Owner's Manual

Wood-Burning Stove

DEE & AVON

4.4kw & 4.8kw nominal heat output

Please hand these instructions to the stove user when the installation is complete. Leave the stove ready for operation and instruct the user in the correct use of the appliance and operation of controls.

Important: – This product must be installed by a suitably qualified installer.



PLEASE READ ALL THESE INSTRUCTIONS CAREFULLY!
For safety reasons it is essential that your stove is correctly installed and operated. Our stove cannot accept responsibility for any fault or consequential problems arising through incorrect installation or operation.

CONTENTS

Section **Page No**

1. 3D VIEWS ……2
2. Installation Instructions……2
3.1 Warnings and important safety information…….....2

3. Installation Information……3

3.1 Chimney…….3

3.2 Connection to Chimney…….4

3.3 Material Clearances…….....4

3.4 Hearths……..4

4. Technical Data…….4

5. Operating Instructions……..5

5.1 Air controls ……5

5.2 Cleaning…….6

5.3 Fuels……..6

5.4 Notes on Wood Burning……....6

5.5 Lighting the stove …….7

5.6 Re-fueling…….7

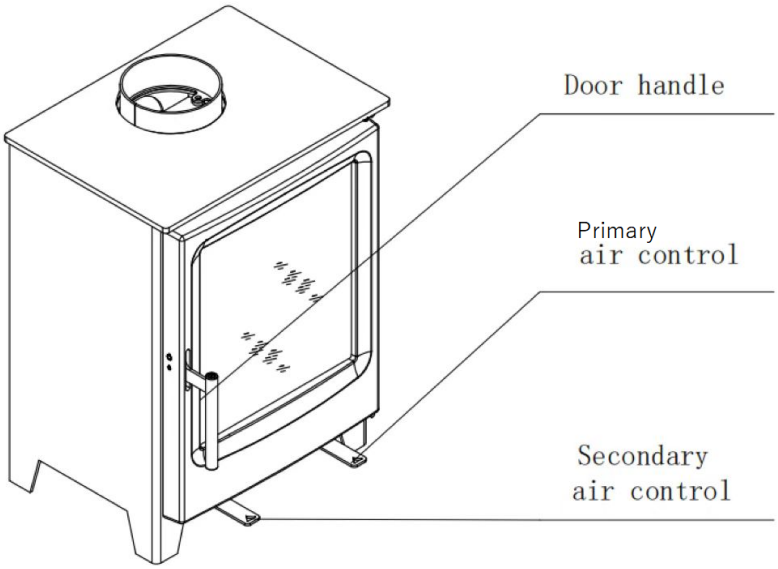
5.7 Shutting down……7

5.8 Maintenance……....7

6. Safety Notes for your Guidance……8

7. Frequently Asked Questions……10

1. 3D VIEWS



2、 Installation Instructions

2.1 WARNINGS AND IMPORTANT SAFETY INFORMATION

2.1.1 READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION!

These instructions cover the basic principles to ensure satisfactory installation of the stove, although detail may need slight modification to suit particular local site conditions. In all cases the installation must comply with current local regulations including Building Regulations, Local Authority By-laws and other specifications.

2.1.2 Important Chimney Warning

This stove must not be installed into a chimney that serves any other heating appliance.

2.1.3 Extractor Fan Warning

There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit fumes into the room.

2.1.4 Cleaning and Chimney Sweeping

The appliance, flue & chimney must be cleaned and checked internally and externally regularly in use and especially after a period on disuse (e.g. after summer). Lift down the baffle at least weekly to check for build up of soot or debris on the top from the flue pipe. Remove the baffle and check the flue spigot and connector is fully clear at regular intervals. The chimney and flue connector must be swept at least annually, more often when used with sooty fuels or damp wood. Any loose, broken or leaking joints or flue ways MUST be repaired immediately.

2.1.5 Fuels

Only use recommended fuels which are seasoned (or kiln dried) wood logs or Anthracite. The appliance can be damaged by burning petroleum coke, liquid fuels or general rubbish and this will invalidate

your warranty and risk your personal safety. The appliance must not be used as a rubbish incinerator.

