

**MCZ**

EN

# INSTALLATION AND USE MANUAL

**BOXTHERM 70 - 80**



8901154300

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## INTRODUCTION

Dear customer,

Thank you for choosing an MCZ product, specifically a fireplace stove of the Boxtherm line.

We are sure that, with use, you will appreciate the quality of an attentively designed and tested product. Our goal is to combine technology with easy use and, above all, safety.

**For best fireplace stove operations and to fully enjoy the heat and sense of well being it will spread throughout your home, we suggest you carefully read this booklet before use. Please contact your dealer for full assistance in resolving any doubts or problems.**

Congratulations on your choice and remember, the fireplace stove **MUST NEVER** be used by children who should always be kept at a safe distance!

### Revisions to the publication

In order to improve the product, the Manufacturer reserves the right to modify and update this publication without prior notice.

Reproduction, even partial, of this manual without the Manufacturer's authorisation is prohibited.

### Manual preservation

- Please take care of this manual and keep it in a place that can be quickly and easily reached.
- If this manual should be lost or destroyed, or if it is in poor condition, ask for a copy from your retailer or directly from the manufacturer, providing product identification data.

### How to read the manual

- An essential item or one that requires specific attention is published in **"bold"**.
- *"Italics"* are used for any additional clarification.
- **NOTE:** the "NOTE" provides the reader with additional information on the subject.

## These symbols signal specific messages in this booklet

	<p><b>WARNING:</b></p> <p>This warning symbol found in various points in this manual indicates that the user should carefully read and understand the message to which it refers since <b>neglect to follow these instructions could cause serious fireplace stove damage or injury to the user.</b></p>
	<p><b>INFORMATION:</b></p> <p>This symbol intends to emphasise important information for good fireplace stove operations. Failure to observe these instructions could jeopardise product use and operations may be unsatisfactory</p>

# 1. WARNINGS AND WARRANTY CONDITIONS

## 1.1. SAFETY WARNINGS

- **Installation of the stove, electrical connections, checking its operation, and maintenance are all tasks which should be carried out by qualified and authorised personnel.**
- **Install the fireplace stove according to correct local, regional or state regulations.**
- **This apparatus cannot be used by people (including children with limited physical, sensorial or mental abilities or with little experience and know-how unless they have been viewed or instructed on the use of the apparatus by the person responsible for its safety.**
- **Only use the fuel recommended by MCZ. The appliance must not be used as an incinerator. The use of liquid fuel is strictly forbidden.**
- For correct use of the fireplace stove and accessories, and to prevent accidents, always follow the instructions in this booklet.
- Before beginning any operation, anyone who uses the stove must read and understand the entire contents of this instruction booklet.
- The fireplace stove must be used only for its intended purpose. Any other use is considered improper and therefore hazardous.
- Check the conditions of the surface that will support the weight of the stove. If it is made of flammable material such as wood, carpet, or plastic, provide suitable insulation.
- Avoid installation in rooms with B type gas devices, hoods with or without exhaust, heat pumps, collective ventilation conduits.
- Do not install several flue pipes in one room, and avoid having a stairwell in the vicinity. Check that in adjacent connected room there are not any units whose simultaneous use would create negative pressure in one of the two rooms.
- The user is fully liable for improper product use, releasing MCZ from any civil or penal liabilities.
- Any tampering with the fireplace stove, or use of non-original spare parts, may be hazardous to the user and releases MCZ from any civil or penal liability.
- Parts of the surfaces of the fireplace stove are very hot (door, handle, glass). Therefore, avoid direct contact with these parts unless wearing protective clothing or specific means such as, for

example, heat protective gloves or "cold" activation devices.

- Incorrect installation or poor maintenance (not compliant with the provisions of this manual) may cause damages to persons, animals or property. MCZ is not civilly or criminally liable in these cases.

## 1.2. OPERATING WARNINGS

- Turn off the fireplace stove in the event of faults or poor operations.
- Never place flammable materials closer than 150 cm to the fireplace stove.
- If the chimney flue draught is poor (due to bad weather or improper installation), use with the smoke valve completely open by removing the closure rod from its seat. Always keep the air register completely open and use small pieces of dry wood. If combustion problems continue, please contact a specialized technician.
- Install the fireplace stove in a location which is suitable for fire fighting, and equipped with all services such as air, water and electricity supply and smoke discharge.
- Do not light the fire with flammable materials.

### INFORMATION:

- For any problem, please contact your dealer or MCZ qualified and authorised personnel and always request original spare parts for repairs.
- Only use the fuel stated by MCZ.
- Check and periodically clean the smoke exhaust stack as foreseen by current regulations in the country of installation.
- If there is a fire in the flue pipe, keep the door of the fireplace stove and the combustion air register closed at all times. Request assistance from the competent authorities.
- Carefully conserve the instruction booklet. It must remain with the fireplace stove for its entire life cycle. If the stove is sold or transferred to another user, make sure the manual accompanies the product.
- If lost, please request a copy from your dealer or from MCZ.

### 1.3. WARRANTY CONDITIONS

MCZ guarantees the product, **except for the elements subject to normal wear** listed below, for two years from the date of purchase proven by a document that indicates the dealer's name and date of sale, if the completed warranty certificate was returned within 8 days and if the product was installed and inspected by a specialised installation technician and according to the detailed instructions indicated in the instruction manual supplied with the product.

The warranty includes the free replacement or repair of **parts recognised as factory defective**.

#### 1.3.1. Restrictions

The above guarantee does not cover components relating to electrical parts, on which the guarantee period is 1 year from the purchase of the product, documented as specified above. The warranty does not cover parts subject to normal wear such as: **gaskets, glass, and all removable fire box parts**.

Replaced parts will be guaranteed for the remaining warranty period from the date of product purchase.



**Specifically, glass is guaranteed from the moment the MCZ installation technician certifies its integrity when installation is completed.**

#### 1.3.2. Exclusions

**The warranty does not cover any part that may be defective due to negligence or careless use, incorrect maintenance, installation non compliant with that specified by MCZ (see relevant chapters in this manual).**

MCZ refuses to accept any responsibility for any damage which may be caused, directly or indirectly, by persons, animals or things as a result of the failure to observe all the provisions set forth in the instruction booklet, especially those concerning warnings on the subject of installation, use and maintenance of the appliance.

In the event of product inefficiency, please contact your dealer and/or area importer.

Damages caused by transport and handling are not covered by the warranty.

Exclusively refer to the supplied manual for product installation and use.

The warranty is null and void in the event of damage due to tampering, weather, natural calamities, lightning, fire, defective electrical and hydraulic systems and the lack or incorrect maintenance as per the manufacturer's instructions.



#### SERVICE REQUESTS

**Service requests must be addressed to the dealer who shall forward the request to MCZ technical assistance.**



**MCZ is not liable in the event the product and any other accessory is improperly used or modified without authorisation.**

Only original MCZ spare parts must be used for all replacements.

### 1.4. IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCE WITH EC DIRECTIVE 2002/96/EC



At the end of its working life, the product must not be disposed of as urban waste.

It must be taken to a special local authority differentiated waste collection centre or to a dealer providing this service.

Disposing of a appliance separately avoids possible negative consequences for the environment and health deriving from inappropriate disposal and enables the constituent materials to be recovered to obtain significant savings in energy and resources.

As a reminder of the need to dispose of appliances separately, the product is marked with a crossed-out wheeled dustbin.

## 2. INSTALLATION IN ACCORDANCE WITH UNI 10683

### 2.1. OPERATING AREA

For good operations and good heat distribution, the fireplace stove should be positioned in a place where the air required for combustion can flow (at least 60 m<sup>3</sup>/h must be available) according to installation standards and current regulations in the country of installation.

**The room volume must not be less than 60 m<sup>3</sup>.**

Air must enter through permanent apertures on the walls (near the fireplace stove) that open outdoors with a minimum section of 360 cm<sup>2</sup>.

These apertures (air vents) must be made so as not to be obstructed in any way.

Air can also be taken from adjacent rooms as long as these are equipped with outdoor air vents and not bedrooms or bathrooms or rooms where fire hazards do not exist such as garages, wood sheds, flammable material warehouses, strictly observing the provisions of current regulations.



