OPERATION AND INSTALLATION MANUAL

OPUS CALYPSO

FIRED BY DESIGN

Contents

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.

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 and under that is wood storage.

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

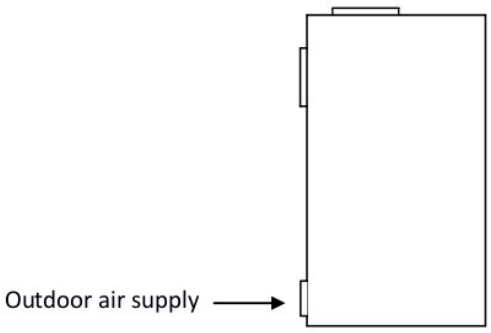
National and European standards, local construction regulations, fire protection law and regulations must be observed.

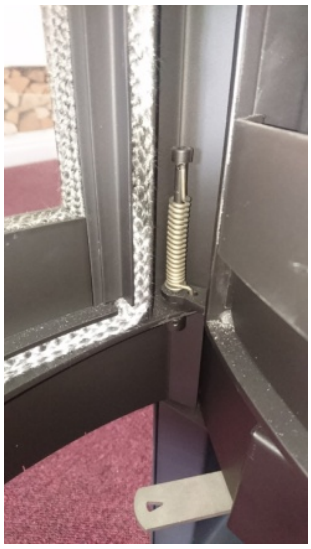
It must be ensured that the installation room is adequately supplied with fresh air.

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. The required direct air kit is available. In a room with controlled ventilation, the stove can be a 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 from the door hinge.

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 awhile 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 pascals.

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 160 mm
- 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.

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 will need to be made before you can use and outdoor air supply.

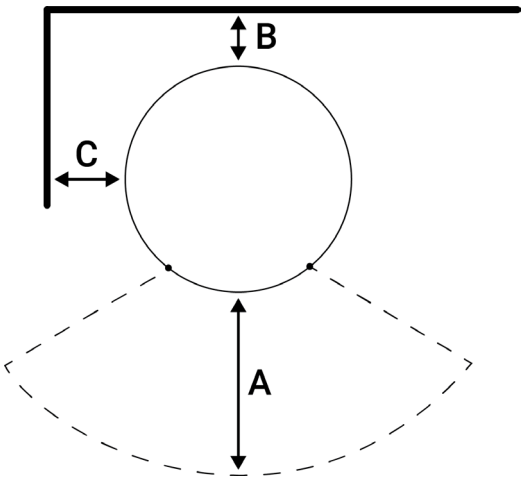
3.2. Safety rules

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	800mm	In the area of thermal radiation
B	100mm	Back space between the wall and stove
C	100mm	Side space between wall and stove



4. Technical specifications

Stove Model	Calypso
Nominal Output	8.3 kW
Output to water	4.9 kW
Output to room	3.4 kW
Efficiency	83.9% (net)
Weight	172 kg
Mean flue gas temperature	222 ºC
Flue gas mass flow	6.46 g/s
Minimum flue pressure	0,12 mbar
Diameter of flue pipe	150 mm
Diameter of the connection to the outdoor air supply	100mm
Fuel	Wood
Average refuelling interval at nominal output	42 minutes

5. Plumbing

The Opus Calypso is supplied ‘system fit’, so connecting to existing pipe work should be straight forward. The Calypso has been designed and built for both open vent and pressurised heating and hot water systems, incorporating an over heat quench coil with built in quench valve to prevent the boiler over heating.

The flow and returns must be connected to a pumped circuit. The Calypso is not designed for a thermo-syphon type circuit. The use of an LK810 thermomat load unit (or similar) is strongly recommended.

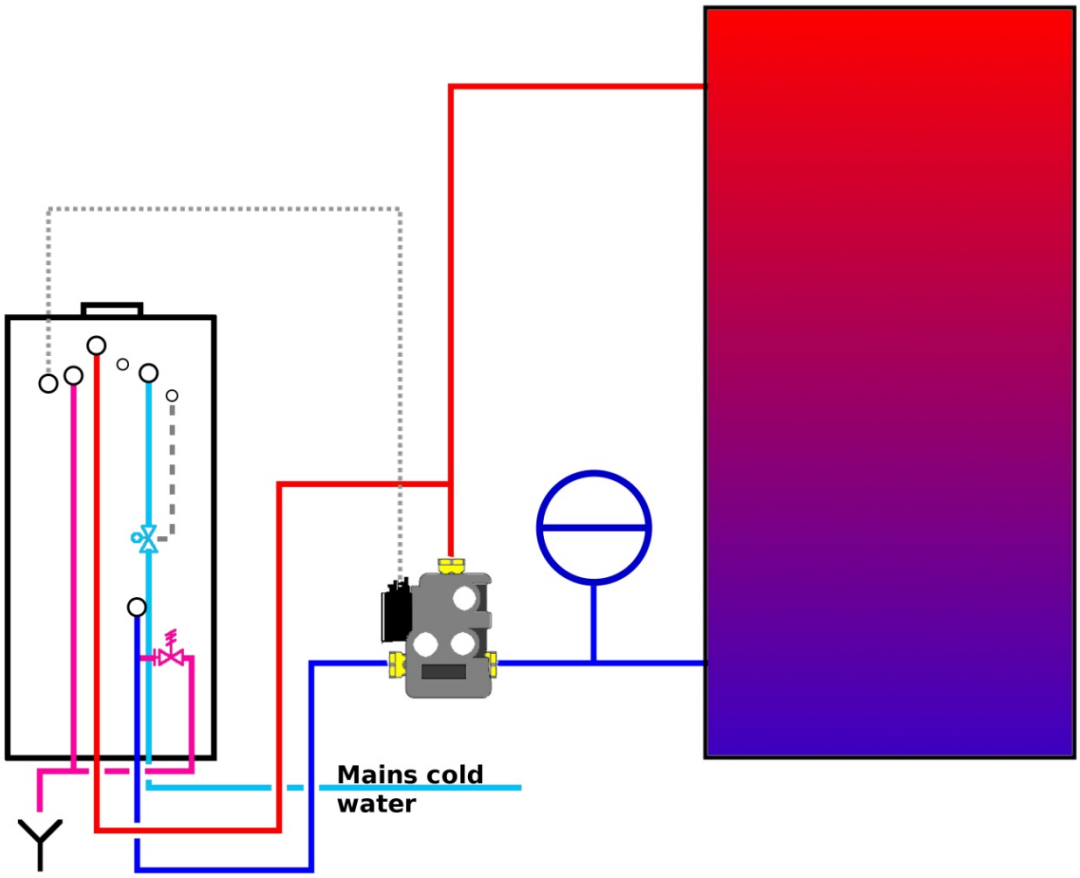
For optimum performance, it is recommended that the Calypso is piped to a thermal store.

