



### **INSTALLATION AND USE MANUAL**











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#### INTRODUCTION

Dear Customer,

We wish to thank you for choosing an MCZ product, specifically a stove of the MCZ pellet line.

In order to get the best performance from your stove and to enjoy to the full the warmth and the sense of well-being which the flame will diffuse through the home, we recommend that you read this booklet carefully before lighting the stove for the first time.

While thanking you again, may we remind you that the stove **MUST NOT** be used by children, and that they must always be kept at a safe distance from it!

#### **Revisions to the publication**

In order to improve the product, to keep this publication up to date the manufacturer reserves the right to make modifications without any advance notice. Any reproduction, even in part, of this manual without the consent of the manufacturer is prohibited.

#### Care of the manual and how to consult it

- Take good care of this manual and keep it in a place which can easily and quickly be 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.
- Information which is essential or that requires special attention is shown in **bold text.**
- *Italic text* is used to call your attention to other paragraphs in the manual or for any additional clarifications.

#### SYMBOLS USED IN THE MANUAL



#### **ATTENTION**

This warning sign indicates that the message to which it refers should be carefully read and understood, because failure to comply with what these notices say can cause serious damage to the stove and put the user's safety at risk.



#### INFORMATION

This symbol is used to highlight information which is important for proper stove operation. Failure to comply with these provisions will compromise use of the stove and its operation will not be satisfactory.



#### **OPERATING SEQUENCES:**

Indicates a sequence of buttons to be pushed to access menus or to make adjustments.



#### **MANUAL**

Indicates that you should carefully read this manual or the related instructions.

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#### 1. WARNINGS AND GUARANTEE CONDITIONS

#### 1.1. SAFETY INSTRUCTIONS



- Installation of the stove, making the electrical connections, checking its operation, and maintenance are all tasks which should be carried out by qualified and authorised personnel.
- Install the stove in accordance with the regulations in force in your local area, region and country.
- 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.
- For the correct use of the stove and of the electronic apparatus connected to it, and to prevent accidents, the instructions given in this booklet must always be followed.
- Use, adjustment and programming must be carried out by adults. Errors or incorrect settings may cause hazardous conditions and/or poor operation.
- Before beginning any operation, the user, or whoever is preparing to operate on the stove, must have read and understood the entire contents of this instruction booklet.
- The stove is to be used only for its intended purpose. Any other use is to be considered improper and therefore hazardous.
- Do not use the stove for standing on or as any kind of support.
- Do not put clothes to dry on the stove Any clothes hangers and suchlike must be kept a suitable distance from the stove. Danger of fire.
- All responsibility for improper use is taken entirely by the user and such use relieves MCZ of any civil or criminal responsibility.
- Any kind of tampering or unauthorised substitution of non-original spare parts can be hazardous for the safety of the operator and relieves MCZ of any civil or criminal responsibility.
- Most of the surfaces of the stove are extremely hot (the door, the handle, the glass, smoke discharge pipes etc.).
   Avoid coming into contact with these parts, therefore, without adequate protective clothing or suitable implements, such as gloves with thermal protection or implements which keep the hands cool.
- Under no circumstances should the stove be run with the door open or the glass broken.
- Do not touch the stove with wet hands, in view of the fact that it is an electrical appliance. Always disconnect the supply cable before doing anything to the unit.



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- Before carrying out any cleaning or maintenance operation, make sure in advance that the stove is disconnected from the mains electricity supply, by turning off the main switch located on the back of the stove, or by unplugging the supply cable.
- If there is a fire in the flue pipe, extinguish the stove, disconnect it from the power supply and never open the door. Then contact the competent authorities.
- The stove must be electrically connected to a system equipped with an effective earth conductor.
- The system must be of adequate rated capacity for the stated electrical power of the stove.
- Incorrect installation or faulty maintenance (not conforming to the requirements set out in this booklet) can cause harm to people, animals or property. In such cases MCZ is absolved from any civil or criminal responsibility.

#### 1.2. OPERATING WARNINGS



- Shut the stove down in the event of a breakdown or bad running.
- Pellets must not be fed manually into the burner.
- Accumulated unburnt pellets in the burner after repeated failed ignitions must be removed before lighting.
- Do not wash the inside of the stove with water.
- Do not wash the stove with water. The water could get inside the unit and damage the electrical insulation and cause electric shocks.
- Do not expose your own body to hot air for extended periods. Do not overheat the room you are in and where the stove is installed. This could cause injuries and health problems.
- Do not expose plants or animals directly to a current of hot air. There could be harmful effects on them
- Do not put any fuels in the hopper but wood pellets.
- Install the stove in a location with adequate means of fire-prevention and equipped with all services such as power supply (air and electricity) and fume discharge.
- If the stove and the ceramic cladding are in storage, it should be in a place that is free of damp, and they should not be exposed to extremes of temperature.
- It is inadvisable to base the stove directly on the floor, and if the floor is made of flammable material, it must be suitably insulated.
- Do not light the stove with flammable materials if the ignition system breaks down.



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#### **INFORMATION**

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

# 1.3. 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.

#### 1.4. GUARANTEE CONDITIONS



MCZ guarantees the stove, **excluding the components which are subject to normal**, for a period of two years from the date of purchase, as proved by a supporting document which gives the name of the vendor and the date on which the sale took place. The guarantee is conditional on the guarantee certificate being filled in and returned within 8 days, and requires that the product be installed and tested by a specialised installer, according to the detailed instructions given in the instruction booklet supplied with the



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product.

The term 'guarantee' is to be understood to denote the freeof-charge replacement or repair of **parts recognised to have been defective at the start by reason of manufacturing defects.** 

#### 1.4.1. Limitations

The above guarantee does not cover components relating to electrical and electronic parts, or fans, on which the guarantee period is 1 year from the purchase of the product, documented as specified above. The guarantee does not cover parts subject to normal wear such as gaskets, glass, and any parts with can be removed from the firebox.

The replacement parts will be guaranteed for the remainder of the guarantee period starting from the date of purchase of the product.

#### 1.4.2. Exclusions

Variations in colour in the painted or ceramic parts, and crackling of the glaze on the ceramics, do not constitute grounds for a claim under the guarantee, as they are natural characteristics of the material and of the use of the product.

The guarantee does not cover any parts which may be found to be faulty as a result of negligence or carelessness in use, or of incorrect maintenance, or of installation not complying with MCZ's specification (see the relevant chapters in this user manual).

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

If the product does not perform correctly, contact your local retailer and/or importer.

Damage caused by transport and/or handling is excluded from the guarantee.

For installation and use of the product, reference must be made exclusively to the booklet supplied.

The guarantee will be invalidated in the event of damage caused by tampering with the appliance, atmospheric agents, natural disasters, electrical discharges, fire, defects in the electrical system, and caused by lack of, or incorrect, maintenance in terms of the manufacturer's instructions.



#### **CLAIMS UNDER THE GUARANTEE**

the request for action under the guarantee must be addressed to the retailer, who will forward the claim to MCZ's technical assistance service.



MCZ refuses to accept any responsibility in the event that the stove or any other accessory have been improperly used or modified without authorisation.

For all replacement of parts, only original MCZ spare parts must be used.

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#### 2. THEORETICAL NOTIONS FOR INSTALLATION

#### 2.1. PELLETS

Wood pellets are manufactured by hot-extruding compressed sawdust which is produced during the working of natural dried wood. The compactness of the material comes from the lignin which is contained in the wood itself, and allows the production of pellets without the use of glues or binders.

The market offers different types of pellet with characteristics which vary depending on what mixture of woods is used. The diameter varies between 6 mm and 8 mm, with a standard length in the range 5 mm to 30 mm. Good quality pellets have a density which varies between 600 kg/m3 and 750 kg/m3, with a moisture content which varies from 5% to 8% by weight.

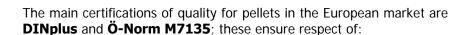
Besides being an ecological fuel (exploiting timber residues to the maximum and achieving cleaner combustion than is possible with fossil fuels), pellets also have technical advantages. While good-quality timber has a calorific power of 4.4 kW/kg (with 15% moisture, therefore after about 18 months' seasoning), the equivalent figure for pellets is 4.9 kW/kg.

To ensure good combustion, the pellets must be stored in an area that is free of humidity and protected from dirt. The pellets are usually supplied in 15 kg. sacks, so storing them is very convenient.

Good quality pellets ensure good combustion, thus lowering the emission of harmful agents into the atmosphere.



The poorer the quality of the fuel, the more frequently will intervention be necessary for cleaning the internal parts, such as the grate and the combustion chamber.



✓ Calorific power: 4,9 kW/kg

✓ Water content: max 10% of weight

✓ Percentage of ashes: max 0,5% of weight

✓ Diameter: 5 – 6mm✓ Length: max 30mm

✓ Contents: 100% untreated wood, with no added bonding substances (bark percentage 5% max)

 Packaging: in sacks made from ecologically compatible or biologically decomposing material



Fuel pellets



15 Kg sack of fuel

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MCZ strongly recommends using certified fuel in its stoves (DINplus  $\rm e$  Ö-Norm M7135).

The use of fuel of inferior quality or not conforming to the specification given above compromises the running of your stove and can therefore lead to the termination of the guarantee and of the manufacturer's responsibility for the product.

MCZ pellet stoves run exclusively on pellets with a diameter of 6 mm (only for Italy) and 6-8 mm (European countries) with lengths that go from 5 mm to 30 mm.

#### 2.2. PRECAUTIONS FOR INSTALLATION



#### **IMPORTANT!**

Installation and assembly of the stove must be carried out by qualified personnel.

The stove must be installed in a suitable position to allow the normal operations of opening and ordinary maintenance.

The site must be:

- capable of providing the environmental conditions for operation
- equipped with power supply 230V 50 Hz
- capable of taking an adequate system for smoke discharge
- provided with external ventilation
- provided with an earth connection complying with CEI 64-8

The stove must be connected to a flue pipe or an internal or external vertical duct conforming to current standards UNI 7129 - 7131 9615.

The stove must be positioned in such a way that the electrical plug is accessible.



#### **IMPORTANT!**

The stove must be connected to a flue pipe or a vertical duct which can discharge the fumes at the highest point of the building.

The fumes are however derived from the combustion of wood products, and if they come into contact with or close to walls, they can make dirty marks.

Also take care because the fumes are very hot but almost invisible, and can cause burns on contact.

The holes for the passage of the smoke pipe and for the intake of air from outside should be made before positioning the stove unit.

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#### 2.3. OPERATING AREA

For proper functioning and a good temperature distribution, the stove should be positioned in a location where it is able to take in the air necessary for combustion of the pellets (about 40 m³/h must be available), as laid down in the standard governing the installation and in accordance with local national standards.

The volume of the room must not be less than 30 m<sup>3</sup>.

The air must come in through permanent openings made in walls (in proximity to the stove) which give onto the outside, with a minimum cross-section area of 100 cm<sup>2</sup>.

These openings must be made in such a way that it is not possible for them to be obstructed in any way.

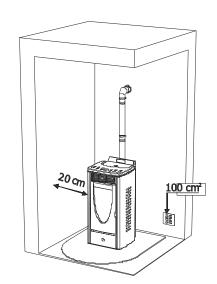
Alternatively, the air can be taken from rooms adjacent to the one which needs ventilating, as long as they are provided with an air intake from the outside, and are not used as bedrooms or bathrooms, and provided there is no fire risk such as there is for example in garages, woodsheds, and storerooms, with particular reference to what is laid down in current standards.



It is not permissible to install the stove in bedrooms, bathrooms or showers, or in a room where another heating appliance is installed (fireplace, stove etc.) which does not have its own independent air intake.

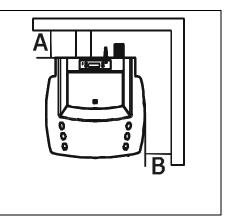
Locating the stove in a room with an explosive atmosphere is prohibited.

The floor of the room where the stove is to be installed must be strong enough to take its weight.



Example of pellet stove installation

SUITE/CLUB/MUSA/ NIMA/TOBA	Non-flammable walls	Flammable walls
Air version	A=5cm	A=5cm
	B=5cm	B=10cm
Comfort Air version	A=15cm	A=20cm
with diffuser	B=15cm	B=20cm
Ducted Comfort Air	A=5cm	A=5cm
version	B=15cm	B=20cm



If the room contains objects which are believed to be particularly delicate, such as drapes, sofas and other furniture, their distance from the stove should be considerably increased.



If the floor is wooden, we recommend the use of a floor guard in compliance with the applicable standards in force in the country of installation.

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#### 2.4. CONNECTION TO THE EXTERNAL AIR INTAKE

It is essential that at least as much air must be able to flow into the room where the stove is installed as is required for proper combustion in the appliance and for the ventilation of the room. This can be effected by means of permanent openings in the walls of the room to be ventilated, which give onto the outside, or by single or collective ventilation ducts.

For this purpose, on the external wall near the stove, a hole must be made with a minimum free cross-section of 100 cm<sup>2</sup>. (equivalent to a round hole of 12 cm diameter or a square hole 10x10 cm), protected by a grille on the inside and the outside.

The air intake must also:

- communicate directly with the room where the stove is installed
- be protected by a grille, metal mesh or suitable guard, as long as this does not reduce the area below the minimum.
- be positioned in such a way as to be impossible to obstruct



It is not compulsory to connect the air intake directly with the stove (so that it draws air directly from outside), but it is essential at all events to ensure an airflow of 50 cubic metres per hour by the use of a hole of the dimensions given.

See standard UNI 10683.



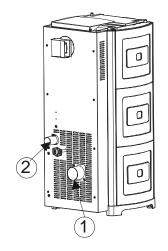
When making the hole for the passage of the smoke discharge pipe, it is necessary to take into account the possible presence of flammable materials. If the hole has to pass through a wall made of wood or thermolabile material, **THE FITTER MUST** under all circumstances observe the minimum safe distance from all combustible materials (value stated on the pipe certification label) and provide any additional insulation using appropriate materials (thickness 1.35cm with minimum thermal conductivity of 0.07 W/m°K).

