

# CLOCK

WOODBURNERS



## User Guide



# Welcome to your stove

**All our stoves are hand made in the uk from the start to finish a claim only few can make.**

Please note it is a legal requirement under England wales and European building regulations that the installation of the stove carried out under local authority building control approval or installed by a competent person registered with a government approved scheme.

This appliance does get hot whilst running. It is recommended that a suitable guard is used to protect children and the elderly or infirm

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Clock Woodburners are CE approved, Defra exempt and can be used in smoke controlled zones only when stop is in place and installed in accordance with the current building control regulations

At Clock Woodburners we undertake and strive for advancement in our products.

**Do not make unauthorised modifications to appliance**

**WARNING: the stove surfaces can reach extremely high temperatures take care**

You can find videos of how to use the stoves and change parts on the Clock Woodburners You Tube page

## Stove Performance Results

All efficiencies in table are Net value.

### Wood

Parameter		Large Blithfield	Standard Blithfield	Compact Blithfield	Double Blithfield	Contemporary Brocksford
Test duration	h	0.75	0.86	0.85	0.75	0.75
Total efficiency	%	78.8	84.3	82.3	75.3	81.53
Nominal heat output	kW	8	5	5	10.5	4.77
Approximate Output range	KW	6.5-10	3.5-9	3.5 -7	8-12	3.5-7
Mean CO emission (at 13 % O <sub>2</sub> )	%	0.10	0.11	0.07	0.08	0.09
Mean flue gas temperature	°C	256	227	243	365	206.6
Flue gas mass flow	g/s	8.42	3.7	4.0	8	5.19
Mean CnHm emission (at 13 % O <sub>2</sub> )	Nmg/m <sup>3</sup>	116	72	76	65	65.38
Mean NO <sub>x</sub> emission (at 13 % O <sub>2</sub> )	Nmg/m <sup>3</sup>	101	101	107	76	75
DIN Plus particulates (at 13 % O <sub>2</sub> )	Nmg/m <sup>3</sup>	19	11	24	13	21

## Stove Performance Results

All efficiencies in table are Net value.

### Smokeless

Parameter		Large Blithfield	Standard Blithfield	Compact Blithfield	Double Blithfield
Test duration	h	1.01	1	1.05	1
Total efficiency	%	78.5	77.8	79.9	78
Nominal heat output	kW	8.2	5	5.0	10.6
Approximate Output range	KW	6-10	3.5-9.5	3.5-7	8-14kw
Mean CO emission (at 13 % O <sub>2</sub> )	%	0.05	0.08	0.06	0.11
Mean flue gas temperature	°C	313	288	279	327
Flue gas mass flow	g/s	5.7	4.1	3.5	7.7
Mean CnHm emission (at 13 % O <sub>2</sub> )	Nmg/m <sup>3</sup>	44	10	50	79
Mean NO <sub>x</sub> emission (at 13 % O <sub>2</sub> )	Nmg/m <sup>3</sup>	116	107	147	65
DIN Plus particulates (at 13 % O <sub>2</sub> )	Nmg/m <sup>3</sup>	14	9	21	17

## Pre-Installation

This appliance must be fitted in accordance with the current Building Regulations and by competent registered person.

**Health and Safety Precautions** Special care must be taken when installing the stove that the requirements of the Health and Safety at Work Act are met.

Note: This appliance is heavy and must be handled with care. Adequate facilities must be available for loading, unloading and site handling.

The appliance is supplied fully assembled for a top flue arrangement.

The door and internal parts can all be removed to reduce the stove weight during installation.

The paint is soft and vulnerable to marking; refer to the maintenance section. Clock stoves must be connected to a suitable chimney. Clock strongly recommends using a complete and compliant chimney lining system.

Our stoves contain 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.

**Metal Parts** When installing or servicing the stove care should be taken to avoid the possibility of personal injury.

## Ventilation

Document J of the Building Regulations states that purpose provided ventilation is not required in England and Wales unless the appliance nominal rated output is greater than 5kW. Over 5kW 5.5 cm<sup>2</sup> of ventilation (550mm<sup>2</sup>) is required for every kW output above 5. For example 6.5 kW requires 8.25 cm<sup>2</sup> and 8 kW needs 16.5cm<sup>2</sup>. In any case, if difficulty in starting the fire or any excessive fuming is experienced, ventilation must be put in place as required to eliminate these flue problems. If a flue draught stabiliser is fitted then extra ventilation is required. See Document J of the Building Regulations for detailed guidance especially in new build properties. A specifically designed direct outside air connection may be used with these stoves to provide appropriate levels of ventilation (significantly in excess of the above requirements) directly to the stove and chimney as follows.

