



Ember

kitchen stove
A1-80

MANUAL
FOR USE AND
INSTALATION

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STOVE SPECIFICATIONS

ABOUT EMBER STOVES

Ember stoves are technologically advanced stoves for heating, intended only for indoor use. Every Ember stove is fuelled by WOOD, thus producing warmth in a safe and healthy manner.

The intended use of the stove and its configurations are described in this manual and have been approved by the manufacturer.

The stoves described in this manual have been checked by the DIN 13240 standard and can as such be connected to multiply-lined chimneys (if possible, given chimney dimensions).

Do not use the stove in a manner which is not in accordance with the instructions provided by the manufacturer.

GENERAL INFORMATION

The person using the stove must be a responsible adult, with all the necessary technical knowledge and skills for carrying out routine maintenance of the stove's mechanical parts. Do not let children play in the immediate vicinity of the stove while it is in use.

The manufacturer is not liable for any problems resulting from inappropriate handling or unauthorised servicing of the stove or replacement of its parts with parts which are not original or not specific for the model. Use only original spare parts and try not to wait for the parts to completely wear out, but replace them prematurely so as to avoid more significant damage and prevent possible accidents.

The manufacturer is not responsible for the installation of the stove. The person put in charge by the owner of the stove should check the flue pipes and air supply, as well as the possibility of correctly following the prescribed instructions. Also, all legal provisions stipulated by the country in which the stove is being installed must be observed when installing the stove, as well as during its further handling.

The manufacturer completely disclaims any responsibility in case of:

- installation of the stove not in accordance with laws stipulated by the country in which the stove is being installed, as well as if installation is not in accordance with safety regulations
- installation which was not performed in accordance with the instructions provided
- installation carried out by unskilled persons
- usage which is not in accordance with the safety regulations
- repairs and alterations which were not approved by the manufacturer
- use of spare parts which are not original or specific for that model
- irregular maintenance of the stove
- exceptional events which are beyond the control of the company Ember Kamin

STOVE MANUAL

1. PURPOSE AND CONTENTS OF THE MANUAL

Purpose: The purpose of stove installation instructions is preparing the user for correct, safe, and long-term use of the stove.

Contents: This manual contains all required information for the proper installation, use, and maintenance of the stove. If you follow the instructions carefully, you will ensure a high degree of safety and productivity of your stove.

2. KEEPING THE MANUAL

Please save the manual so that you can remind yourself of the features and steps for proper handling of the stove at the beginning of the following heating season. A manual comes with each fireplace, but should you lose it, feel free to contact the manufacturer directly to receive a new copy.

A1-80



1. STOVE DESCRIPTION

Ember solid fuel stoves are designed models aimed at fulfilling your needs through their contemporary design, user-friendly operation, and outstanding functionality. Please carefully review these instructions to achieve optimal results right from the first use. The manufacturer bears no responsibility for any consequences (injuries to individuals, animals, or property damage) resulting from disregarding these instructions. The stove becomes hot during operation, and the use of protective heat-insulated gloves is obligatory. Handling the stove is not allowed for children and incapacitated persons. The external appearance of the stove is depicted on the cover page of these instructions. The primary components of the stove are crafted from stainless steel, galvanized, and enameled steel sheets.

A1-80 kitchen stoves come in left and right version of the flue connection, so when ordering a cooker or its spare parts, this should be specified.

This stove is intended for cooking, baking, and space heating.

The stove is packaged on its pallet with a wooden frame. During transport, the cooker must be securely fastened to prevent overturning or damage. The following items are standardly included:

- Stove
- User manual
- Oven tray
- Flue extension
- Cooker cleaning tool
- Poker
- Glove

CAUTION! The weight of the stove ranges from 150 to 180 kg. During unloading, moving, shifting, and installation, the stove must remain in an upright position to avoid damage and physical injury.

Ember stoves are manufactured according to the European standard EN 16510. They are intended for cooking, baking, and space heating. They are made of stainless steel, galvanized, and enamel-coated steel sheets. The cooking plate can be made of 8 mm thick steel sheet or Ceran glass. The interior of the cooker is lined with thermosetting concrete that withstands temperatures up to 1250 °C. The external parts of the cooker are enamel-coated, with elements made of stainless steel. The cooker comes with an enamel-coated flue extension.

The flue extension is attached to the top plate with nuts, and to the side and back of the sheet with screws. Sealing between the body of the cooker and the top plate is achieved using a gasket, as is the case with sealing the furnace door. The cooker's oven is enamel-coated. Handles for the furnace door, oven door, and the handle of the upper stainless steel frame are made of stainless steel.

This cooker also features a built-in thermostat that protects it from overheating, preventing the oven temperature from exceeding approximately 280 °C.



FIGURE 2. - STOVE A1-80

2. PACKAGING

Ember stoves arrive packaged in protective film and embraced in a wooden framework, positioned on wooden pallets, which gives them greater stability and protection of the stove (Figure 3).

Each pallet is designed to perfectly fit the stove for which it is used.

Each stove also comes with:

- a manual on the use, installation and maintenance of the stove
- a protective glove



FIGURE 3.

Screws for unpacking

The stove is unpacked by unscrewing the lower 4 screws (Figure 3). The pallet frame is then released from the base and lifted over the stove. The stove stands on the wooden base on metal braces, which is why it needs to be lifted when removing from the wooden base.

3. INSTALLATION AND USE OF THE STOVE

3.1. PRIOR TO INSTALLATION

The installation of your stove must be conducted in accordance with the regulations in your country and in consultation with a licensed chimney sweep, who should check whether the connection of the stove is properly installed.

Important steps prior to installation:

- the room where the stove will be installed has to be able to withstand the weight of the stove, as well as provide enough space for its adequate installation;
- it is important to ensure sufficient space for accessing the stove after the installation;
- Flue pipes' minimum pressure difference should not be lower than 12 Pa
- check whether the heat output is sufficient for heating of the room where stove shall be installed.

WARNING!!! Do not make any unauthorised modifications to the stove.

3.2. SAFETY MEASURES

3.2.1. INSTALLER INSTRUCTIONS

- Check whether the place of installation complies with all local, national, and European laws and standards.
- Follow the installation steps provided in this manual.
- Check whether the chimney and the air intake are suitable for this type of installation.
- Always use protective equipment and other protection prescribed by the law.

The minimum distance between the cooker and surrounding elements is 50 cm, and from flammable materials, it's 80 cm.

If the surface where you'll place the stove is made of easily flammable material (wood, laminate, etc.), it's necessary to place a protective sheet metal strip, 10 cm wide on the sides, and 50 cm wide in front.

Due to its weight, the stove needs to be installed on a sufficiently load-bearing floor.

The cooker is connected to the chimney via a flue extension, which can be at the back, on the side, or on top of the stove.

