

# ESSE

Ironheart

Wood Fired Cook Stove  
Instruction Manual



UK CA CE MADE IN BRITAIN



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## **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 at: <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 ESSE Ironheart wood fired cook stove have been recommended as suitable for use in smoke control areas when burning wood logs. The ESSE Ironheart wood fired cook stove must be fitted with a permanent stop to prevent closure of the air controller beyond the 25% open position.

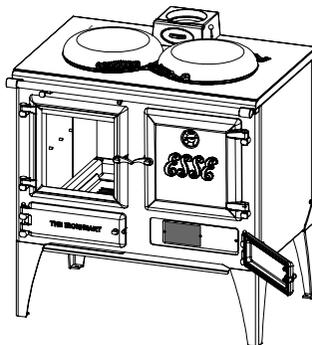
## 1. WELCOME TO YOUR ESSE

Welcome to the ESSE family! We've poured all of our knowledge, expertise and passion for designing and manufacturing market leading stoves, dating back to 1854, into producing your ESSE cook stove. All ESSE cook stoves are manufactured at our factory in Barnoldswick, Lancashire, and we're confident that if appropriately installed, maintained and cared for, your ESSE stove will provide you with many years of cooking, room heating, comfort and joy.

Before you fire up your ESSE cook stove for the first time, ensure that your installer has installed the stove in line with the 'Installation' section of this manual, and that the flue and chimney has been swept. The cook stove is not suitable for use in a shared flue.

As you would expect, when in use, all parts of the stove become hot, so always use the supplied operating tool or glove when interacting with your ESSE cook stove. A fireguard manufactured in accordance with BS 8423:2002 should be used, if it is likely that children or pets may come into contact with the appliance. The stove is suitable for intermittent operation. Do not use an aerosol spray close to the stove when alight.

These instructions provide all the necessary information to both install, then operate your ESSE cook stove. The key information relating to your stove, including the serial number, can be found on the data plate, located behind the bottom right door. Please quote the model and serial number, in any future communication with your retailer or the manufacturer.



**Data plate location**

## 2. OPERATING INSTRUCTIONS

### BEFORE USING YOUR COOK STOVE

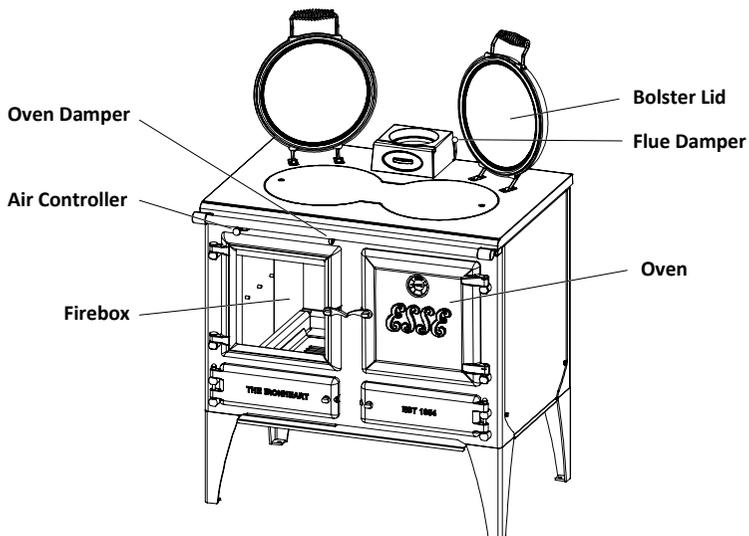
Ensure that all protective packaging has been removed. The hotplate has been oiled at the factory to prevent rusting and therefore will require wiping with a damp cloth and drying with a paper towel, before use.

This appliance is suitable for burning wood only. An extractor should not be fitted within the same room as the appliance.



Do not place tea towels or similar items on the handrail.

### GETTING TO KNOW YOUR COOK STOVE



#### **Air Controller**

This is used to control the fire intensity, by managing the amount of air supplied to the fire. When moved to the left, there is more air and a fiercer burn rate, whilst moved to the right, there is less air, and softer burn rate.

#### **Oven Damper**

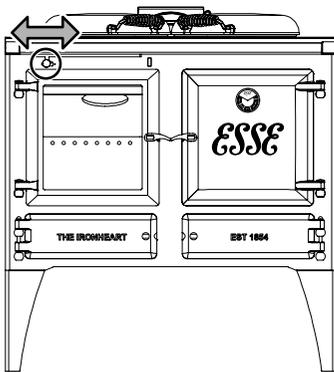
This is used to help control the temperature of the oven, by routing the hot gasses from the fire away from the oven, if desired. To close the damper, (and maximise the oven temperature), rotate the dial **clockwise**. To open the

## 2. OPERATING INSTRUCTIONS

damper, (and reduce the oven temperature), rotate the dial **anticlockwise**.

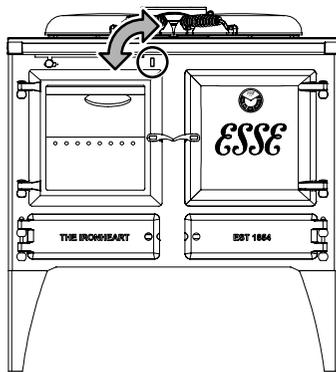
### Flue Damper

This is primarily used to help manage an occasional excessive flue draft, for example, during adverse weather conditions. However, an appropriate flue draft should be created during the installation of the appliance (See the flue draft section of this document for more information). It can also be used to provide additional air, when first lighting the fire. The Flue Damper is opened by pushing the lever backwards towards the rear of the appliance, and closed by pulling it forward, towards the front.



