

# Installation and Operating Instructions



## Multi-Fuel Stove

Model - Purefire 5kw Curve

Approved under – (Ottawa 5kw Curve SE01)



SE01, version 5, 26/02/2016

# INTRODUCTION

Multi-Fuel Stove

Model – Purefire 5kw Curve – Purefire 5kw Curve With Stand – SMOKE EXEMPT

Item No.: "Ottawa 5kW curve SE01" and "Ottawa 5kW curve SE01 with Stand"

## SAFETY

Safety is the most important consideration when using and installing your stove. If not installed and used correctly, a house fire could result. Installation must comply with relevant national and local Building Regulations and fire safety standards.

**IN THE EVENT OF A CHIMNEY FIRE, EVACUATE THE PROPERTY AND CALL THE EMERGENCY SERVICES.**

Your stove will be heavy and care needs to be taken when lifting - 2 people will normally be required to lift.

## UNPACKING

Your stove will have several of its components stored inside the stove itself for transportation. Take the legs out "cast iron stove only" and attach them one at a time to the underside of the stove – it may help to sit the stove on some sturdy blocks of wood or bricks whilst you do this. Do NOT use a wrench to tighten any bolts, they should be hand tight only – cast iron is relatively brittle and can crack if over-tightened.

Do NOT drag the stove on its legs – it must be carefully lifted into place.

The flue spigot can also be bolted to the flue outlet – the stove has two options for flue outlet – one on the top and one at the rear. - Most people use the top outlet – in this case, remove the blanking plate at the top and secure to the rear outlet instead, but depending on where you intend to position the stove in relation to your chimney, you may wish to use the rear outlet.

Inside the stove will also be an ash-pan which sits underneath the grate, and will require regular emptying. You will also find a detachable tool for removal of the ash-pan.

You will also find a glove which must be used when opening the door or when adjusting air vents when the fire is hot.

### **Baffle Plate**

The baffle plate sits above the rear cast iron fire brick and comes to rest just above the top air flow control. The end of the plate with rectangle holes cut in the end sits towards the front of the unit.

# INSTALLATION

Installation of your stove must comply with relevant local and national Building Regulations and fire safety standards.

## TECHNICAL

Ottawa 5 kW Curve - Performance Test Results.

All efficiencies in table are Net values

### **Performance Results Wood – tests carried out with two logs weighing approx. 1.6kgs**

Test duration – h - 1.11

Total Efficiency - % 84.0

Nominal heat output - Kw 5.0

Mean CO emission (at 13 % O<sub>2</sub>) % 0.43

Mean flue gas temperature - °C 241

Flue mass gas flowg/s - 2.8

### **Performance Results Ancit – provisional results. Waiting on ash analysis**

Test duration - h 1.07

Total Efficiency - % 76.1

Nominal heat output – kW 5.0

Mean CO emission (at 13 % O<sub>2</sub>) % 0.33

Mean flue gas temperature - °C 251

Flue mass gas flowg/s 5.1

Note Tests carried out at 12 Pa flue draught

### **Distance to combustibles:**

Back wall: 600mm

Side Wall: 550mm

### **Maximum Hearth Temperatures:**

Safety Test – 57.8°C

Wood Logs – 61.3°C

Ancit – 80.8°C

Weight – 76kg

Your stove will require a constant air supply, and should not be used at the same time and in the same room/space as extractor fans or any device which may draw air supply away from the stove. The stove should be installed on a level floor with adequate load bearing capacity.

The stove needs to stand on a hearth of non-combustible materials not less than 12mm thick conforming to Building Regulations.

Normally for most houses in the UK no extra ventilation is required when installing a stove rated at 5kW or less.

Note: The requirements regarding ventilation have been updated in the most recent version of the Building

Regulations and are now based on the air permeability of the house.

NOT suitable for installation in a shared flue system.

If installed in a standard type chimney, a register plate needs to be fitted inside the chimney.