The same is true if the stove pipe must run through vertical or horizontal stretches passing in proximity (min.20cm) to the heat-sensitive wall

As an alternative we recommend the use of insulated pipe, which can also be used on the outside to avoid condensation.

The combustion chamber works in low pressure. The smoke duct for the discharge of fumes will also be under low pressure when connected to an efficient flue pipe as directed.





Rear view of a pellet stove

- 1) Smoke outlet
- 2) Combustion air intake



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Pipes and unions with suitable gaskets must always be used, to guarantee a hermetic seal.



All sections of the smoke duct must be inspectable and removable to enable periodic internal cleaning. Tee connectors with inspection caps should be used.

Position the stove bearing in mind all the instructions and considerations above.



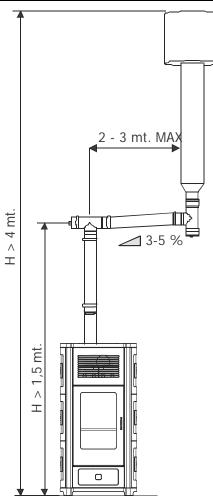
#### **IMPORTANT!**

All 90 degree changes of direction in the flue pipe must be fitted with suitable tee connectors to allow the possibility of inspection. (see accessories for pellet stove)

It is absolutely prohibited to fit a grille on the end of the discharge pipe, because it could lead to poor running of the stove.

FOR CONNECTION TO THE FLUE PIPE, NOT MORE THAN 2-3 METRES OF HORIZONTAL PIPE MUST BE USED AND NOT MORE THAN THREE 90° CURVES MUST BE USED

IT IS ALSO ADVISABLE NOT TO EXCEED 6 METRES IN LENGTH WITH THE PIPE Ø 80 mm



Example of pellet stove installation

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#### 2.6. CONNECTION TO THE FLUE PIPE

The flue pipe must have internal dimensions not larger than  $20 \times 20 \,$  cm, or diameter  $20 \,$  cm. In the event of larger dimensions, or of the flue pipe being in poor condition (for example cracks, poor insulation, etc.), it is advisable to fit a stainless steel pipe of suitable diameter inside the flue pipe throughout its length, right up to the top.

Check with suitable instruments that there is a minimum draught of 10 Pa.

At the bottom of the flue pipe, provide an inspection cap to allow periodic checking and cleaning, **which must be done annually.** 

Make a gas-tight connection to the flue pipe, using pipes and connectors as recommended by us.

You must ensure that a windproof cowl should be fitted which complies with the standards in force.



This type of connection ensures the evacuation of the fumes even in the event of a temporary power cut.



The external fluepipe must have internal dimensions of minimum 10x10 cm or 10 cm diameter, and maximum 20x20 cm or 20 cm diameter.

Check with suitable instruments that there is a minimum draught of 10 Pa. The only type of pipe which is permissible is insulated (double-walled) stainless steel, smooth on the inside, fixed to the wall. Flexible stainless steel pipe must not be used. At the bottom of the flue pipe, provide an inspection cap to allow periodic checking and cleaning, **which must be done annually.** Make a gas-tight connection to the flue pipe, using pipes and connectors as recommended by us.

You must ensure that a windproof cowl should be fitted which complies with the standards in force.



This type of connection ensures the evacuation of the fumes even in the event of a temporary power cut.

#### 2.8. CONNECTION TO THE FLUE PIPE

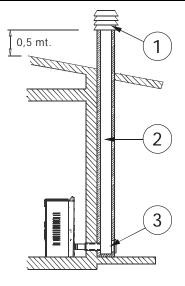
For proper functioning, the connecting pipe between the stove and the chimney or flue duct must have a slope of not less than 3% in the horizontal stretches, the length of which **must not exceed 2/3 metres**, and the vertical distance between one tee connector and another (change of direction) must not be less than 1.5m.

Check with suitable instruments that there is a minimum draught of 10 Pa.

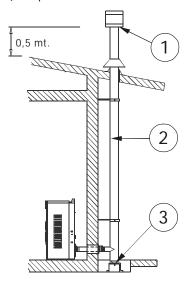
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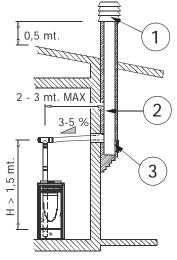
You must ensure that a windproof cowl should be fitted which complies with the standards in force.



- 1) Windproof cowl
- 2) Flue pipe
- 3) Inspection



- 1) Windproof cowl
- 2) Flue pipe
- 3) Inspection



- 1) Windproof cowl
- 2) Flue pipe
- 3) Inspection



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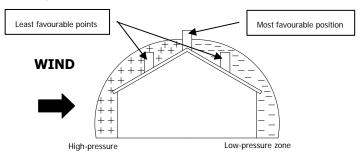
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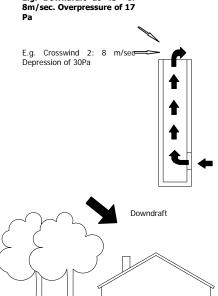


This type of connection ensures the evacuation of the fumes even in the event of a temporary power cut.

### 2.9. OPERATING PROBLEMS CAUSED BY DRAUGHT DEFECTS IN THE FLUE

Of all the weather and geographical conditions which affect the operation of a flue pipe (rain, fog, snow, altitude a.s.l., exposure to sunlight, direction of facing), the **wind** is unquestionably the most decisive. In fact, along with thermal depression caused by the difference in temperature inside and outside of the chimney, there is another type of depression or over-pressure: dynamic pressure caused by the wind. An updraft always increases depression and hence draught. A crosswind increases depression provided the cowl has been installed properly. A downdraft always decreases depression, at times inverting it.





E.g. Downdraft at 45° of

Besides the direction and force of the wind, the position of the flue and the cowl with respect to the roof of the building and the surrounding landscape is important.

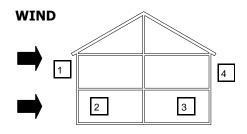
The wind also influences the operation of the chimney indirectly by creating high-pressure and low-pressure zones, not only outside the building but inside as well. In rooms directly exposed to the wind (2), an indoor high-pressure area can be created which can augment the draught in stoves and fireplaces, but it can be counteracted by the external high pressure if the cowl is situated on the side exposed to the wind (1). On the other hand, in the rooms on the opposite side from the direction of the wind (3), a dynamic depression can be created which competes with the natural thermal depression developed by the chimney, but this can be compensated for (sometimes) by locating the flue on the opposite side from the direction of the wind (4).



#### **IMPORTANT!**

The operation of the pellet stove is noticeably sensitive to the conformation and position of the flue which is adopted.

Hazardous conditions can only be overcome by suitable setting-up of the stove carried out by qualified MCZ personnel.



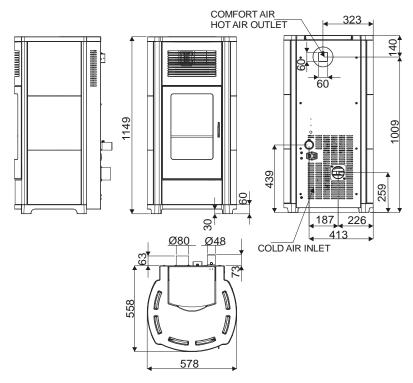
1-2 = High-pressure zones

**3-4 = Low-pressure zones** 

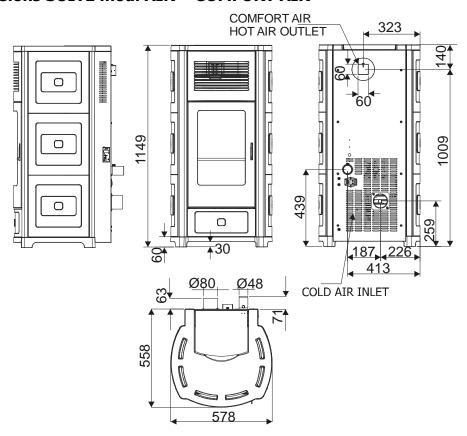
#### 3. INSTALLATION AND ASSEMBLY

#### 3.1. DRAWINGS AND TECHNICAL CHARACTERISTICS

#### 3.1.1. Dimensions CLUB mod. AIR - COMFORT AIR

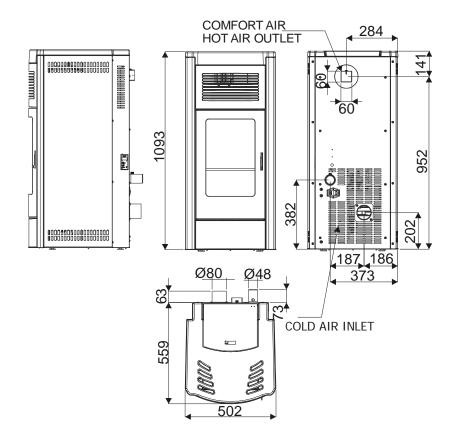


#### 3.1.2. Dimensions SUITE mod. AIR - COMFORT AIR

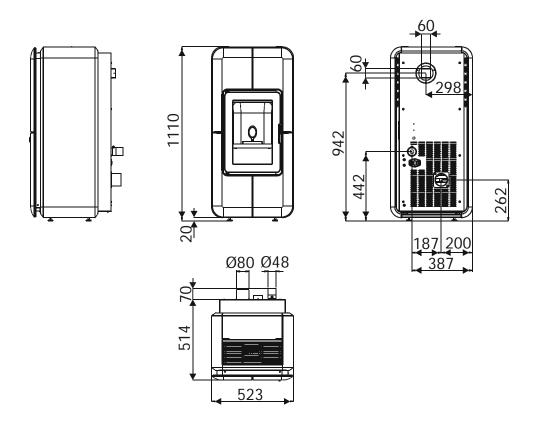


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#### 3.1.3. Dimensions MUSA mod. AIR- COMFORT AIR

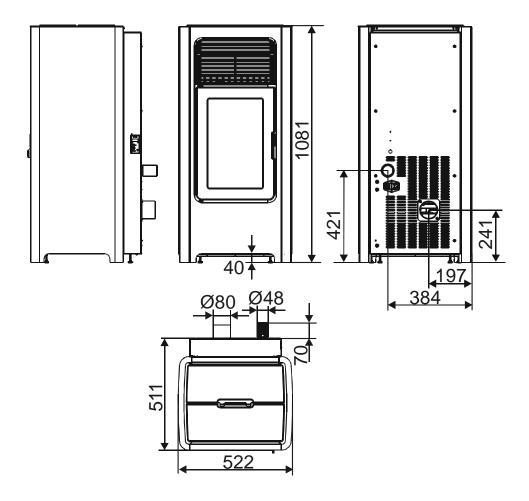


### 3.1.4. Dimensions TOBA mod. AIR-COMFORT AIR



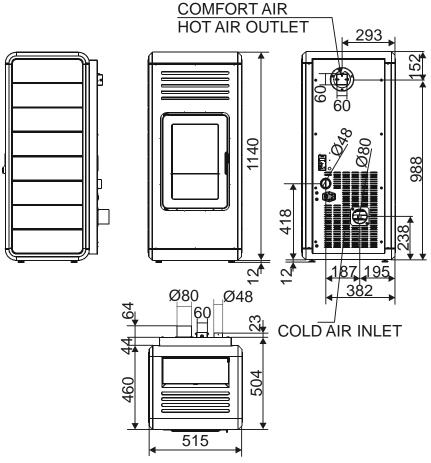
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#### 3.1.5. Dimensions SAGAR mod. AIR



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#### 3.1.6. Dimensions NIMA mod. COMFORT AIR





#### **IMPORTANT!**

The hole in CLUB, SUITE, MUSA, NIMA and TOBA stoves for hot air outlet, located at the top to the rear of the stove, is only present for the COMFORT AIR model.



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#### 3.1.7. Technical characteristics