### Using the Air Controller (to control the fire)

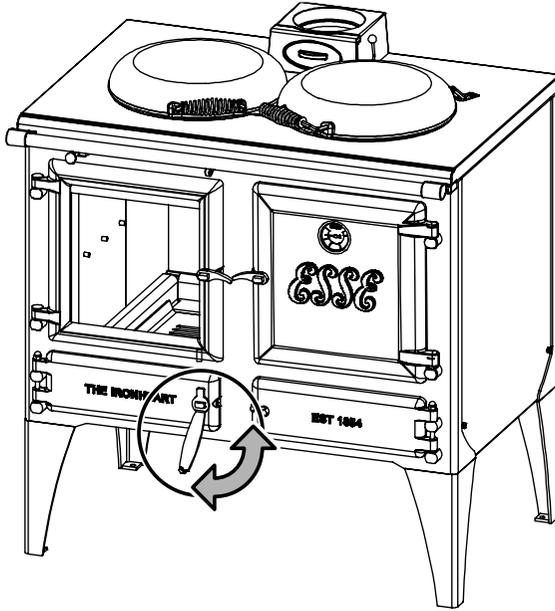
The firebox is accessed through the large glass fronted fire door, which is opened by rotating the catch 90° anticlockwise. The oven is behind the top right door, which is opened by rotating the catch 90° clockwise. Please note, when in use, both of these catches will become hot, so always use the supplied glove to open and close them. The glove should also be used to adjust the Air Controller, whilst we recommend using the supplied tool to rotate the Oven Damper.



### Using the Oven Damper (to help manage the oven temperature)

The riddle grate and ashpan are located behind the bottom left door, which is opened by using the supplied tool.

## 2. OPERATING INSTRUCTIONS



If the cook stove is being used primarily to heat the room, we recommend leaving the bolster lids open, allowing heat from the hotplate to radiate into the room.

### SUPPLIED TOOLS AND PARTS

Your ESSE Ironheart comes supplied with...

- ✓ Glove
- ✓ Operating Tool
- ✓ Fire Shield
- ✓ Wire Brush
- ✓ Hotplate Lifting Tools (X2)
- ✓ Flue Brush
- ✓ Flue Rake
- For interacting with the controls
- For opening doors, using controls & ashpan
- To direct heat away, whilst cooking
- For cleaning ovens & hotplate
- For Removing the hotplate
- For brushing the flues
- For cleaning the flues

Please keep all of these items in a safe place.

## 2. OPERATING INSTRUCTIONS



This appliance is not appropriate for use as an incinerator, and unsuitable fuels should not be used. Failure to follow this requirement will invalidate your warranty.

### CO ALARM

Your installer should have ensured that you have a Carbon Monoxide (CO) alarm fitted, in the same room as your ESSE cook stove. This is a requirement of the BS EN 50292:2013 standard, and you should make sure that you are familiar with the operation of this essential piece of equipment.

### VENTILATION

All stoves require a consistent supply of 'combustion air', to allow for the combustion of the fire. As a general rule, permanent external air vents are not required for stoves with a nominal output of 5kW or less. However, some newer houses with a low air permeability may need a permanent external air vent, irrespective of the nominal output of the stove. Your installer will have advised you on the requirements, within your situation. For more information, see the 'Ventilation' section within the Installation part of this manual.

### FUEL

Your ESSE cook stove has been designed to burn wood logs. Burning wood logs within your ESSE cook stove provides sustainable, efficient and 'clean' heating to your room. The moisture content of your wood is very important, as this affects both how 'cleanly' your cook stove will burn, and also how long the fuel will burn for. Referred to as 'green wood', recently felled wood will almost certainly have a moisture content that is too high to burn efficiently and cleanly. Similarly, overly dry wood will burn quickly, with higher emissions, making your cook stove less economical to run.

We recommend using wood logs with a moisture content of 15 – 20%. This is best achieved by either storing green wood yourself for a period of 12 – 18 months, and checking regularly with a moisture detector, or purchasing it from

## 2. OPERATING INSTRUCTIONS

a reputable fire wood specialist, who is able to control the moisture content of their wood logs.

For best results, we recommend your wood logs are cut to a length of 300mm, and a diameter / width of 80mm.

### LIGHTING YOUR ESSE COOK STOVE

When your ESSE cook stove is first lit, it may smoke, give off an odour, or make 'ticking noises'. This is quite normal, as the materials used within its manufacture are heated up for the first time. These symptoms will stop within a short period, but ensure that the room is well ventilated during this 'settling in' process.

The pallet that your ESSE cook stove was supplied on has been produced from timber that is appropriate for use as kindling, so can be broken up and chopped, for this purpose.

Initially only light a small fire, for a period of 1 – 2 hours, to dry out any moisture found within the flue and chimney.



Whilst lighting the fire, do not leave your ESSE cook stove unattended, until the fire is established, the door is fully closed, and you have adjusted the Air Controller to the appropriate level.



Before lighting your ESSE Ironheart, ensure that the Air Controller is fully open (Pushed to the left) and that the Oven Damper is also fully opened (Fully rotated anticlockwise). If required, the Flue Damper can also be opened, by pushing the lever to the rear of the appliance.

## 2. OPERATING INSTRUCTIONS



Lay two small wood logs along the length of the firebox base, and place a firelighter / tightly rolled up newspaper on top of them. On top, use wood kindling to create a small lattice structure, before finally placing a small wood log on top.



Safely light the firelighter / newspaper and close the door, but leaving it slightly ajar. Once the flames have established on the wood logs, (typically within 3 – 5 minutes), fully close the door and slowly reduce the air volume, by moving the Air Controller to the right. Continue to use the Air Controller to control the fire, until the flames are slowly 'dancing' on top of the wood logs.

We recommend a maximum load of wood logs of 2Kg / hour.

It is very important that your ESSE cook stove is not overfired, as this may cause long term damage to the appliance, and invalidate your warranty.



The door should only be opened during the initial lighting / refuelling of your ESSE cook stove. If left open during normal operation, you may experience excessive smoke emitting into your room.