When purchasing flue pipe, 5" diameter is required. The flue pipe must be fitted INSIDE the flue spigot, and sealed with a generous amount of Fire Cement.

Access should be provided for cleaning the flue to ensure that the passageways for exhaust gases remain free from obstruction. We recommend that you have a qualified fitter install your stove. The British recognised standard for solid fuel installations is HETAS. You can find a HETAS qualified installer in your area by going to the HETAS website – [www.hetas.co.uk](http://www.hetas.co.uk).

# OPERATING INSTRUCTIONS

## **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 designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements

The 'Ottawa 5kW Curve SE01' and 'Ottawa 5kW Curve SE01 with stand' are factory fitted with a permanent stop to fix the secondary/tertiary air control slider to 8mm open in its minimum position, these SE01 versions have been recommended as suitable for use in Smoke Control Areas when burning wood logs. If other smokeless fuels are to be used, only authorised smokeless fuels can be burnt within Smoke Control Areas.

## **Regulations**

All national and local regulations, including those referring to national and European standards, need to be complied with when installing the stove.

# FUEL

Wood- All types of wood are suitable provided they are well seasoned, UNTREATED, and have a moisture level between 12% and 20%. For soft woods, typically they will need to have been left in suitable storage for 9+ months in order for the moisture to evaporate. For hardwoods, this will usually be 18 months+. It is recommended that logs should be no more than 5" or 125mm in diameter. If you are unsure of the moisture content of your fuel, then you can

buy a moisture meter which will indicate the moisture levels in your fuel. Liquid fuels must NEVER be used.

WARNING: Wet timber should not be used as this will create excess tar deposits in the chimney and stove and could increase the risk of chimney fire. Timber which is not of a suitable moisture content will also create more smoke and harmful emissions, and will damage the stove and flue system.

Solid Fuel - Solid mineral fuel should be placed in the stove so that there is no more than a 30° incline of the fuel bed from front to back. It should not be stacked above the level of the rear firebrick as this may result in damage to the stove.

Always de-ash before refuelling and do not let the ash build up to the underside of the grate bars. Solid mineral fuel produces ash, which if allowed to build up will stifle the airflow through the Primary air sliders and grate. This will eventually cause the fire to go out.

With some solid mineral fuels a residue of burnt fuel or clinker will accumulate on the grate, allow the fire to go out periodically to remove this.

Important! - We cannot stress firmly enough how important it is to empty the ashpan regularly. Air passing through the fire bed cools the grate bars. Distortion or burning out the grate bars is nearly always caused by ash being allowed to build up to the underside of the grate. Anthracite is an approved natural smokeless fuel (not processed) and therefore can vary greatly in quality and performance. It generally requires excellent air supply and above average fire-bed temperatures to maintain maximum performance and with experience we would suggest that it is used in conjunction with other approved manufactured smokeless fuels as per the HETAS approved list <http://www.hetas.co.uk/find-fuels/> . Smokeless fuels must not be used within a Smoke Control Area unless they are '**authorised fuels**', such fuels can be identified on the authorised fuels list <https://smokecontrol.defra.gov.uk/fuels.php>

# AIR INLET CONTROLS

**Wood:** Base control lever on the right. This controls the rate of air flowing under the fire. When pushed to the right extra air is fed under the fire. This will make the stove burn faster. When you first light the stove you want this control pushed to the right. When the lever is pushed to the left the air flowing under the stove is restricted and the stove will die down.

Base control on the left. This controls the airwash system and secondary burn system. When pushed to the right this feeds more air through the stove's rear. The air is fed over the fire re-burning the initial smoke produced from the stove. The air is also warmed and fed over the glass helping to keep it clean. When pushed to the left this is restricted. The secondary air vent is set such that the closure plate does not seal fully, thus allowing some constant air supply into the stove.

Suggestion. When lighting the fire have both controls open to the right. When the fire is established gradually close down the right side control. Only close the left hand control if you want an even deeper burn. Each chimney will behave differently, trial and error is often required to get the maximum performance from the stove.

