



from **AGA**

Installation Instructions for Rayburn 200SFW and Rayburn 212SFW Solid Fuel Cooker



Consumer Protection

As responsible manufacturers we take care to make sure that our products are designed and constructed to meet the required safety standard when properly installed and used.

IMPORTANT NOTICE: PLEASE READ THE ACCOMPANYING WARRANTY. Any alteration that is not approved by AGA could invalidate the approval of the appliance, operation of the warranty and could affect your statutory rights.

All local regulations including those referring to National and European standards need to be complied with when installing the appliance.

Important

This appliance may contain some of the materials that are indicated. It is the Users/Installers responsibility to ensure that the necessary personal protective clothing is worn when handling,

where applicable, the pertinent parts that contain any of the listed materials that could be interpreted as being injurious to health and safety, see below for information.

Firebricks, Fuel beds, Artificial Fuels - when handling use disposable gloves.

Fire Cement - when handling use disposable gloves.

Glues and Sealants - exercise caution - if these are still in liquid form use face mask and disposable gloves.

Glass Yarn, Mineral Wool, Insulation Pads, Kerosene/Gas Oil - may be harmful if inhaled, may be irritating to skin, eyes, nose and throat. When handling avoid inhaling and contact with skin or eyes. Use disposable gloves, face-masks and eye protection. After handling wash hands and other exposed parts. When disposing of the product, reduce dust with water spray, ensure that parts are securely wrapped.

PERFORMANCE

REMEMBER, when replacing a part on this appliance, use only spare parts that you can be assured conform to the safety and performance specification that we require. Do not use reconditioned or copy parts that have not been authorised by AGA.

The Rayburn 200SFW is intended to be used for cooking only. The Rayburn 212SFW is intended to supply heating for cooking and domestic hot water.

The Rayburn 200SFW has been tested using Ancit and wood logs. The nominal heat output of this appliance is Ancit 7.1 kW and wood logs 5.8 kW.

The Rayburn 212SFW has been tested using Ancit and wood logs. The nominal heat output of this appliance is Ancit 6.8 kW and wood logs 6.5 kW.

Ancit provides about 2.6 kW to hot water and 4.3 kW to the appliance. Wood provides about 2.0 kW to hot water and 4.5 kW to the appliance. Other fuels may give a slightly different result.

Weight of Rayburn 212SFW - 300 Kgs.
Weight of Rayburn 200SFW - 240 Kgs.

There is no requirement for an electrical power supply.

Flue gas mass flow g/s 5.3.

The mean flue gas temperature of the Rayburn 200SFW directly downstream of the flue spigot at nominal heat output is 200°C.

WARNING

THE ASHPIT DOOR AND FIREBOX DOORS MUST BE LOCKED CLOSED AT ALL TIMES DURING NORMAL USE, EXCEPT WHEN LIGHTING OR RE-FUELLING

FLUE GAS MASS FLOW			MEAN FLUE GAS TEMP.
FUEL	MODEL		
WOOD	200	5.3 g/s	199°C
ANCIT	200	5.6 g/s	196°C
WOOD	212	5.9 g/s	203°C
ANCIT	212	5.9 g/s	207°C

The mean flue gas temperature of the Rayburn 212SFW directly downstream of the flue spigot at nominal heat output is 203°C.

The cooker fully meets the requirements of BS EN 12815 : 2001 and A1: 2004 and is fully approved by the HETAS Ltd Approval Scheme.

Air for combustion within the firebox and the rate of burning is determined by the manually operated spinwheel control on the ashpit door and flue damper.

