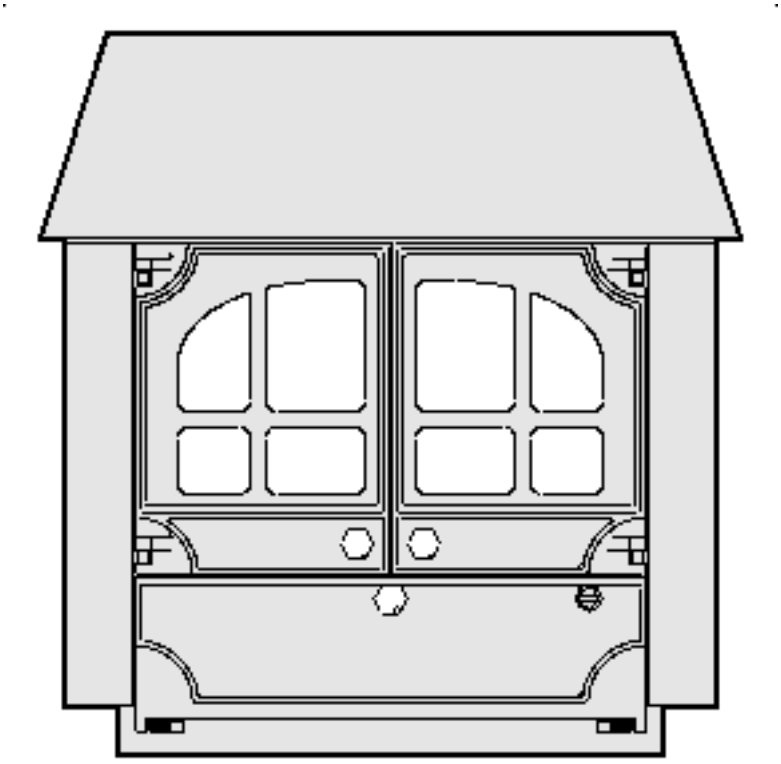
CHARNWOOD
CW50
Multifuel Roomheater



Installation
and
Operating instructions

CHARNWOOD

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INSTALLATION INSTRUCTIONS FOR THE CHARNWOOD CW 50 ROOM HEATER

HEALTH AND SAFETY AT WORK ACT 1974

It is the responsibility of the installer to comply with the Health and Safety at Work Act 1974 and particular attention must be given to the following:-

Handling

The stove is heavy and adequate facilities must be available for loading, unloading and the final manoeuvering into position. Care should be taken when moving the stove that it is not lifted by the hood or the side panels as this can cause damage to the enamel. To make handling easier the fire doors and the hood should be removed.

Glass

Care should be taken when handling the doors that the glass is not knocked.

Fire Cement

Some types of fire cement are caustic and should not be allowed to come into contact with the skin. In cases of contact wash off with plenty of water.

Electrical

If any electrical components are used in the system they should be installed in accordance with the manufacturers' installation instructions and all wiring must comply with the Regulations for the Electrical Equipment of Buildings.

Flues, Combustion Air Supply and Positioning of the Appliance.

In addition to these installation instructions, Building Regulations and Local Authority By-Laws regarding flues and positioning of the appliance, Code of Practice No. 403; 1974 and BS 6461 Pt. 1 & Pt. 2; 1984 must be observed.

This appliance must not be sited in a room where an extractor fan is fitted as this could result in flue pull reversal and fume emission. There must be an adequate air supply into the room totalling at least 16 square inches to provide combustion air.

CHIMNEY

The chimney must be in good condition free from cracks and blockages and should not have an excessive cross sectional area. If problems are encountered expert advice should be sought regarding the necessity of having the chimney lined. Should it be found necessary to line the chimney

a lining suitable for solid fuel must be used.

If the appliance is to be fitted in a room where there is no existing chimney a prefabricated block chimney or a twin walled insulated stainless steel flue to B.S. 4543 can be used either internally or externally. The internal diameter must not be less than 150 mm (6 inches). These flues must be fitted in accordance with the manufacturers' instructions and Building Regulations.

Before connecting the appliance to an existing flue the flue must be swept and checked. In order for the appliance to perform satisfactorily the chimney height should not be less than 4 metres measured vertically from the outlet of the stove to the top of the flue terminal. Should there be excessive draw in the chimney it may be necessary to fit a draught stabiliser.

