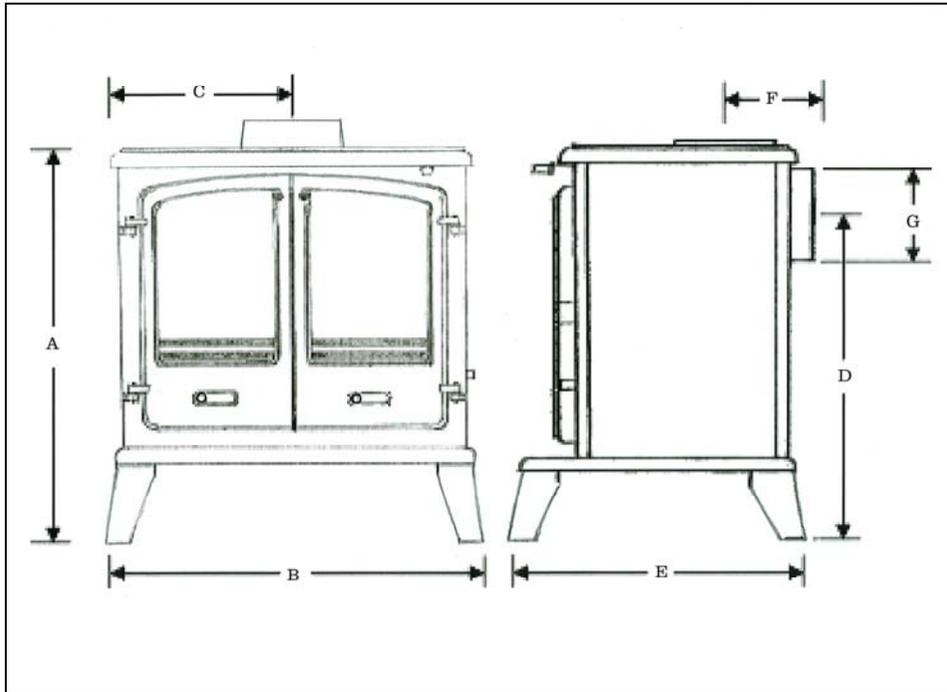


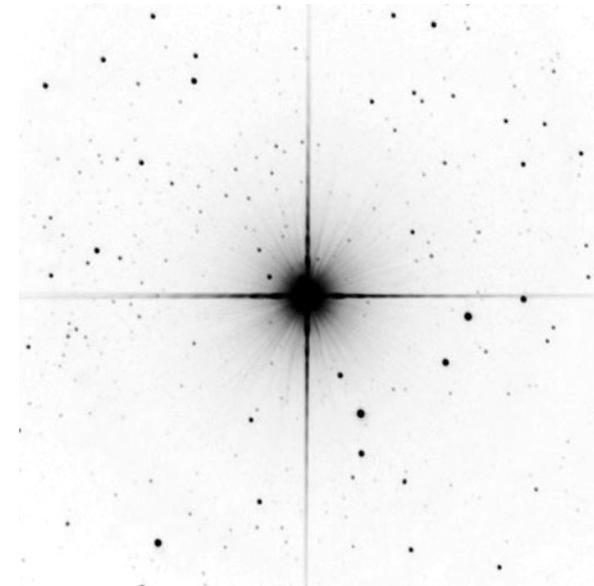
OUTPUT (kW)	Sirius 405 [Efficiency]		Sirius 545 [Efficiency]		Sirius 645 [Efficiency]		Cycle (hours)			
Anthracite (0.75kg loads)	4.6 [73%]		8.42 [79%]		10.5 [76%]		4			
Hard wood logs (less than 20% moisture content – 1kg loads)	4.9 [78%]		8.90		13.8		1			
Coal (E)	4.3		6.5		7.8		4			
Peat (E)	4.7		8.38		10.75		2			
Closed fire briquettes	4.6		8.64		10.22		4			
OUTPUTS STATED ARE UNDER IDEAL TEST CONDITIONS. VARIATIONS WILL OCCUR DUE TO INSTALLATION, ATMOSPHERIC CONDITIONS AND FUEL QUALITY. E – CALCULATED ESTIMATE										
DIMS mm	A	B	C	D	E	F	G	WEIGHT (kg)	MAX FUEL LOAD kg (ANTHRACITE)	MIN FLUE DRAFT (Pa)
SIRIUS 405	580	405	205	440	360	100	130	70	5.33	12
SIRIUS 545	610	545	285	485	340	140	165	90	8.64	12
SIRIUS 645	700	645	300	580	420	100	150	140	10	12
	FLUE GAS TEMP AT SPIGOT		FLUE GAS MASS FLOW				FLUE DIA	VENT REQMT	VENT RQMT WITH DRAFT STABILISER	
SIRIUS 405	446 °C		3.4g/s (wood)				125mm	NONE	1500 mm ²	
			4.7 g/s (ancit)				125mm	NONE	1500 mm ²	
AS TESTED TO THE REQUIREMENTS OF EN13240 FOR INTERMITTENT USE										

Dimensions may vary slightly, the manufacturers reserve the right to adjust them without notice. Outputs stated are under ideal test conditions. Variations may occur due to installation, atmospheric conditions and fuel quality.



