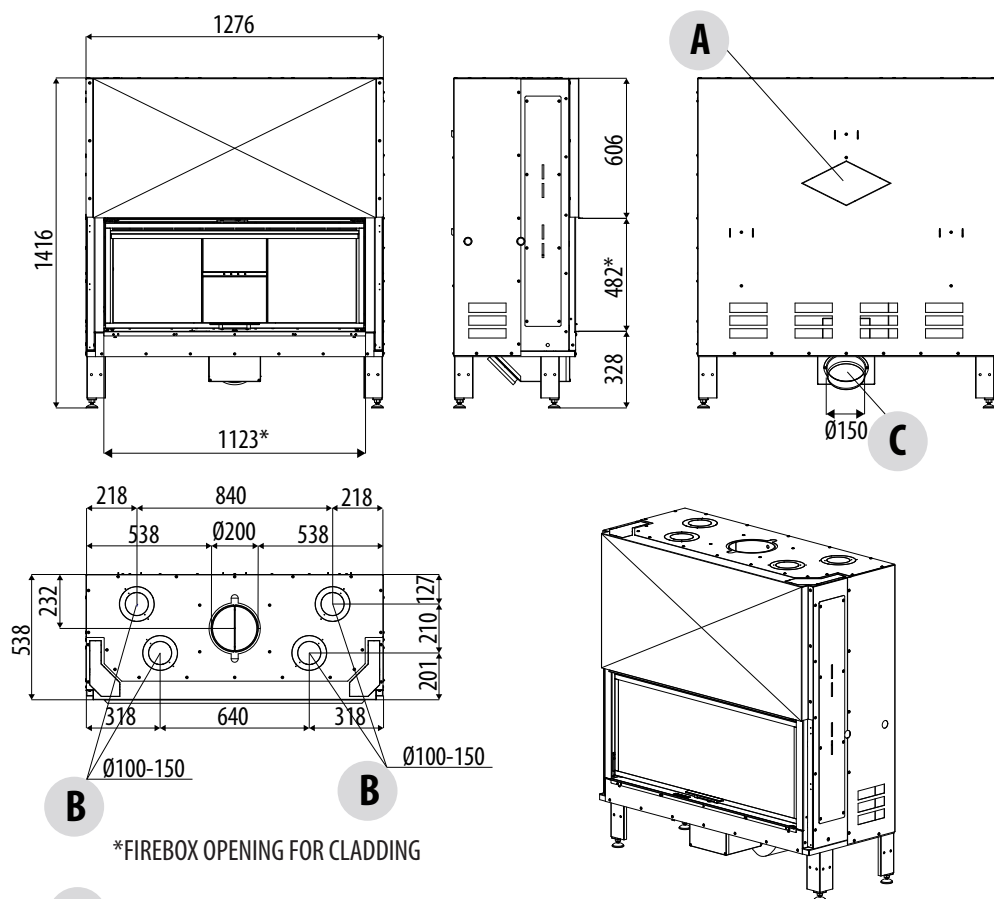
4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 95 WOOD DIMENSION NATURAL



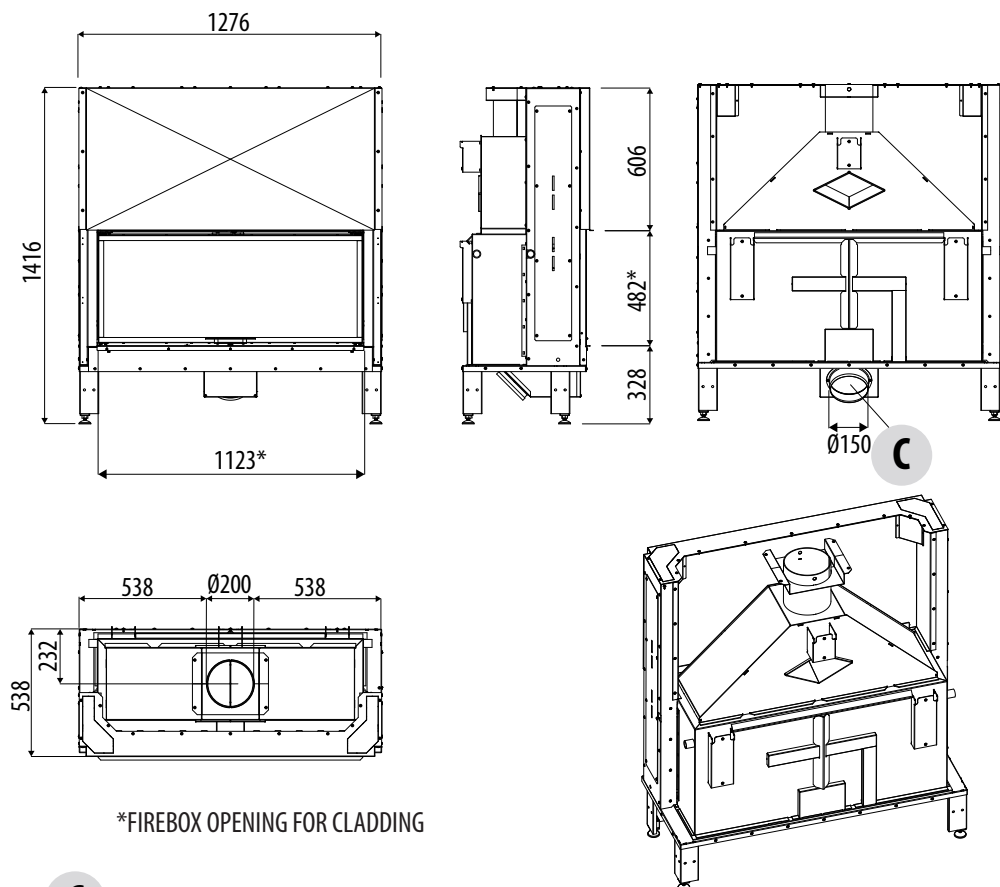
4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 115 WOOD DIMENSION



4-DIMENSIONS AND TECHNICAL FEATURES

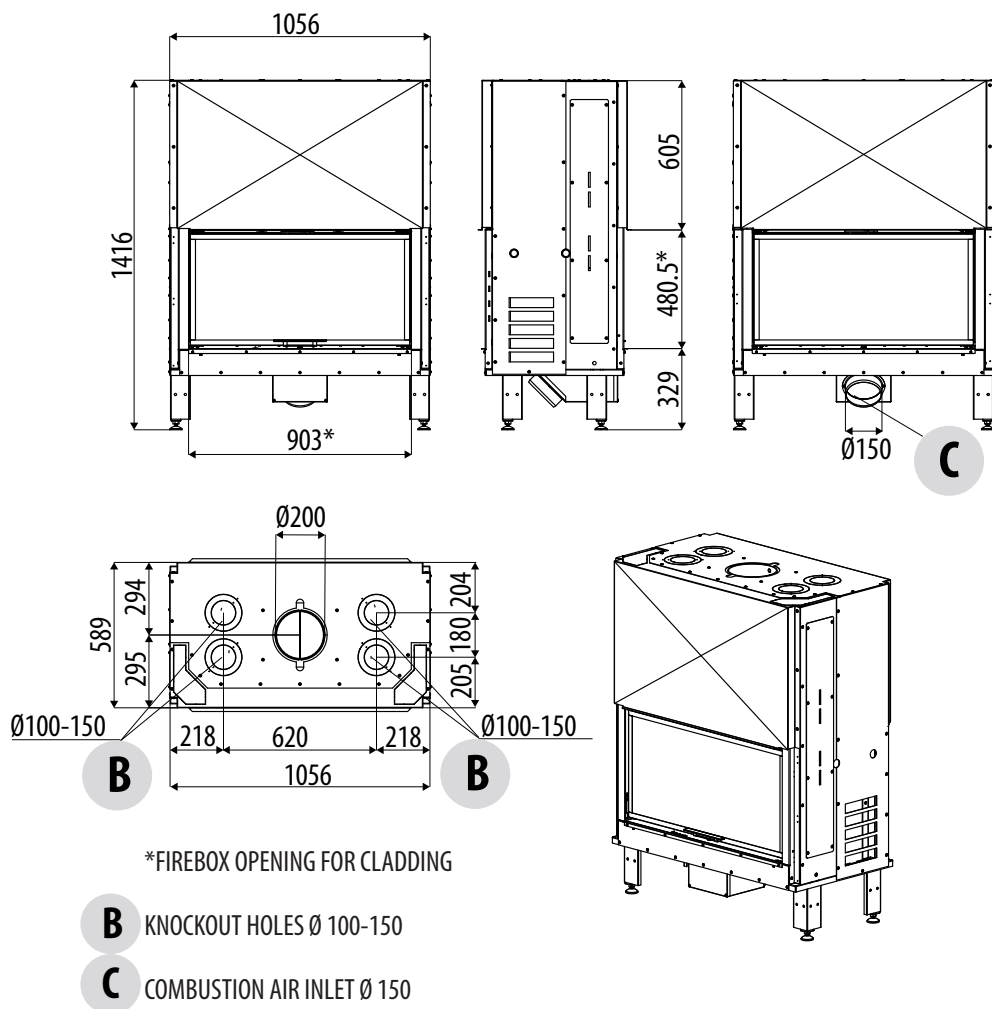
PLASMA 115 WOOD DIMENSION NATURAL



C COMBUSTION AIR INLET Ø 150

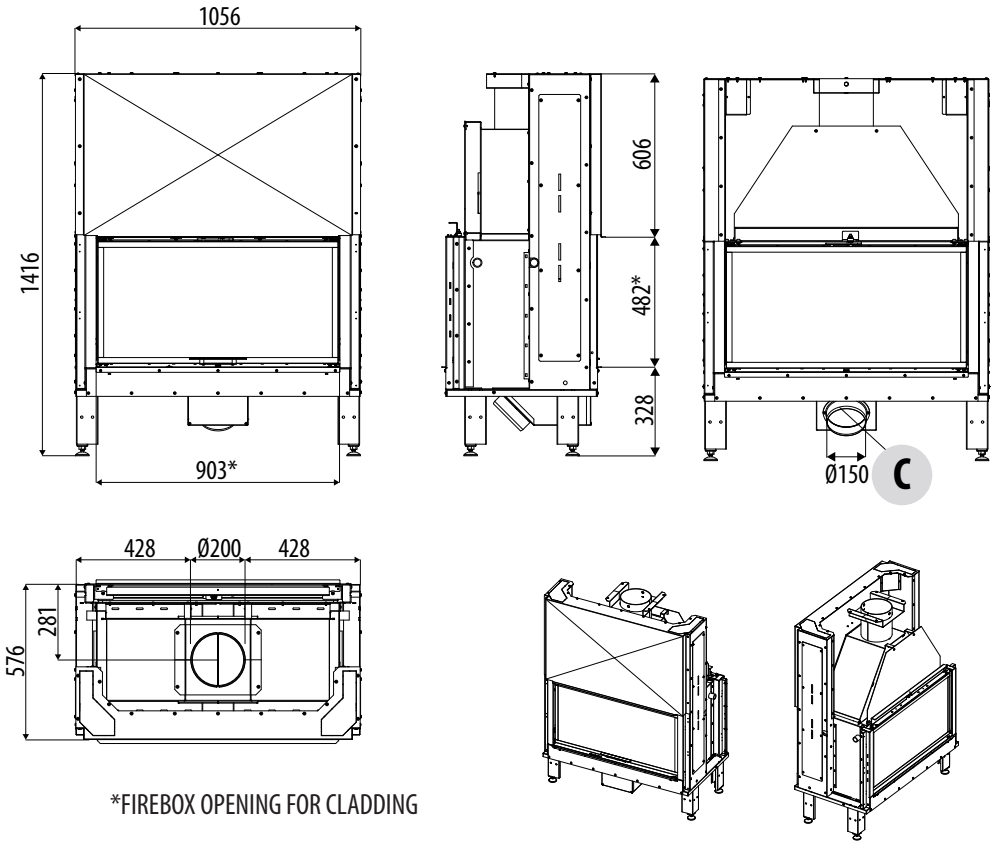
4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 95B WOOD DIMENSION



