



Essential characteristic	Performance	
Test fuel	Beech	Anthracite
Fire Safety	Pass	Pass
Emission of combustion products, related to 13% O <sub>2</sub>	CO: 0.23 vol% Dust: 77 mg/m <sub>0</sub> <sup>3</sup>	CO: 0.06 vol% Dust: 14 mg/m <sub>0</sub> <sup>3</sup>
Thermal output / Energy efficiency	13.8kW / 74.2%	10.5kW / 76.7%
Fire safety	Approved	Approved

**FIREFOX 12**  
**INSTALLATION AND OPERATING INSTRUCTIONS**  
(to be left with the householder)



**CE APPROVED**



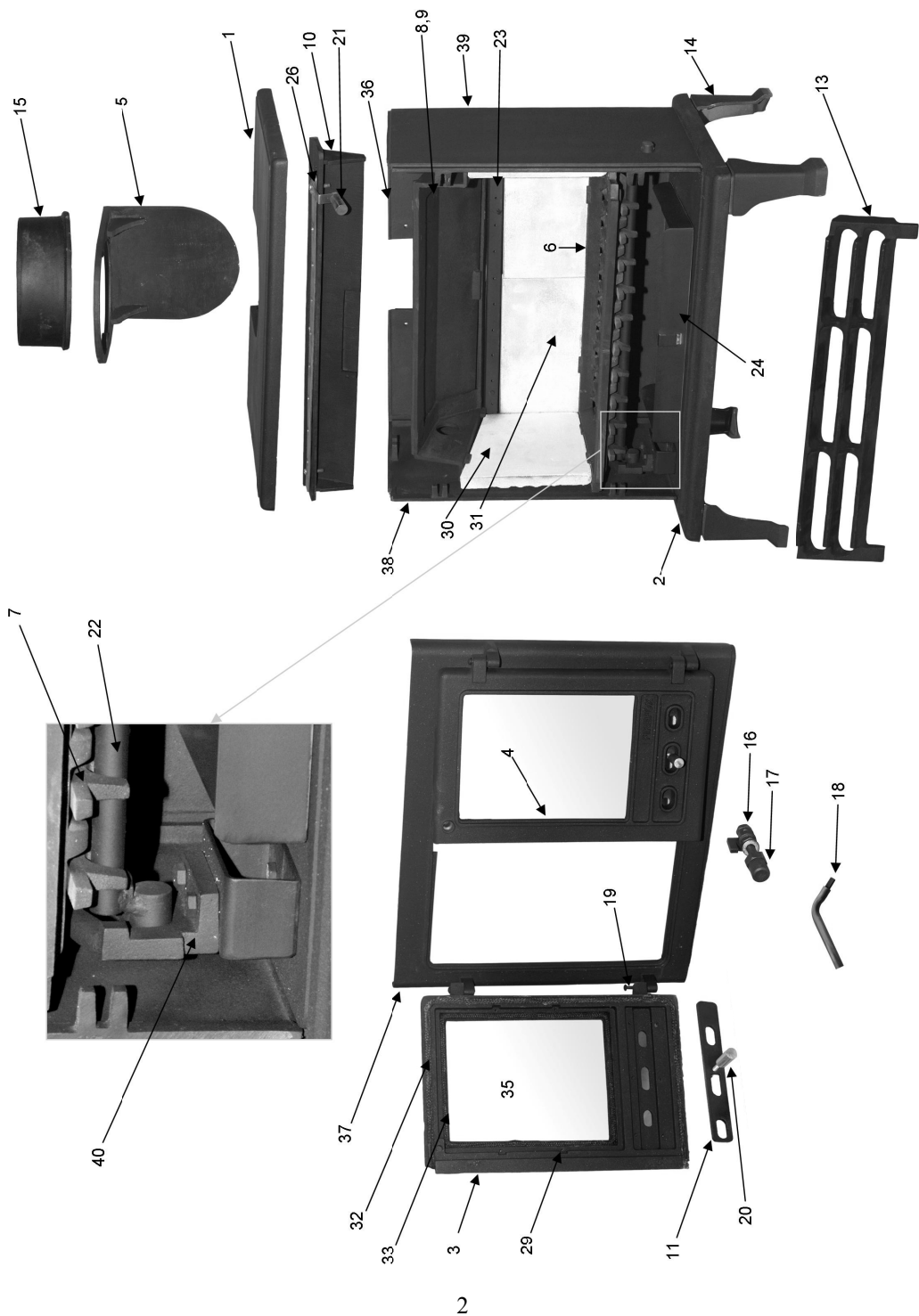
**Percy Doughty & Co.**  
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Express Trading Estate  
Stone Hill Road  
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BL4 9TN

