

BALTIMORE

CAST IRON MULTI-FUEL STOVE

V 5.2

Conforms to EN13240:2001

Constructional Requirements

For intermittent Use

Not to be used in a shared flue

BALTIMORE INSTALLATION AND OPERATING INSTRUCTIONS (to be left with the householder)



CE APPROVED

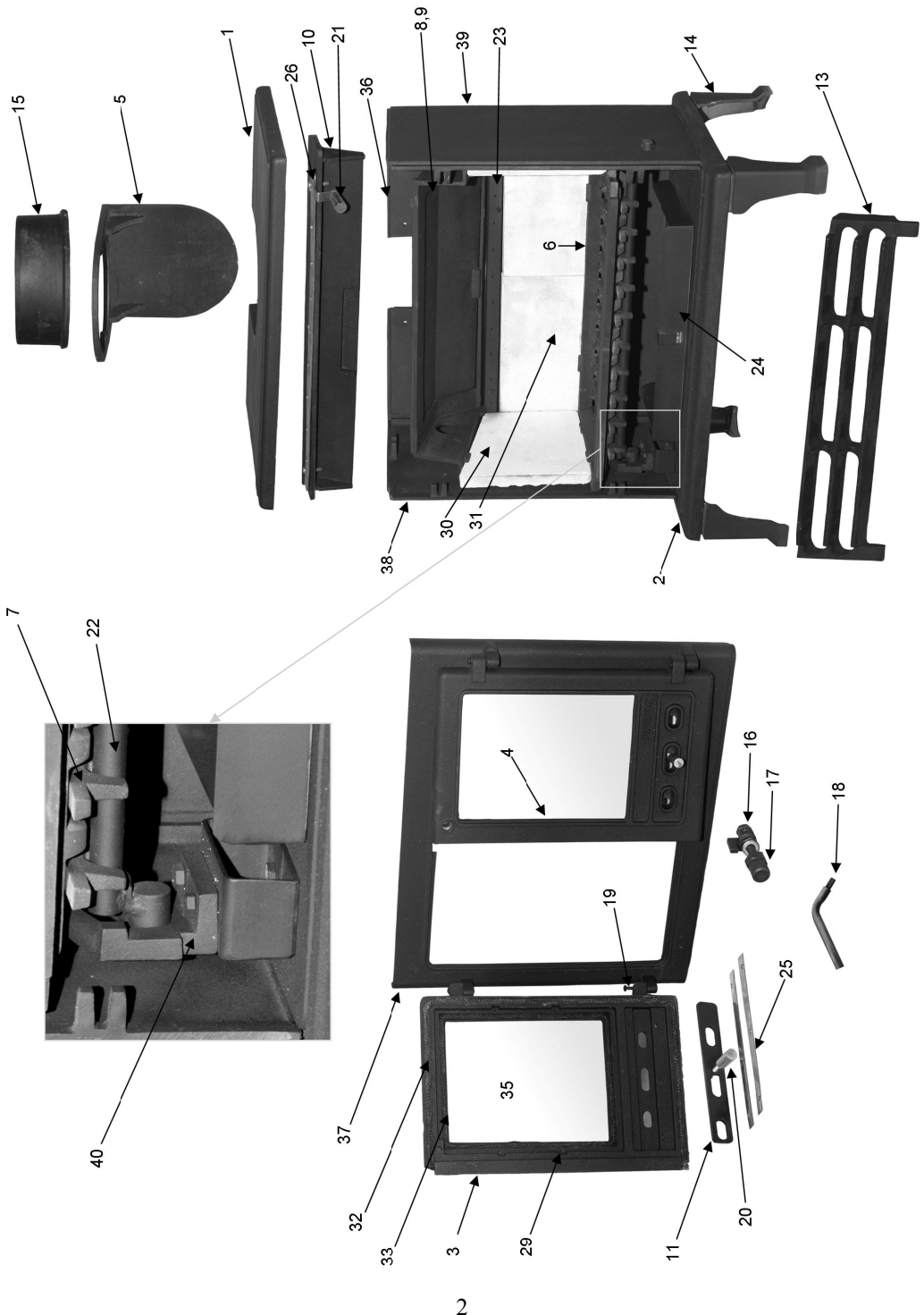
Valor Fires
Wood Lane
Erdington
Birmingham
B24 9QP

Tel. 01204 868550 (technical and spares enquiries)