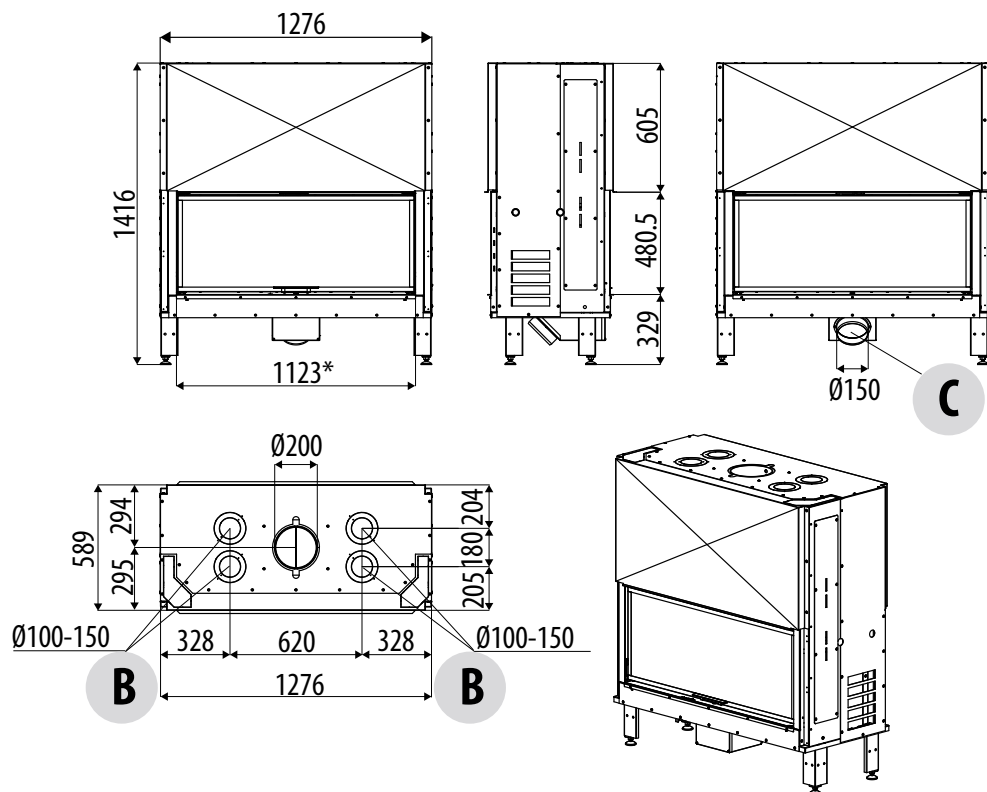
4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 95B WOOD DIMENSION NATURAL



4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 115B WOOD DIMENSION



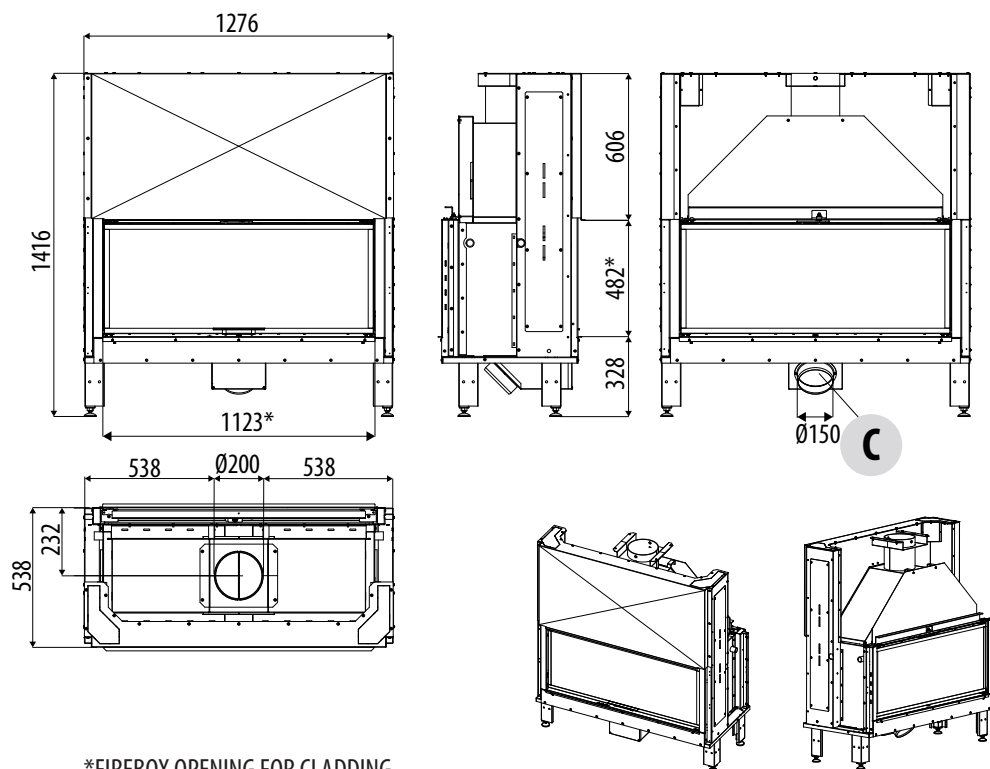
*FIREBOX OPENING FOR CLADDING

B KNOCKOUT HOLES Ø 100-150

C COMBUSTION AIR INLET Ø 150

4-DIMENSIONS AND TECHNICAL FEATURES

PLASMA 115B WOOD DIMENSION NATURAL



*FIREBOX OPENING FOR CLADDING

C COMBUSTION AIR INLET Ø 150

4-DIMENSIONS AND TECHNICAL FEATURES

TECHNICAL CHARACTERISTICS	PLASMA 75 WOOD PLASMA 75 WOOD NATURAL	PLASMA 85 WOOD PLASMA 85 WOOD NATURAL
Energy Efficiency Class	A+	A+
Type of fuel	Wood	Wood
Hourly consumption	3.7 kg/h - 1.7 kg/h	3.9 kg/h - 1.9 kg/h
Reloading/load time	40 min / 2.5 kg	41 min / 2.7 kg
Nominal output power:	12.5 kW (10750 Kcal/h)	13.3 kW (11438 kcal/h)
Minimum power output:	6.0 kW (5160 kcal/h)	6.4 kW (5504 kcal/h)
Efficiency	80.3%	80.1%
CO emission in fumes (13% O ₂)	0.10%	0.10%
Particulate/OGC/Nox (13% O ₂)	29 - 69 - 130 mg/Nm ³	29 - 69 - 130 mg/Nm ³
Smoke mass flow rate	11.0 g/s	11.5 g/s
Smoke temperature	271 °C	271 °C
Recommended draught	12 Pa / 0.12 mbar	12 Pa / 0.12 mbar
Heatable volume m ³	269/40–307/35–358/30*	286/40–327/35–381/30*
Smoke outlet	Ø 20 cm	Ø 20 cm
Firebox dimensions (mm)	H=625 D=382 L=626 mm	H=625 D=382 L=736 mm
Net weight	312 kg	328 kg
External air inlet	180 cm ²	180 cm ²
Distance from flammable material (back) - dR	100 mm + 60 mm insulation	100 mm + 60 mm insulation
Distance from flammable material (side) - dS	200 mm + 60 mm insulation	200 mm + 60 mm insulation
Distance from flammable material (underneath) - dB	220 mm	220 mm
Distance from flammable material (front) - dP	1800 mm	2000 mm
Distance from flammable material (downwards radiation) - dF	1200 mm	1400 mm
Distance from flammable material (side radiation) - dL	1200 mm	1400 mm
Distance from combustible material (ceiling) - dC	750 mm	750 mm
House room height - H	ACCORDING TO STATE/REGIONAL REGULATIONS IN FORCE	
Safety distance (side) - K	700 mm	700 mm
Flue		
Up to 5 m	25x25 cm Ø25	25x25 cm Ø25
Between 5 and 7 m	22x22 cm Ø22	22x22 cm Ø22
Over 7 m	20x20 cm Ø20	20x20 cm Ø20
Notes Intermittent combustion appliance. * Volume that can be heated, according to the power requirement per m ³ (respectively 40-35-30 Kcal/h per m ³) For symbols dR/dB see chapter on "Positioning". Tested according to EN 13229 in compliance with Directive 305/2011 (Construction Products)		

4-DIMENSIONS AND TECHNICAL FEATURES

TECHNICAL CHARACTERISTICS	PLASMA 95 WOOD PLASMA 95 WOOD NATURAL	PLASMA 115 WOOD PLASMA 115 WOOD NATURAL
Energy Efficiency Class	A+	A+
Type of fuel	Wood	Wood
Hourly consumption	3.9 kg/h - 1.9 kg/h	4.1 kg/h* – 2.0 kg/h
Reloading/load time	41 min / 2.7 kg	41 min / 2.8 kg
Nominal output power:	13.3 kW (11438 kcal/h)	14.1 kW (12126 kcal/h)
Minimum power output:	6.4 kW (5504 kcal/h)	6.8 kW (5848 kcal/h)
Efficiency	80.1%	80.1%
CO emission in fumes (13% O ₂)	0.10%	0.10%
Particulate/OGC/Nox (13% O ₂)	29 - 69 - 130 mg/Nm ³	29 - 69 - 130 mg/Nm ³
Smoke mass flow rate	11.5 g/s	11.9 g/s
Smoke temperature	271 °C	270 °C
Recommended draught	12 Pa / 0.12 mbar	12 Pa / 0.12 mbar
Heatable volume m ³	286/40–327/35–381/30*	303/40–346/35–404/30*
Smoke outlet	Ø 20 cm	Ø 20 cm
Firebox dimensions (mm)	H=477 D=382 L=836 mm	H=476 D=382 L=1056 mm
Net weight	344 kg	384 kg
External air inlet	180 cm ²	180 cm ²
Distance from flammable material (back) - dR	100 mm + 60 mm insulation	100 mm + 60 mm insulation
Distance from flammable material (side) - dS	200 mm + 60 mm insulation	100 mm + 60 mm insulation
Distance from flammable material (underneath) - dB	220 mm	220 mm
Distance from flammable material (front) - dP	2000 mm	2000 mm
Distance from flammable material (downwards radiation) - dF	1400 mm	1400 mm
Distance from flammable material (side radiation) - dL	1400 mm	1400 mm
Distance from combustible material (ceiling)- dC	750 mm	750 mm
House room height - H	ACCORDING TO STATE/REGIONAL REGULATIONS IN FORCE	
Safety distance (side) - K	700 mm	700 mm
Flue		
Up to 5 m	25x25 cm Ø25	25x25 cm Ø25
Between 5 and 7 m	22x22 cm Ø22	22x22 cm Ø22
Over 7 m	20x20 cm Ø20	20x20 cm Ø20
Notes Intermittent combustion appliance. * Volume that can be heated, according to the power requirement per m ³ (respectively 40-35-30 Kcal/h per m ³) For symbols dR/dB see chapter on "Positioning". Tested according to EN 13229 in compliance with Directive 305/2011 (Construction Products)		

4-DIMENSIONS AND TECHNICAL FEATURES

TECHNICAL CHARACTERISTICS	PLASMA 95B WOOD PLASMA 95B WOOD NATURAL	PLASMA 115B WOOD PLASMA 115B WOOD NATURAL
Energy Efficiency Class	A	A
Type of fuel	Wood	Wood
Hourly consumption	3,9 kg/h	3,8 kg/h
Reloading/load time	41 min / 2,7 kg	40 min / 2,5 kg
Nominal output power:	kW 12,9 (Kcal/h 11094)	kW 12,6 (Kcal/h 10836)
Minimum power output:	-	-
Efficiency	76,6%	77,6%
CO emission in fumes (13% O ₂)	0,10%	0,10%
Particulate/OGC/Nox (13% O ₂)	27 - 74 - 101 mg/Nm ³	30 - 46 - 132 mg/Nm ³
Smoke mass flow rate	13,4 g/s	12,1 g/s
Smoke temperature	270 °C	272 °C
Recommended draught	12 Pa / 0,12 mbar	12 Pa / 0,12 mbar
Heatable volume m ³	277/40–317/35–370/30*	271/40–310/35–361/30*
Smoke outlet	Ø 20 cm	Ø 20 cm
Firebox dimensions (mm)	H=503 P=362 L=836 mm	H=503 P=362 L=1057 mm
Net weight	298 kg (WOOD) / 283 kg (WOOD NATURAL)	334 kg (WOOD) / 315 kg (WOOD NATURAL)
External air inlet	180 cm ²	180 cm ²
Distance from flammable material (back) - dR	1700 mm	1900 mm
Distance from flammable material (side) - dS	100 mm + 60 mm insulation	100 mm + 60 mm insulation
Distance from flammable material (underneath) - dB	220 mm	220 mm
Distance from flammable material (front) - dP	1700 mm	1900 mm
Distance from flammable material (downwards radiation) - dF	1200 mm	1500 mm
Distance from flammable material (side radiation) - dL	1200 mm	1500 mm
Distance from combustible material (ceiling)- dC	750 mm	750 mm
House room height - H	ACCORDING TO STATE/REGIONAL REGULATIONS IN FORCE	
Safety distance (side) - K	700 mm	700 mm
Flue		
Up to 5 m	25x25 cm Ø25	25x25 cm Ø25
Between 5 and 7 m	22x22 cm Ø22	22x22 cm Ø22
Over 7 m	20x20 cm Ø20	20x20 cm Ø20
Notes Intermittent combustion appliance. * Volume that can be heated, according to the power requirement per m ³ (respectively 40-35-30 Kcal/h per m ³) For symbols dR/dB see chapter on "Positioning". Tested according to EN 13229 in compliance with Directive 305/2011 (Construction Products)		

5-UNPACKING



IMPORTANT!