- **Fireplace stoves may not be installed in bedrooms, bathrooms and where another heating device is installed without autonomous air flow (fireplace, stove, etc.).**
- **Placing the fireplace stove in explosive environments is prohibited.**
- **The floor of the room where the fireplace stove is to be installed must be strong enough to support its weight.**
- **In the event of wood floors, install a protective covering in accordance with current regulations in the country of installation.**
- **If walls are not flammable, install the fireplace stove at least 5 cm from the walls.**

### 2.2. PRECAUTIONS

The fireplace stove must be installed in a suitable surface that permits routine opening and maintenance operations.

The room must be:

- suitable for room operating conditions
- equipped with an adequate smoke exhaust system
- equipped with outdoor ventilation



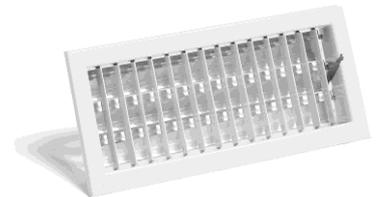
**IMPORTANT!**

- The fireplace stove must be installed and assembled by qualified personnel.
- The fireplace stove must be connected to a flue pipe or other vertical smoke stack that can discharge smoke at the highest point of the house.
- The fireplace stove must be connected to a flue pipe or an internal or external vertical duct conforming to current standards UNI 7129 - 7131 9615.
- Smoke is generated from burning wood and, therefore, may dirty adjacent or nearby walls.
- Before positioning the fireplace stove, you must make a hole for the intake of external air.

**2.3. CONNECTION TO THE EXTERNAL AIR INTAKE**

The room where the stove is installed must have at least as much air as requested by normal combustion of the equipment and by room ventilation. This may take place through permanent apertures in the room walls that lead directly outdoors or ventilated rooms according to UNI 10683 REV.

For this purpose, drill a hole with minimum 360 cm<sup>2</sup> free section near the fireplace stove (22 cm diameter or a 20x18cm rectangle), protected by an indoor and outdoor grille.



The air intake must also:

- directly communicate with the installation room
- be protected by a grill, made of metallic anti-insect mesh or a suitable protection as long as it does not reduce the minimum section.
- be installed so as to avoid obstruction
- for ducts, up to 3.5 linear metres, increase the section by about 5% while increased by 15% for larger measurements.



Remember that the ventilation grills always have a cm<sup>2</sup> useful section on one side. When selecting the grill and hole dimension, make sure the useful grill section is greater than or equal to the section required by MCZ for product operations.



**IMPORTANT!**

**Air flow may also be obtained from a room adjacent to the installation room as long as this flow is free through permanent apertures that directly communicate with the outdoors; avoid air outlets connecting with heating units, garages, kitchens or bathrooms.**

## 2.4. CONNECTION TO THE FLUE PIPE

The connection to the flue pipe is a very important element. The connection must be made with a great deal of care; in the event of erroneous or anomalous construction, it is extremely difficult to remedy without damaging the hood liner. In addition, the connection is made in a part of the stove where temperatures are very high, and for this reason it is important to use materials that are capable of resisting heat and also the acidity of the fumes produced by combustion.

Before beginning work, please note the following:

- The connecting pipe must have a maximum slope of 45 degrees. This is to avoid excessive deposit of condensation produced in the initial phases of lighting the fireplace stove, and/or the excessive accumulation of creosote. It also keeps the release of smoke from being slowed down.
- **The unions must be made of metal and suitable for the specific operating conditions of the product and marked EC (EN1856-2). The use of flexible and extending metal pipes is not permitted.**
- The components making up the connecting pipe must be perfectly sealed.
- The joint to the flue pipe must not be too long (to avoid obstructions), nor too short (to avoid smoke leakage).



**If metal connecting pipes are used, they must be insulated with suitable material such as ceramic fibre matting, to avoid deterioration of the masonry and of the decorative hood liner.**



**IMPORTANT!**

**Any increase in the section of the connecting pipe must start immediately above the hood of the fireplace and not along the flue pipe section.**

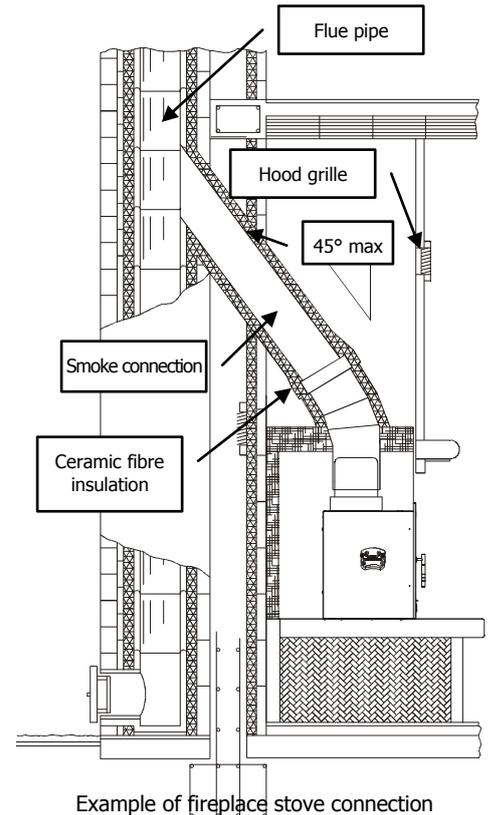
## 2.5. FLUE PIPE

The flue pipe is a **fundamental element** in discharging smoke and therefore must have the following requisites:

- It must be waterproof and thermally insulated.
- It must be made with heat resistant materials, resistant to combustion products and any condensation.
- It must have a vertical slope with axis deviations not over 45° and without narrowing.
- must be suitable for the specific operating conditions of the product and marked EC (EN1856-1, EN1443).
- must be suitably sized to accommodate the draught/smoke disposal requirements necessary for the correct functioning of the product (EN13384-1).
- It must preferably have a circular interior section.
- If pre-existing and previously used, it must be cleaned.



**The flue pipe is of primary importance for the correct functioning and safety of your fireplace stove.**



Example of fireplace stove connection

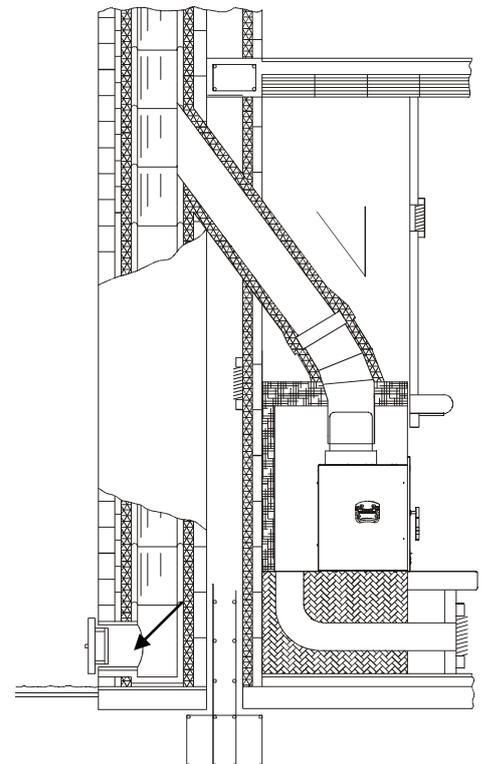
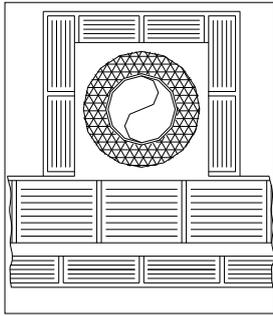


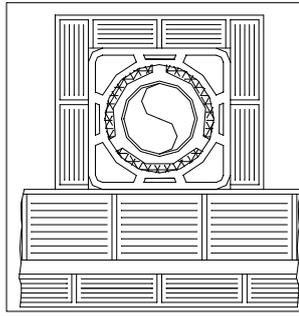
Illustration of a correctly constructed flue pipe with a chamber and sealed door for solid combustion product collection and discharge at the foot of the external ascending segment.