2.1.6 Maintenance
Annual checking and servicing of the appliance and flue by a competent engineer is recommended.

2.1.7 Ventilation
Adequate ventilation is ESSENTIAL for the safe and efficient operation of any solid fuel or wood burning appliance. Ventilation MUST be provided where required by the stove output or flue under-performance. Keep all ventilation clear and free of blockage.

Health And Safety Precautions

2.1.8 Handling
Adequate facilities must be available for unloading and site handling. The stove is very heavily built so always ask for assistance when lifting and sitting the stove.

2.1.9 Fire Cement
High-temperature resistant firebrick is used in the chamber of the stove.

2.1.10 Asbestos
This stove contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek specialist guidance and use appropriate protective equipment.

2.1.11 Metal Parts
When installing or servicing this stove, proper care should be taken to avoid the possibility of personal injury.

3.0 Installation Information

3.1 Chimney
The chimney height and the position of the chimney terminal should conform to Building Regulations. Minimum chimney height is 4.5m. Check that the chimney is in good condition, dry, free from cracks and obstructions. **The diameter of the flue should be 127mm.**If any of these requirements are not met, the chimney should be lined by a suitable method. The chimney must be swept before connection to the stove. Where the chimney is believed to have previously served an open fire installation, it is possible that the higher flue gas temperature from the stove may loosen deposits that were previously firmly adhered, with the consequent risk of flue blockage. It is therefore recommended that the chimney be swept a second time within a month of regular use after installation.

If you have any doubts about the suitability of your chimney, consult your local dealer/stockist or chimney specialist. These chimneys must be fitted in accordance with the manufacturer's instructions and Building Regulations.

3.2 Connection to the Chimney
This appliance is **not** suitable for use in a shared flue. This appliance requires a direct flue connection to the spigot. If practical, an existing fireplace opening can be bricked up or sealed with a register plate and a short length of flue pipe of a minimum 180mm internal diameter may then be used to connect the stove to the register plate in the chimney. This flue pipe should conform to Building Regulations. The stove must be insulated and properly fitted into the fireplace opening by back filling with 6:1 ratio vermiculite & cement mixture using minimal water through the top of the fireplace or flue spigot opening. The surface should be

finished using 1:1:8 mix of cement, lime and sand. The connecting pipe is fitted with the spigot pushed up from **inside** the stove and rotated onto its keyhole slots to join to the pipe. Ensure that the pipe end is no closer than 76mm to the side or rear chimney walls.

This appliance is **not** suitable for use in a shared flue. This appliance requires a direct flue connection to the spigot. It is **essential** that all connections between the stove and chimney-flue are sealed and made airtight with sealing rope, clamping rings and/or fire cement or heat resisting cement where required.
Both the chimney and flue pipe must be accessible for cleaning and if ANY parts of the chimney cannot be reached through the stove (with baffle removed), a soot door must be fitted in a suitable position to enable this to be done.

3.3 Material Clearances

Safety Distances from Combustible Surfaces:

a>500mm b>200mm c>200mm
a: clear from the front of the stove
b: clear from the back of the stove
c: clear from sides of the stove

In addition it is strongly recommended that any furniture or other combustible materials are kept at least 1100mm clear from the front of the stove.

3.4 Hearths:

The appliance shall be installed on a floor with adequate load-bearing capacity. If the existing construction does not meet this requirement, suitable measures (e.g. load distributing plate) should be provided to achieve it.

4.0 Technical Data

Model	DEE	AVON
Appliance weight (Kg)	75	88
Efficiency (%) on Wood fuel	82.8%	77%
Declared nominal output (kW)	4.4	4.8
CO emission (Vol %) @13% O2	0.06%	0.07%
Dust emission(mg/Nm3)@13% O2	28	39
NOX emission(mg/Nm3)@13% O2	122	142
CxHy emission(mg/Nm3)@13% O2	44	59

Model	DEE	AVON
Appliance weight (Kg)	75	88
Efficiency (%) on Anthracite fuel	84.5%	82%
Declared nominal output (kW)	4.5	4.9
CO emission (Vol %) @13% O2	0.02%	0.04%
Dust emission(mg/Nm3)@13% O2	16	14
NOX emission(mg/Nm3)@13% O2	136	153
CxHy emission(mg/Nm3)@13% O2	4	9

*Average reading at nominal output

5.0 Operating Instructions

This appliance is not designed for open operation and therefore should **not** be operated with the doors open.