With normal usage in 24 hours continuous burning the Rayburn 212SFW has an approximate output of 100 gallons of hot water. To provide 2 or 3 hot baths at intervals and normal household requirements, the following conditions must be fulfilled:-

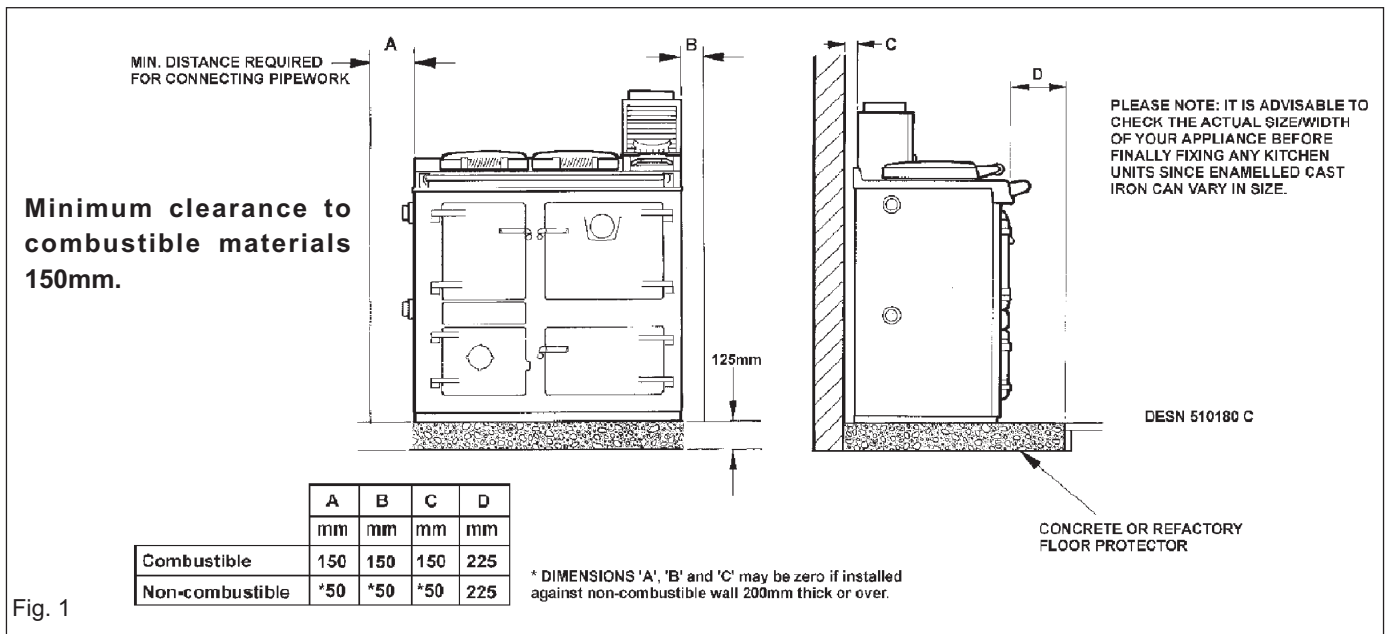
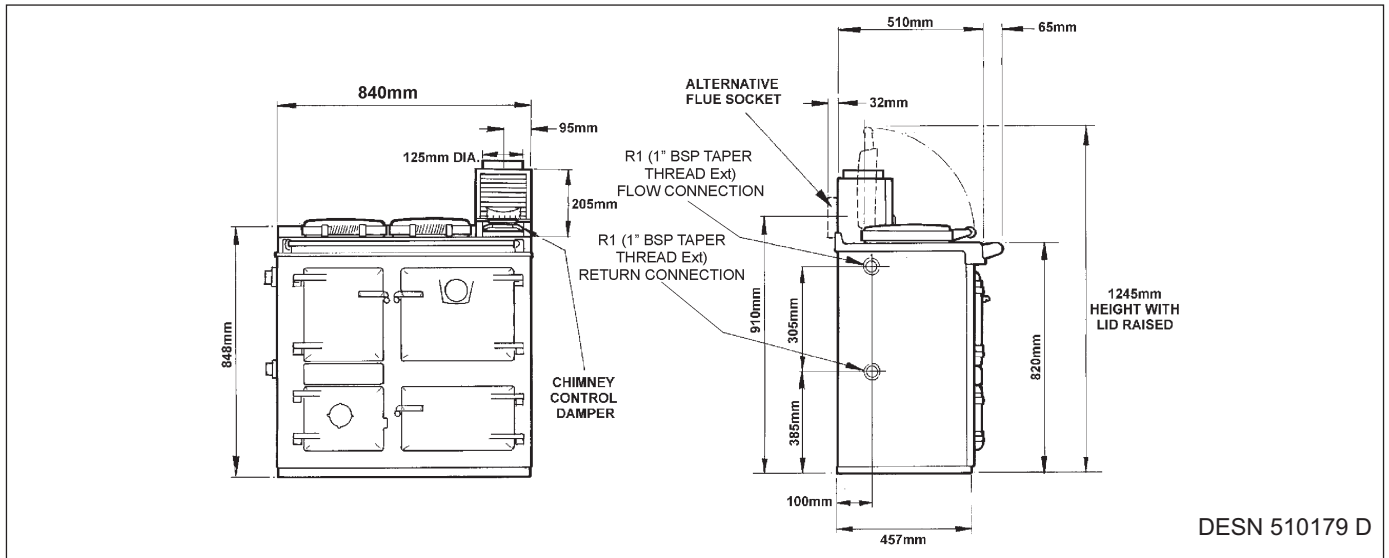