**Telephone 01204 868550  
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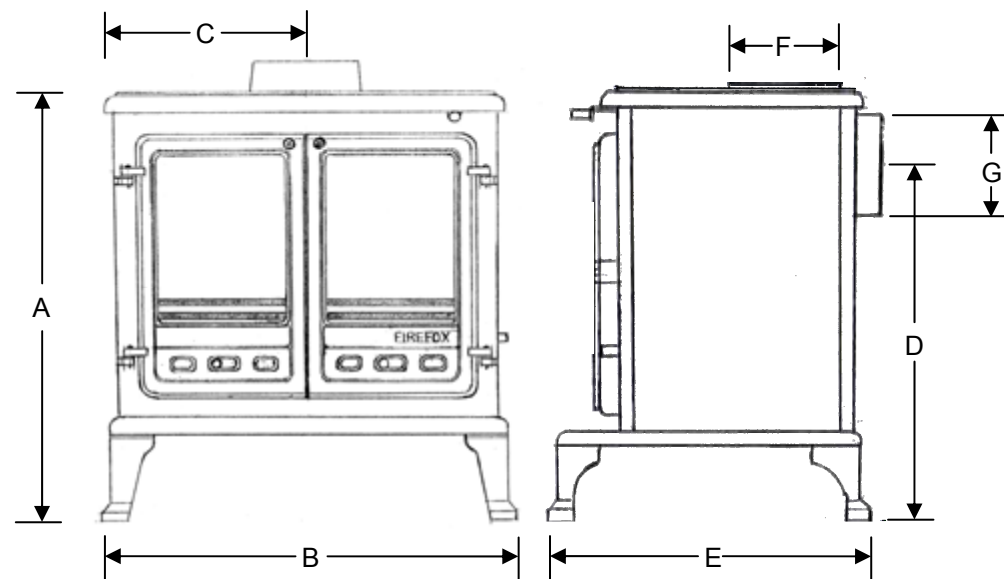
**email sales@percydoughty.com  
web www.percydoughty.co.uk**

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

# Parts List



# Dimensions



Dimensions, mm	A	B	C	D	E	F	G	Weight	Minimum Flue Draught
<b>Firefox 12</b>	680	655	298	580	415	100	150	140Kg	12 Pa 0.048 In Wg

