

# PETRA



 **OLIMPIA  
SPLENDID**  
NUOVI SISTEMI USER FRIENDLY

INSTRUCTIONS FOR INSTALLATION USE AND MAINTENANCE **GB**

<b>3</b>	<b>1</b>	<b>INSTALLATION</b>
		<b>(SECTION DEDICATED TO THE INSTALLER)</b>
3	1.1	RULES AND REGULATIONS
3	1.2	PRELIMINARY OPERATIONS
3	1.3	POSITIONING THE APPLIANCE
3	1.4	PROTECTION OF THE FLOOR
4	1.5	SAFETY DISTANCE
4	1.6	CONNECTIONS
4	1.7	CHIMNEY OR CHIMNEY FLUE
5	1.8	CONNECTION OF THE APPLIANCE TO THE CHIMNEY FLUE AND EVACUATION OF COMBUSTION PRODUCTS
5	1.9	CHIMNEY COWL
5	1.10	MAKING THE CONNECTION TO THE CHIMNEY FLUE
6	1.11	TAKING COMBUSTION AIR FROM THE INSTALLATION ROOM
<b>7</b>	<b>2</b>	<b>USE (SECTION DEDICATED TO THE USER)</b>
7	2.1	IMPORTANT WARNINGS
7	2.2	FUEL
7	2.3	INFORMATION ON FIREWOOD
8	2.4	STARTING UP
8	2.5	LOADING THE FUEL
8	2.6	LIGHTING AND USE
9	2.7	LIGHTING UP
9	2.8	LOADING AND RE-LIGHTING WITH EMBERS
9	2.9	SHAKING THE FIREBOX GRATE
9	2.10	ASH BOX
9	2.11	ADJUSTMENTS
<b>10</b>	<b>3</b>	<b>MAINTENANCE (SECTION DEDICATED TO THE USER)</b>
10	3.1	FUNDAMENTAL PRECAUTIONS
10	3.2	ORDINARY MAINTENANCE
10	3.3	EXTRAORDINARY MAINTENANCE (TO BE PERFORMED BY QUALIFIED PERSONNEL)
10	3.4	ACCESSORIES
10	3.5	INTERNAL CLEANING OF FUMES PIPES
<b>11</b>		<b>TROUBLESHOOTING</b>
<b>11</b>		<b>TECHNICAL CHARACTERISTICS</b>

APPLIANCE MANUFACTURED IN COMPLIANCE WITH THE EUROPEAN COMMUNITY DIRECTIVES APPLICABLE FOR THE CE MARK. APPLIANCE FOR SOLID FUEL: FIREWOOD

## INSTALLATION (PART DEDICATED TO THE INSTALLER)

1

### RULES AND REGULATIONS

1.1

- Read this manual carefully as it contains important indications and instructions concerning the installation, use, maintenance and safety of the product.
- This appliance must only be installed and used in a room deemed suitable by the specific authorities and in compliance with the relevant rules and regulations.
- The technological systems and the installation of the appliance must be done by professional qualified personnel authorised to release the certificate of conformity and compliance with the regulation in force.
- All the laws, rules and regulations in force concerning civil and industrial buildings must be respected, always using PPE and other means foreseen by law.
- All laws, rules and regulations concerning the systems, chimney flues, electricity, water, ventilation and aspiration must be respected.
- **The manufacturer declines all responsibility arising from incorrect installation, tampering, incorrect use of the appliance, improper use, poor maintenance, and failure to respect regulations in force.**

### PRELIMINARY OPERATIONS

1.2

- Carefully remove the packing.
- The packing material must be recycled by disposing in the special containers or in the local municipal waste disposal site.
- Before installation, make sure that the appliance is intact, in case of doubt, do not use it and contact the vendor.

### POSITIONING THE APPLIANCE

1.3

- The place where the appliance is installed must have:
  - A suitable floor for stove weight and calorific radiation;
  - A minimal distance from flammable materials;
  - A permanently ventilated room in accordance with the regulations in force.

### PROTECTION OF THE FLOOR

1.4

- The appliance must rest on a refractory surface. In the case of inflammable flooring (wood, carpet, etc.) prearrange a refractory base (steel sheet, tiles or similar) with the following size:
  - Frontal protrusion  $\geq$  500 mm;
  - Side protrusion  $\geq$  300 mm;
  - Rear protrusion  $\geq$  100 mm.

## 1.5 DISTANZE DI SICUREZZA

- From not inflammable objects :
  - A > 500 mm      B > 200 mm      C > 200 mm
- From inflammable objects and support walls in armed concrete:
  - A > 1000 mm      B > 400 mm      C > 400 mm
- Any inflammable objects placed above the appliance must be kept at a safe distance: at least 1 metre.