NOTE: As of early 2014 an ADJ vent is still required even if using an outside air connection.

Always ensure air vents are positioned where they cannot be blocked

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. If unavoidable the appliance must be checked with Approved Document (A.D.) 1.21 and necessary action taken

Action may have to be taken if other heating appliances are in the same dwelling to make sure the correct ventilation applies.

## Flue Requirements

The chimney must be swept before installation and checked for soundness and suitability. The chimney must also be free from cracks and blockages. If you find the chimney is in a poor condition then expert advice should be sought.

If the stove was fitted in place of an open fire then the chimney should be swept one month after installation to clear any soot falls which may have occurred due to the difference in combustion between the stove and the open fire.

The chimney and connecting flue pipe must not narrow to less than the size of the outlet socket of the stove at any point. This appliance must not be used in a shared flue system.

The minimum flue draft is 12 Pascal's at nominal output.

Minimum flue height required is 5 metres.

The 125mm diameter flue models may be increased to 150mm diameter.

The 125mm diameter flue should be increased to 150mm in most cases. If the smoke control mode is engaged a 125mm flue can remain, i.e. Smoke Tab removed.

If appliance is fitted in an area that has another flue (mechanical or otherwise) a flue interference test must be completed and recorded. The appliance must be checked with reference to ADJ 1.21, and necessary action taken.

## Installation

In addition to these instructions the requirements of BS 8303 and BS EN 15287 must be fulfilled. Local Authority Bylaws and Building Regulations regarding the installation of Solid Fuel burning appliances, flues and chimneys must also be taken into account. The installation is a notifiable building work as defined in the Building Regulations and that it is a legal requirement under England and Wales Building Regulations that the installation is either carried out under Local Authority Building Control approval or is installed by a competent person registered with a Government approved Competent Persons Scheme.

Therefore this appliance and installation must comply with the following regulations:

British Standards BS 8303. BS EN 15287-1:2010

Building Regulation Approved Document J for England and Wales

Building Regulations Part F for Scotland

Building Regulations/1997 Technical Guidance Approved

Document J-Heat Producing Appliances for the Republic of Ireland

Registered Body: HETAS (GB only) INFO (Ireland)

This appliance must be fitted by an approved installer or inspected and signed off by a Building Control Officer.

This appliance must be fitted on a top hat connector and the stove must be removable without affecting the lining of the chimney.

## Hearths distances

Clock freestanding stoves do not require a constructional hearth beneath them as they do not cause the floor temperature to exceed 100 degrees C. Hearths must be generally level. In all instances a non-combustible superimposed hearth extending fully underneath the stove and forming an apron of at least 300mm at the front of the stove and 150mm on either side must be provided. The superimposed hearth must not be less than 12mm thick and must have a clearly defined edge (change of level) to discourage placing of any combustible materials on or partially over it.

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.

## CO Alarms

Your installer should have fitted a CO alarm in the same room as the appliance. If the alarm sounds unexpectedly, follow the instructions given under "Warning Note" below.

**WARNING** If the CO Alarm sounds unexpectedly:-

1. Leave the premises immediately and contact installer
2. Let the fire go out.

## 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). The Secretary of State for Environment, Food and Rural Affairs has powers under the Act to authorise smokeless fuels or exempt appliances for use in smoke control areas in England. In Scotland and Wales this power rests with Ministers in the devolved administrations for those countries. Separate legislation, the Clean Air (Northern Ireland) Order 1981, applies in Northern Ireland. Therefore it is a requirement that fuels burnt or obtained for use in smoke control areas have been "authorised" in Regulations and that appliances used to burn solid fuel in those areas (other than "authorised" fuels) have been exempted by an order made and signed by the Secretary of State or Minister in the devolved administrations. The Smoke Control must be set for use in a smoke control area by the HETAS installer.

Clock Woodburners range of Wood Burning and Multi-Fuel stoves have been recommended as suitable for use in smoke control areas when burning HETAS approved wood logs and smokeless fuel only. Further information on the requirements of the Clean Air Act can be found here: <http://smokecontrol.defra.gov.uk/appliances.php>

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.