Care must be taken to ensure a secure and airtight connection between the stove and the chimney. The flue pipe must be properly installed in the chimney to avoid reducing the necessary passage area for flue gas flow.

3.2.2. **USER INSTRUCTIONS**

- Ensure that the place of installation complies with all local, national, and European laws and standards.
- Given that the stove is an appliance that generates heat, its outer parts can get extremely hot, which is why extra caution is advised when the stove is in operation. Pay special attention to the following:
 - do not approach too close and do not touch the glass on the stove because you might get burned;
 - do not touch the flue pipes;
 - do not clean the stove while it is in operation;
 - do not empty the ash container while the stove is in operation.
- Make sure that children do not get too close to the stove.
- Follow the instructions provided in this manual.
- Only use fuel intended for this stove (more details under “Fuel characteristics”).
- Stick to the prescribed routine for stove maintenance.
- Do not use the stove without first conducting the prescribed daily check (more details under “Maintenance”).
-
- Do not use the stove if you notice any malfunction, if you suspect damage or breakage, or you hear an unusual noise.
- Do not throw water onto the stove when it is in operation or into the fire to extinguish it.
- Do not lean onto an open stove door because you can weaken it that way.
- Do not use the stove as support.
- Do not clean the stove until its structure and ash are completely cold.
- Everything you do on the stove should be done with absolute caution and care.
- If the chimney catches fire, call firefighters immediately, move all flammable objects away from the chimney, and notify your chimney sweep. Do not extinguish a fire in the chimney using water, as that may cause damage to the chimney. After the fire in the chimney has stopped burning, before the following ignition of the stove, you should call an expert to check the chimney and implement appropriate measures if cracks have appeared in the chimney.

3.3. **IMPORTANT INFORMATION FOR STOVE INSTALLATION**

3.3.1. **COMBUSTION**

There are a number of factors which influence good combustion, in terms of producing heat and low emissions of harmful substances.

Some of those factors depend on the stove itself, while others depend on proper installation, manner of usage, and maintenance.

Some indicators can be found later in the manual and it is recommended to adhere to those in order to achieve maximum performance of the stove.

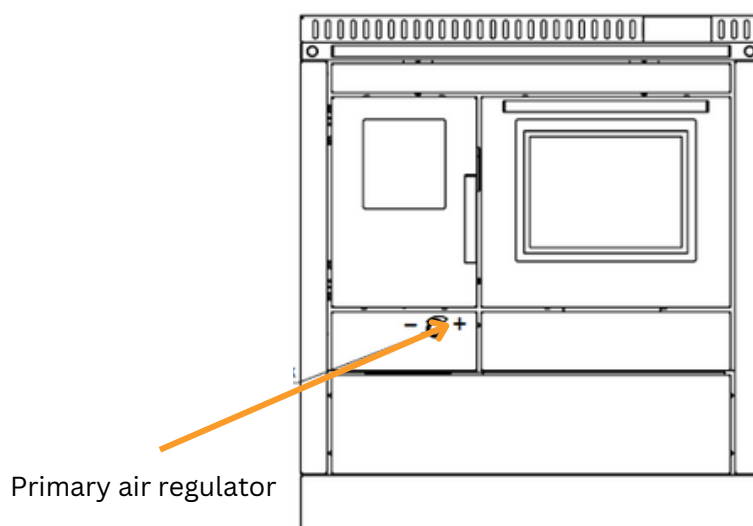
3.3.2. COMBUSTION AIR

This cooker has the ability to regulate primary and secondary air, achieving better combustion, ensuring greater efficiency, and a more favorable environmental impact. Regulation of primary air entering through the grate of the furnace is done using a primary air control wheel located below the furnace door. The primary regulator is opened at the beginning of firing when we want to increase the temperature in the furnace or when there is a larger amount of embers in the furnace.

Regulation of secondary air is done using a regulator located next to the furnace door, serving as the primary control for the intensity of burning.

Regulation of the flow of flue gases is done using a regulator located next to the oven door. The regulator in the "B" (baking) position allows most of the flue gases to circulate around the oven, resulting in a higher oven temperature. The regulator in the "C" (cooking) position allows fewer flue gases to circulate around the oven, resulting in a higher temperature on the cooking plate.

When the cooker is used for heating, set the flue gas flow regulator to the "B" position and open the oven door.



IMPORTANT!!!

Fans extracting air out of the room (extractor hood) where the stove is installed can cause penetration of flue gases into the room.

In that case, fresh air should be connected directly to the stove.

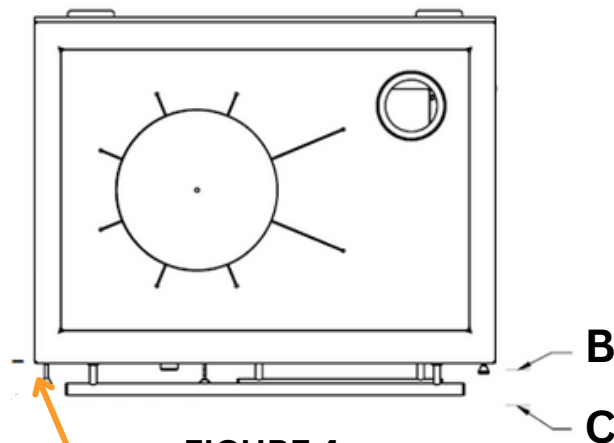


FIGURE 4.