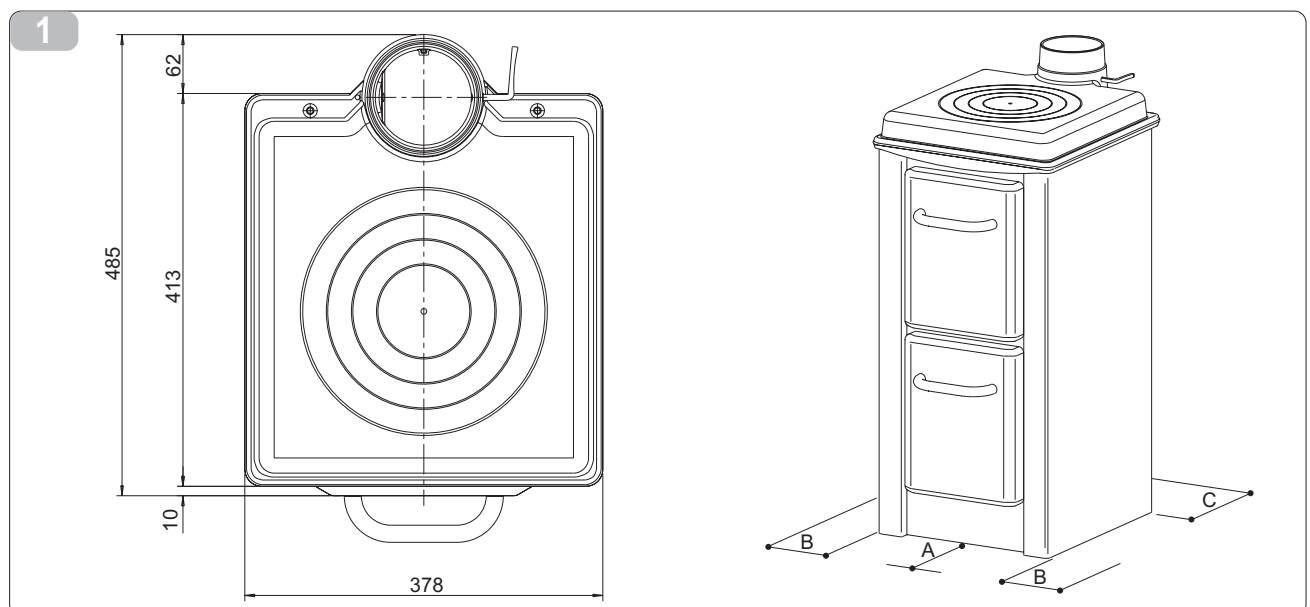
Always take measurements from the outside surface of the appliance (fig. 1).

## 1.6 CONNECTIONS

- Before connecting the appliance, make sure that the data indicated on the data plate meets the needs of the purchase.
- All the biomass heating appliances, in this case, wood stoves, by law must have a chimney flue, built in compliance with regulations on force, for the evacuation of exhaust fumes.
- The points described below are norms of good construction and installation. They refer to regulations in force (at the time of printing of this manual) but are not exhaustive in matters of systems and installation.

## 1.7 CHIMNEY OR CHIMNEY FLUE

- The chimney or chimney flue must respect the following requirements:
  - It must seal in the exhaust fumes, be water-tight and suitably insulated and isolated in accordance with the conditions of use (UNI 9615);
  - It must be made in materials that can resist normal mechanical stress, heat and the action of the products of the combustion and possible condensation;
  - Must be prevalently vertical with deviations of not more than 45° from the axis;
  - It must be adequately distanced from combustible or inflammable materials with a cavity or else suitable insulation;
  - The internal section must preferably be circular; squared or rectangular sections must have rounded corners with a radius not less than 20 mm;
  - It must have a constant internal section that is free and independent;
  - Rectangular sections must have a maximum ratio between sides of 1:5;
  - The indications given by the manufacturer on the section and construction characteristics of the chimney/flue must be followed. For particular sections, section or routing variations, check the working efficiency of the exhaust fumes system using the fluidodynamic calculation (UNI 9615);
  - It is recommended that the smoke duct be fitted with a chamber for the collection of solid material and any condensation, located under the opening of the smoke duct so that it can easily be opened and inspected through the airtight inspection door;
  - In case of a fire in the chimney flue, use suitable systems to suffocate the flames (e.g. use a powder or carbon dioxide extinguisher) and request an intervention of the Fire Brigade.



