

OPERATION AND INSTALLATION MANUAL

OPUS ARIA

**OPUS**  
FIRED BY DESIGN

## Contents

|  |       |
|--|-------|
| Disposal of packaging  | 3     |
| Introduction   | 3     |
| 1. Description   | 3     |
| 2. General   | 3     |
| 3. Installation of the Stove and the flue pipe connection    | 4     |
| 3.1. Flue pipe connection                                    | 4     |
| 3.2. Safety rules  | 5     |
| 3.3. Minimum distances to combustibles                       | 5     |
| 4. Technical specifications                                  | 6     |
| 5. General information about the working of the stove        | 7     |
| 5.1. Starting the stove                                      | 7 - 8 |
| 5.2. Suitable materials for lighting                         | 9     |
| 5.3 Emptying the ashpan                                      | 9     |
| 5.4 Cleaning and maintenance                                 | 10    |
| 5.5 Instructions on how to access the flue through the stove | 11    |
| 5.6 Layout and usage of air regulators                       | 12    |
| 6. Malfunction and service                                   | 12    |
| 7. Common fault finding                                      | 13    |
| 8. Warranty  | 14    |
| Opus commissioning checklist                                 | 15    |

## Attention

Check the stove before installation to ensure that there has been no damage to the functional parts (air regulators, seals, door, chimney connector, etc.) during transportation.

If you have noticed damage, please contact our customer service. The stove must not be modified in any way.

### “The Clean Air Act 1993 and Smoke Control Areas”

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an "unauthorised fuel" for use within a smoke control area unless it is used in an "exempt" appliance ("exempted" from the controls which generally apply in the smoke control area).

In England appliances are exempted by publication on a list by the Secretary of State in accordance with changes made to sections 20 and 21 of the Clean Air Act 1993 by section 15 of the Deregulation Act 2015. Similarly in Scotland appliances are exempted by publication on a list by Scottish Ministers under section 50 of the Regulatory Reform (Scotland) Act 2014.

In Wales and Northern Ireland these are authorised by regulations made by Welsh Ministers and by the Department of the Environment respectively.

Further information on the requirements of the Clean Air Act can be found here:

<https://www.gov.uk/smoke-control-area-rules>

Your local authority is responsible for implementing the Clean Air Act 1993 including the designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements”

## **Disposal of packaging**

The packaging protects the stove from damage during transportation. The packaging materials can be recycled. The wooden parts of the packaging can be used as firewood.

## **Introduction**

Congratulations on your purchase of this Opus stove.

This manual will introduce you to the functions and correct operation of the stove. It is important that your installer takes you through the operation of this stove during their handover.

Our guarantee is valid only if the guidelines in this manual are carefully followed.

Please keep this manual in order to remind yourself how to operate the stove before the winter months.

## **1. Description**

The stove is constructed with welded steel. In the centre is the firebox which is lined with firebricks.

Beneath the cast iron grate is an ashpan.

This stove works on the principle of convection, in which cool air is drawn up from the floor and warmed between the two outer walls of the stove. This warm air then spreads around the room.

## **2. General**

National and European standards, local construction regulations, fire protection law and regulations must be observed.

It must be ensured that the installation room is adequately supplied with fresh air.

If extractor fans are present in the same or connecting rooms as the stove, additional ventilation should be given to allow for this.

Calculation of chimney set up should be done according to EN 13384-1 and EN 13384-2 with specific values which can be seen in this manual under the section 4.

Your stove can be equipped with a connection for the external air supply (see image 1). The required direct air kit is available. In a room with controlled ventilation, the stove can be connected to an air supply from the outside. In that case additional pressure monitoring in the room is required.

The stove has been built with a self closing door mechanism. This can be disabled by removing the spring.



If the combustion air is being supplied from the outside, the duct size will need to be increased for any duct over two metres long or any run containing 90 degree bends. The duct length should not be longer than 6 metres with no more than three 90 degree bends. The chimney must be able to overcome the additional resistance of the air intake ducting.

When the stove is out keep both regulators closed, in order for cold air not to be able to circulate throughout the chimney. However it can be advantageous to open the air controls some while before lighting the stove to allow warmer air to begin going up the chimney.

Pay attention to the flue pipe.

The chimney draw must be a minimum of 12 Pascal's.

Due to the cold outside air, condensation can be avoided by insulating the flue pipe.

Your chimney significantly contributes to the proper working of your stove.