### 2.5.1. Examples of flue pipes



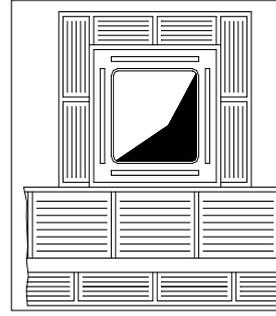
AISI 316 stainless steel flue pipe with dual chamber insulated with ceramic wool or equivalent resistant to 400°C.

**EXCELLENT**



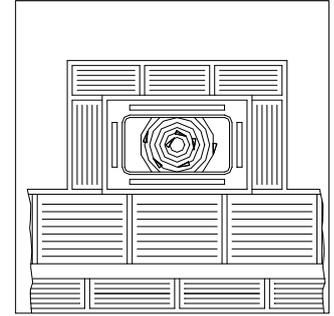
Flue pipe in refractory brick with insulated double wall and external coat of cement mix lightened with honeycomb material such as clay.

**GOOD**



Traditional square section clay flue pipe with insulating hollow inserts.

**GOOD**



Avoid flue pipes with internal rectangular sections whose larger side is double the smaller such as 20x40 or 15x30.

**AVERAGE**

Square or rectangular section flue pipes must have rounded internal corners with radius not less than 20mm. For the rectangular section, the ratio between internal dimensions must be  $\leq 1.5$ .

The sections/lengths of the flue pipe shown in the technical data table are guidelines for correct installation. Any alternative configurations must be suitably sized in accordance with EN13384-1.

The smoke duct should be equipped with a solid material collection chamber at the mouth of the smoke duct to be easily opened with an airtight door.



#### **IMPORTANT !**

In the event of doubt on your chimney flue operations or that its dimensions are different from those recommended, we highly suggest an authorised MCZ technician inspect and measure chimney flue performance (micro-gauge measurements)

MCZ s.p.a. shall not be held liable for poor operation of the fireplace stove that is due to a flue pipe of improper size or installation that does not comply with provided requirements.

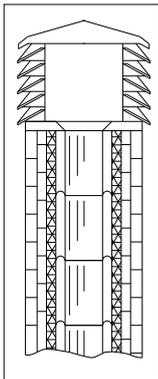
## 2.6. COWL

If underestimated, it is a severe impediment to correct "chimney system" operations.

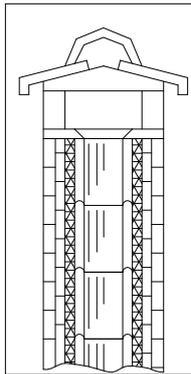
### Flue pipe draught also depends on its cowl.

Therefore, if hand made, its four exhaust sections must correspond to **more than twice the internal section of the flue pipe.**

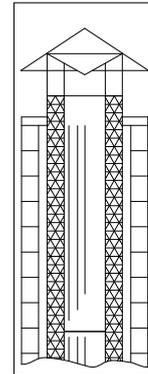
**Having to exceed the peak of the roof, the cowl will be exposed to wind, therefore an industrial type is recommended.**



An industrial cowl, with prefabricated sections fitting together, allows optimal disposal of the flue gases.



A traditional handmade cowl. The right exhaust section must be at least twice the internal section of the flue pipe, 2.5 times is ideal.



Steel cowl for flue pipe with internal smoke deflector cone.

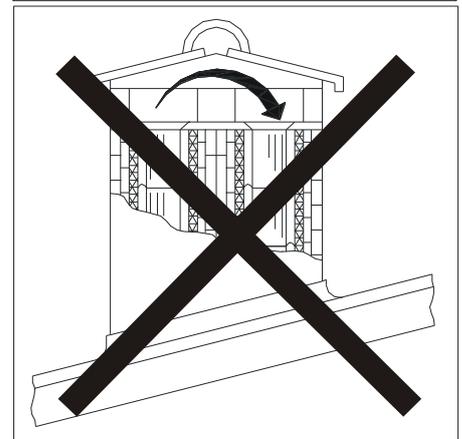
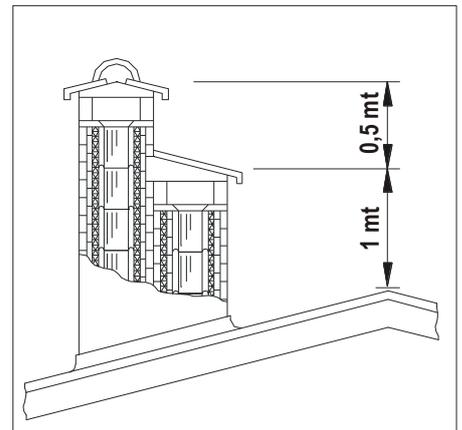
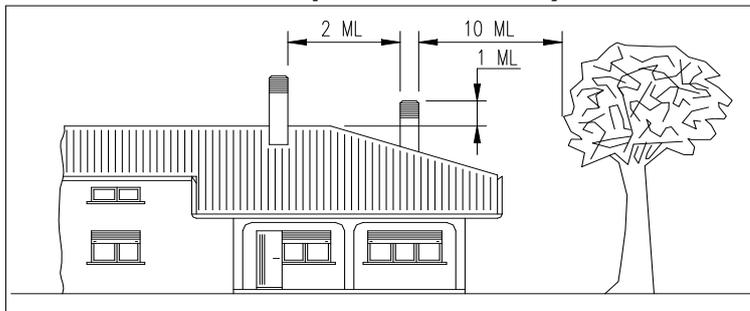
The cowl must meet the following requisites:

- It must have an internal section equal to that of the chimney.
- It must have a useful output section not less than double that of the internal section of the flue pipe.
- It must be built to prevent rain, snow and any foreign objects from getting into the flue pipe.
- They must be installed to guarantee adequate smoke dispersion and out of the reflux area where negative pressure forms.



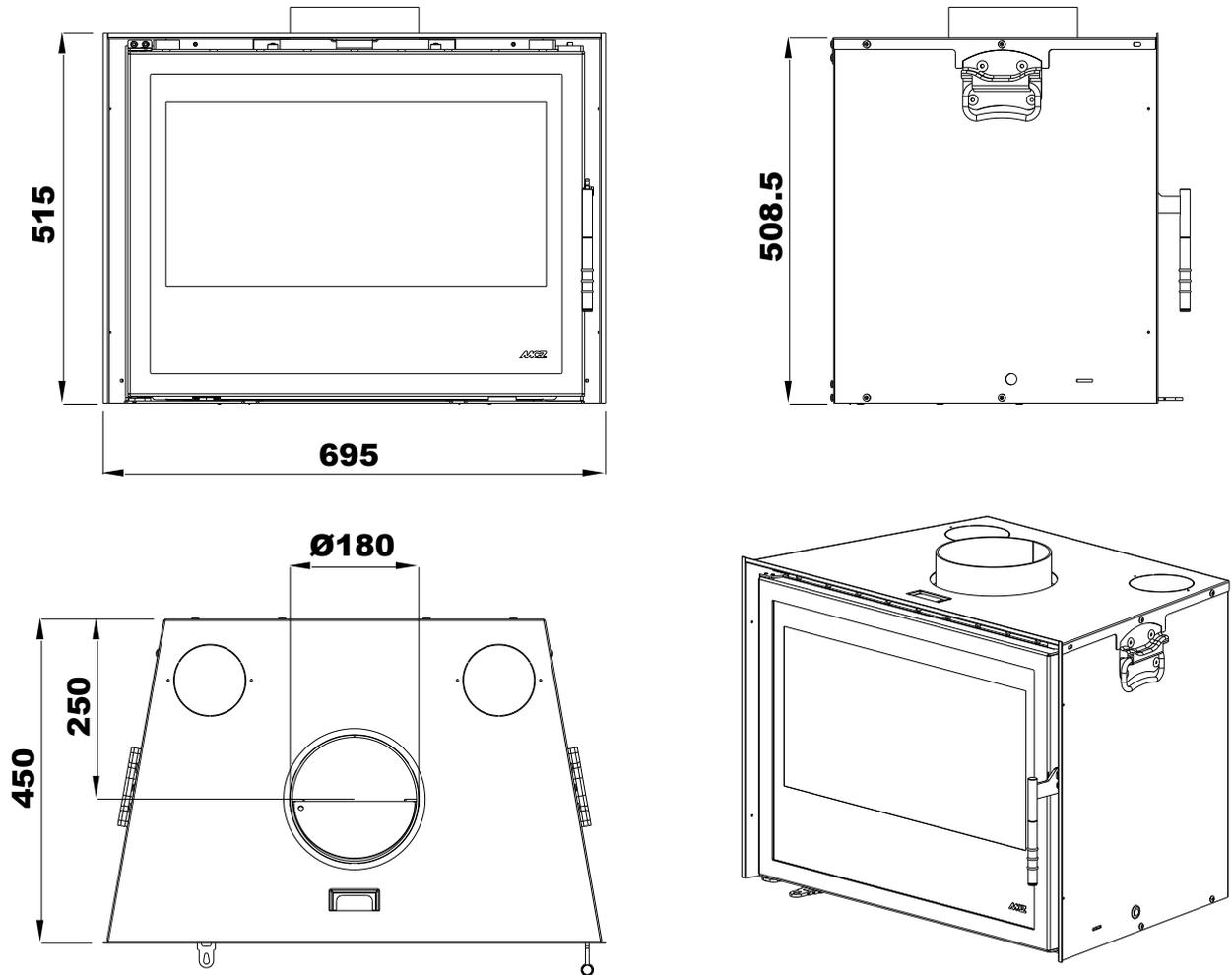
**For paired flue pipes, the cowl for solid combustion and the one for the upper floor must be at least 50cm higher than the other to avoid pressure transfers between paired flues.**