## CONNECTION OF THE APPLIANCE TO THE CHIMNEY FLUE AND EVACUATION OF COMBUSTION PRODUCTS (see legislation UNI 10683)

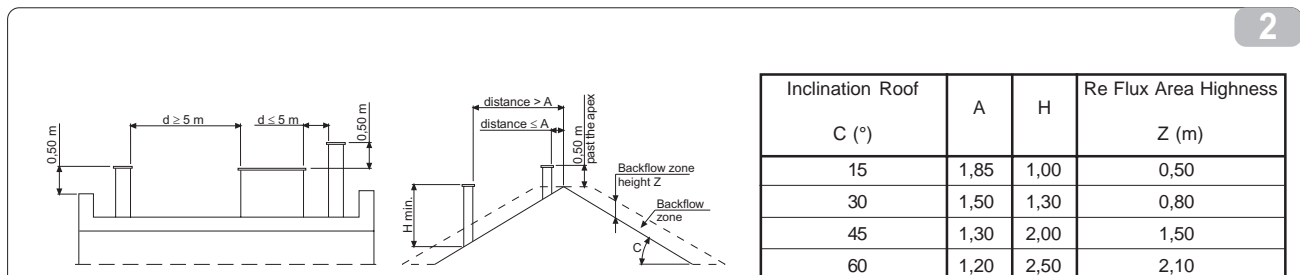
1.8

- The connection between the appliance being used and the chimney flue must receive exhaust fumes from one heat source only.
- An appliance can consist of a fireplace and cooking oven with a single exhaust point to the chimney for which the manufacturer must provide the construction characteristics of the connections to the smoke ducts.
- It is forbidden to convey exhaust from hoods above cooking appliances in the same smoke duct.
- The discharge towards closed spaces is forbidden, even if they have an open ceiling.
- The direct discharge of exhaust products must be envisaged on the roof and the chimney flue must have the previously mentioned features.

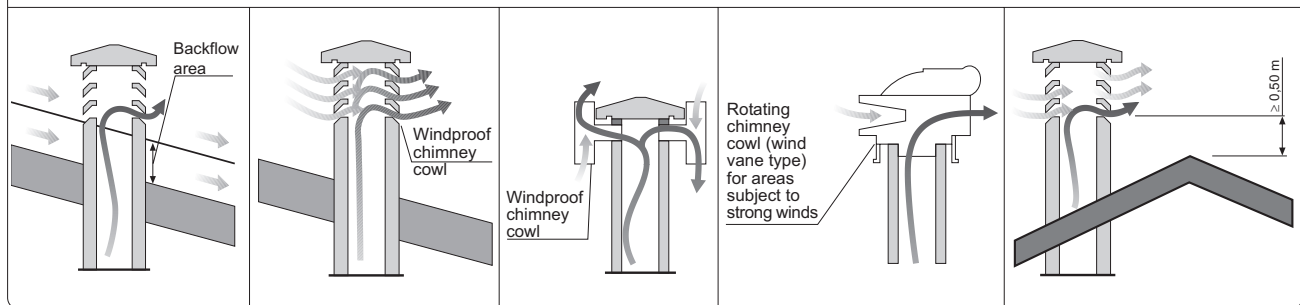
### CHIMNEY COWL

1.9

- The chimney cowl must have the following features:
  - It must have an internal section equal to that of the chimney flue;
  - The useful outlet section must not be less than twice that of the chimney flue;
  - It must be built so that it prevents the entry into the chimney of rain, snow and foreign bodies and in such a way that even in the case of winds blowing from all sides or angles the discharge of the combustion products is ensured;
  - It must be positioned so that it guarantees an adequate dispersion and dilution of the combustion products and in any case, outside the backflow zone where the formation of counter pressure can occur. This zone has different size and formation depending on the inclination angle of the roof and therefore it is essential that the minimum heights indicated in the designs (fig.2) are respected.



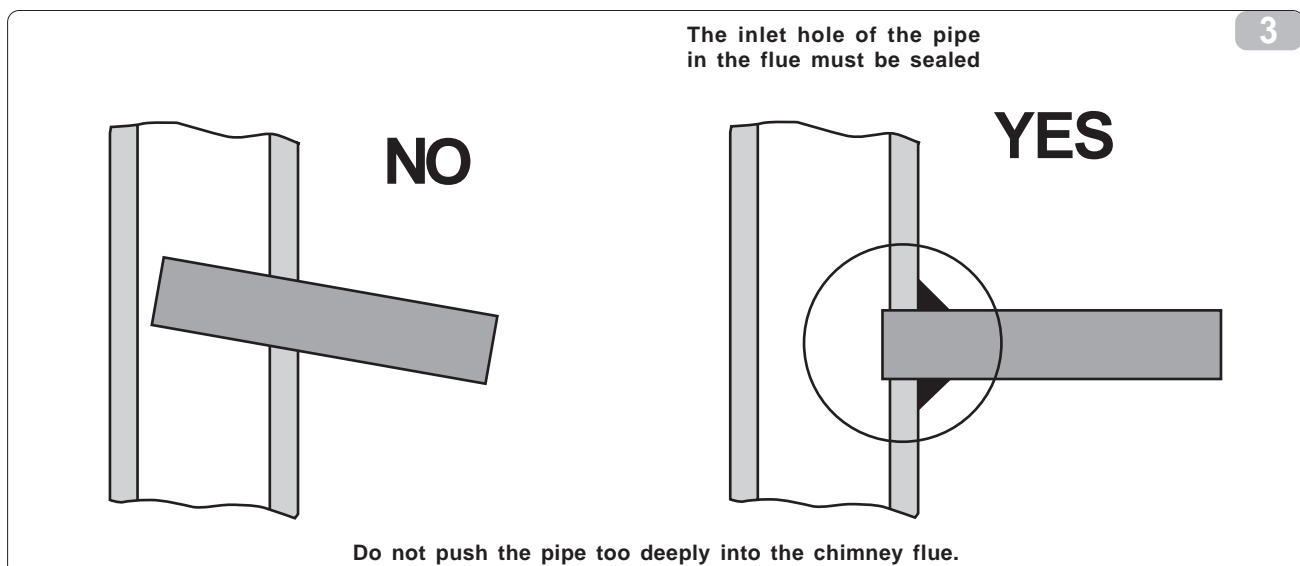
For chimney cowls and the backflow zone, see UNI 7129