Recommendations:

- Working level of chimney: min. 5 meters
- Maximum diameter of flue 160mm
- Any existing chimney should be examined by an expert

### **3. Installation of the Stove and the flue pipe connection**

#### ***3.1. Flue pipe connection***

All flue pipe that is used to connect the stove to the chimney must comply with national regulations. All connections from the stove into the chimney must be firm and tightly connected.

Be careful that flue pipe does not enter into the free section of the chimney.

Maintain the correct distances specified by building regulations between the flue pipe and combustible material.

When the stove has a rear flue connection, the Tee cap should be securely attached.

This appliance must never be connected to a shared flue system.

Attention: if the chimney pressure is too low or too high this may cause problems with the working of the stove.

Outdoor air supply: if the deviation from the required pressure (section 4) is over 25%, suitable changes to the chimney should be made.

### 3.2. Safety rules

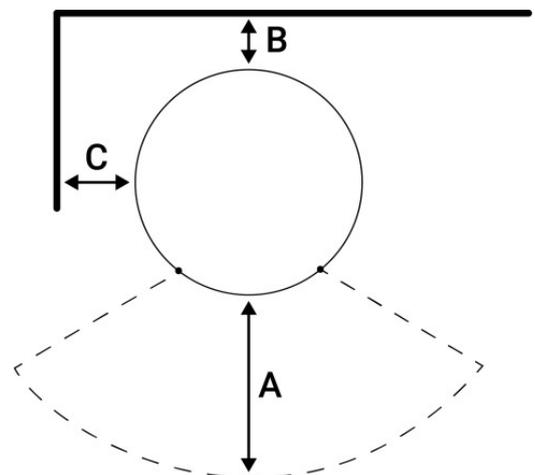
During stove installation, you must comply with the safety rules.

The appliance shall be installed on floors with an adequate load-bearing capacity. If an existing construction doesn't meet these prerequisite, suitable measures (e.g. load distributing plate) shall be taken to achieve it.

Pay attention to minimum distance required from the wall, combustible materials and to protection of the floor

### 3.3 Minimum distances to combustibles

- |   |       |                                       |
|---|-------|---------------------------------------|
| A | 850mm | In the area of thermal radiation      |
| B | 250mm | Back space between the wall and stove |
| C | 350mm | Side space between wall and stove     |



#### 4. Technical specifications

|  |           |
|--|-----------|
| Stove Model  | Aria      |
| Nominal Output                                       | 5.0 kW    |
| Efficiency   | 81%       |
| Weight   | 78 kg     |
| Mean flue gas temperature                            | 232 °C    |
| Flue gas mass flow                                   | 4.3 g/s   |
| Minimum pressure                                     | 0,12 mbar |
| Diameter of flue pipe                                | 150 mm    |
| Diameter of the connection to the outdoor air supply | 100mm     |
| Fuel   | Wood      |
| Average re-fuelling interval at nominal output       | 0.74H     |

## **5. General information about the working of the stove**

Always use a glove

Do not use any flammable liquid fluids for lighting the fire. The door of the firebox should be opened only when adding fuel, apart from leaving the door slightly ajar during the lighting phase.

Use only suitable fuels (see section 5.2.).

Check that there is enough fresh air coming into the room. Stoves should only be used by adults. All parts of the appliance, especially the external surfaces will be hot to touch when in operation and due care will need to be taken. Make sure that children are never alone near the stove. Never leave the stove for a long period of time without surveillance.

The stove should be used only according to the instructions in this manual.

### **5.1. Starting the stove**

Please pay attention to the minimum space between the stove and flammable objects when lighting a fire.

1. Primary and secondary controls should be fully open.

If the flue pipe has a flue damper it should also be fully open.

2. Remove enough ash from the grate to let air through but leave some of the ash there. Put 2-3 firelighters in the centre of the firebox and put on the firewood.

3. Light the firelighters and leave the door slightly open as it prevents condensation on the cold glass. Do not leave the stove unattended when the door is ajar.

4. After approximately 5 to 10 minutes, when the fire is burning fully, carefully open the door, put 1 to 2 pieces of the wood into the firebox, and then close the door.

5. When all the fuel is properly burning, and the working temperature of the stove is achieved (after approximately 20-30 minutes), gradually move the primary air regulator backwards, but ensure that there is still a visible flame.

When the stove is up to temperature and the fire burning well then the primary regulator can be completely closed.