HEARTH

The stove must stand on a fireproof hearth and must be situated at least 300 mm (12 inches) from any combustible material. The positioning of the stove and the size of the hearth are governed by building regulations for Class 1 appliances. These building regulations state that the hearth must extend in front of the stove by at least 300 mm (12 inches) and to the sides of the stove by at least 150 mm (6 inches). If in doubt as to the positioning of the stove expert advice should be sought either from the supplier or the local building inspector.

CONNECTIONS TO FLUES

There are several ways of connecting the stove to the flue. These are illustrated in figures 1 to 3. Horizontal lengths of flue must be kept to a minimum and should not be more that 150 mm (6 inches) long. The sealing face of the flue collar should be coated with fire cement before fixing to the body of the stove using the two screws provided. The blanking plate should be removed, sealed with fire cement and refitted, care being taken to ensure that the screws are well tightened. All flue connections must be well sealed.

SOOT DOORS

It is possible to pass a 16" diameter sweeps brush through the appliance but in most installations it will be necessary to have a soot door to enable the chimney to be swept. This may either be in the actual brickwork of the chimney or in the register plate. Various types and positions of soot doors are shown in figures 1 to 3.

FITTING A BACK BOILER

Before fitting the boiler remove the side and back fire plates, the front fence, the throat plate and the back firebrick.
The back firebrick is supported at the bottom by two brackets which are secured with nuts and bolts. The brick is also held by adhesive fire cement on the back of the brick. The brick should be prised loose and lifted out and the two angles should then be removed. The two small blanking plates covering the boiler tapping holes in the back of the stove should be

removed and any fire cement covering the holes cleared away. The locking nuts and the fibre washers should be removed from the boiler tappings and the boiler fitted inside the stove with the two tappings protruding through the holes in the back of the stove. IMPORTANT – The flow tapping (marked on the boiler) must be passed through the top hole in the back of the stove. If the boiler is fitted the wrong way up air will be trapped in the boiler.
Place the fibre washers over the tappings to sit against the back of the stove, replace the locking nuts and tighten ensuring that the boiler is level and that the grate operates correctly. Replace the throat plate, the front fence, and the back and side fire plates. The back fire brick and the two fire brick angles are not required. All unused bolt holes in the back of the stove should be filled with fire cement.

WATER HEATING SYSTEM

The water heating system should be installed by a qualified heating engineer to B.S. 5449: part 1. A double feed indirect hot water storage cylinder to B.S. 1556: part 1 should be used and in order to prevent the build up of scale and corrosion a suitable inhibitor should be used. All pipework in the primary circuit should be 28 mm diameter and the flow pipe must rise from the boiler.

THERMOSTAT

The thermostat is factory fitted and should not need any adjustment. To adjust the cold setting distance turn the control knob to the minimum setting, slacken the locking nut and adjust the damper so that it is just closed.

PRE LIGHTING CHECK

Before initial lighting the following points should be checked.

1. The bottom grate bars must all be fitted and should move freely and easily when the riddling mechanism is operated.
2. The plates round the sides and back of the grate must be in position and sitting correctly. (See figure 4).
3. The throat plate must be fitted in the roof of the appliance and should be checked to ensure that it has not become dislodged in transit. The method of location and positioning of the throat plate is shown in fig. 5.
4. Ensure that the overrun catch swings freely and easily on its spindle preventing the fire doors from closing until the ashpan door has been shut.

COMMISSIONING

On completion of the installation and after allowing a suitable period of time for the fire cement and mortar to dry out, the stove should be lit and checked to ensure that smoke and fumes are taken from the appliance up the chimney and emitted safely. Also check all joints and seals.

If the appliance is used to provide hot water then the system should be

checked to ensure that it is functioning correctly.

On completion of the installation and commissioning please leave these operating instructions with the customer. The customer should be advised on the use of the appliance and also of any controls on the system.

OPERATING INSTRUCTIONS FOR THE CHARNWOOD CW 50 ROOM HEATER

Before lighting the stove check with the installer that the work and checks described on the previous pages of this booklet have been carried out correctly and that the chimney has been swept, is sound and free from any obstructions.