CLUB – SUITE – MUSA Mod. AIR
9,5 kw / 8170 kcal
2,4 kw / 2064 kcal
91,7%
94,1%
180°C
100°C
22 mg/Nm3 (13% O2)
13 mg/MJ
0,025 – 0,014%
5,7% - 8,7%
4,0-7,7 g/sec
0,10 mbar – 10 Pa
0,05 mbar – 5 Pa
44 litres
Pellet diameter 6-8 mm. Length range 5-30 mm.
Min~0,6 kg/h* Max~2,0 kg/h*
Al min~48 h* Al max~15 h*
204/40-233/35-272/30 **
External diameter 50 mm.
External diameter 80 mm.
Max. 420 W - Med. 80 W
230 Volt / 50 Hz
160 Kg.
170 Kg.
CLUB – SUITE – MUSA - NIMA Mod. COMFORT AIR
11,5 kw / 9890 kcal
2,4 kw / 2064 kcal
90,2%
90,2% 94,1%
94,1% 190°C
94,1% 190°C 130°C
94,1% 190°C 130°C 20 mg/Nm3 (13% O2)
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ 0,025 – 0,013%
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ 0,025 – 0,013% 5,7% - 8,6% 4,0-9,9 g/sec
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ 0,025 - 0,013% 5,7% - 8,6% 4,0-9,9 g/sec 0,10 mbar - 10 Pa
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ 0,025 - 0,013% 5,7% - 8,6% 4,0-9,9 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ 0,025 - 0,013% 5,7% - 8,6% 4,0-9,9 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 44 litres
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ 0,025 - 0,013% 5,7% - 8,6% 4,0-9,9 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 44 litres Pellet diameter 6-8 mm. Length range 5-30 mm.
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ 0,025 - 0,013% 5,7% - 8,6% 4,0-9,9 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 44 litres Pellet diameter 6-8 mm. Length range 5-30 mm. Min~0,6 kg/h* Max~2,2 kg/h*
94,1%  190°C  130°C  20 mg/Nm3 (13% O2)  11 mg/MJ  0,025 – 0,013%  5,7% - 8,6%  4,0-9,9 g/sec  0,10 mbar – 10 Pa  0,05 mbar – 5 Pa  44 litres  Pellet diameter 6-8 mm. Length range 5-30 mm.  Min~0,6 kg/h* Max~2,2 kg/h*  Al min~48 h* Al max~13 h*
94,1% 190°C 130°C 20 mg/Nm3 (13% O2) 11 mg/MJ 0,025 - 0,013% 5,7% - 8,6% 4,0-9,9 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 44 litres Pellet diameter 6-8 mm. Length range 5-30 mm. Min~0,6 kg/h* Max~2,2 kg/h* Al min~48 h* Al max~13 h* 247/40-283/35-330/30 **
94,1%  190°C  130°C  20 mg/Nm3 (13% O2)  11 mg/MJ  0,025 – 0,013%  5,7% - 8,6%  4,0-9,9 g/sec  0,10 mbar – 10 Pa  0,05 mbar – 5 Pa  44 litres  Pellet diameter 6-8 mm. Length range 5-30 mm.  Min~0,6 kg/h* Max~2,2 kg/h*  Al min~48 h* Al max~13 h*
94,1%  190°C  130°C  20 mg/Nm3 (13% O2)  11 mg/MJ  0,025 - 0,013%  5,7% - 8,6%  4,0-9,9 g/sec  0,10 mbar - 10 Pa  0,05 mbar - 5 Pa  44 litres  Pellet diameter 6-8 mm. Length range 5-30 mm.  Min~0,6 kg/h* Max~2,2 kg/h*  Al min~48 h* Al max~13 h*  247/40-283/35-330/30 **  External diameter 50 mm.  External diameter 80 mm.
94,1%  190°C  130°C  20 mg/Nm3 (13% O2)  11 mg/MJ  0,025 – 0,013%  5,7% - 8,6%  4,0-9,9 g/sec  0,10 mbar – 10 Pa  0,05 mbar – 5 Pa  44 litres  Pellet diameter 6-8 mm. Length range 5-30 mm.  Min~0,6 kg/h* Max~2,2 kg/h*  Al min~48 h* Al max~13 h*  247/40-283/35-330/30 **  External diameter 50 mm.  External diameter 80 mm.  Max. 420 W – Med. 100 W
94,1%  190°C  130°C  20 mg/Nm3 (13% O2)  11 mg/MJ  0,025 – 0,013%  5,7% - 8,6%  4,0-9,9 g/sec  0,10 mbar – 10 Pa  0,05 mbar – 5 Pa  44 litres  Pellet diameter 6-8 mm. Length range 5-30 mm.  Min~0,6 kg/h* Max~2,2 kg/h*  Al min~48 h* Al max~13 h*  247/40-283/35-330/30 **  External diameter 50 mm.  External diameter 80 mm.  Max. 420 W – Med. 100 W  230 Volt / 50 Hz
94,1%  190°C  130°C  20 mg/Nm3 (13% O2)  11 mg/MJ  0,025 – 0,013%  5,7% - 8,6%  4,0-9,9 g/sec  0,10 mbar – 10 Pa  0,05 mbar – 5 Pa  44 litres  Pellet diameter 6-8 mm. Length range 5-30 mm.  Min~0,6 kg/h* Max~2,2 kg/h*  Al min~48 h* Al max~13 h*  247/40-283/35-330/30 **  External diameter 50 mm.  External diameter 80 mm.  Max. 420 W – Med. 100 W

<sup>\*</sup> Data that may vary depending on the type of pellets used.

\*\*Heatable volume based on demand of cal/m³ 40-35-30 (respectively 40-35-30 Kcal/h for m³) Appliance suitable for installation in a shared flue.



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Technical characteristics	SAGAR – TOBA Mod. AIR
Overall thermal power Max.	8 kw / 6880 kcal
Overall thermal power Min.	2,4 kw / 2064 kcal
Yield at maximum	91,7%
Yield at minimum	94,1%
Temperature of exhaust smoke at maximum	170°C
Temperature of exhaust smoke at minimum	100°C
Dust	22 mg/Nm3 (13% O2)
	13 mg/MJ
CO at 13%O <sub>2</sub> at minimum and maximum	0,025 – 0,014%
CO <sub>2</sub> at minimum and maximum	5,7% - 8,7%
Mass of smoke at minimum and maximum	4,0-6,6 g/sec
Minimum draught at maximum power	0,10 mbar – 10 Pa
Minimum draught at minimum power	0,05 mbar – 5 Pa
Hopper capacity	37 litres
Fuel pellet type	Pellet diameter 6-8 mm. Length range 5-30 mm.
Pellet consumption per hour	Min~0,6 kg/h* Max~1,8 kg/h*
Operating time between re-fuelling	Al min~40 h* Al max~13 h*
Heatable volume m <sup>3</sup>	172/40-196/35-229/30 **
Combustion air inlet	External diameter 50 mm.
Smoke outlet	External diameter 80 mm.
Maximum absorbed electrical power	Max. 420 W - Med. 80 W
Power supply frequency and voltage	230 Volt / 50 Hz
Net weight	140 Kg.
Weight with packaging	150 Kg.
	150 kg.
Technical characteristics	TOBA Mod. COMFORT AIR
Technical characteristics	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal
Technical characteristics Overall thermal power Max.	TOBA Mod. COMFORT AIR 8 kw / 6880 kcal
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%
Technical characteristics Overall thermal power Max. Overall thermal power Min. Yield at maximum	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O <sub>2</sub> at minimum and maximum	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ  0,025 - 0,014%
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O <sub>2</sub> at minimum and maximum  CO <sub>2</sub> at minimum and maximum	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O <sub>2</sub> at minimum and maximum  CO <sub>2</sub> at minimum and maximum  Mass of smoke at minimum and maximum	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ  0,025 – 0,014%  5,7% - 8,7%  4,0-6,6 g/sec
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O <sub>2</sub> at minimum and maximum  CO <sub>2</sub> at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ  0,025 – 0,014%  5,7% - 8,7%  4,0-6,6 g/sec  0,10 mbar – 10 Pa
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O <sub>2</sub> at minimum and maximum  CO <sub>2</sub> at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ  0,025 - 0,014%  5,7% - 8,7%  4,0-6,6 g/sec  0,10 mbar - 10 Pa  0,05 mbar - 5 Pa
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O <sub>2</sub> at minimum and maximum  CO <sub>2</sub> at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ  0,025 - 0,014%  5,7% - 8,7%  4,0-6,6 g/sec  0,10 mbar - 10 Pa  0,05 mbar - 5 Pa  37 litres
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O2 at minimum and maximum  CO2 at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type	8 kw / 6880 kcal 2,4 kw / 2064 kcal 91,7% 94,1% 170°C 100°C 22 mg/Nm3 (13% O2) 13 mg/MJ 0,025 - 0,014% 5,7% - 8,7% 4,0-6,6 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 37 litres Pellet diameter 6-8 mm. Length range 5-30 mm.
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O₂ at minimum and maximum  CO₂ at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type  Pellet consumption per hour	8 kw / 6880 kcal 2,4 kw / 2064 kcal 91,7% 94,1% 170°C 100°C 22 mg/Nm3 (13% O2) 13 mg/MJ 0,025 - 0,014% 5,7% - 8,7% 4,0-6,6 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 37 litres Pellet diameter 6-8 mm. Length range 5-30 mm. Min~0,6 kg/h* Max~1,8 kg/h*
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O2 at minimum and maximum  CO2 at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type  Pellet consumption per hour  Operating time between re-fuelling	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ  0,025 – 0,014%  5,7% - 8,7%  4,0-6,6 g/sec  0,10 mbar – 10 Pa  0,05 mbar – 5 Pa  37 litres  Pellet diameter 6-8 mm. Length range 5-30 mm.  Min~0,6 kg/h* Max~1,8 kg/h*  Al min~40 h* Al max~13 h*
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O₂ at minimum and maximum  CO₂ at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type  Pellet consumption per hour  Operating time between re-fuelling  Heatable volume m³	8 kw / 6880 kcal 2,4 kw / 2064 kcal 91,7% 94,1% 170°C 100°C 22 mg/Nm3 (13% O2) 13 mg/MJ 0,025 - 0,014% 5,7% - 8,7% 4,0-6,6 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 37 litres Pellet diameter 6-8 mm. Length range 5-30 mm. Min~0,6 kg/h* Max~1,8 kg/h* Al min~40 h* Al max~13 h* 172/40-196/35-229/30 **
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O2 at minimum and maximum  CO2 at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type  Pellet consumption per hour  Operating time between re-fuelling  Heatable volume m³  Combustion air inlet	TOBA Mod. COMFORT AIR  8 kw / 6880 kcal  2,4 kw / 2064 kcal  91,7%  94,1%  170°C  100°C  22 mg/Nm3 (13% O2)  13 mg/MJ  0,025 – 0,014%  5,7% - 8,7%  4,0-6,6 g/sec  0,10 mbar – 10 Pa  0,05 mbar – 5 Pa  37 litres  Pellet diameter 6-8 mm. Length range 5-30 mm.  Min~0,6 kg/h* Max~1,8 kg/h*  Al min~40 h* Al max~13 h*  172/40-196/35-229/30 **  External diameter 50 mm.
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O₂ at minimum and maximum  CO₂ at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type  Pellet consumption per hour  Operating time between re-fuelling  Heatable volume m³  Combustion air inlet  Smoke outlet	8 kw / 6880 kcal 2,4 kw / 2064 kcal 91,7% 94,1% 170°C 100°C 22 mg/Nm3 (13% O2) 13 mg/MJ 0,025 - 0,014% 5,7% - 8,7% 4,0-6,6 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 37 litres Pellet diameter 6-8 mm. Length range 5-30 mm. Min~0,6 kg/h* Max~1,8 kg/h* Al min~40 h* Al max~13 h* 172/40-196/35-229/30 ** External diameter 50 mm. External diameter 80 mm.
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O2 at minimum and maximum  CO2 at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type  Pellet consumption per hour  Operating time between re-fuelling  Heatable volume m³  Combustion air inlet	8 kw / 6880 kcal 2,4 kw / 2064 kcal 91,7% 94,1% 170°C 100°C 22 mg/Nm3 (13% O2) 13 mg/MJ 0,025 - 0,014% 5,7% - 8,7% 4,0-6,6 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 37 litres Pellet diameter 6-8 mm. Length range 5-30 mm. Min~0,6 kg/h* Max~1,8 kg/h* Al min~40 h* Al max~13 h* 172/40-196/35-229/30 ** External diameter 50 mm. External diameter 80 mm. Max. 420 W - Med. 80 W
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O2 at minimum and maximum  CO2 at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type  Pellet consumption per hour  Operating time between re-fuelling  Heatable volume m³  Combustion air inlet  Smoke outlet  Maximum absorbed electrical power  Power supply frequency and voltage	8 kw / 6880 kcal 2,4 kw / 2064 kcal 91,7% 94,1% 170°C 100°C 22 mg/Nm3 (13% O2) 13 mg/MJ 0,025 - 0,014% 5,7% - 8,7% 4,0-6,6 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 37 litres Pellet diameter 6-8 mm. Length range 5-30 mm. Min~0,6 kg/h* Max~1,8 kg/h* Al min~40 h* Al max~13 h* 172/40-196/35-229/30 ** External diameter 80 mm. External diameter 80 mm. Max. 420 W — Med. 80 W 230 Volt / 50 Hz
Technical characteristics  Overall thermal power Max.  Overall thermal power Min.  Yield at maximum  Yield at minimum  Temperature of exhaust smoke at maximum  Temperature of exhaust smoke at minimum  Dust  CO at 13%O2 at minimum and maximum  CO2 at minimum and maximum  Mass of smoke at minimum and maximum  Minimum draught at maximum power  Minimum draught at minimum power  Hopper capacity  Fuel pellet type  Pellet consumption per hour  Operating time between re-fuelling  Heatable volume m³  Combustion air inlet  Smoke outlet  Maximum absorbed electrical power	8 kw / 6880 kcal 2,4 kw / 2064 kcal 91,7% 94,1% 170°C 100°C 22 mg/Nm3 (13% O2) 13 mg/MJ 0,025 - 0,014% 5,7% - 8,7% 4,0-6,6 g/sec 0,10 mbar - 10 Pa 0,05 mbar - 5 Pa 37 litres Pellet diameter 6-8 mm. Length range 5-30 mm. Min~0,6 kg/h* Max~1,8 kg/h* Al min~40 h* Al max~13 h* 172/40-196/35-229/30 ** External diameter 50 mm. External diameter 80 mm. Max. 420 W - Med. 80 W

<sup>\*</sup> Data that may vary depending on the type of pellets used.

Appliance suitable for installation in a shared flue.

<sup>\*\*</sup>Heatable volume based on demand of cal/m³ 40-35-30 (respectively 40-35-30 Kcal/h for m³)

#### 3.2. PREPARATION AND UNPACK ING

**Suite, Club and NIMA** stoves are delivered in two packages:

- ✓ The first contains the stove
- ✓ The second contains the ceramic cladding. (Fig. 2)

The **Musa** stove is only delivered in one set of packaging composed of:

- ✓ The first pack contains the stove
- ✓ The second pack contains the sides made of steel (fig.1).

The **Toba** stove is delivered in two ways depending on its front panel, both ceramic or steatite.

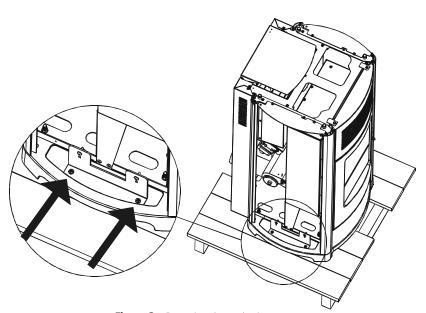
In the case of a ceramic front panel there will be one sole package with the structure (the box with the ceramic panel shall come flanked with that containing the structure and the top) while in the case of a steatite front panel the package shall be formed of two pallets, one with the structure and the top and the other made in steatite.