### MAKING THE CONNECTION TO THE CHIMNEY FLUE

1.10

- Connect the appliance to the chimney flue of the existing chimney, making sure that the smoke outlet pipe does not take up the free space of the chimney flue (fig. 3).
- Only use pipes suitable for the dispersal of combustion fumes.  
Limit the horizontal sections of the duct joints to the chimney flue (max. 1 metre) and the use of curves.



**1.11 TAKING COMBUSTION AIR FROM THE INSTALLATION ROOM**

- The appliance must be able to obtain the air necessary to guarantee regular operation through an external air vent.
- The air vents must respect the following requirements:
  - a) Minimum total free section of 200 cm<sup>2</sup>;
  - b) Direct connection with the installation room;
  - c) Must be protected with a grill, a metallic net or a similar protection guard so long as it does not reduce the minimum section mentioned in point a) and is so positioned that they cannot be obstructed.
- The airflow can also be obtained from an adjacent room to that of the installation as long as this flow happens freely through permanent outlets communicating with the outdoors. No negative pressure must be caused in the room next to that of the installation as a result of the air sucked out together with similar activity from another appliance or aspiration device.
- The permanent openings in the adjacent room must comply with the requirements in points a) and c).
- The adjacent room must not be used as a garage, warehouse for combustible material or for any type of activity with risk of fire.



**N.B: When air extraction fans are used in the same room or in areas close to the appliance, this could affect the functioning.**

## USE (PART DEDICATED TO THE USER)

### IMPORTANT WARNINGS

- Read this manual carefully as it contains important indication and instructions concerning the use, maintenance and safety of the product.
- All parts of this manual must be read and fully understood. Failure to do so shall be considered as improper use of the appliance which is tantamount to incorrect use of the appliance.
- Keep this manual in a safe place so that it is always available for future reference.
- The appliance must only be used for the purposes for which it has been specifically designed, all other uses are improper and therefore dangerous.
- The appliance must not be used as an incinerator.
- When operating, this appliance generates very high temperatures on some surfaces, both outside and inside, so always pay attention as these surfaces can be touched by the user.
- The entire appliance should be considered as an active thermal exchange zone with hot surfaces so adequate precautions need to be taken to avoid direct contact with children, disabled persons, animals etc.
- When opening the firebox door, the ash box door and moving the various adjusters, use the tools supplied with the appliance.
- For correct functioning of the heater the firebox door and the ash box door should be kept closed and the rings on the head mounted correctly. If the glass on the firebox door is broken or cracked, or if it is not working correctly, the appliance cannot be used until the fault is corrected.
- Do not block the openings or aspiration and heat dispersion slats.
- All repairs or replacements of worn components must only be carried out by a qualified service centre. Only use original spare parts.
- All unauthorised tampering or modifications are forbidden.

2.1



### FUEL

- **The appliance is only designed to use: FIREWOOD**
- **N.B. The use of liquid fuel or coal is not allowed.**  
**Also forbidden is the use of solid fuel other than wood such as straw, corn, nuts, and pinecones. The use of pallets, wood chips or types of wood, such as: acacia, conifer, fruit trees (including olive) can prejudice not only the working efficiency but it can also damage parts of the appliance.**