This stove is designed to burn wood cleanly with high efficiency. However, for this product to work properly it must be used correctly.

It is **essential** that the stove has an adequate air supply for combustion and ventilation. The primary, secondary and tertiary air inlets must be kept clear from obstruction.
Warning! This appliance will be very **hot** when in operation and due care should be taken when operating the controls. A leather glove is provided to assist safe operation.

Do not use an aerosol spray on or near the stove when it is alight.

5.1 Air Control

Primary Air

Primary air is controlled via the sliding air control at the bottom right of the stove, just below the door. This provides a conventional air under draught to the bed of the fire. The primary air is used when lighting the stoves or when the fuel bed goes very low. Once the stove is properly lit the primary air should be fully closed. When sliding the controller outwards, the air inlet will increase, vice versa. Pull the controller outwards all over to the end, the primary air will be fully opened. Pull the controller inwards all over to the end, the primary air will be shut down.

Secondary Air (Air Wash)

Our stoves are provided with a sophisticated preheated “air wash” system. This secondary air supply to the stove is controlled via sliding the bottom left of the stove, just below the door. If you want clean glass, always leave this control open some way whilst burning unless the stove is being shut right down for a long period. Moving the sliding control outwards increases the burn rate whilst moving it inwards reduces it. There will always be a 5mm gap on the secondary air inlet even if you shut down the secondary air inlet.

Tertiary Air

Our stove also has a back tertiary air which is always opened. This will provide contentious air supply to the firebox for combustion.

Grate

This stove is fitted with a grate with a strong set of thick steel bars with suitable air slots that assist the burning of wood. It is important that the grate is cleaned free of ash each morning before lighting the stove to ensure that the primary airflow is not impeded, as this will ensure that the stove lights quickly. A build up of ash when burning wood will not usually harm the grate and indeed wood burns better on a bed of wood ash building up. Excessive wood ash build up is not to be recommended however as this would decrease the size of the firebox and consequently decrease the amount of fuel that can be put in the stove.

Ash pan

It is essential that you empty the ash pan regularly. Get the ash pan out from the stove carefully. DO NOT allow ash to build up underneath the bed as this may cause damage to the grate.

5.2 Cleaning

Glass: Despite the advanced air wash system provided, the glass will need cleaning from time to time depending on the fuel quality and burning rates used. Never clean glass when the stove is hot. Always use stove glass cleaner or ceramic hob cleaner, which is available from your stove retailer. As an alternative, use a wet cloth with some of the wood ash if burning wood but be very careful to use very clean ash so as not to scratch the glass.

Outer body: The outer body simply needs to be dusted from time to time. DO NOT use any kind of furniture polish or cleaning agent other than your stove suppliers recommended paint.

Inner firebox: It is not normally necessary to re-paint inside the firebox due to the high temperatures that mean that the paint does not have much effect before being burnt off. Steel and firebrick are resilient firebox materials and will give reliable service without major cleaning or work on the firebox.

Baffle (Top firebrick): It is essential to check the top of the baffle for build up of soot and ash regularly when in use and after a long period of no use. From time to time remove the baffle if necessary to ensure that the flue way entrance is clear.

5.3 Fuels

The appliance is fitted with a wood burning grate and the appliance has been tested and approved burning dry, well-seasoned logs. This is the recommended fuel.
With our multi-fuel kits being equipped, you can also burn anthracite inside the stove.

5.4 Notes on Wood burning

With a full load of wood, the stove will need to be refuelled approximately every 1 to 1.5 hours depending on burn rate.
Wood burns most efficiently with the primary air controls open. Carefully adjusting the primary air control and fuel load will then control the burn rate of the stove. Always make sure that flames are visible above the wood after re-fuelling for cleanest burning. Open the primary air control full for 3 to 5 minutes to achieve full flames above the fuel.