The **Sagar** stove is delivered in one sole package formed of:

- ✓ The first containing the stove with the box holding the steel sides to its side
- One contains the ceramics or steatite for the top (fig.2/2a). In this case there will be a single pack for the structure (the cardboard with the ceramics will be placed above the packaging with the structure)

Open the packaging, remove, for the **Suite/ Club/Sagar/Toba/Nima,** stoves, the two brackets that block the stove on the pallet (one on the right and one on the left side-fig.3/4), while for the **Musa** (fig.5) stove remove the screws directly from the base of the stove.

Position the stove in the chosen place, paying attention that it meets the instructions above.



**Figure 3** - Removing the packaging screws (in figure Suite stove)

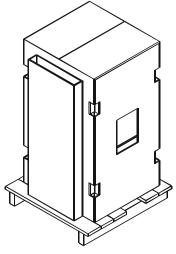
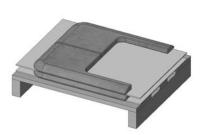


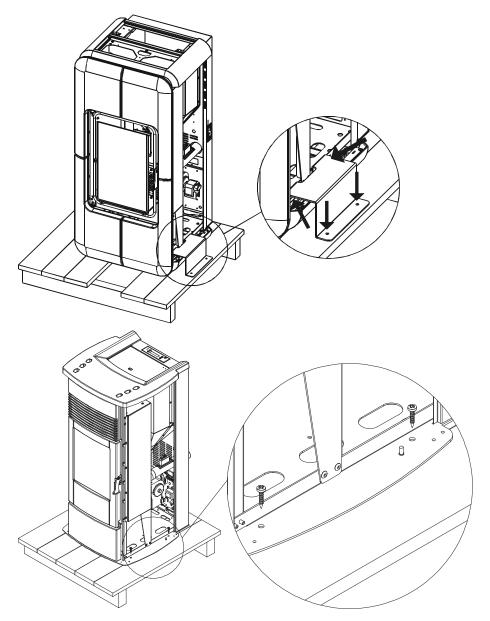
Figure 1 – Example of stove packaging



**Figure 2** - Example of packing for ceramics



**Figure** 2a – Soapstone package example (Toba Oven)



**Figures 4** - Removing screws from Toba/Nima stove

Figures 5 - Removing screws from Musa

The stove body or unit must always be kept in a vertical position when moved, and moved only using carts. Special care must be used to protect the door and the glass from impacts that would damage them. Moving the product must always be done with care. If possible, unpack the stove in the area where it is going to be installed.

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

Their storage, disposal or possible recycling are therefore the responsibility of the final user, in compliance with current legislation on the subject.

Do not store the stove unit or its cladding without their packaging.

Position the stove without its cladding and connect it to the flue pipe. Once the operations for connection are complete, assemble the cladding (ceramics or steel sides).



**Chapter 3** 

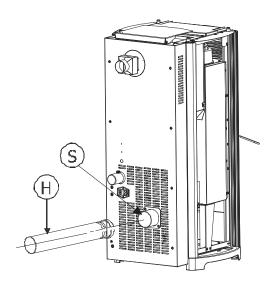
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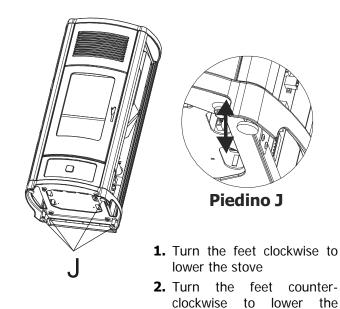
If the stove needs to be connected to a discharge pipe which goes through the rear wall (to connect up with the flue), take the greatest care to make sure that the joint is not stressed.

Use the four adjustable feet (J) to get the stove correctly levelled so that the smoke outlet (S) is lined up with the connecting pipe (H). The feet must be adjusted without the ceramic or steel sides, because the adjustment occurs inside the cladding.



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





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## 3.3. CONNECTIONS OF HOT AIR DUCTS FOR SUITE/CLUB/MUSA/NIMA AND TOBA COMFORT AIR MODEL

Once the stove is in position, you can begin installation of the hot air ducts.

Comfort Air stoves are provided with an air deflector **E** as standard. This means that the rear flange for hot air outlet is connected to this deflector, which allows the hot air to be directed to the right and left of the room, in case the channelling of hot air is not desired.

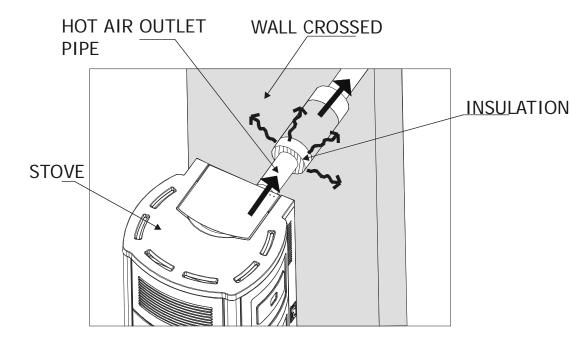
If you wish to channel the hot air, the deflector **E must be removed.** Connect the soundproofed connection **F** (optional) that makes the output from square to round, and then make the various connections with appropriate MCZ pipes and connections to divert the flow in more hot air diffusers (120x120 mm nozzle). These ducts may also be walled up. (SEE OPTIONALS)

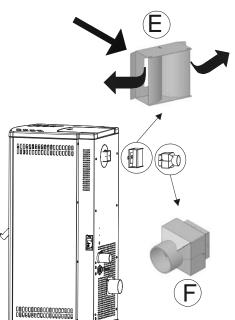


The air outlet pipe can reach very high temperatures, up to 200°C: it is therefore necessary to insulate it properly with suitable materials, in those points where it may come into contact with flammable surfaces or that are affected by the temperature (e.g. discolouration of paint, ducts for electric cables, plasterboard, etc.); it is also necessary to protect people and animals from voluntary or accidental contact. In any case comply with the regulations and laws in force in the region where the product is installed.



It is advisable to provide insulation along the entire route of the pipe to decrease dispersion and increase the heat energy in the environment.







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В

In case of crossing walls built of flammable material, **THE INSTALLER MUST** suitably insulate the pipe of the stove that crosses the walls, using suitable insulating material (1.3-5 thick with a min. thermal conductivity of 0.07 W/m°K).

A pipe which is inserted in the wall must be properly insulated so that it does not lose heat and so that air outlet is silent.

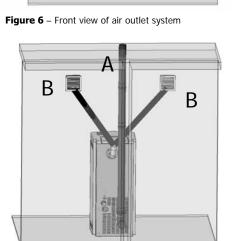


You should use ducts of the same length so that the air is evenly distributed. Otherwise, the air will tend to flow through the shortest or least twisted ducts

In the example in figures 6 and 7 (front and rear view) the air duct is an equal length totaling 8 meters, or in other words the pipes ( $\bf B$ ) will have a length of approximately 4 meters each. In the case of ducts with different lengths, the total must always be maximum 8 meters (example 3 + 5 meters). In this case the heat will spread through the rooms in an uneven manner.

The recirculation of air in the room occurs using the perforated sheet metal placed in the rear of the stove  ${\bf C}$  and the holes placed on the metal sheet bottom

It is possible to choose the volume of air you wish to discharge from the front part and from the rear part of the stove in an independent manner, by adjusting the ventilation power directly with the remote control.



В

Figure 7 - Rear view of air outlet system

### 3.4. INSTALLATION OF CERAMIC CLADDING FOR SUITE AND CLUB



It is advisable to place small felt pads on the ceramics where these touch the metallic parts of the stove structure and in the contact between the ceramic.

#### 3.4.1. Assembly of the lower panel – Suite and Club Stoves

The stove is delivered with all the ceramics packed. Therefore, before assembling the side tiles and the top, it is necessary to insert the lower panel.

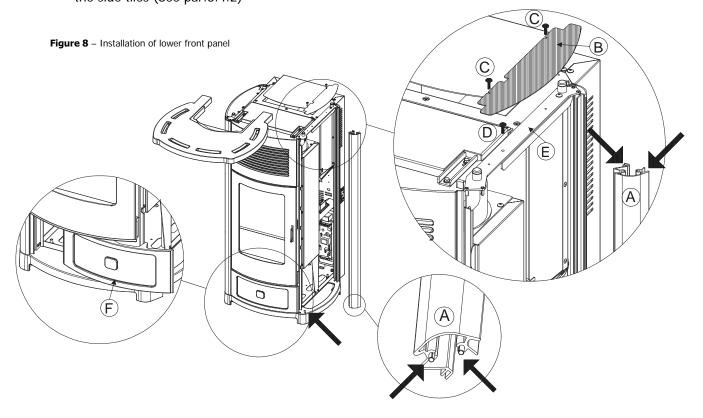
Proceed in the following way (fig.8):

- Remove the micro-perforated sheet metal grill B on the right side (handle side) on the upper part by removing the two screws C.
- Remove the screw D on the sheet metal E in a way that the profile A is no longer locked.
- At this point slightly lift the sheet metal E and remove the profile A.
- To remove the profile A lift it (sliding it from the base) and tilt it slightly in a way that the plugs inserted on the base come out.
- Take the lower panel F and insert it from the right (handle side) towards the left in a way that it enters exactly in the housings
- Reinsert the profile A making the plugs enter the case, and lift the sheet metal E in a way to realign the profile "A". Work in a way that the upper plugs of the profile "A" are inserted in the housings of the sheet metal "E".

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- With the screw D close the sheet metal E that keeps profile A locked
- Before refitting the grill **B** with the two screws **C**, also insert the side tiles (See par.3.4.2)



#### 3.4.2. Installation of side tiles

Remove the micro-perforated grill  ${\bf B}$  and insert the three side tiles, making them slide from the top towards the bottom on the runners of the profiles  ${\bf A}$ . On the upper and lower part of the tile it is advisable to place small felt pads. Level the bubbles of the tiles. At this point it is possible the retighten the micro-perforated grill  ${\bf B}$  to the structure and position the ceramic top. (fig.9)

#### 3.4.3. Installation of ceramic top

Install the top by setting it on the four upper protuberances of the stove. The part underneath is provided with four small cavities at the rubber supports indicated in the figure 10.

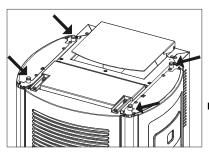


Figura 9 – Installation of side tiles

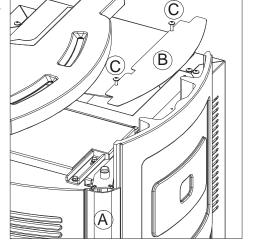


Figura 10 - Supports for installation of ceramic top

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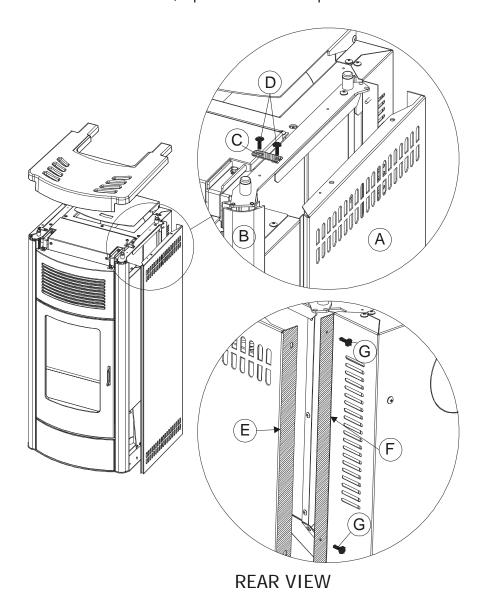
#### 3.4.4. Assembly of sides on the MUSA stove

Remove the cast iron top, take the sides  $\bf A$  (one for the right side and one for the left) and insert them on the runners of the profile  $\bf B$  paying attention that the rear part of the side  $\bf E$  (the one with a 90° bend) overlaps with the sheet metal bend of the structure  $\bf F$  and that the lower part of the side enters in the plugs on the base.

Take the plate  ${\bf C}$  provided and fix it with the two screws  ${\bf D}$ , on the upper part in correspondence to the structure and the side.

The rear side must be fixed to the stove's structure using the four screws  ${\bf G}$  provided.

When both steel sides **A** are assembled, replace the cast iron top.



Installation and assembly

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#### 3.4.5. Assembly of ceramic side tiles onto NIMA stove

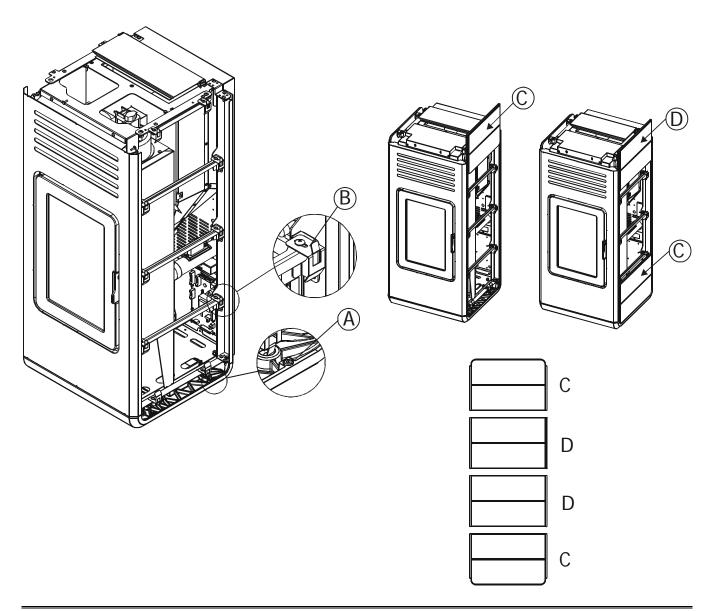
The eight ceramic tiles are delivered in a box. There shall be four rectangles  $\bf D$  which go in the middle part of the side panel and two profiles  $\bf C$  which go under and over the side panel.

Remove the top and slide in the first tile  ${\bf C}$  with the rounded part pointing downwards, making sure it is inserted adherently to the profile and inside the brackets located on the structure.