Fig. 1

HOT WATER SYSTEM

Rayburn 212SFW - It is recommended that a 140 litre (30 gallons) indirect hot water storage cylinder of the double feed type, (e.g. manufactured by Albion Cylinders) complying with BS 1566 Part 1 : DF Type 8 should be lagged and fixed vertically as near as possible to the cooker.

The maximum water pressure is 1.75 bar.

The water capacity of the boiler is 7 litres.

The 28mm minimum diameter primary flow and return pipes must not exceed 10m in length and pipes longer than 5m must be lagged.

Ensure that the flow pipe has an open vent and rises continuously from the boiler to the cylinder to ensure good gravity circulation.

The water draw-off pipes to the taps must be dead-leg connection from the vent/expansion pipe.

A towel rail of not more than 0.5m² heating surface may be heated providing the flow and return pipes are not more than 5m each in length, and provided the cylinder and towel rail are lagged. When the hot water storage cylinder is very closely coupled to the boiler, a towel rail is advisable as a heat leak, and lagging should not be applied. A radiator is not recommended.

To obtain the boiler outputs the fire must be idled overnight, and daytime cooking take place.

All installations must be fitted with a drain tap at the lowest point of the system.

IMPORTANT NOTE: THESE INSTRUCTIONS MUST BE STRICTLY OBSERVED. IF THEY ARE DISREGARDED (E.G. AN UNLAGGED OR OVERSIZE CYLINDER), CONSUMPTION OF FUEL MAY BE EXCESSIVE, AND THE COOKER DAMAGED BY OVERFIRING.

In some circumstances it may be possible to overheat the appliance and the water inside will boil. This will be evident by the sound of a knocking noise coming from the appliance and pipes around the house. If this occurs close off all air controls and manually start the central heating pump if fitted. Opening the oven doors and hotplates covers will help to release heat from the appliance. Be aware that steam and boiling water will be expended from any open vent from the heating system probably in the roof space at the expansion tank.

THE BOILER

Rayburn 212SFW - Unscrew the sheet metal cover plate on the side of the cooker and remove the insulating material from behind it.

Joint the flow and return connections to the boiler, replace the insulating material and screw on the cover plate and collar.

The boiler is now ready for connection to the hot water cylinder.

IMPORTANT: LIFT OUT THE HOTPLATE AND CEMENT SEAL THE JOINT BETWEEN THE BOILER FACE AND IT LOCATING FACE ON THE FIREBOX SIDES WITH FIRE CEMENT. RENEW ANY BRICKWORK CEMENTED JOINTS THAT MAY HAVE OPENED IN TRANSIT.

PREPARATION OF SITE

The non-combustible hearth must be solid and level and together with the walls adjacent to the cooker and chimney, conform to current Building Regulations.

The cooker and chimney flue installation should be in accordance with the relevant recommendations of BS8303, BS. 6461 Part 1 and BS. 7566 Parts 1 to 4.

Rayburn 212SFW - The boiler installation section must also be in accordance with the byelaws of the local Water Undertaking and any relevant requirements of the Local Authority.