**Mineral Fuel:** When burning mineral fuel we always suggest using the base control lever on the right (Primary burn) with only occasional use of the left lever (Secondary burn). The right lever when pushed to the right allows air to be fed under the fire. Mineral fuel like a lot of air flowing underneath to achieve a good burn. To close the stove down slide this lever to the left. In most cases the left lever should be pushed to left (closed) if more air flow is required this lever can be opened slightly by pushing the lever to the right. Mineral fuel in most cases will work best with this closed.

# TOOLS

The glove is provided for adjusting the air inlets and for opening the door when the stove is hot, as these knobs will heat up when in use. The tool handle provided is for removing the ash-pan.

NOTE – all parts of the stove will become hot during use and care needs to be taken to avoid injury through burning.

# LIGHTING THE FIRE AND RE-FUELING

## First use troubleshooting

When the stove is new the paint is very tacky where the stove is curing. The door locks very tight and when opened can pull away the fire rope from its chamber. If the instructions are followed above this should not happen. However if it does the rope will need to be stuck back in place with "heat resistant fire rope glue" After a few burns the paint will be cured and this should no longer happen.

## Lighting the fire

- Prior to lighting the fire for the first time, ensure that-
- Installation and building work is complete.
- The chimney is suitable and sound and has been swept and free from obstruction.
- Adequate ventilation and provision for combustion air has been made.
- That the stove installation has been carried out in accordance with Building Regulations and any applicable local regulations as well as these installation instructions.

• That chimney draw has been checked and within specification. (The stove has been tested at nominal output with a flue draught of 12 Pa) INITIAL CURING AND TEMPERING FIRES ESSENTIAL INSTRUCTIONS BEFORE USE – It is essential to follow these 'tempering-in' instructions in order to avoid serious damage to your stove. The castings of your stove require very gentle 'normalising' to release stresses in the metal formed during the casting process. The paint finish also requires an initial curing process to be followed: -

For the initial tempering/ curing period, ensure the tertiary air inlet is set to MINIMUM, by sliding the lever to the 'Minus' position. Set the Primary air to half position and secondary air to half position. For the first 2 burns on day one just use small controlled kindling wood fires with each fire lasting around 40 minutes – the second fire can be started when the stove is almost cooled down after the first. A third slightly hotter medium type fire should then be lit using smallish logs and lasting around 1 hour. Then for the next week or around 15-20 hours total burn time, fires must be gently increased in temperature and log size and load and NO COAL must be used during this period. A stove thermometer will be a valuable tool in helping you to achieve this safely and also to ensure an efficient burn rate in future. Starting a large fire too soon is likely to damage the stove in which case it will not be covered by the warranty. Note: the paint on any new stove is relatively soft. As such do not clean, wash or wipe the surface until the paint has fully cured. Never wipe the stove whilst warm. If the above advice is ignored then there is a high risk of the paint being "shocked" by excessive heat and could peel. Furthermore, if the stove is over fired it will invalidate your guarantee. ENSURE THAT YOU HAVE READ AND UNDERSTOOD THESE INSTRUCTIONS BEFORE LIGHTING THE FIRE, AND THAT YOU ARE CONFIDENT THE STOVE HAS BEEN INSTALLED CORRECTLY.



ALWAYS WEAR A PROTECTIVE GLOVE WHEN REFUELLING YOUR STOVE.

Ignition (FOLLOW INITIAL TEMPERING INSTRUCTIONS ABOVE FIRST TO AVOID DAMAGE)

- Ensure the ash-pan is in place. Ensure all air inlets are fully open (tertiary air should be closed for first 3 burns)
- Construct a pile of kindling in the middle of the grate using approx 500g of kindling wood
- Light with a single chemical firelighter
- Partially shut the door but leaving it cracked open slightly
- After about 5 minutes or when the fire is well established, shut the door
- After a further 3-5 minutes as the fire starts to die, add a further three larger pieces of wood weighing approx. 0.75kg in total.
- Once these logs are alight, and after about 7 minutes or so, a normal load of 3 logs weighing up to 1.4kgs in total can be added (ONLY AFTER THE INITIAL TEMPERING PERIOD HAS BEEN FOLLOWED – SEE ABOVE)
- Once this load is burning well, the Primary air vents can be closed, with the Secondary and Tertiary vents left open.