Wood burns best on a bed of ash and it is therefore only necessary to remove surplus ash from the stove occasionally**. If the grate is completely clear, place a few handfuls of ash into the slots in the grate to help the fire bed build up.**

Burn only dry, well-seasoned wood, which should have been cut, split and stacked - under protection from rain - for at least 12-24 months with free air movement around the sides of the stack to enable it to dry out. Burning wet or unseasoned wood will create tar deposits in the stove and chimney and will not produce a satisfactory heat output. **Wood that is not properly dry ('dry' is considered to be less than 20% internal moisture content) uses up energy from the burn process to evaporate the water inside the wood thus creating very poor conditions for combustion**. The main cause of burning problems with wood stoves is due to excessively damp wood. Wood can appear perfectly dry on the outside but still contain 40-50% water on the inside. A moisture meter can be purchased from some stove and equipment suppliers if you wish to check your wood source is correct.

5.5 Lighting the Stove

We recommend that you have two or three small fires before you operate your stove to its maximum heat output. This is to allow the paint to cure in steadily and to give a long service life of the paint finish. During this curing in process you may notice an unpleasant smell whilst the finishes finally cure. It is non-toxic, but for your comfort we would suggest that during this period you leave all doors and windows open.

First, open the primary and secondary air wash control fully. Load the firebox with plenty of starting fuel, i.e. paper, dry sticks and/or firelighters. Light the fire at the base leaving the primary and secondary air control fully open. Leave the door slightly ajar for 10 minutes to enhance initial starting and reduce smoke emission – DO NOT leave the stove unattended if the door is left ajar. Allow the fuel to reach a steady glow and build the fire up gradually by adding a few small sticks or well split logs at a time. Once you have a good fire bed established across the grate, further fuel can be added step by step as required. Don't be tempted to overload the fire bed with fuel all at once or close down the air controls too much until the fire is

really well established for some time. Once the ignition period is well under way, close the primary air and gradually reduce the secondary air wash control opening to establish the burning intensity you require.

5.6 Re-fuelling

When burning wood, the fire will die down as the fuel is consumed. When the flames disappear and the remainder is breaking down into glowing embers it is an appropriate time to consider re-fuelling. NOTE: If the flames disappear and there are still lumps of solid wood left this indicates excessive moisture in the wood or insufficient air supply/flue draught.

Note: To eliminate unwanted smoke emission, after loading new logs on to the fire, open the air control up fully for 3-5 minutes to boost the fire and get flames issuing from the top of the fuel as soon as possible. When flames are well established, reduce the air control to the running setting required. Burning without flames above the fuel will create unnecessary smoke.

Loading 3 to 4 medium sized logs will produce a good output with reasonable burn time, generally small logs will burn up quicker producing a high output for a short time and a large log will take longer to burn and produce less output over a given time. These appliances are approved for intermittent operation on wood (0.75 to 1.5 hour burn cycles) although much longer burn times can be achieved by fully loading the firebox, getting the fuel burning well and then shutting the air controls down. The fire will then often need reviving by first de-ashing and then using small pieces of wood and plenty of air to get flames issuing from the wood again.

5.7 Shutting Down

The stove will normally shut down by itself as the fuel is consumed. In order to shut down the stove for other reasons, close the primary air controls (if open), then close the secondary air control. If the controls are left in this position, the fire will eventually burn out. If you want to revive the fire open the secondary air controls fully.

Warning! - The stove will remain **very hot** for a considerable time after the fire has died down or been extinguished.

Warning!- Petroleum coke fuels , coal or household waste must not be burnt on this appliance.

5.8 Maintenance

Inspect the inside of the firebox and above the firebrick every week during use. **See chimney cleaning section in section 3.1 Warnings and Important Information.** Inspect the inside of the stove and the flue ways and ensure they are 100% clear after a period of disuse (e.g summer). **Only use manufacturers recommended replacement parts on the appliance**

6.0 Safety Notes for your guidance

FIRES CAN BE DANGEROUS – Always use a fireguard in the presence of children, the elderly or the infirm.

DO NOT perform modifications to the appliance as this could seriously compromise safety in operation.

DO NOT OVERFIRE – it is possible to fire the stove beyond its design capacity, this could damage the stove, so watch for signs of over firing – if any part of the stove starts to glow red, the fire is in an over fire situation and the controls should be adjusted accordingly. Never leave the stove unattended for long periods

without first adjusting the controls to a reduced and safe setting – careful air supply control should be exercised at all times.