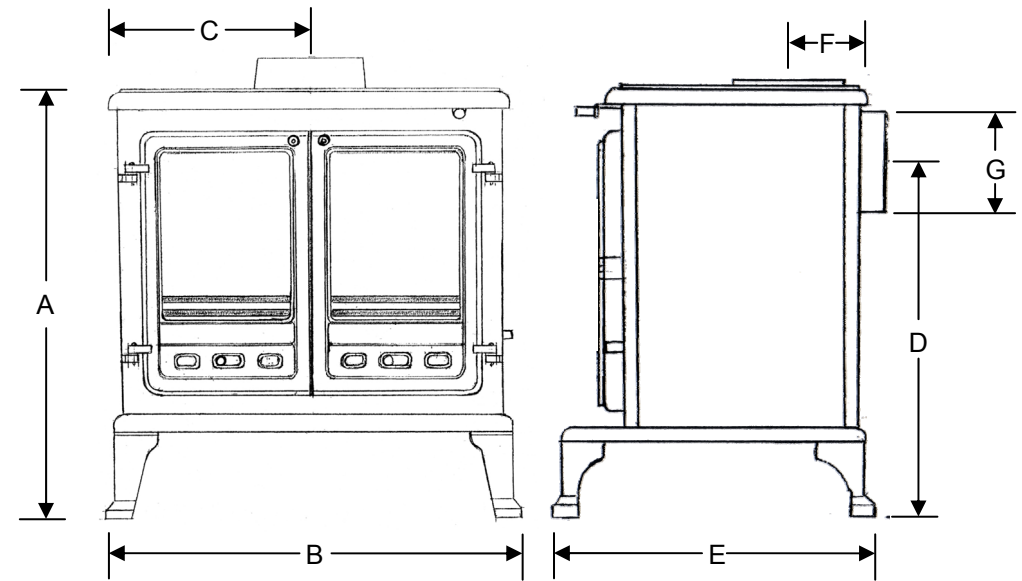
www.valor.co.uk

FIRES CAN BE DANGEROUS –The Baltimore Stove operates at very high temperatures. Always use a fire guard to BS6539 specification 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. The mitten provided is a tool.

Parts List



Dimensions



Dimensions, mm	A	B	C	D	E	F	G	Weight	Flue Draught
Baltimore	680	655	298	580	415	100	150	140Kg	Min 12Pa, Max 15 Pa

Key to Dimensions	A—Height	E—Depth
	B—Width	F—Rear to Centre of Top Flue
	C—Centreline of Flue	G—Flue Diameter
	D—Height To Centre of Rear Flue	

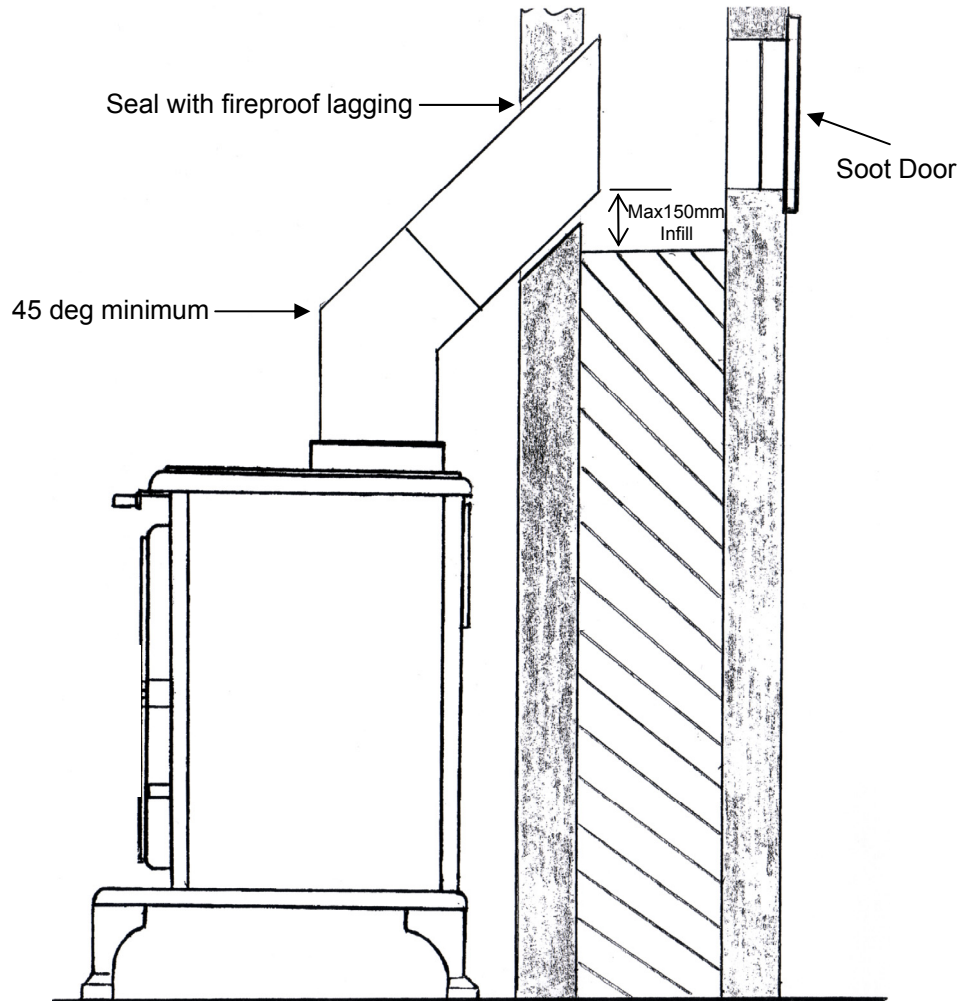
Ventilation requirement: 48.5 cm² unrestricted free air.

