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Users Instructions for Rayburn Cookmaster 200K and Rayburn Cookmaster 208K Oil Fired Cooker

Better than you ever imagined

Consumer Protection Act 1987

As responsible manufacturers we take to make sure that our products are designed and constructed to meet the required safety standards 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 also affect your statutory rights.

Control of Substances - Health and Safety 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, Ceramic Fibre, Kerosene 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.

INTRODUCTION

The cooking performance features of the popular and proven solid fuel Rayburn Cookers have been preserved and integrated into the Rayburn Cookmaster 200K and Rayburn Cookmaster Plus 208K **burning 28 Second Kerosene to BS: 2869: 1988 Class C2.**

The Rayburn Cookmaster 208K provides domestic hot water and cooking facilities, whereas the Rayburn 200K provides cooking facilities only, which consists of a heat graduated hotplate, main oven and warming oven. The circulator oil burner is controlled by a manually operated oil valve control knob. The burner should always be continuously burning at low fire rate when not required for cooking. When cooking is required, the burner operates at a high fire rate by adjustment of the control

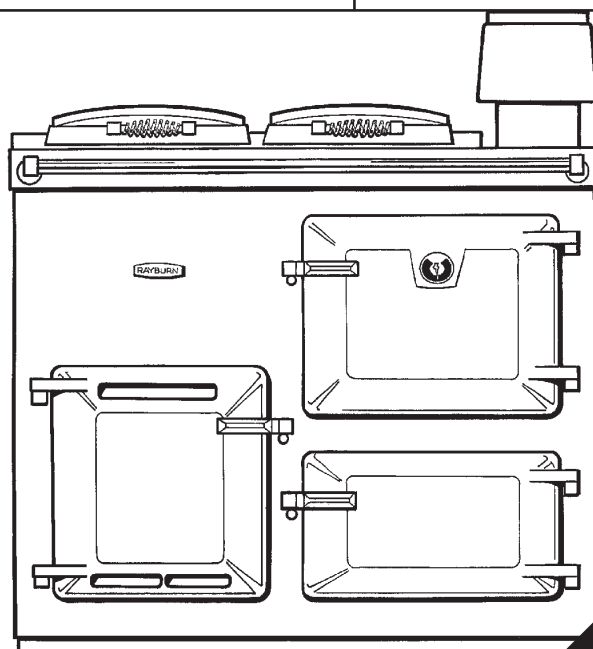
knob and its setting.

NOTE: FOR LONG SHUT-DOWN PERIODS, CLOSE ALL OIL VALVES BETWEEN THE OIL TANK AND THE APPLIANCE.

WARNING: OIL BURNER: NEVER ATTEMPT TO RELIGHT A HOT BURNER - DO NOT TURN OIL ON UNTIL BURNER IS COOL.

NOTE: SMOKE/SMELL EMITTED DURING INITIAL USAGE.

Some parts of the cooker have been coated with a light covering of protective oil. During initial operation of the cooker, 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 lids to prevent staining the linings.



IMPORTANT
The cooker burner is intended to run in a continuously aight condition at all times, at low fire rate when idling. Turning the cooker burner OFF is NOT recommended unless servicing is required or when the cooker is left unattended for several days.

TO LIGHT THE BURNER - See Fig.1

1. Remove the oil control valve cover, then depress the trip lever **D** on the front of the oil control valve and turn the cooker oil control valve knob **C** to No. 6 setting. Allow 15 minutes for oil to enter and settle in cooker burner base.
2. Open outer burner door adjacent to the bottom warming oven door, remove/lift out inner burner door.
3. Lift hinged lighting cover on the front of the burner shell and expose the lighting port.
4. Insert a taper through the lighting port and light the front wick, then close the lighting cover.
5. Replace inner burner door and close outer burner door.

NOTE: ENSURE INNER COOKER BURNER DOOR IS CORRECTLY LOCATED AND SEALED.

6. Return control knob **C** to its No. 1 setting for about 20 minutes, until the burner is hot, then re-set to No. 6 for cooking.
7. The cooker burner will gradually increase its oil rate, and raise the temperature of the oven, taking about 2¹/₂ hours from cold to attain an oven temperature of 200°C (400°F), leaving the cooker control knob **C** at its No. 6 setting. Re-set the cooker control knob **C** to an intermediate setting and the oven temperature will maintain the desired temperature.
8. Set the cooker control knob **C** to No. 1 which is the minimum setting when cooking is not required and idling rate is needed.
9. Ensure both hotplate insulating covers are closed down to conserve heat in hotplate.

To Turn Off Oil Burner

Turn the oil control valve knob **C** anti-clockwise from No.6 setting to OFF, and lift the trip lever **D** on the front of the oil control valve.

OVEN CONTROL KNOB SETTINGS

The oil valve control knob **C** is marked 1 to 6, which provides main oven temperatures with setting 6 being the highest temperature - see chart below.

Cooker Control Knob Setting	Main Oven Temperature
1 IDLING	150° - 170°C
2	170° - 190°C
3	210° - 230°C
4	250° - 270°C
5	HIGH
6	HIGH

NOTE: NON-BOILER MODELS MAY OPERATE AT HIGHER TEMPERATURES THAN THOSE QUOTED ABOVE .

To Heat the Top Main Oven and Increase Hotplate Temperature

Turn the control knob **C** to the required setting which will take up to 90 minutes to attain from idling temperatures. When the top main oven temperature is reached, the

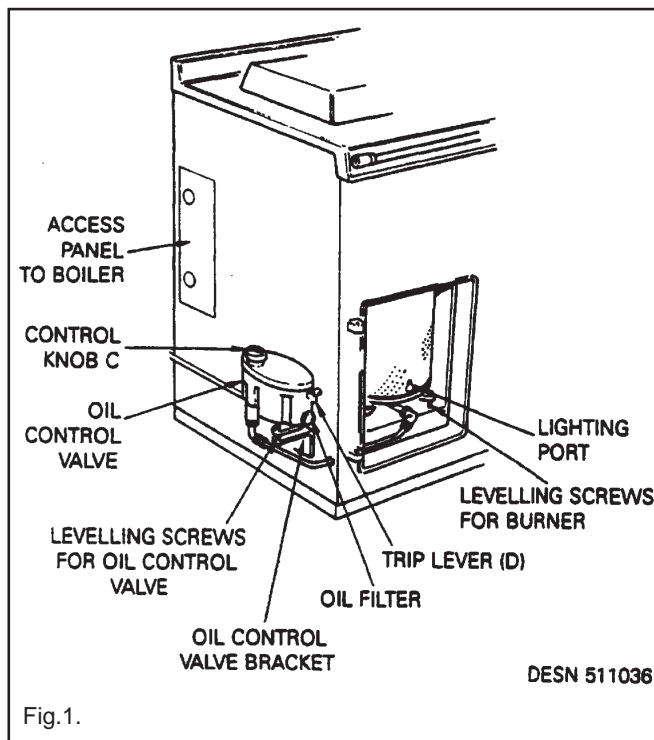


Fig.1.

required temperature will be maintained by lowering the setting of the cooker control knob

HINT: THE SOLID PLAIN SHELF CAN BE USED AS A HEAT DEFLECTOR, (AS WELL AS A BAKING SHEET). SLIDE ONTO RUNNERS TOWARDS THE TOP OF THE OVEN WHICH REDUCES THE HEAT UNDER THE SHELF.