WARNING – FUME EMISSION
Properly installed and operated, this appliance will not emit fumes. Occasional fumes from de-ashing and refuelling may occur which is not normally of serious concern. **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: -

1. Open doors and windows to ventilate room. The room shall be ventilated when the new stove is being used within 3-4 times.

2. Let the fire out, or remove and safely dispose of fuel from the appliance.

3. Check for flue chimney blockage and clean if required.

4. Do not attempt to re-light the fire until the cause has been identified and corrected.

If necessary, seek professional advice from chimney or stove specialists.

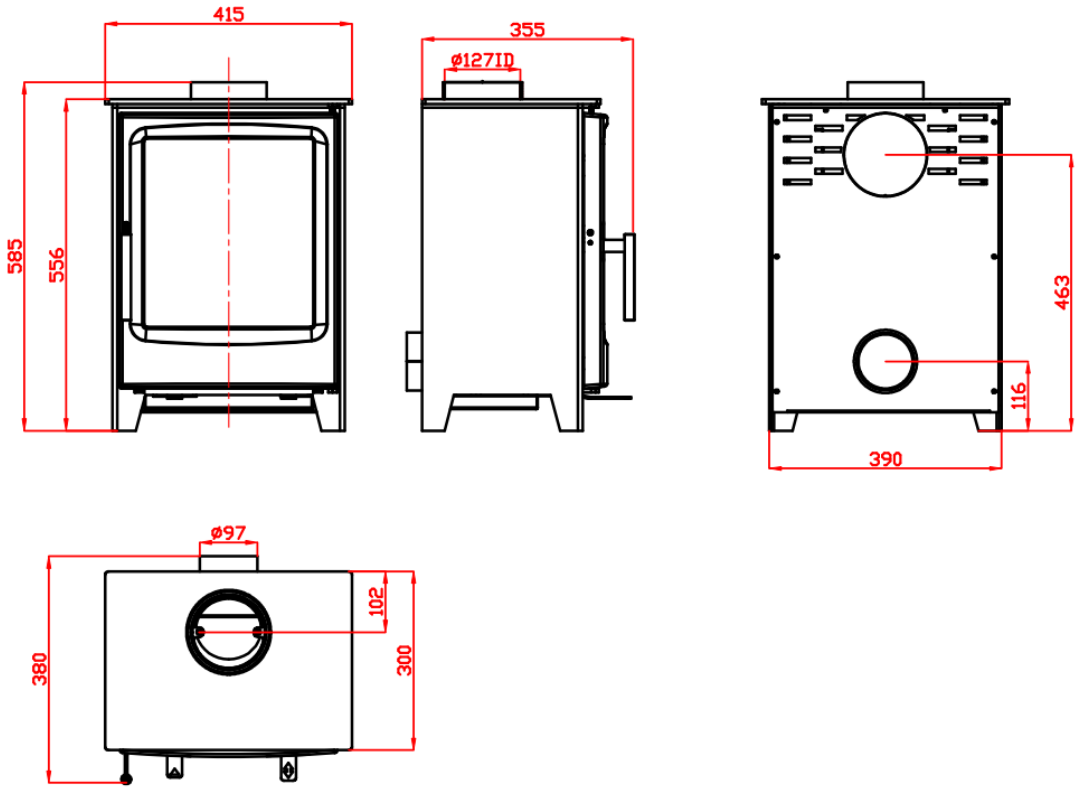
Important! – Do not fit an extractor fan in the same room as this appliance.

IN THE EVENT OF A CHIMNEY FIRE

- Raise the alarm to let others in the house know.
- Call the Fire Brigade
- Reduce the appliance-burning rate by closing the air controls fully.
- Move furniture and rugs away from the fireplace and remove any nearby ornaments.
- Place a fireguard or spark guard in front of the stove.
- Feel the chimneybreast for sign of excessive heat.
- If the wall is becoming hot, move the furniture away. Ensure that the Fire Brigade can gain access to your roof space in order to check this area for signs of fire spread.