Sirius 405, 545 and 645

CE APPROVED - CONFORMING TO EN13240:2001



INSTALLATION AND OPERATING INSTRUCTIONS FOR THE SIRIUS FAMILY OF CAST IRON MULTI-FUEL STOVES

PLEASE LEAVE THIS BOOKLET WITH THE HOUSEHOLDER

The Sirius Stoves operate at very high temperatures. All persons including children and the infirm should be warned of this and not allowed to touch any surfaces whilst in use. The operator must use the tools provided. The glove provided is a tool.



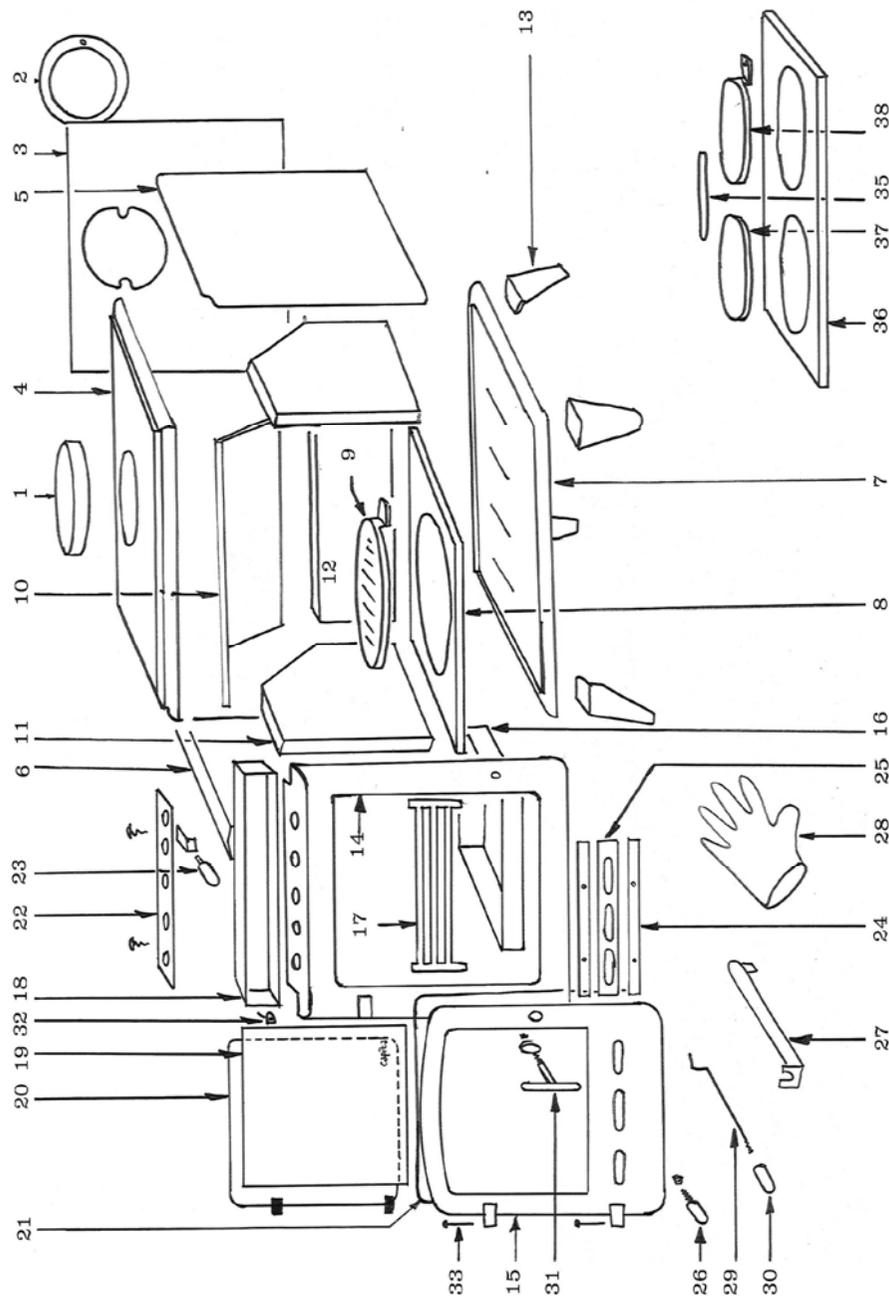
Capital Fireplace Limited

Unit 12-17, Henlow Trading Estate, Henlow Camp, Herts. SG16 6DS

01462 813138

www.capitalfireplaces.co.uk

EXPLODED VIEW



TROUBLESHOOTING

1. POOR HEAT OUTPUT

A. Stove too small for room

Seek advice from a qualified heating engineer as to (kW) output required for room size. As a guideline the volume of the room in cubic feet divided by 500 i.e. room 15' x 15' x 8' would require 3.6kW approx.

B. Chimney and / or flue pipe restricted, room ventilation restricted.

On Installation these will have been checked but regular maintenance is necessary as conditions can change i.e. soot build up, birds nesting, masonry fall, dust build up or furniture blocking vents.

C. Poor quality fuel.

Only burn dry seasoned timber, soft woods have a lower heat output than hard woods per hour. Solid fuels vary in heat value, check with your coal merchant as to suitability.

2. DIRTY GLASS PANEL

A. Generally caused by poor fuel quality, see (1c)

B. Use secondary air slide (Air wash) for glass panel

C. Fire burning too low, open the air vents on the stove to create a hot fire, this may 'burn' the glass clean.

D. If glass requires cleaning use glass cleaner recommended by your supplier, only use glass cleaner on cold glass. **DO NOT USE** any abrasives or scrapers, these will scratch the glass making tar build up harder to remove.

UN-BURNT FUEL

Insufficient air reaching fuel. Open primary air slide, this will supply combustion air to burn fuel fully.

Check ash pan is full, empty if required. Front bar/fret may be blocked, de-ash with the riddler. Check for jammed clinker or nails in grate when fires out and cold.

3. SMOKE AND FUMES ENTERING ROOM

These are very dangerous and must NOT be tolerated. Open window are allow fire to burn out, seek expert advice immediately. DO NOT USE stove until the problem is solved. A list of Qualified Engineers is available from