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

Baltimore Output. Based On Firebox Volume	Burning Rate Kg/hr	Fuel Load Kg	Refuel Interval hrs	Efficiency %	Max kW Output
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



Baltimore Parts List

1	FFX12003	Stove Top
2	FFX12002	Stove Base
3	D19C001-A	Stove Door Left Hand
4	D19C001-B	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	D11C010-A	Door Handle Brushed Steel (2 pcs)
18	D11C010-B	Door Handle PVD (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
25	FFX12021	Air Slide Guide Plate (4 pcs)
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 and collar from inside stove. Fit expansion flange in desired position with flue collar. If expansion flange has been moved from factory fitted position then slight pressure will be required on the flange as bolts are tightened, in order to compress rope seal evenly.

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

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 THIS 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 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.

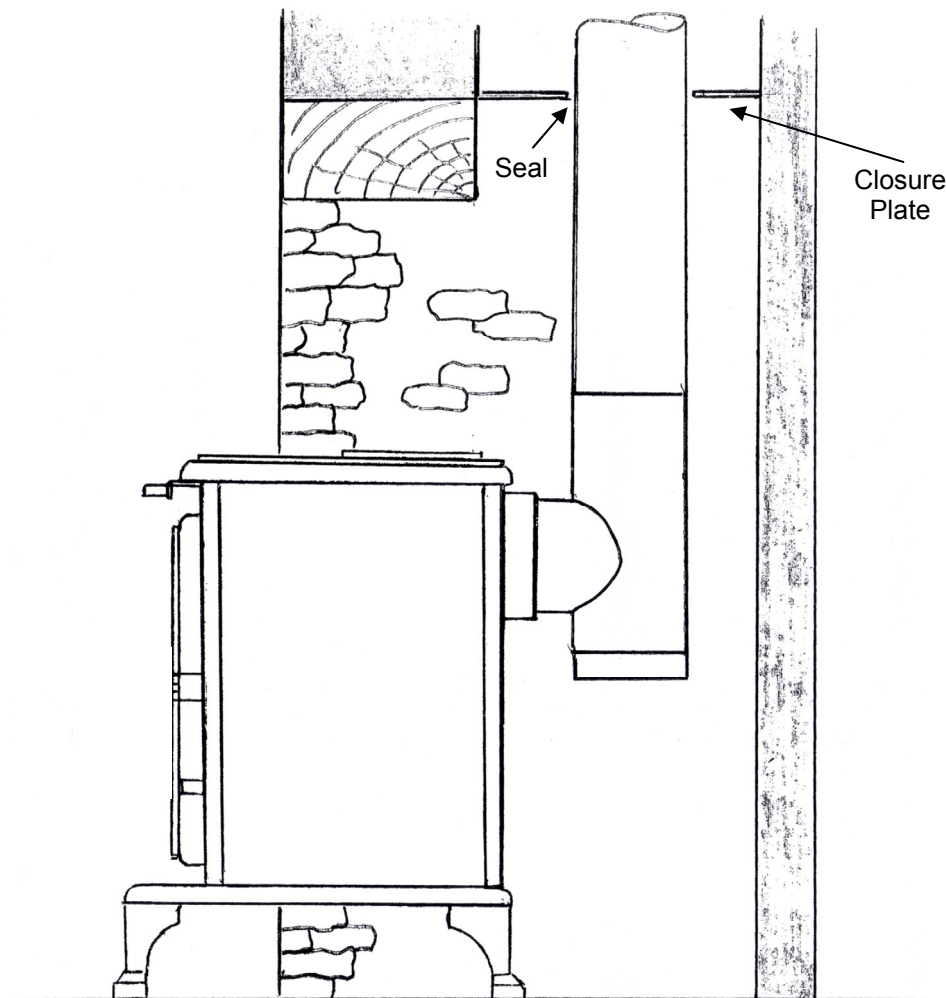
A flue draught of minimum 12 Pascals and a maximum of 15 Pascals water gauge is required for satisfactory appliance performance. The flue draught should be checked under fire at high output and if it exceeds the recommended maximum, a draught stabiliser must be fitted so that the rate of burning can 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 at least every 12 months thereafter.

