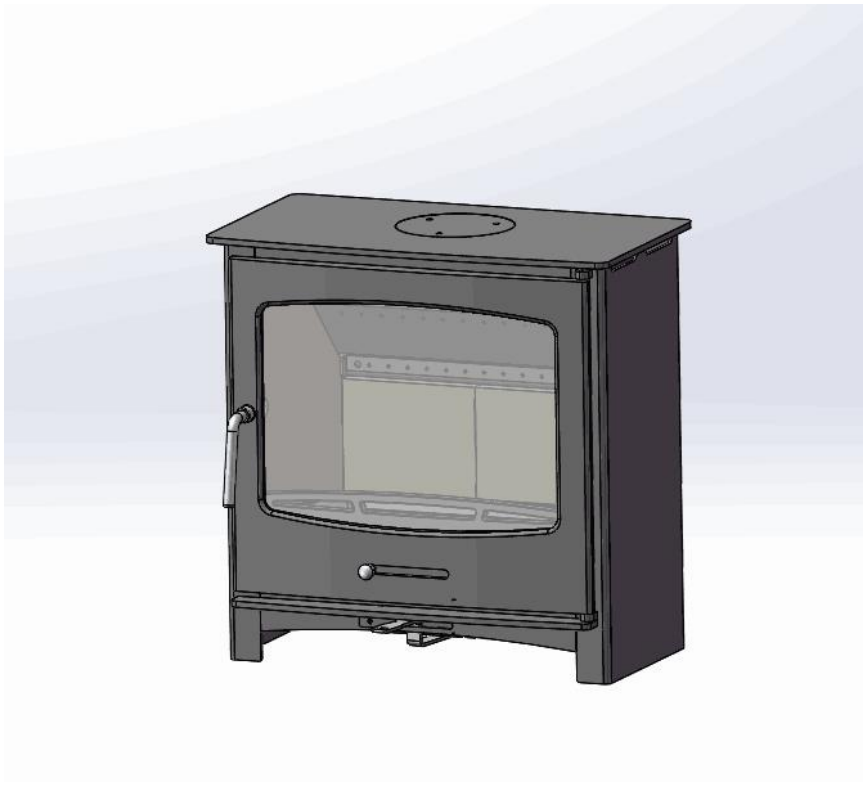
Ecosy+ Panoramic 5kw Slimline SE Stove

Wood and Smokeless Coal



Version 1.1: 20/02/2020

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.
The main component is the flue collar; this will simply need attaching with the provided bolts on the top, or rear of the fire.

INSTALLATION

Installation of your stove must comply with relevant local and national Building Regulations and fire safety standards. If you are choosing a third party to install the product, we would always suggest using a qualified installer to carry out the installation. 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

TECHNICAL

Panoramic Slimline 5kw - Performance Test Results.

Weight: 92kg
Total Efficiency
Wood: 80 %
Smokeless Coal: 78.9%
Nominal heat output: KW 5.00
Mean CO emission (at 13 % O2)
Wood: 0.09%
Smokeless Coal: 0.09%
Mean flue gas temperature
Wood: ºC 276
Smokeless Coal : ºC 295
Flue gas mass flow
Wood: g/s 4.3
Smokeless Coal: g/s 3.9
Mean NOx emission (at 13 % O2)
Wood: Nmg/m3 – 99
Smokeless Coal: - Nmg/m3 – 116
DIN Plus particulates (at 13 % O2)
Wood: Nmg/m3 – 39
Smokeless Coal: Nmg/m3 – 12
Mean CnHm emission (at 13 % O2)
Wood: Nmg/m3 – 69
Smokeless Coal: Nmg/m3 – 14
Distances to combustibles:
Back Wall: 700mm
Side Wall: 400mm
Hearth Temperatures
Maximum hearth temperature – 78c
This stove is suitable for a 12mm hearth

Note: The wood values above are taken with the removable grate and ash pan out of the stove and the primary air feed on the door completely closed. The Smokeless coal values are taken with the grate and ash pan in place and primary air control on the door in use.

We do not suggest mixing fuel and would always suggest burning wood without the grate inside and smokeless coal with the grate in place – Please see (Setting up your fire bed) for more information.