When the fire is lit within the cook stove, all controls and handles become hot - The operating tool or glove provided should be used when interacting with the appliance.

### 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 control 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.

## 2. OPERATING INSTRUCTIONS

### REFUELLING

Refuelling should be undertaken whilst the flames on the current fuel are still established, or you may experience excessive smoking. If the current fire has died out, reignite the fire with additional kindling, before adding additional fuel. When positioning fuel into the firebed, ensure that the fuel is not touching the back or side walls, or the glass window, as this will result in a less clean burn.

To enjoy optimum wood burning, leave an ashbed of 1 – 2cm of ash within the fire grate. First rake the current fuel, to create a bed of hot embers, on which to place the new fuel. Then place the new wood logs onto the hot embers.



Do not 'overload' the fire with excessive amounts of fuel, as this will result in over-firing, and may cause permanent damage to your ESSE cook stove.

### THE FIRE GRATE AND RIDDLING

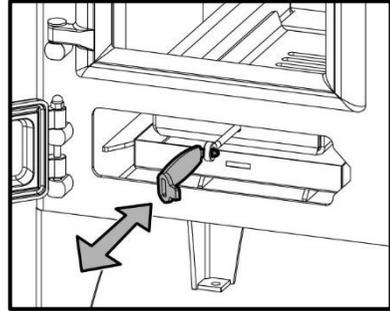
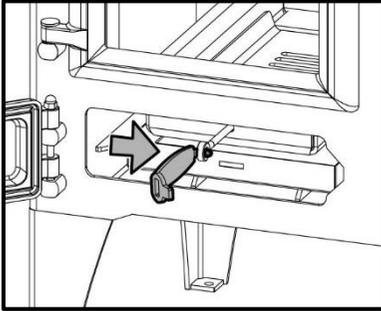


Your ESSE cook stove will be hot during and after use. Always use the supplied Operating Tool and / or Stove Glove to riddle the appliance.

The Fire Grate in your ESSE stove is made of two parts – The Grate and the Riddle Plate. The Fire Grate can be 'riddled' by sliding the Riddle Plate quickly forwards and backwards, forcing excess ash to fall through the slots in both parts, into the Ashpan below.

To 'riddle' the Fire Grate, first insert the hook at the end of the Operating Tool into the loop on the Riddling Bar. Then alternate the Operating Tool position quickly forwards and backwards, which will force ash to drop into the Ashpan.

## 2. OPERATING INSTRUCTIONS



### Positioning the Fire Gate

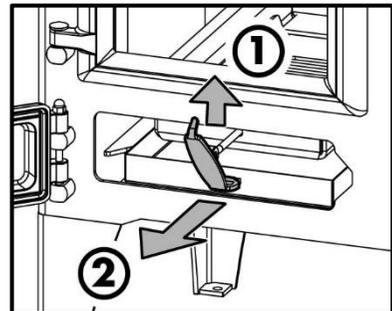
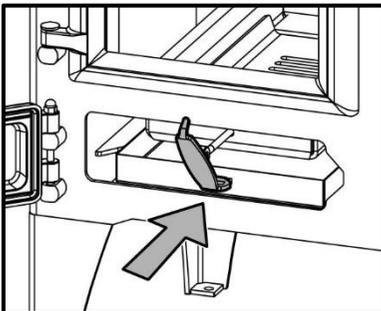
After riddling, the Fire Gate should be 'closed', with the Riddle Plate positioned to block the slots in the below Grate. The Fire Gate should only be 'riddled' when the ashbed grows above 20mm deep, so as to remove some of the excess ash.

### ASHPAN



Your ESSE cook stove will be hot during and after use. Always use the supplied Operating Tool and / or Glove to remove and replace the Ashpan. Only remove the Ashpan when the appliance and ash it contains are cool.

When the Fire Gate is 'riddled', ash will fall into the Ashpan below. When the Ashpan is approaching being full, it should be emptied, and the ash disposed of. To remove the Ashpan, insert the appropriate end of the Operating Tool into the slot at the front of the Ashpan, and carefully pull it forward, sliding it clear of your ESSE cook stove.



## 2. OPERATING INSTRUCTIONS

Never allow the level of ash to build up so it touches the underside of the Fire Grate, as this can cause permanent damage to your ESSE cook stove. Never pour hot ash into plastic waste bags or bins.

### COOKING ON YOUR COOK STOVE



Always ensure that that the bottom left door is closed during use, or too much air will be drawn into the firebox.

Whilst your Ironheart can be used to heat a space, it is primarily a wood fuelled cooker. There are three cooking areas in your cook stove – The oven, hotplate and within the firebox.

#### **The Oven**

When in use, the oven is heated by the hot fumes from the fire, which circulate around the outside of the oven providing surround heat, for perfect cooking. As a result, pans and casserole dishes can be placed on the bottom surface of the oven, without frying food, ensuring that all of the near 50lt of capacity is useable space.

The oven is deeper than it is wide, to reduce heat loss when the door is opened for inspection of the food, helping to maintain a cooking temperature. The oven door should be kept closed when in use.

Always use the supplied Glove to open the oven door, as the handle gets hot when in use. To open the oven door, turn the handle 90° clockwise, and carefully swing open.

A temperature gauge is located within the oven door, which can be used to give a guide to the temperature within the oven. Remember that when the door has been opened, the temperature shown on the dial will drop, and take time to correct, when the door is subsequently closed. Please note, the temperature gauge should only be used as a guide to the oven temperature.

## 2. OPERATING INSTRUCTIONS

Your ESSE Ironheart comes supplied with a wire shelf, which can be placed on the steel runner pins in the oven. The wire shelf has a retaining device, to reduce the risk of them pulling free of the cooker accidentally. To remove the shelf, pull forward as far as they come, then lift the front of the shelf up at an angle, and slowly pull free from the shelf runners.

