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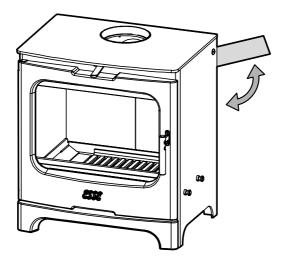
# **1. WELCOME TO YOUR ESSE**

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 stove. All ESSE 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 room heating, comfort and joy.

Before you fire up your ESSE 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 stove is not suitable for use in a shared flue.

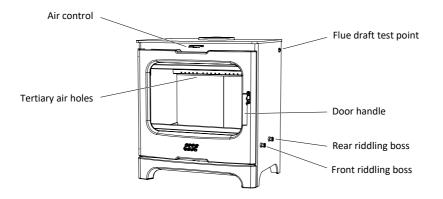
As you would expect, when in use, all parts of the stove become hot, so always use the supplied operating tool or glove when interacting with your ESSE stove. A fireguard manufactured in accordance with BS 8423:2002 should be used, if it is likely that children or pets may come into contact with the 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 stove. The key information relating to your stove, including the serial number, can be found on the data plate, located at the rear of the stove. Simply swing the data plate up to access the information. Please quote the model and serial number, in any future communication with your retailer or the manufacturer.



Data plate location

# 2. QUICK START GUIDE



INCLUDED WITH YOUR ESSE STOVE		
√	Instruction manual	
$\checkmark$	Operating tool	
$\checkmark$	Stove glove	
$\checkmark$	Top flue blanking plate	
$\checkmark$	4 x Height adjusting bolts	
√	Welcome to ESSE booklet	
$\checkmark$	Warranty card	
✓	Energy label	

<b>BEFORE LIGHTING THE STOVE</b>		
✓ Fully close fire grate		
$\checkmark$	Fully <b>open</b> Air Control	

# LIGHTING THE STOVE

Place kindling wood on top of	Once flames on the kindling	Once established, add larger
fire lighters / newspaper, and	have taken hold, add small	logs, fully close the door, and
carefully light, leaving the	logs, again leaving the door	adjust the air control to
door slightly ajar.	slightly ajar.	control the fire.

#### CO ALARM

Your installer should have ensured that you have a Carbon Monoxide (CO) alarm fitted, in the same room as your ESSE 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. Permanent external air vents are required for stoves with a nominal output of greater than 5kW. Your installer will have advised you on the requirements, within your situation. For more information, see the 'Ventilation' section of the 'Installation Instructions' part of this document.

## FUEL

Your ESSE stove has been designed to burn wood logs, of appropriate quality and moisture content.

Approved fuels	Unapproved fuels
✓ Wood logs	X Wet wood
	X Overly dry wood
	X Treated timber
	X Smokeless mineral fuel
	X Petroleum based fuels
	X Bituminous house coal

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.

## WOOD LOGS

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

# **3. OPERATING INSTRUCTIONS**

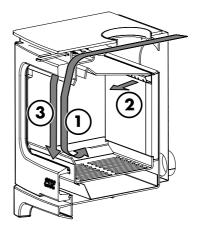
For best results, we recommend your wood logs are cut to a length of 300mm, and a diameter / width of 70mm.

### COMBUSTION AIR AND AIRWASH

ESSE stoves are designed to achieve the most efficient heat outputs, with the 'cleanest burn'. To achieve this, significant research and development investment has been given to how to provide appropriate levels of 'combustion air' to the correct parts of the fire, at the correct time of the burn cycle.

Combustion air is drawn into your ESSE stove from two locations, one of which is controllable. It is important to understand the function of each, and where appropriate, how they are controlled.

- 1. Controllable air
- 2. Tertiary air
- 3. Airwash



## **Combustion air & Airwash**

Combustion Air	Controllable Combustion Air enters your ESSE stove from the top of the appliance, dropping down into the firebox, via the 'Airwash' (see below). The Air control incorporates Precision Burn™ technology, to provide a more precise adjustment, to better control the air supply and burn rate. When moved to the right, there is more air and a fiercer burn rate, whilst moved to the left, there is less air, and softer burn rate.
Tertiary Air	Tertiary Air enters your ESSE stove from the rear, through the rear fire bricks, to provide additional combustion air directly into the flames. The amount of Tertiary Air is not adjustable, but carefully positioned to help achieve improved efficiency and a clean burn.
Airwash	The Airwash is created by Controllable Combustion Air being pushed down the inside face of the glass window, creating an air curtain that helps reduce build-up of soot, keeping the glass clean.