UK Solid Fuel Association
7 Swanwick Court
Alfreton
Derbyshire
DE55 7AS
Tel. 0845 601 4406

R. o. I.
Irish National Fireplace Organisation
162 Chapel Street
Dublin
Tel. 01 801 5959

4. CHIMNEY FIRE

Identified by loud roaring sounds, dense smoke and sparks exiting chimney. Shut down air supply to stove by closing air vents, close stove door fully, call Fire Brigade immediately. Regular chimney maintenance will prevent chimney fires. Seek advice from a Qualified Chimney Sweep. Chimneys must be checked at least annually or more often when bitumous coal and poor quality smokey fuels are used. If this appliance is well maintained and used correctly in accordance with these instructions it will give many years of efficient service and prove to be an excellent investment.

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ASSEMBLY

Remove Legs, collar, blanking plate and accessory pack from the stove. The collar can be fitted top or rear.

The legs are fitted by screwing the M8 studs into the leg positions underneath the stove, locating the legs in position and using the large washers, spring washers and hexagonal nuts to secure them in place. The legs can be fitted at front of ash lip or rearward.

To make easier for handling on installation, remove the baffle plate, side bricks, back brick and door. Place in a secure place to avoid damage. Refit after installation.

INSTALLATION, OPERATION AND MAINTENANCE

IMPORTANT: THIS APPLIANCE MUST BE INSTALLED BY A COMPETENT PERSON AND MUST COMPLY WITH NATIONAL BUILDING REGULATIONS AND LOCAL BY-LAWS. UNLESS THE INSTALLER IS QUALIFIED TO APPROVE INSTALLATION THEN APPROVAL MUST BE SOUGHT FROM YOUR LOCAL BUILDING CONTROL DEPARTMENT. THE SUPPLIERS ACCEPT NO RESPONSIBILITY IF THE ADVICE IS NOT COMPLIED WITH. THIS APPLIANCE HAS BEEN EXTENSIVELY TESTED FOR SAFETY AND EFFICIENCY, DO NOT ATTEMPT TO MODIFY IT. ALWAYS USE GENUINE REPLACEMENT PARTS AS RECOMMENDED BY YOUR SUPPLIER. FAILURE TO ADHERE TO THIS ADVICE COULD INVALIDATE YOUR GUARANTEE.

INSTALLATION

Check the chimney is in good condition, dry, free from cracks and obstructions. The diameter of the flue should not be less than 150mm and not more than 230mm. If any of these requirements are not met, the chimney should be lined by a suitable method.