COOKER POSITION

When the cooker is installed in a recess it must be 'freestanding' and not built-in solid at the sides.

Where the cooker is to stand in a recess or against a wall which is to be tiled, in no circumstances should the tiles overlap the cooker top plate.

Ensure that any combustible material e.g. kitchen furniture is spaced away from the cooker to the recommended distances. See Fig. 1. The work surface however, may be fitted to the top plate on both sides.

NOTE: SMOKE/SMELL EMITTED DURING INITIAL USAGE

Some parts of the cooker have been coated with a light covering of protective oil, this may cause smoke/smell to be emitted, and is normal and not a fault with the appliance, it is therefore advisable to open doors and or windows to allow for ventilation. Lift the insulating lids to prevent staining the linings.

AIR SUPPLY

Rayburn 200SFW and 212SFW: Provision must be made for additional ventilation. A permanent unobstructed air vent having a minimum effective area of 11cm² must communicate to outside air or an adjacent room which in turn has a permanent vent of at least the same size to outside air.

If a flue draught stabiliser is fitted in the flue this vent size must be increased to a minimum 23.5cm². If this appliance is used with an additional appliance of a similar type then the air supply must be adequate for both appliances in accordance with the Building Regulations.

Any air inlet grilles must be positioned so that they are not liable to blockage.

It is not permissible to use an air extraction device in the same room as the appliance, unless additional ventilation is provided to prevent any adverse effect on the flue.

Effect of Extractor Fan

Avoid if possible the installation of an extractor fan in the same room as the appliance or the room where the permanent air vent is located.

Compensating extra air inlets must be introduced equivalent to the capacity of the fan wheel when fitted.

THE CHIMNEY

The minimum chimney draught requirement for the 200SFW at nominal total heat output is 12 Pa.

The minimum chimney draught requirement for the 212SFW at nominal total heat output is 12 Pa.

The mean flue gas temperature of the Rayburn 200SFW directly downwards of the flue spigot at nominal heat output is 200°C.

The mean flue gas temperature of the Rayburn 212SFW directly downwards of the flue spigot at nominal heat output is 203°C.

Flue gas mass flow g/s 5.3.

The appliance is not suitable for installation in a shared flue system.

Checking Existing Chimney

The internal and external location of the chimney should be checked **before** the appliance is installed and rectification made where necessary to prevent leakage or porosity. The soundness of the chimney which should have a minimum flue dimension of 150mm can be confirmed by smoke testing.

Advice on the test method can be obtained from HETAS Ltd.

When repairing or re-using existing chimneys it is recommended that the building control officer be consulted before the commencement of work with particular attention to the chimney height and its termination.

The chimney MUST be swept before installation.