# **3. OPERATING INSTRUCTIONS**



Air control, incorporating Precision Burn<sup>™</sup> technology

#### LIGHTING YOUR ESSE STOVE

When your ESSE stove is first lit, it may smoke or give off an odour. 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. You may hear 'ticking noises' for a short period each time the stove is lit. This is also quite normal, and will stop once the sheet steel and cast iron have warmed up to temperature.

The pallet that your ESSE stove was supplied on has been produced from timer 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 stove unattended, until the fire is established, the door is fully closed, and you have adjusted the controller(s) to the appropriate level.



Before lighting your ESSE stove, ensure that the fire grate is fully closed, (pushed to the left), and that Air Control is fully open (Pushed to the right).





Lay three small pieces of kindling wood next to each other in the centre of the grate, and place a few firelighters / tightly rolled up newspaper on top of them. On top, place two pieces of kindling wood at ninety degrees to the first three, either side of the firelighters / newspaper. Add three more pieces of kindling wood on top, in line with the bottom row, to create a small lattice structure. Safely light the firelighters / newspaper, and allow the flames to take hold.

Once the fire has taken hold, place two small wood logs onto the growing flames, and close the door, but leaving it slightly ajar. Once the flames have established on the small wood logs, (typically within 3-5 minutes), add the desired load of larger wood logs, and fully close the door. When the fire has fully established, slowly reduce the Controllable Combustion Air volume, by moving the Air Control to the left. Continue to use the Air Control 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 2.1Kg / hour, which when stacked in the firebox, should not sit above the row of Tertiary Air holes, located at the rear of the firebox.



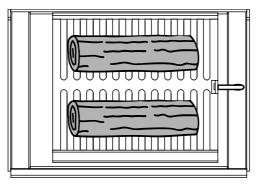
The door should only be opened during the initial lighting and refuelling of your ESSE stove. If left open during normal operation, you may experience excessive smoke emitting into your room.

### 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. For the most efficient and cleanest burn, two wood logs should be placed running from left to right, as shown below. Close the door, and open the Air Control, to allow flames to take hold on the new wood logs. Once the fire is once again established, slowly reduce the controllable air volume, by moving the control to the left. Continue to use the Air Control to control the fire, until the flames are slowly 'dancing' on top of the wood logs.

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 stove.



Optimum positioning of wood logs, when refuelling - Top View

#### **REDUCED BURNING**

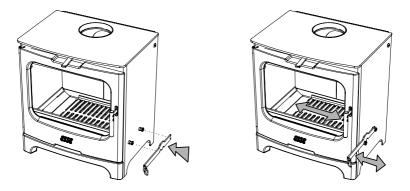
Once a fire has established, close down the air control, and ensure that the door is firmly closed. Experimentation with the setting of air controls may be required, depending upon the flue draft and fuel type. A build-up of soot on the inside face of the glass window is likely.

#### THE FIRE GRATE AND RIDDLING

Your ESSE 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 between the left and right position, forcing excess ash to fall through the slots in both parts, into the Ashpan below.

To 'riddle' the Fire Grate, position the straight end of the Operating Tool on the rear Riddling Boss, so it rests on the top of the front Riddling Boss. Alternate the Operating Tool position quickly between the left and right side position, which will force ash to drop into the Ashpan.



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

#### ASHPAN

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

When the Fire Grate 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 folded 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 stove.

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 stove. Never pour hot ash into plastic waste bags or bins.

#### **CLEANING & MAINTENANCE**

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

 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.

#### CHIMNEY SWEEPING

To ensure continued safe and efficient use of your ESSE 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 both the Air Controls to the left, 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.

#### SEASONAL USE

If your ESSE 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 Control to a central position – This will allow a flow of air, preventing a build-up of moisture inside your ESSE stove, which can lead to rusting. Before relighting the appliance, remove the top baffle bricks, to remove any debris, and check for blockages within the flue.

#### WARRANTY

Your ESSE stove has been built to the highest standard using premium materials, and comes with a two year manufacturer's warranty. Register your ESSE stove, online at www.esse.com/warranty-registration.

The conditions of your warranty are...

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

### TROUBLESHOOTING

Problem	Cause	Solution
	Wet wood logs	• Use wood logs with 15-20% moisture content
Window glass blackening	• 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
	Too little combustion air	• Increase the setting of the air controller
Fire will not light	Wet wood logs	• Use wood logs with 15-20% moisture content
	• Flue draft is too low	• Consult with your installer, to rectify
	• Too much combustion air	• Reduce the setting of the air controller
Fire burns too quickly	Overly dry wood logs	• Use wood logs with 15-20% moisture content
	• Flue draft is too high	Consult with your installer, to rectify

#### 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.

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. Permanent external air vents are required for stoves with a nominal output of greater than 5kW. Document J of the Building Regulations explains that should a stove be installed in a room with an air permeability of lower than 5.0m<sup>3</sup>/(h.m<sup>2</sup>), 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.