These brackets **B** are already in place so that the ceramics **C-D** are held in the best position of adherence on the stove; they have screws with a slot for eventual adjustment (for example if the tile moves too much or is hard to insert).

The lower tile  ${\bf C}$  rests on two screws  ${\bf A}$  which can be adjusted in height so as to compensate eventual differences in size of the tiles; it is possible to apply felt pads between one tile and another where necessary.

When all 8 ceramics have been positioned (4 per side) reposition the top by simply resting in on the rubber supports on the upper part of the stove.



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#### 3.4.6. Assembling the frontal/side panel and top on the Toba stove

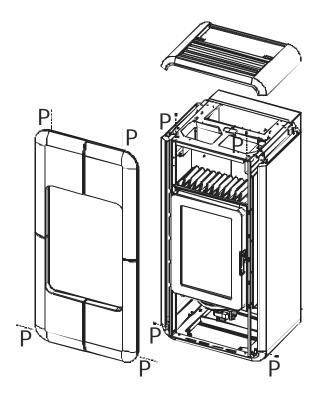
The Toba stove has three parts requiring assembly:

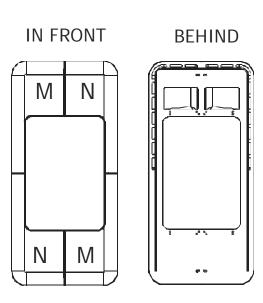
- o Front panel in:
  - Ceramic
  - Steatite
- Sides made of steel
- Top

The **front panel** *made in ceramics* is delivered with the ceramics secureed onto the iron frame, therefore it is sufficient to secure it onto the stove structure using the two upper screws and the two lower screwsi **(P)**.

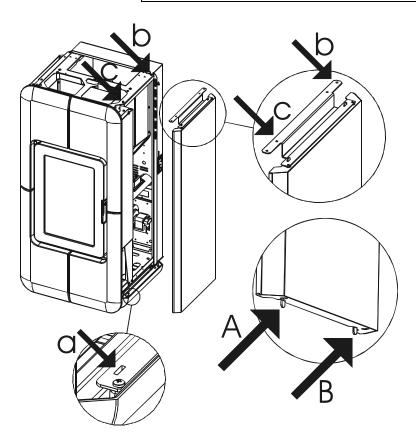
Whereas the **front panel made** *in steatite* has to be assembled. The steatite tiles shall be delivered on a pallet while the iron frame of the panel shall be on the pallet with the stove.

Tiles **M-N** have to be unpacked, lay the panel frame horizontally and position the tiles following correspondence of the holes on the frame with the threaded inserts for secureing with the supplied screws. Once the steatite tiles have been secureed, proceed with secureing the panel to the structure as for the panel with ceramic tiles.

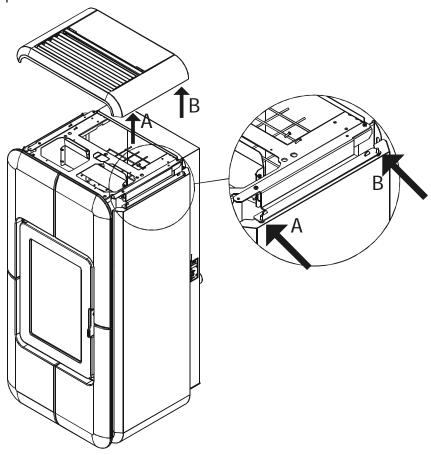




The **steel side panels** are secureed to the structure of the stove by sliding the apposite plugs **A-B** found on the lower part of the panels into the holes **(a)** found on the base of the stove. Once in position secure the side panel onto to upper part of the stove using the two screws **(b-c)**.



Once the front panel and both sides are in position it is possible to assemble the steel **top**. The top lies on the upper part of the stove making sure that the holes on the top enter the plugs **A-B** on the side panels.

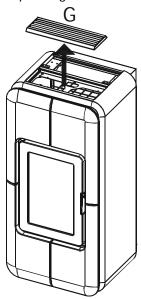




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On the part in front of the top there is a grille  ${\bf G}$  for hot air output. This grill  ${\bf G}$  has tilted tabs which guide the air in front or behind the stove depending on how it is positioned.

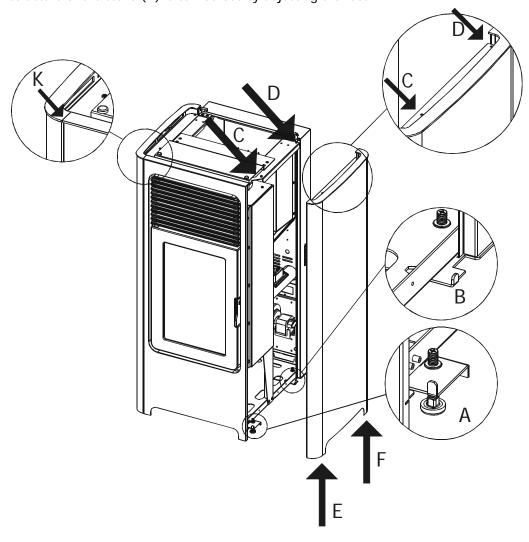


#### 3.4.7. Assembling side panels and top on the Sagar stove

The Sagar stove has two parts requiring assembly:

- o Sides made of steel
- o The top onto which mounted are the panels in:
  - Ceramic
  - Steatite

The **steel side panels** are secured onto the structure of the stove by sliding into the apposite plugs **A-B** found on the base of the stove the holes **E-F** found on the lower part of the side panel. Once in position secure the side panel onto to upper part of the stove using the two screws in position C-D. Alignment of the steel side panels with the structure of the stove (**K**) is carried out by adjusting the feet.



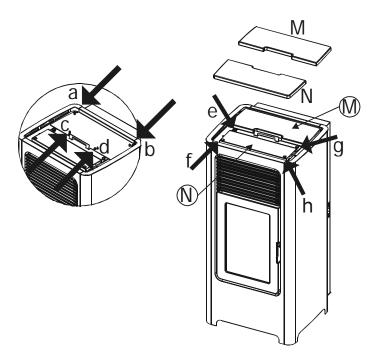


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Once both sides are in position it is possible to mount the ceramics or soapstone on the  $\pmb{top}$ .

A ceramic or steatite tile  $\mathbf{M}$  is secured onto the hopper cover using the four screws  $\mathbf{a}\text{-}\mathbf{b}\text{-}\mathbf{c}\text{-}\mathbf{d}$  supplied ( lift the steel cover and secure the tile internally using screws a-b-c-d) whereas the other one is laid on the apposite rubbers  $\mathbf{e}\text{-}\mathbf{f}\text{-}\mathbf{g}\text{-}\mathbf{h}$  found on the top of the stove.



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#### 3.5. INSTALLATION OF AIR FILTER

Before placing the stove near the wall for connection to the flue pipe and to the electrical mains, install the air filter provided with the stove.

The cylindrical filter is composed of a metallic net and is included with the accessories (along with the glove, hook, instructions, and so on).

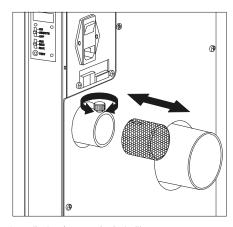
The filter must be inserted on the air inlet pipe Ø 5 cm.

To remove it, slightly loosen the screw with the knob on the air inlet, insert the filter matching it with the filter groove with the screw of the knob and then secure it by tightening the knob.



#### **ATTENTION!**

Never operate the stove without the air filter. MCZ shall not be held liable for damage to internal components if this instruction is not followed.



Installation/removal of air filter

#### 3.6. OPENING/CLOSING OF ATHOS STOVE DOOR



#### ATTENTION!

In order for the stove to operate correctly, it is essential that the door be closed completely.

In Suite/Club/Musa stoves the door is opened using the hook on the door which must be lifted by the cool hand supplied (fig.11); whereas for the Sagar/Toba/Nima stoves slide the cool hand onto door hook, lift and pull (fig.12).

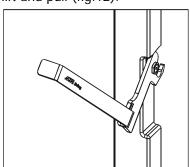


Fig.12 - Opening/closing the door Sagar/Toba/Nima

Fig. 11 - Opening/closing the door Suite/Club/Musa

#### 3.7. MAKING THE ELECTRICAL CONNECTIONS

Connect the supply cable first at the rear of the stove and then to an electrical outlet on the wall.

The main switch located on the rear of the stove should be switched on only when you want to light the stove.



When the stove is not being used, it is advisable to keep it unplugged.



Electrical connection of the stove

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#### 4. OPERATION

#### 4.1. PRE-LIGHTING WARNINGS



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

If necessary, touch up the paint with the aerosol spray in the original colour (see the section "Accessories for pellet stoves").



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.

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

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

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

It is extremely important to be sure not to take the stove to full heat straight away, but to bring it gradually up to temperature.

If in manual mode, use low heating powers (for example  $1^a-2^a-3^a$ ). During subsequent use, you will be able to make use of all available heating power (e.g.  $4^a-5^a$ ).

In this way you will avoid damage to the ceramic panels, the welds and the steel structure.



At first lighting the stove is already in manual mode. At first, it is advisable to use the only low and medium heating levels (from first to third power level).



Do not demand full heating performance straight away!

Try to get familiar with commands given from the control panel or remote control.

Try to memorize the messages that the stove provides on the display of the remote control.

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### 4.2. PRE-LIGHTING CHECK

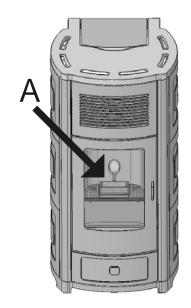
Check that all the safety conditions described above have been met. Make sure you have read and completely understood the contents of this instruction booklet.

Remove any components which might burn from the firebox and from the glass (various instructions and adhesive labels).

Check that the grate  ${\bf A}$  is properly positioned and rests correctly on the base.



After long periods of disuse, remove from the hopper (**using a vacuum cleaner with an extension**) any remains of pellets which have lain there for some time, since they may have absorbed moisture, which changes their original characteristics and makes them unsuitable for burning.



# 4.2.1. Note on first ignition



The first attempt at ignition may not be successful, since the feeder screw is empty and it is not always able to fill the grate with required amount of pellets in time to ensure normal ignition



CANCEL THE ALARM (A02) CONDITION FROM THE EMERGENCY PANEL (see paragraph 7.2), REMOVE PELLETS IN THE GRATE AND REPEAT LIGHTING

After repeated attempts at lighting, if there is no flame even though pellets are flowing normally, check that the grate is correctly positioned. It must be **placed where it adheres perfectly to its housing and free of any ash incrustations**. If after this check no abnormalities are found, it means that there may be a problem with the stove components or that installation may not have been carried out correctly.



REMOVE THE PELLETS FROM THE BURNER AND CONTACT AN AUTHORISED MCZ TECHNICIAN.

### 4.3. LOADING THE PELLETS

Fuel is loaded from the upper part of the stove by opening a door. Pour the pellets in the hopper. Pour the pellets in the hopper; when empty it holds almost two sacks (about 25 kg)

This is easier if performed in two steps:

- Pour half of the contents into the hopper and wait for the fuel to settle on the bottom.
- Then pour in the rest



Never remove the protection grille in the hopper. When filling, do not let the sack of pellets touch any hot surfaces.

Do not place any type of fuel in the hopper other than pellets that are compliant with the specifications provided previously.



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### 5. LCD REMOTE CONTROL

# 5.1. Characteristics of the remote control

The remote control operates at a transmission frequency of 434.5MHz. Power the product with three AAA batteries as follows:

Remove the cover of the battery compartment by pressing and lifting it as shown by the arrow

Insert the batteries according to the correct polarity (+) and (-)

Close the cover of the battery compartment

When power is supplied to the remote control the time setting will automatically be prompted (see paragraph 5.4.1).

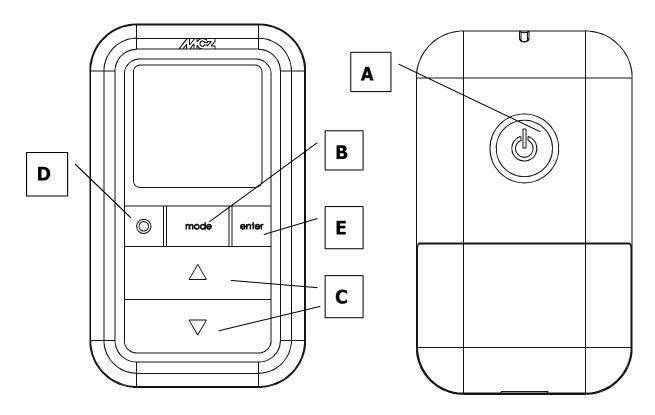
The remote control tells the user when the batteries are about the run out via the relevant icon on the display. If the flat battery icon appears, this means that the batteries are almost flat and the remote control is about to switch off.



Used batteries contain metals that are harmful to the environment. Therefore, they must be disposed of separately in suitable containers.

# 5.2. Graphic appearance

In the instructions herein, we will often refer to the indications of the buttons shown in the figure. For simplicity, always keep the figure to hand.



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# 5.3. Operation of the remote control

### 5.3.1. General rules

The product is switched on and off by pressing button **A** for 1 second. All modifications are made using button **C**. Button **E** is used to confirm these modifications. Press button **B** to select the operating mode of the product (see paragraph 5.5). Use button **D** to navigate the **FAN** and **SLEEP** setting (see paragraph 5.6).

With the remote control in any status, briefly pressing button **A** (or not touching the keypad for 7 seconds) will return you to the basic display.

# 5.4. Initial settings

# 5.4.1. Adjusting the time

With the remote control either off or on, pressing buttons  ${\bf B}+{\bf E}$  for 3 seconds will access the time/ day adjustment setting. The hour figures will begin to flash and can be modified using button  ${\bf C}$ . Pressing button  ${\bf E}$  confirms all modifications. The minute figures will then begin to flash. Follow the same modify/ confirm procedure to move on to the time display mode (12 h or 24 h) and, lastly, the day will begin to flash. Confirming this data as well will exit the settings modification.