5.1 Connections

To access the pipe work, the rear panel must first be removed from the stove. Remove the stove top, unscrew the two hex head bolts on either side at the top of the panel, and lift panel away from stove.

I	Over heat coil discharge
II	Primary flow
III	Primary return
IV	Cold mains connection for over heat coil
V	Pressure relief valve
VI	Manual bleed vent
VII	¾” BSPF (optional connection)
VIII	Over heat valve sensor

5.2 Typical system schematic



6. 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.

6.1. 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 firebed 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.

To burn at the nominal output, the stove requires refueling every 45-50mins with approximately 1.1kg of wood logs.

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 OVERHEATING 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.

6.2. 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%.

6.3 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.

6.4 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.

Chimney fires

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.

6.5 Instructions on how to access the flue through the stove

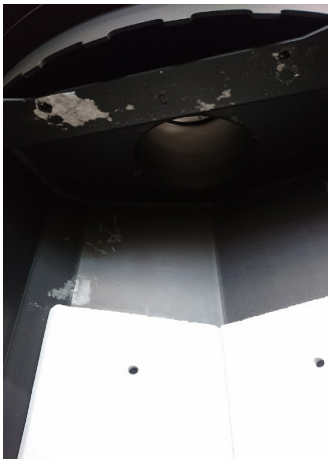
Remove grate and base fire bricks.

Slide outside retaining bars.

Carefully lift out both side fire bricks, ensuring the securing clip remains with the brick.
Attention, when removing the second side fire brick, ensure you support the throat baffle to prevent it from being dropped.

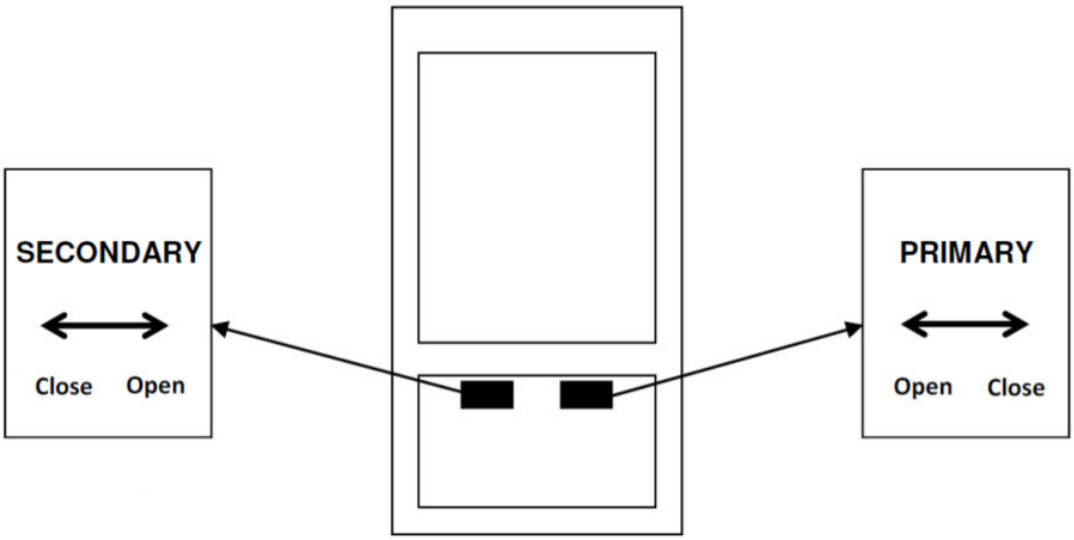
Now lower the throat plate baffle to remove.

Using a 5mm hex key, unscrew the second baffle and it's bracket being careful to support its weight whilst removing.



You can now sweep through the stove.
To replace the fire bricks, please repeat steps 1 – 5 in reverse.

6.6 Layout and usage of air regulators



7. 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.

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

9. 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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