The Hotplate

When the main oven is in use the hotplate will be hot enough for normal needs. The hotplate area above the main oven is used for simmering with the opposite end being the hottest.

At other times, increase the setting of the control knob **C** to increase the temperature of the hotplate.

Pans and kettles must have flat machined bases.

Warming Oven

This is at a low temperature suitable for warming serving plates and dishes. Although not intended as a cooking oven, its temperature does vary with temperature of the main oven. As a guide, it is around a third the temperature of the main oven.

DOMESTIC HOT WATER

The supply of domestic hot water to the cylinder is automatic and is at its maximum when the control knob **C** is on No. 6 setting, reducing as the control knob setting is reduced.

The amount of hot water is increased if a considerable amount of cooking is performed. If more hot water is required overnight, set the control knob **C** to a higher setting than No. 1, which is normally sufficient.

OVERNIGHT

Turn the control knob **C** to No.1 which give the lowest burning rate and will maintain an oven temperature of about 150°C-170°C. At a higher setting, the oil consumption will be higher, but the main oven, hotplate and domestic hot water will be hotter.

Turn the control knob **C** to No.6 setting in the morning to increase the hotplate temperature and minimise the time to boil a kettle of water.

The recommendations for the best use of the appliance are guidelines only, and the respective setting of the cooker control knob which suits your requirements will be apparent with experience.

WHEN THE COOKER IS NOT IN USE

During periods of the day when the cooker is not required, the control knob C should be set at No. 1 to give the lowest burning rate which will in most cases give sufficient heat to the hotplate and hot water. Use the setting that meets your needs.

Frost Precautions

In the event of the boiler being unheated for long periods during very cold weather, the advice of your installer should be obtained.

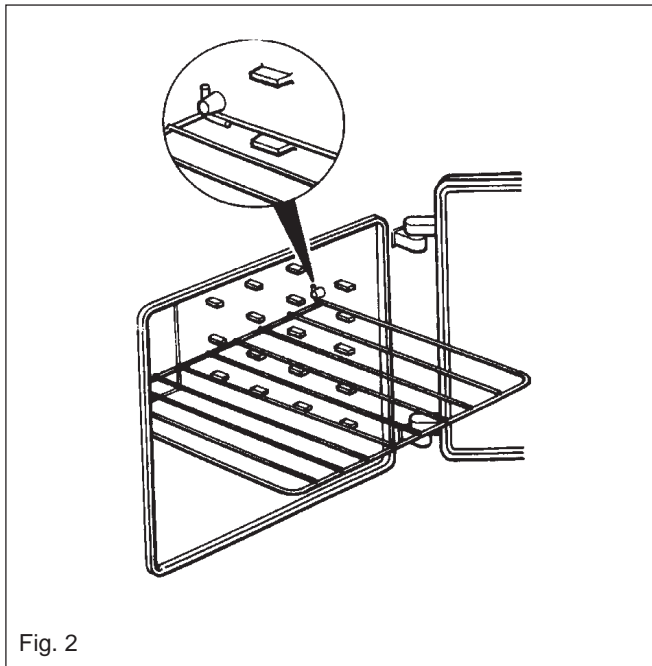


Fig. 2

COOKING HINTS

The oven is indirectly heated from outside by hot gases from the heat source so that no flame or elements within the oven means full use can be made of the whole cooking space.

The main oven is slightly hotter towards the top than the bottom. At a low idling heat the main oven can be used for long slow cooking such as casseroles, stock, soup, ratatouille, curries, meringues, creme caramels, rice puddings etc., all of which benefit from the gentle slow heat, and as the oven is vented into the flue, cooking smells disappear to the outside.

One of the many benefits of the cast iron main oven is that the floor of the oven is hotter than that of a conventional cooker. No need to bake pastry quiche cases "blind", just place the flan dish on the oven floor for 'soggy-free' pastry. When the oven is hot, the floor of the oven can be used for shallow frying (a cast iron dish is recommended) with the added advantages that fat splashes are carbonised so cleaning is minimised and frying smells are taken away through the flue.

For perfect baking results, turn food during cooking.

The top of a hot oven is where grilling takes place, use the meat tin with a grill rack so that the fat can drip into the tray.

The thermodial temperature gauge, on the main oven door is a guide to the internal oven temperature. Remember though, on opening the door the temperature will appear to drop, do not worry, close the door and after a few minutes the true oven temperature can be read again. Heat is not lost as quickly from a cast iron oven as a pressed metal box type so you can peep at the cake to see how it is cooking without it sinking.

As you have probably realised, the meat tin supplied with your Rayburn fits the oven size, hanging directly from the runners, so leaving the grid shelves free for other dishes. The oven grid shelves are designed to be non-tilt and should be fitted with the upstand to the top and at the back, so when pulled forward the shelf cannot come right out. (See Fig. 2)

The solid plain shelf, as mentioned before, can be used as a baking sheet or as a heat deflector. If the oven is too hot or food already in the oven is beginning to over-brown, slide the solid plain shelf, above the food. To be effective this shelf should be stored out of the oven so it is used from cold.

NOTE: SEE COOK BOOK FOR RECIPES.

DO NOT USE ABRASIVE PADS OR OVEN CLEANERS.

NOTE: IT IS NOT ADVISABLE TO PUT VERY WET CLOTHES ON THE HAND RAIL, AS THIS MAY CRAZE THE ENAMEL.

IMPORTANT - USE 28 SEC KEROSENE FUEL ONLY.

CLEANING

REMEMBER: BE CAREFUL OF THE HOT APPLIANCE.

DO NOT USE A STEAM CLEANER TO CLEAN THIS COOKER.

To keep the vitreous enamelled surface bright and clean, wipe over daily with a soapy damp cloth, followed by a clean dry duster. If milk, fruit juice or anything containing acid is spilt on the top plate or down the cooker, be sure to wipe it immediately or the vitreous enamel may be permanently discoloured. Keep a damp cloth handy, while cooking to wipe up spills as they occur, so they do not harden and become more difficult to remove later. If spills do become baked on a cream cleanser can be used. For stubborn deposits a soap impregnated pad can be carefully used on the vitreous enamel.

In the main oven, spills and fat splashes are carbonised at high temperatures; occasionally brush out with a stiff brush. The oven door can be removed for cleaning - **do not** immerse in water, and shelves can be soaked and cleaned with a cream cleanser.

Both insulating covers should be raised and allowed to cool before cleaning with a soapy damp cloth. Use a wire brush to keep the cast iron hotplate clean.

General cleaning is best carried out when the Rayburn is cool.

IMPORTANT:

Aga recommend Vitreous Enamel Association approved cleaners for cleaning the vitreous enamelled surfaces of this product.