The chimney height and the position of the chimney terminal should conform to Building Regulations.

GENERAL MAINTENANCE

Baffle Plate

This should be removed at least once a month to prevent a build up of soot or fly ash which could lead to blocked flue ways and dangerous fume emission. If baffle plate is removed the chimney/flue can be swept through the appliance.

To avoid a build up of soot on the baffle (the plate inside the stove above the grate) this must be removed and cleaned periodically. This plate locates the back and side firebricks so note its position before removal. To remove, lift plate and remove one side brick, this will allow plate to drop and aid removal. To replace, position baffle plate on back and side brick, lift plate and replace remaining brick, make sure it is located in position. This must be done when the stove is cold.

Baffle Plate Removal and Replacement

Note position before removal. To remove baffle plate, lift up and remove one side brick left or right. The baffle plate can now be manipulated out of the stove door opening. Remove the remaining back and side brick—as the bricks are free-standing no damage can now occur due to bricks falling over.

To replace, place rear brick in position and one side brick. Manipulate baffle into position and fit remaining side brick. Make sure all parts are located.

Grate Removal Sirius 405

The Sirius 405 has a single rotating grate operated by an attached riddling rod. To remove, unscrew control knob and rotate grate out of its guide hole. The centre grate can now be removed. To replace grate, reverse this procedure. Note position of grate riddling rod as it connects to grate. The hook on the end of the rod passes under and up through the arm hole on the grate. If the removal of the outer grate is required then the baffle plate, rear and side bricks will require removal. The outer grate will then lift out off its stops.

Grate Removal Sirius 545

The Sirius 545 has two rotating grates joined by a connecting rod. These can be removed as Sirius 405 but one of the connecting rod screws will need to be unscrewed (M6 socket head). These are under the grate. It is sometimes easier to remove complete grate assembly as described in Firefox 5 removal instructions.

Stove Body

The stove is finished with a heat-resistant paint and this can be cleaned with a soft brush. Do not clean whilst the stove is hot, wait until it has cooled down. The finish can be renovated with a suitable brand of paint.

Glass Panels

Clean the glass panels when cool with a proprietary glass cleaner. Highly abrasive substances should be avoided as these can scratch the glass and make subsequent cleaning more difficult. Wet logs on heated glass, a badly aimed poker or heavy slamming of doors could crack the glass panels. The glass will not fracture from heat.

Chimney

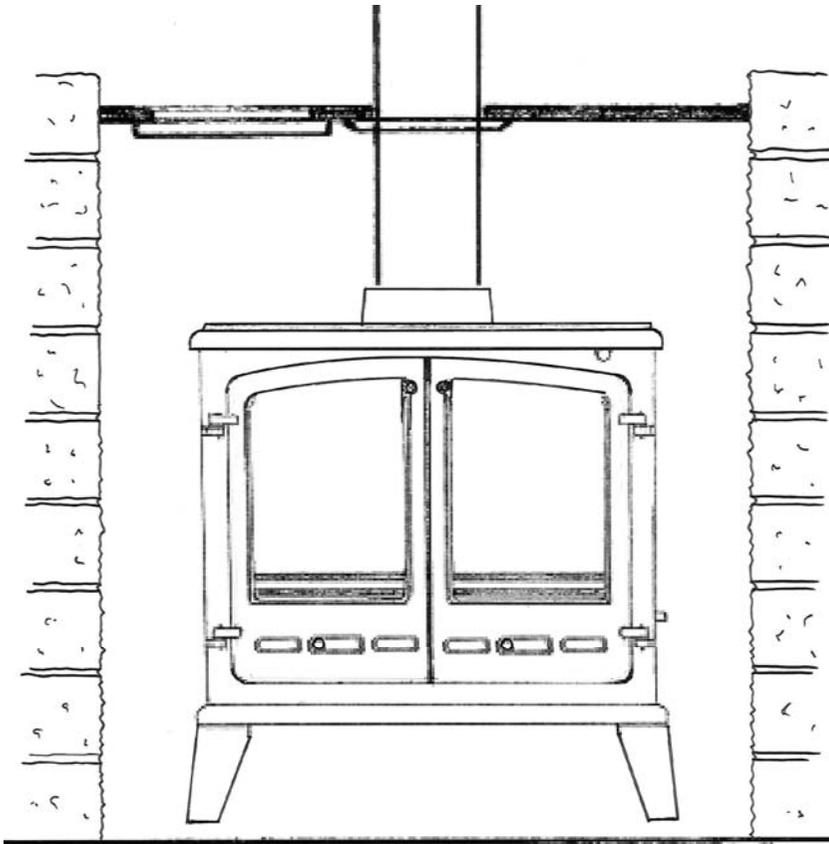
Check the chimney each year before starting to use your stove for the winter. Birds may have nested in the chimney or the masonry may have cracked. Both chimney and flue pipe must be swept at least once a year. It is recommended that you have your chimney swept every six months. It may be necessary to sweep more frequently when damp wood is burnt regularly.