## Commissioning

Check all internal parts are fitted correctly. There are no gaps between the firebricks and baffle and the log retainer is secure.

Check the Ash pan, 15mm steel grate, Log retainer, Firebricks: rear and sides and baffle are all fitted correctly.

Check all the levers are operating fully and freely.

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 alarm must be fitted in the same room as the appliance. Further guidance is available in BS EN50292:2002 and from the alarm manufacturer's instructions. Provision 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.

On completion of installation after allowing any fire cement & mortar to dry out, the stove should be checked so that all seals/joints are sound. The flue should also be checked by lighting a small fire and checking fumes are taken from the appliance up the chimney and emitted safely.

## The Curing Process

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 process you may notice an unpleasant smell whilst the paint finally cures. 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 single air control fully. Then load the firebox with plenty of starting fuel, i.e. dry kindling sticks and firelighters. A crib lattice pattern or wigwam pattern tend to work well. If using smokeless briquetted fuel, place a layer of briquetted fuel into the firebox as well. Light the fire at the base leaving the air control fully open. Leave the door ajar for 5-10 minutes to enhance initial starting and reduce smoke emission – DO NOT leave the stove unattended if the door is left ajar. Allowing the fuel to reach a steady glow, build the fire up gradually by adding a few small well split logs or Maxibrite briquettes 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 until the fire is well established for some time. Once the ignition period is well under way, gradually reduce the air control opening to establish the burning intensity you require.

## First Lighting & Operation

This appliance is not to be used as an incinerator. Only HETAS approved wood logs and smokeless fuels are recommended by Clock for use in this appliance. This appliance is design to operate with the door closed, except for lighting and reloading, failure to close the door during operation can result in fume spillage.

Warning Note: Correctly installed, operated and maintained this appliance 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, the following immediate actions should be taken:

Open doors and windows to ventilate room then leave the premises. Let the fire burn out or eject and safely dispose of fuel from the appliance. Check for flue or chimney blockage, and clean if required. Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.

Note: Before lighting please note the following points: Clock stoves must only use HETAS approved wood fuels and smokeless coal. Do not use any liquid fuels. Do not over load your stove. Never empty the ash when the fire is alight. Do not burn solid fuel and wood at the same time. Wood burns from the top down, whereas solid fuel burns from the bottom up, therefore there is a conflict of air supply for complete combustion of your fuel.

Always use the glove provided to operate the handle and controls. This appliance will get very hot, fireguards must be used when appropriate.



## Important Information for Wood Burning

With a full load of wood and burning near nominal output the stove will need to be refuelled approximately every 1-1.5 hours. (One or two large logs will burn longer than a number of smaller ones). Wood can usually be stacked higher in the stove than solid mineral fuel but care must be taken that logs do not touch the baffle or the glass panel. Do not stack logs above the level of the tertiary air inlet in the rear ceramic firebox liners at the back of the stove.

Always make sure that flames are visible above the wood after re-fuelling for the cleanest burn. Burning without flames above the fuel will create unnecessary smoke. After re-fuelling open the single air control fully to the (left) side for 3 minutes or until the logs are fully blackened 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. Burn only dry, well-seasoned wood, which should have been cut, split and stacked - under cover 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 content on the inside. A moisture meter can be purchased from stove and equipment suppliers if you wish to check your wood source is correct. Split a log and check the inside as well as the outside.

Be sure to check both inside and outside of log.

**Refuelling on to a low fire bed** - If there is insufficient burning material in the fire bed to light a new fuel charge, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash so that the new fuel charge will ignite in a reasonable period. If there are too few embers in the fire bed, add suitable kindling to prevent excessive smoke.

**Fuel overloading** - The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke. Never

load fuel above the bottom edge of the tertiary air profiling in the back ceramic firebox liner or allow them to touch the glass. All models max log diameter = approx. 150mm. Max length = 300mm for 5kW, 400mm for 5kW Wide, 400mm-650mm (taper firebox) for 8.5kW models. One log is acceptable ONLY if loading onto a hot well established fire bed.

**Operation with door left open** - Operation with the door open can cause excess smoke and spillage into the room. The appliance must not be operated with the appliance door left open.