### **The Hotplate**

The clever 'dog-bone' shape of the cast iron hotplate is carefully designed to give graduated areas of heat. The left hand side is positioned directly above the firebox, so will be the hottest area, and is perfect for boiling. The right hand side uses heat transfer to provide heat, and is designed for simmering.

Depending upon what you are cooking, both sides of the hotplate can be used for direct to hotplate cooking, such as searing, chargrilling or toasting, during which the bolster lid can be shut to increase the heat or provide a steaming effect.

The unique large area of the hotplate can comfortably accommodate up to six pans. We recommend only using heavy based pans, casserole dishes or griddle pans.

### **The Firebox**

To fully enjoy the unique flavours of wood fired cooking, your ESSE Ironheart allows for cooking directly over wood embers, providing classic chargrill lines.

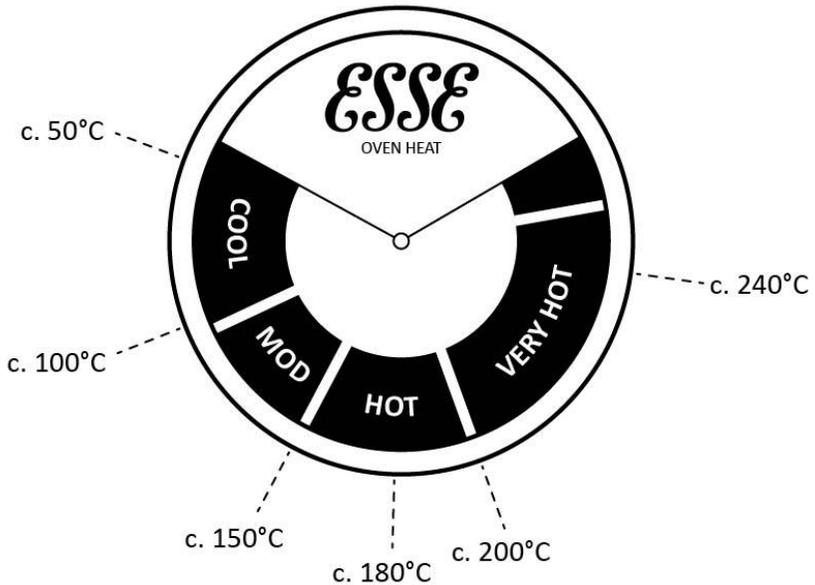
To enjoy this feature, please contact your retailer or ESSE, to buy the optional Firebox Cooking Shelf. Once acquired, the Firebox Cooking Shelf can be positioned into the firebox, after lighting.

Once the fire has died down to glowing embers, using the supplied Glove, carefully slide the Firebox Cooking Shelf into position along the steel pin runners, located on the side bricks.

## 2. OPERATING INSTRUCTIONS



The fire door should always be closed, whilst cooking in the firebox.



### The Oven Gauge, with temperature guide

Remember that the oven gauge is a useful tool for giving an indication of the oven temperature, but due to how the oven is heated, should not be relied upon to give an exact temperature reading.

Your ESSE Ironheart is cleverly designed to allow the hot gasses from the fire to be directed to the area of the cook stove where it is most required. The Oven Damper should be used to help manage the heat, depending upon which cooking area you wish to use.

### Cooking in the Oven

The Oven Damper should be fully closed, (fully rotated clockwise), allowing the hot gasses to circulate around the oven, heating it up, before passing past the hotplate, then up through the flue pipe.

## 2. OPERATING INSTRUCTIONS

**Cooking on the Hotplate** The Oven Damper should be fully opened, (fully rotated anticlockwise), allowing the majority of hot gasses to pass directly from the firebox to the hotplate, before passing up through the flue pipe.

**Cooking in the Oven and on the Hotplate** Depending upon what you are cooking, and your cooking style, the Oven Damper can be positioned fully closed, (fully rotated clockwise), fully open (fully rotated anti-clockwise), or at any point between. Experience of cooking on your ESSE Ironheart will help you choose the best position, and where you want to direct the hot gasses.

When the hotplate is not in use, the bolster lids should be left down, to help retain heat and keep the hotplates warm.

Once up to temperature, relatively small amounts of fuel are required to keep the cooking areas hot. With this in mind, resist the temptation to add excessive amounts of fuel to the firebox, which can cause long-term damage to your ESSE Ironheart, whilst also making the appliance uncomfortably hot to stand in front of, during cooking. If this does become a problem, the supplied Fire Guard can be placed in front of the glass oven door, to help deflect heat away from the user.

When cooking on your ESSE Ironheart, the supplied Fire Shield can be used to protect the user from heat emitted from the firebox. To install the Fire Shield, simply hang it onto the hand rail in front of the glass firedoor.

### **REDUCED BURNING**

Once a fire has established, close down the air control, and ensure that the door is firmly closed. Experimentation with the setting of air controls may be required, depending upon the flue draft and fuel type. A build-up of soot on the inside face of the glass window is more likely when operating the cook stove in this way.

## 2. OPERATING INSTRUCTIONS

### FLUE DRAFT

An appropriate flue draft is essential for the stove to work safely and efficiently. During installation, your installer should have taken a flue draft reading, to ensure that it is within the recommended range of 12 – 25 pascals. If your cook stove is burning wood logs quickly, or adjusting the Air Controller is having little effect on controlling the fire, consult with your installer to confirm the flue draft remains appropriate.

### CLEANING & MAINTENANCE

Your ESSE cook stove should be inspected frequently, and any required maintenance undertaken. We recommend that your ESSE cook stove is serviced once a year by a qualified service professional.

As the cook stove top is used for cooking, associated wear and tear will occur. Spills should be wiped up immediately with a damp cloth. Chemical oven cleaners should not be used on the hob surface.

The supplied wire brush can be used to remove stubborn stains from the cast iron hotplate, or inside the ovens.



Be aware that using the wire brush on the painted surfaces, (including the top that surrounds the hotplate), will cause damage to the paint finish.