The closed fireplace must be installed and connected to the smoke duct exclusively by a specialised technician, so that every local or national regulation is observed. Installation must nevertheless be carried out in accordance with regulation UNI 10683.

When you unwrap the closed fireplace, make sure that every part is in perfect working order or check for any damage due to transport. Any damage must be immediately reported to the carrier or dealer.

If the closed fireplace is installed in an area of difficult access, its weight can be lightened by removing the internal elements of the firebox, however it is necessary to put every element correctly back in place and have this operation carried out exclusively by specialised personnel.

The producer will not be held liable if the above warning is not observed.

PREPARATION AND UNPACKING

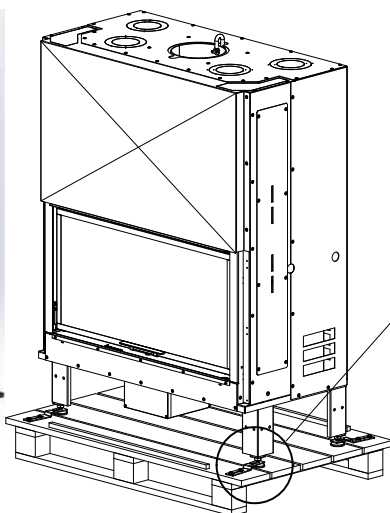
Open the packing, remove the closed fireplace from the pallet and place it in the selected position, ensuring it complies with the specifications.



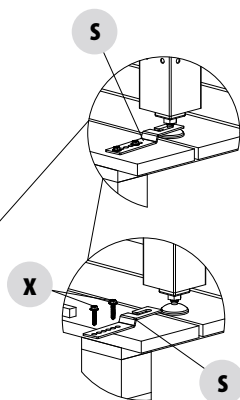
The closed fireplace must always be carried UPRIGHT and exclusively with a cart. Do not drag the unit as this could damage the supporting feet.



PACKAGING



REMOVING THE PACKAGE BRACKETS



To remove the closed fireplace from the pallet, do the following:

- Remove plate "s" by taking out the two screws "x"
- Pull plate "s" out from the product's foot.

There are four "s" plates that need to be removed. Pay particular attention to the door and its glass, protecting them from mechanical knocks that would compromise their integrity.

Products must always be handled with care. If possible unpack the closed fireplace near the place of installation.

The packaging materials are neither toxic nor harmful, therefore no particular disposal measures are required.

The end user is responsible for product storage, disposal or possible recycling in compliance with the relative applicable laws in force.

5-UNPACKING

RELEASING THE COUNTERWEIGHTS

The closed fireplace is delivered with the sliding counterweights locked to avoid dangerous counterblows during transport and positioning, which could damage the parts involved in sliding as well as the door and the glass-ceramic.

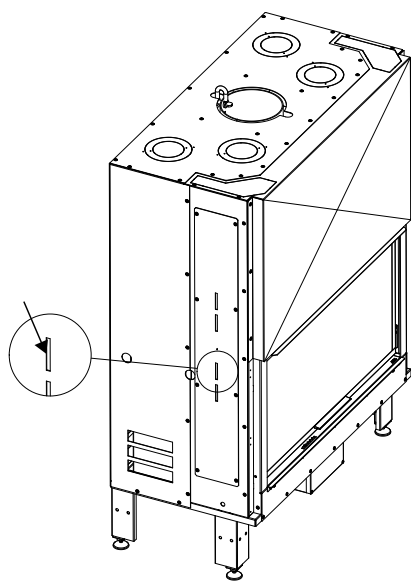
To release the counterweights and therefore the door, remove the screws as shown in the figure below from both sides of the closed fireplace where the arrows stickers are positioned on both sides.



Take out the screws that clamp the counterweights only after having positioned the closed fireplace, and to make sure that the glass is intact.

DO NOT MOVE NOR SHIFT THE CLOSED FIREPLACE WITHOUT THE COUNTERWEIGHT CLAMPING SCREWS.

The customer, or whoever appointed by him/her, is liable for damage caused by the failure to observe this rule.



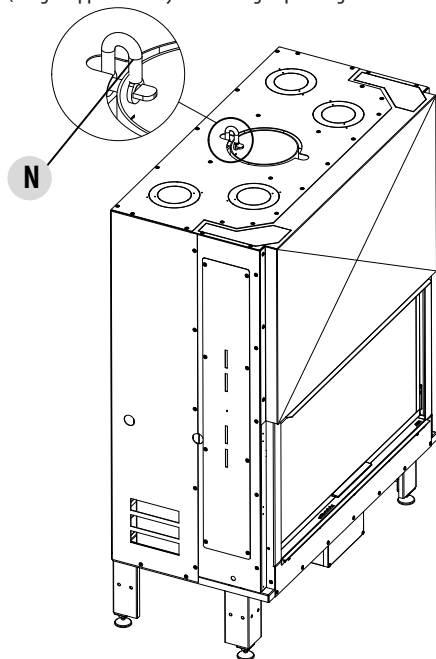
COUNTERWEIGHT LOCKING SCREWS

6-POSITIONING

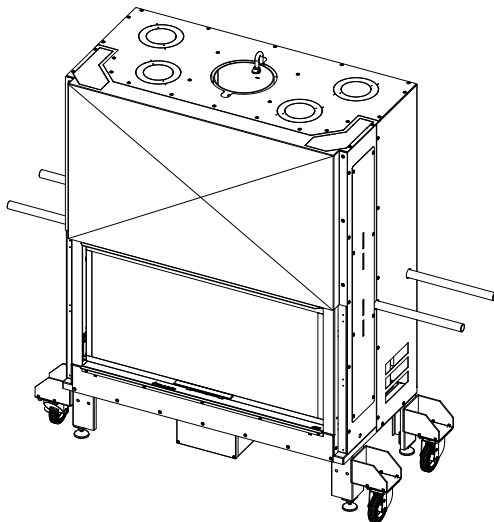
POSITIONING

The **PLASMA** closed fireplace can be positioned in a corner or against the wall. It can be customised with the cladding of the manufacturing company or built at the time of installation with heat-resistant materials.

Closed fireplaces are freestanding monoblocks that simplify installation and do not require any integrative support. Closed fireplaces are fitted with particular anchoring points to facilitate handling (handling kit - not provided - see chapter on accessories) and a lifting hook (weight approximately 300/400 kg depending on the model).



LIFTING HOOK



HANDLING KIT (ACCESSORY)

Always assess the static conditions of the surface that the weight will travel over and always observe the minimum safety distance stated in the technical data.

Dry-assemble the hearth of the **cladding** leaving a **1 cm** gap for insulation.

6-POSITIONING



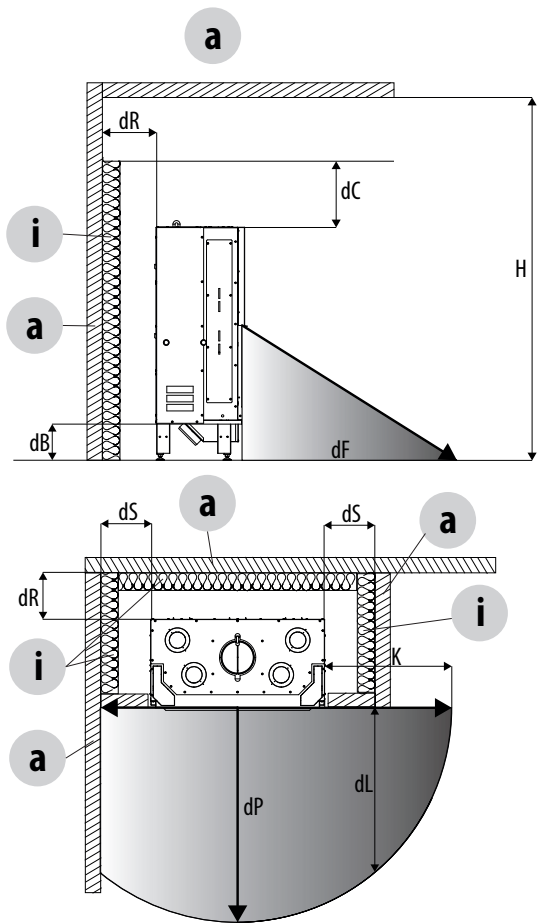
Attention!!
All measurements pertaining to positioning are provided in chapter 4 in the technical data table.

KEY

dR = distance from flammable material - back	dL = distance from flammable material - side radiation
dS = distance from flammable material - side	dC = minimum distance from ceiling
dB = distance from flammable material - underneath	K = safety distance for radiation
dP = distance from flammable material - front	H = house room height
dF = distance from flammable material - downwards radiation	



If the closed fireplace is positioned over a floor or near flammable walls, it is necessary to provide adequate insulation.
The hot air outlet vents need to be positioned at least 400 mm from other materials (ex. curtains).



a = FLAMMABLE WALL

i = EXAMPLE OF RIGID ROCK WOOL PANEL LINED ON ONE SIDE WITH AN ALUMINIUM FILM

REACTION TO FIRE EUROCLASS A1
SPECIFIC HEAT $C_p=1030 \text{ J/(kgK)}$
DENSITY $p=80 \text{ kg/m}^3$
min thickness = 30 + 30 mm with staggered joints

If a = NON-FLAMMABLE WALL

CONSIDER THE SAFETY DISTANCE WITHOUT INSULATING MATERIAL (*)

*** If the non-combustible wall is a partition wall shared by another dwelling and/or room (considering the possibility of having, next to the partition, flammable material), apply the minimum insulation to ensure safety (30 + 30 mm)**

The safety distance (side) k is a safety distance for irradiation 700 mm

PLEASE NOTE Safety distances are mandatory

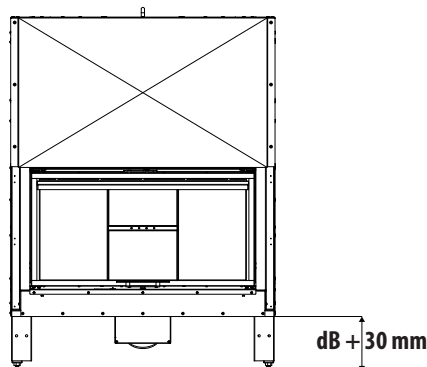
6-POSITIONING

HEIGHT ADJUSTMENT AND LEVELLING

The Plasma closed fireplace is supplied with adjustable feet which have the purpose of levelling the hearth of the closed fireplace, and have a range of about 3 cm.

Anyone wishing to raise the closed fireplace by more than 3 cm will need to create a brick pedestal to set the product on.

In any case do not remove the feet which are essential for levelling.



CLOSED FIREPLACE HEIGHT ADJUSTMENT

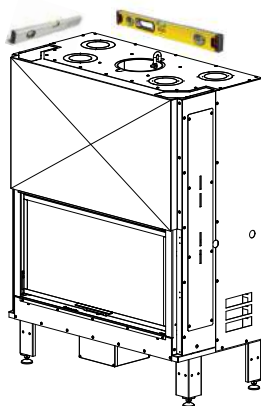


Levelling the closed fireplace is a crucial operation for the door to slide correctly.

CHECK SEVERAL TIMES THAT THE DOOR SLIDES CORRECTLY BEFORE INSTALLING THE CLADDING ON THE CLOSED FIREPLACE.



If the closed fireplace is not "levelled" you run the risk of the door not closing perfectly and that the internal counterweights hit the structure, making a noise every time the door is raised and lowered.



LEVELLING THE CLOSED FIREPLACE

7-OPERATING MODE

OPERATING MODE SELECTION



IMPORTANT!