FUELS

the recommended fuels for this stove are as follows:

Ancit
Anthracite Stove Nuts
Coalite
Homefire
Phurnacite
Rexco
Royal
Sunbrite Doubles
Welsh Dry Steam Coal Large Nuts

Smaller sizes of some of the above fuels may be burned in autumn and spring to give lower outputs.
The above may all be burned in Smoke Control Areas. In areas which are not Smoke Control Areas dry wood and peat may also be burned. If you are unable to obtain the fuel you want ask your supplier, an approved fuel distributor, or your local SFAS office to suggest an alternative.

MULTIFUEL GRATE

Your Charnwood stove is fitted with a multifuel grate which enables both solid fuels and wood to be burned equally effectively. The grate has two positions. In the solid fuel position the grate bars are vertical with gaps in between allowing the primary combustion air to come up through the grate and through the fuel bed. In the wood position the combustion air comes up around the side of the grate and over the top of it. When in the wood position ash is able to build up on the grate as is necessary for effective wood burning. Movement of the grate from one position to the other is effected using the tool supplied. The grate is put into the wood position by moving the tool in the direction of the arrow 'W' (marked on the handle of the tool) until the tool is vertical. The grate is put into the solid fuel position by moving the tool in the direction of the arrow 'C' until the tool is horizontal. To riddle the appliance when burning solid fuels the tool should be moved from the '3 o clock' to the '5 o clock' position several times. When burning wood the ash should be allowed to build up and riddling should only be carried out once or twice a week.

LIGHTING

There is a safety device fitted to the stove which prevents the ashpan door being left open when the main doors are shut. The main doors must always be opened before opening the ashpan door as there is an interference

device which must not be forced. When the ashpan door is opened the overrun prevention catch will swing up preventing the left hand door from closing completely. This feature is a safety device to prevent accidental over-firing.

The sequence for opening and closing the doors is as follows:

Open the main doors.
Open the ashpan door.
Close the ashpan door.
Close the main doors.

The stove may be lit using paper and dry kindling wood or fire lighters.

Set the grate into either the wood position or the solid fuel position as required. Place the paper and kindling or fire lighters on the grate and cover with approximately 2 inches of fuel. Turn the thermostat control knob to the maximum setting and light the paper or fire lighter. Close the doors until the fuel is well ignited then load with fuel and adjust the thermostat to the required level.

On initial lighting the stove may smoke and give off an odour as the silicon paint with which the firebox is painted reacts to the heat. This is normal and will cease after a short time. In the meantime the room should be kept well ventilated.

When relighting the stove, riddle, remove any clinker from the firebed then empty the ashpan.

CONTROLLING THE FIRE

The rate of burning and hence the output is controlled by the control knob on the left hand side of the stove. This is linked to a thermostat which is based on the firebox temperature. The number at the top of the control is the number at which it is set and a high number will give a high burning rate and hence a high output. A low number will give a low burning rate and a low output. Experimentation will be necessary to obtain the desired heat output. The stove is fitted with a manual secondary air control which is located on the right hand side of the stove. When the arm is pointing forwards it is closed, when pointing to the right it is open. This control should be in the closed position when burning smokeless fuels and in the open position when burning other fuels.

RIDDLING

When burning solid fuels riddling twice a day is usually sufficient. When burning wood, ash should be allowed to build up and riddling once or twice a week will be sufficient.
The fire should be riddled with all doors shut. Place the tool on the knob and rotate back and forth several times. Too much riddling can result in emptying unburnt fuel into the ashpan and should therefore be avoided. Clinker should regularly be removed from the fire bed.
After riddling the grate should be put back into the solid fuel or wood position as required (the tool should be horizontal for solid fuel or vertical for wood).

REFUELLING

Keep the firebox well filled but do not overfill to prevent fuel from spilling over the top of the front fire bars. Care should be taken especially when burning wood that fuel does not project over the front fire bars or damage to the glass may be caused when the doors are closed.

ASH CLEARANCE

The ashpan should be emptied regularly before it becomes too full. Never allow the ash to accumulate in the ashpan so that it comes in contact with the underside of the grate as this will seriously damage the grate bars. The ashpan is handled using the tool provided.

Care should be taken to ensure that ash is cool before emptying it into plastic liners or bins.

Always close the ashpan door tightly after replacing the ashpan.

WOODBURNING

When burning only wood the top section of the front fire bars should be removed as this will allow much larger logs to be fitted into the firebox. The grate should be kept in the woodburning position and the stove should not be riddled until the depth of ash becomes so deep that it begins to block the passage of air into the firebox at the side of the grate. When this is the case do not remove all of the ash using the riddling mechanism but keep a layer about half an inch thick as this enables the wood to burn more effectively.