PRE-INSTALLATION

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, unless the 100mm direct air spigot at the rear is in operation. The stove should be installed on a level floor with adequate load bearing capacity. The fire comes with 4 x levelling bolts on the base of the fire.
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. Most house built before 2008 will be below this threshold and not require an air brick or direct air feed.
The stove is 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 allowed providing the metal stop that prevents the sliding air control from completely closing, remains in place if you are burning wood. We may refer to this as the "Defra Stop". The flue pipe must be fitted INSIDE the flue spigot and fire cement placed around it to seal it place. The baffle plate on the fire can be removed to allow the chimney to swept but we would suggest a flue pipe with an access hatch is installed if possible as the baffle bolts can sometimes be a little stiff to remove.

REGULATIONS AND SE APPROVAL

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 (“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 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 Ecosy+ Panoramic 5kW Slimline - SE has been recommended as suitable for use in smoke control areas when burning seasoned wood logs. The appliance has a factory-fitted modification to the secondary air control to prevent closure beyond 18mm open.

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.

Please note the following advice on minimising smoke emissions when burning wood:

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 appliance door left open except as directed in the instructions.

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

Setting Up Your Fire for Burning

Wood or Smokeless Coal

Wood and smokeless coal burn in very different ways. Wood burns best on a base with lots of air flowing over the top and smokeless coal burns best raised off the ground with lots of air flowing under it. We have designed this stove so each fuel burns independently and in the conditions that promote high efficiency and super low emissions output.

If you are choosing to burn smokeless coal you can leave the grate and ash pan inside the fire.

If you are choosing to burn wood, we suggest completely removing the grate and ash pan, then closing the primary air control on the door. This will leave you with a completely flat base to burn on and only the sliding leaver under the fire to control the secondary / tertiary air.

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" or 125mm in diameter and 10" 25cm 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.

Solid Fuel – (Please ensure Multi-Fuel grate is installed before burning smokeless coal) 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

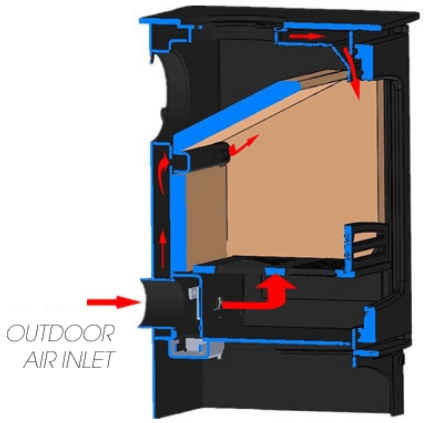
AIR INLET CONTROLS

Sliding Vent on the door – This vent is primarily used when the grate is in place and smokeless coal is being burnt. If you are burning wood with the grate removed this vent MUST be closed to ensure the fuel is burning clean and efficiently.

Base leaver - This controls the Secondary/Airwash and Tertiaryburn system. When pushed to the right this feeds more air through the stoves 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.

SE/DEFRA version

On the smoke exempt appliance this air vent is set so that the closure plate does not seal fully, thus allowing some constant air supply into the stove.



LIGHTING THE FIRE AND RE-FUELING

Prior to lighting the fire for the first time, ensure that.

- Installation and building work are 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)

ESSENTIAL INSTRUCTIONS BEFORE USE – It is essential to follow these 'tempering-in' instructions in order to avoid serious damage to your stove.
For the first 2 burns on day one just use small controlled kindling wood fires with each fire lasting around 30 to 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. A stove thermometer will be a valuable tool in helping you to achieve this safely and 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 after the stove is cured:

Wood:

Ensure the primary air control is fully closed.

- Construct a pile of kindling in the middle of the bed using approx 500g of kindling wood
- Light with a single chemical or natural firelighter

- If burning wood 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 theses logs are alight, and after about 7 minutes or so, a normal load of 3 logs weighing up to 2.4kgs in total can be added.
- Once this load is burning well the stove can be controlled with the base leaver.

Note: If the stove is closed off too early it can cause excessive smoke and the fire may die out. Before closing off the stove needs to have sufficient heat contained inside it to sustain lower levels of oxygen input. Good quality fuel is essential for an efficient burn.

