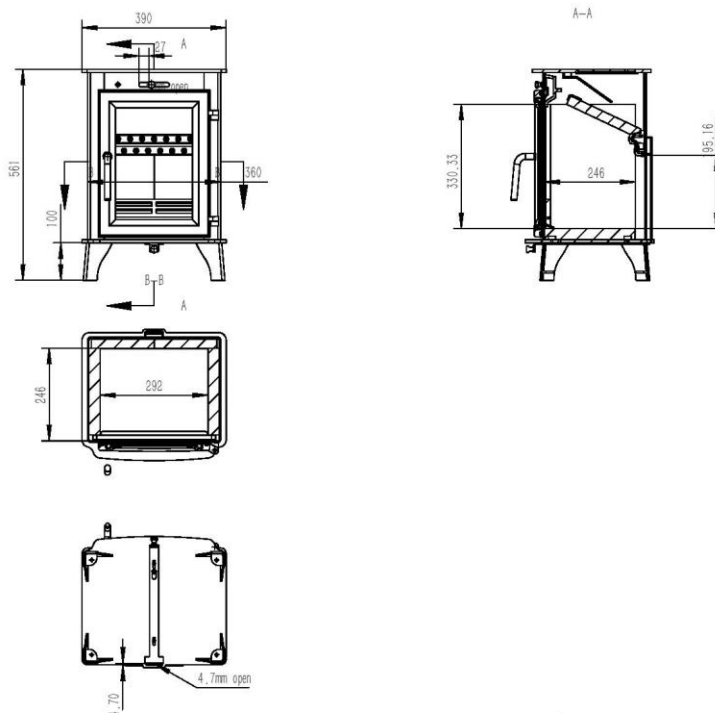


Model: Ottawa 5 “ECO” (SE)  
(Woodburning only)



Version number 1: Issue date 14/10/2019



Model: **Ottawa 5 ECO**  
**Woodburning Stove**

## Dimensions

561mm High – 390mm Wide – 320.73mm Deep

## 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. Your stove is fully constructed and the only component that needs attaching is the flue collar. This will simply need attaching with the provided bolts on the top or rear of the fire. If you are choosing to use the top flue outlet, ensure the rear flue outlet is blanked off with the blanking plate and not left open. The same applies if you are attaching the flue collar to the rear. When the collar is attached ensure you remove the free oven glove and any small accessories that may be tucked away under the grate before lighting the stove for the first time. Your new stove is lined with vermiculite fireproof bricks that are sand like in colour. These are not part of the packaging and need to remain in the stove at all times.

## INSTALLATION

Installation of your stove must comply with relevant local and national Building Regulations and fire safety standards. We would always suggest using a qualified installer to carry out

the installation of this product. 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). If you are self-installing, the stove must be signed off by the local authority.

## TECHNICAL

Ottawa 5 ECO - Performance Test Results.

Weight 70kg

Nominal Kilowatt Output	5.0
Total Efficiency	82.8 (Exceeds eco design requirements)
Mean CO emissions (at 13% O <sub>2</sub> )	0.008 (Exceeds eco design requirements)
Mean CnHm (at 13 % O <sub>2</sub> ) Nmg/m <sup>3</sup>	104 (Exceeds eco design requirements)
Mean NO <sub>x</sub> (at 13 % O <sub>2</sub> ) Nmg/m <sup>3</sup>	83 (Exceeds eco design requirements)
DIN Plus dust (at 13 % O <sub>2</sub> )s Nmg/m <sup>3</sup>	21 (Exceeds eco design requirements)
Mean flue gas temperature °C	242
Flue gas mass flowg/s	3.9

Distances to combustible materials:

**Back Wall – 600mm**

**Side Wall – 500mm**

Maximum hearth temperature:

**Directly under the stove – 82 Celsius**

This stove is suitable for a 12mm hearth. For example, a 12mm glass hearth can sit directly onto a wooden floor and this unit can be sat on top of that.