NOTE: each time the power is reconnected to the remote control the time will zero and the display will automatically enter the hour setting.

# 5.4.2. $^{\circ}$ C - $^{\circ}$ F setting.

Press button **B** for 5 seconds to change the unit of temperature measurement from Celsius to Fahrenheit and vice versa. Do this only while the stove is switched off.

# 5.5. Setting the operating mode

While the remote control is switched on, button **B** allows you to set one the four following operating modes of the product. Figures 1, 2, 3 and 4 show the four basic displays, respectively:

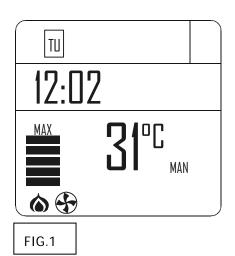
Manual, Automatic, Timer and Eco modes

# 5.5.1. MANUAL mode (indicated by MAN)

In this mode you can manually set the power of the flame (5 levels - use button C to directly modify) and the ventilation (5 levels + auto) (see paragraph 5.6.1). **Figure 1** 

# 5.5.2. AUTOMATIC mode (indicated by AUTO)

In this mode you can set the desired room temperature and the stove will automatically modulate the power of the flame to reach this temperature. The ventilation can be adjusted to 5 levels + auto (see paragraph 5.6.1). **Figure 2** 







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# 5.5.3. TIMER mode (indicated by TIMER)

When you select this operating mode you can switch the product on and off automatically according to 6 customisable time frames (P1 - P6). In each time frame you can set:

- The start-up time
- The shut-down time
- The desired room temperature in that time frame
- The days of the week in which the time frame is active

When the stove is started up (manually using button A or automatically using a time frame) the product operates in the automatic mode described above. When a time frame is enabled it is automatically displayed (P1 **in figure 3**) and the desired temperature modifies to the value set in the time frame. The user can modify this value at any time, in real time, as desired.

To learn how to set the time frames refer to paragraph 5.7.



This mode enables/ disables when the remote control is switched on by pressing button B for 5 seconds.

ECO mode is an automatic mode with the only difference that if the temperature set is reached and maintained for the following 20 minutes (regardless of the flame modulation) the product shuts down and remains on stand-by until the room temperature drops 2 degrees below the desired temperature (or until 5 minutes after the last shut down). At this point the product restarts. **Figure 4** 

If the room is not sufficiently insulated the flame modulation does not allow the set temperature to remain satisfied for 20 consecutive minutes and the product therefore does not shut down.

NOTE: We recommend that you use ECO mode only in well-insulated rooms to prevent the appliance from starting up and shutting down too frequently.

The remote control remains switched on, even while the product is switched off due to ECO mode, to indicate that this shut down is only temporary. Shutting down the product using button A exits ECO mode and the product remains switched off.

In ECO mode you can also enable up to 6 automatic start-up/ shut down time frames (E1 - E6). These are separate from those in the TIMER mode (P1 - P6). If these time frames have been enabled the message TIMER-ECO appears **(figure 5)** and is shown permanently even when the remote control is switched off.

To learn how to set the time frames refer to paragraph 5.7.

NOTE: If the remote control shuts down by the TIMER, ECO mode cannot restart until the user intervenes (button A) or the next valid time frame is started. The use the TIMER combined with ECO mode requires good knowledge of the operating logic of the product.

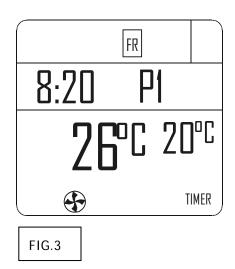




FIG.4

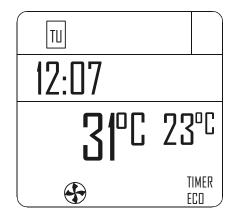


FIG.5



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# 5.6. Various settings

### 5.6.1. Room ventilation

In all 4 operating modes described above you can adjust the room ventilation as desired. Simply follow this basic operation: from the basic display press button D to enter the **VENTILATION** adjustment setting **(figure 6).** At this point, press button C to set the preferred ventilation setting by choosing one of the 5 available levels, independently of the flame level. You can also select the "auto" option that automatically links the room ventilation speed to the flame level.

# Summary:

flame at 1 > ventilation at 1; flame at 3 > ventilation at 3: flame at 5 > ventilation still at 3 (to make the operation quieter than automatic mode).

In appliances with 2 room fans (comfort air models), you can use the D key to scroll through and set the speed of each individual fan (identified as 1 and 2 above the level bars).

N.B.: If you purchase a replacement remote control and need to change the default settings, proceed as follows: with the remote control switched on, press the D + E keys simultaneously for 10 sec (until the flashing number appears). Press the C key and select 1 or 2 depending on the setting required by the appliance you wish to operate with the remote control, then press E to confirm.

# 5.6.2. Sleep function

The sleep function allows you to quickly set a time at which the product must shut down. This function is only available in **MAN** and **AUTO** mode. The sleep function is set as follows: from the **VENTILATION** adjustment setting (press button D - see previous paragraph), press button D again to enter the **SLEEP** adjustment setting. Use button C to adjust the shut down time in 10 minute steps. Use button D or E to confirm the setting and return to the basic display which will continue to show the time of shut down from the sleep function (**figure 7**).

To disable the **SLEEP** function simply access the adjustment setting, decrease the time until dashes appear and confirm.

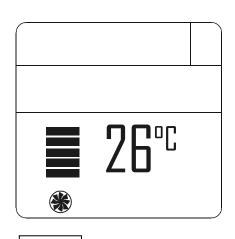


FIG.6



FIG.7

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# 5.7. TIMER settings

# 5.7.1. TIMER time frame display

In the **TIMER** mode, to display the time frames simply press button **D** for 2 seconds. Use button **C** to scroll freely through the 6 time frames to quickly check that all of the setting have been saved **(figure 8).** Press button **D** or **A** to return to the basic display.

# 5.7.2. Modifying the TIMER time frames

To modify a time frame display it as described in the previous paragraph then briefly press button  ${\bf E}$ . The first adjustable parameter (or room temperature) will begin to flash. Press button  ${\bf C}$  to modify the value and button  ${\bf E}$  to confirm the setting and move on to setting the next parameter. The adjustable parameters for a time frame are as follows:

- Room temperature. Can be modified from 5 °C to 35 °C. Below 5 °C or above 35 °C two dashed appear "--" that, if confirmed, disable the program (and the product will therefore not start up).
- Start-up time. This can be adjusted in steps of 10 minutes (from 00:00 to 23:50).
- Shut-down time. This can be adjusted in steps of 10 minutes (from 00:10 to 24:00).
- Days of the week on which the program is enabled. Monday (MO) will begin to flash and then the other days of the week. Use button C to enable/ disable the day. The days enabled will be displayed on a dark background. Once the setting for Sunday (SU) has been reached pressing button E will exit the modification setting and return you to the time frame display.

Pressing button  $\bf D$  at any time will exit the time frame and save all the changes confirmed with button  $\bf E$  up until that time and return you to the time frame display.

Alternatively, pressing button  $\bf A$  (or not touching the keypad for 30 seconds) will return you directly to the basic display and save all the changes confirmed with button  $\bf E$  up until that time.

### 5.7.3. Enabling the TIMER-ECO time frames

In **ECO** mode you can enable 6 customisable start up and shut down time frames **(E1 – E6)**. Pressing button **D** for 2 seconds will display the enable/ disable function for the **TIMER (figure 9)**. If the ON option is confirmed you can display/ modify the 6 **TIMER-ECO** time frames using the methods previously described for the **TIMER** If the **OFF** option is confirmed the **TIMER** disables and the product returns to **ECO** mode operation without any time frames enabled.

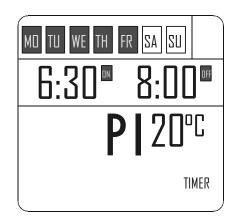


FIG.8

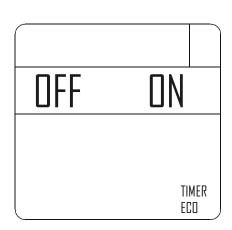
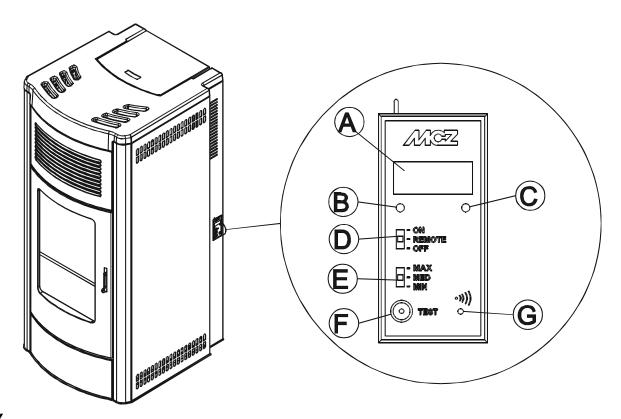


FIG.9

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### 6. EMERGENCY PANEL

At the right rear of the stove, there is an emergency panel. It was designed to diagnose any operating anomalies. It is also used to control the stove if the remote control is not working.



### **KEY**

- A. Three figure display which indicates a series of information about the stove, as well as the identification code for any operating anomaly.
- B. **GREEN** LED to indicate:
  - OFF = Stove off
  - FLASHING = Stove in lighting phase
  - ON STEADY = Stove on
- C. RED LED to indicate:
  - OFF = Stove on
  - FLASHING SLOWLY = Stove shutting down
  - FLASHING RAPIDLY = Stove in alarm status (accompanied for 10 minutes by a beep)
  - ON STEADY = Stove off

- D. Three-position selector for function
  - OFF = Stove shut off manually in absence of remote control
  - REMOTE = Stove can be controlled only by remote control
  - ON = Stove turned on manually in absence of remote control
- E. Three-position selector for selection of power
  - MIN = Selector to run the stove at minimum power with no remote control and with selector 4 in ON position
  - MED = Selector to run the stove at medium power with no remote control and with selector in ON position
  - MAX = Selector to run the stove at maximum power with no remote control and with selector in ON position
- F. Push button for diagnostics of stove operating status
- G. button to connect the stove to a new remote control (by means of a procedure explained below)



TO OPERATE THE STOVE WITH THE REMOTE CONTROL, SELECTOR "D" MUST BE <u>PLACED</u> ON "REMOTE"

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# 6.1. Start-up/shutdown from emergency panel

If the remote control is defective or the batteries are dead, you can temporarily run the stove from the rear emergency panel.

In this configuration, the stove can operate only in manual mode and with possibility to select from **3** levels of power.

# • <u>LIGHTING THE STOVE WITHOUT THE REMOTE</u> CONTROL

To light the stove, place selector "**D**" to **ON.** At start-up the red LED goes off and the green LED will start flashing until the start-up phase is complete. At full operating power the green LED will come on steady.

### • SELECTING POWER WITHOUT REMOTE CONTROL

You can choose from three levels of heating power:

MIN-MED-MAX (selector "E")

**MINIMA** power is the 1st power;

**MEDIUM** power is the 2nd power;

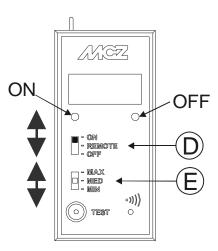
**MAXIMUM** power is the 3rd power;

# • SHUTTING DOWN THE STOVE WITHOUT THE REMOTE CONTROL

To shut down the stove, place selector "D" to OFF.



Once the remote control is working again, remember to put selector "D" back in the "REMOTE" position. Otherwise the stove will disregard inputs from the remote control.



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# 7. SAFETY DEVICES AND ALARMS

### 7.1. SAFETY DEVICES

The stove is fitted with the following safety devices:

### SMOKE TEMPERATURE SENSOR.

Monitors the temperature of the smoke, and gives permission for start-up or shuts the stove down when the smoke temperature falls below the preset value.

### • PELLET HOPPER TEMPERATURE SENSOR.

If the temperature exceeds the preset safety level, it immediately shuts down the running of the stove, and has to be reset manually, after the stove has cooled, before the it will restart.

#### ELECTRICAL SAFETY

The stove is protected against violent surges of current by the main fuse, which is located on the control panel at the rear of the stove. Other fuses to protect the electronic boards are to be found on the boards themselves.

#### FAILURE OF THE SMOKE EXTRACTION FAN

If the fan stops, the electronic board shuts off the supply of pellets in good time, and an alarm is displayed.

### BREAKDOWN OF THE REDUCTION MOTOR

If the reduction motor stops, the stove continues to function until it has cooled down to the minimum level.

### TEMPORARY POWER CUT

If there is a power outage during operation, when the power comes back on the stove will go into cooling mode and then it will come back on automatically.

### FAILURE TO LIGHT

If during ignition no flame develops, the stove will go into alarm condition.



# TAMPERING WITH THE SAFETY DEVICES IS PROHIBITED



It is only after eliminating the cause which gave rise to the intervention of the safety system, that it is possible to relight the stove and thus reset the automatic operation of the sensor. To understand which anomaly has occurred, consult this manual at paragraph 4.17 which explains what to do based on the alarm message the stove displays.



# ATTENTION

If the stove is not used as described in this instruction booklet, the manufacturer refuses to accept any responsibility for damage to persons and property that may arise. The manufacturer furthermore refuses to accept responsibility for damage to persons and property arising from the failure to observe all the rules contained in the manual and in particular:



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- Failure when carrying out works of maintenance, cleaning and repair to adopt all necessary measures and precautions
- Tampering with the safety devices.
- Removing the safety devices.
- Failure to connect the stove to an efficient system for the discharge of smoke.
- Failure to check in advance that the room where the stove is to be installed is adequately ventilated.

### 7.2. ALARM SIGNALLING

If there is an operating anomaly, the stove goes into alarm shutdown mode and informs the user of the type of problem that has occurred via a 3-figure code displayed on the rear emergency panel.

The alarm is permanently signalled by the corresponding 3-figure code, by a flashing red light on the emergency panel, and, for the first ten minutes of the alarm, by a periodic acoustic signal. To take the stove out of alarm conditions and restore its normal operation, read the instructions in the next two paragraphs.