Smokeless Coal

- Load a number of coals around 2 or 3 firelighter
- Light the firelighters, ensure the secondary/tertiary leaver is closed almost all the way and the primary slider on the door is fully open.
- When the coals have plenty of heat in them you can begin to reduce the primary air.

  Note: Depending on the chimney you may need to open the secondary / tertiary burn outlet by sliding the base leaver to the right when lighting or refuelling only.

Refuelling on wood

Every stove will work slightly differently depending on the chimney, or flue system it is attached to. It can take time to get use to the stove and how best to run and control it in each situation.

When refuelling it is necessary to set the base air control fully open for a period of 1 to 3 minutes in order to sustain flames on the new refuel charge –

- 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.

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.

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 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

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 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.
When cleaning the glass Just use a clean cloth with warm water when the stove is cold, if you clean the glass when it is still warm the glass can “craze”, crazing can also occur if incorrect fuels are burnt on the stove, or fuels with impurities in them. 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

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

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 corked or too small to allow smoke to pass. If you have corked 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 corked, 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 glass, fire bricks, door seals, over-firing, and paint.

Incorrect use or installation not carried out by a registered installer will void the guarantee. The only exceptions will be if the install has been signed off by the council. Please keep hold of the invoice as this will be requested if a claim started, if this is not provided upon request, we will not be able to escalate your claim. The guarantee will begin from the sale date on the invoice and 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.

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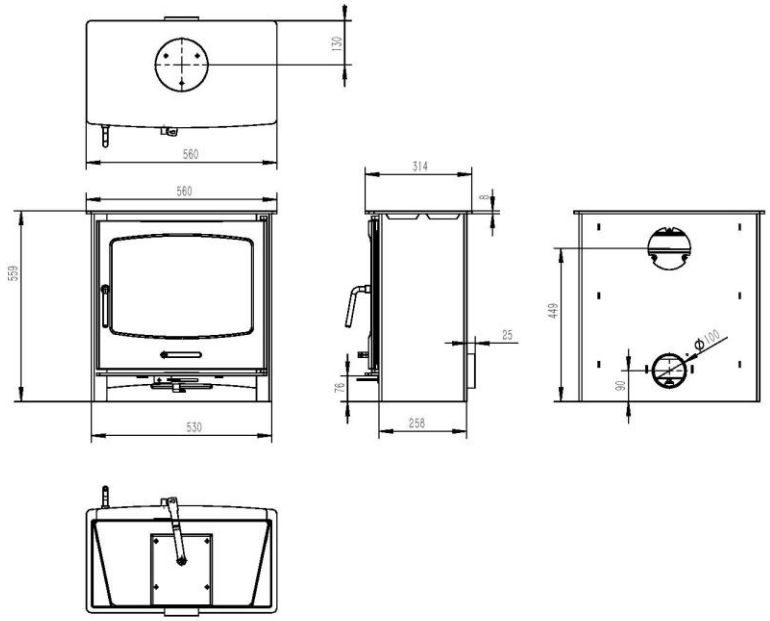
Ecosy+, Unit 22 and 26 – Folly farm, Ramsdell, Tadley, RG26 5GJ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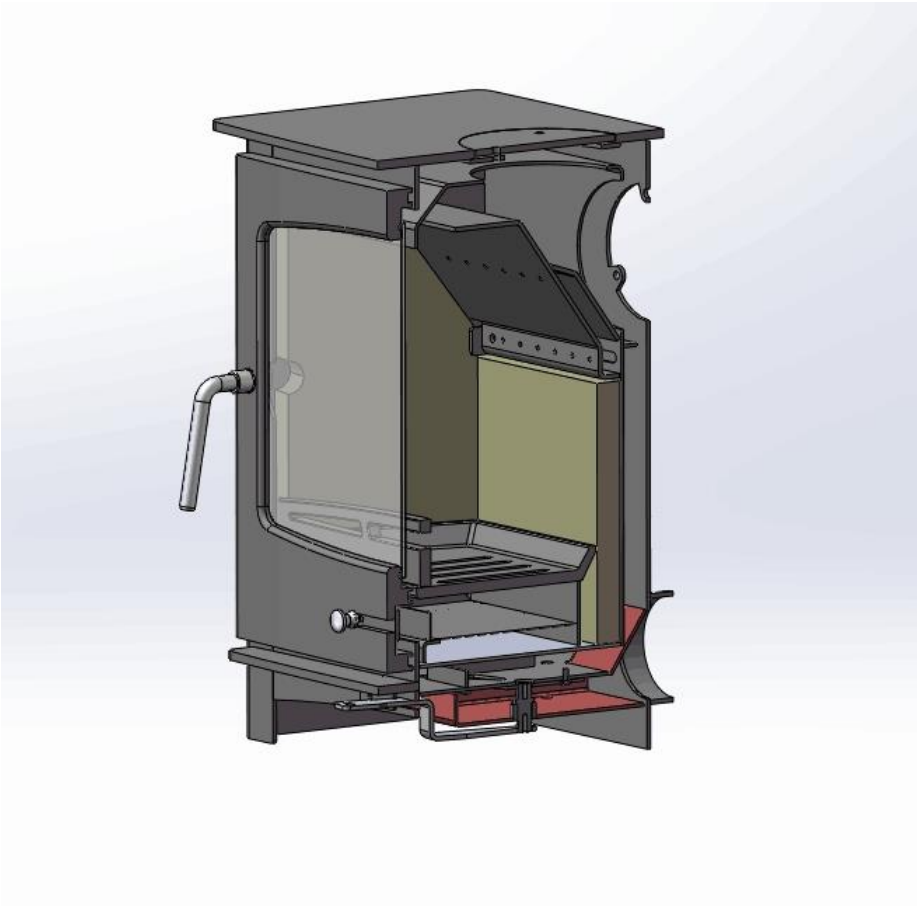