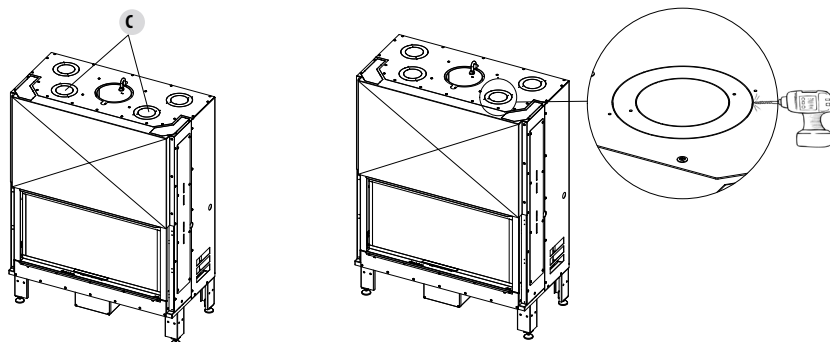
Before installation it is necessary to decide what system needs to be implemented.

The closed fireplace has the possibility of distributing hot air in **NATURAL CONVECTION (COMFORT AIR VN)** mode or **FORCED CONVECTION (COMFORT AIR VF)** mode through the use of a forced ventilation kit.

IMPORTANT!

With both systems the installer is required to take down the knockout holes set up above the closed fireplace to facilitate thermal exchange and air circulation.

The top knockout holes are round with Ø100 and Ø150 and at least two need to be opened and ducted ("C") for correct air diffusion. To detach the knockout holes, use a drill with Ø4 mm bit (see image).



Natural convection (COMFORT AIR VN)

With natural ventilation, the air naturally enters the bottom of the closed fireplace.

Take off the diamond-shaped knockout hole from the back of the closed fireplace.

Forced convection (COMFORT AIR VF)

If you implement this system, purchase the Comfort Basic Air kit or the optional Comfort Air Slim kit and follow the instructions provided with each kit.

EARTHING INSTRUCTIONS



If any electrical equipment is installed, the chimney must be safely connected to an earth contact, in accordance with regulations in force.

8-AIR INLETS

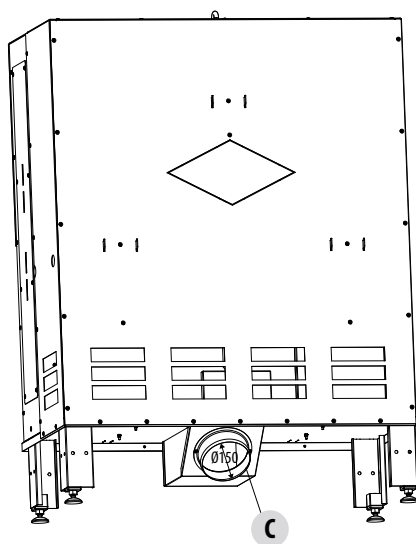
EXTERNAL AND INTERNAL AIR INLET COMBUSTION AIR INLET

The closed fireplace has a hole with a diameter of 150 mm for the intake of the air required for combustion.

Use a hose to connect the air intake hole to the exterior of the cladding and connect it to a grid so that the route is separate from the natural or forced convection air.



NEVER CLOSE THE COMBUSTION AIR INTAKE HOLE.



C = COMBUSTION AIR INLET Ø150

NATURAL VENTILATION/FORCED VENTILATION AIR INLET

If the closed fireplace is installed with forced ventilation, that is by using a Comfort Air kit, the air inlets and ducting must be conducted as follows:

- to ensure correct oxygen renewal in the room, we recommend setting up a 180 cm² external air inlet so that clean, fresh air can be drawn in and another inlet in the room where the closed fireplace is placed (again a 180 cm² air inlet). This will ensure that the air inside the room where the equipment is installed is mixed properly and will guarantee better cooling for the closed fireplace's structure.
- If you cannot carry out this kind of connection, you will still need to set up the two air inlets, whether they are both from the inside or outside. Depending on the choice, you will have slightly higher or lower operating temperatures compared to average values, though they will not prevent the product from working properly.

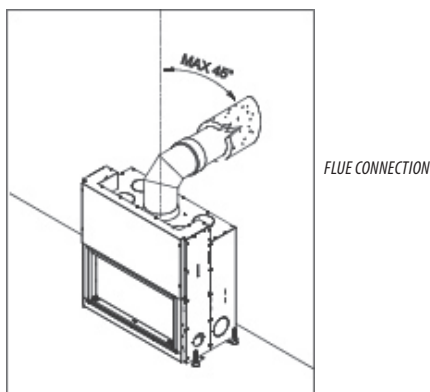
8-AIR INLETS

Please bear in mind that:

- All external air inlets must have a closing damper that can be controlled from the outside, along with an insect screen.
- The air inlet section is a net value, so you need to consider the area of any other elements (netting, etc.)
- **Periodically clean the filters or netting to ensure the air can pass through**
- **Do not, for any reason, obstruct the air inlets if the closed fireplace or ventilation kit is running.**

CONNECTION TO THE FLUE

We recommend connecting the closed fireplace to the flue using aluminium-plated steel pipes and bends that are able to withstand the high temperatures of that section and smoke corrosion. These connections are available on request in various sizes (see our price list) and they simplify installation as they are assembled by fitting one inside the other.



Any increase in the cross-section of the connection must be set up directly above the hood of the closed fireplace and not along the flue.

When installation is complete, it is compulsory to insulate the smoke fittings with ceramic fibre padding or any material that is resistant to at least 600°C.

CLADDING AND COUNTER-HOOD ASSEMBLY



READ THE "OPERATION TEST" CHAPTER BEFORE STARTING ANY CLOSED FIREPLACE CLADDING OPERATION

The closed fireplace and parts of the cladding must be fastened to each other **WITHOUT TOUCHING THE STEEL STRUCTURE** to avoid transmitting heat to the marble and/or stone and to allow for normal thermal dilation; pay attention to wood finishes like beams or shelves.

It is recommended to construct the counter-hood in fire-retardant plasterboard, 15/20 mm thick with self-supported galvanized profile frame in order not to bear on the cladding components (wooden beams or marble architraves) which do not have a load bearing structure and to be able to operate easily in the event of faults and/or future maintenance.

Dry-assemble the hearth of the **cladding leaving a 1 cm gap between closed fireplace and hearth to perform insulation.**

CLOSED FIREPLACE INSULATION

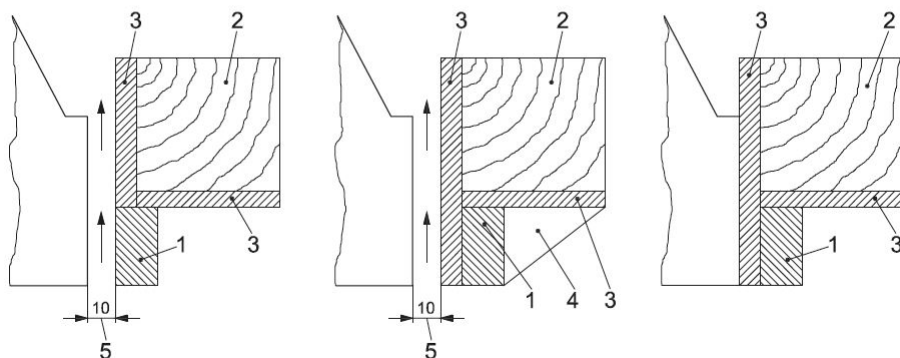
The closed fireplace always needs to be separate from the adjacent walls and ceiling.

If necessary, use insulating materials to insulate the walls touching the closed fireplace, if they run the risk of getting damaged or even catching fire (wood walls, plasterboard, etc...).

8-AIR INLETS

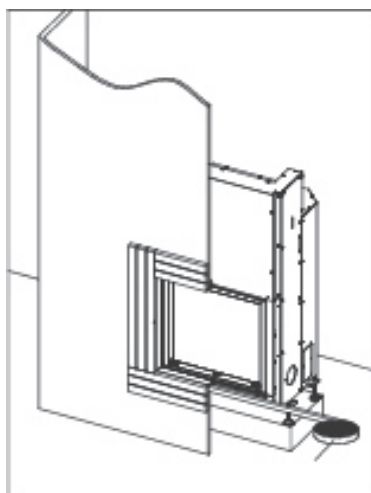
WOODEN BEAM INSULATION

The wooden beam must be protected with adequate insulation from hot parts in order to prevent the risk of fire or damage to the cladding.



THERMAL PROTECTION OF THE BEAM (CONSTRUCTION EXAMPLES)

1. MARBLE SPANDREL, OR OTHER NON-FLAMMABLE MATERIAL
2. WOODEN BEAM
3. INSULATION TO BE APPLIED
4. DEFLECTOR IN NON-FLAMMABLE MATERIAL
5. AIR GAP (MM)



INSULATION OF THE CLOSED FIREPLACE FROM THE WALLS AND CLADDING

8-AIR INLETS

HOOD VENTILATION OUTLETS

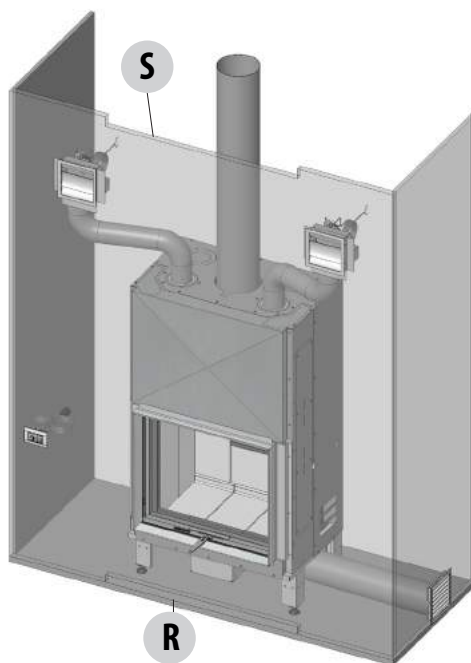
Both in the case of installation with natural ventilation and if using the Comfort Air kit for forced ventilation, **it is mandatory to install the manufacturer's hood ventilation vents or vents that can guarantee the same kind of operation and the same air passage section.**

The producer is not liable for any damage to the structure or to the electric components caused by failure to comply with this warning. For correct operation of ambient ventilation, remember that:

- Lower part "R" of the cladding **must have** a convective air inlet opening of no less than 400 cm²
- Upper part "S" **must have** a relief outlet (in addition to the ducted outlets) of at least 520 cm² to release the residual heat that has accumulated inside the cladding into the room.

This practice - as well as assuring perfect operation of the product - makes it possible to recover some of the structure's heat, which would be lost if it remained inside the cladding.

For a better understanding of the amounts, dimension and function of the ventilation outlets to be installed on the cladding, we provide three examples below of installation with the relative outlets.



8-AIR INLETS

NATURAL CONNECTION (without casing)

Combustion air

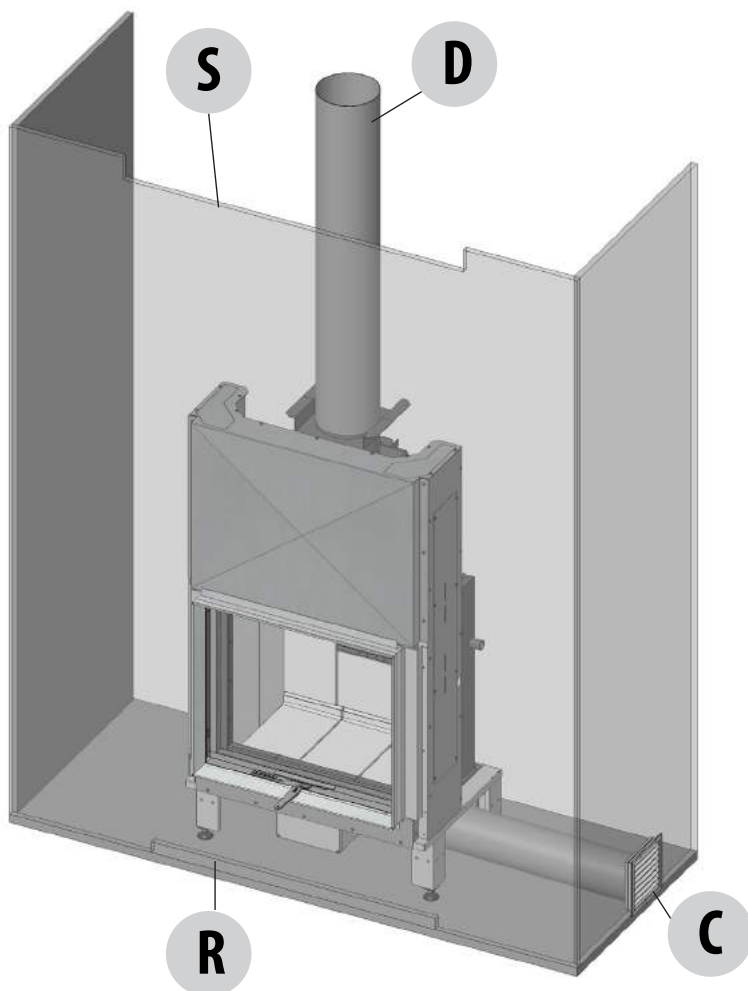
The combustion air inlet "C" Ø 150 provided on the Plasma closed fireplace must be connected to the exterior of the cladding by a pipe with 150 mm diameter and a maximum length of 3 metres.