Only dry well seasoned wood should be burned on this appliance as burning wet unseasoned wood will give rise to heavy tar deposits. For the same reason hard wood is better than soft wood. Burning wet unseasoned wood will also result in considerably reduced outputs.

When burning wood use the primary air control in exactly the same way as when burning solid fuel but keep the secondary air inlet open (the secondary air inlet is located at the bottom of the righthand side panel).

OVERNIGHT BURNING

When burning solid fuel the fire will burn more slowly if a smaller size of fuel is used. The opposite is true when burning wood, so if long burning times are required use large logs rather than small ones.

When burning solid fuel the fire should be riddled and the ashpan emptied if necessary. The thermostat control should be turned up to maximum for a brief period and then when the fire is burning brightly it should be loaded with fuel and the thermostat turned to a low setting. Some experimentation will be necessary to find the setting most suitable for the particular fuel used and the draw on the chimney. For overnight burning the fire doors must be closed.

To revive the fire, riddle (when burning solid fuel), empty the ashpan if necessary and turn the thermostat control knob to maximum. When the fire is burning well load on more fuel as necessary and turn the control knob to the desired setting. When burning wood do not riddle but simply turn the air control to maximum until the fire picks up and then set the air control at the desired setting and refuel as necessary.

CLEANING AND MAINTENANCE

The cladding of the stove, the doors and the top grid are finished in vitreous enamel. To clean the surfaces simply wipe over with a dry cloth. Abrasive pads and scouring cleaners must not be used as these will damage the finish. Care should be taken not to knock the enamel with hard objects as it will chip.

The glass in the doors is a zero expansion ceramic glass which will not crack due to the heat of the fire. It may be cleaned when hot without damage to the glass although care must be taken with any aerosols or cloths used. When burning solid fuel the glass may be cleaned simply using a damp cloth and then wiping with a dry cloth, when burning wood any tar deposits on the glass may be removed with a proprietory oven cleaner or with wire wool. When burning wood, tar deposits on the glass can often be burnt off simply by running the fire at a fast rate for a few minutes using dry wood.

MONTHLY MAINTENANCE

It is important that every month the throat plate and all the stove flueways are thoroughly cleaned. It is not necessary to let the fire out completely to carry out these operations.

The throatplate should be lowered using the tool. The method of doing this is to pull down the front of the throat plate as shown in figure 5. Any sooty deposits should then be swept from the plate and into the fire.

SWEEPING

The chimney should be swept at least twice a year. As stated earlier, in some installations it will be possible to sweep the chimney through the appliance. If this is the case then the procedure for sweeping the chimney is as follows.

1. Remove the two plates either side of the grate.
2. Remove the front fire bars.
3. Remove the throatplate.
4. Sweep the chimney ensuring that soot is removed from all horizontal surfaces after sweeping.
5. Replace all parts removed.

In situations where it is not possible to sweep through the appliance the procedure is as above except that instead of sweeping through the appliance the chimney must be swept through the soot door provided. After sweeping the chimney the appliance flue outlet and the flue pipe connecting the stove to the chimney should be cleaned with a flue brush.

Any horizontal register plates must also be cleaned.

Different types of sweep's brushes are available to suit different flueways. For standard brick chimneys a wire centre sweeps brush fitted with a guide wheel should be used. For prefabricated insulated chimneys the manufacturers instructions with regard to sweeping should be consulted.

TROUBLE SHOOTING

Fire will not burn.

Check that: the air inlet is not obstructed in any way, that chimneys and flueways are clear, that a suitable fuel is being used.

Fume emission.

WARNING NOTE: Properly installed and operated this appliance will not emit fumes. Occasional fume from de-ashing and refuelling may occur. Persistant fume emission must not be tolerated. If fume emission does persist, then the following immediate actions should be taken:
(a) Open doors and windows to ventilate the room.
(b) Let the fire out and safely dispose of fuel from the appliance.
(c) Check for flue or chimney blockage, and clean if required.
(d) Do not attempt to relight fire until cause of fume has been identified, if necessary seek professional advice.

Fire blazing out of control.

Check: that the ash pit door is tightly closed, that the thermostat knob is turned down to the minimum setting, that the inlet damper is closed (at the bottom left of the appliance), that a suitable fuel is being used.

Water heating system.

The appliance must not be lit if there is any possibility that any parts of the system may be frozen.