**The cowl must not have obstacles within 10 m such as walls, roof slopes and trees. Otherwise, raise it at least 1 m over the obstacle and, in the event of other nearby cowls, keep them at least 2 m away. In any case, the cowl must exceed the peak of the roof by at least 1m.**

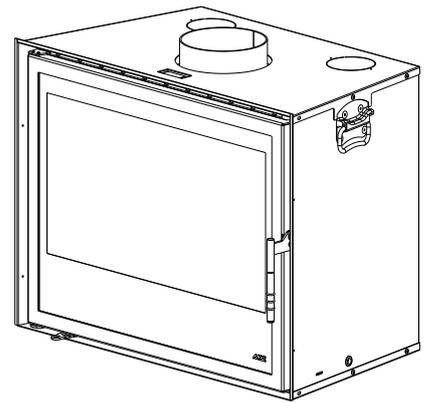
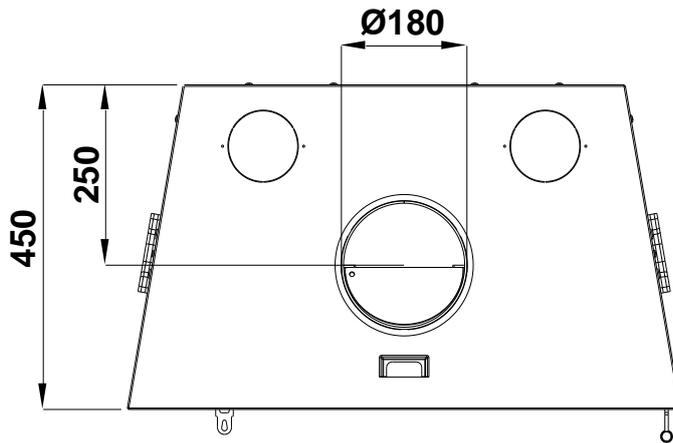
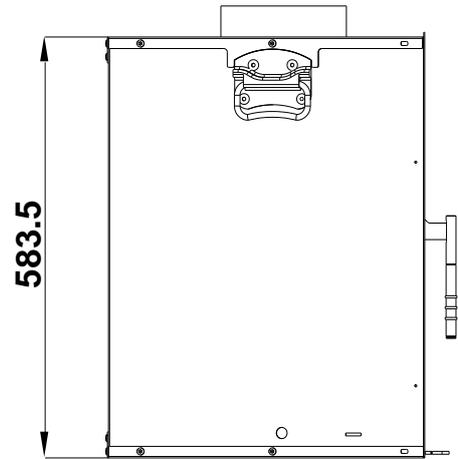
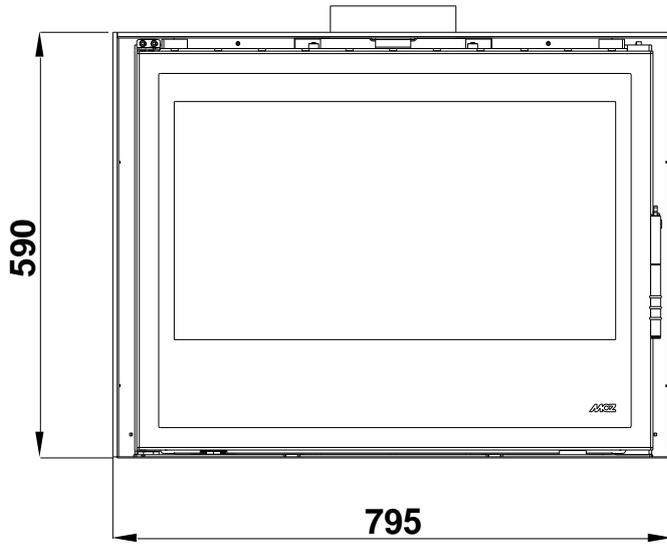


### 3. DIMENSIONS AND TECHNICAL SPECIFICATIONS

#### 3.1. Dimensions Boxtherm 70



### 3.2. Dimensions Boxtherm 80



### 3.3. Technical specifications

<b>Technical specifications</b>	<b>BOXTHERM 70</b>	<b>BOXTHERM 80</b>
Fuel type	wood	wood
Hourly consumption	2,1 kg/h – 1,1 kg/h	2,4 kg/h – 1,1 kg/h
Reloading/load time	45 min. / 1,6 kg	50 min. / 2 kg
Nominal output power	8 kW (6880 Kcal/h)	9 kW (7740 Kcal/h)
Minimum output power	4,1 kW (3526 kcal/h)	4,1 kW (3526 kcal/h)
Efficiency	83,7%	82,9%
CO emission in the smoke (13% O <sub>2</sub> )	0,11%	0,12%
Particulate/OGC/Nox (13%O <sub>2</sub> )	49 mg/Nm <sup>3</sup> - 6 mg/Nm <sup>3</sup> – 136 mg/Nm <sup>3</sup>	21 mg/Nm <sup>3</sup> - 1 mg/Nm <sup>3</sup> – 72 mg/Nm <sup>3</sup>
Smoke flow rate	8 g/s	8,9 g/s
Smoke temperature	240 °C	250 °C
Recommended draught	0,12 mbar – 12 Pa	0,12 mbar – 12 Pa
Heatable volume m <sup>3</sup>	161/40-184/35-215/30*	183/40-209/35-244/30*
Smoke outlet	Ø 18 cm	Ø 18 cm
Firebox dimensions	H=515 mm P=450 mm L=695 mm	H=590 mm P=450 mm L=695 mm
Net weight	100 Kg	130 Kg
External combustion air inlet	cm <sup>2</sup> 150	cm <sup>2</sup> 150
Distance from combustible material (back)	100 mm	100 mm
Distance from combustible material (side)	100 mm	100 mm
Distance from combustible material (down)	100 mm	100 mm
<b>Flue pipe</b>		
Up to 5 m	20x30 cm Ø22	20x30 cm Ø22
between 5-7 m	20x20 cm Ø20	20x20 cm Ø20
Over 5 m	18x18 cm Ø18	18x18 cm Ø18
<b>Note</b>		
Intermittent combustion unit		
*Heatable volume based on the requested power per m <sup>3</sup> (respectively 40-35-30 Kcal/h per m <sup>3</sup> )		
<b>Tested according to EN 13229 in accordance with Directive 89/106/EC (Construction Products).</b>		

## 4. INSTALLATION AND ASSEMBLY



### IMPORTANT!

The fireplace stove must be installed and connected to the smoke duct only by a specialized technician, so that all local and national regulations are complied with.

Installation must in any case be carried out in compliance with UNI 10683.