### **Refuelling**

When refuelling the appliance it was necessary to fully open the secondary air control for approximately 1 minute to establish the fire before closing down to the minimum output setting.

- At high power output, your stove will require refuelling approximately every hour.
- It is important to follow these instructions in order to achieve clean burning and to maximise the efficiency of the stove.
- Do not leave the fire unattended until flames are well established on the newly charged logs
- Always refuel onto hot embers.
- If the fire has died out at the point of refuelling, use kindling to re-establish the fire and follow the "Ignition" procedure above.
- It is important that the stove is not overloaded with fuel.
- Reduced burn rates can be achieved by reducing the openings of the Secondary and Tertiary air vents.
- Refuelling on to a low fire bed – 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.
- Fuel overloading - The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke.
- Operation with door left open – Operation with the door or air controls left open can cause excess smoke. The appliance must not be operated with the door left open except as directed in the instructions.

The Ecosy + 5 curve se01 stove is suitable for use in smoke control areas when used in accordance with these instructions. Note that the Ecosy + 5 Curve is a different appliance to the SE01 version and is NOT exempt.

**WARNING-** The high temperature paint covering the stove will give off some fumes during the initial few uses of the stove. The fumes are non-toxic, but some people may find them unpleasant – Ensure the area is well ventilated during this period. The higher power output rating of this stove is based on around 1.4kg of seasoned logs which would require refuelling every hour.

This stove is suitable for intermittent burning, and should not be used constantly for extended periods of time but can burn over night. Under certain abnormal weather conditions, e.g. down draughts, it may be difficult to get sufficient draw through the appliance to achieve good combustion. When this happens, the stove should not be used.

**IMPORTANT:** -

As of October 2010, it is a legal requirement to use a Carbon Monoxide Detector in the same room as the stove. This needs to incorporate a battery which lasts the life of the detector.

## CLEANING/MAINTENANCE

Regular cleaning of the stove is essential for safety and efficiency. The ash-pan should be emptied at least after every use, and during use if burning for longer periods.

When cold, the inside of the stove should be given a regular sweep out.

The flue and flue pipe will require cleaning with a suitable chimney brush, to minimise build-up of soot and tar. Your chimney will also require periodic sweeping.

If the glass becomes stained from the inside, the air-wash vent may need opening more during use. The high temperature paint which your stove is finished in should last many years with normal use, but when it does eventually require re-finishing, black heat resistant paint in spray cans can be purchased from most hardware stores. – Do not use regular paint which is not high temperature resistant. After prolonged periods of not using the fire, the stove and flue system should be checked for blockages prior to relighting. We recommend regular servicing and safety checks are carried out by a qualified engineer. There must be no unauthorised modification of the appliance. Use only replacement parts recommended by the manufacturer.

**MODELS WITH MIRROR GLASS: THIS GLASS HAS A SPECIAL COATING, DO NOT USE ANY ABRASIVE MATERIAL TO CLEAN THE GLASS.** Just use a clean cloth with warm water when the stove is cold. If fire bricks have just split they do not need replacing. The bricks only need replacing when they have fully crumbled away exposing the stoves rear or sides.

## GUARANTEE

The main body of your stove is guaranteed for 5 Years. This does not include glass, grates, door seals, over-firing, and paint.

Incorrect use or installation not carried out by a registered HETAS installer will void the guarantee. Please keep hold of the invoice as this will be requested if a claim started. The guarantee will begin from the sale date on the invoice.

Ecosy+  
Unit 24 – Folly Farm  
Ramsdell  
Tadley  
RG26 5RJ