2.2



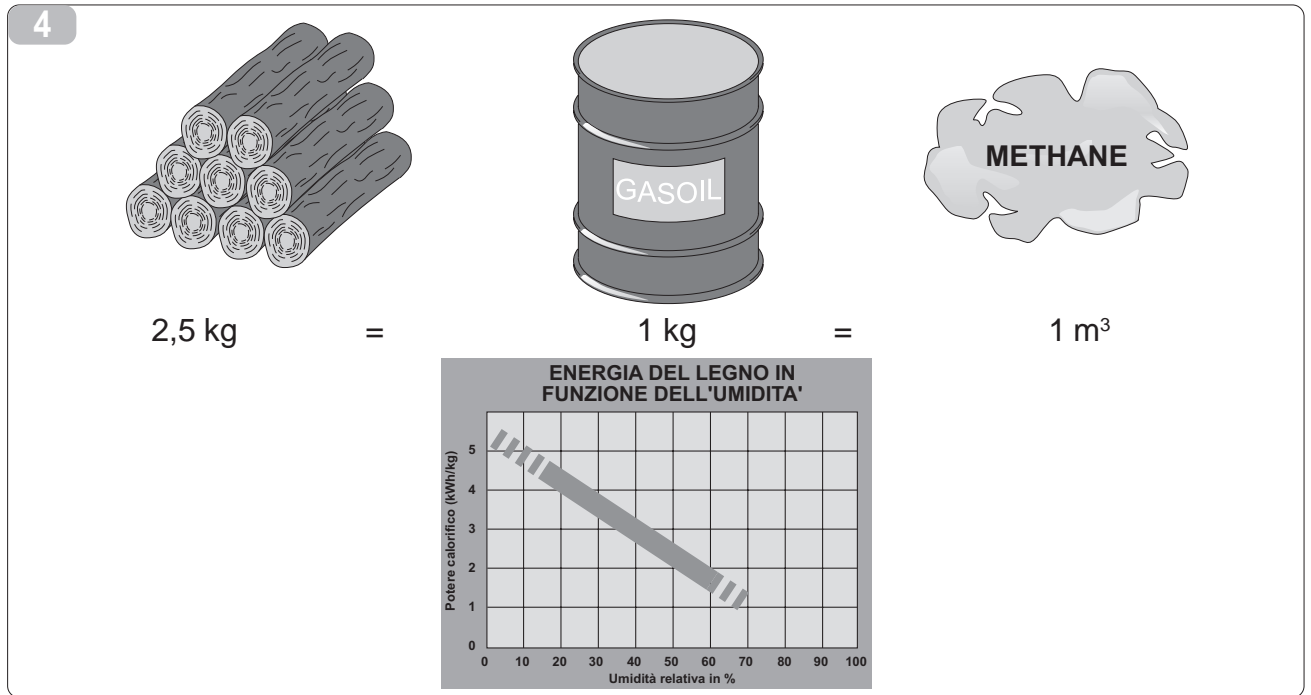
### INFORMATION ON FIREWOOD

- wood intended for use as fuel is classified in accordance with UNI 9016 based on: PIECE SIZE - MATERIAL - HUMIDITY (see table)
- the wood that we have used for testing and that we recommend is: SEASONED BEECH in pieces 25÷30 cm with N.C.V. (net calorific value) 4.3 kWh/kg.
- To ensure perfect combustion the fuel must be kept in a dry place protected from dirt.

2.3

The thermal performance of wood is influenced by its relative humidity as a % (see graph in fig. 4).

IDENTIFICATION	WITH NUMBERS	WITH LETTERS
PIECE SIZE:		
Discs - sticks	1	GROSS
Chips-flakes	2	FLAKES
Sawdust-powder	3	FINE
MATERIAL:		
Fir-Larch	1	CONIFER
Oak-beech	2	BROADLEAF TREES
HUMIDITY %:		
> 35	1	FRESH
14÷35	2	PARTIALLY SEASONED
< 14	3	SEASONED



## 2.4 STARTING UP

- The appliance must only be started up after the mounting and the connection of the smoke evacuation ducts has been completed. On a new stove, the paintwork finish needs to be completely dried out, therefore we recommend that you carefully follow the instructions below when first using the stove:
  - When first using, the appliance could emit odours which might be unpleasant; we recommend that you ventilate the room to eliminate these odours;
  - The paint on the stove is only completely hardened after it has been used several times.