When the fireplace is unpacked, **check for perfect operation of all its parts or any damage which may have occurred during shipping. The retailer or the carrier must be immediately informed of any damage.**

If the fireplace stove is installed in a place that is difficult to reach, its weight can be reduced by removing the internal parts that make up the fire box. However, **be sure to put all of the parts back in place. This operation is to be carried out only by specialized personnel.**

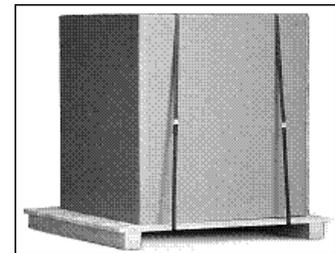
**MCZ shall not be held liable if the preceding warning is not complied with.**

### 4.1. PREPARATION AND UNPACKING

Open the packaging, remove the stove unit from the pallet and position it in the chosen location, taking care that its position complies with the above instructions.



**The fireplace stove must always be kept in a VERTICAL position during handling, using the appropriate handles located on the sides.**



Example of fireplace stove packing

Be especially careful that the door and its glass are protected from mechanical collisions that could jeopardise their integrity.

Moving the product must be done with care. If possible, unpack the fireplace stove in the area where it is to be installed.

The materials which make up the packaging are not toxic or harmful, so no special procedures for disposal are required.

The final user must store, dispose or recycle packaging material in accordance with local regulations.

### 4.2. ELECTRICAL CONNECTION

Before positioning the insert, a 230V - 50 Hz electrical power outlet must be prepared near the insert in order to connect the electrical cable that powers the forced ventilation fans.

The socket must be fitted with earth and accessible at all times to cut off power when servicing equipment.



**IMPORTANT!**

The installation must be carried out by first disconnecting the electricity from the home.

When preparing the connection of the electric cable provided with the insert VF kit, be very careful not to crush the cable while inserting the product. This could cause short circuits that can damage the entire electrical system.

Furthermore, predispose a socket with bipolar switch to remove and/or turn off in case of maintenance.

**4.3. SELECTION OF OPERATING MODE**



**IMPORTANT!**

With either **NATURAL CONVECTION** or with **FORCED VENTILATION** it is necessary to provide connection to the external air intake.

BOXTHERM can distribute the hot air either by **NATURAL CONVECTION** or by **FORCED CONVECTION** through the use of a **FORCED VENTILATION KIT** or with the **COMFORT AIR system**.

**4.3.1. Natural convection**

If this system is chosen, an air intake must be prepared (**A**) that has a free passage surface of at least 150 cm<sup>2</sup> to make the natural fresh air flow into the installation environment (better if inside the cladding). The air for the natural convection ventilation (**B**) will exit from the front part in the opening between the firebox and the outer cladding and will be uniformly dispersed throughout the room (fig.1).

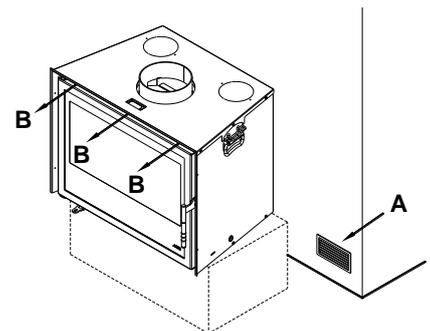


Figure 1 – Natural convection

**4.3.2. Forced convection (ventilation kit)**

If this system is chosen, in addition to adopting the rules of natural convection, in lower part of the fireplace stove, the ventilation kit must be installed, inclusive of the temperature probe to switch the stove on and off automatically **when the temperature of the air near the probe is about 50/60°C**.



To check that the probe works properly, heat it with a hair dryer and wait for the fan to turn on.

**Do not perform this check by heating up the probe with open flames (cigarette lighter, matches, etc...) since this could irreparably damage the probe.**

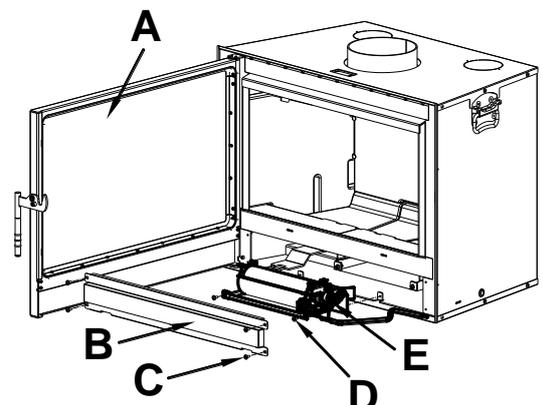


Figure 2 - VF kit assembly

If the reaction times of the probe are too long, then you should check the quality of the wood, e.g. poplar or beech, and its humidity (see paragraph "5.2 Choice of fuel"), or because the chimney flue does not allow suitable discharge of the fumes and a correct combustion.

**ASSEMBLY KIT:** for the assembly (fig.2) after opening the door **A** remove the protective panel **B** by unscrewing the screws **C**; then insert the kit and secure it with the screws **D** on the appropriate supports – be careful to run the cable through the fairlead hole on the side of the insert (fig.3); reassemble all parts following the reverse sequence.

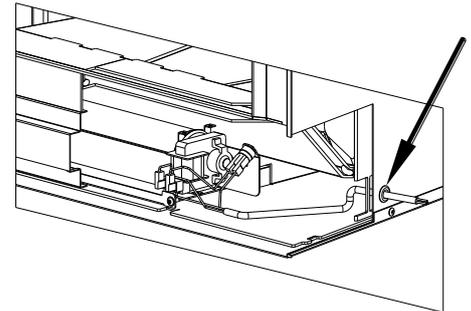


Figure 3 - VF kit assembly detail



**IMPORTANT!**

The installation and assembly of the ventilation kit must be carried out by qualified personnel in compliance with current national and local regulations.

**4.3.3. Forced convection ( Comfort air VF )**

If this system is chosen, an air intake must be prepared (**A**) that has a free passage surface of at least 150 cm<sup>2</sup> to make the natural fresh air flow into the installation environment (better if inside the cladding). Fig.4

For the ducting of hot air, it is necessary to install a reduction flange Ø 100 on the upper connections of the stove unit. Then insert in the flanges of the hoses Ø 100 in the COMFORT AIR outlets (**B**).

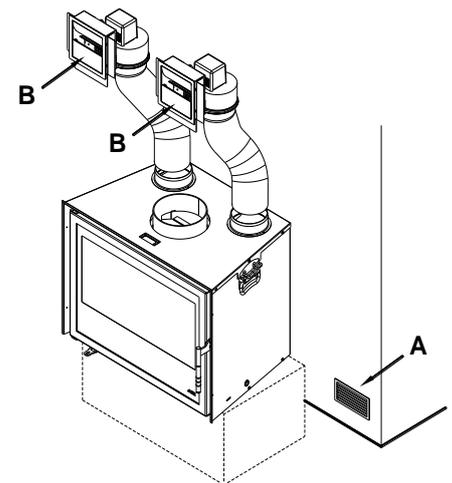


Figure 4 - Comfort Air natural convection

**4.4. EXTERNAL AND INTERNAL AIR INTAKE**

**4.4.1. Air inlet for natural ventilation**

If the fireplace stove is installed with natural ventilation, you must provide an external air intake **B (150 cm<sup>2</sup>)** that allows natural fresh air to flow inside of the cladding. This air intake **A (150 cm<sup>2</sup>)** must be made in the room where the stove unit is installed.



It is indispensable to comply carefully with this instruction, otherwise the lack of oxygen may compromise the safety of the installation.

**4.4.2. Air inlet for forced ventilation**

If the fireplace stove is installed with forced ventilation, i.e. using the COMFORT AIR kit, place air intakes and ducts as follows:

an external air intake (**150 cm<sup>2</sup>**) must be provided that allows natural fresh air to flow into the cladding. This air intake can also be located in the room where the fireplace stove is installed.

This mode allows a proper mix of the air in the room of installation and better cooling of the structure of the fireplace stove.

**Remember that:**

- All of the air intakes must be equipped with shutters than can be controlled from the outside and that are equipped with insect protection.
- The air intake section is considered net, therefore the area of any obstructions must be considered (mesh, etc.)
- The filters or meshes need to be cleaned periodically to ensure air can pass through them.
- **Do not for any reason obstruct the air intakes if the fireplace stove or ventilation kit is in operation**

**4.5. GENERAL ASSEMBLY RULES**

The insert can either be inserted on existing fireboxes or inserted as an autonomous firebox thanks to its self-supporting structure.