But they are unsuitable for use on chrome and stainless steel components, including the hand-rails and their brackets.

The insulating covers should be cleaned regularly with a **NON-ABRASIVE** mild detergent, applied with a soft (coarse free) cloth and lightly polished up afterwards with a soft (coarse free) duster or tissue, to bring it back to its original lustre.

BI-ANNUAL SERVICING

Bi-annual Servicing

With normal use a cooker annual flueway clean and burner maintenance should be carried out at 6 monthly intervals.

The cooker oil valve control knob should be turned **OFF** by the User the night before the day of the servicing so that the appliance will have cooled down by the following morning.

A HOT APPLIANCE CANNOT BE SERVICED.

Your Rayburn stockist will provide advice on obtaining the nearest selected Servicing Engineer, where we recommend you contract out the periodical servicing of the appliance.

For further advice or information contact your
local distributor/stockist

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



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Installation and Servicing Instructions for Rayburn Cookmaster 200K and Rayburn Cookmaster Plus 208K Oil-Fired Cooker

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INTRODUCTION

The Rayburn Cookmaster Plus 208K is a cooker providing domestic hot water and cooking facilities. It is available with a vertical flue outlet only, with the oil burner operating on natural draught. The boiler is designed for use in an open vented water system only, with gravity D.H.W. primaries. Alternatively, the Rayburn Cookmaster 200K is a non-boiler model. However, with this model the idling temperature may be higher. These appliances must only be used with Commercial Grade C2 Kerosene.

IMPORTANT: IN ORDER TO ACHIEVE THE OPTIMUM PERFORMANCE FROM THIS APPLIANCE, IT IS ESSENTIAL THAT THE INITIAL COMMISSIONING OF THE APPLIANCE IS UNDERTAKEN BY SELECTED TRAINED INSTALLING SERVICE ENGINEERS. YOUR RAYBURN STOCKIST WILL PROVIDE ADVICE ON THE LOCATION OF THE NEAREST INSTALLING ENGINEER. WE ALSO RECOMMEND YOU CONTRACT OUT THE PERIODIC SERVICING OF THE

APPLIANCE TO THIS INSTALLING/SERVICING ENGINEER.

REMEMBER, when replacing parts 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 clearly authorised by AGA.

This appliance must be commissioned by a competent engineer, such as OFTEC approved.

INSTALLATION INSTRUCTIONS

THIS APPLIANCE IS A CONTROLLED SERVICE BY DEFINITION AND REQUIRES EITHER FITMENT UNDER THE REMIT OF BUILDING CONTROL OR INSTALLATION BY AN OFTEC REGISTERED 105 TECHNICIAN (CLASSED AS A COMPETENT PERSON) WHO CAN SELF CERTIFY HIS OWN WORKS.

The installation of the appliance must be in accordance with the relevant requirements of the current Building Regulations, current I.E.E. Wiring Regulations and the byelaws of the local Water Undertaking.

		Boiler Model		Non-Boiler Model	
		Cooker LOW	Cooker HIGH	Cooker LOW	Cooker HIGH
Heat Input	kW	2.43	7.42	2.16	5.48
	Btu/h	8,312	25,321	7,386	18,700
Heat Output Water	kW	0.73	2.34		
	Btu/h	3,000	8,000		
Oil Input Rate	cc/minute	4.0	13.0	3.5	8.5

Boiler Water Connections

Flow (one) Rp 1 (1in BSP Int)

Return (one) Rp1 (1in BSP Int)

Both connections are located towards the rear edge of the appliance L.H. side panel.

Oil Valve Inlet Rp¹/₄ (1¹/₄ in BSP Int)

Weight of Appliance 305Kg

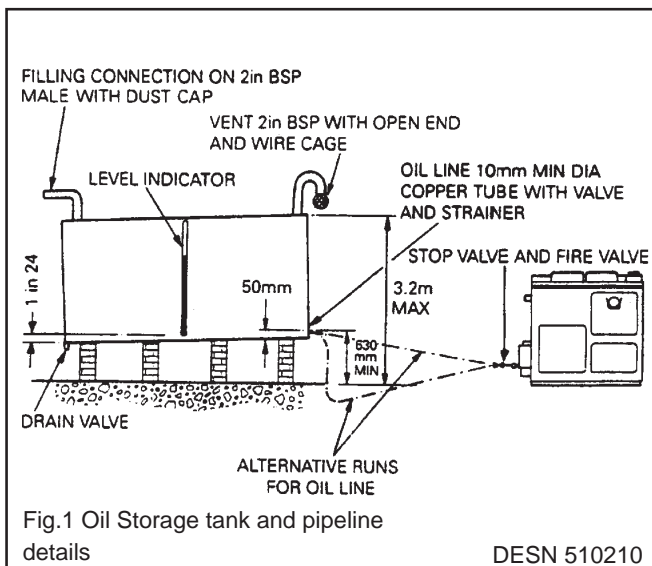
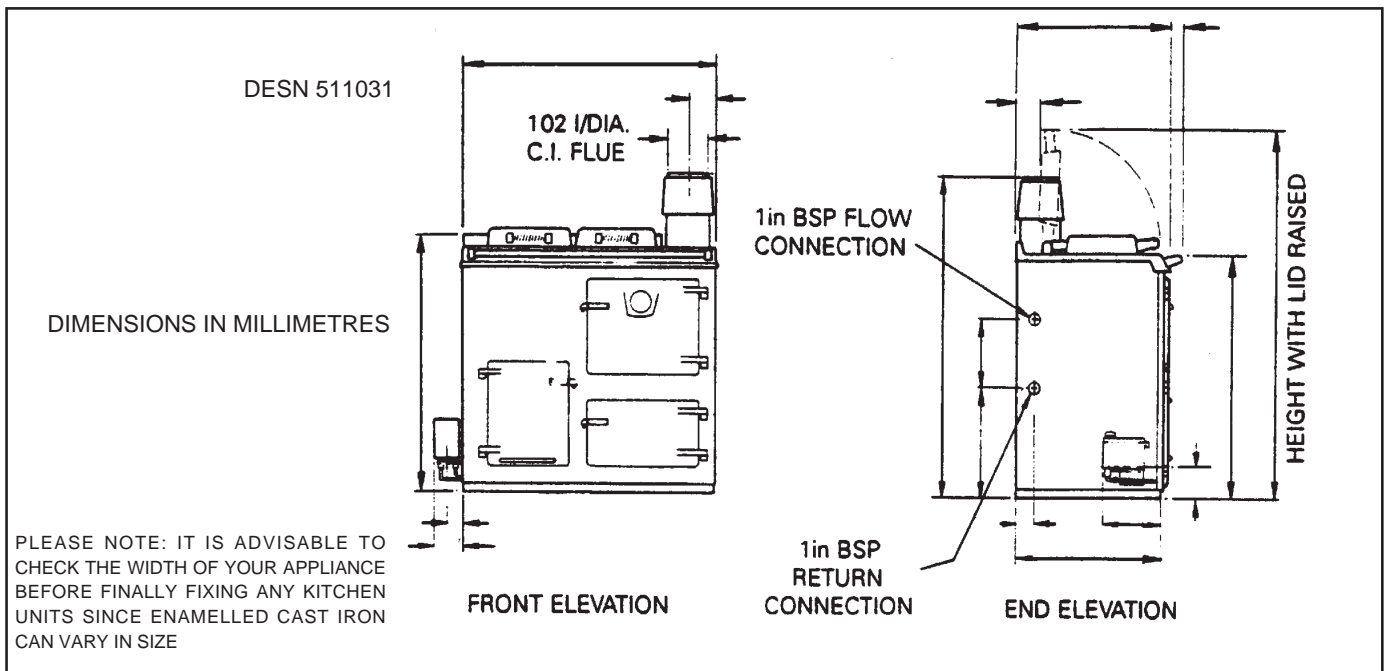
Appliance Overall Height: 995mm