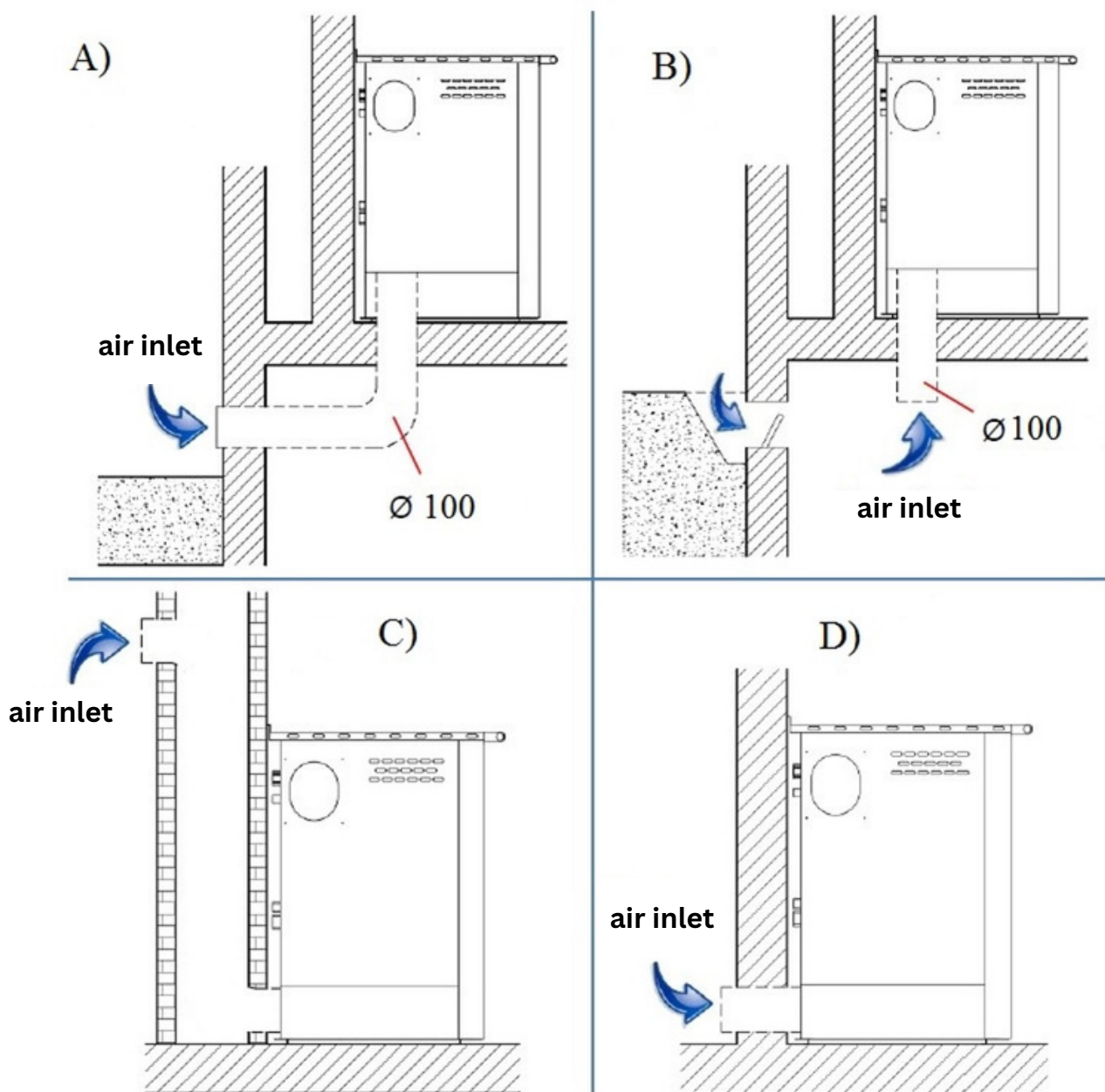


FIGURE 5.
Fresh air supply from outside

- A) Fresh air supply through ducts through basement rooms**
- B) Fresh air supply through basement rooms**
- C) Fresh air supply through existing ventilation system**
- D) Fresh air supply directly from outside**

3.3.3. CONNECTING FLUE PIPES

For the connection of the stove to the chimney, only a flue pipe with a 2-millimeter wall thickness can be used!!!

Flue pipes, their dimensions and materials must be in accordance with current standards (DIN EN 1856:2).

Important instructions:

- the metal pipe connecting the stove to the flue pipe can never have a diameter smaller than the outlet of the stove;
- all connections from the stove to the chimney must be firm and tightly connected;
- each stove must have its own flue pipe and under no circumstances can the same flue pipe be used for multiple stoves.

Chimney deficiencies can include: (Figure 6)

1. The chimney is lower than the top of the roof
2. The slope is too steep
3. Sharp change of direction
4. A furnace or another appliance is connected to the same flue
5. Protrusions in the flue
6. Cracks
7. Foreign bodies or accumulated soot
8. Flue pipe inserted too deeply
9. Fan, extractor hood, or another appliance creating under-pressure in the room
10. The cleaning opening is poorly sealed or open

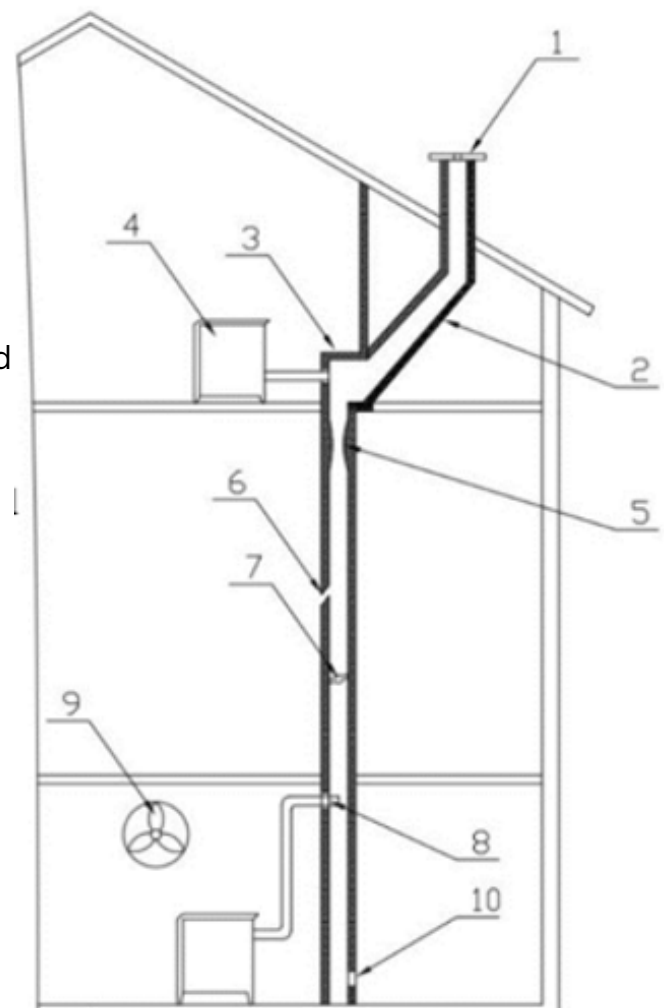


FIGURE 6.

3.3.4. LOCATING AND POSITIONING THE STOVE IN A ROOM

When installing the stove, it is necessary to adhere to the rules of fire safety. Figure 7 and Table 1 show the minimum required distances between the stove and the walls/floor.

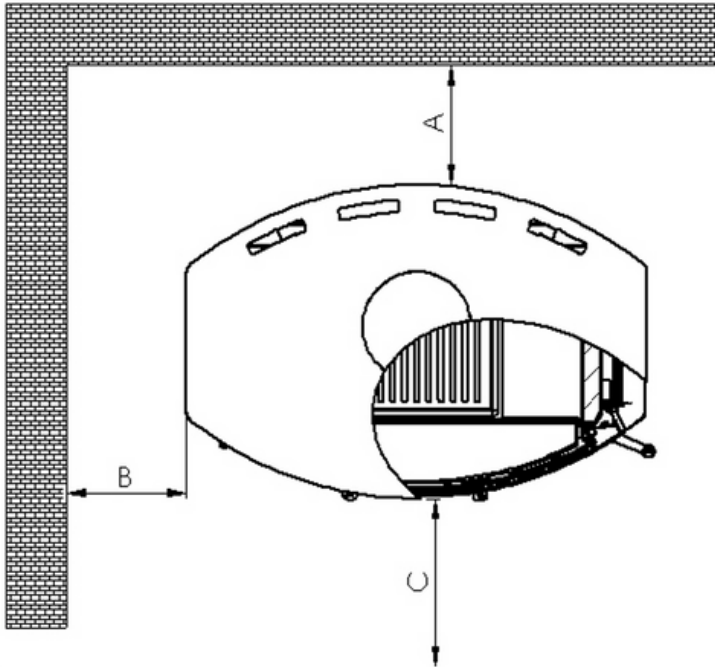


FIGURE 7.