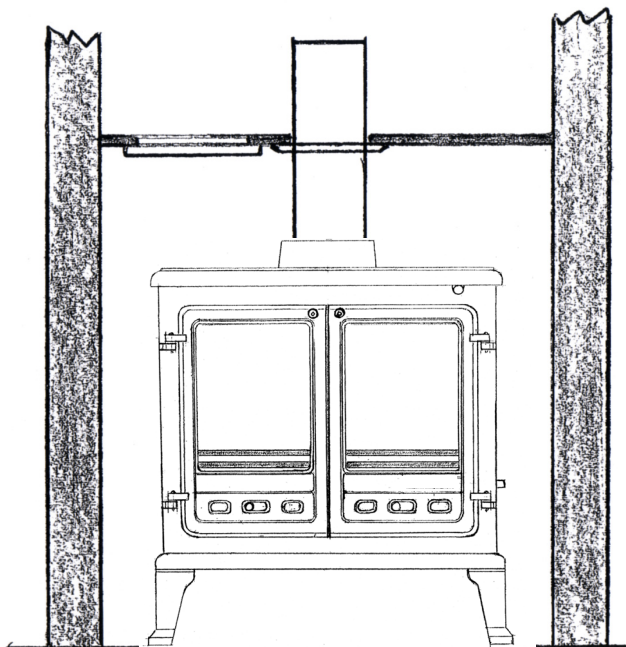
Typical Installation For Inglenook Fireplaces

Inglenook fireplaces can have very large bore chimneys. Check with your installer—you may need a stainless steel flexible liner for solid fuel fitting.



Installation Diagrams

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



An existing fireplace opening can be bricked up or sealed with a register plate, 1.5mm 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.

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.

Any changes in flue pipe direction should not be less than 45 degrees. If any 90 degree bends are required then a swept elbow or 2 x 45 degree elbows should be used. Any elbows used should have access doors for cleaning. Provisions must be made for access to the chimney connection, i.e. soot door.

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 Primary Air Sealing Plates are located on the front of the grate. To locate in position, slacken the four screws beneath the grate and pull forward, then close the door fully, open door and tighten screws.

Positioning of the Appliance

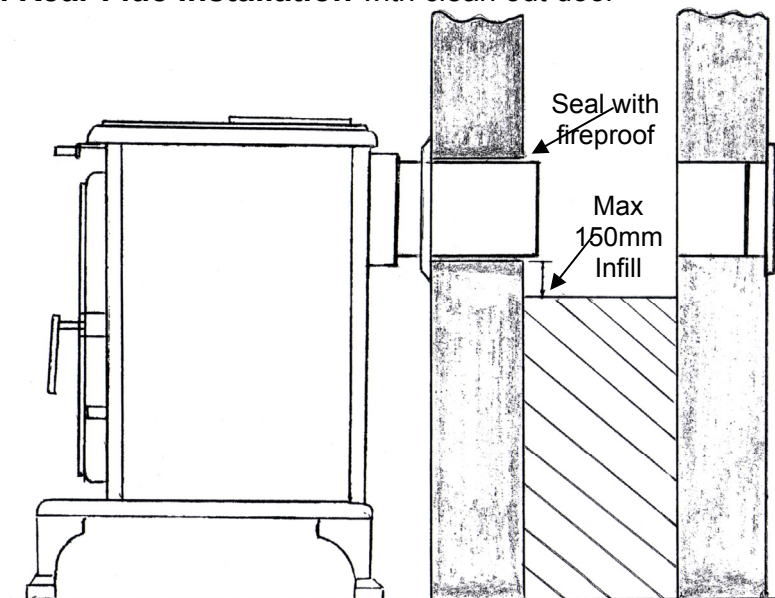
The stove can be recessed in a suitable sized fireplace but a permanent free air gap of at least 100mm must be left around the sides and top to obtain maximum heat output and for access to the rear of the stove. There should not be any combustible material within a distance of 600mm from any surface 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 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. If existing floors do not have adequate load bearing capacity then suitable modifications i.e. load bearing plates must be adopted.