## Key To Dimensions

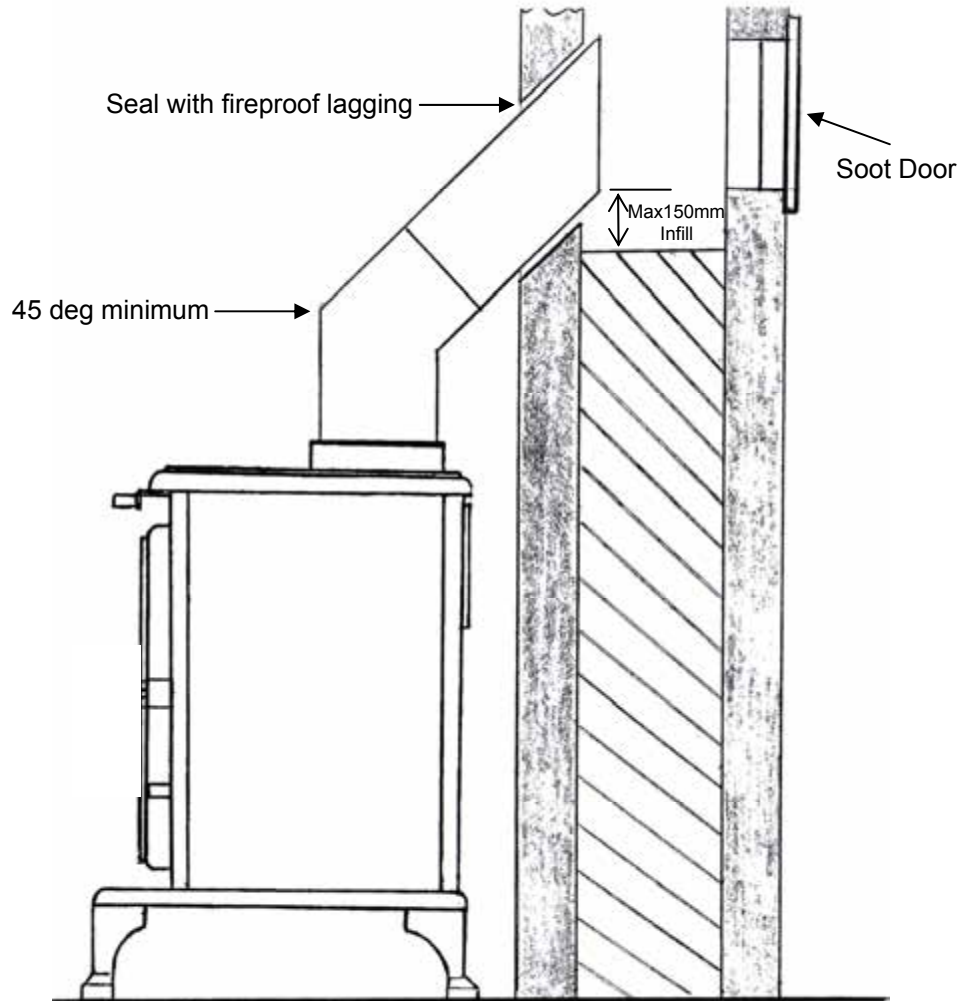
- A—Height
- B—Width
- C—Centreline of Flue
- D—Height To Centre of Rear
- Flue
- E—Depth
- F—Rear to Centre of Top
- Flue

<b>Firefox 12 Output. Extract From Test Results</b>	<b>Burning Rate Kg/hr</b>	<b>Fuel Load Kg</b>	<b>Refuel Interval hrs</b>	<b>Efficiency %</b>	<b>Max kW Output</b>
Anthracite	1.52	10.0	4	76.2	10.5
Hardwood Logs	2.96	7.0	1	74.2	13.8

<b>Firefox 12 Output. Based On Firebox Volume</b>	<b>Burning Rate Kg/hr</b>	<b>Fuel Load Kg</b>	<b>Refuel Interval hrs</b>	<b>Efficiency %</b>	<b>Max kW Output</b>
Closed Fire Briquettes	1.69	10.38	4	74.0	10.22
House Coal	1.50	10.0	4	74.0	7.8
Lignite Briquettes	2.83	9.0	2	74.0	11.37
Peat Briquettes	2.86	9.38	2	74.0	10.75

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

## Typical Installation Into Infilled Masonry Fireplaces



### Firefox 12 Parts List

1	FFX12003	Stove Top
2	FFX12002	Stove Base
3	FFX12004L	Stove Door Left Hand
4	FFX12004R	Stove Door Right Hand
5	FFX12003E	Expanding Flange
6	FFX12005	Grate Outer
7	FFX12005B	Grate Inner Bars (10 pcs)
8	FFX12007F	Stove Baffle Plate Frame
9	FFX12007	Stove Baffle Plate
10	FFX12024	Air Wash Deflector Plate
11	FFX12020	Primary Air Slide (2 pcs)
12	FFX12029	Operating Tool (not shown)
13	FFX12011	Front Bar
14	FFX12010	Leg (4 pcs)
15	FFX12008	Flue Collar
16	FFX12017	Door Catch
17	FFX12016H	Door Handle Holder (2 pcs)
18	FFX12016	Door Handle (2 pcs)
19	FFX12028	Hinge Pin (4 pcs)
20	FFX022T	Knob
21	FFX022B	Knob Set (2 pcs)
22	FFX12005R	Grate Riddler
23	FFX12031	Air Duct
24	FFX12014	Ash Pan
26	FFX12023	Secondary Air Slide
27	FFX12032	Heat Shield Primary (not shown)
28	FFX12033	Heat Shield Secondary (not shown)
29	FFX12019	Glass Clip (8 pcs) (not shown)
30	FFX12012	Side Brick (2 pcs)
31	FFX12013	Back Brick (2 pcs)
32	FFX12026	Door Seal
33	FFX12027	Glass Seal
34	FFX1	Heat Resistant Mitten (not shown)
35	FFX12018	Door Glass (2 pcs)
36	FFX12034	Rear Panel
37	FFX12035	Front Panel
38	FFX12036	Side Panel Left Hand
39	FFX12037	Side Panel Right Hand
40	FFX12038	Grate Pivot Block