Smoke outlet

Smoke outlet "D" must be connected by a smoke fitting to a suitable flue.

Convection air

Set up a low air intake grid "R" of at least 400 sq cm net and a high outlet "S" of at least 520 sq cm net, to decompress the hood.



8-AIR INLETS

NATURAL VENTILATION CONNECTION

Combustion air

The combustion air inlet "C" Ø 150 provided on the Plasma closed fireplace must be connected to the exterior of the cladding by a pipe with 150 mm diameter and a maximum length of 3 metres.

Smoke outlet

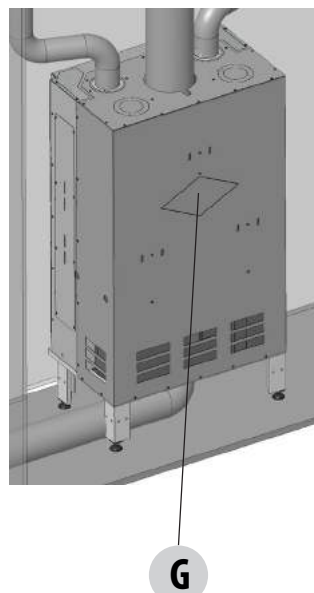
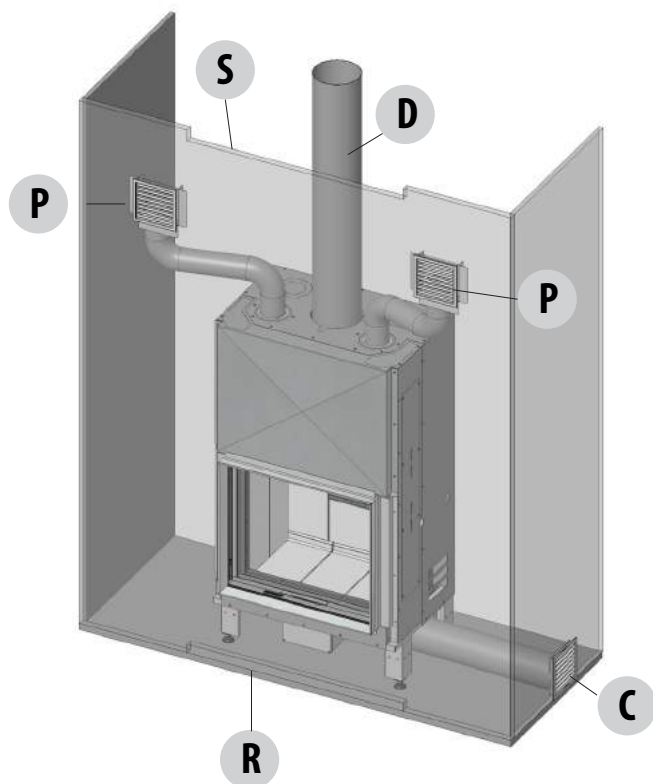
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Convection air

Set up a low air intake grid "R" of at least 400 sq cm net and a high outlet "S" of at least 520 sq cm net, to decompress the hood.

Heating air

With natural ventilation open the two front knockout holes, connect at least two pipes with a diameter of 150 mm and connect them to two outlets for the release of hot air "P". Also open the rear diamond-shaped knockout hole "G".



8-AIR INLETS

VENTILATION CONNECTION COMFORT AIR BASIC

Combustion air

The combustion air inlet "C" Ø 150 provided on the Plasma closed fireplace must be connected to the exterior of the cladding by a pipe with 150 mm diameter and a maximum length of 3 metres.

Smoke outlet

Smoke outlet "D" must be connected by a smoke fitting to a suitable flue.

Convection air

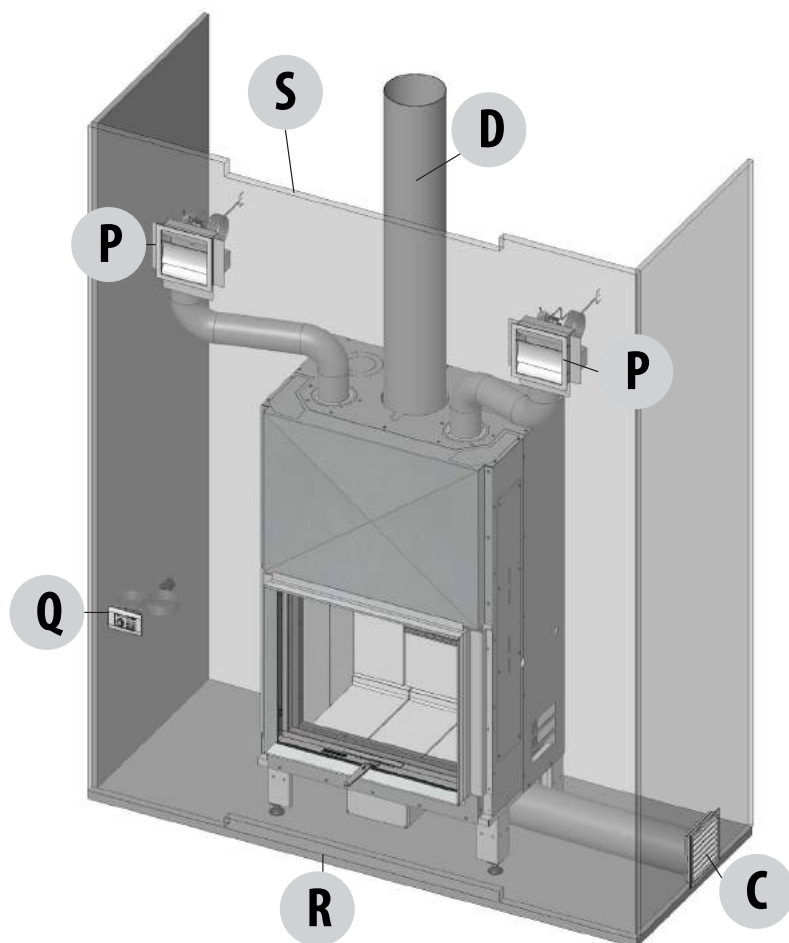
Set up a low air intake grid "R" of at least 400 sq cm net and a high outlet "S" of at least 520 sq cm net, to decompress the hood.

Heating air

With forced ventilation open the two front knockout holes, connect two pipes with a diameter of 100 mm and connect them to two outlets for the release of hot air "P".

Control unit

Position control unit "Q" in a cold area to avoid overheating the electronics.



9-CHOICE OF FUEL

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

FUEL

Below are some useful instructions for the correct use of the product

- Only burn natural, untreated wood with maximum moisture content of 20%, which corresponds to cut wood with 2 years of correct drying
- All types of wood are suitable, both hard and soft: beech, maple, oak, birch, acacia, fir, pine, larch, etc.
- Always use wood that is of the right size and not intact, because a whole log impedes the supply of air inside.
- Always burn the wood horizontally and not standing up
- For each load, always use the amount of wood indicated by the manufacturer and do not load one piece after another, because the flame would never reach a sufficient temperature for proper combustion.
- Do not insert an amount above that indicated to prevent excessive flames with excessively high smoke and wall temperatures.
- The thickness and length of the wood must always comply with the manufacturer's indications: the length (25 or 30 cm) depends on the size of the hearth in the combustion chamber.

Below are some useful indications for the correct storage of the wood:

- stored wood must already be sized for use.
- optimal drying requires a minimum of 2 years (longer times would not lead to increased drying).
- the wood must be cut during the winter and stored outdoors in the summer

Storage must be:

- well ventilated and aired
- covered to protect from rain and protected from sunlight, because the wood would lose quality (**DO NOT** cover the wood with tarps that touch the ground as this creates a sealed cover making the wood even damper.)
- not resting directly on the floor but at a distance of about 20-30 cm to prevent rotting.
- Possibly outside, otherwise in rooms or cellars that are well ventilated, preventing the formation of mould (always leave the window open!).
- Wood must always be stored at a sufficient safe distance from the combustion unit - always comply with the fire and safety regulations.



EXAMPLE OF WOOD STORAGE

9-CHOICE OF FUEL

FUEL: Wood

In order to achieve maximum efficiency from your product, it is of utmost importance to **use wood with suitable characteristics**. We recommend using heating wood such as **oak-beech-ash-robinia-common oak or non-resinous pressed wood logs**. The latter has a high calorific value and must be used with caution to avoid harmful overheating of the product. Fuels such as poplar-pine-lime-chestnut-eucalyptus-myrtle have a low calorific value as they are soft wood, i.e. tender. The moisture content is fundamental for all types of wood listed.

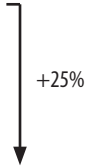
By using wood with a higher moisture content, most of the energy content of the fire will go to drying the water. Using moist wood also leads to poor combustion, soot and tar deposits in the flue which, in the worst case scenario, can catch fire. Other inconveniences are soot deposits on the glass of the product and creating an issue for the neighbours.



Attention!
It is strictly forbidden to use fossil fuels, impregnated, painted or glued wood, sheets of particle board, plastic or colour magazines as fuel. During combustion all of the above products develop hydrochloric acid or heavy metals, which are harmful to the environment and fireplace.
Hydrochloric acid can also corrode the steel or brickwork of the flue.

The table below provides the percentage of moisture and the calorific value of a burned 1 kg log. The optimal condition for use and drying time of 24 months is equal to 16% moisture, with a relative calorific value of 15350 kJ/kg. There is a significant 25% loss when the wood has a percentage of 29% with calorific value of 12200 kJ/kg.

Average moisture (%) of the wood in percentage		
	Wood placed in storage 3 months after cutting	
Drying time	Wood	Calorific value (kJ/kg)
0 (green wood)	75%	
3 months	44%	
6 months	29%	12200
9 months	26%	
12 months	25%	13250
18 months	17%	
24 months	16% OPTIMAL	15350
30 months	15%	



- the type of wood: only use virgin wood, uncontaminated and get information on the properties of the wood and its proper seasoning;
- moisture: ~~only use dry wood (16% or less) or green wood which spoils poorly, and use the product only if the appliance does not have pollution emissions;~~
- the size: split wood is better than round logs and use even sizes logs, preferably medium-small (25-33 cm long, 5-15 cm in diameter).

CONCLUSION

The table determines the energy loss of the wood and can be summarised in a brief consideration: **losing 25% of energy is equal to losing 1 log (1 kg) out of every 4.**

10-OPERATION

PRECAUTIONS BEFORE START-UP

Make sure you have read and fully understood the contents of this instruction manual.

Remove all components that could burn from the firebox and door (instructions and various adhesive labels).

Remove the stickers from the ceramic glass otherwise the high temperature could melt them and cause irreparable damage to the glass. The product can be positioned at in a corner or along a wall.



Avoid touching the product during the initial start-up, since the paint completes its drying process during this time and hardens. It is good practice to guarantee effective ventilation in the room during the initial start-up, as the product will emit some smoke and smell of paint, which is absolutely normal!

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

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



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

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



ONLY FOR FIRST TIME START-UP

It is extremely important to make sure the product is not immediately overheated and the temperature must be increased gradually.

This will prevent damage to the welds and the steel structure.

OPERATION TEST



ATTENTION!!

BEFORE CONTINUING WITH ANY CLADDING INSTALLATION OPERATION, PERFORM A GENERAL TEST ON THE CLOSED FIREPLACE ACCORDING TO THE FOLLOWING:

- Raise and lower the door 7-8 times to make sure it slides easily and that the counterweights do not make any noise due to impact against the structure.
- Make sure that cabling and control unit (if the COMFORT AIR VF kit is installed) are far away from the hot body of the closed fireplace.
- Test the ventilation kit at every speed and in every mode (when using the COMFORT AIR VF kit).
- Light the fire moderately, to ensure that the smoke fitting is tight / not leaking soot.