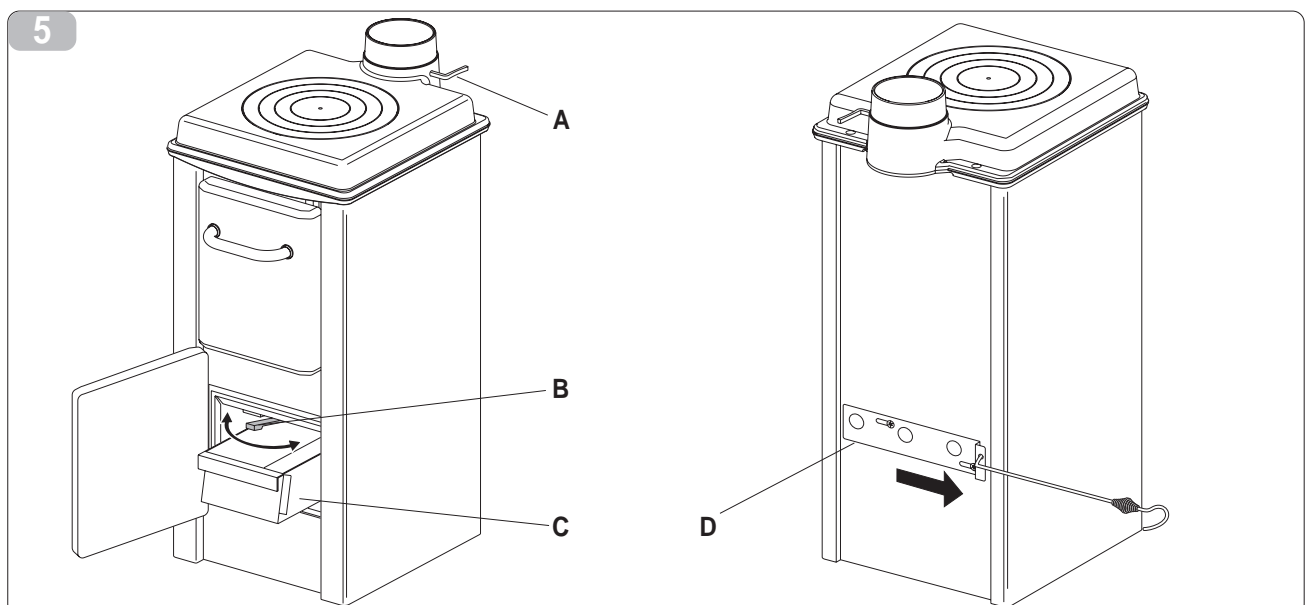
## 2.5 LOADING THE FUEL

- The appliance functions intermittently and therefore it needs to be fuelled up manually while it is operating;
- Perform the refuelling when the flame is low to avoid any unpleasant spillage of burnt product from the firebox door.
- To open the firebox door, use the tool supplied with the appliance.

## 2.6 LIGHTING AND USE

**N.B. To light the stove, never use: alcohol, petrol or other inflammable liquids.**

- When lighting up on a very cold day or with low pressure it is advisable to heat the flue by burning some newspaper in the stove.
- When adding fuel with the stove burning, always keep to the quantities indicated in the "Technical data" table.



**LIGHTING UP**

2.7

- Put a firelighter cube or a small ball of newspaper on the brazier, then on top of this, place 0.5 kg of twigs or small split logs and 3 small inlet logs of wood. Using the accessories supplied, open completely the smoke valve (fig. 5 ref. A) and the primary air inlet (fig. 5 ref. D), then light the paper or firelighter with a match and close the firebox door.
- When the fire has caught and starts to grow add some slightly larger logs and gradually repeat this operation until reaching the hourly load indicated in the "technical data" table; when the normal functioning is reached, set the adjustments of the primary and secondary air inlets as indicated in the ADJUSTMENTS chapter.
- Remember that the loading must be done with a moderate flame to avoid any spillage of burnt product into the room.
- During prolonged operation, it is advisable to activate the grate-shaker to shake the ash from the brazier down into the ash collection box (fig. 5 ref. C).

**LOADING AND RE-LIGHTING WITH EMBERS (Without a moderate fire)**

2.8

When adding fuel without a moderate flame, but only embers, proceed as described below:

- Use the poker to move the embers to the centre of the firebox.
- Completely open the primary air inlet.
- Wait long enough until there are sufficient flames in the grate to relight the fire (a few minutes).
- Load some pieces of wood and wait until they are completely alight.
- Return the primary air control to the normal use position as indicated in the ADJUSTMENTS chapter

**SHAKING THE FIREBOX GRATE**

2.9

- Using the glove, Shake the ash grate so the ash will detach from grate and fall into the ash drawer (fig. 5). The foyer is always ready to be employed and the prime air can be introduced rightly into the foyer