Like all cast iron parts, the hotplate will rust with prolonged exposure to moisture. Should this be the case, remove any surface rust with the supplied wire brush, and season with a thin coating of flax oil (food grade linseed oil), which will create a tough, water resistant coating. The inside of the ovens can also be given a coating of flax oil, which will help protect them against rusting, particularly when the oven is not in use for prolonged periods.



Repairs or modifications should only be undertaken by ESSE authorised professionals. Only genuine ESSE replacement parts should be used, or your warranty may become invalid.

## 2. OPERATING INSTRUCTIONS

- General cleaning** The exterior cast iron and sheet steel parts should be cleaned with a soft brush or lint-free cloth. Should areas of the appliance need re-painting, high temperature aerosol paints are available from your retailer.
- Glass window** If the glass window needs cleaning, use a damp cloth. If stubborn stains remains, use a dedicated glass cleaning solution. Do not use abrasive cleaners or pads, as these can scratch the surface, which may cause the glass to fail prematurely. Before relighting the appliance ensure that the glass has fully dried.
- Rope seals** Ensuring a firm seal between the body of the appliance and the closed door is essential for the efficient and clean burning of your ESSE stove. The rope seals on the inside face of the door should be inspected regularly, and replaced as necessary.
- Chrome parts** Chrome parts can be cleaned using a dedicated chrome cleaner. Do not use aggressive chemical cleaners, as these can dull the finish. Do not use aggressive scouring pads or brushes, as this can scratch the surface.
- Exterior painted surfaces** The exterior of the cook stove is painted in a specialist high temperature wet paint, designed for this application. However, through the life of the cook stove, it may be necessary to touch up areas of paintwork. High temperature cook stove paints are available from your retailer, or through the spare parts section of the ESSE website.
- Ensure that the cook stove is completely cool before undertaking any maintenance work. First remove any areas of flaky paint by gently rubbing with a wire brush. Then remove any areas of grease or oil, which will prevent the new layer of paint from adhering to the metal surface. Ensure other areas of the cook stove, and neighbouring items are masked off before applying the high temperature paint. If using an aerosol, ensure there is appropriate ventilation, and use appropriate personal

## 2. OPERATING INSTRUCTIONS

protective equipment. Follow the manufacturer's instructions for application and use.

### **Internal flue ways**

The flue ways inside the cook stove should be cleaned as part of the annual service, and at the same time as the flue and chimney are swept.

Once the fluepipe and chimney have been swept, all of the internal channels that allow the hot flue gasses to pass around and heat the cooker should be cleaned. To do so, the hotplate and two flue cleaning access plates should be removed.

To remove the hotplate, first remove the two fixing screws, using a 5mm Allen key. Then screw the two supplied Hotplate Lifting Tools into position, before carefully removing the hotplate.

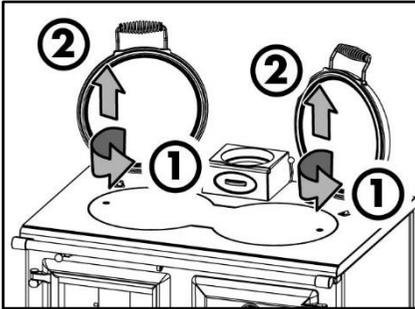
To remove the Front Access Panel, pull the bottom right door open, and remove the three screws holding the panel in place.

To remove the Side Oven Access Panel, after opening the oven door, unscrew the two Torx head bolts, to remove the right hand side shelf runners, which forms the access panel.

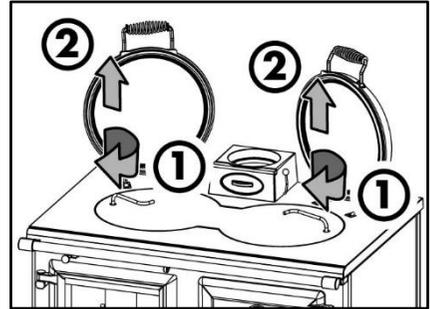
Once all access panels are removed, first sweep up any debris using a flue rake or vacuum cleaner. Then using a flue cleaning brush, sweep all accessible areas above, below and to the side of the ovens.

After the maintenance is complete, ensure that the hotplate and two access panels are firmly replaced into position, with the seal intact.

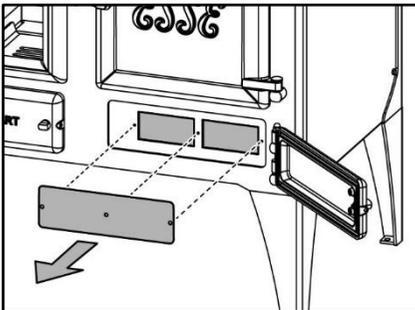
## 2. OPERATING INSTRUCTIONS



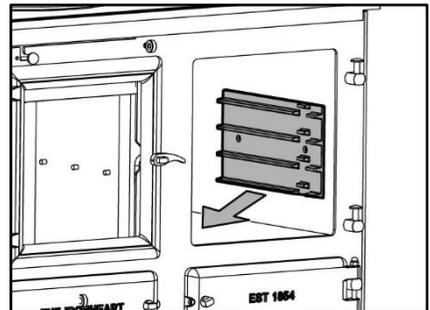
Hotplate removal – Screw removal



Hotplate removal – Lifting the hotplate clear



Front access plate removal



Side oven access plate removal

### CHIMNEY SWEEPING

To ensure continued safe and efficient use of your ESSE cook stove, we recommend that your chimney is swept by a professional at least once a year, typically before the stove season. Where the appliance is used throughout the year, we recommend more regular sweeping.

### SAFE SHUTDOWN

In the unlikely event of a chimney fire, a fault occurring with the appliance, or extreme weather affecting the burn of the appliance, move the Air Controller to the right, closing down the combustion air supply to the minimum volume. This will minimise the intensity of the flames in the appliance, which will then slowly die out. In the case of a fire in the chimney or flue, immediately call the Fire and Rescue Service for assistance.