Chimney Fires.

If the chimney is regularly swept properly chimney fires should not occur. However, if a chimney fire does occur turn the control knob to the minimum setting, and tightly close the doors of the appliance. This should cause the chimney fire to go out in which case the control should be kept at the minimum setting until the fire has gone out. The chimney and flueways should then be cleaned. If the chimney fire does not go out when the above action is taken then the fire brigade should be called.
After a chimney fire, the chimney should be carefully examined for any damage. Expert advice should be sought if necessary.

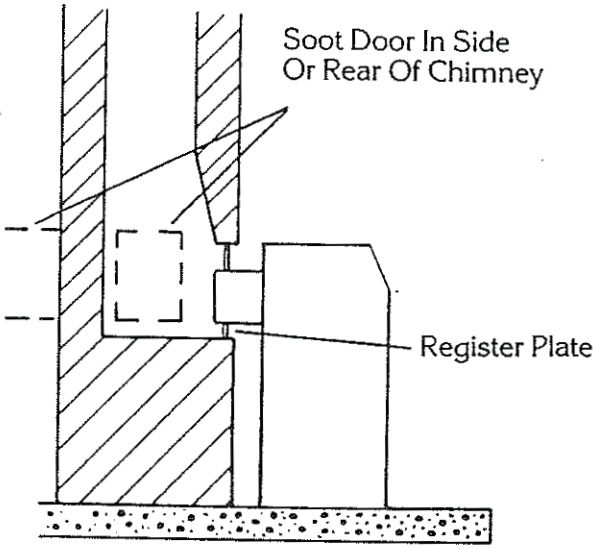


Fig. 1 Vertical Register Plate
With Bricked Up Fireplace

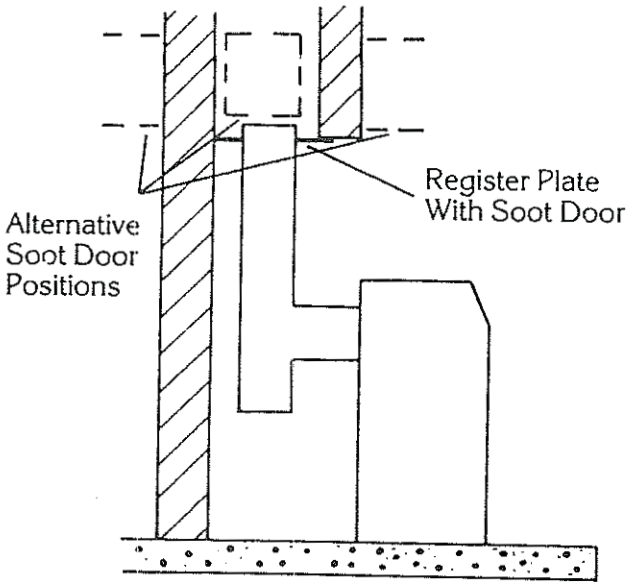