6. The door should only be opened again when the fuel has burned right down and you want to put new fuel in.

If there is insufficient burning material in the fire bed to light a new fuel charge, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash that the new fuel charge will ignite in a reasonable period. If there are too few embers in the fire bed, add suitable kindling to prevent excessive smoke.

It is recommended that the secondary air regulator is kept fully open in order for the “glass cleaning” to be most efficient, and to avoid the glass “fogging”.

7. Use the amount of fuel you place in the stove to regulate the room temperature. When burning at the nominal output, the stove requires refuelling every 45-50mins with approximately 1.1kg of wood logs.

To achieve slow combustion, it is necessary to lay logs with one crossed over the other at 45°, the primary air control must be fully closed, secondary air control lever must be opened at 60%, or to the DEFRA kit stop for the SE model.

8. When adding larger wood it is good practice to put in a couple of smaller bits first as the larger logs then light faster, so producing less smoke. When adding wood, the primary air control must always be open, and left open until the new logs have caught fire. At that point close the primary control and leave the secondary air to facilitate the combustion.

**THE STOVE SHOULD NEVER BE FILLED EXCESSIVELY. EXCESSIVE AMOUNTS OF WOOD OR AIR FOR COMBUSTION CAN CAUSE OVER HEATING AND DAMAGE THE STOVE.**

During the first few times the stove is used, it is possible that it can produce a slight smell while the paint is curing. This will disappear after a short while. If the smell appears, open the windows of the room for ventilation.

**ATTENTION**

**THE ASHPAN MUST BE TIGHTLY CLOSED FOR PROPER REGULATION OF THE PRIMARY AND SECONDARY AIR.** If ash is allowed to build up behind the ashpan then it can prevent the ashpan sealing properly.

## **5.2. Suitable materials for lighting**

The stove should be used for the combustion of natural wood and wood briquettes.

Some of the best wood for the stove is beech and birch. These types of wood have the highest burn temperature, and they burn the cleanest, as long as they have been stored in a dry place for a sufficient length of time.

If the glass window blackens excessively during burning it is usually an indication that the moisture content of the firewood is too high.

Do not use any of the following:

- Damp wood or treated wood
- Cardboard
- Bark or plywood
- Plastic or other waste

Fresh wood should be cut up and stored 12 to 18 months in open storage, but protected from rain. Any wood used should have a maximum humidity of 20%.

## **5.3 Emptying the ashpan**

It is recommended to clean out the ash every day.

Be careful that too much ash is not accumulated otherwise there is the danger that, if the ash reaches up to the grate, it will not cool sufficiently and may get damaged.

Before emptying the ashpan, check if there are any embers left in the ashtray.

Even though the ash is cold from the outside, it is possible that there are embers within the ash which can lead to a fire in the waste bin.

## **5.4 Cleaning and maintenance**

The stove can be cleaned only when it is cold.

Pay attention while cleaning your stove not to damage, scratch or break essential parts.

For cleaning steel parts use non-abrasive detergents and a soft rag, and after cleaning wash it well to avoid the deposit of detergent which can damage material.

Cleaning the glass should be done when the stove is cold, using normal detergent for washing the glass. In the case of solid deposits that should be removed, we recommend to use detergents that are sold in stores, and that are intended for that use.

After washing, wipe over with clean water and if there are condensates, do not wait until they are dried, rather wipe them immediately.

Attention: The stove paint only achieves its ultimate strength after reaching its rated temperature a few times.

To avoid damaging the paint, it is recommended to clean the stove surface only when the paint achieves its ultimate hardness.

It is important to have the chimney regularly checked and cleaned by a qualified chimney sweep.

## 5.5 Instructions on how to access the flue through the stove

Carefully lift the vermiculite throat plate slightly. This allows the LHS concrete side brick to lean forward at the top, lift out of its groove and then be turned to come out of the door.

The vermiculite throat plate can now be raised slightly, slid to the left and taken out by lowering its back edge down first.



Remove the two split pins in the steel blanking plate and remove it. The flue way can now be accessed.

Re-assemble in reverse order.



## In case of chimney fire

If the wrong or unseasoned wood is used, it is possible that a chimney fire can occur due to the accumulation of deposits inside the chimney.

Immediately close all air regulators on the stove and call the fire brigade.

If a chimney fire was to occur, an experienced professional should be employed to check the entire flue system.

## 5.6 Layout and usage of air regulators

Secondary Air

Open

Slide left

Close

Slide right



Primary Air

Open

Slide right

Close

Slide left

## 6. Malfunction and service

In the event of a product malfunction please contact your supplier. If the stove is under warranty your supplier will take care of the warranty claim.