Your stove will require a constant air supply and should not be used at the same time or 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 does include adjustable feet for levelling.

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. The stove is NOT suitable for installation in a shared flue system. The flue pipe must be fitted INSIDE the flue spigot and sealed with a generous amount of Fire Cement. A 5" flexible flue liner or twin walled chimney system can be used with this unit, as it has passed the DEFRA testing. Access should be provided for cleaning the flue to ensure that the passageways for exhaust gases remain free from obstruction.

The Ottawa 5 ECO is a woodburning only unit and does not require or include a grate and ash pan. Wood burns best on the base with air flowing over the top of it. An additional grate would increase the amount of air flowing under the fire and drastically reduce the efficiency. When cleaning the stove out, all you need to do is take a few scoops of ash off the top and leave the rest in the stove.

## OPERATING INSTRUCTIONS

### Regulations

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

#### 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 ("exempt" 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 Northern Ireland appliances are exempted by publication on a list by the Department of Agriculture, Environment and Rural Affairs under Section 16 of the Environmental Better regulation Act (Northern Ireland) 2016. In Wales appliances are exempted by regulations made by Welsh Ministers.

Further information on the requirements of the Clean Air Act can be found here:  
<https://www.gov.uk/smoke-control-area-rules>

The Ottawa 5 ECO has been deemed as suitable for use in smoke control areas when burning seasoned wood logs. The appliance has two factory fitted stops that will need to remain in place if you wish to keep the stove compliant and legal to use in smoke free zones or with a 5" flue system or liner.

The first stop is fitted on the airwash vent and prevents it from being fully closed off as shown below:



The second stop is fitted on the stoves base and prevents the full closure of the secondary/tertiary vent that channels air up the stoves rear and through a series of holes halfway up the firebox.



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.

Note: A stove approved for use in a smoke free zone is designed not to fully close off. The slumbering effect of burning with the vents closed fully off massively increases smoke output and increases the risk of blocking a flue. This is why an approved appliance can be used in a smoke free zone. It is also the reason as to why it can be used with a 5" liner as opposed to a 6" on a standard unit

**Please note the following advice on minimising smoke emissions:**

**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.

In order to establish and maintain flames on a new refuel charge, it is necessary to operate with the door ajar for a period of 1- 3 minutes.



### **Fuel overloading**

The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke.

**Dampers Left Open** - Operation with the air controls or appliance dampers open can cause excess smoke. The appliance must not be operated with air control, appliance dampers or door left open except as directed in the instructions.

## **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 for the moisture to evaporate. For hardwoods, this will usually be 18 months+. It is recommended that logs should be no more than 5" (125mm) in diameter and 8" (200mm) in length. 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.

## **AIR INLET CONTROLS**

The base control vent regulates the air flowing through the series of holes halfway up the stoves internal chamber. This is referred to as the Secondary/Tertiary burn and helps re-burn the initial smoke produced by the fire and is key in reducing the stove emissions and increasing the stoves efficiency. When the control vent is pulled towards you, air is being released through these holes and the fire will burn fast. When the control vent is pushed in, the air is restricted reducing the air flowing into the stove and the rate of burn.

The sliding vent above the door is called the "Airwash" and its primary purpose is to channel air over the glass helping to keep it clean. It also allows more air into the chamber therefore further increasing the burn rate.

When you light the stove, ensure the base vent is pulled towards you (open) and the top sliding vent is pushed all the way to the right. (open) When the fire is established gradually



close off the vents. With the Defra stops in place, the stove will not fully close off and a constant stream of air will be flowing into the stove. Every chimney works in a unique way and a degree of trial and error is required to get the best setting for the vents. ( **These Defra stops can only be removed if you are not in a smoke free zone and do not have the stove fitted to a 5" liner** )

**Please note the following advice on minimising smoke emissions:**

#### **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.

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## **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**

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 paint finish also requires an initial curing process to be followed: -

For the first 2 burns on day one just use small controlled kindling wood fires with each fire lasting around 20 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. 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.