## Assembly Of Stove

Remove legs, collar and blanking plate from stove and fit in desired position. The collar can be fitted top or rear.

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

Refit after installation.

## Stove Installation, Operating & Maintenance Instructions

**THIS APPLIANCE MUST BE INSTALLED BY A QUALIFIED SOLID FUEL ENGINEER IN ACCORDANCE WITH NATIONAL AND EUROPEAN STANDARDS AND LOCAL CODES.**

### Installation Instructions

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.

A flue draught of minimum 12 Pascals water gauge 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 overfiring.

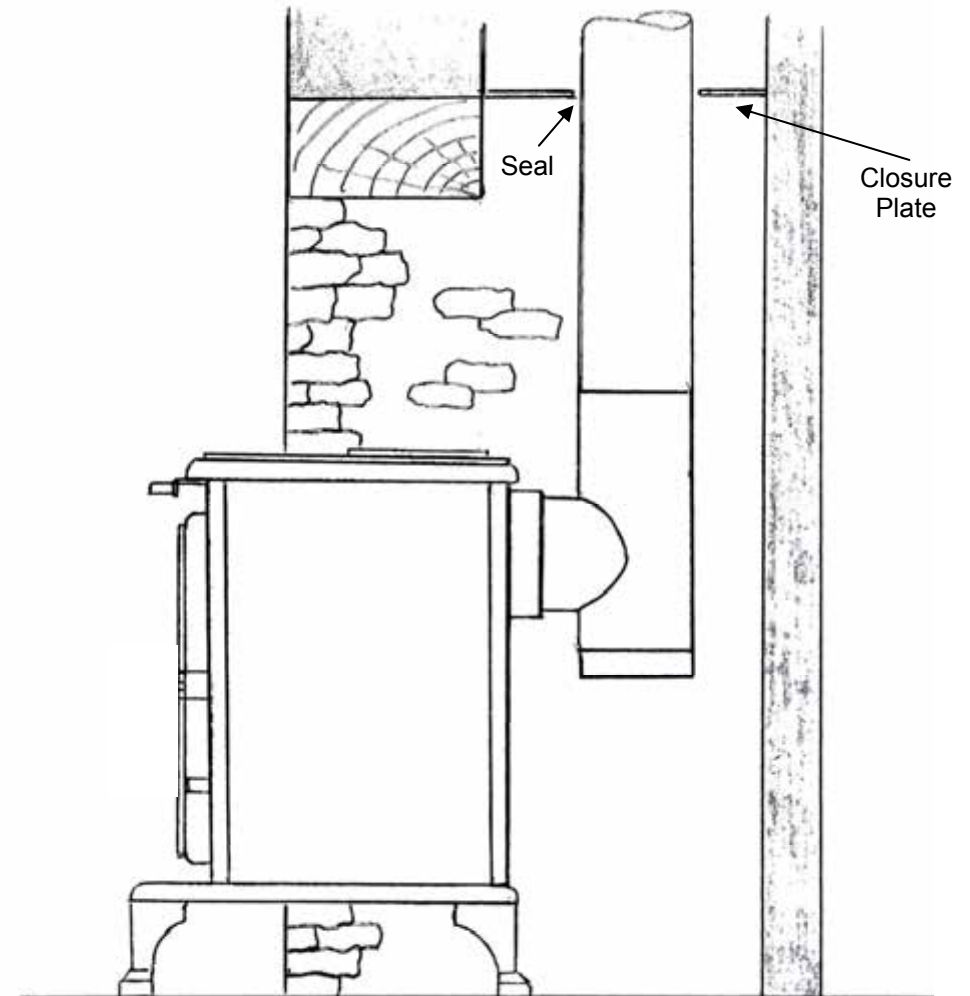
If you have any doubts about the suitability of your chimney, consult your local dealer/stockist.