**Minimum distance from
combustible building materials**
STOVE A2-40

On the back A - 250 mm

On the side B - 350 mm

Thermal radiation area C - 850 mm

It is important to protect all items that might catch fire when exposed to the stove's high temperatures.

It is recommended to buy a floor plate, which is placed under the stove to protect surroundings from catching fire.

4. COMMISSIONING THE STOVE AND USING IT

4.1. FIRST IGNITION OF THE STOVE

- Check whether all movable parts are put in the right place and whether air regulators are working properly.
- Wipe all external surfaces with a dry cloth to remove dirt.
- After igniting the stove for the first time, we recommend that you use a weak fire to avoid the stove being under sudden thermal load.
- It is possible that during initial ignition the stove will release a smell of metal and fresh varnish, but the smell will disappear with the second ignition. The reason why this smell is released during first ignition is because, on that occasion, the varnish blends completely with the metal.
- Also, it is important for the primary air intake to be in a semi-open position for at least four hours.
- The ash container must be well sealed so that the primary and secondary air intakes can be properly regulated.

4.2. **APPROPRIATE FUEL MATERIALS**

Ember stoves are stoves intended for use with wood as their only possible fuel.

Beech and birch are the recommended types of wood for the stoves, as they have the highest degree of combustion and the cleanest combustion. Of course, other types of wood are also suitable for our stoves, with the condition of sufficient dryness, which means that for all types of wood, moisture in logs should not amount to more than 20%, and it is recommended that the moisture of the log should be closer to 15% as such log moisture has shown to provide optimum stove utilization.

For this reason, freshly cut wood is to be stored for a period of 12 to 18 months to achieve a sufficient percentage of dryness and be appropriate for combustion.

No fuel other than the above may be used for combustion. Accordingly, you should not fire the stove at all with the following:

- fresh wood: wood with a moisture content above the recommended level, as it reduces the stove's heat capacity, causes glass 'blackening', rendering more frequent stove and chimney cleaning necessary;
- reclaimed wood: burning of treated wood (railway sills, chipboard, lacquered wood, etc.) causes the formation of sediments in the flue system and may lead to overheating;
- slow-burning coal (the use of this coal is absolutely prohibited);
- coke (it has a too-high calorific value and is in no way suitable as fuel for stoves);
- charcoal;
- plastic of any kind;
- clothes and household waste.

Burning any type of waste is harmful to the environment, but also to your stove!!!

4.3. **HOW TO IGNITE A FIRE IN THE STOVE**

- Fully open the primary and secondary air regulator.
- Open the door of the combustion chamber and place a roll of paper or some other lighting mean on the bottom.
- Place several small pieces of wood on paper, arranging them crosswise over each other.
- Then place some larger pieces on the smaller pieces of firewood.
- Light one of the paper pieces in the stove to start the fire.
- Do not fully close the combustion chamber door, but leave it ajar until you notice the fire catching on.

At this time, the primary and secondary air supply must be open!!!

- After a few minutes, you can set the primary and secondary air supply according to your own preferences (see section 6 for more about the primary and secondary air supply) and refill the stove with fuel. If the wood is sufficiently dry (see 4.2), after the fire is lit, it is recommended to close the primary regulator completely and regulate stove burning with the secondary regulator.

4.4. **REFILLING FUEL IN THE STOVE**

To keep the fire in your stove steady and heat your home, the stove should be refilled with fuel if needed. The ideal time for this is when you notice there are only embers in the stove, without any flames.

Do not refill the fuel in the stove while there is still a flame!!!

Complete the following steps to refill the stove:

- Open the primary air supply to the end.
- Slowly open the handle of the stove door and thus avoid creating air pressure in the stove that would allow smoke from the stove to enter the room.
- Add a few wood logs and close the door.

5. MAINTAINING AND CLEANING THE STOVE

5.1. **SAFETY PRECAUTIONS BEFORE CLEANING**

Before you begin any stove maintenance or cleaning, it is important to ensure the following steps:

- All parts of the stove must be cold.
- The ash in the stove must be cold; there must be no ember in it.
- Use protective equipment prescribed by the law (EEC 89/391).
- The tools you use must be appropriate.
- After finishing repairs or maintenance, make sure that all safety covers are in place and closed.

It is recommended to clean the stove surface only with a dry cloth and without the use of detergents, so as to avoid destruction of the surface!!!

5.3. **CLEANING THE STOVE ASH**

Ember stoves have a great advantage over competitors – an ash container installed in the stove, enabling easier and simpler cleaning of ashes.

The ash container needs to be emptied timely to avoid contact between the ashes and the stove grid. If this is not done in a timely manner, there is a possibility that the combustion chamber grate will not be fully cooled and will thus eventually be destroyed.

Ash container use: The ash container is located under the stove's combustion chamber, hidden beneath the stove door. When ash is removed from the ash container, it is necessary to first open the combustion chamber door, then lightly pull the ash container handle and pull out and remove the ash, after which the ash container can be put back in place.

It is extremely ***IMPORTANT*** to ensure that no ember is left in the stove and that the ash is completely cold. If any embers remain while cleaning the stove, there is a risk of burns, as well as of trashcan combustion. We recommend using the protective glove when disposing ashes, as well as a metal container for ash disposal to avoid possible accidents.

Do not throw ash in the trashcan!!!

5.3. **STOVE CLEANING AND MAINTETANCE**

By regular and proper cleaning, you ensure the correct operation and prolong the lifespan of the cooker. All cleaning, both external and internal parts of the cooker, should be done when the cooker is cold.

Cleaning external surfaces – Use a cloth that won't damage the cooker's surfaces. Chemical cleaning agents do not harm the cooker's surfaces and are permitted for use. Painted and enamel-coated surfaces should not be cleaned with abrasive substances.

Cleaning internal surfaces – To clean the internal surfaces of the cooker, including the channels through which flue gases flow, it is necessary to dismantle certain parts of the cooker.

1. Removing the top plate (or Ceran glass) – Figure 7: The top plate is removed by opening the furnace door and lifting the plate manually through the furnace opening.
2. Removing the mask under the oven door – Figure 8: The mask under the oven door is removed by opening the wood drawer and manually removing the mask.
3. Removing the oven door (optional) – Figures 9, 10, and 11.
4. Removing the cleaning cover.