Fig. 2 Horizontal Register Plate
With Rear Flue Connection

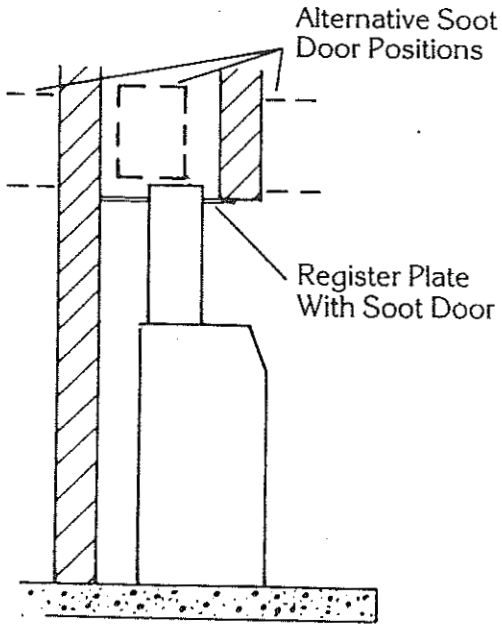


Fig. 3 Horizontal Register Plate
With Top Flue Connection

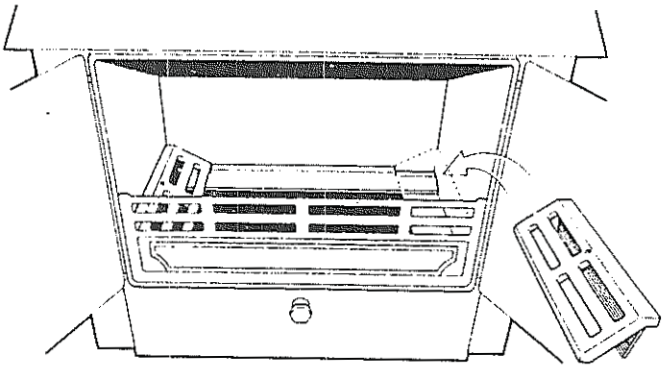


Fig. 4 Location of side and
back fireplates

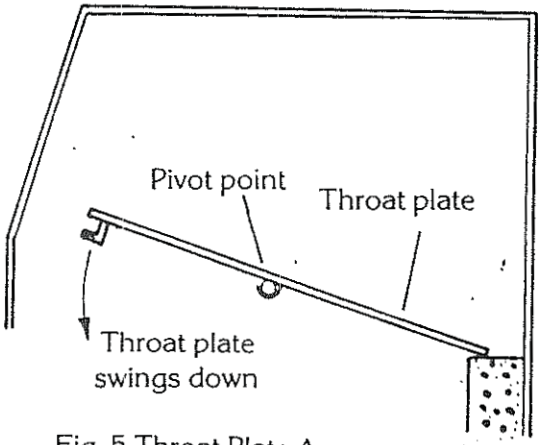
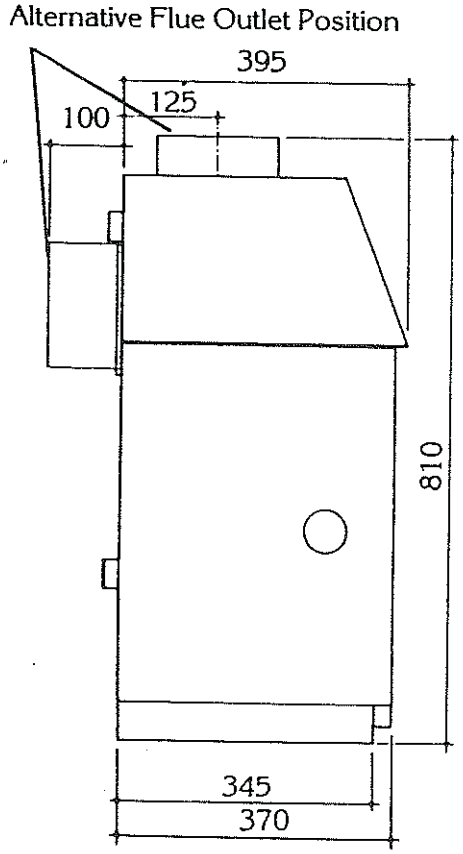
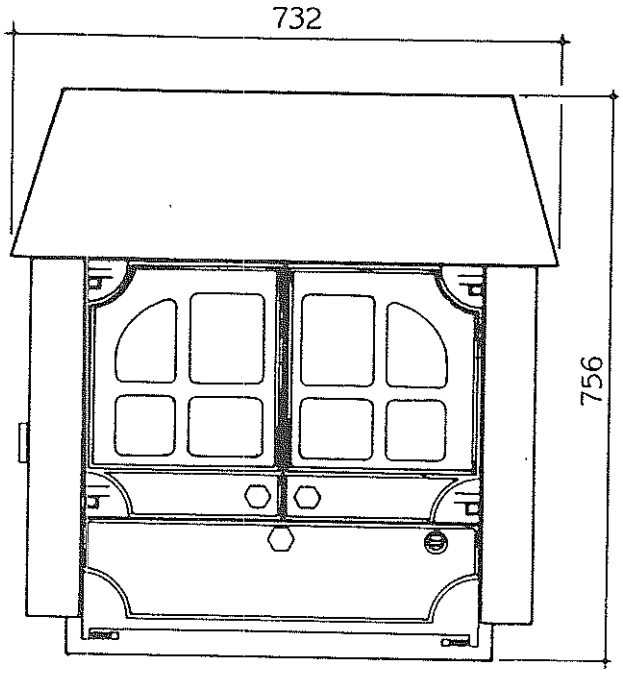
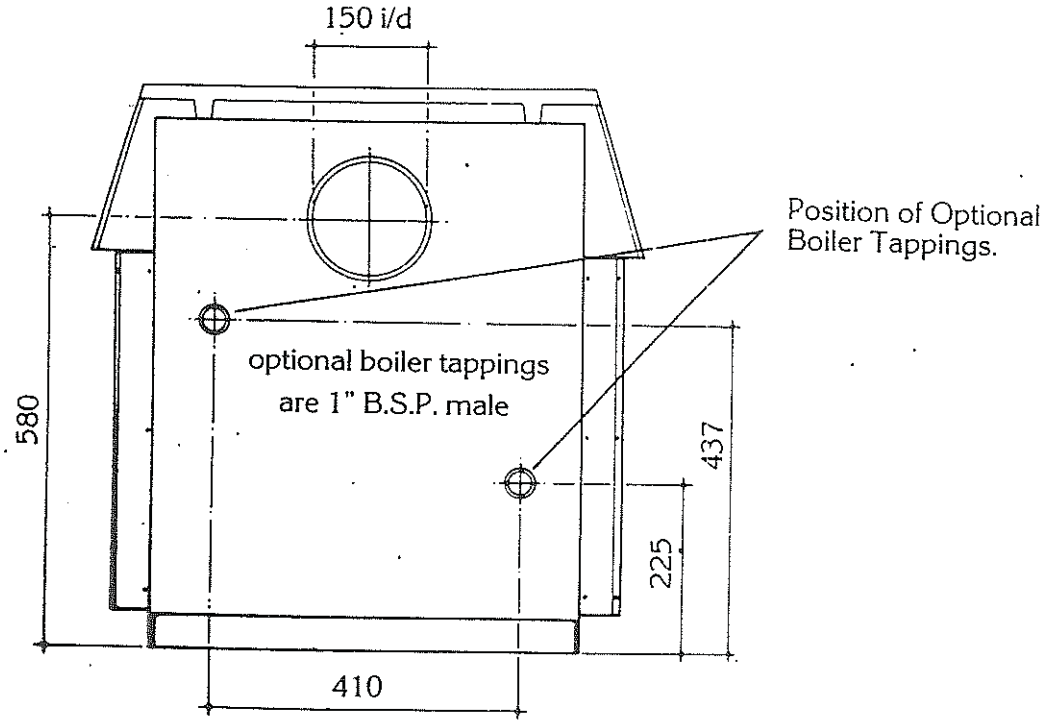