Air Permeability	Minimum air vent area (cm²)	
m3/(h.m²)	ESSE 700 Series	
>5.0	11.0	
<5.0	38.5	

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.

## **PRODUCT SPECIFICATION – 700 SERIES**

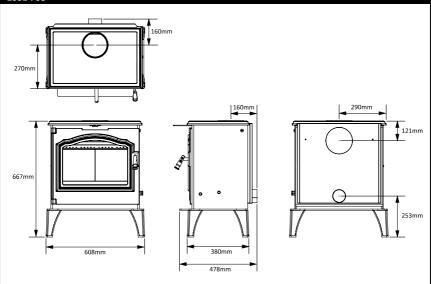
Key Product Specifications		
	Wood Logs	
Nominal Heat Output (Kw)	9.6	
Weight (Kg)	99.0	
Minimum Flue Draft	12 Pa	
Flue Gas Mass Flow (g/s)	8.1	
Flue temperature (°C)	347	
Flue Diameter	6″	
C <sub>n</sub> H <sub>m</sub> emission (at 13% O2)	103 Nmg/m <sup>3</sup>	
NOx emission (at 13% O2)	101 Nmg/m <sup>3</sup>	
Particulates (at 13% O2)	33 Nmg/m <sup>3</sup>	

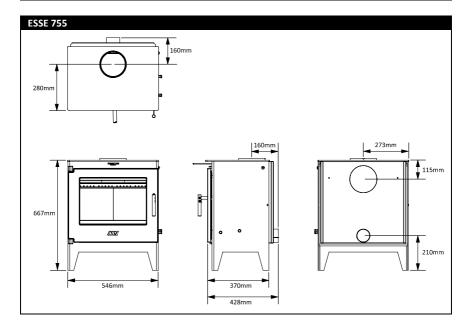
Distance To Combustibles			
	Rear (mm)	Sides (mm)	
With single wall flue & supplied heatshield	200	500	
With double wall flue & supplied heatshield	100	500	

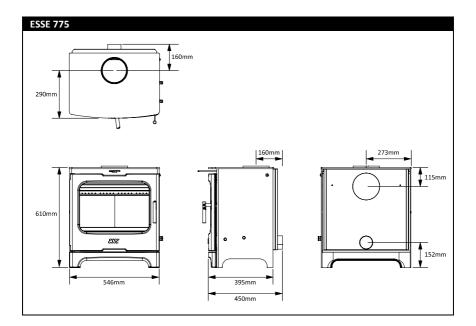
Distance To Non-Combustibles (Recommended)		
	Rear (mm)	Sides (mm)
All configurations	150	150

The floor temperature 900mm from the stove front has been measured at 54°C.









#### 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.

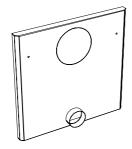
#### UNPACKING THE APPLIANCE

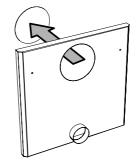
The stove comes bolted and strapped to a pallet, for simple and secure transportation. To unpack, first remove the strapping and packaging. Then remove the two bolts holding the stove to the pallet, using a 10mm spanner. Locate the four Height Adjusting Bolts supplied with the appliance, and insert them from below into the same four holes in the feet of the stove, using a 13mm spanner. These can then be individually tightened / loosened as required, to level the stove on an uneven / sloping hearth. 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.

#### TOP OR REAR FLUE CONNECTION

The appliance can be installed with either a top or rear connected 6" flue. The stove comes supplied with a top connection, so if a rear connected flue is desired, it must be converted before fitting in place.

Before converting the stove to rear flue connection, the rear heatshield must be removed from the stove, (by releasing the two rear fixings), and the knock out section removed. After converting the stove to rear flue connection, the heat shield must then be reinstalled onto the stove.





With rear flue knockout removed

Supplied heatshield

To convert the stove to rear flue connection...