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

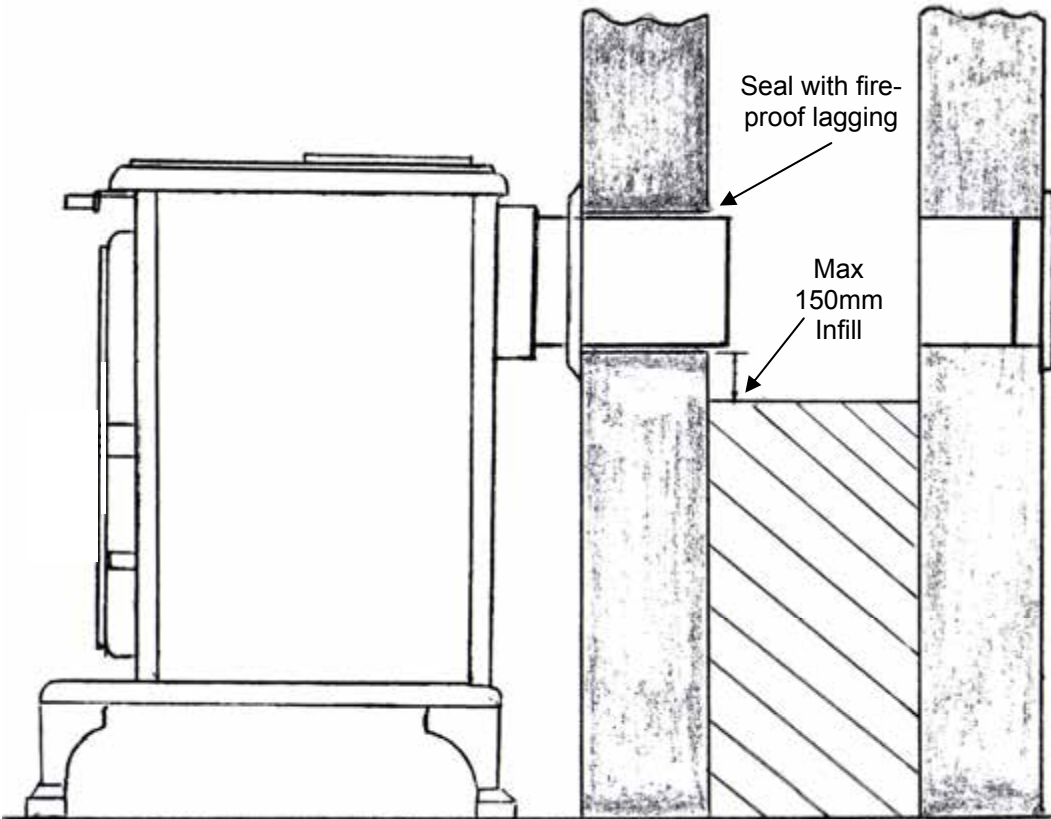
An existing fireplace opening can be bricked up or sealed with a register plate, 2.5mm steel sheet or concrete. A short length of flue pipe no smaller in diameter than the stove flue outlet or the manufacturer's stated flue size may then be used to connect the stove to the chimney. This flue pipe should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

## 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.



## 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 flueway.

The length of any horizontal run of the flue pipe must not exceed the flue outlet diameter on the stove—150mm.

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.

The stove can be recessed into a suitably sized fireplace opening but a permanent free air gap of 150mm must be left around the sides with a free air gap of 300mm above the top. There should not be any combustible material within a distance of 300mm from any surface of the stove. The heatshield fitted to the rear of the stove should remain in position. In all instances the stove should be positioned on a non-combustible hearth. Allow an apron of at least 300mm at the front of the stove and 150mm on either side. The hearth on which the stove is to be placed should not be 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.