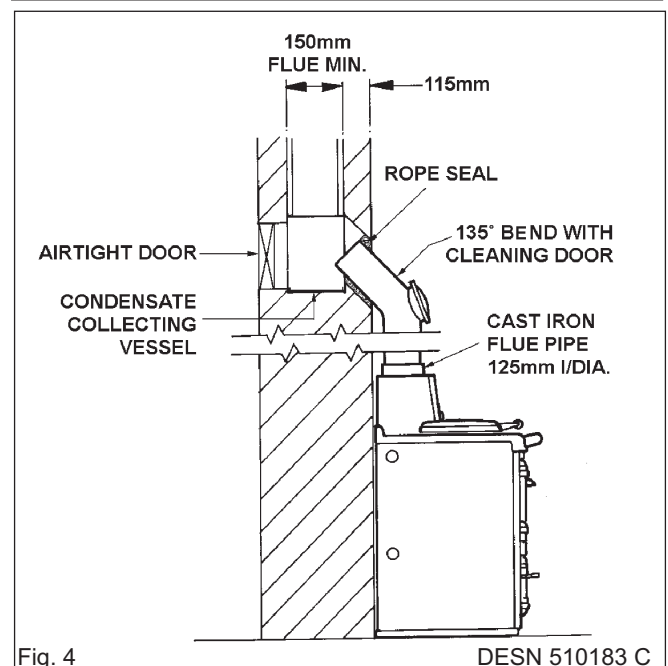
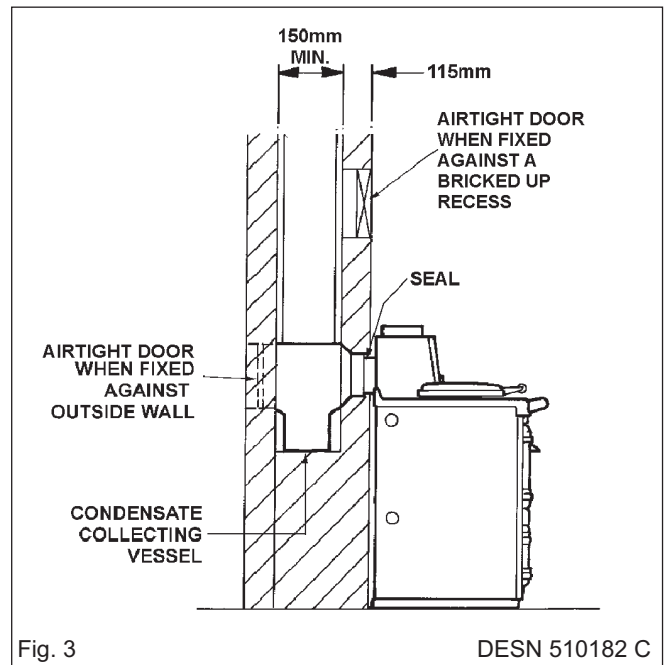
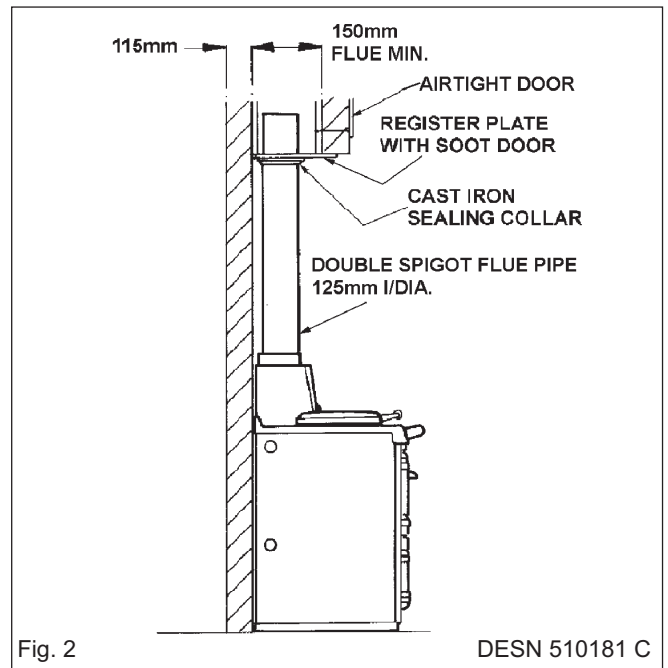
Erecting New Chimney

The flue through the chimney should be formed with pre-cast moisture and acid resistant liners with a minimum internal diameter of 150mm diameter and all in accordance with the current Building Regulations (England and Wales) and in Scotland the Building Standards (Scotland) (Consolidation) Regulations and the Codes of Practice for chimneys and flues BS. 6461 Part 1 and BS. 7566 Parts 1 to 4.

Ensure the chimney liners are free of projecting internal building jointing composition before the appliance is installed.

Factory-Made Insulated Chimneys

It is recommended the chimney be ceramic lined and comply with BS. 4543: Part 2.



The minimum diameter for a straight chimney is 150mm and there should not be more than two bends of 45° from vertical.

IN ALL TYPES OF CHIMNEYS THE MINIMUM HEIGHT FOR CORRECT OPERATION OF THE CHIMNEY IS 4.5m AND SHOULD TERMINATE ABOVE THE ROOF IN ACCORDANCE WITH REGIONAL STATUTORY REQUIREMENTS RECOMMENDED FLUE DRAUGHT - 12 Pa MINIMUM. THE APPLIANCE SHOULD BE INSTALLED AND CONFORM TO THE CURRENT CODES OF PRACTICE FOR INSTALLATION OF DOMESTIC HEATING AND COOKING APPLIANCES BURNING SOLID FUEL - BS 8303.