**ASH BOX**

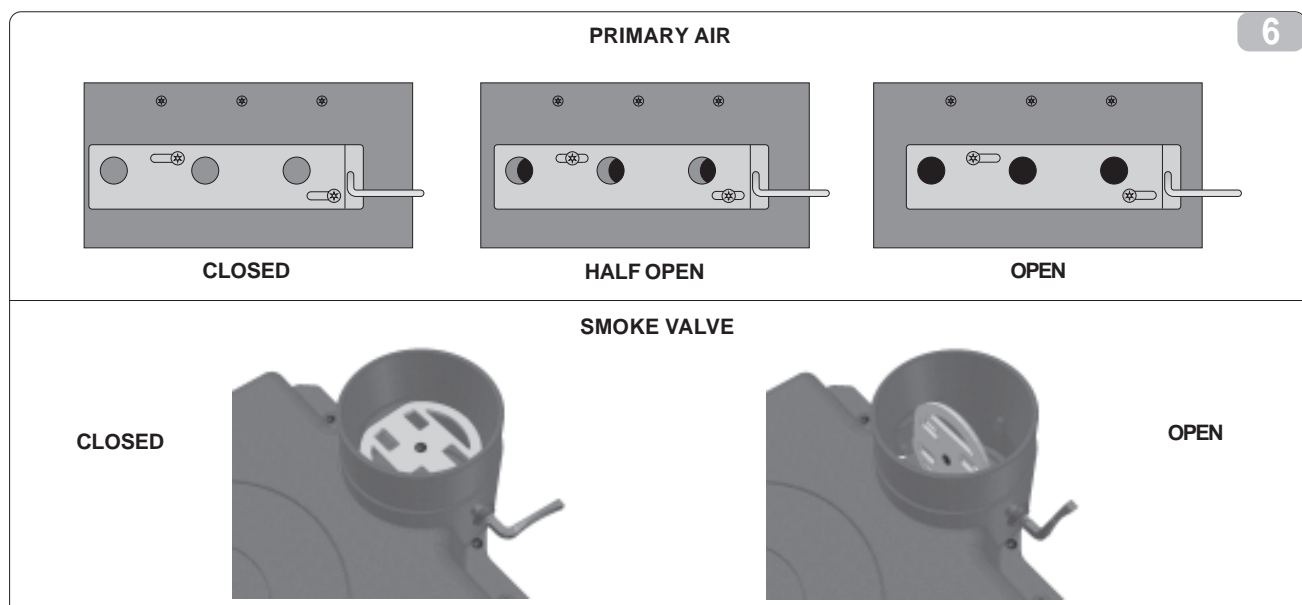
2.10

- When the stove is cold and using the special glove, empty the ash from the ash box.
- The ash box is located under the firebox and can be accessed by opening the front door.
- The ash box must be emptied when the stove is cold. Take care a there could be hot ashes or embers present.
- Always return the ash box into its space: using the stove without the box in place could be dangerous.
- If it is necessary to empty the ash box when the stove is still hot, although never with a flame present, always use the special glove.

**ADJUSTMENTS**

2.11

- To obtain a good compromise between thermal efficiency and fuel consumption the following positions are recommended: During normal use, the fire intensity adjustment must be made using the primary air control and the secondary air control.
- The adjustment positions shown below refer to the appliance when it is already functioning normally and are purely indicative.



## CLEANING AND MAINTENANCE (PART DEDICATED TO THE USER)

### 3.1 FUNDAMENTAL PRECAUTIONS

- The stove must be turned off and allowed to cool down to room temperature before performing any cleaning or maintenance operations.
- The checks on the state of the device must only be carried out by qualified personnel.

### 3.2 ORDINARY MAINTENANCE



- The frequency of cleaning and maintenance interventions depends on the type and quantity of fuel used. If the fuel contains high levels of humidity, ash, dust, scraps or chemical additives this could increase considerably the number of interventions required, so once more we would like to underline the need to use good quality firewood for fuel.
- **Cleaning the firebox.** To ensure the best functioning of the appliance, **EVERY DAY**, carefully clean the grate in the firebox, empty all the ash and residue (**taking care for the possible presence of hot ash**) clean the holes/slots in the base of the grate.
- **Cleaning the outside.** This must be done with the appliance cold.
  - Steel/cast iron parts: use a cloth soaked in a substance suited for these materials.
  - Glass/tiled parts: use a sponge soaked in product suitable for cleaning stove/fireplace glass and then wipe with a dry cloth.
  - Painted parts: use a cloth dampened with neutral detergent then wipe with a dry cloth.

### 3.3 EXTRAORDINARY MAINTENANCE (TO BE PERFORMED BY QUALIFIED PERSONNEL)

- At least once per year a general check of the appliance must be performed by a specialised technician.
- Preferably, every year it is advisable to have an authorised service centre perform the following operations:
  - Cleaning of the exhaust gas ducts;
  - Check the gaskets and replace if necessary;
  - Check the flue.