When the stove is desired position mark hearth through holes in feet, remove stove drill and plug hearth for securing 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 Bye-Laws, British Standards and Codes of Practice with a minimum requirement of  $550\text{mm}^2$  per kW of appliance rated output above 5kW of permanent air supply free of any obstruction. An extractor fan must not be used in the same room as the appliance.

## Operating Instructions

### Primary Air

Primary air is controlled via the sliding vents in the bottom of the doors; this provides a conventional air draught to the bed of the fire. (+) indicates more air, (-) indicates less air, (+) and (-) are marked on primary and secondary air controls.

### Secondary Air

Secondary air is controlled via the sliding vent above the doors, 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

The Firefox 12 is fitted with a tertiary (third) air 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 and assist clean burning. It is advisable to clear holes in the duct occasionally either when the stove is serviced or after long periods of burning (dirty) fuel, i.e. bitumas coal. On all occasions this should be done when the stove is cold.

The tertiary air supply is permanently open and only allows a small fixed amount of air into the stove. The holes in the rear panel that feed air into the duct can be plugged with 2x screws provided. If you suffer from poor flue draft or regularly use smokeless fuel, i.e. anthracite, the heatshield will need to be removed, the plugs fitted and the heatshield replaced. One or both plugs can be used.

### Door Handle

The door handle along with the mitten provided are operating tools. It is not advisable to leave the door handle connected to the door as very high temperatures will be created in the handle and could cause harm if handled. Always remove the handle and use the mitten provided. Alert other users to these instructions.

### Damper Assembly (optional)

When burning wood only, a flue damper assembly may be fitted. When the damper is set in the open wood 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 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 stove is de-ashed regularly. The airflow through the grate keeps it cool, adding longevity of grate life and minimising distortion.

To operate: Offer the operating tool to the riddling bar (right hand side panel near base) and using slow positive movement riddle the grate back and forth. The reciprocating movement will clear the grate. The grate can jam occasionally with clinker or more often with nails and screws from used timber. Use shorter, faster movement of the tool to dislodge. If jamming persists then the obstruction must be removed when the stove is cold. If the grate is kept clear and maintained it will last longer.