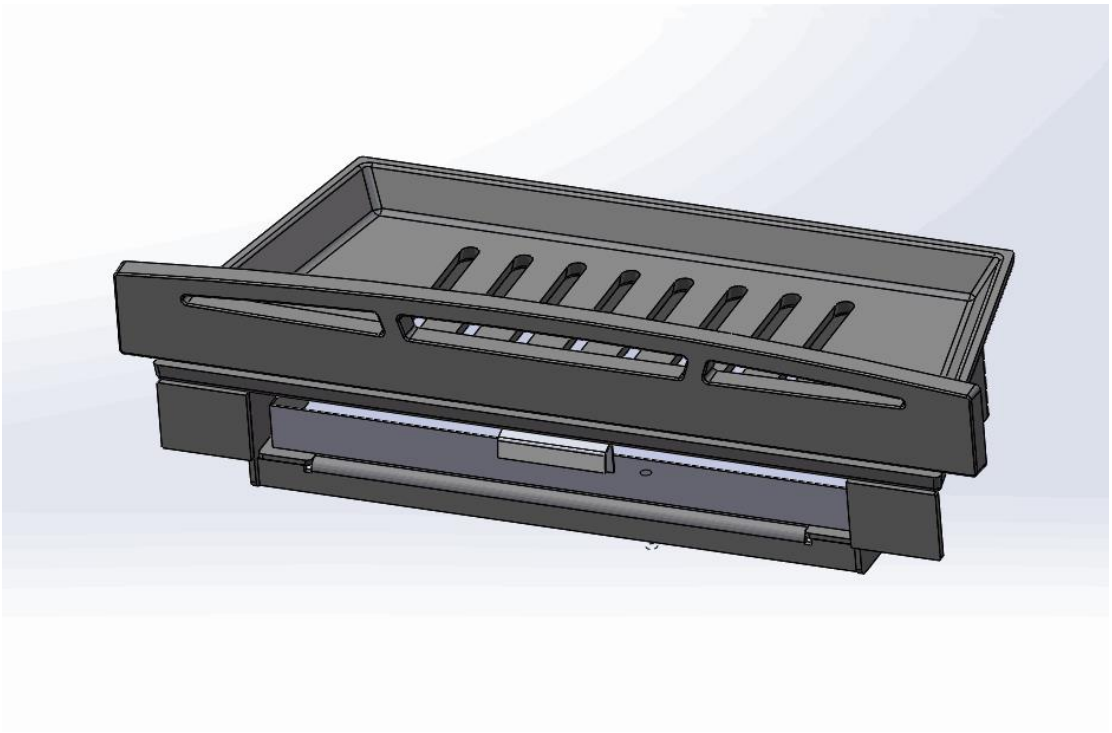

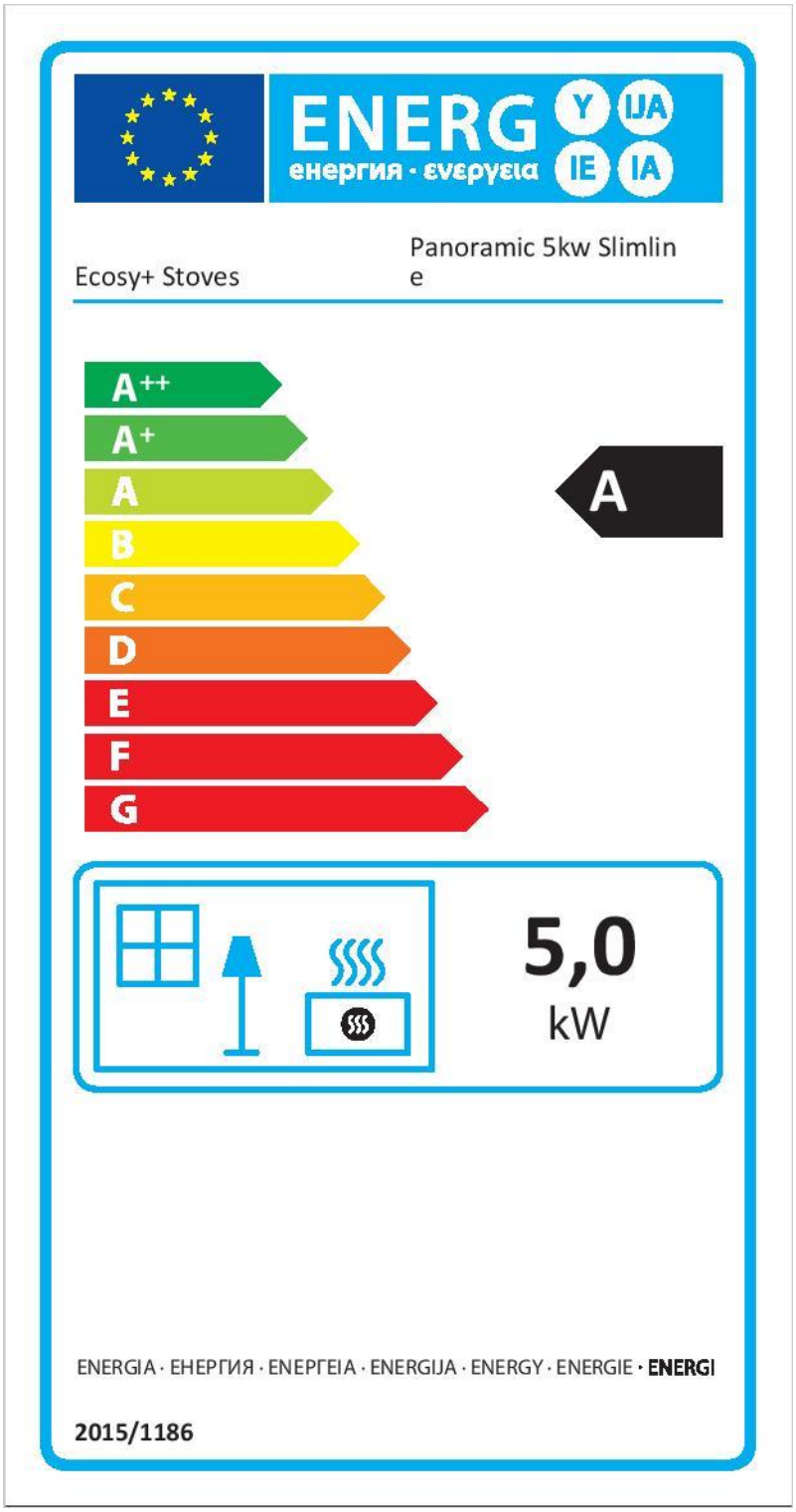
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