Fig. 1 – Stove Dimensions

DEE



AVON

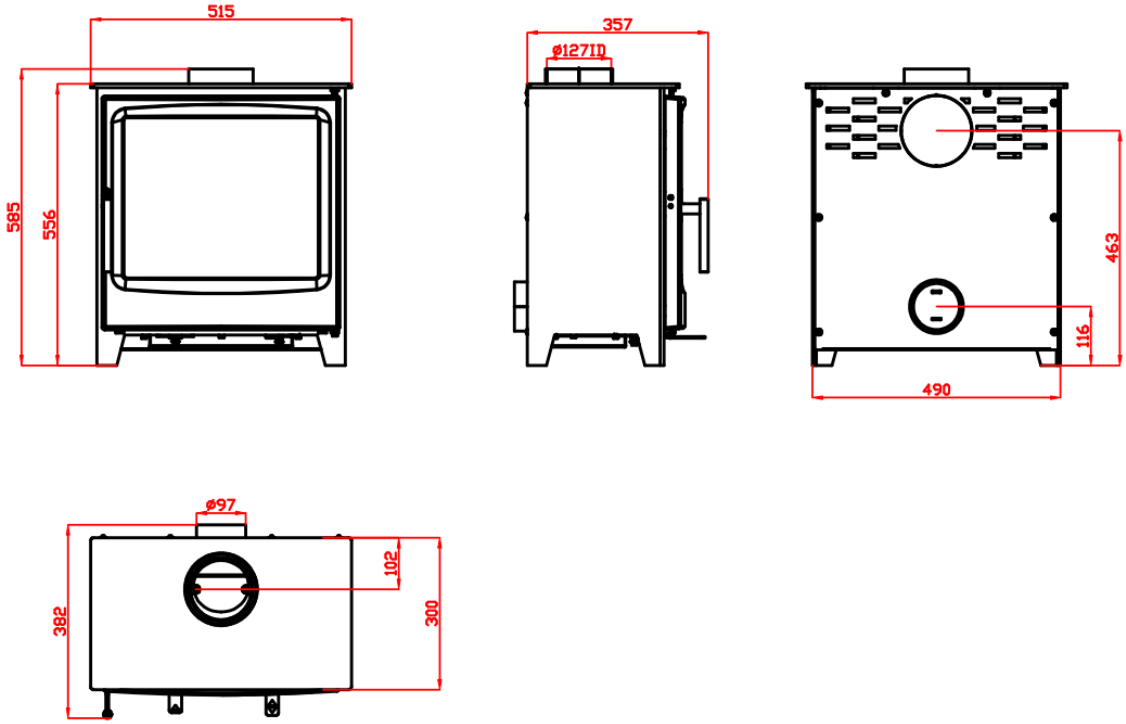
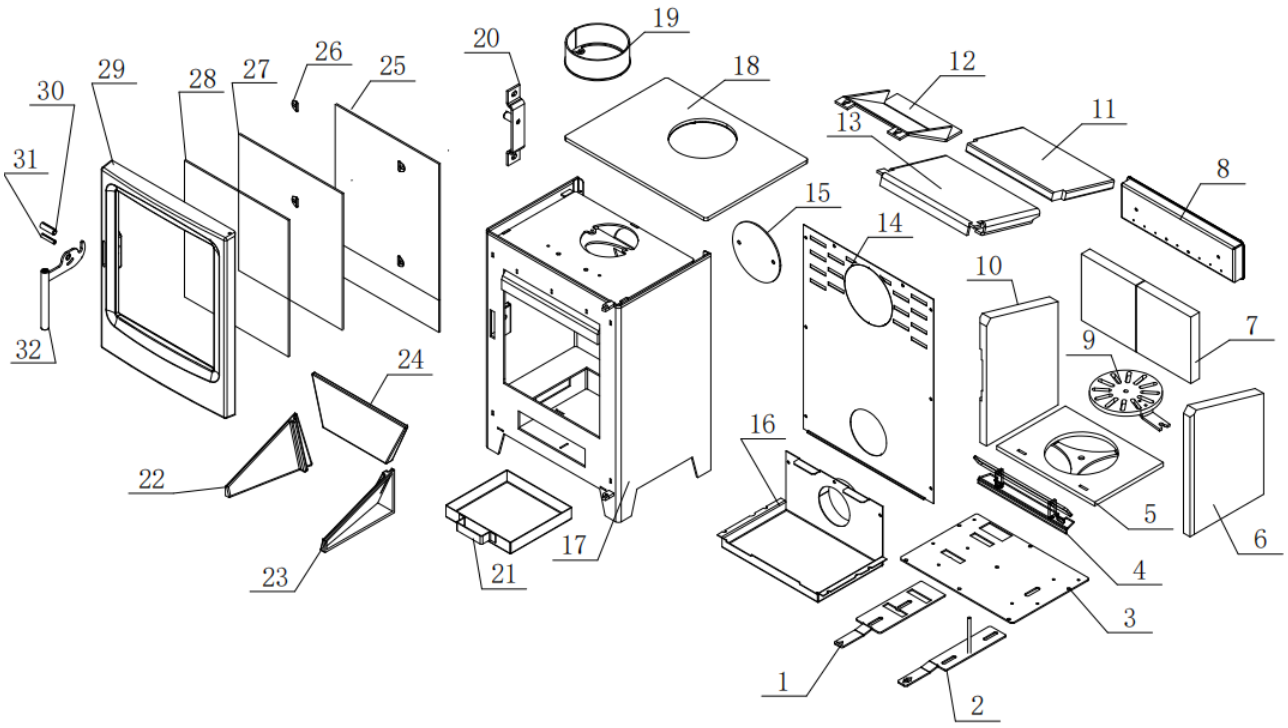