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 accor-

Typical Rear Flue Installation with clean out door



dance with the current Building Regulations, Local Authority Bye-Laws, British Standards and Codes of Practice with a minimum 48.5cm² of permanent air supply free of any obstruction. Considerations and provisions must be made for any other appliances requiring ventilation. 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. To adjust, slightly turn the knob anti-clockwise to loosen, then move sideways. When in the desired position, turn the knob clockwise until tight.

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. To adjust the secondary air intake, simply move the slider left (-) for less air or right (+) for more air.

Tertiary Air

The Baltimore 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.

Damper Assembly (optional)

When burning wood only, a flue 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 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 USED 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

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 abrazifs or scrapers these will scratch glass causing tar build up harder to remove.

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 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.

Commissioning

On completion of installation, check that all cements have hardened, a small fire can then be lit. Check there is full evacuation of smoke and fumes up the chimney. The installer must ensure that the customer is instructed on the use of the appliance, as well as recommended fuels. Insist that the customer reads the instructions and fully understands the installations. Advise the user on the use of a fireguard, which must be to BS6539 standard, and what measures to be taken if smoke or fumes are emitted from the stove.

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.

Baffle Plate Removal

To avoid a build up of soot on the baffle (the plate inside the stove above the grate) this must be removed periodically for cleaning. The baffle plate consists of an inner and outer plate, only the inner plate requires removal for cleaning. Note the position of the plate before removal. Lift the plate and manipulate from the outer baffle plate through the opening. Clean off soot from inner plate and outer plate, then refit inner plate. If there is any significant distortion on the inner plate then a replacement is recommended. If complete baffle plate removal is required, then lift at one side and remove brick below, then manipulate out of position. Note: the outer baffle plate locates the bricks—make sure they are located correctly on re-fitting of baffle plate outer frame.

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

Grate

The grate is made up of fixed bars and sliding bars and these are operated by a long cam (rocker bar). The rocker bar passes through a hole in the right-hand side panel. The operating tool fits the flats on the end of the rocker bar.

Grate Removal

Remove baffle plate assembly (as described in Baffle Plate Removal). Lift out remaining bricks. Remove loose sliding bars from grate (making grate easier to lift) then lift complete grate off its stops and manipulate out of door opening. Replacement is the opposite of this removal process. Note: Great care must be taken when removing heavy components. If you do not feel confident in doing so, seek expert help.

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 with a maximum moisture content of 20%, soft woods have a lower heat output than hard woods per hour. Solid fuels vary in

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 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 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 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. Do not load solid fuel more than 30 degrees from top of front bar rearwards.

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 stove internals.

The stove must be operated with the doors closed except for re-fuelling and ashpan removal. The performance, efficiency and safety will be reduced dramatically otherwise.

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

Recommended Fuels

Seasoned wood—moisture content less than 20%

Solid fuel—Anthracite large nuts, briquette smokeless fuel i.e. 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—overfuelling can produce temperatures beyond the designed rating of the appliance, causing damage to internal parts.

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 to BS6539 specification 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.

HANDLING—This stove is heavy. Adequate facilities are required for site handling.

ASBESTOS—This stove contains no asbestos.

FIRE CEMENT—Do not allow fire cements to come into contact with skin as some are caustic.

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 toler-

ated.

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

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 circulation of air. Regular monitoring of internals will highlight condensation problems or water ingress. If these problems occur then the appliance needs drying and the cause of the problem investigating. It is advisable that after a seasonal shutdown the appliance is re-cleaned. 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.

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.