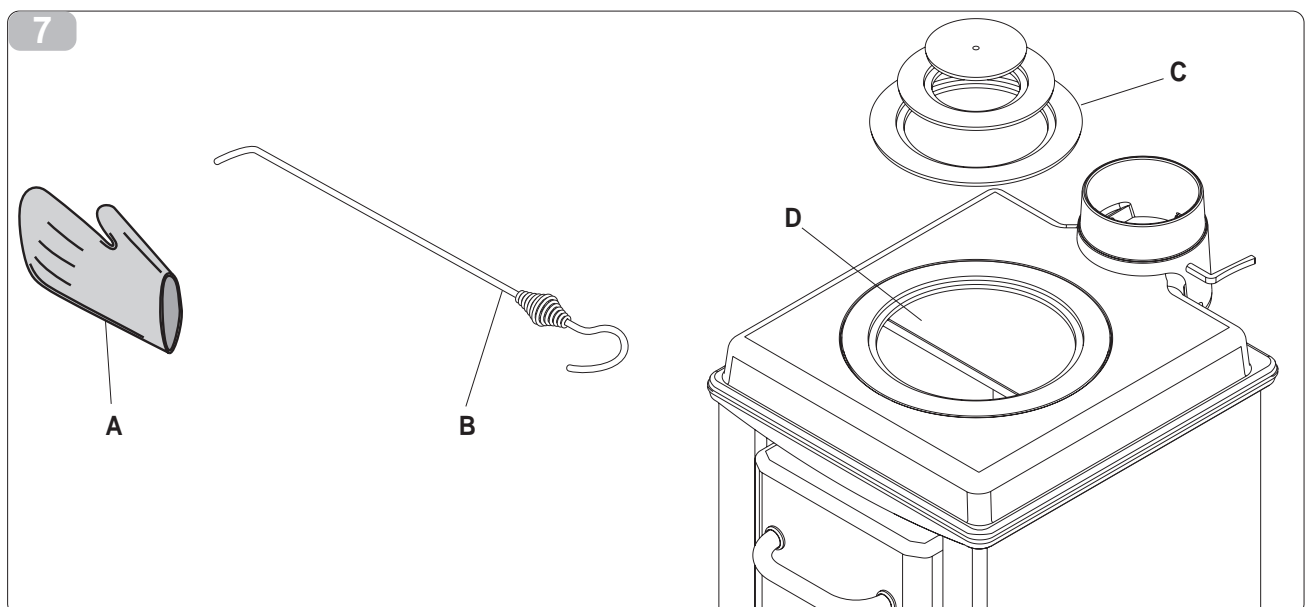
### 3.4 ACCESSORIES



- The following service tools are supplied with the stove:
- **Glove** (fig. 7 ref. A) for handling the ash box and other hot parts;
  - **Poker** (fig. 7 ref. B) for removing ash etc in the firebox:

### 3.5 INTERNAL CLEANING OF FUMES PIPES

- At least once a year or every time that it's necessary.
- The internal cleaning should be executed when the stove is cold, taking every gear that can be necessary.
- Employing the poker, lift the four rings in enamelled cast iron (fig. 7 rif. C) and clean the fumes pipe inside (fig. 7 rif. D).
- When the operation is finished, reassemble the stove making attention to position of its components.



## TROUBLESHOOTING

In case of malfunctioning, check the following table.

If, after the checks and controls suggested, the problem persists, contact the authorised technical service.



DEFECT	CAUSE	REMEDY
<ul style="list-style-type: none"> <li>The glass on the firebox door is covered with soot or the firebox chamber is dirty with black smoke.</li> </ul>	<ul style="list-style-type: none"> <li>Draught too low &lt; 10 Pa.</li> <li>Incorrect adjustments.</li> <li>Too much fuel introduced.</li> <li>Firewood with too much relative humidity.</li> <li>Unsuitable fuel.</li> </ul>	<ul style="list-style-type: none"> <li>Check that the smoke outlet pipe duct is not blocked. Modify the flue: chimney too high or terminal hood not suitable, or improve insulation.</li> <li>Check the indications in the "Adjustments" and "Fuel to be used" chapters.</li> <li>Reduce the quantity.</li> <li>Dry the damp wood before using.</li> <li>Check the indications in the "Fuel" paragraph.</li> </ul>
<ul style="list-style-type: none"> <li>Irregular air draught</li> </ul>	<ul style="list-style-type: none"> <li>Unsuitable or dirty flue.</li> <li>Appliance dirty inside.</li> </ul>	<ul style="list-style-type: none"> <li>Call in a chimney sweep.</li> <li>Clean.</li> </ul>
<ul style="list-style-type: none"> <li>Exhaust outside with too much black smoke.</li> </ul>	<ul style="list-style-type: none"> <li>Appliance lit with green wood.</li> <li>Smoke outlet partially blocked.</li> </ul>	<ul style="list-style-type: none"> <li>Light up with suitable fuel (see "Fuel" section).</li> <li>Call in a qualified technician.</li> </ul>
<ul style="list-style-type: none"> <li>Smoke coming out of the appliance</li> </ul>	<ul style="list-style-type: none"> <li>The door on the firebox is open while the fire is alight.</li> <li>Insufficient draught.</li> <li>Incorrect adjustment when lighting.</li> </ul>	<ul style="list-style-type: none"> <li>Close the door.</li> <li>Call in a qualified technician for an inspection.</li> <li>Check the indications in the "Adjustments" and "Fuel to be used" chapters.</li> </ul>

## CARATTERISTICHE TECNICHE

Width	m m	380
Depth	m m	535
Height	m m	855
Weight of appliance	kg	67
Diameter of smoke exhaust	m m	120
Termical power max foyer	kW	9.2
Termic power output	kW	5.5
CO emissions (with 13% of oxygen)	%	0.54
Efficiency	%	60
Wood fumes temperature	°C	360
Depression chimney min	Pa	> 10
Depression chimney max	Pa	< 20
Recommended fuel; pieces of beech firewood		1
Wood load (at hour)	kg	2,0



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