ALWAYS ADVISE THE USER TO CLEAN THE COOKERS FLUES IN ACCORDANCE WITH THE OPERATING INSTRUCTIONS AND TO HAVE THE CHIMNEY SWEEPED AT A MINIMUM OF 12 MONTHLY INTERVALS AFTER THE COOKER IS COMMISSIONED.

COOKER FLUE CONNECTION

The position of available types of flue layouts are shown in Figs. 2, 3 and 4, the cooker flue chamber is adaptable to providing either top or back flue outlets, by means of the reversible loose socket.

a) Rear Flue Outlet

This must only be used where there is a brick flue immediately behind the cooker. Provision must be made for a condensate collecting vessel and cleaning door. See Fig. 3.

EXTENDED HORIZONTAL FLUE PIPE CONNECTION IS ALLOWED UP TO A MAXIMUM OF 150mm IN LENGTH.

NO BEND CONNECTIONS ARE ALLOWED.

b) Top Flue Outlet

The cooker should be connected to the main flue via a 125mm minimum diameter cast iron flue pipe or appropriately internally/externally vitreous enamelled mild steel pipe and be sealed to the cooker flue chamber with soft rope and fire cement. Any bends in the flue pipe must not be less than 135° (45° from vertical) and be complete with a cleaning door.

FLUE LAYOUTS

In Fig. 2 the cooker is installed in an existing recess. There must be a clearance of not less than 150mm between the top of the flue pipe and any overhanging brickwork.

Any cavities or pockets above the register plate should as far as possible be filled and if necessary the flue pipe should be extended into the throat of the chimney and a soot door for chimney sweeping.

If a flue liner or insulated chimney is used, the size should not be less than 150mm.

In Fig. 3 the cooker is connected direct to a brick flue. Horizontal pipe runs between cooker and brick flue **must not** be used.

In Fig. 4 the cooker is connected to an existing brick flue with a length of flue pipe. Square bends and horizontal runs **must not** be used. There must be a cleaning door at every bend.

NOTE: WHATEVER METHOD OF INSTALLATION IS EMPLOYED. AIR MUST NOT BE ALLOWED TO ENTER THE CHIMNEY EXCEPT THROUGH THE COOKER ALL JOINTS MUST BE AIR-TIGHT.

If the chimney is unlined, and there is any doubt about its condition, it should be lined in accordance with current Building Regulations.

PROVISION MUST ALWAYS BE MADE FOR SWEEPING THE CHIMNEY.

IMPORTANT: CEMENT TYPE PIPES AND FITTINGS MUST NOT BE USED WITHIN 2m OF THE COOKER. CHIMNEYS OF PLAIN PIPE ARE NOT RECOMMENDED BUT CERTAIN PROPRIETARY MAKES OF INSULATED CHIMNEY ARE SUITABLE.

HIGH UPDRAUGHTS

Tall chimneys may develop excessively high updraughts which prevent the appliance operating correctly.

It is recommended that a proprietary brand adjustable flue draught stabiliser having an openable cross sectional area of 126cm² be fitted above the flue pipe connection either in the brickwork or into a right angle 'T' fitting in the flue pipe positions that will not inconvenience appliance operation or maintenance.

INSTALLATION

Place the cooker in the intended position and lift out the surface ground hotplate, checking that the joint between the underside of the hob and the top of the cooker are intact.

If the appliance is installed near combustible material then as well as adhering to minimum clearances in Fig. 1 additional non-combustible insulation must be fitted to the wall to protect the area around the flue and fluebox. The insulation must reach a minimum distance of 150mm either side of the flue/flue box and follow the line of the flue. The minimum specification for this material is Superwool 607 LTI with a density of 320kg/m³, a thickness of 10mm and a self finish. There must be a minimum 16mm air gap between the insulation board and an adjacent combustible wall surface. A higher specification material may be used but the air gap must be maintained.