PARTS LIST

KEY	SIRIUS 405	SIRIUS 545	SIRIUS 645	DESCRIPTION
1	FFX008	FFX8008	FFX12008	Flue Collar
2	FFX009	FFX8009	FFX12003E	Flue Blanking Plate (Expanding flange for Sirius 645)
3, 5, 6	FFX001	FFX8001	FFX12034, 36 and 37	Stove Body (Rear, Right, Left Panel)
4	FFX003	FFX8003	FFX12003	Stove Top
7	FFX002	FFX8002	FFX12002	Stove Base
8	FFX005	N/A	FFX12005	Grate Support
9	FFX006	N/A	FFX12005B	Grate
10	FFX007	FFX8007	FFX12007 AND 12007F	Stove Baffle Plate (includes Baffle Plate Frame for Sirius 645)
11	FFX012	FFX8012	FFX120012	Side Brick
12	FFX013	FFX8013	FFX120013	Back Brick
13	FFS4010	FFS5010	FFS6010	Leg Set (4 pcs)
14, 15	FFS4004	FFS5004	FFS6004	Stove Door + Front Panel (two doors for the Sirius)
16	FFX014	FFX8014	FFX12014	Ash Pan
17	FFX011	FFX8011	FFX12011	Front Bar/Fret
18	FFX024	FFX8024	N/A	Secondary Air Duct
19	FFS4018	FFS5018	FFS6018	Door Glass (two panes for the Sirius 645)
20	FFX027	FFX8027	FFX12027	Glass Seal
21	FFX026	FFX8026	FFX12026	Door Seal
22	FFX023	FFX8023	FFX12023	Secondary Air Slide
23, 26, 30	FFS4022	FFS5022	FFS6022	Primary, Secondary + Riddling Knob Set
24	FFX021	FFX8021	FFX12021	Air slide guide plate (two for Sirius 645)
25	FFX020	FFX8020	FFX12020	Primary Air Slide
27	FFS029	FFS029	FFS029	Operating Tool
28	FFS1	FFS1	FFS1	Heat Resistant Glove
29	FFS4015	FFS5015	FFS6015	Grate Riddling Rod
31	FFS4016 AND 17	FFS5016 AND 17	FFS6016 AND 6017	Door Handle Assembly
32	FFX019	FFX019	FFX019	Door Glass Retaining Tabs (order two sets fro Sirius)
33	FFS028	FFS028	FFS028	Hinge Pin
35	N/A	FFX8030	N/A	Grate Connecting Bar
36	N/A	FFX8005	FFX12005	Grate Support Plate
37	N/A	FFX8006L	N/A	Grate (LH)
38	N/A	FFX8006R	N/A	Grate (RH)
40	N/A	N/A	FFX12038	Grate pivot block (not shown)
41	N/A	N/A	FFX12024	Air wash deflector plate (not shown)
42	N/A	N/A	FFX12031	Air duct (not shown)
43	N/A	N/A	FFX12032	Heat Shield Primary (not shown)
44	N/A	N/A	FFX21033	Heat Shield Secondary (not shown)

Typical Installation For Inglenook Fireplaces

Inglenook fireplaces can have very large bore chimneys. Check with your installer – you may need a stainless steel flexible liner for solid fuel fitting. A closure plate may also be required.



SAFETY NOTES FOR YOUR GUIDANCE

FIRES CAN BE DANGEROUS – Always use a fire guard to BS6539 specification in the presence of children, the elderly or the infirm. Inform all persons of the dangers of high temperatures during operation of appliance including the stove pipe use operating tools provided.

DO NOT OVER FIRE – 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 start 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 adjusting the controls to a safe setting – careful air supply control should be exercised at all times.

WARNING – FUME EMISSIONS

When properly installed and operated, this appliance will not emit fumes. Occasional fumes from de-ashing and refuelling may occur. Persistent fume emission must not be tolerated.

If fume emission does persist, then the following immediate action should be taken –

1. Evacuate the room, opening doors and windows on your exit to ventilate the room.
2. Let the fire go out, or eject and safely dispose of fuel from the appliance.
3. Check for a flue blockage and clean if required.

Do not attempt to relight the fire until the cause has been identified and corrected. If necessary, seek professional advice.