If the fireplace stove is positioned in an existing firebox, check that the dimensions of the firebox are compatible for insertion.

It can be installed at the desired height, providing a suitable support during work.

**Always evaluate the structural condition of the surface which will take the weight, and always leave a minimum 5 cm airspace between the stove and any walls.**

Install dry the fire bed of the cladding leaving an opening of 1 cm for the insulation.

**For installation near flammable material, comply with the following minimum safe distances:**

- **100 mm (distance from the sides and back)**
- **80 mm (insulating material)**
- **100 mm (height above floor)**



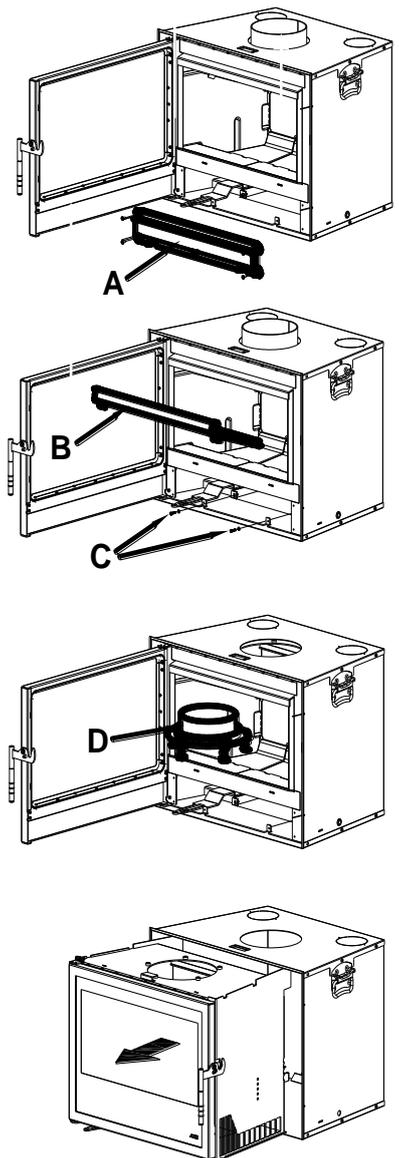
**If the stove is positioned over a floor or close to walls made of flammable materials, it is advisable to use sufficient insulation.**

**4.5.1. INSERT ASSEMBLY**

To facilitate insertion of the insert, the firebox can be removed from the outer cladding or only the flue pipe connection group to facilitate the connection to the flue pipe.

*4.5.1.1. Removal of the smoke connection*

After opening the door, remove the upper deflector in calorite **B** and unscrew the screws that tighten the union **D** (fig.5); after creating the connection to the flue pipe and inserting the fireplace stove, reinstall the union **D** being careful to connect it correctly with the flue pipe tube, tighten the screws properly and reposition the deflector in calorite **B**.



**Figure 5 – Insert removal**

#### 4.5.1.2. Removal of the firebox

After following the instructions in chapter 4.5.1.1. continue by removing the protective panel A by unscrewing the locking screws and then block the firebox to the outer cladding; at this point the firebox can be separated from the outer cladding to facilitate the assembly.

### 4.6. CONNECTION TO THE FLUE PIPE

We recommend connecting the stove to the flue pipe by means of pipes and bends in aluminised steel, capable of withstanding the high temperatures which are reached in that section of pipe, and of resisting corrosion from the fumes. These connecting pipes are available on request in various sizes (see our price list), and they simplify installation, as they are assembled by fitting one into another. Figure 6



**Any increase in the section of the connecting pipe must start immediately above the hood of the fireplace and not along the flue pipe section**

**When installation is complete, the smoke connection must be insulated with ceramic fibre matting or material that is resistant up to at least 600°C.**

**Flexible pipes in steel or aluminium cannot be used to connect the fireplace stove to the chimney flue as they are prohibited by current regulations.**

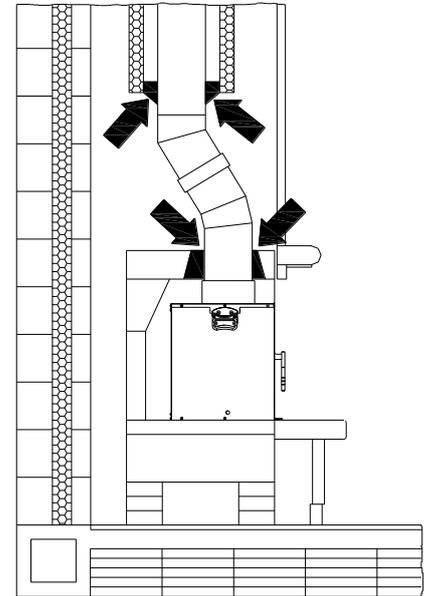


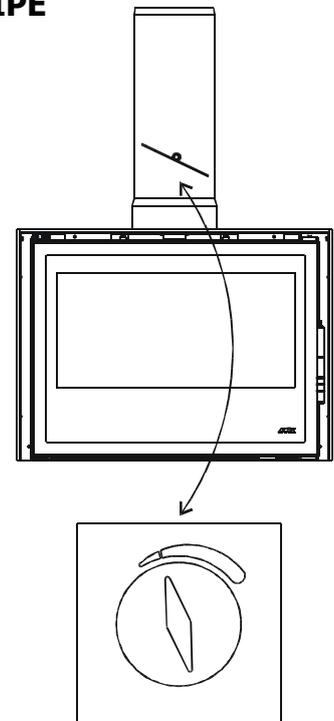
Figure 6 – Connection to the flue pipe

#### 4.6.1. DIRECT CONNECTION BETWEEN INSERT AND FLUE PIPE

Drill and disassemble the existing clay hood and engage the elements in the chimney flue, being careful not to exceed the 45° inclination and to correctly carry out any infilling necessary in order to prevent soot or ashes from the chimney flue from settling above the insert (fig. 6).

#### 4.6.2. Smoke valve (optional)

In case of excessive draught in the flue chimney, combustion may become unbalanced and consequently less efficient. In this case, in order to improve combustion efficiency, it is advisable to install the smoke valve (optional) directly at the output of the fireplace stove.



#### 4.7. INSTALLATION OF CLADDING AND HOOD LINER



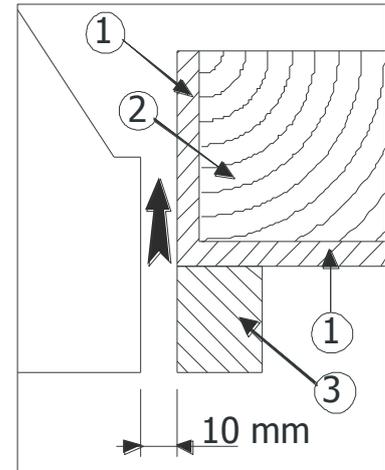
**BEFORE YOU START INSTALLING THE CLADDING OF THE FIREPLACE STOVE, READ CHAPTER 6 "OPERATING TEST"**

The fireplace stove and the parts of the cladding must be attached to one another **WITHOUT COMING INTO CONTACT WITH THE STEEL STRUCTURE** to prevent transmission of the heat to the marble and/or stone, and to allow normal thermal dilation. Use care with wood finishes such as beams or shelves, which must be suitably insulated.

In particular, shelves must be placed at a distance of not less than 30 cm from the upper part of the unit.

**We recommend making the hood liner in fire-resistant plasterboard** of 15/20 mm thickness, with a self-supporting frame in galvanised profile, so as not to put weight on components of the cladding (such as wooden beams and marble architraves) which do not have a load-bearing structure and **to make it easy to work in the event of future anomalies and/or maintenance.**

Dry install the fire bed of the **cladding, leaving an aperture of 1 cm** between the fireplace stove and the fire bed to provide insulation.