## 2. OPERATING INSTRUCTIONS

### SEASONAL USE

If your ESSE cook stove is to not be used for a period of time, first clean the appliance as described within the 'Cleaning & Maintenance' section of this manual. Empty both the Fire Grate and Ashpan of all ash, before closing the door. Position the Air Controller to a central position – This will allow a flow of air, preventing a build-up of moisture inside your ESSE cook stove, which can lead to rusting. Before re-lighting the appliance, remove the top baffle bricks, to remove any debris, and check for blockages within the flue.

### WARRANTY

Your ESSE cook stove has been built to the highest standard using premium materials, and comes with a two year manufacturer's warranty. Register your ESSE cook stove online at [www.esse.com/warranty-registration](http://www.esse.com/warranty-registration). The warranty must be registered within 1 month of installation.

The conditions of your warranty are...

- ✘ Does not cover incorrect use or application, as advised within this manual.
- ✘ Must be installed appropriately, by a certified installer.
- ✘ Does not cover consumable parts, including fire grate, glass window, rope door seals, ashpan and vermiculite fire bricks.
- ✘ Does not cover general wear and tear or cosmetic damage unrelated to the function of the appliance.



To dispose of the stove after the product life has expired, please observe the following information:

- Dispose of the items correctly i.e. separate the parts to be disposed of in material groups.
  - Always dispose of items in a way that is as sustainable as possible and that is in line with the current environmental protection, reprocessing/recycling and disposal technology.
-

## 2. OPERATING INSTRUCTIONS

### TROUBLESHOOTING

Problem	Cause	Solution
Window glass blackening	• Wet wood logs	• Use wood logs with 15-20% moisture content
	• Fuel touching glass window	• Use a poker to move fuel back within the fire grate
	• Too little combustion air	• Increase the setting of the air controller
Fumes emit into room	• Blocked flue	• Check and remove any blockage
	• Downdraft in flue	• Consult with your installer, to add flue cowl or other solution
Fire will not light	• Too little combustion air	• Increase the setting of the air controller
	• Wet wood logs	• Use wood logs with 15-20% moisture content
	• Flue draft is too low	• Consult with your installer, to rectify
Fire burns too quickly	• Too much combustion air	• Reduce the setting of the air controller
	• Overly dry wood logs	• Use wood logs with 15-20% moisture content
	• Flue draft is too high	• Consult with your installer, to rectify

### WARNING NOTE

Properly installed, operated and maintained this stove will not emit fumes into the dwelling. Occasional fumes from de-ashing and re-fuelling may occur. However, persistent fume emission is potentially dangerous and must not be tolerated. If fume emission does persist, then the following immediate action should be taken: -

- a) Open doors and windows to ventilate the room and then leave the premises.
- b) Let the fire go out.
- c) Check for flue or chimney blockage and clean if required
- d) Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.

The most common cause of fume emission is flueway or chimney blockage. For your own safety these must be kept clean at all times

### 3. INSTALLATION INSTRUCTIONS

#### PLANNING THE INSTALLATION

It is the installer's responsibility to ensure that when installing the appliance, the requirements of the Health and Safety at Work Act 1974 are met.

The installation instructions within this manual provide a guide for safe and appropriate installation, but it is the responsibility of the installer to ensure that the requirements of applicable British Standards are met, in particular BS 8303 and BS EN 15287:2007, relating to the installation of solid fuel appliances. The appliance is heavy and care must be taken during handling. Although the appliance does not contain asbestos products, it is possible that asbestos may be disturbed in existing installations and every precaution must be taken.

When considering the installation design, ensure appropriate access is provided for cleaning of the appliance, flue pipe and chimney flue. This appliance is suitable for intermittent operation, but is not suitable for use in a shared flue system. The appliance should not be used in the same room as an extractor fan, as this can cause the stove to emit fumes into the room.

#### VENTILATION

All stoves require a consistent supply of 'combustion air', to allow for combustion of the fire. As a general rule, permanent external air vents are not required for stoves with a nominal output of 5kW or less. However, houses with a low air permeability, such as newer builds, may require a permanent external air vent. Document J of the Building Regulations explains that should a stove be installed in a room with an air permeability of lower than  $5.0\text{m}^3/(\text{h}\cdot\text{m}^2)$ , a permanent external air vent is required, irrespective of the nominal output of the stove.

External air vents must be positioned so they are not liable to be blocked. Based upon the requirements within Document J of the Building Regulations, a 5kW stove has the below air vent area requirements.

### 3. INSTALLATION INSTRUCTIONS

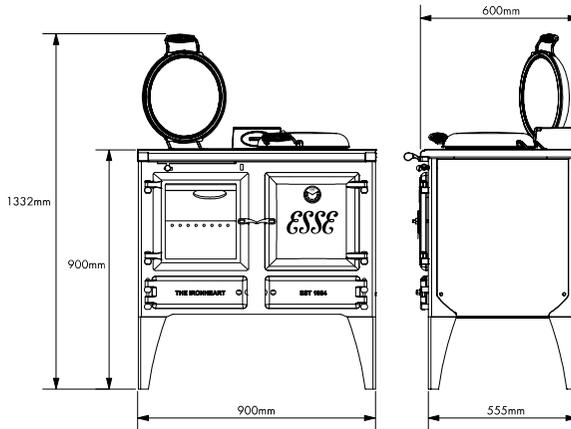
<b>Air Permeability m<sup>3</sup>/(h.m<sup>2</sup>)</b>	<b>Minimum air vent area (cm<sup>2</sup>)</b>
<5.0kw	Not required
>5.0kw	27.5

Please consult Document J of the Building Regulations for detailed guidance, particularly for new build properties, where a low air permeability rating may necessitate a permanent external air vent.