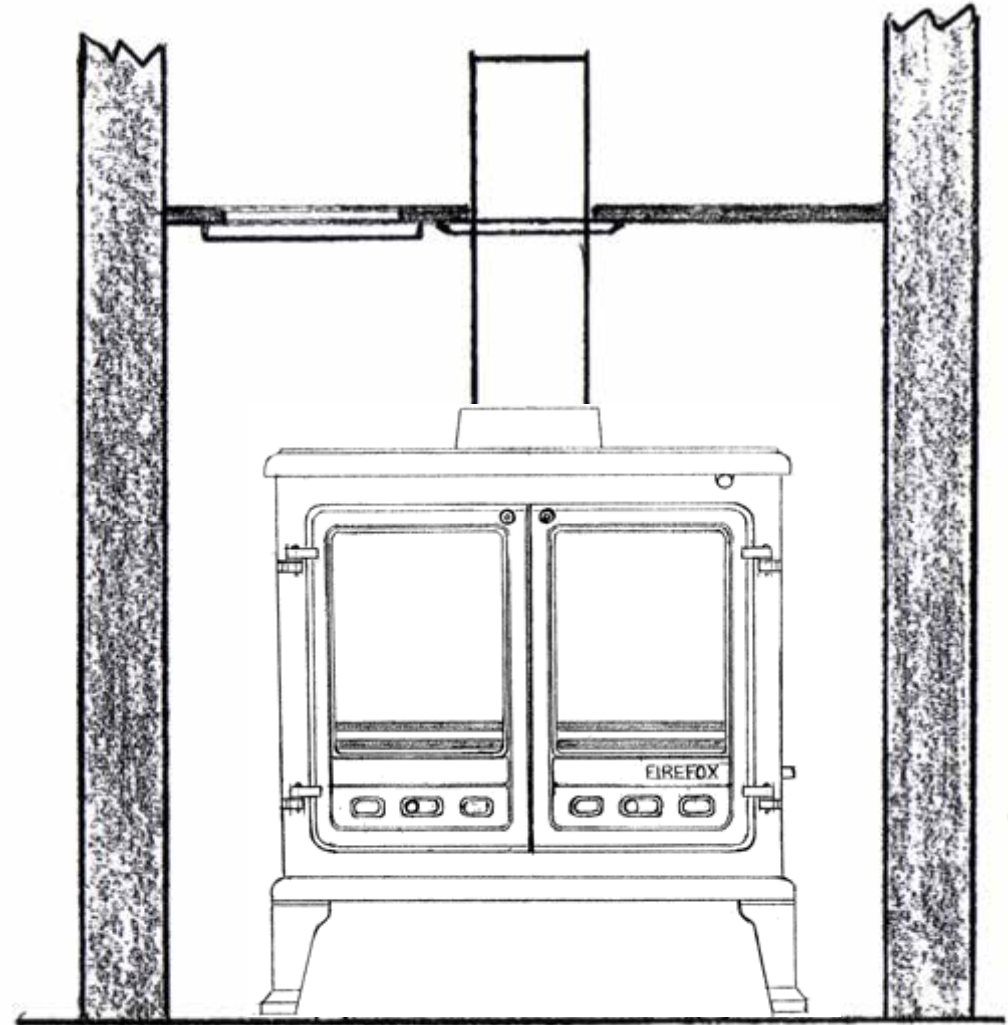
### Notes On Wood Burning

Wood burns best on a bed of ash and it is therefore only necessary to remove surplus ash from the grate occasionally.

Burn only dry, well seasoned wood, which should have been cut, split and stacked for

## Installation Diagrams

**Typical Top Flue Installation** using steel closure plate incorporating clean out door for chimney sweeping



### 3) Unburnt Fuel In Firebox

Insufficient air reaching fuel. Open primary air slide, this will supply combustion air to burn fuel fully (unless it has reached a 'point of no return')  
Check ash pan is full, empty if required, grate may be blocked de-ash with riddler, check for jammed clinker or nails in grate when fires out and cold.

### 4) Smoke And Fumes Entering Room

These are very dangerous and must NOT be tolerated. Open window and 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 DE557AS  
Tel- 0845-601-4406

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

### 5) 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 annually more often when bitumas coal and poor quality smoky fuels are used.

at least 12 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.

### 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.

We cannot stress firmly enough how important it is to empty the ash pan regularly. Air passing through the firebed cools the grate. Distortion or burning out the grate bars is nearly always caused by ash being allowed to build up the underside of the grate.

### 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 and castings 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 all 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 the fire up 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 ashpan. 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 practice may 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 'Smoky' 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 internals.

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

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

### Safety Notes For Your Guidance

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

Inform all persons 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 overfiring—if any part of the stove starts to glow red, the fire is in an overfire 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

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 following immediate action should be taken—

1. Open doors and windows to ventilate the room.
2. Let the fire out, or eject and safely dispose of fuel from the appliance.
3. Check for flue chimney blockage, and clean if required.

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

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

## General Maintenance

### Baffle Plate

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

### 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 the doors could crack the glass panels. The glass will not fracture from heat.

### Chimney

Check your 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.

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 up centre section of baffle plate and manipulate through the gap in the outer baffle plate. Then, by lifting the outer plate at one side, remove the firebrick beneath. The outer plate can now be withdrawn. Clean off any residual soot from the flueway and baffle plate and replace in reverse order of removal. Check that the plates are located correctly. This must be done when the stove is cold.

For efficient burning of your appliance, make sure the grate is clear of burnt debris i.e. nails etc.

## Troubleshooting

### 1) Poor heat output

A) Stove too small for a 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'x15'x8' 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 (Airwash) for glass panel

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

D) If glass requires cleaning use glass cleaner recommended by your supplier, only use glass cleaner or cold glass. DO NOT USE any abrasifs or scrapers these will scratch glass causing tar build up harder to remove.