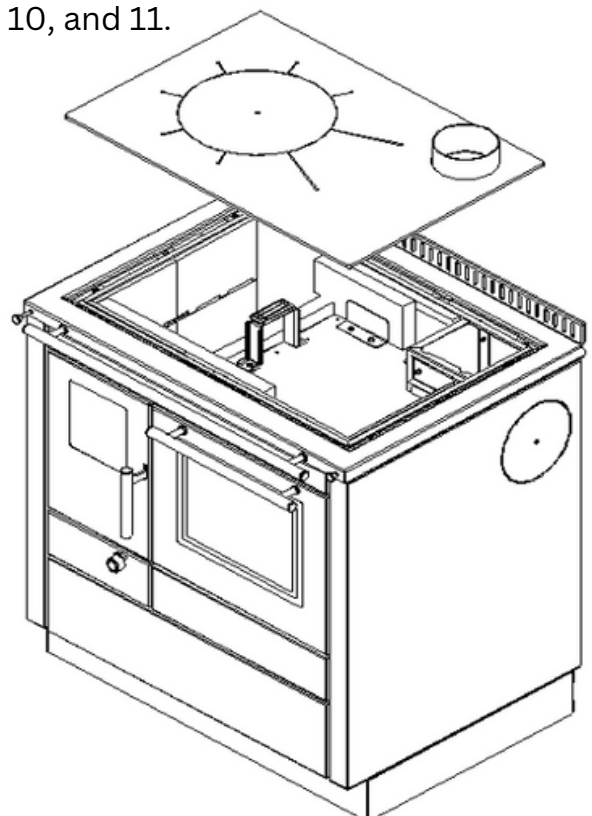


FIGURE 8.

Removal of the top plate (or Ceran glass)

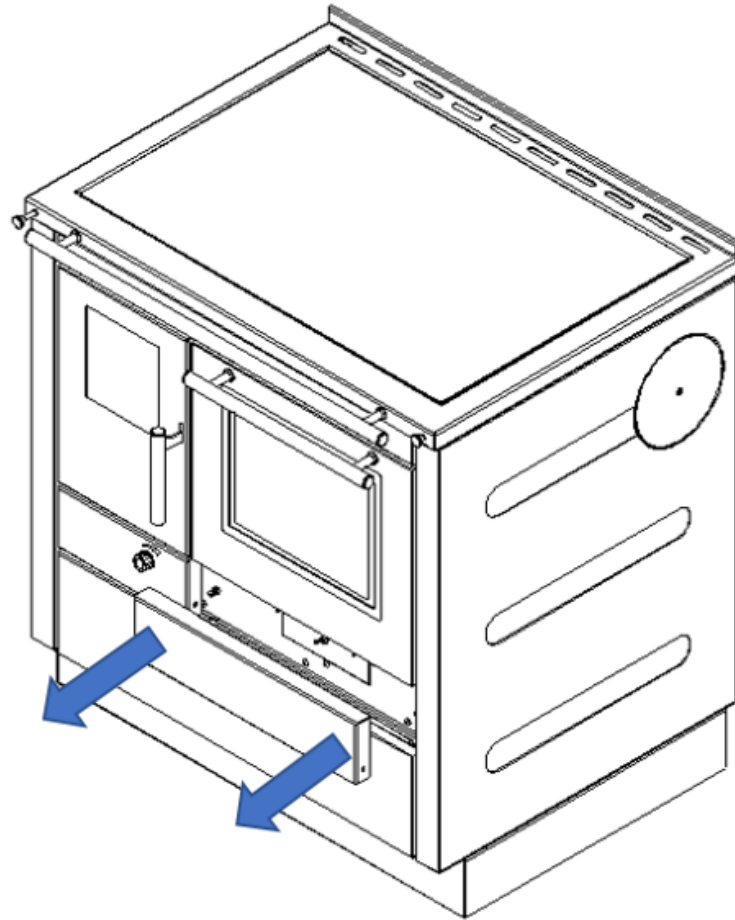


FIGURE 9.

Procedure for disassembling the mask under the oven door

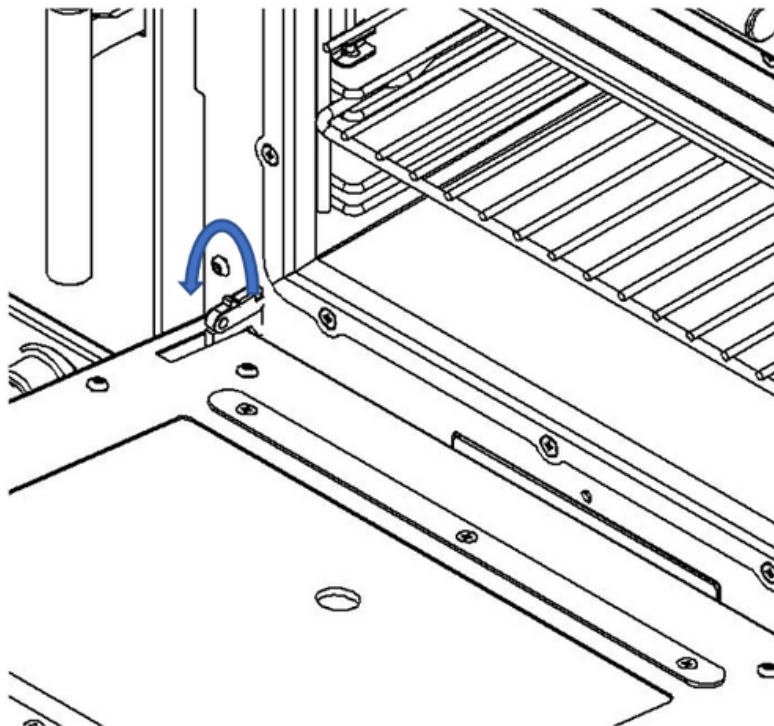


FIGURE 10.