Any joints which have opened should be made good with fire cement provided.

Replace the hotplate making sure that it is seating evenly on the soft rope and that it is approximately 1.5mm proud of the enamelled top plate, with an equal space all around.

Connect pipework to boiler flow and return tappings.

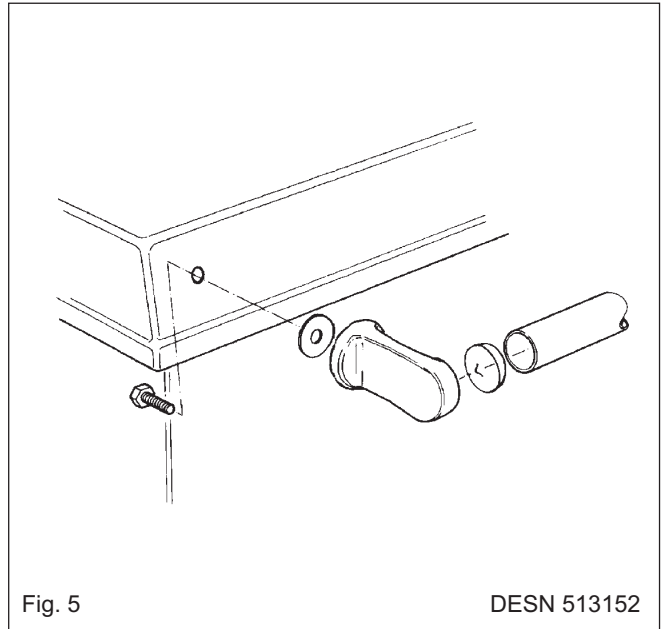


Fig. 5

DESN 513152

Fit the flue chamber which should be given a 1mm smear of fire cement on the underside then screwed to the cooker. Make sure there is a good seal between the flue chamber and the cooker top (if there is an ingress of air it can affect the flue draught and proper working of the cooker). Before the fire cement hardens remove any surplus with a damp cloth then polish with a dry cloth.

Open the firebox and ashpit doors and check that the bottomgrate is in position. Operate the riddling lever to ensure the bottomgrate operation.

Failure to do so can result in the enamel surface being permanently marked.

The handrail brackets are held on the front end of the cooker top-plate casting. Remove the travel nuts and replace with the handrail brackets ensuring the fibre protecting washers are in position. Insert the handrail with fitted endcaps into the brackets, positioning them correctly and tighten the locating bolts. (See Fig. 5).

TESTING AND COMMISSIONING

After completing the installation, the Heating Contractor should demonstrate to the user, the operation of the appliance and the routine flue operating method.

1. Check that the system is full of water and free from air pockets. (**Rayburn 212SFW only**).
2. Select and install the appropriate burning grate as required by the customer (see Users Instructions for method).
3. When lighting pull the flue chamber damper open to maximum.
4. Add paper and sticks with a small quantity of fuel through the fuelling aperture onto bottomgrate and close the firebox door.
5. Open ashpit door, ignite fuel and close ashpit door when fuel is well alight with spinwheel on ashpit door at required setting.
6. Allow the cooker to heat up gradually at first time lighting.

NOTE: The water capacity of the boiler is 7 litres

FIREBRICK REPLACEMENT

The firebricks fitted to the Rayburn Cookers are of first quality manufacture, and providing the cooker has been installed and used correctly will have a reasonable life. They are, however, expendable items and in time will require renewal.

The renewal of firebricks is not a major operation and can be carried out by the average person.

Replacement bricks either in sets or singly can be obtained from your Rayburn distributor.

LEAVE INSTRUCTIONS FOR FUTURE USE

For further advice or information contact your
local distributor/stockist

With AGA Rangemaster's policy of continuous
product improvement, the Company reserves the
right to change specifications and make
modifications to the appliance described at any
time.



from The word "from" is followed by the AGA logo, which consists of the letters "AGA" in a white, sans-serif font inside a black, horizontally-oriented oval.

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