Top flue connection (As factory supplied)



Rear flue connection (After conversion)

- 1. Remove the heatshield, and remove the knock out section (as escribed above).
- 2. Remove the flue plate, from the rear of the stove, by unscrewing the three outer fixing screws (using a 13mm spanner).
- 3. Open the stove door, and remove the top steel baffle.
- 4. Remove the two nuts, securing the stove top in place, (using a 13mm spanner), and lift it clear from the stove.
- 5. Release the steel flue collar, by unscrewing the three fixing Philips head bolts.
- 6. Reposition the steel flue collar onto the rear of the stove, (where the flue plate was previously located), reusing the three Philips head bolts.
- 7. Reposition the flue plate around the top flue port, and fix in place to seal.
- 8. Replace the stove top into position, and secure using the two retained fixing nuts.
- 9. Replace the top steel baffle.
- 10. Drop the supplied flue blanking disk into the circular cut-out in the stove top.
- 11. If the flue blanking disk doesn't fit flush with the stove top, remove it and adjust the three inner screws heads on the flue plate, so as to make the blanking disk sit flush.

#### **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.
- Be free from cracks, severe bends, voids and obstructions.

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.

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)**

The appliance comes with a rear heatshield, which must be installed, irrespective whether the surrounding materials are combustible or non-combustible. Required distances to combustibles, (with the supplied heatshield), can be found in the Product Specification section of this manual. If a double wall flue pipe is used for the installation, the permitted distance to combustibles is reduced. 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 in the top of the right hand side of the stove. When both the 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 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.

# 5. APPLIANCE COMMISSIONING CHECKLIST

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

Name:

Address:

Telephone number:

Date of installation:

ESSE stove model:

Serial number:

Name:

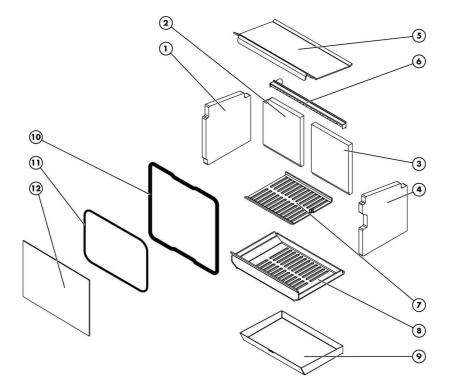
Address:

Telephone number:

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:



Item	Part No.	Description	Item	Part No.	Description
1	700-002A	700 Brick LH Side	7	700-007	Steel Fire Plate
2	700-003B	700 Brick Rear LH	8	700-006	Steel Fire Grate
3	700-003A	700 Brick Rear RH	9	700-45	Ashpan
4	700-002B	700 Brick RH Side	10	ROPE/CUT.GRY 13MM	Door Rope
5	S-MF-775-109	Steel Baffle	11	ROPE/CUT.GRY 3MM	Glass Rope
6	700-204B	Tertiary Air Bar	12	S-MF-110-019	Glass Window

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.



#### DECLARATION OF PERFORMANCE

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

- 1. Unique identification code of the product type
- ESSE 705, ESSE 755 & ESSE 775
- 2. Product description
- ESSE 705, ESSE 755 & ESSE 775
- 3. Intended use of the product
  - Residential roomheater fired by solid fuel without hot water supply
- 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/2020-12/00003-1

#### 8. Declared performance

	Wood
<ul> <li>Harmonised technical specification</li> </ul>	BS EN 13240:2001 + A2:2004
<ul> <li>Essential characteristics</li> </ul>	Performance
Fire safety	
- Reaction to fire	A1
<ul> <li>Distance to combustible materials / (With double wall flue)</li> </ul>	Rear: 200mm / (100mm) Sides: 500mm / (500mm)
<ul> <li>Risk of burning fuel escaping</li> </ul>	Pass
<ul> <li>Emission of combustible product (CO)</li> </ul>	
- Mean CO [at 13 % O2] (%)	0.07%
<ul> <li>Mean CnHm [at 13 % O2] (Nmg/m3)</li> </ul>	103
<ul> <li>Mean NOx [at 13 % O2] (Nmg/m3)</li> </ul>	101
- DIN Plus particulates [at 13 % O2] (Nmg/m3)	33
Surface Temperature	Pass
Electrical Safety	n/a
Cleanability	Pass
<ul> <li>Flue gas temperature at nominal heat output</li> </ul>	347°C
<ul> <li>Mechanical resistance (to carry a chimney / flue)</li> </ul>	Pass
Thermal properties	
- Nominal heat output	9.6kW
- Room heating output	9.6kW
- Water heating output	n/a
Efficiency	76.0%

#### 9. Conformity

Signed

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 M. Ashh

> Martin Ashby Managing Director

04/01/21

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R1 01/21

ESSE Engineering Ltd.,

Date

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