Preparation for disassembly of the oven door

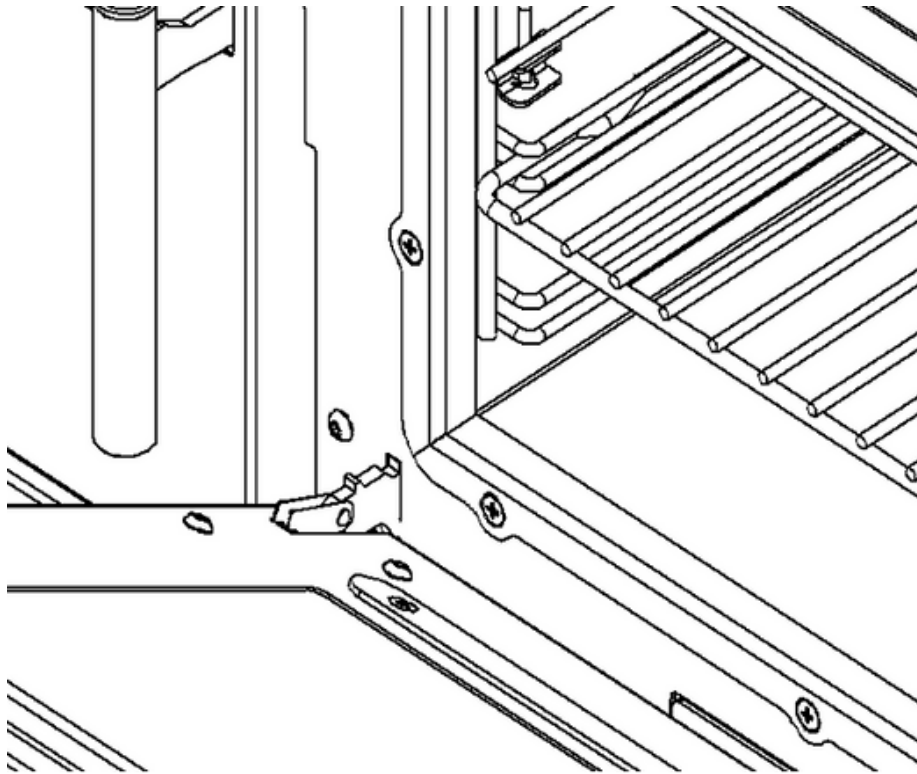


FIGURE 11.

The position of the latch for disassembling the oven door

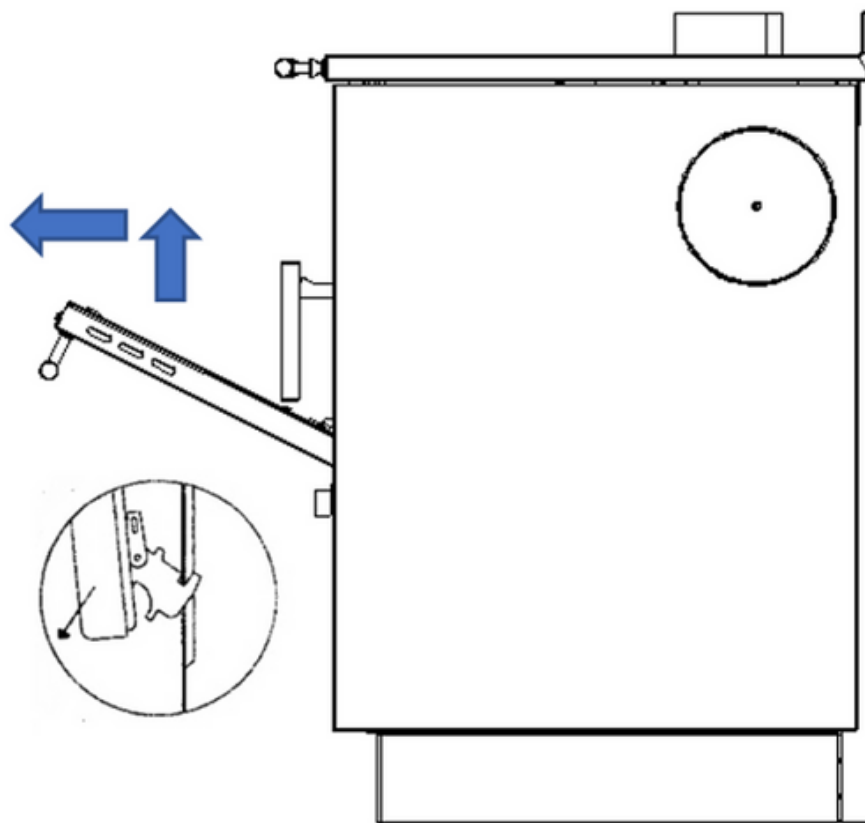


FIGURE 12.

Preparation for disassembly of the oven door

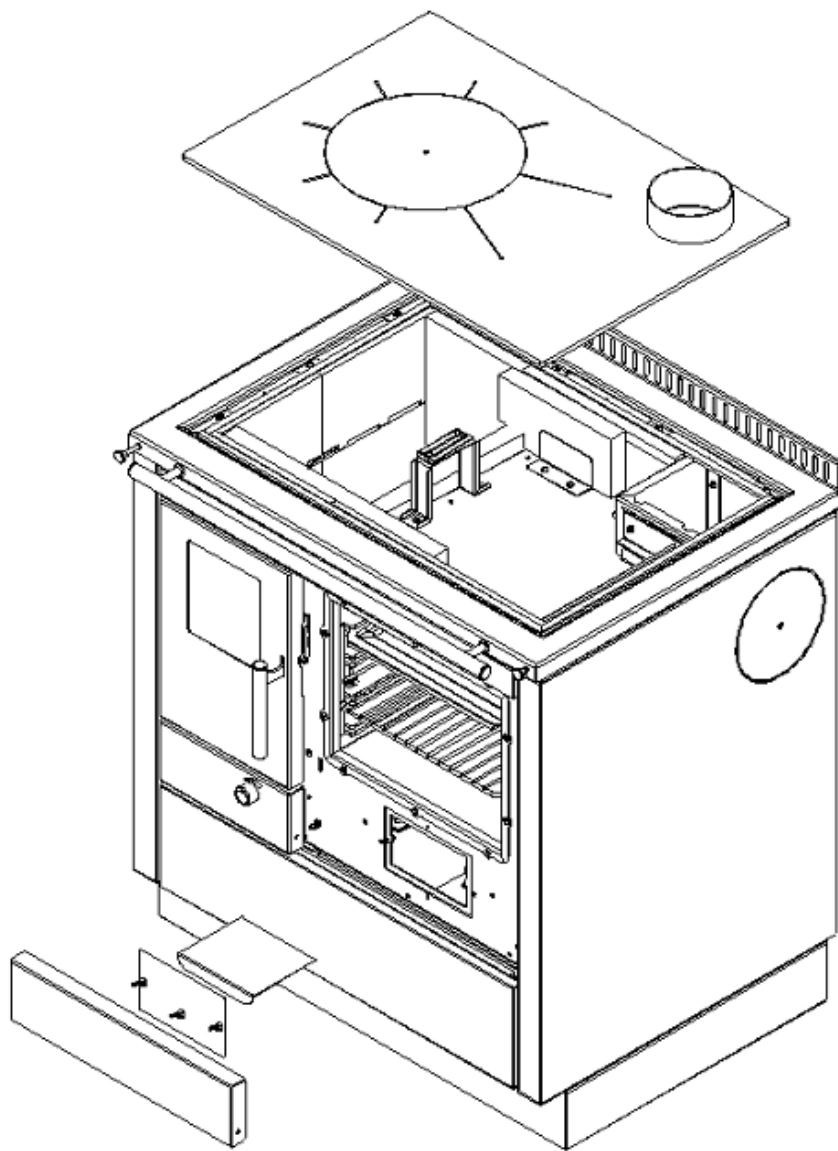


FIGURE 13.
Disassembly of the cleaning cover

If necessary, for easier access to the cleaning opening, the drawer can also be removed. When cleaning the cooker, use protective gloves.