DO NOT FIT AN EXTRACTOR FAN IN THE SAME ROOM AS THIS APPLIANCE

SEASONAL MAINTENANCE

If the appliance is not to be used for any length of time, e.g. summer months, then it is recommended that the appliance is cleaned out thoroughly. Air slides should be lightly oiled and left partially open to allow air circulation. Regular monitoring of the inside components will identify condensation or water ingress. If these problems occur, then the appliance needs to be dried and the cause of the problem rectified. After a shut down, and before reuse, the appliance should be cleaned again and the chimney swept.

Remove baffle plate, brick linings, check operation of grate, check flue for any possible blockages. It is advisable to have the chimney swept at least once or even twice per year. If the appliance is in constant use, the use of bitumas coal or poor quality wood makes flues soot and tar up more frequently.

Basic maintenance can be carried out by the appliance operator, i.e. removal of baffle plate, bricks, grate, glass replacement and must be done when the appliance is cold. Any structural repairs, i.e. panel collar replacement or stove pipe must be carried out by a suitably qualified engineer.

A flue draught of minimum 12 Pascals and a maximum of 15 Pascals is required for satisfactory appliance performance. The flue draught should be checked under fire at high output and if it exceeds the recommended maximum, a draught stabiliser must be fitted so that the rate of burning can be controlled, and to prevent over firing.

If you have any doubts about the suitability of your chimney, consult your local dealer / stockist.

The chimney must be swept before connection to the stove and swept every six months thereafter.

An existing fireplace opening can be bricked up or sealed with a register plate, 2.5mm steel sheet or concrete. A short length of flue pipe no smaller in diameter than the stove flue outlet or the manufacturer's stated flue size may then be used to connect the stove to the chimney. This flue pipe should be of cast iron, 316 grade stainless steel or vitreous enamelled, nominal thickness of 1.2mm. Ensure that the flue pipe end is no closer than 76mm to the side or rear chimney walls.

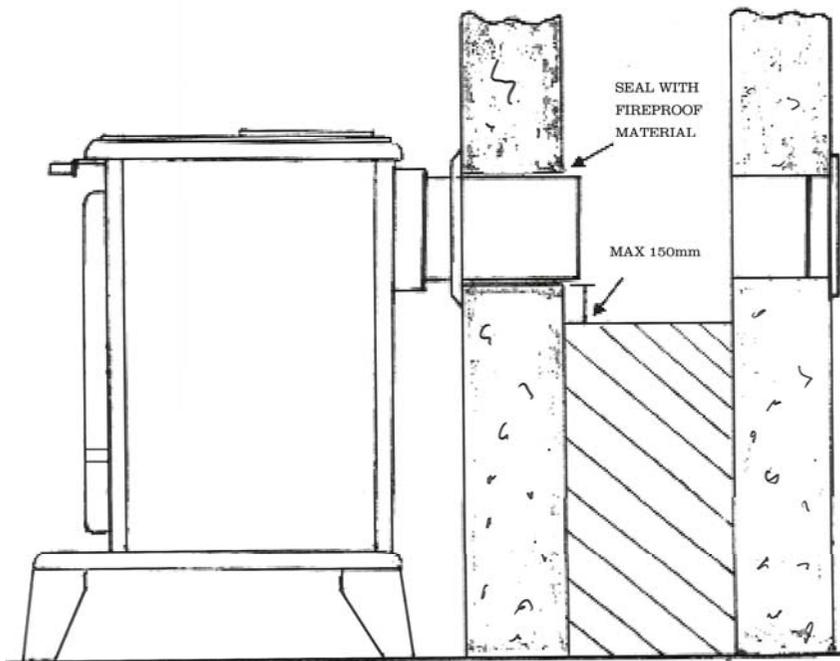
Typical Rear Flue Installation with clean out door.

Ideally, the old fireplace should be filled in so that there is a smooth streamlined entry into the flue.

The length of the horizontal run of the flue pipe must not exceed the flue outlet diameter on the stove – 125mm

It is essential that all connections between the stove and chimney flue are sealed and made airtight.

Both chimney and flue pipe must be accessible for cleaning and if ALL parts of the chimney cannot be reached through the stove, a soot door must be fitted to enable this to be done.



Recommended Fuels

Seasoned wood – moisture content less than 20%

Solid Fuel – Anthracite large nuts, briquettes smokeless fuel, IE Ancit, Phurnacite, Taybrite, Homefire Ovals suitable for closed appliances.

Please note that when refuelling with solid fuel, do not pile fuel higher than 30 degrees from the front bar rearwards – over-fuelling can produce temperatures beyond the designed rating of the appliance, causing damage to internal parts.