THE MANUFACTURER WILL NOT BE HELD LIABLE FOR DAMAGE TO THE CLADDING, IF THE ABOVE PREVENTIVE CHECKS ARE NOT CARRIED OUT AND IT ENDS UP BEING NECESSARY TO DEMOLISH THE CLADDING TO MAKE REPAIRS OR ADJUSTMENTS.

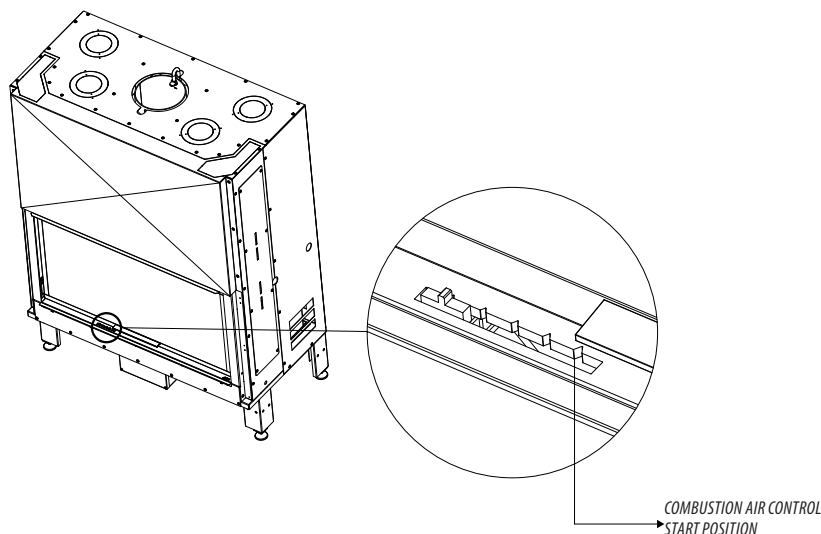
STEPS OF FIRST TRIAL IGNITION

- Make sure you have read and fully understood the contents of this instruction manual.
- Remove all components that could burn from the firebox of the closed fireplace and door (instructions and various adhesive labels).
- Remove the stickers from the ceramic glass otherwise the high temperature could melt them and cause irreparable damage to the glass. If this is the case, the manufacturer will not guarantee the glass.
- Open the front combustion air grid register all the way using the cold handle.
- Put in wood in small pieces and thoroughly-dry (moisture of 15/20%).
- Turn the fire on at moderate rate without excessively overheating the structure. With new chimneys, you might notice a smell caused

10-OPERATION

by the presence of an oily film and excess paint, which will go away after lighting the fire a few times.

- Do not close the rise and fall door right away, rather, leave it open by about 10 cm so that the wood can burn better and any moisture contained in it can dry. When the flame is stable, close the door all the way.



A high percentage of moisture causes condensation in the smoke duct, causing an alteration to the draught and generating smoke and considerable soot deposits in the firebox, on the glass of the door and on the chimney, with the subsequent risk of this catching fire. It also leads to a much lower overall efficiency.

The use of moist or treated wood releases a greater amount of smoke, which could soil the glass more quickly. Poor chimney performance can also compromise the cleanliness of the glass, as the smoke remains in the combustion chamber longer than usual.



Do not use treated fuels (painted or lacquered wood) or non-compliant fuels (plastic or derivatives), which could release toxic or polluting substances.

Do not burn waste.

The gasses produced by combustion of unsuitable fuel could damage the product and the chimney, pollute and compromise your health.

10-OPERATION

FIRST START-UP

NOTE REGARDING PAINT EXHALATION

It is recommended to air the room the first time the stove is switched on, to evacuate any smells and/or fumes emitted by the paint during the drying and hardening stage due to the heat.



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.

It is recommended to start the product for the first time using thin and seasoned wood.

The combustion air inlet must be fully open (START POSITION). When combustion has started up, normal sized wood can be introduced.

Each time the wood is loaded, the door must be opened slowly to prevent smoke blow back in the room.

THE BEST WAY TO LIGHT THE FIREBOX

We recommend doing the following:

- fill the wood from the top, instead of from the bottom as is the tradition, **to reduce polluting emissions;**
- use very dry kindling or suitable fire lighters to rapidly reach a high temperature in the firebox, but avoid paper or cardboard that pollute the air when burning;
- help fresh air reach the fire at the beginning by completely opening the air vent. Close the vent when you have good base of embers (START POSITION);
- introduce larger logs later and that we don't excessively fill the combustion chamber;
- always keep the appliance's door properly closed during operation.

It is very important to observe the ignition procedures in order to heat the structure and flue and ensure the desired level of performance, except with the first two/three start-ups for running in the new fireplace, when it is recommended not to overheat the product.

To ignite, load a generous amount of mixed fuel comprising small pieces of wood and logs of medium size (6/7 Kg), and do the same also for the next load. It is not advisable to use large logs for ignition as these make the process of ignition and heating longer and less efficient. Large logs can be used later when the fireplace has been run in.

This procedure allows the structure to heat up quickly and maintain an ideal internal temperature to ensure the best possible performance, the cleanliness of the glass and the whiteness of the internal refractory material.

The quality of the flames and cleanliness of the internal surfaces of the flue (white Alutec and clean glass) are an excellent indicator of the internal temperature of the unit (*). The higher the internal temperature, the better the performance and cleanliness during operation. The best performance, in fact, is obtained when a small bed of glowing embers gathers at the base of the firebox that helps to keep the internal temperature high and uniform.

After ignition and heating of the chamber, the EASY GOING air register can be used to control the flames as required. For subsequent use of the fireplace, load the amount of wood SPECIFIED in the TECHNICAL characteristics of each model of the PLASMA fireplace.

(*) The quality and humidity of the wood (<20%) and quality and draught of the flue (>12 Pa when hot) strongly influence performance and reaching of the internal temperatures, as well as cleaning afterwards.

10-OPERATION



The photo on the side illustrates a tack of wood lighted from the top with dry wood. This is the most correct and clean way of starting the fire.



on the side logs lighted from the bottom with dry wood. This is the most common method but not recommended due to the particulate emissions that is generates.



On the side, mixed stack of wood with no lighting module. This method must be avoided.



On the side, vertical logs lighted from underneath. This method must be avoided.

FUEL LOADING

For routine fuel loading simply open the door by the cold handle provided or with the handle. **During use, the metal structure and glass reach high temperatures, therefore use suitable thermal protection (such as gloves). During normal use always keep the door fully lowered/closed**, as intermediate positions cause anomalous combustion (forge effect), quick consumption of the wood and could also create smoke leaks due to the high temperatures of the firebox.

Only open the door for fuel loading operations and only for brief amounts of time.

The closed firebox reaches its maximum output and best operation with the door closed, as the tightness of the combustion chamber and the calibrated oxygen intake makes it possible to raise the output levels.



To achieve the nominal output and optimal combustion, load the amount of wood and comply with the loading interval indicated in the technical data table (chapter 5).

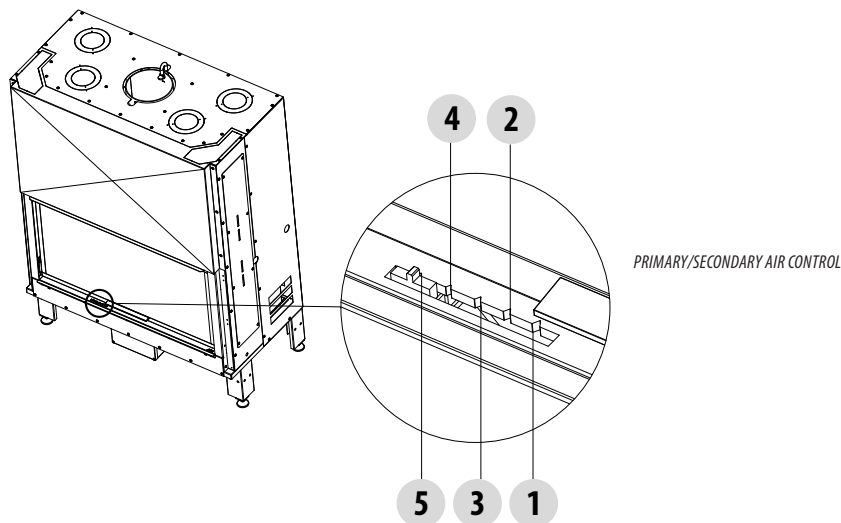
11-EASY GOING

COMBUSTION CONTROL

The new "Easy Going" air adjustment system is based on the choice of 5 types of use of the closed firebox.

PRIMARY AIR

The primary air comes in directly through the openings between the casing and the structure of the closed fireplace. This air makes combustion possible. With the aid of the cold handle, moving the provided lever, as shown in the figure, to the right, we achieve full opening with quicker combustion, while moving it to the left will close it and combustion will be slower.



The lever has 5 positions:

- 1 - START - position for quick ignition of the flame
- 2 - CLEAN - position for a cleaner glass
- 3 - COMFORT - for a lively flame with the right compromise of primary and secondary air
- 4 - PERFORMANCE - for better heat exchange of the fireplace
- 5 - SLEEP - for slower combustion without almost any oxygen

The lever turned to the START position is designed to bring a large quantity of primary air under the hearth of the firebox, to allow rapid and effective ignition of the fire.

To achieve the best performance of the fireplace, after having started it and obtained a bed of uniform embers, set the air register in position 4 - PERFORMANCE. Load every 41 minutes with 3 x 25 cm logs with an overall weight between 2.5 and 2.9 kg depending on what model is chosen (see technical data table).



11-EASY GOING

SECONDARY AIR

The adjustment needs to be made using the same lever as the primary air. The secondary air comes out proportionately to the primary air in a pre-calculated balance that the user can never modify, risking poor adjustments. Accordingly there will never be excessive combustion. Secondary air allows the completion of combustion and increases the efficiency. In the position to the far left (SLEEP) the amount of air in the combustion chamber, namely, where there is only a minimum amount of primary and secondary air.

This position is used to prolong combustion (for instance, at night, or when you are not at home) so that the closed fireplace is set to minimum for auto-combustion, to save on fuel and keep the flame burning.



The use of moist or treated wood releases a greater amount of smoke, which could soil the glass more quickly. The poor performance of the flue pipe can also compromise the cleanliness of the glass, considering that the smoke remains in the combustion chamber longer than usual.



Attention! The air flow lever of the models PLASMA B95/B115 can be found only on one side by the rise and fall door with opening span of 90°.

12-EASY SWITCH

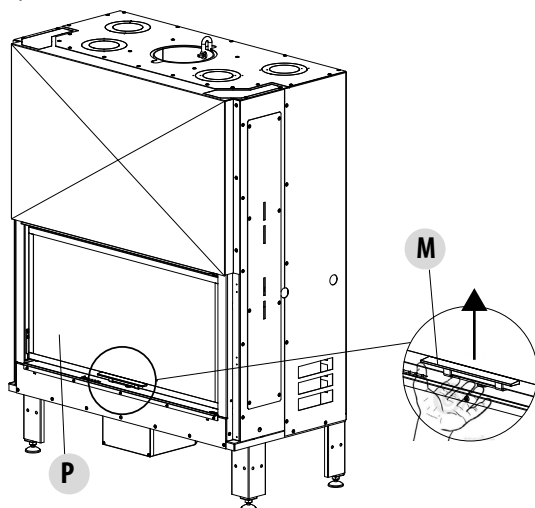
DOOR OPENING SYSTEM

The "Easy Switch" guarantees the possibility of using either the handle or a "hands cool" element.

The door of the closed fireplace can be opened using the handle or without the handle and therefore with the cold handle.

With the handle:

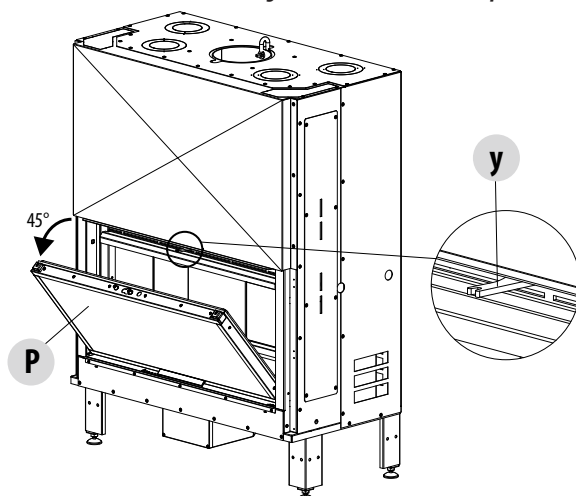
- grip handle "M" and pull upwards.