Dimensions Width: 940mm

Depth: 575mm

FUEL - COMMERCIAL GRADE C2 KEROSENE

Installation Instructions



It should be in accordance also with any relevant requirements of the Local Authority and the relevant recommendations of the following current British Codes of Practice:

BS. 5410 Installation of oil fired space heating and hot water supply purposes. Boilers of rated output not exceeding 44kW.

Building Regulations

J1/4/5 Provision for introduction of air supply and discharge of products of combustion for appliances.

BS.4543 Specification for chimney for oil-fired appliances. Part 1-3.

Building Regulations

J1/4/5 Provision for protection against fire and heat.

Appliance Hearth

This appliance must be installed on a solid level floor or base of incombustible material which is capable of supporting the total weight.

LOCATION

The location chosen for the appliance must permit installation and the provision of a satisfactory flue and an adequate air supply. The location must also provide adequate space for servicing and air circulation around the appliance. See "Installation of Appliance".

OIL STORAGE - See fig.1

The minimum recommended oil tank size is 1400 litres (300 gallons) and the Codes of Practice governing its installation are covered by BS. 5410.

The requirements for mild steel tanks should be to BS. 799, Part 5. Plastic Oil Tanks to, OFTEC Standard T100.

The oil storage tank must be positioned with the bottom of the tank not less than 630mm, and the top not more than 3.2m above the base of the cooker.

Oil Pipe Line

The oil line from the storage tank to the appliance should be fitted with a remote acting fire valve (such as Teddington KBB-66°C) located outside the building, or where the supply enters the wall on the inside of the building and with the heat sensing phial of the fire valve, located as near as practicable on the L.H. side of the cooker.

A 5-10 micron oil filter should also be fitted in the oil line, and the minimum size of the copper oil pipe should not be less than 10mm diameter.

A stop valve must be fitted near the appliance, in an accessible position.

We also recommend an additional remote acting fire valve be fitted close to the oil control valve, with its heat sensing phial located in the burner housing, but not touching, the inner burner door.

FLUE SYSTEM - See Fig.2

Detailed recommendations for fluing are given in the current Building Regulations J1/4/5.

The following notes are intended to give general

Installation Instructions

guidance:-

The cross sectional area of the flue serving the appliance must not be less than the area of the flue outlet of the appliance and be at least 4.5m high.

The flue pipe to be used must not be less than 102mm internal diameter. Flue pipes and fittings should be constructed from one of the following materials:

- Mild Steel with a wall thickness of 3mm minimum.
- Stainless Steel to BS. 1449. Part 2
- Cast Iron to BS. 41.
- Mild Steel, acid resistant vitreous enamel lined to BS.1344. Part 2.

Chimneys

Chimneys should be built of masonry or be assembled from factory-made insulated components.

Masonry chimneys may be built of any masonry material, with a lining, or of flue blocks, without a lining. The chimney lining should be 125mm minimum diameter and be formed of moisture and acid resistant liners to BS.1181 with rebated or socketed joints uppermost.

Alternatively, linings may be imperforate clay flue pipes as described in BS.65 or flue blocks to BS.1289 and installed to BS.6461.

A 125mm minimum diameter factory-made, insulated chimney, complying to BS 4543 may be fitted and installed to BS.7566.

Use of older existing chimneys

Older chimneys must be swept and a suitable flexi liner fitted.

Chimney Terminations

All chimneys should terminate above the roof level in accordance with current Building Regulations and statutory requirements as outlined in BS.6461 Part 1 and BS.7566 Parts 1 to 4.

However well-designed, constructed and positioned, the satisfactory performance of a flue can be adversely affected by the down-draught caused by adjacent tall buildings and trees or even nearby hills. These deflect the wind creating a zone of high pressure over the terminal causing it to blow directly down the chimney flue.

A suitable anti-downdraught terminal such as the Marcone will usually effectively combat low pressure down-blow but no known cowl is likely to prevent down-draught due to a high pressure zone.

Flue Draught

For correct performance of the appliance, it is recommended that the flue pull be a minimum of 1mm H₂O.

Chimney Cleaning

Ensure there are accessible airtight flue cleaning doors in order to obtain cleaning access to the complete chimney.

Providing the appliance is operating correctly, an annual chimney flue clean will suffice, but if in doubt, arrange for a half yearly clean, preferably at the beginning/end of the central heating season.

High Chimney Draughts

A well sealed, tall exposed chimney on a hill, is an instance where generated draughts could be excessive and must be controlled.

Should this occur, a flue stabiliser must be fitted either in the flue pipe or chimney, but in the same room as the appliance.