When the stove is going through its first few burn cycles the paint will be curing and producing a strong smell. We suggest ensuring all windows are left open in this period. 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 and be careful when adjusting the controls and opening the door ensuring the glove used is not running against the paint.. 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)**

- Construct a pile of kindling in the middle of the fire using approximately 500g of kindling wood
- Light with a single 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)

### **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. 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.

### **Refuelling**

When re-fuelling the stove, it is necessary to fully open both the primary and secondary air controls for a period of 3 minutes 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 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.

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 open can cause excess smoke. The appliance must not be operated with the door left open except as directed in the instructions.



The Ottawa 5kw ECO stove is suitable for use in smoke control areas when used in accordance with these instructions.

**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.

Under certain abnormal weather conditions, e.g. down draughts, it may be difficult to get enough 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

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. If the vent is fully open and the glass is still going black it will most likely be down to poor quality wet wood. 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 but we would suggest using "Calfire flat black paint". – 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.

**CLEANING THE GLASS** - Just use a clean cloth with warm water or specialist stove glass cleaner. You must ensure the stove is cold before cleaning the glass. It is very important that the glass is 100% dry before the stove is lit again. If you do not follow these instructions, your glass could "craze". Crazeing can also occur if incorrect fuels are burnt on the stove or if fuels with impurities or high moisture in them are used. Broken or crazed glass is not covered under any guarantee for any period of time.

**FIRE BRICKS**

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. Fire bricks are fully heat resistant but can easily split if struck with a log or other similarly hard object.

## WOOD SMOKE SPILLING FROM THE STOVE

### WOOD STOVE SMOKE IN THE ROOM REASON 1

Negative pressure:

Cause: This is effectively cold air being forced down the chimney and it is more common on cold/foggy days. So, the simple science part: cold air sinks, hot air rises. The cold air will literally be forcing the smoke back down the flue. It is a lot more common on twin walled chimney systems as these are often very exposed to the elements and cold. Traditional brick chimneys are nice and warm snuggled in the middle of a property so draw the smoke up nicely. It is slightly more common too with chimneys on the gable end, as these can also get rather cold being on the end of a property.

Solution: Your task is to get as much heat up the chimney as quickly as possible and you can do this by either:

Preparing your fire with some good dry kindling and fire lighters. Place a few sheets of flat newspaper on top of the kindling stack and light the firelighters and newspaper sheets at the same time. If you keep the door ajar, lots of air should rush into the stove and the paper on top should burst into flames giving the chimney an instant burst of heat, reversing the negative pressure. You can also hold a loosely scrunched-up piece of paper that is alight to the baffle opening and it has a similar effect.

We would urge everyone to stay safe whilst adopting this method.

### WOOD STOVE SMOKE IN THE ROOM REASON 2

Chimney Height

Cause: A short chimney (4 to 6 metres) is a common cause of smoke coming back into the room as it does not have sufficient draw to pull the smoke up and away.

Solution: If you have a very low chimney, you may want to discuss with your stove installer making the chimney as high as legally possible or installing some form of mechanical ventilation system or specialist cowl. A tall chimney generally creates a good suction up the pipe, but there is such a thing as a chimney that is too tall. A very tall chimney (11 or 12 meters plus) can also pose an issue as the smoke begins to cool and sink as it gets towards the top of the chimney. Again, this can be more common with twin walled flues or chimneys

on a gable end. If you have a traditional brick chimney you can look at insulating the flue with vermiculite, ensuring it keeps nice and warm. You can also speak with your installer and discuss whether a different cowl or mechanical system will be suitable for you.

## WOOD STOVE SMOKE IN THE ROOM REASON 3

### Blocked Chimney

Cause: If your stove has been working well throughout all seasonal changes and the baffle has not been disturbed, you may have a blocked chimney. This is very dangerous and could be spilling dangerous carbon monoxide into the room.