- or (to clean the glass), with door "P" closed, pull the top hook "y" towards you and tilt the door by approximately 45°



Attention! there are retainers on the door/closed fireplace that make it impossible for the door to lower below a certain angle, otherwise the handle could damage the base of the closed fireplace.



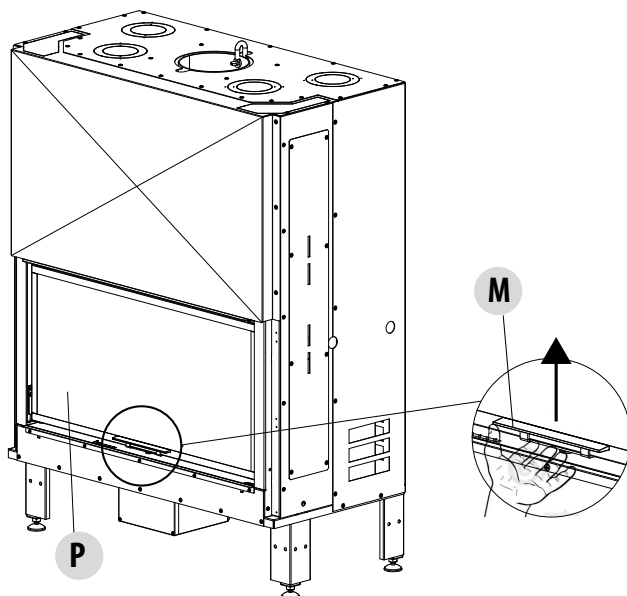
For use without a handle:

- use the cold handle to lift the door
- or, for opening to clean the glass, pull the hook towards you and lower the door to approximately 90°.

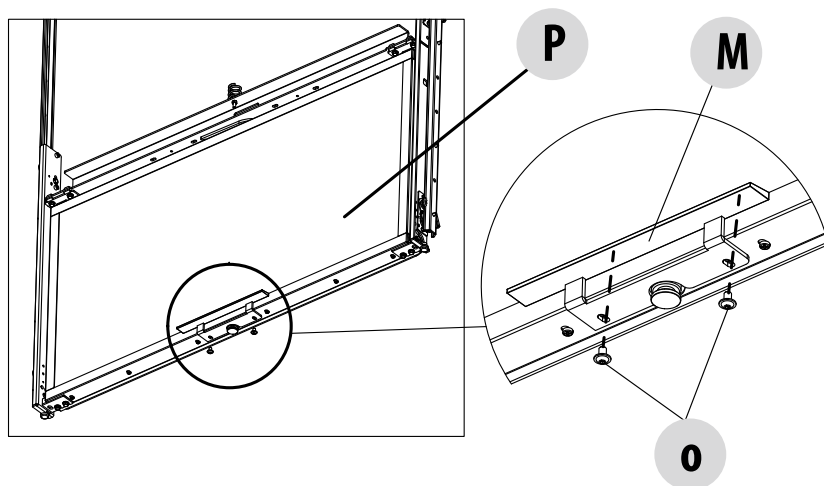
12-EASY SWITCH

For opening without a handle, follow the points below in the stated order; an incorrect manoeuvre could cause parts of the closed fireplace to break:

- raise door "P" with handle "M"



- take out the two screws "o" that secure the handle "M"
- take off handle "M" and set aside

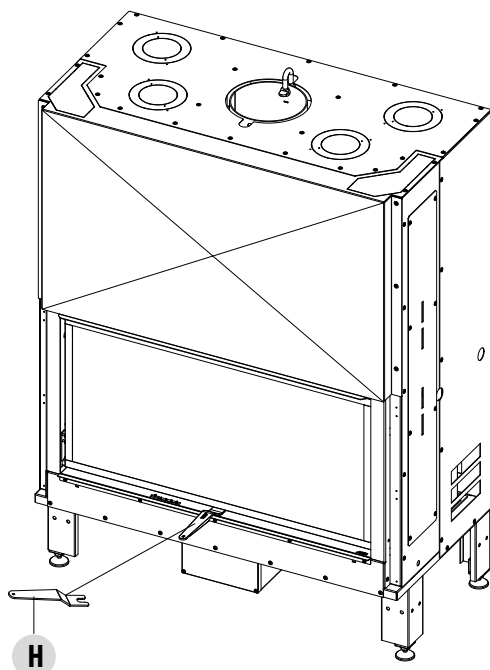


12-EASY SWITCH

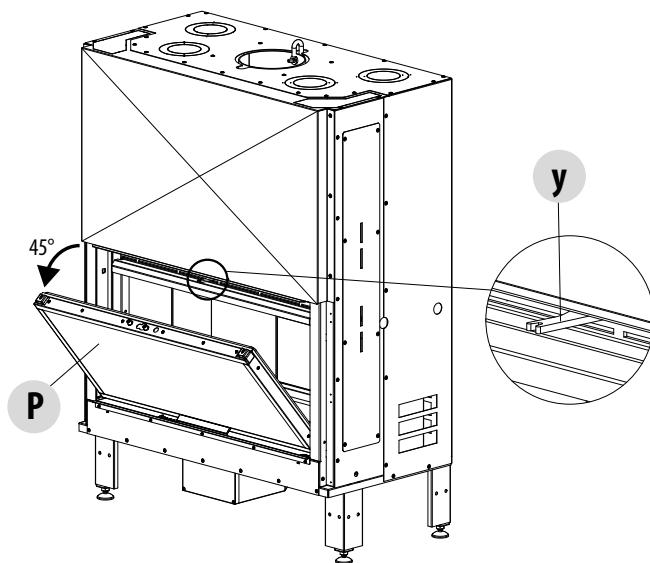
- lower door "P"



Attention! Once the handle is off to lower and raise the door you need to use the cold handle "H", provided.

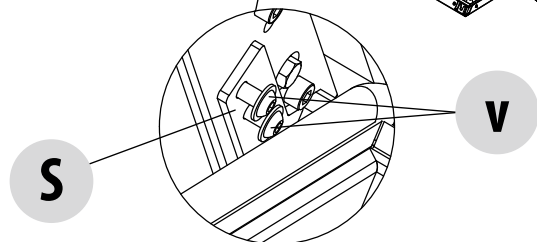
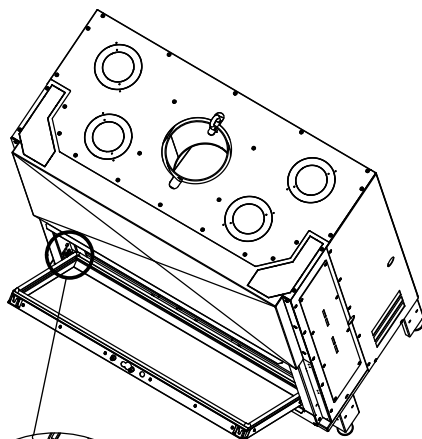
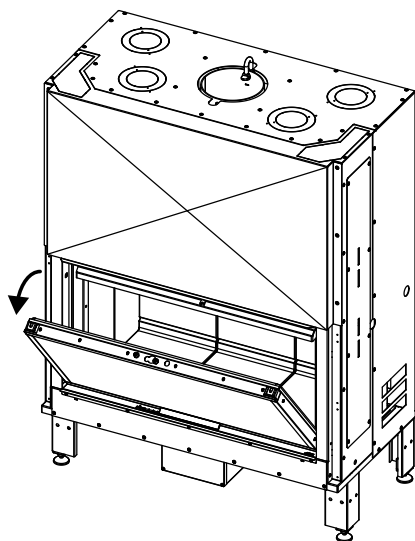


- pull the top hook "y" towards you



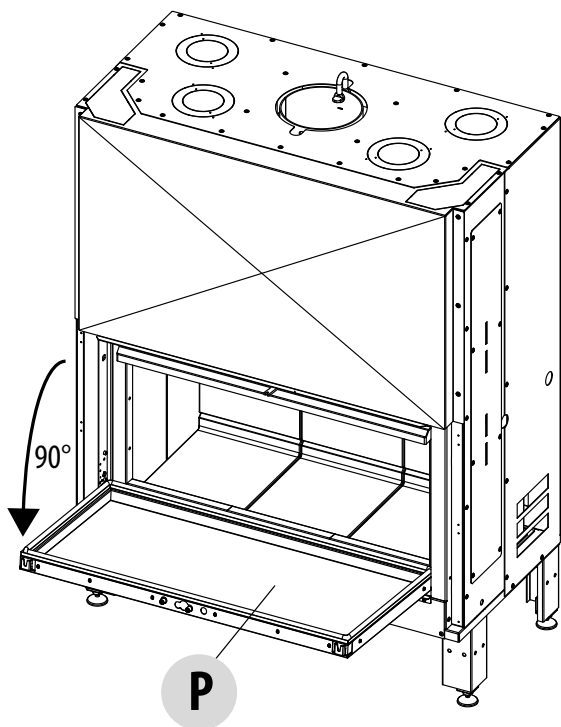
12-EASY SWITCH

- lower door "P" to an inclination of approximately 45° (the position stopped by the retainers)
- take out the two internal screws "v" and bracket "S" on both the right and left of the door



12-EASY SWITCH

- it is now possible to lower door "P" to 90°



During operation, the door of the closed fireplace must stay shut all the way.
When the fire is lit the door gets very hot.



Attention! For the models Plasma B95 and B115, the door at the point of the air flow lever is as described above, while on the other side the door does NOT rise and fall but moves only downwards by 90° for the purpose of cleaning.

DOOR OPENING SWITCH

On closed fireplaces there is a **switch** installed by MCZ and in the case of forced ventilation, **it turns off the fans when the door of the closed fireplace is open** (see the relative manual for the basic-slim comfort air kit).

QUICK RESPONSE

If for any reason it is necessary to put out the fire in the closed fireplace suddenly and quickly or put out a fire that has started in the flue pipe, respond as follows:

- Time permitting, remove the embers and ashes using a metal container.
- Immediately request help from the competent bodies.
- Close the combustion air register to 0