The internal surfaces of the cooker should be cleaned from accumulated soot.

It is also possible to remove grate segments through the furnace door for more detailed cleaning of the furnace.

You can use an ashtray to collect the cleaned soot.

After cleaning, reassembly of the removed parts is performed in the reverse order of disassembly.

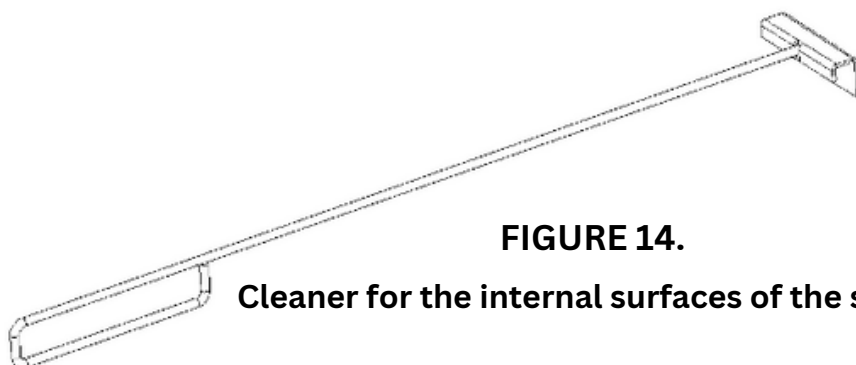


FIGURE 14.
Cleaner for the internal surfaces of the stove

Cleaning glass surfaces – during use, the glass of the cooker gets dirty. Use non-abrasive detergents for cleaning as the glass surface can be damaged. Clean the glass when it is cold.

Cleaning and maintenance of the chimney – cleaning and inspecting the chimney is recommended once a year or after prolonged periods of inactivity. By regularly maintaining and inspecting the chimney, we improve the performance of the cooker and prevent fire hazards.

5.4. **CLEANING THE FLUE PIPES AND CHIMNEY**

It is recommended to clean chimneys and flue pipes every time you notice a heavy flow of smoke.

Cleaning the soot and carbonated residue needs to be carried out properly, using the appropriate instruments and taking care not to damage the lacquered parts and seals.

6. OPERATIONAL ISSUES

OPERATIONAL ISSUE	CAUSE	SOLUTION
Glass on the firebox door is blackened.	• Insufficient draft in the chimney • Too much fuel in the firebox • Fuel with excessive moisture • Inappropriate fuel • Incorrect handling	• Check the connection between the stove and the chimney • Reduce the amount of fuel • Use fuel with less than 20% moisture content • Use fuel according to the instructions • Handle the stove according to the instructions
Smoke is coming out of the stove.	• Stove covered in soot • Chimney covered in soot • Fuel with excessive moisture • Insufficient fresh air supply in the room • Improperly constructed chimney	• Clean the stove • Clean the chimney • Replace the fuel • Ensure adequate room ventilation • Adjust the chimney
Temperature is too low for cooking and baking.	• Insufficient draft in the chimney • Excessive amount of fuel in the stove • Inappropriate fuel	• Inspect the chimney • Reduce the amount of fuel in the stove • Use fuel according to the instructions
Temperature is too high for cooking and baking.	• Excessive draft in the chimney • Inappropriate fuel • Excessive amount of primary air	• Inspect the chimney • Use fuel according to the instructions • Close the primary air intake

7. COMPLAINTS AND SERVICING

The Ember Kamin company places great importance on customer relations even after sale, and our repair and customer support services are an extremely important process in our business.

All Ember stove models have a two-year warranty.

The warranty does not cover damage and replacements on combustion chamber lining or stove glass, or damage caused by improper handling, neglect, and incorrect maintenance.

For all additional questions and service information, we kind ask our valued customers to contact the place of purchase of their Ember stove, where authorized service providers will determine whether the warranty covers the issue or damage. If the problem or damage is covered by the warranty, the product will enter the processing and repair procedure.

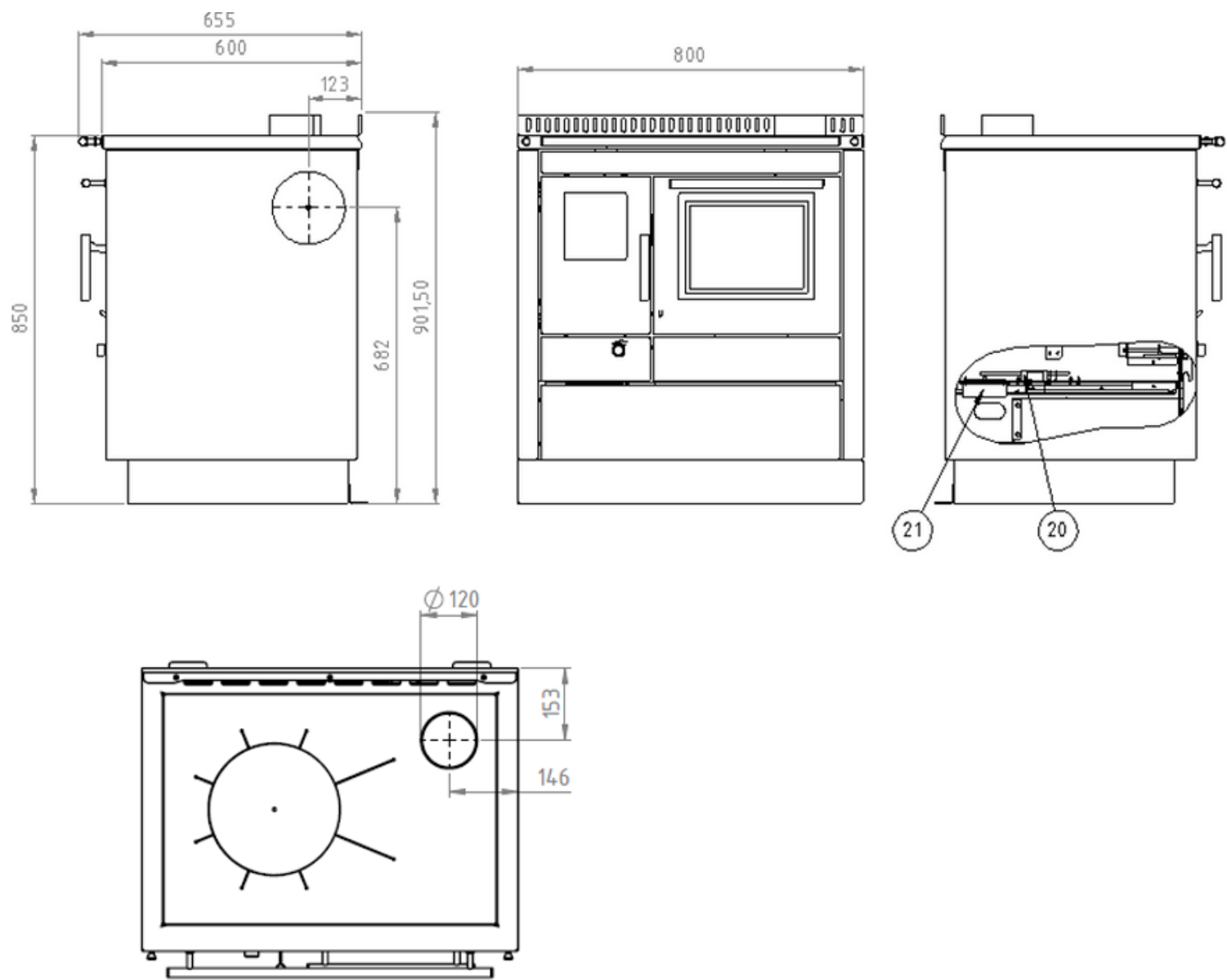
If the stove damage or issue occurs after two years and after the warranty expires, we also invite you to contact the place of purchase of your Ember stove so that authorized repairers can give you recommendations on further repair procedures, as well as inform you of their cost.