This appliance is designed to be operated with the door closed, except for refuelling. Not only is it unsafe to operate with the door open but the appliance efficiency will be significantly reduced

Lighting The Stove

It is essential that you have two or three small fires before you operate the stove to its maximum heat output. This is to allow the paint to cure and casting to relax and consolidate location. We recommend 'running in' procedure after long shutdowns to preserve life of stove. During this you may notice an unpleasant smell. It is not toxic, but for your comfort we would suggest that during this period you leave doors and windows open.

First, load the fire with starting fuel i.e. paper, dry kindling timber and / or fire lighters in the mode chosen, either wood or coal.

Light the fire at base leaving all air controls open. Allow the fuel to reach a steady glow and build up the fire gradually. Once you have a good fire established across the grate bed, further fuel can be added as required.

When your fuel is well alight you can start to restrict the primary air intake. If you are burning only wood, the primary air control can be fully closed. If you are burning solid fuel you will require more primary air. Your stove is burning with maximum efficiency when a bright fire is achieved using minimum air inlet.

The stove can be banked up for long periods. When burning solid fuel empty the ash pan. Open air controls and let the fire burn brightly for a short period. Refuel and close air controls, the exact setting required will depend on the fuel used and the chimney draw so some trial and error and practice will be necessary. To revive the fire, open air controls until the fire is burning brightly, de-ash if necessary (solid fuel only) and refuel. Set air controls as required.

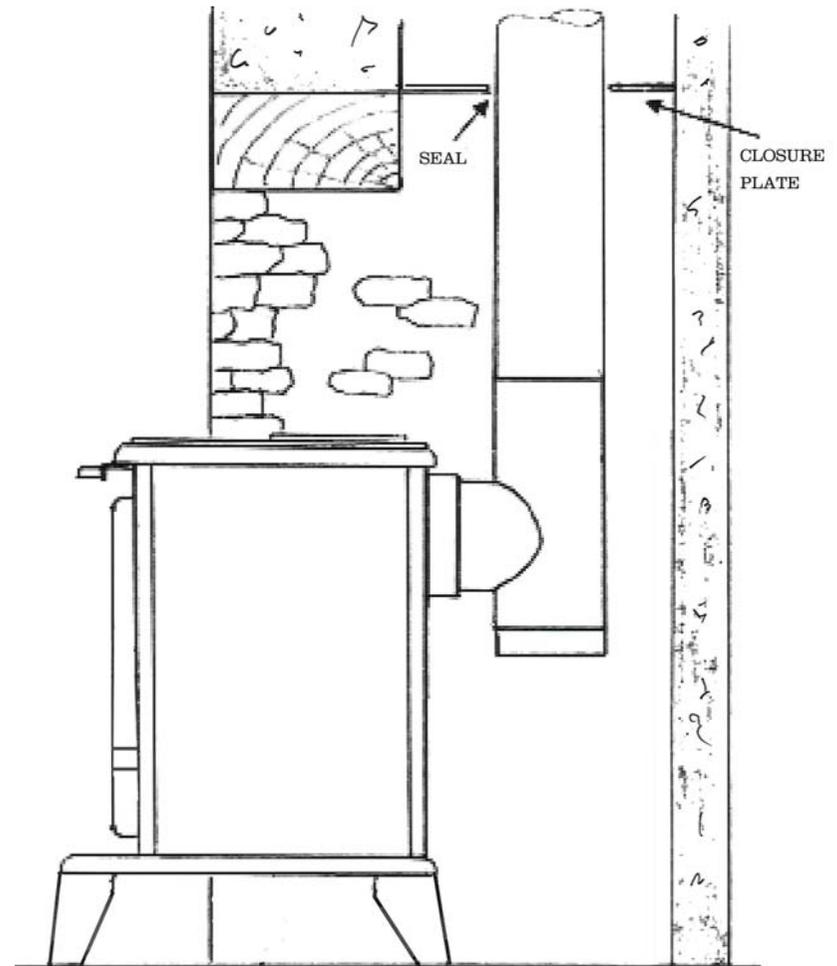
Solid Fuels

We recommend the majority of approved manufactured smokeless fuels. Household coal, which is 'smokey' fuel, can also be used but note that different types will give different performances. Use as an incinerator is not recommended as fumes from plastics etc will cause pollution to the atmosphere and will damage stoves internally.

PETROLEUM COKE FUELS OR HOUSEHOLD WASTE SHOULD NOT BE BURNT IN THIS APPLIANCE

Should any difficulties arise over fuel quality or suitability, consult your local supplier or Solid Fuel Advisory Service.