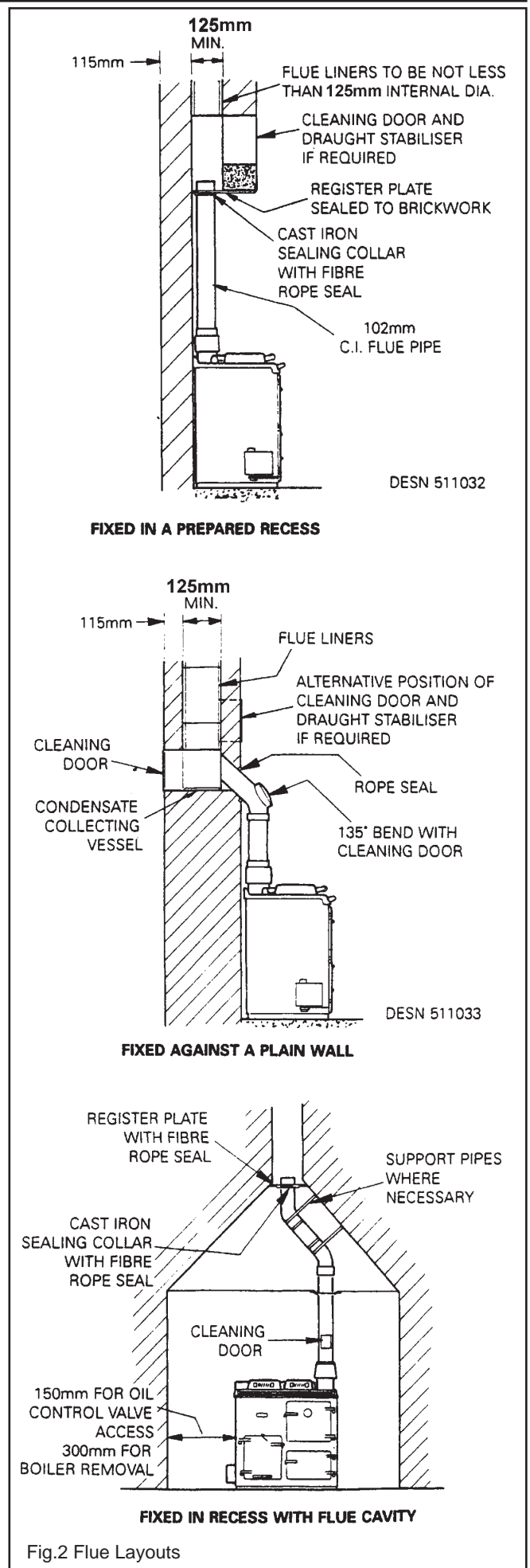


Fig.2 Flue Layouts

Installation Instructions

AIR SUPPLY

Detailed recommendations for air supply are given in the current Building Regulations J1/4/5.

The following notes are intended to give general guidance:-

Kitchen or Internal Air Supply

Wherever a flue appliance is to be installed, it must have a permanent air vent. This vent must be either direct to outside air or to an adjacent room or internal space which must itself have a permanent air vent of at least the same size direct to outside air. The minimum effective area of the permanent air vent in the outside wall must be 30.5cm² (4.75in²).

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. Additional air inlets must be fitted to introduce compensating air, equivalent to the capacity of the fan when fitted.

HOT WATER SYSTEM

Hot water systems should be in accordance with the relevant recommendations given in BS. 6700.

The following notes are of particular importance.

1. In domestic hot water systems the hot water storage vessel must be of the indirect cylinder of calorific type.
2. The hot water storage vessel should be insulated, preferably with not less than 75mm thick mineral fibre, or its equivalent.
3. Pipework should be insulated to help prevent heat loss and possible freezing, particularly where pipes are run through roof spaces. Cisterns situated in area which may be exposed to freezing conditions should also be insulated.
4. Draining taps must be located in accessible positions which permit the draining of the appliance and hot water storage vessel. Draining taps should be at least 1/2in BSP nominal size and be in accordance with BS. 2879.
5. The appliance boiler section should be connected to a cistern water supply, subject to a maximum head of 18.25m (1.8 bar).
6. Water carrying copper tubes should be to BS. 2871, Part 1.
7. Hot water systems should be in accordance with the relevant recommendations given in BS. 6700.
8. The use of horizontal pipe runs should be avoided wherever possible in order to prevent the collection of air in the system. If horizontal runs are unavoided the pipes should rise upwards in the direction away from the appliance.

Hot Water Storage Vessel

It is recommended that an indirect 140 litre (30 gallon) hot water storage cylinder of the double feed type e.g. (Manufactured by Albion Cylinders) complying with the BS. 1566, should be insulated, preferably with not less than 75mm thick mineral fibre or its equivalent, and fixed vertically as near as possible to the appliance.

The water draw-off pipes to the taps must be dead leg connection from the vent expansion pipe. A drain tap must be fitted at the lowest point of the system.

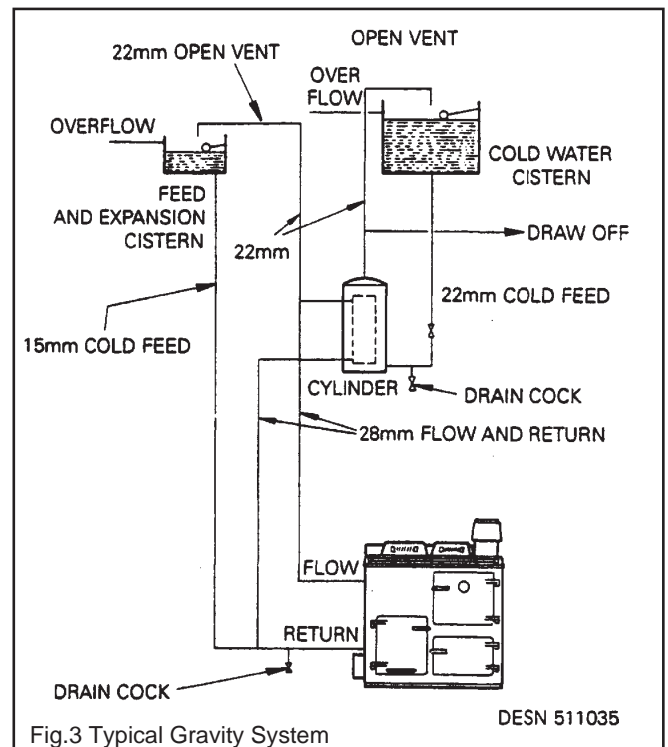
A towel rail of not more than 0.5mm² heating surface may be heated providing the flow and return pipes are not more than 5m each in length, and provided the cylinder and pipes to the cylinder are insulated.

If the cylinder is very close to the cooker, a towel rail is advisable as a heat leak and lagging should not be applied.

NOTE: The appliance must not be operated if the water system is out of operation, or has been drained.

Corrosion Inhibitor

A corrosion inhibitor can be used when installing this appliance to an **Indirect Hot Water Cylinder Only**.



INSTALLATION OF APPLIANCE - GENERAL

The combined appliance is floor-mounted and the space in which the appliance is to be fitted must have the following minimum dimensions:-

Width: 1145mm

Depth: 1575mm

Height: 1320mm

This space includes the following minimum clearances for servicing:-

Between wall and L.H. side of appliance

300mm

Between wall and R.H. side of appliance

Zero

Above the raised insulating cover handle

75mm

In addition, adequate clearance must be available at the front of the appliance to enable it to be operated and serviced.

Flue pipes and fitting must not be closer than 25mm to combustible materials and where passing through a combustible partition such as a ceiling or roof, must be enclosed in non-combustible sleeve providing an air

space of at least 25mm.

Spaces around the flue pipes passing through walls or floors should be sealed against the passage of smoke and flame.

PRELIMINARY INSTALLATION

The appliance is delivered in a fully assembled condition with the exception of the following items which are supplied separately packed and require assembly.

1. Complete, but dis-assembled oil burner with spare set of wicks.
2. Oil Constant Level Valve and Support Bracket.
3. Flue Outlet Assembly.
4. Handrail Tube.
5. Appliance rear distance bracket - For use when the appliance is installed near a rear wall or combustible material - See Fig. 4.
6. Boiler sealing cement.
7. 8mm dia copper oil feed tube.
8. Boiler pipe Collars - Boiler Model Only.

Wherever possible, it is recommended that skirting board is removed for the width of the appliance to enable the rear edge of the appliance top plate to make contact with the vertical wall, and avoid a rear air gap. (Combustible walls excepted).