The table below describes the possible alarms signalled by the stove, associated to the respective code that appears on the emergency panel, and useful suggestions to solve the problem.

MESSAGE ON DISPLAY	TYPE OF PROBLEM	SOLUTION
A01	Fire fails to ignite	Check the level of pellets in the hopper. Check that the grate is properly inserted in its housing and does not have any obvious unburnt incrustations; Check whether the ignition plug heats.
A02	Fire extinguishes abnormally	It derives from a shutdown due to lack of fuel (hopper empty).
<b>A03</b>	Pellet tank temperature exceeds foreseen safety limit.  Overheating of the stove body	The structure is too hot because the product has been operating for too long at maximum power, or it is poorly ventilated, or the air fans are faulty. When the stove is sufficiently cold, press button B of the control panel or OFF on the remote control to cancel the alarm A03. Once the alarm is cancelled it is possible to relight the stove normally.
A04	The temperature of the smoke discharge has exceeded pre-set safety limits	The stove will shut off automatically. Let the stove cool off for a few minutes, then re-light it.  Check smoke release and the type of pellet being used.
A05	Flue pipe obstruction - wind - door open.	Check fume conduit and door closure.
A06	The smoke extractor is not able to provide the primary air required for combustion.	Draught difficulties or clogging of grate. Check whether the grate is clogged by incrustation and clean as required. Control and if necessary clean the smoke duct and the air intake.
A08	Flue-gas exhaust fan broken	Check that the smoke fan compartment is clean and if it is dirt that is blocking it.  If insufficient, the smoke fan is defective. Call an authorized service centre to make the replacement.
A09	The smoke probe is defective and does not properly measure the temperature of the discharge smoke	



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MESSAGE ON DISPLAY	TYPE OF PROBLEM	SOLUTION
A10	The plug is defective	Contact an authorized service centre to replace the component.
A11	Defective pellet feeder	Contact an authorized service centre to replace the component.
A12	The remote control has been beyond the reception range of the stove for more than three hours, or its batteries are dead.  NOTE: only in this case the stove does not go into alarm shutdown, but continues operating in the mode that the remote control set via the last sent command.	As soon as the stove receives a new signal from the stove, the alarm indications will disappear. A easy way to force a transmission to the stove is to press button 4.
A13	Generic failure of electronic control unit	Contact an authorized service centre to replace the component.
A14	Generic failure of sensor	This alarm is not blocked, only a warning screen appears. Contact an authorized service centre to replace the component.
SEr	Periodic maintenance warning	If this flashing messages appears when lighting the stove, it means that the hours of operation pre-set before the maintenance have elapsed and a new maintenance intervention is necessary. Contact a specialist MCZ technician.



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# 7.3. Exiting alarm condition

If there is an alarm, to restore normal operation of the stove you will need to follow the procedure outlined below:

- Place selector D of the rear emergency panel in the OFF position for a few seconds until the 3-figure code that identifies the type of alarm disappears. The following operation will also stop the flashing of the red LED and the acoustic alarm signal.
- Place selector D back in the REMOTE position, so that the stove can again be managed by the remote control.
- Turn the remote control off and back on again if you want to restart the stove.



Only in the event of defect A12 (no communication between remote control and stove), the stove will remain on with the most recently set mode. It will automatically exit alarm mode as soon as it receives a signal from the remote control.

### 7.3.1. Mechanical shutdown of the stove

The following things can cause stove shutdown:

- Overheating of the stove body ("A03")
- Overheating of the smoke ("**A04**")
- During the function of the stove, an uncontrolled air intake occurred in the combustion chamber or an obstruction in the flue pipe ("A05")

Shutdown is signalled on the display accompanied by a beep.

In this situation the shutdown cycle is automatically activated.

Once this process has started, any operation which is an attempt to reset the system is useless.

The cause of the shutdown is shown on the display.

### WHAT TO DO:

If "AO3" appears: the structure is too hot because the product has been operating for too long at maximum power, or it is poorly ventilated, or the air fans are faulty. When the stove is sufficiently cold, press button B on the control panel or OFF on the remote control to cancel the alarm AO3. Once the alarm is cancelled it is possible to relight the stove normally.

If "**A04**" appears: the stove will shut off automatically. Let the stove cool off for a few minutes, then re-light it.

Control the exhaust of the smoke and

check the type of pellet being used.

If "A05" appears: it is caused by the prolonged opening of the fire door or by substantial air infiltration (e.g. smoke fan inspection plug missing). If not caused by these factors control and if necessary clean the smoke duct and the flue pipe. (it is recommended that this operation be conducted by a specialist MCZ technician).

Only after the cause of the blockage has been permanently eliminated can a fresh attempt to relight the stove be made.

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# 8. MAINTENANCE AND CLEANING



### **ATTENTION!**

All cleaning of all parts must be carried out with the stove completely cold and unplugged.

The stove does not need much maintenance if used with certified quality pellets.



Example of clean grate

Example of dirty grate

# 8.1. DAILY AND WEEKLY CLEANING BY THE USER

# 8.1.1. Before each lighting

Using a suitable tool clean the grate "F" of ash and any incrustation which could obstruct the passage of air.

In the case of pellet depletion, unburnt pellet in the grate could accumulate in the hopper. Always empty the residuals from the grate prior to each lighting.



REMEMBER THAT ONLY A CORRECTLY POSITIONED AND CLEAN GRATE CAN GUARANTEE THE OPTIMAL LIGHTING AND OPERATION OF YOUR PELLET STOVE.

For good cleaning of the grate **A**, pull it completely out of its housing and thoroughly clean the grate and holes on the bottom. If you use good-quality pellets, you will normally only need to use a paintbrush to restore the perfect condition of the component. For tough incrustations, use the steel tool provided with the stove.

# 8.1.2. Check every 2/3 days

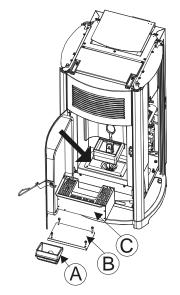
Clean and empty the ash drawer, watching out for hot ash.

**Only if the ash is completely cold,** it is possible to use a vacuum cleaner to remove it. Use a drum-type vacuum cleaner that is suitable for picking up particles of a certain size.

Experience, and the quality of the pellets used, will determine the frequency of cleaning.

### It is however advisable not to let it exceed 2 or 3 days.

Once the operation is finished, reinsert the ash drawer below the grate making sure it is well inserted



Cleaning the ash collection compartment



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# 8.1.3. Cleaning the glass

For cleaning the ceramic glass, the use of a dry brush is recommended, or if it is very dirty, the special spray detergent, applying a small quantity then cleaning with a cloth.



### **ATTENTION!**

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



At the lower part of the stove, where there is the inlet pipe for combustion air  $\emptyset$  5 cm, at the time of installation of the stove a metal mesh air filter must be inserted to prevent dirt from getting into the motor body and internal sensor.

It is advisable to check every 15/20 days whether the filter is clean. Remove lint or any other material which may have been trapped by the filter.

Checking and cleaning will be required more frequently if there are pets in the home.

For cleaning, just turn the knob that holds the filter on the air intake pipe and remove the filter by turning in the direction indicated by the arrow. Clean it with a brush, damp cloth or compressed air.



The filter is made of metallic mesh. It is soft and malleable to the touch. Therefore, when cleaning it, be careful not to crush it or damage it in any other way. If it is broken it must be replaced

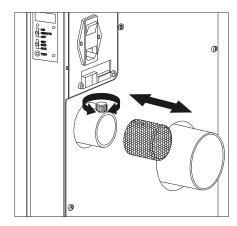


### **ATTENTION!**

Never operate the stove without the air filter. MCZ shall not be held liable for damage to internal components if this instruction is not followed.



Cleaning the glass



Removing the air filter for cleaning



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# 8.2. PERIODIC CLEANING BY A SPECIALISED TECHNICIAN

# 8.2.1. Cleaning of the heat exchanger

After the winter you will need to clean the compartment where discharge smoke passes.

This cleaning <u>must</u> be done in order to remove all combustion residues before time and humidity let them harden and make them difficult to remove.



#### ATTENTION!

You are advised to contact an authorised MCZ centre for the cleaning of the upper exchanger.

### **CLEANING THE UPPER EXCHANGER**

When the stove is cold, carry out the following operations to clean the upper exchanger.

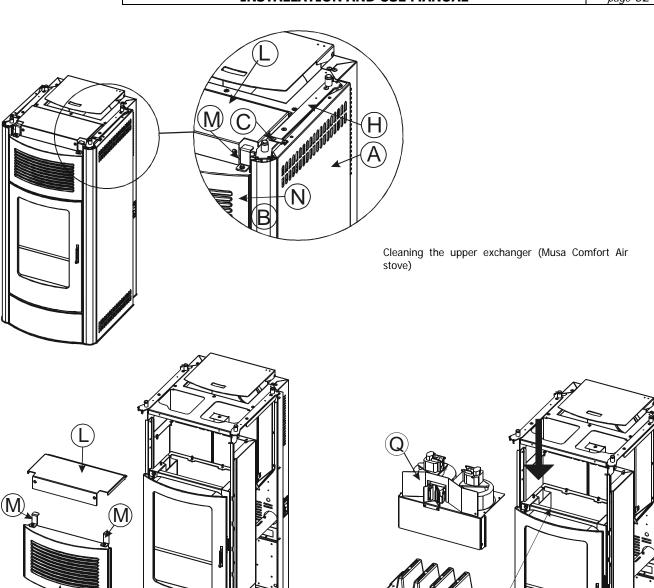
# **8.2.1.1.** Musa stove (steel sides) COMFORT AIR version

- 1. Remove the cast iron top.
- 2. Remove the steel sides **A** (see par. 3.4.4.)
- 3. Remove the upper plug **L** (4 screws)
- 4. Loosen the front screw of the bracket **H**; lift the bracket **H** in a way to remove the front profile **B**.
- 5. Remove the front cast iron grid **N** with the two brackets **M**
- 6. Remove the fan group **Q** by unscrewing the 7 screws. To easily remove the screw placed behind the left fan, it is advisable to loosen the two screws of the fan and move it slightly.
- 7. To draw the fan group, remove the two front screws of the cover **P**, lift it slightly and extract the fans.
- 8. Remove the exchanger **0** by unscrewing the 4 screws that secure it

Clean and refit all the components by using a new front gasket.



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FRONT GASKET

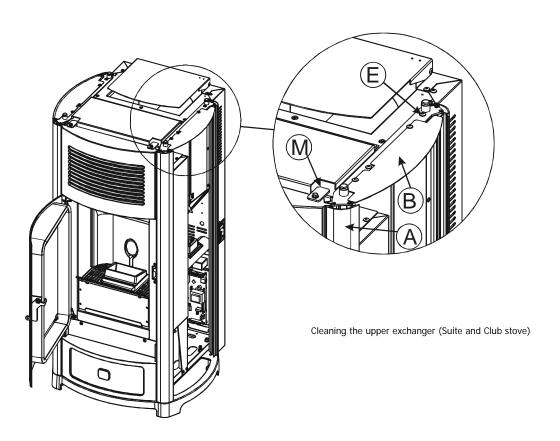
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# **8.2.1.2.** Suite and Club stove (ceramic sides) COMFORT AIR version

- 1. Remove the ceramic top.
- 2. Remove the two micro-perforated compensation grills for the sides **B** (see par.3.4.1)
- 3. Remove the ceramic sides (three to the right and three to the left) see par.3.4.1
- 4. Loosen the front screw of the bracket **E**; lift the bracket **E** in a way to remove the front profile **A**.
- 5. Remove the front cast iron grid **N** with the brackets **M**
- 6. Remove the upper plug **L** by unscrewing the four screws
- 7. Remove the fan group **Q** by unscrewing the 7 screws. To easily remove the screw placed behind the left fan, it is advisable to loosen the two screws of the fan and move it slightly.
- 8. Remove the exchanger **O** by unscrewing the four screws that secure it

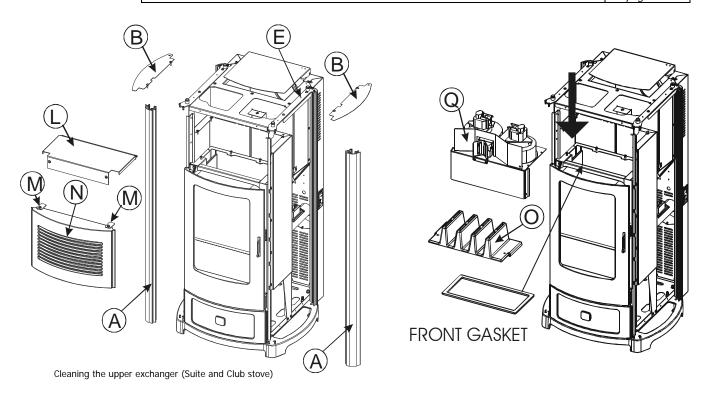
### Clean and refit all the components by using a new front gasket.





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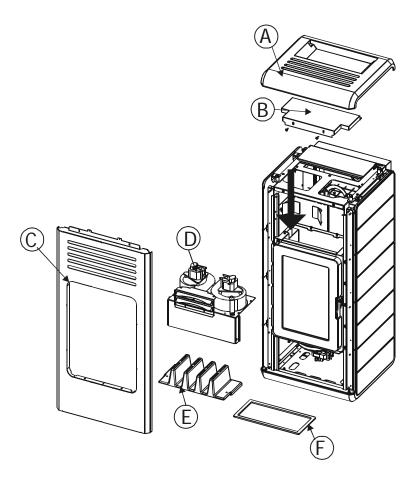
Using a stiff rod or a bottle brush, scrape the inner walls of the fire box so that the ashes drop into the part below.