Regular maintenance of the stove and flue should be carried out by a competent engineer.

Use only replacement parts as recommended by the manufacturer.

## 7. Common fault finding

Please be aware that in the event of your stove not performing properly, you should always consult your installer first or a qualified professional. Below is a list of potential problems and possible causes:

| Problem                                    | Possible cause  |
|--|---|
| Starting problems                          |   |
| Burning does not start                     | Bad quality or wet wood<br>Too thick wood log<br>Insufficient primary air<br>Cold flue pipe   |
| Fire gets choked                           | Insufficient draft<br>Obstructed chimney or pipes, butterfly throttle is closed   |
| Burning problems                           |   |
| Too slow fire progression                  | Bad quality or wet wood<br>Insufficient primary air<br>Insufficient draft, low pressure   |
| No ember layer produced                    | Too thick wood or log<br>Improper placement of the wood   |
| Fire extinguishes                          | Too strong or too weak draught  |
| Too brisk flame – not possible to regulate | Too much combustion air<br>Too small wood pieces<br>Ashpan not properly closed<br>Ash build up behind ashpan<br>Ashpan sealing rope needs replacing   |
| Sooting                                    | Bad quality or wet wood<br>Cold flue pipe<br>Slow burning for longer period<br>Too long chimney section in cold zone  |
| Chimney fire                               | Extensive sooting of flue pipe  |
| Insufficient heating                       | Fresh or too wet wood<br>Too strong air flow<br>Improper firebox installation   |
| Stove smoking                              | Wet or soft wood<br>Flue pipe obstructed<br>Flue damper is closed<br>Operating of closed firebox with door in open position<br>Contaminated flame baffle and/or connecting pipes<br>Chimney not according to requirement<br>Effect of the wind to the top opening<br>Insufficient air exchange in the room or the mechanical ventilation interferes (such as kitchen odour extractor) |
| Extensively contaminated glass window      | Bad quality or wet wood<br>Not suitable or prohibited fuel<br>Excessive slow burning  |

Weather conditions may affect your stove causing smoke spillage into the room when the appliance door is opened. On windy days this maybe a result of down draught, or on calm days, this could be lack of natural flue draught. We recommend contacting your installer for advice.

Always ensure use of good quality wood at 10-20% moisture content during light up, and to maintain the fire.

## **8. Warranty**

The warranty cover is effective from when the unit is handed over to the buyer.

In case the commissioning does not take place within 3 months from the date of purchase then the warranty period starts on the day of purchase of the product, which must be demonstrated by proof of purchase such as a sales receipt or paid invoice from the seller.

OPUS declines all liability for any accidents due to failure to observe the specifications contained in the use and maintenance manual accompanying the device. Furthermore, OPUS declines all liability deriving from improper use of the product by the user (including heat-shock, overload or misuse of the firebox), unauthorised modifications and/or repairs, and the use of non-original spare parts or spare parts not designed for use on this product model.

Duration of warranty is five year(s) on the firebox house, grate, flame baffle, moving parts (hinges, handle, and fittings).

Please note that the warranty does not cover glues, seals, ceramic glass, and firebricks.

## Opus commissioning checklist

General information

Stove purchased from

Telephone number

Stove installed by

Telephone number

CPS registration with (e.g. HETAS)

CPS registration number

Installation date

Stove model

|   |  |
|---|--|
| Physical checks   |  |
| Installation is in accordance with the design, including material specification, flue length and diameter |  |
| The installation instructions have been followed  |  |
| There is no damage to any components  |  |
| Joints between the appliance and chimney and within the chimney system are secure and in good condition   |  |
| The separation of components from combustible materials conforms to this code of practice                 |  |
| The appliance and chimney can be fully cleaned, once the installation is complete                         |  |
| Components for weatherproofing are installed correctly  |  |
| Smoke spillage test has been carried out  |  |
| CO Alarm fitted and tested  |  |

### Handover

At handover all user instructions should be given to the user and an explanation of the appliance operation and safety issues should be given. Additionally an explanation of the correct removal, relocation, and any sealing of the removable/hinged section of the chimney should be given and all safety issues explained.

Commissioning engineer's signature\* \_\_\_\_\_

\*By signing this you confirm that all commissioning checks above have passed, and that operation and maintenance of the appliance have been explained to the customer in full in line with this user manual

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