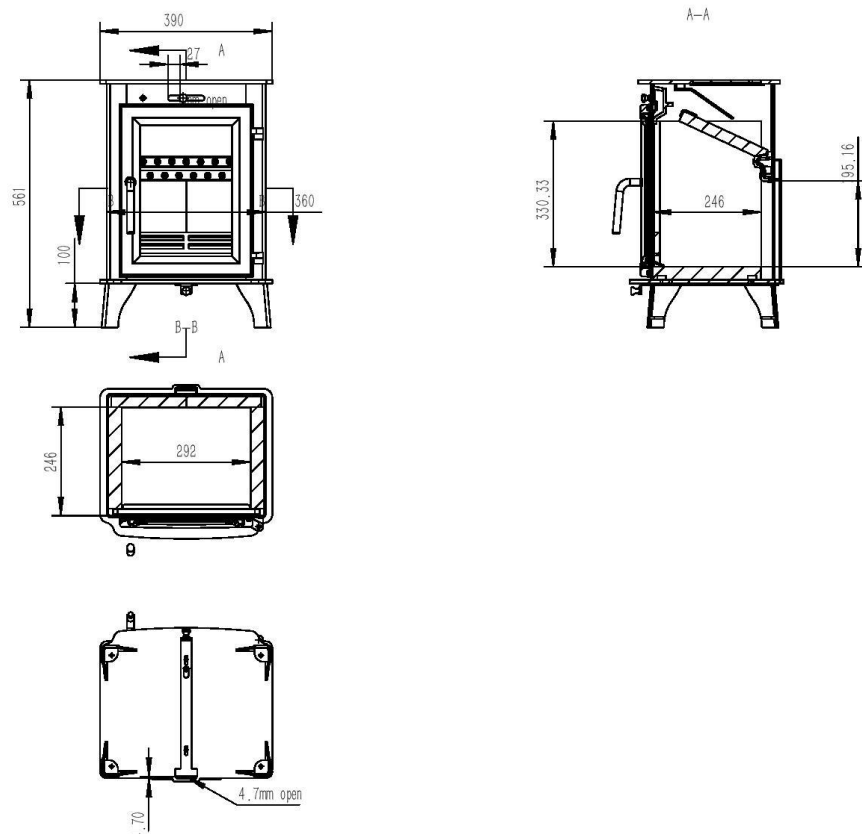
Solution: You should always have a CO alarm and a regular sweep of the chimney. What often happens is wet wood is slumbered down (left to burn very low, eg. overnight) thus producing copious amounts of tar; a by-product from the burning of wet wood. This collects on the inside of a chimney liner until it is eventually completely coked or too small to allow smoke to pass. If you have coked a liner you will most likely need it replacing. We have known people to cork liners in a matter of months and this really does highlight the importance of burning dry seasoned fuel. If you have not used the chimney for some time and are sure the chimney is not coked, you may have a jackdaw nesting in the chimney. You will often find some evidence on top of the chimney or on the register plate itself.

## GUARANTEE

The main body of your stove is guaranteed for 5 years. This does not include broken glass, crazed glass, fire bricks, door seals, grates, ash pans, paint and over-firing.

Incorrect use or installation not carried out by a registered installer qualified to install this style of appliance (Usually HETAS or OFTEC registered) will void the guarantee. The only exceptions will be if the install has been signed off by your local authority. Please keep hold of the invoice as this will be requested if a claim is started. If this is not provided upon request, we may not be able to escalate your claim. We do not cover any cost incurred when removing faulty appliances or installing new ones, even if it has been proven that the stove is faulty. For full guarantee details please visit [www.ecosystoves.co.uk](http://www.ecosystoves.co.uk)

## DRAWINGS



Ecosy+, Unit 22-26 – Folly farm, Ramsdell, Tadley, RG26 5GJ