**De ashing** - never let the ash pan over fill or build up to the underside of the grate. When burning wood it is a good idea to allow 10mm build up of ash on top of the grate. When burning smokeless briquetted fuel always clean out after use when cooled. Be aware there may still be hot material within the ash.

**Smokeless Briquetted Fuel** - Smokeless and coal type fuels require very different burning conditions to wood burning and the single air control has been designed to allow for this. Use the control on the right side of its travel marked 'Coal' for best efficiency on these types of fuel. Maxibrite and other smokeless briquetted fuels can burn with very little primary air and stay in for many hours to be revived after an overnight burn for example

## Cleaning

**Glass:** Despite the advanced air wash system provided, the glass will still 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 or supermarket. 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. **DO NOT** use coal ash to clean the glass.

**Outer body:** The outer body simply needs to be dusted or wiped with a dry clean cloth from time to time. **DO NOT** use any kind of furniture polish or cleaning agent other than your stove suppliers recommended paint. **Inner firebox:** Brush the inside of the firebox clean from time to time to check the integrity of the plates and liners etc. See Maintenance Guide section for instructions on how to remove parts of the stove. 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 high quality cast ceramic liners are very resilient firebox materials and will give reliable service without major cleaning or work on the firebox. The ceramic liner boards are very durable but may require replacement occasionally depending upon fuels and the type of usage experienced. Firebox linings are not covered by warranty, as they are a wearing consumable part.

**Baffle:** It is essential to check the top of the baffle for build-up of soot and ash regularly (once a month) when in use and after a long period of disuse – e.g. summer. From time to time remove the baffle if necessary to ensure that the flue way entrance is clear. Lift the front edge of the baffle upwards and forwards to slide the rear edge off its support. Lower the rear edge slightly and then slide the baffle off its front supports to leave it free for removal. See maintenance section for further details.

**Air Supply:** It is essential to check the air supply grille on the outside of the property if the direct outside air connection is installed. Regularly brush or vacuum out any debris, cobwebs or similar materials to ensure that the air supply is not restricted. Ensure the air intake chamber visible underneath the ash pit section with the stove door open is kept free of excessive ash or debris.

## Warranty

Clock Woodburners offer a full 7 year warranty on the stove body if warranty form is completed online when purchased from an authorised dealer. If attained from an unauthorised dealer a 1 year warranty is standard.

All moving parts of the stove have a 1 year warranty.

Consumable parts NOT under warranty as these are usable parts are : Grate, Glass, Log retainer, Paint and Fire bricks.

**Clock Woodburners reserve the right to fix any problems on site.**

To fill in your warranty form please go to [www.clockwoodburners.co.uk](http://www.clockwoodburners.co.uk)

Also for helpful tips

### Learn How To Burn Right with 'Burnright'!

Want to save money, stay safer and help the environment?

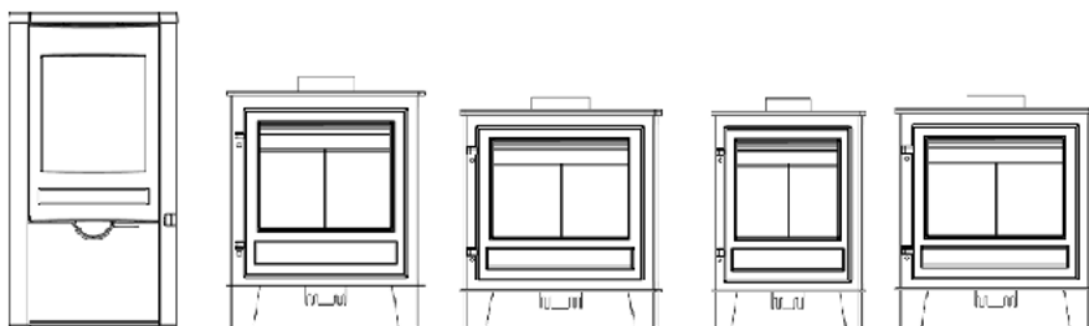
Burnright is a grass roots campaign helping you, the stove user, get the best out of your appliance. Following a few simple steps can really make all the difference. They include:

- Only burn seasoned or kiln dried logs with moisture content less than 20%
- **Never** burn housecoal in a stove - instead opt for smokeless fuel
- Don't burn off cuts such as treated/painted woods or pallet wood
- Learn how to use this stove's air controls - this will make a big difference to your burning experience
- Get your chimney swept regularly by a professional, registered chimney sweep