**THERMAL PROTECTION OF CROSSBEAM**

1. Insulation applied or to be applied.
2. Wood beam
3. Marble or other material

**Figure 7** – Insulating a wooden beam

#### 4.8. INSULATING A WOODEN BEAM

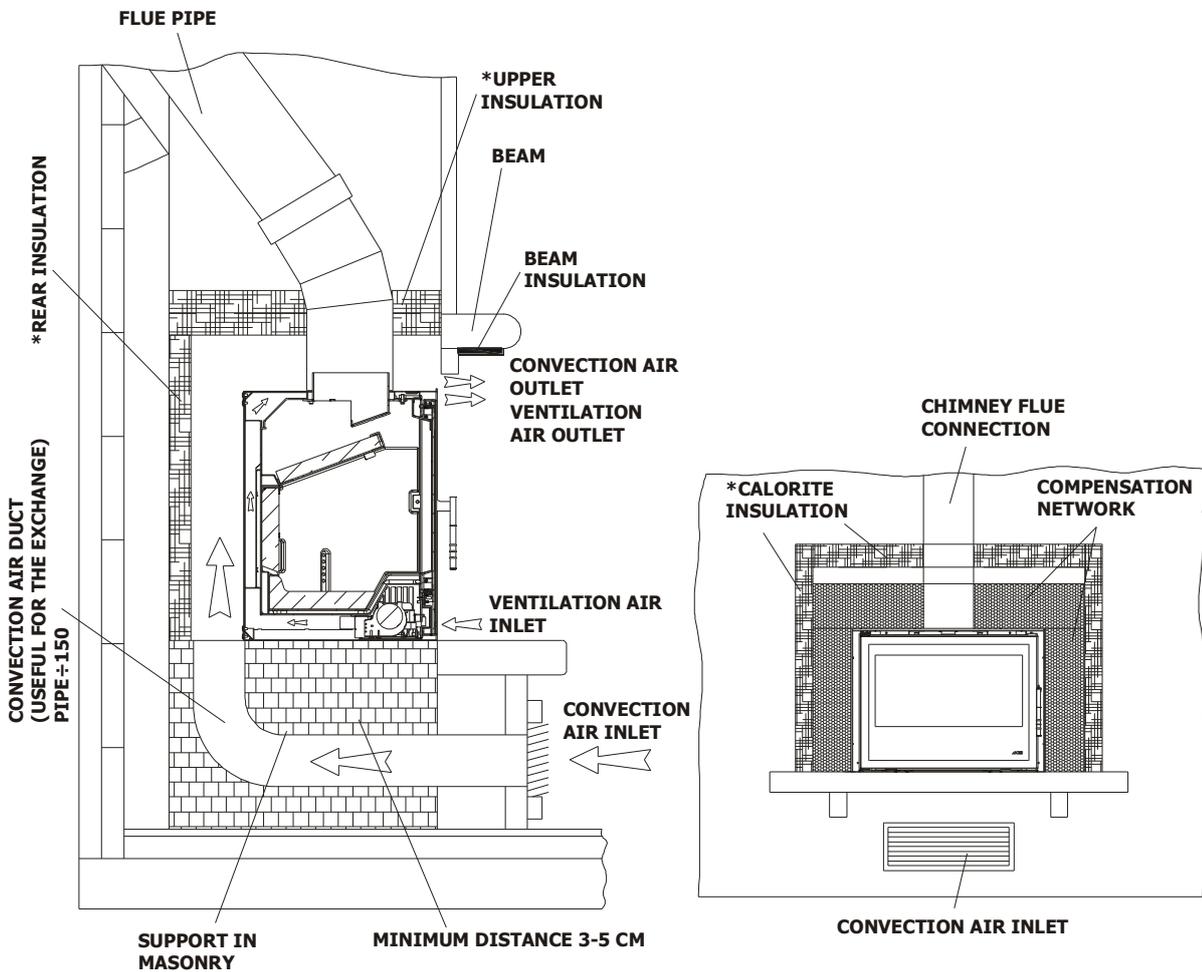
If there is a beam made of wood or other combustible material above the hot air outlet opening, **it is absolutely necessary to protect it** with panels made of insulating material (ex: calorite).

### 4.9. SUMMARY DIAGRAM FOR IDEAL CONNECTION OF THE INSERTS

The installation described below is ideal for inserts assembled on old or new fireplaces; the insert must never be walled up but positioned 5mm away from any masonry surface since it needs to be able to expand when it is hot; furthermore, if it is walled up there is a significant drop (30-40%) in the thermal efficiency because the heat is not allowed out completely but only in part.



**Insulate the structure thoroughly only if there are parts in wood or flammable material nearby.**



## 5. OPERATION

### 5.1. PRE-LIGHTING WARNINGS

Make sure you have read and completely understood the contents of this instruction booklet.

Remove all accessories and parts that could burn from the firebox and from the door.

**Remove the stickers from the ceramic glass or the high temperature could melt them and irreparably damage the glass. In this case, the MCZ warranty does not cover the glass.**



Do not touch the fireplace stove when it is lit for the first time. During this phase, the paint finishes drying and hardens. If you touch the paint, you may expose the steel surface.

It is good practice to provide plenty of ventilation in the room during the initial lighting, as the stove will give off a small amount of smoke and smell of paint.

If necessary, touch up the paint with the aerosol spray in the original colour (see "Fireplace stove accessories and inserts")

Do not stay near the fireplace stove, and as previously mentioned, ventilate the room. The smoke and the smell of paint will vanish after about one hour of operation. There are no health risks involved.

During start-up and cooling, the fireplace stove is subject to expansion and contraction; therefore, you may hear slight creaking noises.

This phenomenon is absolutely normal, the structure being made of sheet steel, and must not be considered a fault.



**It is very important not to bring the stove up to full heat immediately. Bring it up to temperature gradually.**

**This avoids damages to welds and the steel structure.**

**Do not demand full heating performance straight away!**

### 5.2. CHOICE OF FUEL

To obtain the maximum performance from your BOXTHERM fireplace stove, it is of primary importance to use **wood with suitable characteristics.**

**It is advisable to use** wood for heating such as **oak, beech, locust tree, or oak** with good calorific energy, or logs of pressed wood that **do not have resin. These have a high calorific power and must be used with caution to avoid overheating which could damage the stove.**

**It is advisable to use** fuels such as **poplar, pine, lime tree, or chestnut** which have low calorific power, since they are soft wood and also they do not burn for a long time.

**Avoid using** fuels such as **pine, fir, and olive** as they contain a high degree of resin and their combustion may substantially soil the fire mouth and the ceramic glass; also, they do not have an exceptional yield.

**For all types of wood listed, the humidity they contain is essential because it determines the calorific energy.**



**Do not use treated fuels (such as painted or varnished wood, or particle board) or unsuitable materials (such as plastics and derivatives), which could release toxic or polluting substances. Do not burn rubbish.**

**The gases produced by combustion due the use of unsuitable fuels cause damage to the fireplace stove and the chimney, they cause pollution and can compromise your health.**



A high percentage of humidity produces condensation in the smoke duct causing an alteration in the draught and generating smoke and a significant deposit of soot on the glass of the door and in the flue pipe with a possible risk of a chimney fire later on.

Wood drying time (i.e. beech)	% humidity	Heat power Kcal/h
Freshly cut	50	/
3 months	40	2410
6 months	35	2700
9 months	30	2900
12 months	25	3150
15 months	20	3400
18 months	15	3710
21 months	10	3980

**Figure 9** – Calorific energy (e.g. beech) in relation to humidity contained.

### 5.3. FIRST LIGHTING

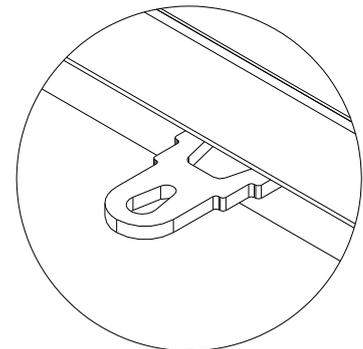
**It is advisable to approach the first lighting with caution, using good-quality, well-seasoned wood.**

**The primary air inlet must be fully open. Do not use alcohol, petrol, or other volatile flammable substances.** On first lighting, fumes and unpleasant smells may be given off, caused by the drying of the product; this is not hazardous to the health, and it is sufficient to ventilate the room adequately. Once combustion has started, pieces of wood of normal size may be added.

The flame must have as far as possible a smooth and laminar flow. **On the various occasions when the stove needs reloading, the door should be opened slowly, to avoid blowbacks of smoke into the room.**

Proceed as follows:

- Place a small amount of balled paper in the stove.
- Cover the paper with a small quantity of twigs and a few pieces of wood.
- Open the primary air register completely fig.10
- Light the paper, and if necessary leave the door up; when the twigs are burning, the door can be closed.
- Only once the flame is burning well (presence of a bed of coals and full combustion), move the air adjustment to MIN (see fig.11) MAX to obtain normal power, MIN for slow combustion.