It is essential that the fire has adequate air supply for combustion and ventilation. Apertures provided for this purpose shall not be restricted.

### 3. INSTALLATION INSTRUCTIONS

#### PRODUCT SPECIFICATION



ESSE cook stoves are hand crafted, so small variations in size can occur.

Description	Value
Nominal Heat Output	7.3kW
Recommended chimney draught	12Pa
Efficiency	80.6%
Mean Flue Temperature	190°C
Particulate emissions @ 13% O <sub>2</sub> (mg/m <sup>3</sup> )	21
OGC @ 13% O <sub>2</sub> (mg/m <sup>3</sup> )	25
CO @ 13% O <sub>2</sub> (mg/m <sup>3</sup> )	861
NO <sub>x</sub> @ 13% O <sub>2</sub> (mg/m <sup>3</sup> )	90
Energy Class	A
Energy Index	102
Seasonal Efficiency	70.6%
Weight	280kg

#### Distance To Combustibles

	Rear (mm)	Sides (mm)
With single wall flue	400	500

#### Distance To Non-Combustibles (Recommended)

	Rear (mm)	Sides (mm)
All configurations	10	7

\*Excluding packaging

### 3. INSTALLATION INSTRUCTIONS

#### CO ALARM

Building regulations require that whenever a new or replacement fixed solid fuel or wood / biomass appliance is installed in a dwelling, a carbon monoxide (CO) alarm must be fitted in the same room as the appliance, in accordance with BS EN 50292:2002. Please consult Document J of the Building Regulations for detailed guidance. The installation of an alarm must not be considered a substitute for either installing the appliance correctly, or ensuring regular servicing and maintenance of the appliance and chimney system.

#### UNPACKING THE APPLIANCE

The stove comes bolted and strapped to a pallet, for simple and secure transportation. To unpack, first remove the strapping and packaging. Then remove the two bolts holding the stove to the pallet, using a 10mm spanner. Whilst heat-treated, the pallet has been produced from timber that is appropriate for use as kindling, so can be broken up and chopped, for this purpose. Finally, dispose of the remaining packaging responsibly.

#### PREPARING THE HOTPLATE

The hotplate has been fixed in position for transit, using two socket screws. Before installation, these two screws should be removed, (using a 5mm Allen key), and replaced with the two supplied grub screws. The grub screws should be screwed in place, (using a 4mm Allen key), so as to protect the thread from being filling with dirt.

#### CHIMNEY & FLUE

The stove must be installed and connected to the chimney and flue pipe in line with the current requirements of Building Regulations. As a basic guideline, the chimney and flue installation should...

- ✓ Have an internal cross section area of approximately 320cm<sup>2</sup>, with a minimum diameter or square side length of 125mm<sup>2</sup>.
- ✓ Have a minimum height of 4.5m.

### 3. INSTALLATION INSTRUCTIONS

- ✓ Be free from cracks, severe bends, voids and obstructions. (Typically, the first 500mm should be free from bends, whilst any subsequent bends should not be greater than 45°).
- ✓ Ensure where a flue pipe connects to a chimney, the flue passes past the point where the chimney narrows.
- ✓ Ensure an appropriate flue draft, as detailed within the Flue Draft section of this manual.
- ✓ Take into consideration future access for maintenance and sweeping.
- ✓ The flue must be capped / have a cowl, to prevent any ingress of rain.  
A single wall starter length with a single to twin wall adapter will be needed to use twin wall insulated flue. The stove will need to be moved away from the wall to accommodate use of twin wall flue.

Please consult Document J of the Building Regulations for detailed guidance.

#### **HEARTH**

The hearth must be at least 12mm thick and of non-combustible material(s). When in use, the temperature on the horizontal surface below the stove has been measured at <100°C. There must be a minimum distance of 225mm from the front of the stove, to the front of the hearth. The hearth must be of robust construction, capable of taking the weight of the stove. Please consult Document J of the Building Regulations for detailed guidance.

#### **CLEARANCE DISTANCES (COMBUSTIBLES & NON-COMBUSTIBLES)**

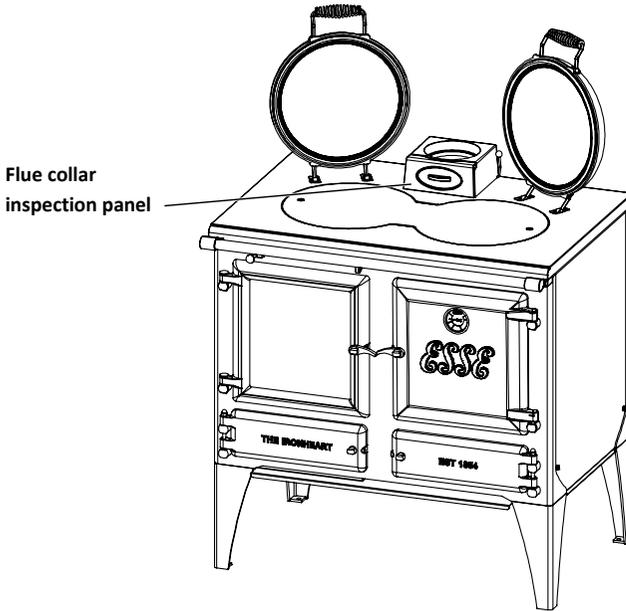
Required distances to combustibles can be found in the Product Specification section of this manual. Recommended distances to non-combustibles are also indicated, in the same section.

#### **FLUE DRAFT**

An appropriate flue draft is essential, for the stove to work safely and efficiently. When installed, and prior to commissioning, a flue draft reading should be taken, using the flue draft reading point located behind the flue collar inspection panel.

### 3. INSTALLATION INSTRUCTIONS

To use the flue draft reading point, make a small piercing through the insulating foam, through one of the two holes in the flue gasket plate.