**For more free information including articles and videos, visit [www.burnright.co.uk](http://www.burnright.co.uk)**



## Dimensions of the range of stoves



**Contemporary  
5kw Brocksford**

**Large 8kw  
Blithfield**

**Standard 5kw  
Blithfield**

**Compact 5kw  
Blithfield**

**Double sided  
Blithfield**

Stove	Contemporary 5 kw Brocksford	Large 8kw Blithfield	Standard 5kw Blithfield	Compact 5kw Blithfield	Double 10kw Blithfield
Height	970	640	600mm (1075mm)	600	600
Width	480	590	525	430	535
Depth	430	390	390	335	600
Flue collar Height	n/a	680	655mm (1125mm)	655	655
FC back to centre	150	100	90mm	90	300
Flue collar	125mm	150mm	125mm	125mm	150mm
Outside air Height	320mm	166mm	166mm	166mm	NA
Outside air Height log box	TBA	TBA	TBA	TBA	NA
Height with log box	970mm	TBA	845mm	845mm	NA

### Distance to combustibles

Stove	Contemporary 5 kw Brocksford	Large 8kw Blithfield	Standard 5kw Blithfield (cook model)	Compact 5kw Blithfield	Double 10kw Blithfield
Above	750	na	na	na	na
Sides	250	600	550	500	850
Back	150	650	600	600	Na
12mm hearth	yes	yes	yes	yes	yes
weight kg	122	136	116	85	175

### Stove options available

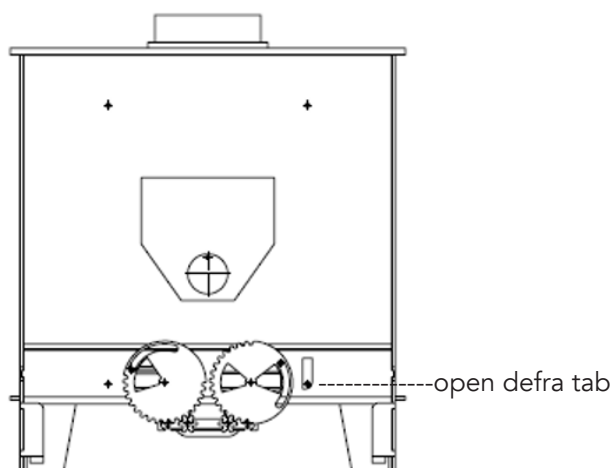
Stove	Contemporary 10 kw Brocksford	Large 8kw Blithfield	Standard 5kw Blithfield (cook model)	Compact 5kw Blithfield	Double 10kw Blithfield
Heat shield	NA	Y	Y	Y	N
Rear exit	Y	N	N	N	N
Outside air kit	Y	Y	Y	Y	Y
Brass Handle	N	Y	Y	Y	Y
Stove colour	Y	Y	Y	Y	Y
Log box	NA	Y	Y	Y	Y

*(Please note these are charged as extra items and may have lead times)*

### DEFRA Settings

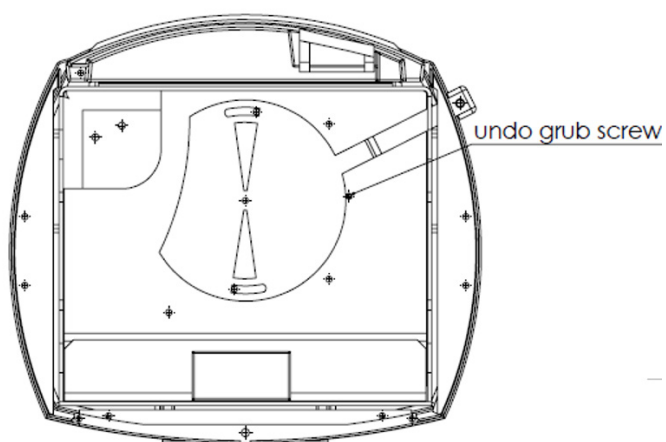
#### Settings for the 8kw,5kw and 5kw compact versions.

Open to engage Defra stop.