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.**

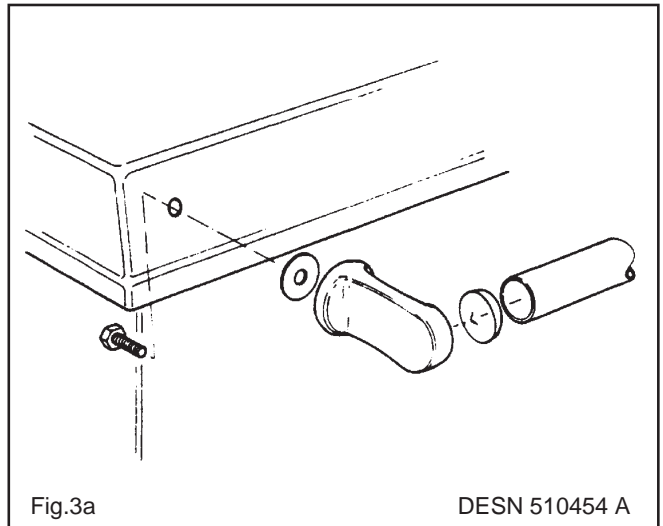
The handrail brackets are held on the front ends of the cooker top-plate casting. Remove the travel nuts and replace with the handrail brackets ensuring the fibre protecting washers are in position. Insert the handrail with fitted endcaps into the brackets, positioning them correctly, tighten the locating bolts (Fig. 3a).

SITE LOCATION

1. Check that the hearth is level, then move the appliance from its transit wooden pallet, and position it with its back against the wall and in its intended position, for flue connection.

NOTE: IF THE REAR WALL IS OF COMBUSTIBLE MATERIAL, THERE MUST BE AN AIR GAP OF 25mm BETWEEN THE WALL AND REAR AS SHOWN IN FIG. 4.

2. Locate and secure flue outlet spigot to top plate with sampling hole at front. Place horizontal baffle on spigot and locate flue outlet hood on baffle supported by internal screws. See Fig. 5.
3. Locate and fit flue pipe into flue socket, sealing joint with fire cement.
4. Connect and terminate the flue system in accordance with standard practice.
5. Coat the male thread of the oil burner pipe assembly elbow with oil resistant compound and screw into the burner base, check position of elbow. See Fig. 6. Visually confirm that the oil burner pipe is level or slopes upwards to the oil entry in the burner base, to avoid air locking.
6. Fit oil burner base to support plate and secure with 3 bolts.
7. Lift up insulating covers and remove hotplates. (Boiler Model Only).



8. Place and locate the cast-iron baffle and stainless steel baffle assembly as per Fig.7 through the hotplate aperture. Replace the hotplate with the fins over the oil burner position.

WATER CONNECTIONS

Remove the sheet metal panel in the area of boiler pipes on the LH side of appliance to expose the two Rp1 (1in BSP int) flow and return tapings in the boiler. Pipe connections should be made with Rp1 (1in. BSP ext) x 28mm dia copper compression fittings or steel pipe nipples. Replace panel and fit pipe collars.

Gravity Domestic Hot Water

The 28mm O.D. primary flow pipe must rise continuously from the boiler section to the cylinder to ensure good gravity circulation and extended to provide an open vent.

The 28mm O.D. primary flow and return pipes must not exceed 10m in length. Pipe runs in excess of 5m must be lagged.

Seal the boiler body to the combustion chamber with fire cement provided, or non-boiler models remake any distributed seals on firebrick assembly.

OIL CONTROL VALVE INSTALLATION

1. Fit and lightly secure oil control valve support bracket to cooker LH side panel. See Fig. 8. Using a spirit level, check that the horizontal face of the support bracket is level in all directions, then tighten and secure bracket fixing screws.
2. Mount oil control valve on support bracket and adjust its height (via locknuts) so that the 'OIL LINE' mark on the LH side of the oil control valve body, measures a vertical height of 256mm from the valve body 'mark' to the base plate level.

NOTE: IF THE APPLIANCE IS MOUNTED ON A PLINTH, ADD THE HEIGHT OF THE PLINTH TO THE DIMENSION GIVEN. CHECK USING A SPIRIT LEVEL, THAT THE TOP OF THE VALVE IS LEVEL IN ALL DIRECTIONS.

Installation Instructions

BURNER INSTALLATION

1. Open outer burner door and lift/remove inner burner door.
2. Withdraw oil burner base assembly and place on a work surface. Locate the perforated shell assemblies onto burner base (lighting port at burner front), and check that the shell assemblies seat correctly (near airtight) and that the top horizontal baffle fits on top of the shells. Remove the shells, and check that the vapourising chamber plug fits snugly into the base, and that the vapourising wicks fit into the burner base grooves.
3. Transfer the oil burner base assembly into combustion chamber with centre support at the rear end and the two front support screws forward in the combustion chamber.

Adjust the front support levelling screws of the burner assembly until it is level in all directions, then tighten the locknuts on the levelling screws. Use a cross spirit level to ensure burner is level in all directions.