Figure 2 -Exploded view



1	Secondary Air control handle	17	Firebox
2	Primary air handle	18	Top lid
3	Air inlet plate	19	Flue collar
4	Coalcatcher	20	Door lock bracket
5	Static Grate	21	Ashbox
6	Right vermiculite	22	Left multi-fuel kit
7	Back vermiculite	23	Right multi-fuel kit
8	Tertiary air bracket	24	Back multi-fuel kit
9	Riddle grate	25	Seal rope
10	Left vermiculite	26	Glass retainer bracket
11	Top baffle vermiclute	27	Door glass
12	Baffle	28	Glass rope
13	Baffle plate	29	Cast iron door
14	Back cover plate	30	8mm spring pin
15	Flue cover plate	31	5mm spring pin
16	Air inlet box	32	Door handle

7.0 Frequently Asked Questions

1 Do stoves require a chimney? All of our multi fuel and wood burning stoves require a suitable chimney or professionally installed flue system.

2 How do I clean the chimney? You will require a chimney sweep to clean the chimney. It is essential to provide a dedicated chimney cleaning access door when installing the flue of the stove in some situations. In other situations the chimney can be swept through the firebox.

3 Who should install my stove? Our Stoves want you to enjoy the maximum performance from your appliance. To ensure this, it is essential that they are installed correctly. We strongly recommend that your stove is installed by a suitably qualified installer .

5 What warranty do I get? Our Stoves will replace, free of charge, any working part that fails (under normal operating conditions) within 12 months of purchase. Consumables such as glass, firebox lining boards or stove rope and adhesives are not guaranteed. ***A call out charge will apply if our engineer attends any stove problem that is not related to product failure.***

6 Where can I get spare parts? Your local Stove retailer will be pleased to supply spare parts and to provide any other information you require.

7 Can the doors be left open while burning? For safety and heat efficiency the doors should remain closed.

8 Why is the stove smoking when lit? A flue with back draught problems is almost certainly the cause of a smoking stove. Also check adequate ventilation is present. A qualified fitter should complete both a smoke pressure and flow test prior to fitting the stove to ascertain the integrity of the flue.

9 Why should I "Run in" my stove? To begin, light a series of small fires over a period of a few days to allow the paint finish to cure. The stove is finished with a highly heat resistant paint. The finish can be renovated with stove paint available from your local stove retailer. If the stove is not "run in" correctly, this may cause the paint to discolour and flake.

10 What is Over Firing? Your stove should never be used in a manner to cause over firing. Over firing can be caused by over loading the stove with fuel, and with primary controls open. If any part of stove glows "red" your stove is over firing and your draught control should be adjusted to restrict airflow to stove. Over firing can cause permanent damage to the appliance, which is not covered by warranty.