**Figure 10** – Air register

**As the fire burns, add wood. Never overload the fireplace stove with wood (see technical specifications in the table).**

As soon as the flames have died down and a bed of embers has formed, load the stove normally. Small loads of wood are preferable to large ones for combustion.



## Attention

- Do not use volatile, flammable substances (petrol, alcohol etc.) for lighting the fire.
- Do not use fuels which could release toxic substances or pollutants.
- Do not put the fire out by throwing water on it.
- Check the external and internal air intakes, and the flue pipe, at least once a year, arranging for them to be cleaned.
- During use, the metal parts and the glass reach high temperatures. For all jobs of loading the stove, adjustment or cleaning the ash drawer, use the insulating glove provided.
- Never leave children unattended near the fireplace stove when it is in use.
- The risk of burns from contact with hot surfaces is very high.

### 5.4. LOADING THE FUEL

For normal fuel loading, open the fire door by turning the handle and pulling the door towards you.

**During use, the metallic structure, the handles and the glass become very hot. Use the thermal glove provided when handling these parts.**

**During normal use, always keep the fire door completely closed**, since intermediate positions cause abnormal combustions (forge effect), rapid consumption of wood and a drastic reduction in the heating efficiency of the unit.

**Open the door only to add fuel, and only for brief periods of time.**

The fireplace stove works best and provides the greatest yield when the door is closed, because the hermetic combustion chamber and the calibrated inlet of oxygen allow increased performance.

## 5.5. CONTROL OF COMBUSTION

### PRIMARY AIR

The fireplace stove has an inflow on the front that permits the entry of the primary air required for combustion.

Moving the register completely outwards (MAX fig.11) provides the maximum inflow of PRIMARY and SECONDARY air for lighting the fireplace stove.

Once the flame in the fireplace stove is burning well, turn the register until the knob reaches the centre position. In this condition, the primary air inlet is completely closed and the secondary air flow is at a maximum.

### SECONDARY AIR

The adjustment is made with the previously mentioned register. Pushing this register from the middle position inwards adjusts the flow of exclusively secondary air from MAX to MIN.



In normal conditions of use, dirt deposits on the glass at lighting, but disappears as soon as the combustion chamber is hot enough.

The use of damp or treated wood emits a higher quantity of smoke than normal that can dirty glass faster. Also the low performance of the flue pipe can jeopardise glass cleanliness since smoke remains in the combustion chamber longer than normal.

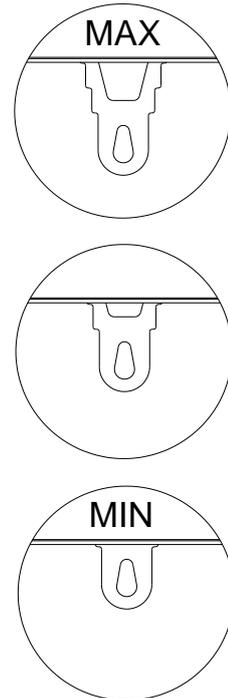


Figure 11– Frame assembly

## 5.6. ASSEMBLING THE OPTIONAL FRAME

An optional finishing frame can be assembled on BOXTHERM, which covers three sides of the product. This optional frame is assembled at the end of installation and after the cladding has been completed and is anchored directly to the insert structure. This frame is designed to finish and cover the crack that is formed between the metal structure of the fireplace stove and the wall.

For frame assembly proceed as follows (fig.12):

- Remove door **A** by unscrewing the two screws **B** on the upper part of the fireplace stove
- Insert the frame **C** until it comes into contact with the cladding and fasten it with the four screws **D**
- Reinstall the door **A** inserting it in the pin of the lower hinge and fasten it with the screws **B**

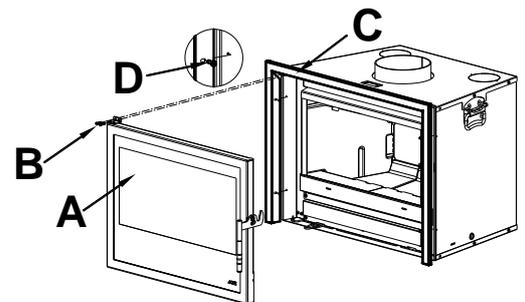


Figure 12– Frame assembly

## 5.7. EMERGENCY SITUATIONS

If for any reason the stove fire needs to be suddenly and quickly put out or a fire in the flue pipe needs to be put out, proceed as follows:

- The equipment door must be kept closed.
- Disconnect the power supply and do not use water (shock hazard).
- Urgently request the intervention of the competent authorities.

## 6. MAINTENANCE AND CLEANING



### ATTENTION!

All cleaning operations of all parts should be conducted with the fireplace stove cold.

### 6.1. CLEANING TO BE PERFORMED BY THE USER

#### 6.1.1. Cleaning the glass

Specific products can be used to clean the glass (see our price list), a cloth dampened with water and ammonia or a bit of white ash and a newspaper.

Any soot and dirt accumulations take longer to clean.



### ATTENTION!

Do not spray the product on the painted parts or on the gaskets of the door (ceramic fibre cord)

#### 6.1.2. Cleaning out the ashes

This must be done when the fireplace stove is off and cold.

It is advisable to adequately clean the fire bed for proper combustion.

To remove the ashes from the fire bed, use a metal scoop and brush. Place the ashes in a non-flammable container for transport.

**Ashes that are still hot should be kept outdoors with great care, and not placed in a waste container. Leave them to cool down in the open air in a metal container.**

#### 6.1.3. Cleaning the refractory material walls (ALUTEC®)

They do not require any cleaning, since the feature of this material (ALUTEC®) is that it does not absorb soot but rather repels it when the fire box is hot. During the lighting phase, during which the fire box tends to blacken, the refractory materials will turn white again, starting from the base of the flame, when the combustion chamber reaches its operating temperature (~ 400° C).

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

- Humid or resinous wood that does not release enough heat or that dirties the combustion chamber (*see chapter 6.2*)
- Flue pipe with poor performance resulting in smoke remaining too long in combustion chamber, dirtying the fire box.
- Flue pipe with poor performance which does not allow fireplace stove to reach high yield that results in adequate temperature of the refractory material.



Never clean the refractory material with a damp cloth or anything else, as it may be stained.

Use a dry paintbrush if necessary to remove heavy soot build-up.



If the Alutec does not whiten, it is not to be considered as a defect in light of the warnings and instructions above.

#### 6.1.4. Cleaning the upper deflector in calorite

This does not require particular care. With prolonged use, however, the effective but porous material of which the deflector inside the firebox is made can wear out or become damaged. It should be replaced only when its thickness is reduced by half or if it breaks.

#### 6.1.5. Cleaning of painted parts

Do not clean the painted parts with wet rags when the unit is in operation or hot in order to prevent thermal shock to the paint which may cause it to detach. Do not use abrasive or aggressive products or materials. Clean with damp cotton or paper towels.



The silicone paints used to paint MCZ products have top quality technical properties that make them resistant to very high temperatures.

There is however a physical limit (380°-400°) beyond which the paint begins to fade or (over 450°) to vitrify; it may then flake and detach from the steel surface. If these effects are noticed, this means temperatures have been reached that are well above those at which the product should properly operate. Therefore, you should use the amount of fuel specified in the technical tables.

## 6.2. CLEANING TO BE DEALT WITH BY SPECIALIZED TECHNICIAN

### 6.2.1. Cleaning flue pipe

Mechanical cleaning of the flue pipe is recommended at least once a year. Excessive deposits of unburnt solid material can cause problems with the evacuation of smoke, and gives rise to a risk of chimney fires.

To access the appliance's flue pipe for cleaning, remove the smoke deflectors.



#### **WARNING!**

The frequency with which the product is cleaned should be determined based on the type of use that is made of the product and the type of installation.

MCZ suggests relying on an authorised service centre for end-of-season cleaning and maintenance, which will carry out all of the previously mentioned work and make a general check of the appliance's components.



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