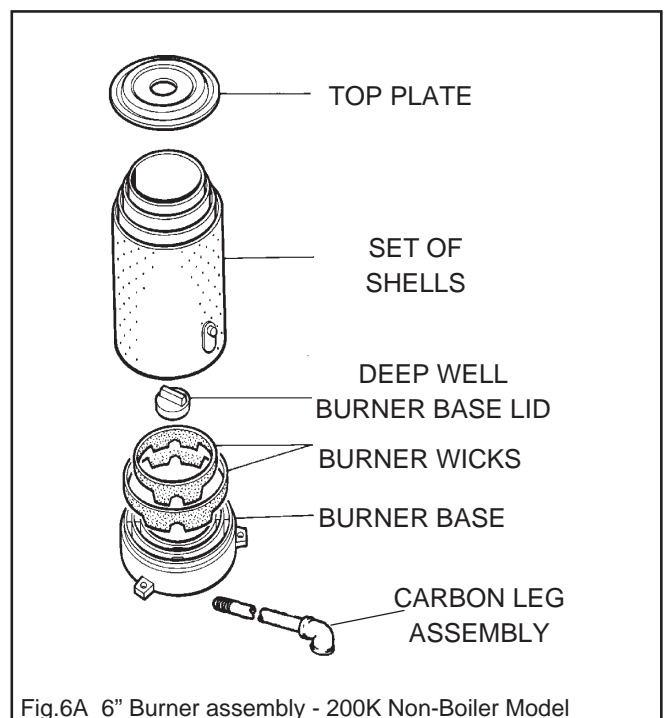
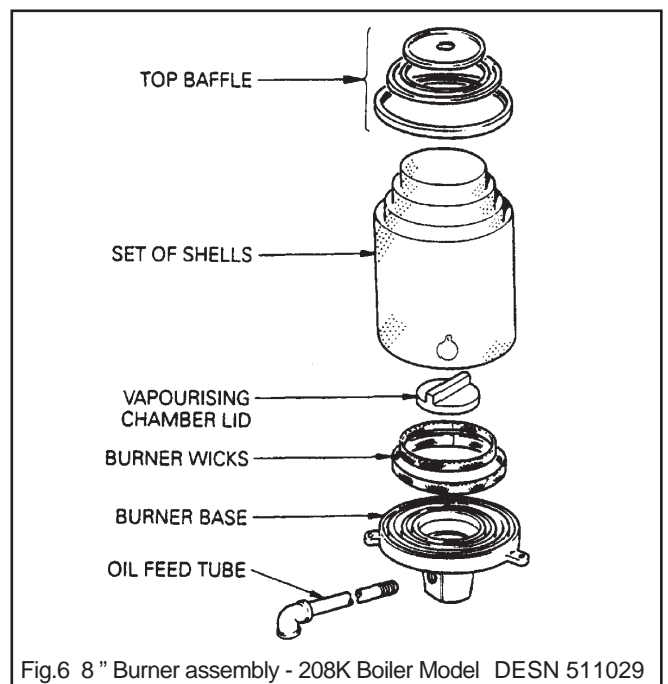
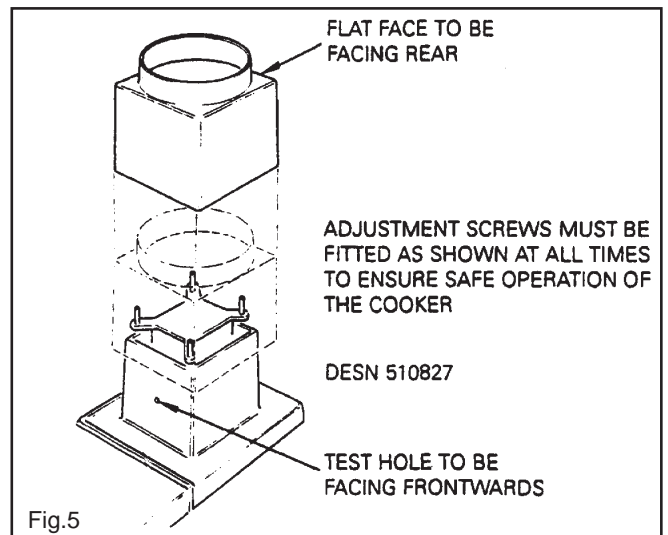
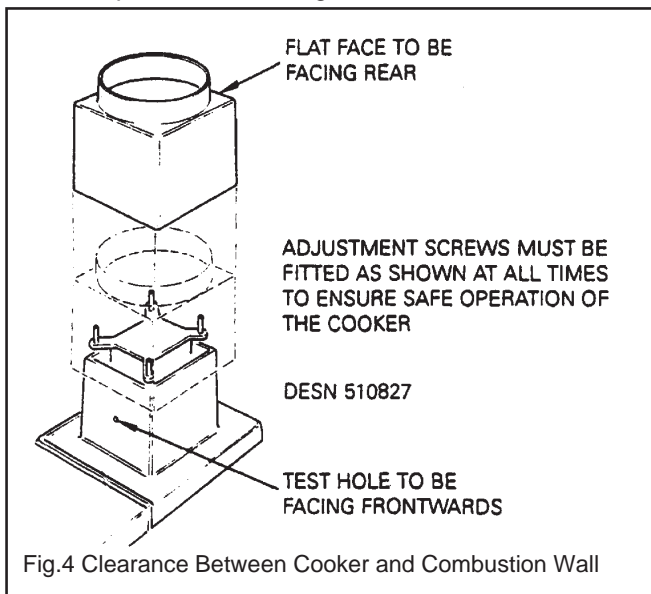
NOTE: THE BURNER BASE MUST BE LEVEL.

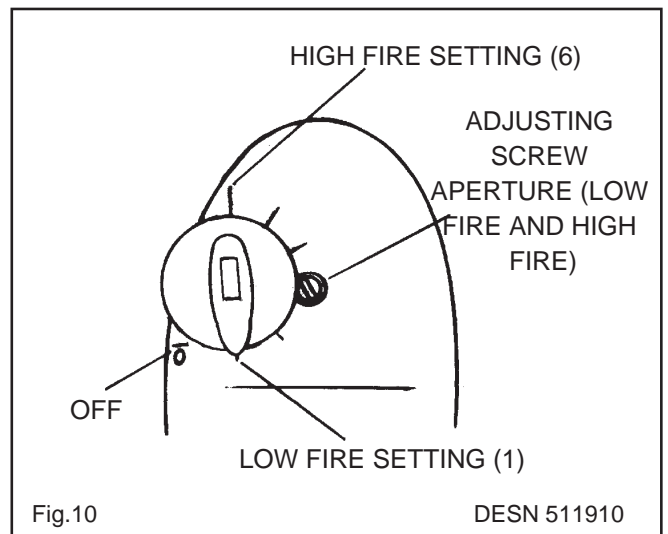
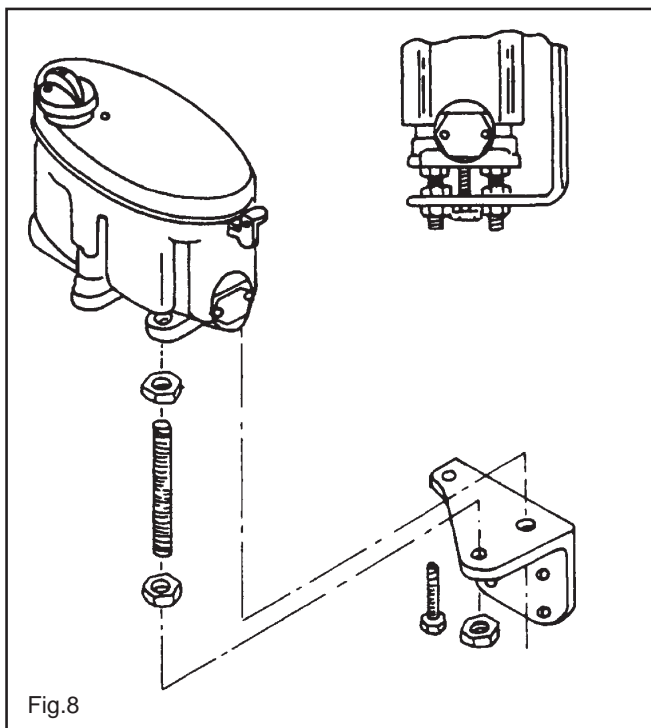
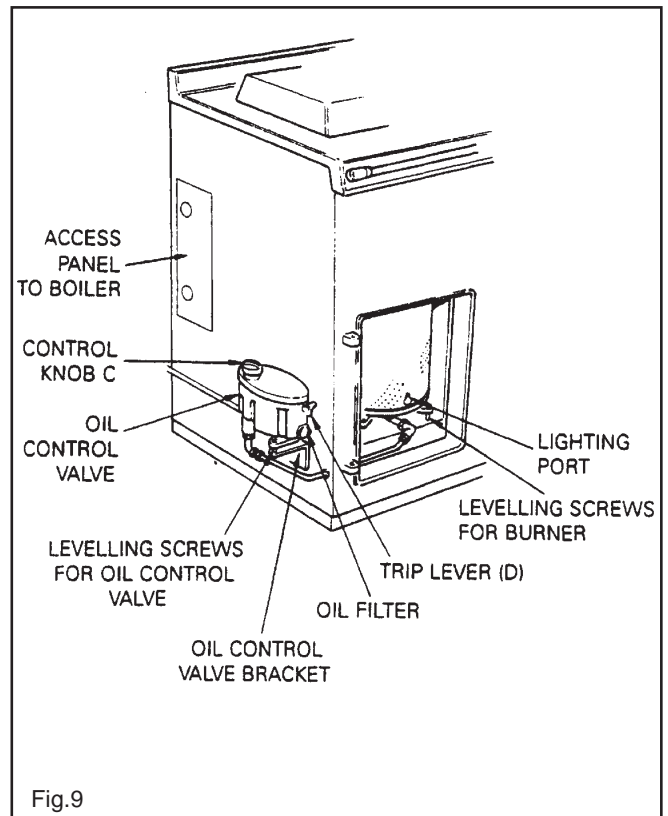
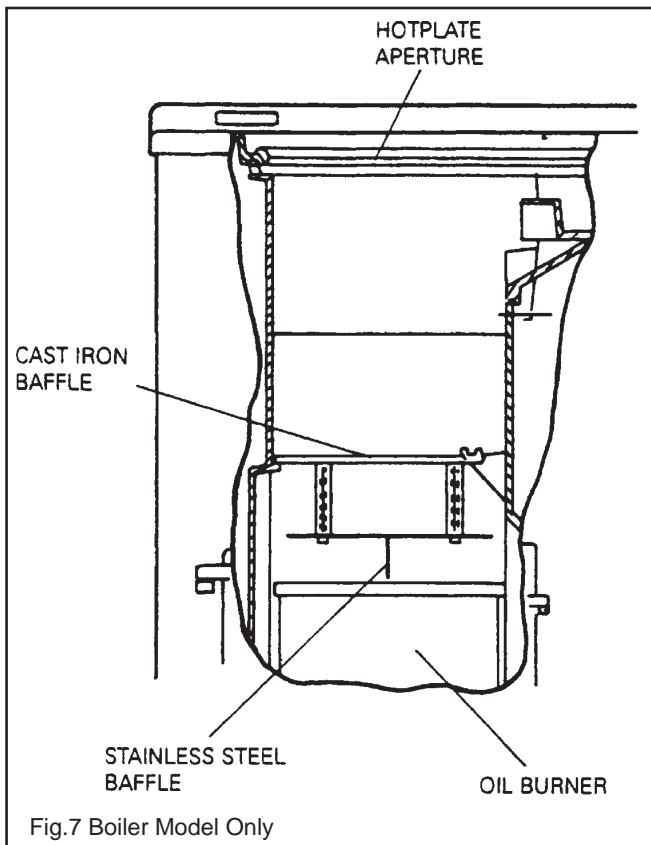
4. Insert the copper oil feed pipe through the side of the cooker with the front end turned upward for connection to the burner base front elbow.