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### **8.2.1.3.** *Nima Stove Version COMFORT AIR*

- 1. Remove the top A
- 2. Remove the micro-perforated grille **B** by unscrewing the 4 screws (2 in front and 2 behind)
- 3. Remove front panel **C** by unscrewing the 6 screws
- 4. Remove fan unit **D** with the deflector by unscrewing the 4 screws
- 5. Remove exchanger **E**

# Clean and refit all the components using a new front gasket F.



Using a stiff rod or a bottle brush, scrape the inner walls of the fire box so that the ashes drop into the part below.



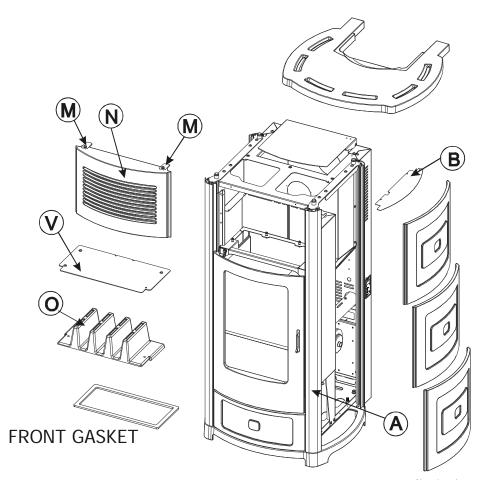
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# **8.2.1.4.** Suite and Club stove (ceramic sides) AIR version

- 1. Remove the ceramic top.
- 2. Remove the two micro-perforated compensation grills for the sides **B** (see par.3.4.1)
- 3. Remove the ceramic sides (three to the right and three to the left) see par.3.4.1
- 4. Remove the front cast iron grid N with the two brackets M
- 5. Remove the plug **V** by unscrewing the screws
- 6. Remove the exchanger **O** by unscrewing the four screws that secure it

# Clean and refit all the components by using a new front gasket.



Cleaning the upper exchanger (Suite and Club stove)



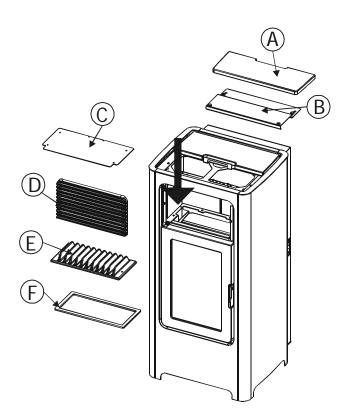
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# **8.2.1.5.** Sagar Stove Version AIR

- 1. Lift the hopper cover
- 2. Remove the ceramic/steatite tile A
- 3. Remove the tile support **B**
- 4. Remove the front grille **D** by unscrewing the two screws
- 5. Remove the plug **C** by unscrewing the screws
- 6. Remove exchanger **E** by unscrewing the four screws

# Clean and refit all the components using a new front gasket F.



Cleaning the upper exchanger Sagar stove (Air version)



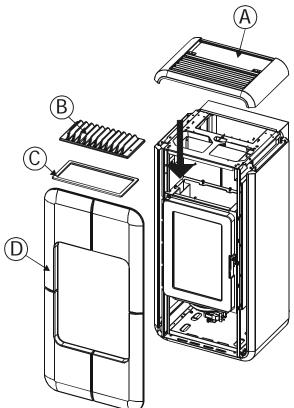
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# **8.2.1.6.** Toba Stove AIR Version

- 1. Remove the top A
- 2. Remove the front panel **D** by unscrewing the screws
- 3. Remove the exchanger  ${\bf 0}$  by unscrewing the four screws that secure it

# Clean and refit all the components using a new front gasket C.



Cleaning the upper exchanger Toba stove (Air version)

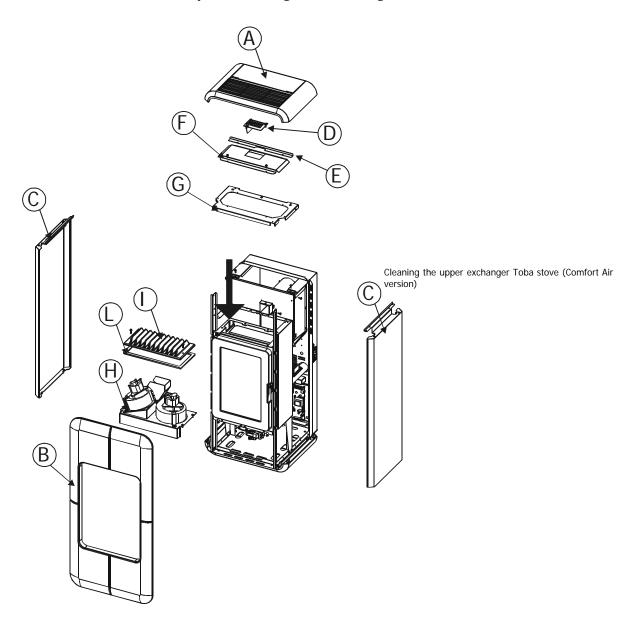
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# **8.2.1.7.** Toba Stove COMFORT AIR Version

- 1. Remove the top A
- 2. Remove the front panel **B** and sides in steel **C**
- 3. Remove the following plates in sequence: **D-E-F-G**
- 4. Remove the fan unit **H**
- 5. Remove the exchanger I and gasket L

# Clean and refit all the components using a new front gasket L.



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### 8.2.2. CLEANING THE LOWER COMPARTMENT

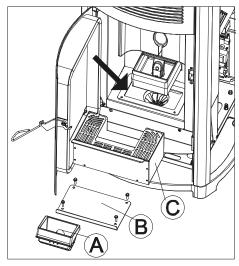
Remove the ash drawer  $\mathbf{C}$ , open the lower inspection plug  $\mathbf{B}$ , by unscrewing the four screws, and with a vacuum cleaner, remove all ash and soot which has built up in the heat exchanger and in the smoke extraction fan.

### **CLEANING OF SMOKE DUCT AND GENERAL CHECKS:**

Clean the smoke discharge system, especially in the area of the tee connectors, curves and any horizontal stretches of pipe.

For information on cleaning the flue pipe, contact a professional chimney sweep.

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



Cleaning the lower compartment



### ATTENTION:

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

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

# 8.2.3. Shutting the stove down (end of season)

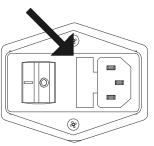
At the end of season, before shutting down the stove, we recommend completely removing pellets from the hopper with the use of a vacuum cleaner with an extension.

During periods of disuse, the stove must be unplugged and placed in a dry place protected from the elements. For greater safety, especially if there are children around, we recommend removing the supply cable from the rear of the stove.

Upon re-start, when pressing the main switch (located on the back of the stove) does not make the control panel display light up, it could mean that the service fuse needs replacing.

On the rear of the stove there is a fuse holding compartment which is located underneath the supply socket. Use a screwdriver to open the fuse-holder compartment and if necessary replace them (3.15 AT delayed)





# 8.2.4. Check of internal components



### **ATTENTION!**

The check of the internal electro-mechanical components must be carried out only by qualified personnel with technical knowledge of electricity and combustion.

We recommend that an annual maintenance service is carried out, preferably under a programmed service contract. The essential part of this service is a visual and functional check on the internal components:



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The following is a summary of the checks and/or maintenance tasks which are indispensable for the correct operation of the stove.

PARTS / INTERVAL	1 DAY	2-3 DAYS	30 DAYS	60-90 DAYS	1 YEAR
Grate	•				
Ash collection		•			
Ash drawer		•			
Glass		•			
Lower heat exchanger				•	
Complete exchanger					•
Smoke duct			•		
Door seal					•
Air filter			•		•
Flue pipe					•
Remote control battery					•



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# 9. PROBLEMS / CAUSES / SOLUTIONS



# **ATTENTION:**

All repairs must be carried out exclusively by a specialised technician, with the stove completely cold and the electric plug pulled out.

PROBLEM	POSSIBLE CAUSES	REMEDY
Pellets not being fed into the combustion chamber.	<ul> <li>Pellet hopper empty.</li> <li>Feeder screw blocked by sawdust.</li> <li>Reduction motor defective.</li> <li>Defective electronic board.</li> </ul>	<ul> <li>Refill pellet hopper.</li> <li>Empty the hopper and manually free the feeder screw of sawdust.</li> <li>Replace reduction motor.</li> <li>Replace electronic board.</li> </ul>
The fire goes out or the stove stops automatically.	<ul> <li>Pellet hopper empty.</li> <li>Pellets not being fed in.</li> <li>Intervention of pellet temperature sensor.</li> </ul>	<ul> <li>Refill pellet hopper.</li> <li>See previous problem</li> <li>Let the stove cool down completely, reset the thermostat till lockout ceases, relight stove; if problem persists, contact technical assistance.</li> </ul>
	<ul> <li>Door not closed properly or gaskets worn.</li> <li>Unsuitable pellets.</li> <li>Low pellet feed rate.</li> <li>Combustion chamber dirty.</li> <li>Smoke outlet obstructed.</li> <li>Smoke extraction motor failed.</li> </ul>	<ul> <li>Close the door or replace the gaskets with original spare parts.</li> <li>Change to a type of pellet recommended by the manufacturer.</li> <li>Have the fuel feed rate checked by technical service.</li> <li>Clean the combustion chamber, following instructions in the manual.</li> <li>Clean the smoke duct.</li> <li>Check the motor and replace if necessary.</li> </ul>
The stove runs for a few minutes and then goes out.	<ul> <li>Lighting cycle not completed.</li> <li>Temporary failure of electricity supply.</li> <li>Smoke duct obstructed.</li> <li>Temperature sensors defective or broken.</li> <li>Sparkplug failure.</li> </ul>	<ul> <li>Re-run lighting cycle.</li> <li>See previous instruction.</li> <li>Clean smoke duct.</li> <li>Check and replace sensors as necessary.</li> <li>Check the plug and replace if necessary.</li> </ul>
Pellets build up in grate, door glass gets dirty and flame is weak.	<ul> <li>Insufficient combustion air.</li> <li>Pellets damp or unsuitable.</li> <li>Smoke extractor motor broken.</li> </ul>	<ul> <li>Check that the room air intake is present and free.</li> <li>Check that the combustion air filter on the pipe Ø 5 cm for air inlet is not obstructed.</li> <li>Clean the grate and check that all the airways are clear.</li> <li>Carry out a general cleaning of the combustion chamber and the smoke duct.</li> <li>Check the state of the door gaskets.</li> <li>Change the type of pellet.</li> <li>Check the motor and replace if necessary.</li> </ul>



**Chapter 6** 

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PROBLEM	POSSIBLE CAUSES	REMEDY		
The smoke extraction motor does not work.	<ul> <li>No electrical supply to the stove.</li> <li>The motor is broken.</li> <li>Defective electronic board.</li> <li>Control panel broken.</li> </ul>	<ul> <li>Check the supply voltage and the protection fuse.</li> <li>Check the motor and capacitor and replace if necessary.</li> <li>Replace electronic board.</li> <li>Replace the control panel.</li> </ul>		
The convection air fan runs continuously.	<ul><li>Temperature sensor defective or broken.</li><li>Fan broken.</li></ul>	<ul> <li>Check the operation of the sensor and replace if necessary.</li> <li>Check the operation of the motor and replace if necessary.</li> </ul>		
Remote control does not work	<ul><li>Remote control batteries flat.</li><li>Remote control broken.</li></ul>	<ul><li>Replace batteries.</li><li>Replace remote control.</li></ul>		
In the automatic position the stove always runs at full power.	<ul> <li>Room thermostat set to maximum.</li> <li>Temperature sensor defective.</li> <li>Control panel defective or broken.</li> </ul>	<ul> <li>Reset the thermostat temperature.</li> <li>Check the operation of the sensor and replace if necessary.</li> <li>Check the panel and replace if necessary.</li> </ul>		
The stove does not run	<ul> <li>Lack of electricity supply.</li> <li>Pellet sensor in lockout.</li> <li>Fuse blown.</li> <li>Smoke outlet or duct blocked.</li> </ul>	<ul> <li>Check that the electric socket is plugged in and that the main switch is in position "I".</li> <li>Clear lockout by resetting the rear thermostat, replace the thermostat if it happens again.</li> <li>Replace the fuse.</li> <li>Clean the smoke outlet and/or smoke duct.</li> </ul>		



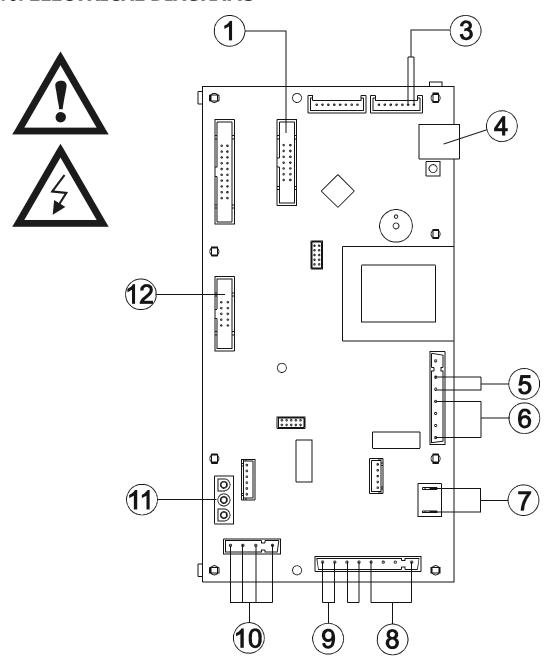
### **ATTENTION**

The operations marked in bold type must be carried out by specialised MCZ personnel.

The manufacturer refuses to accept any responsibility and the guarantee lapses if this condition is not respected.

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# 10. ELECTRICAL DIAGRAMS



### MOTHERBOARD WIRING KEY

- 1. Emergency panel
- 3. Smoke sensor
- 4. Modem connection
- 5. Switch
- 6. Ignition plug
- 7. Flue-gas extractor fan

- 8. Reduction motor
- 9. Contact thermostat
- 10. Air fan
- 11. Flue-gas extractor fan revolutions control
- 12. Air flow sensor

**N.B.** The electrical wiring of the single components includes pre-wired connectors which are of different sizes.



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