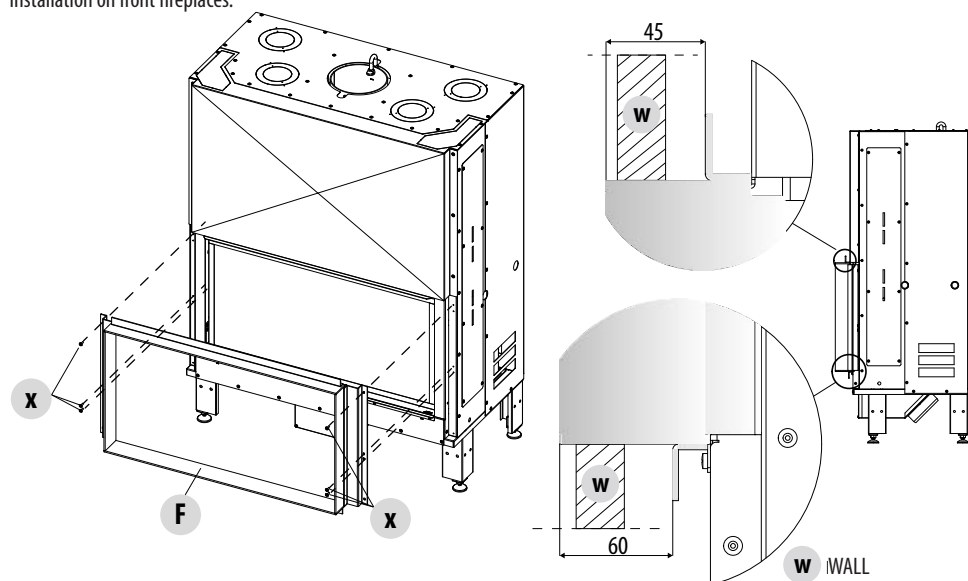
13-ACCESSORIES

ACCESSORIES

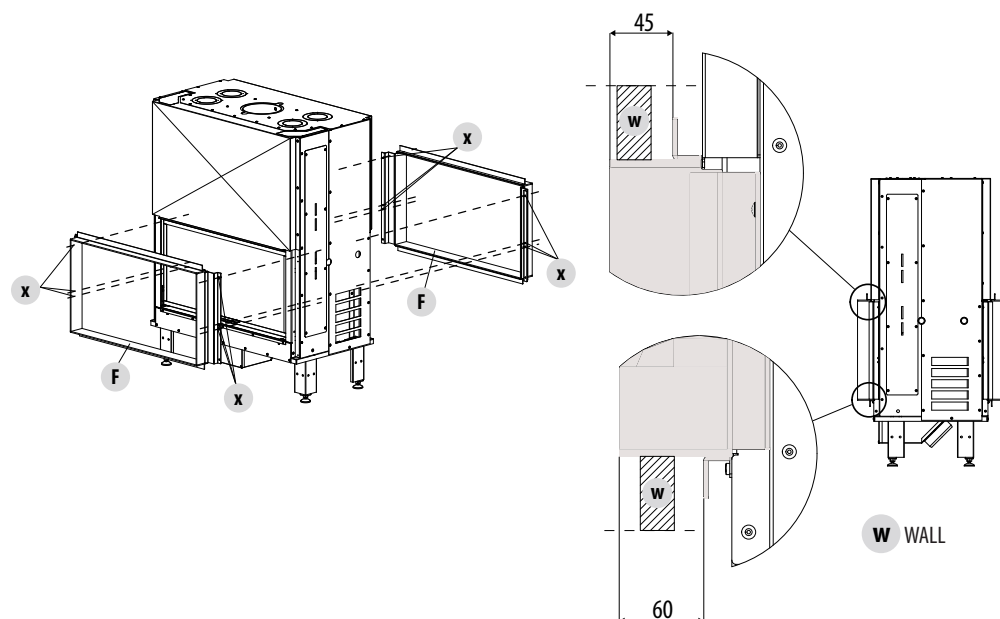
PASSE-PARTOUT

Passe-partout "F" is used for installations without cladding. It is attached to the structure by six screws "x". All of the relative instructions are inside the kit.

Installation on front fireplaces.



Installation on dual-front fireplaces.

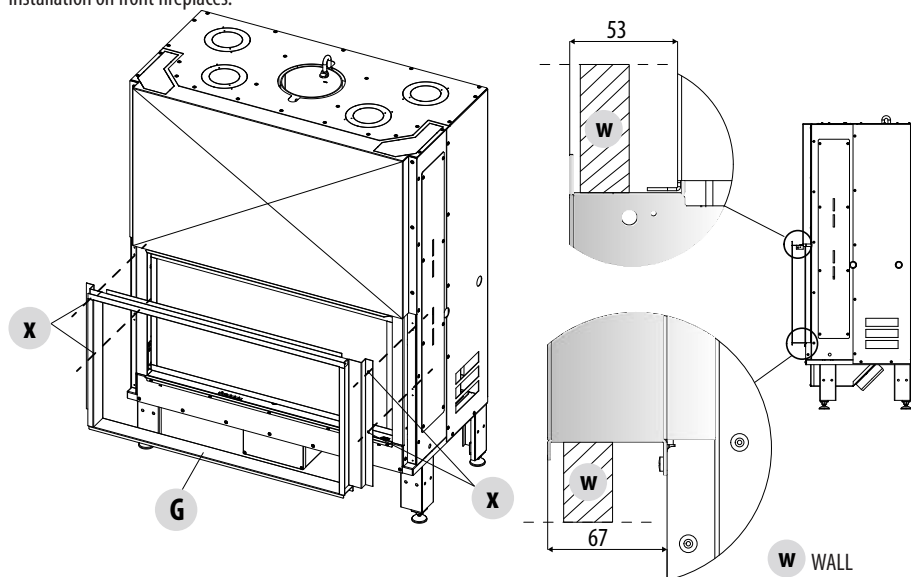


13-ACCESSORIES

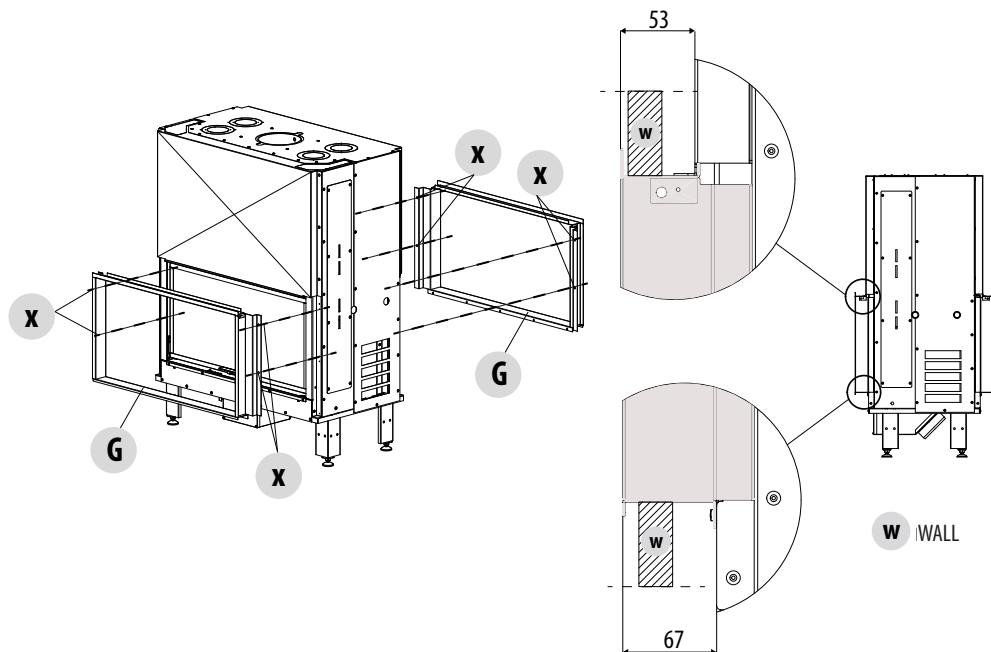
SPACER

Spacer "G" is supplied to compensate for the hole between the closed fireplace and the craft cladding. MCZ claddings already compensate for this hole. It is attached to the structure by four screws "X". All of the relative instructions are inside the kit.

Installation on front fireplaces.



Installation on dual-front fireplaces.

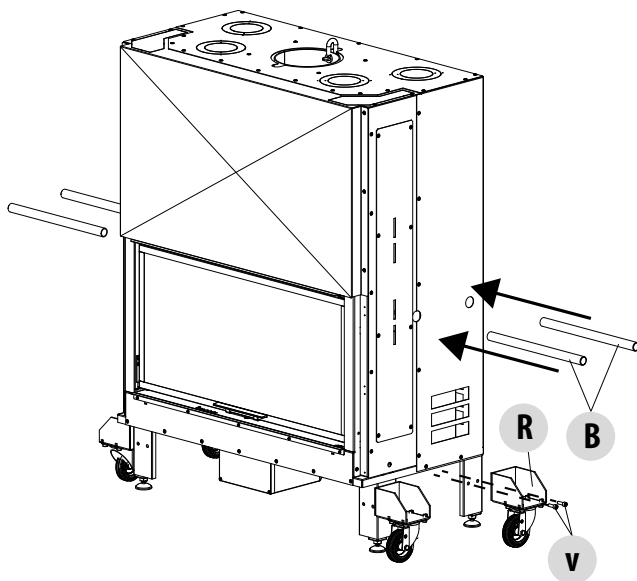


13-ACCESSORIES

HANDLING KIT

The handling kit is supplied to simplify closed fireplace transport operations.

The kit is composed of four handling units "R", and four chimney holding bars "B". The bars "B" need to be inserted into the relative holes on the sides of the closed fireplaces, while the handling units need to be attached to the legs of the closed fireplace by the relative screws "V". All of the instructions are contained in the kit.



COMFORT AIR SLIM/BASIC KIT

Ventilation kit to connect pipes and outlets for conveying hot air.

ADDITIONAL WEIGHTS KIT

Additional weights to naturally lower and close the firebox door, according to regulation Bauart A1.

14-MAINTENANCE AND CLEANING



ATTENTION!

All cleaning operations of all parts need to be carried out when the closed fireplace is completely cold; make sure that the ashes are out, use personal protective equipment and use appropriate maintenance equipment.

CLEANING UNDER THE USER'S RESPONSIBILITY

CLEANING THE GLASS

To clean the glass, use specific products (see our price list) or a cloth dipped in water and ammonia solution or a little white ash and a sheet of newspaper.

To open the door follow the procedure set forth in the dedicated chapter, depending on whether the handle or the cold handle is being used (see chapter on door opening/EASY SWITCH)

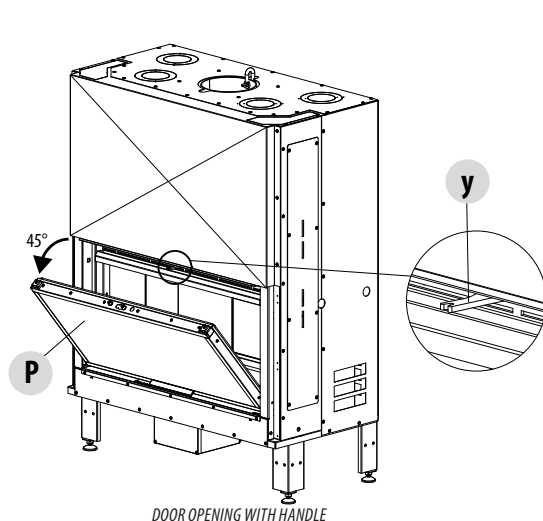
WHEN OPENING THE DOOR BUT ESPECIALLY WHEN CLOSING IT, GUIDE IT WITHOUT PRESSING ON IT.

FOR EXAMPLE, FORCING THE DOOR DOWNWARDS TO CLOSE THE GLASS COULD MAKE IT HIT THE SPANDREL AT THE BOTTOM OF THE CLOSED FIREPLACE, MAKING IT BREAK.

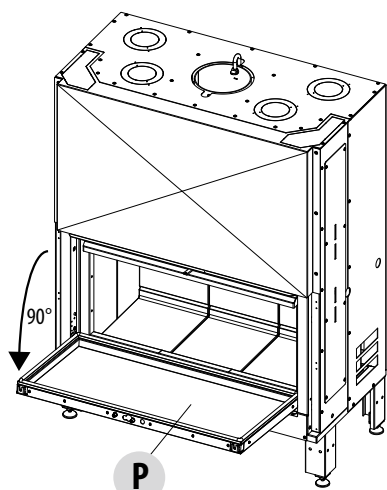


ATTENTION!

Do not spray the cleaner onto the painted parts or onto the seals of the door (ceramic fibre cord)



DOOR OPENING WITH HANDLE



DOOR OPENING WITHOUT HANDLE AND THEREFORE WITH THE USE OF THE COLD HANDLE

14-MAINTENANCE AND CLEANING

ASH REMOVAL

We recommend cleaning the hearth suitably for correct combustion. Use a metal pan and a brush to remove the ash from the hearth and place the ash non-flammable containers for transport.

Hot ashes must not be stored outside unsupervised or thrown into the rubbish bin. Allow them to cool down in the open air in a metal container.

CLEANING THE REFRACTORY WALLS (ALUTEC®)

These do not need to be cleaned because the feature of this material (ALUTEC®) is that it does not absorb soot, rather, it repels it when the firebox is hot. After ignition, when the firebox would normally tend to blacken, the refractory walls will tend to turn white again, starting from the base of the flame, when the combustion chamber reaches the operating temperature (~ 400° C).

If this does not happen, it may be due to:

- Moist or resin-rich wood that does not release enough heat or that soils the combustion chamber
- Chimney with poor performance and therefore the smoke stays too long in the combustion chamber, soiling the firebox
- Chimney with poor performance that does not make it possible to reach high output with the closed fireplace and therefore adequate temperature of the refractory walls.



*Never clean the refractory wall with a damp cloth, or other, as this could stain it.
At most use a dry paintbrush to remove large soot deposits.*



The failure of Alutec to “whiten” is not considered a defect in light of the warnings and instructions provided above.

CLEANING PERFORMED BY A QUALIFIED TECHNICIAN

CLEANING THE CHIMNEY

We recommend the mechanical cleaning of the flue **at least once a year**; excess build-up of unburned waste could cause problems with the smoke outlet and start a fire in the flue pipe itself. To access flue cleaning from the appliance, remove the smoke deflector: to slide it out correctly, lift the front of it and at the same time push it forwards to detach it from the rear supports.



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