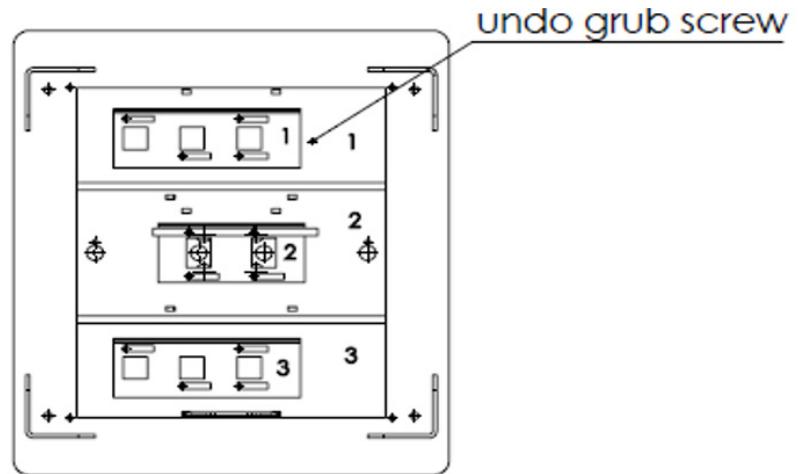
#### Contemporary stove

Undo Grub screw to engage.  
Defra stop 4mm open.



### Double sided stove

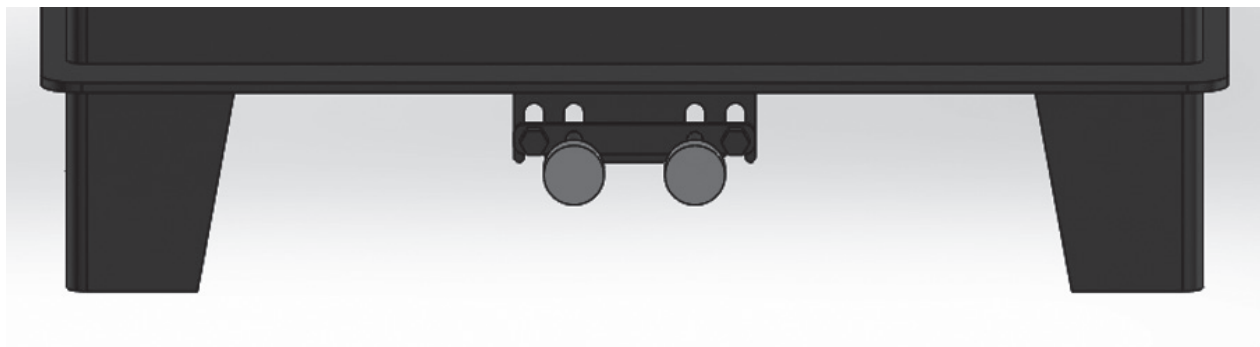
Undo grub screw to engage Defra stop.



## Controls

Videos of all our stove operations can be found on youtube

Controls for the large 8kw, standard 5kw and 5kw compact



The right hand dial is the primary and the left hand dial is secondary (air wash) to open these turn clock wise and to close, turn anti clock wise

### Wood burning

When starting the fire open the secondary control to about 70% open fully if draw is low and the primary may be used if there isn't sufficient draw if this is the case open this to maximum.

After about 20-25 min the stove will be up to temperature.

Shut the right hand dial (primary) and control with the secondary (air wash)

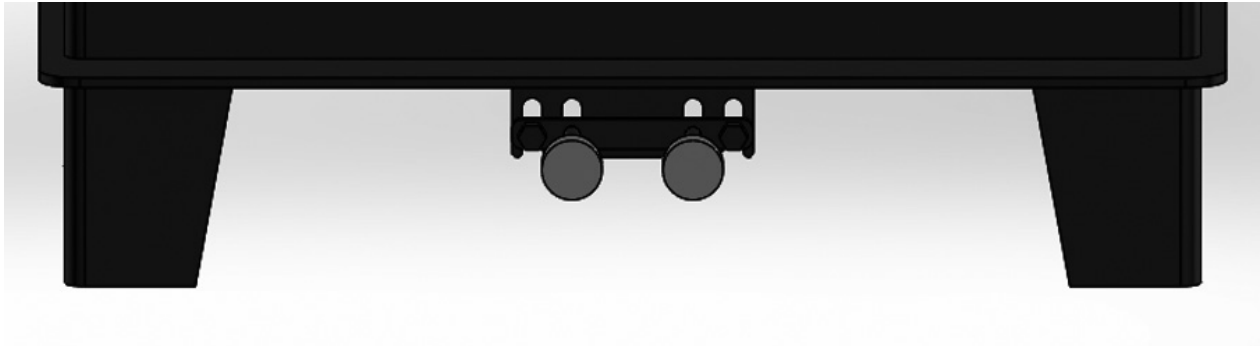
### Solid fuel

When starting the fire open the secondary control to about 70% open fully if draw is low and the primary may be used if there isn't sufficient draw if this is the case open this to maximum.