The Ember Kamin company disclaims any liability for any defects caused by unauthorized changes to the stove or in the case of the use of non-original spare parts. If any of the above is established when the stove comes to service and before the warranty expires, the warranty will not be recognized.

STOVE SPECIFICATIONS

STOVE DIMENSIONS : KITCHEN STOVE A1-80

L [mm]	800	Stove length
W [mm]	600	Stove width
H [mm]	850	Stove height
P [mm]	150	Diameter of the flue gases opening



Components of the A1-80 kitchen stove:

1. Upper stainless steel frame
2. Upper plate (optional Ceran glass)
3. Flue extension
4. Furnace door
5. Oven door
6. Upper mask
7. Drawer
8. Ashtray
9. Grate
10. Secondary air control handle
11. Primary air control wheel
12. Oven control handle
13. Base
14. Baking tray
15. Oven
16. Vertical oven rack
17. Horizontal oven rack
18. Poker
19. Cleaning tools
20. Overheating thermostat
21. Fresh air inlet connection point

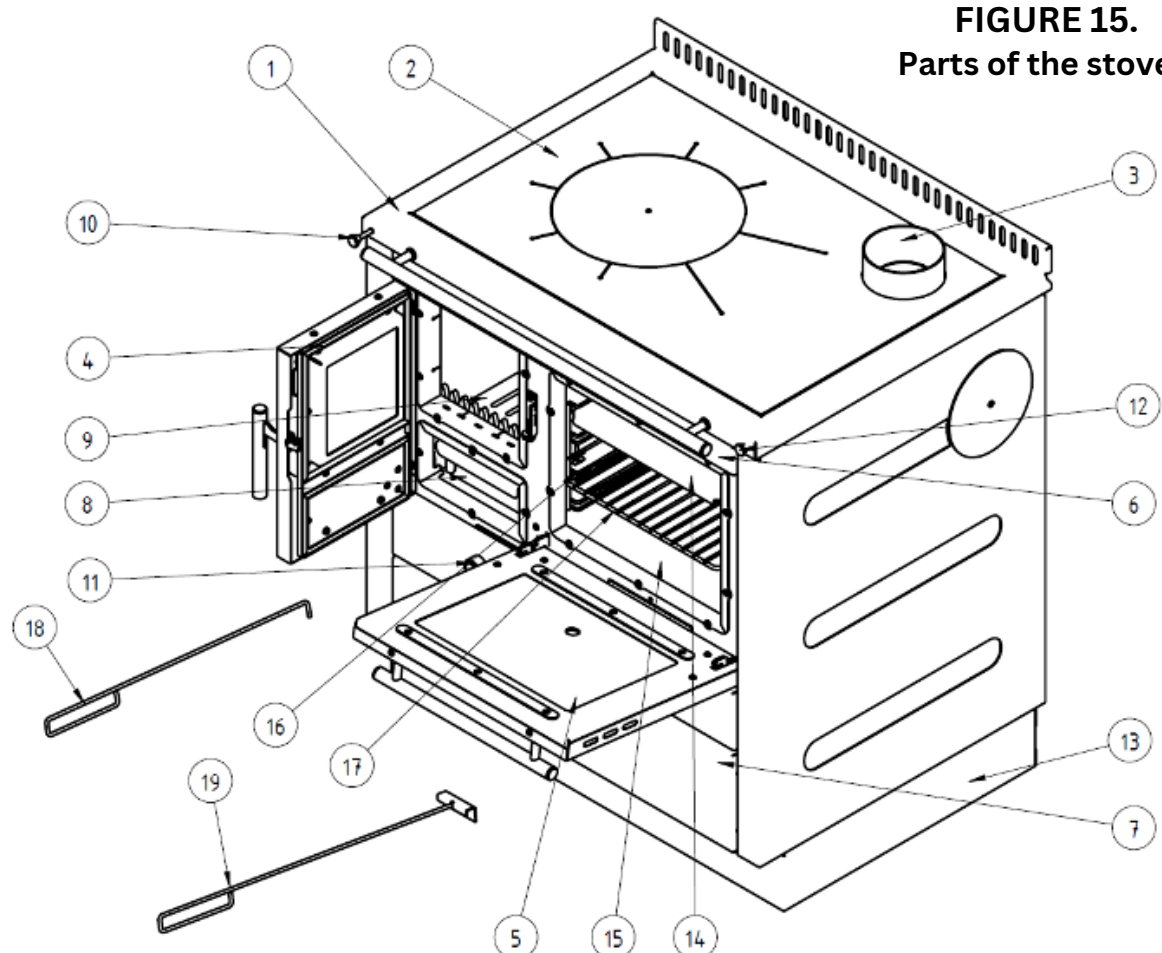


FIGURE 15.
Parts of the stove

TECHNICAL DATA

Stove (without cover)	800x600x600 mm
Firebox	260x190x440 mm
Oven	330x260x440 mm
Chimney extension	Φ120 mm
Weight	160 kg
Nominal power	6,6 kW
Efficiency	87%
Minimum distance from flammable materials	53 cm
CO content	0,05%
Dust emission	16 mg/m ³
Chimney connection position	Rear, side, top
Fuel consumption at nominal power	1.44 kg/h
Exhaust gas temperature	166°C
Required pressure	12 Pa

NOTES

[illegible]

NOTES

[illegible]



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