Typical Installation For Inglenook Fireplaces – Side View



The Primary Air Sealing Plate is located on the front of the grate. To locate in position, slacken the two screws beneath the grate and pull forward, then close the door fully, open door and tighten screws.

The stove can be recessed in a suitable sized fireplace but a permanent free air gap of at least 100mm must be left around the sides and top to obtain maximum heat output and for access to the rear of the stove. There should not be any combustible material within a distance of 600mm from any surface of the stove. Furniture and general soft furnishings should not be within 900mm of any of the stove surfaces including the stove pipe. In all instances the stove should be positioned on a non-combustible hearth. Allow an apron of at least 225mm at the front of the stove and 150mm on either side. The hearth on which the stove is to be placed should be not less than 125mm thick if the floor is made of combustible material, and care should be taken to level the stove and secure the hearth. If existing floors do not have adequate load bearing capacity then suitable modifications to load bearing plates must be adopted.

When the stove is in the desired position fix brackets to the back feet and mark the hearth through the holes, remove the stove, and drill and plug the hearth for securing the stove and levelling. See typical flue connection methods illustrated.

Upon completion of installation, the appliance should be checked under fire for soundness of joints and seals, and also that all smoke and fumes are taken from the appliance, up the chimney and emitted safely.

Care should be taken that all flues, hearths and combustion air supplies are in accordance with the current Building Regulations, Local Authority By-laws, British Standards and Codes of Practice. The Sirius 405 has no ventilation requirement. Considerations and provisions must be made for any other appliances requiring ventilation. An extractor fan must not be used in the same location as the appliance. This appliance is not to be used with a shared chimney.

OPERATION

Primary Air

Primary air is controlled via the sliding vents in the bottom of the door, this provides a conventional air draught to the bed of the fire. Slide to the left to introduce more air and to the right to reduce the air flow.

Secondary Air

Secondary Air is controlled via the sliding vent above the door, it is this 'airwash' that keeps a clean and uninterrupted view of the fire, also aiding in good secondary combustion of fuel and reducing emissions into the chimney and environment.

Tertiary Air - SIRIUS 645 ONLY

The Sirius 645 is fitted with a tertiary (third) air control system. Air is bled into the stove from the rear panel via an air duct over the rear brick. Its function is to ignite unburned gasses assisting with a clean burning. It is advisable to clear these holes and the duct from time to time, especially when the stove is being serviced or after long periods of burning – particularly "dirty" fuels such as damp wood or bituminous coal. **ONLY CARRY OUT THIS AND ALL SERVICING PROCEDURES WHEN THE STOVE IS COLD.**

This tertiary air supply is permanently open and allows a small amount of air into the stove. The holes can be plugged using the two screws provided (item C in the accessory pack). If your chimney has a poor draft, or you regularly use smokeless fuel, the heat shield covering these tertiary air holes will need to be removed, the plugs fitted and the heat shield replaced. One or both plugs may be used depending on the draft.

Damper Assembly (optional)

When burning wood only, a damper assembly may be fitted. When the damper is set in the open position, the chimney draws at full draught, increasing the volume of air flow through the stove and flue. Shutting the damper restricts the flow,

slowing down the rate of burning. This is an after market product and will be of the type with positive open and closed indication to prevent misunderstanding.

THE FLUE DAMPER SHOULD NOT BE FITTED WHEN BURNING SOLID FUELS

De-Ashing

It is important that the riddler is used to remove ash to ensure an airflow through the fire bed and allow the fire to burn over the entire area of the grate. Insert the pin on operation tool into hole in riddling rod, draw tool forwards and backwards with a slow positive action. Set rod in back position after de-ashing. For efficient burning of your appliance, make sure the grate is clear of burnt debris i.e. nails etc.

Notes on Wood Burning

Wood burns best on a bed of ash and it is therefore only necessary to remove surplus ash from the grate occasionally. Burn only kiln dried or well seasoned wood, which should have been cut, split and stacked under cover for at least 36 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. Tar deposits, if allowed to build up, are a major cause of chimney fires.

Notes on Solid Fuel Burning

Always de-ash before refuelling and do not let the ash build up to the underside of the grate bars. Solid fuel produces ash, which if allowed to build up, will stifle the air flow through the grate and eventually cause the fire to die. With some solid fuels a residue of burnt fuel or clinker will accumulate on the grate, allow the fire to go out periodically to remove this.

It is stressed how important it is to empty the ash pan regularly. Air passing through the fire bed cools the grate. Distortion or burning out the grate bars is nearly always caused by ash being allowed to build up the underside

Typical Installation Into Infilled Masonry Fireplaces