After about 20-25 min the stove will be up to temperature.

Have the right hand dial (primary) slightly open and control with the secondary (air wash)

### Double sided stove controls



### Wood burning

The right hand dial is the primary and the left hand dial is secondary (air wash) to open these turn clock wise and to close turn anti clock wise

When starting the fire open the secondary control to open to maximum and the primary open if needed.

After about 20-25 min the stove will be up to temperature.

Then Shut the right hand dial (primary) and control with the secondary (air wash)

### Solid fuel

When starting the fire open both the primary & secondary controls to maximum.

After about 25-30 min the stove will be up to temperature.

Then close the right hand dial (primary) down so it is slightly open and control with the left hand dial (secondary air wash)

### Controls for contemporary Brocksford stove

#### Wood burning

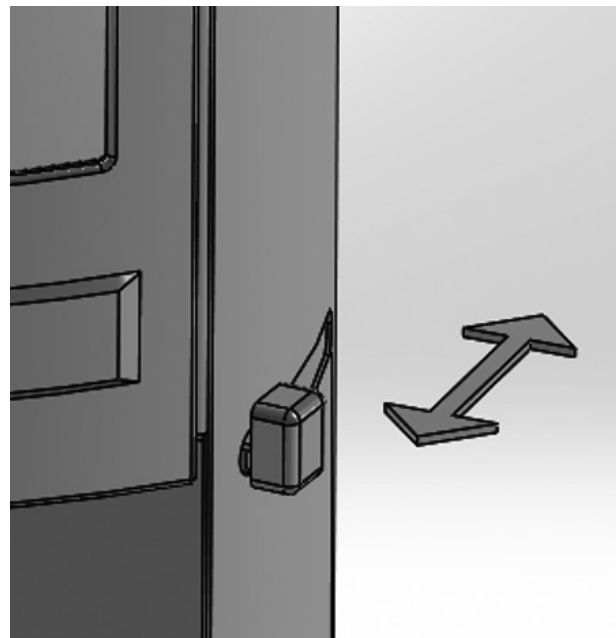
to light the stove slide control towards the front of the stove place sticks in a Jenga type structure and place 2 firelighters on top and light them then shut the door once sticks have sufficiently caught fire add logs.

Leave the control in this position for about 30mins after this slide control away to control the burn of the stove

On refuel, slide control towards the front of the stove for 3mins then back to control the rate of burning.

#### List of Materials used in construction

Cast iron, stainless steel, mild steel, vermiculite, ceramic glass, ceramic rope, high temp silicone and high temperature stove paint.





## IMPORTANT INSTALLATION NOTE

**Before installing this appliance please make a note of the serial number as this is needed for the online warranty registration.**

Serial numbers are on the data plate at the back or base of all stoves.

The Blithfield 5, Compact and 8kw models have the data plate on the rear panel (top left as you look at the stove). The Double Sided has the date plate underneath and the Brocksford data plate is inside the log store at the base of the stove.

1 year standard warranty extended by 6 years if registered and purchased via dealer.

**To register your stove please visit our website:**

**[WWW.CLOCKWOODBURNERS.CO.UK](http://WWW.CLOCKWOODBURNERS.CO.UK)**

By registering your stove on our website we will extend the standard 12 month warranty by 6 years. The 6 year extension only applies to stoves purchased through our approved dealer showroom network and only when the stove is installed by recognised and qualified installer. To maintain your warranty you must undertake and keep regular records of a yearly service carried out by a recognised and qualified professional. Faults occurring due to poor maintenance or appliance abuse will not be covered by your warranty.

### Contact details

**Tel: 0161 877 6974**

**Email: [hello@clockwoodburners.co.uk](mailto:hello@clockwoodburners.co.uk)**