Fig. 5 Throat Plate Arrangement
Showing Method of
Lowering The Plate

Alternative Flue Outlet Position

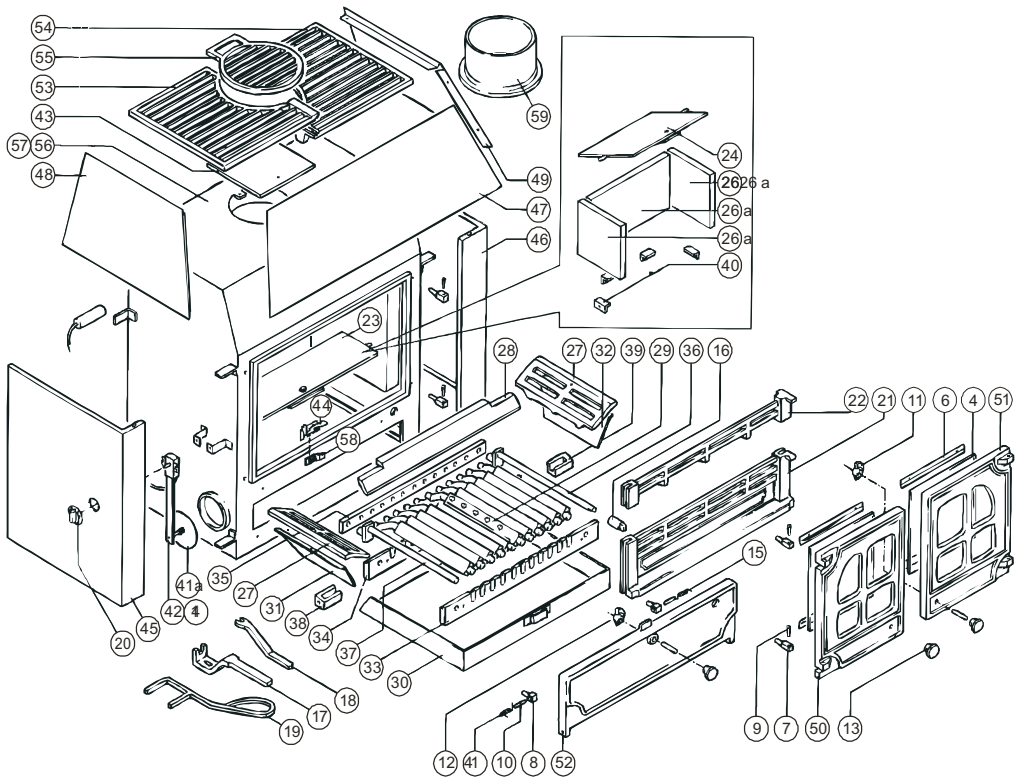






Charnwood CW50/50B Parts List

Issue F



Item	Part No.	Description
3a*	008/BW35S	Door Seal Set Inc Adhesive
3b*	008/FW29	Door Seal Adhesive
4	006/BW30	Glass (Inc Seal)
4a*	008/RW55	Glass Seal Kit
6	004/BW23	Glass Retainer
7	008/FW27	Hinge Post
8	008/FW28	Hinge Post
9	008/BW39/S	Hinge Pin Set
10	008/BW40/S	Hinge Pin A/P Door Set
11	008/BW41/A	Door Catch Assembly R.H.
12	008/BW42/A	Door Catch Assembly Ashpit
13	002/HV12	Door Knob L.H. (Round)
14	008/BW43L	Ashpit Door Spring L.H.
15	008/BW43R	Ashpit Door Spring R.H.
16	002/CG06	Riddler Knob
17	002/BW20	Riddler/Ashpan Tool
18	002/BW26	Door Opening Tool
19	012/BW28	Tube Cleaning Tool (CW50B)
20	008/BW50	Thermostat Knob
21	002/BW07	Front Fire Bar
22	002/BW08	Deepening Bar
23	010/BW31	Throatplate (CW50B)
24	010/BW32	Throat Plate (CW50)
26a	011/BW34/S	Set Of Bricks
27	002/BW15	Side Plate
27a	002/BW15/AL	Side Plate C/W Ash Plate L.H.
27b	002/BW15AR	Side Plate C/W Ash Plate R.H.
28	002/BW16	Back Fire Plate
29	002/CG01	Bottom Grate Bar
29a	002/CG01S11	Set of Grate Bars (11 per set)
30	004/BW17	Ashpan
31	004/BW19L	Ash Shedding Plate L.H.

Item	Part No.	Description
32	004/BW19R	Ash Shedding Plate R.H.
33	002/CG02F	Carrier Bar Front
34	002/CG02R	Carrier Bar Rear
35	012/CG03	Mover Bar
36	012/CG04	Riddler Rod
37	012/CG05	Idler Rod
38	002/CG07	Carrier Bar Support L.H.
39	002/CG08	Carrier Bar Support R.H.
40	012/BW27	Firebrick Angle (CW50)
41	008/BW49	Thermostat (CW50)
41a	008/BW57	Thermostat Flap 90mm dia
42	008/BW48	Thermostat (CW50B)
43	013/175/175	Blanking Plate
44	004/BW46	Over Run Catch
45	005/BW05L/#	Side Panel L.H.
46	005/BW05R/#	Side Panel R.H.
47	005/BW06F/#	Hood Panel Front
48	005/BW06L/#	Hood Panel L.H.
49	005/BW06R/#	Hood Panel R.H.
50	003/BW01/#	Door L.H.
51	003/BW02/#	Door R.H.
52	003/BW03/#	Ashpit Door
53	003/BW37/1/#	Top Grid L.H.
54	003/BW37/2/#	Top Grid R.H.
55	003/BW38/#	Insert Grid
56	001/BW10	Firebox (CW50)
57	009/CW50B/A	Firebox Assembly (CW50B)
58	012/BW45	Ashpit Door Bracket
59	002/CH12A	Flue Collar
59a	003/CH12A/#	Flue Collar Enamelled
60*	010/BW51	Ash Carrier (Optional Extra)
61*	008/TH02/L	Low Level Pipe Stat (Opt'l Extra)

* These items are not shown on the drawing.
# Please specify colour when ordering.

To obtain spare parts please contact your local stockist giving Model, Part No. and Description. In case of difficulty contact the manufacturer at the address shown.
This drawing is for identification purposes only.

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