When both the cook stove and chimney are warm, a reading in a range between 1.25mm wg (12 Pa) and 2.5mm wg (25 Pa) should be expected. Any readings significantly outside this range are likely to cause problems, so further investigation should be undertaken so as to either reduce or increase the flue draft reading, as appropriate.

#### COMMISSIONING

Once the installation has been completed, check the flue and chimney connection is fully sealed, and complete a test lighting of the cook stove. Instruct the owner on how to use the appliance, and complete the Commissioning Checklist section of this manual. Finally, ensure that you leave this manual with the owner, for their reference.

### 3. INSTALLATION INSTRUCTIONS

Please complete, for the owners records and to support any future warranty claims.

#### Retailer information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone number: \_\_\_\_\_  
\_\_\_\_\_

#### Installation information: (Essential information - must be completed)

Date of installation: \_\_\_\_\_

ESSE model: \_\_\_\_\_

Serial number: \_\_\_\_\_

#### Installing engineer information:

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone number: \_\_\_\_\_

#### Commissioning checks: (To be completed & signed for)

Flue draft reading taken and recorded: \_\_\_\_\_ (Insert reading here)

Flue & chimney setup appropriate: Yes  No

Flue & chimney swept & inspected: Yes  No

Smoke test completed on appliance: Yes  No

Clearance to combustibles checked: Yes  No

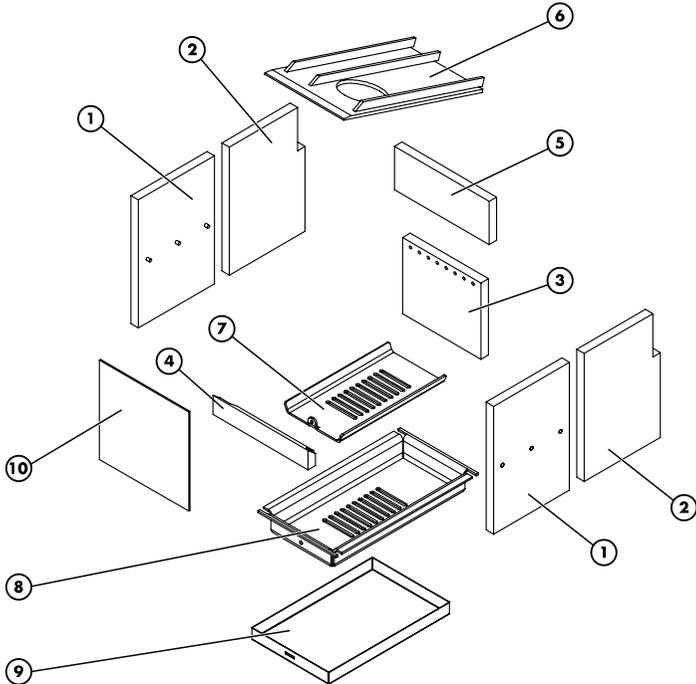
CO alarm fitted: Yes  No

Operation of appliance explained to owner: Yes  No

Instruction manual handed over to owner: Yes  No

Signature: \_\_\_\_\_ Print name: \_\_\_\_\_

## 4. CONSUMABLE PARTS



Item	Part No.	Description	Item	Part No.	Description
1	I-IH-200-001	Front LH/RH Brick With Pins (X2)	6	EW-012	Cast Iron Baffle
2	I-IH-200-105	Back LH/RH Brick (X2)	7	I-IH-200-109	Steel Riddle Plate
3	I-IH-200-103	Back Lower Brick	8	I-IH-200-110	Steel Fire Grate
4	I-IH-200-101	Front Brick	9	I-IH-200-112	Ashpan
5	ES102	Back Top Brick	10	FC-045	Glass Window

The Bolster Lid Rope Seals will also need replacing during the life of the cook stove.

The above consumable parts can be ordered through your retailer. If your retailer is unable to supply the consumable parts, or you would like to discuss the availability of spare parts, please contact ESSE directly.

## 5. DECLARATION OF PERFORMANCE



### DECLARATION OF PERFORMANCE

(In accordance with Regulation (EU) No. 305/2011)

- 1. Unique identification code of the product type**  
ESSE IH-ECO
- 2. Product description**  
Ironheart
- 3. Intended use of the product**  
Residential cookers fired by solid fuel
- 4. Manufacturer**  
ESSE Engineering Ltd, Ouzledale Foundry, Long Ing, Barnoldswick, Lancashire, UK, BB18 6BJ
- 5. Authorised representative**  
n/a
- 6. System of assessment**  
System 3
- 7. Notified laboratory**  
The notified laboratory SGS Nederland BV, laboratory No. 0608 preformed the determination of the product type on the basis of type testing under system 3 and issued test report Ref. EZKA/2020-01/00032-1
- 8. Declared performance**

	Wood	Ancit
• Harmonised technical specification	EN 12815:2001 +A1:2004	n/a
• Essential characteristics	Performance	n/a
• Fire safety	-	-
- Reaction to fire	A1	n/a
- Distance to combustible materials	Rear: 400mm Sides: 500mm	n/a
- Risk of burning fuel escaping	Pass	n/a
• Emission of combustible product (CO)	0.07%	n/a
• Surface Temperature	Pass	n/a
• Electrical Safety	n/a	n/a
• Cleanability	Pass	n/a
• Maximum operating pressure	n/a	n/a
• Flue gas temperature at nominal heat output	215°C	n/a
• Mechanical resistance (to carry a chimney / flue)	Pass	n/a
• Thermal properties	-	-
- Nominal heat output	7.6 kW	n/a
- Room heating output	7.6 kW	n/a
- Water heating output	n/a	n/a
• Efficiency	80.6%	n/a

- 9. Conformity**  
The performance of the product identified in points 1 and 2 is in conformity with the declared performance given in point 8

Signed for on behalf of the manufacturer

Signed M. Ashby Date 09/06/20

Martin Ashby  
Managing Director

R1 06/20

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