The opposite end of the pipe should be connected to the elbow on the outlet of the oil control valve.

NOTE: KINKING OF THE OIL FEED PIPE MUST BE AVOIDED OTHERWISE AIRLOCKING WILL OCCUR. ALWAYS RUN THE PIPE TO A LOW LEVEL POINT, THEN GRADUALLY PROVIDE A CONTINUAL UPWARD SLOPE TO THE BURNER.

5. Connect oil supply tank feed pipe to inlet of oil control valve open all oil valves to allow oil into control valve. It may be necessary to purge the oil line to prevent air locking.





CHECKING THE BURNER OIL LEVEL

1. Open all oil valves to allow oil into the oil control valve. It may be necessary to purge the oil line to prevent airlocking.
2. Depress the trip lever **D** on the front of the oil control valve **A**, and turn cooker oil control knob **C** to No.6 setting. See Figs. 9 & 10.

Oil should enter the burner base in due course and after about 10-15 minutes, the depth of the oil should have settled to a static depth of 5-6mm deep where oil enters the oilways of the **burner base**. To correct the oil depth, adjust the oil control valve height via the adjusting screws between the valve and mounting bracket. Re-check the oil burner and valve are level in all directions.

General

- a. Turn oil valve control knob to **OFF**, disconnect the copper pipe connection at the burner base and withdraw. Draw off the oil in the burner base. Alternatively the oil can be sucked out using an aspirator.
- b. Fit the burner wicks, vapour chamber, sealing plate and perforated shell assembly with top baffle

Installation Instructions

assembly, checking that the shell assembly seats airtightly on the burner bases.

NOTE: ENSURE 'CUT-OUTS' ON BURNER WICKS LINE UP WITH OIL CHANNELS ON BURNER BASE (SEE FIG. 6)

- c. Replace the burner and reconnect oil pipe.
- d. Ensure boiler shell assembly locations are seated airtight by carefully holding the assembly and turning it in a restricted manner.

COMMISSIONING AND TESTING

CHECKING BOILER FLOW RATES

1. After checking the burner is level and that the oil is the correct depth in the burner disconnect the oil feed pipe to the burner and attach adaptor for measuring by the DRIP FEED METHOD.
2. Turn the cooker oil control valve knob **C** on the oil control valve to No.6 setting to establish oil flow, allowing 2 min. Always set low fire rate first.
3. Turn the cooker oil control valve knob **C** on the oil control valve to No. 1 setting - check low fire setting - this should be between 4.0 to 4.25 cc/min.
NOTE: ALLOW 7 MINUTES FOR THE FLOW TO STABILISE BEFORE TAKING THE RATE. IF THE RATE IS INCORRECT THEN ALLOW 2 MINUTES BETWEEN RE-SETTING AND THE NEXT RATE.
4. If the rate is incorrect then turn the low fire setting screw as shown on the cover plate to increase or decrease the flow. See Fig.10.
5. Now turn the cooker oil control valve **C** on the oil control valve to No.6 (High Fire) and check rate - AGAIN ALLOW TIME AS ABOVE FOR THE OIL RATE TO SETTLE. If incorrect adjust high fire rate by turning the high fire setting screw as shown on the cover plate. See Fig.10. This should be between 12.75 to 13.0 cc/min for the boiler model or 8.5 to 9.0 cc/min for the non boiler model. ALLOW TIME FOR RATE TO SETTLE.
6. **Smoke Test: On Burner**
Identify a sampling hole in the front of the flue hood assembly. See Fig. 5.
Sample the flue products through the hole for a Smoke Test utilising a Baccarach Smoke Pump where all reading should indicate a Smoke Number 0-1 under the following checks:
 - (i) At low fire rate.
 - (ii) At high fire rate.

WARNING: NEVER ATTEMPT TO RELIGHT A HOT BURNER - DO NOT TURN ON UNTIL THE BURNER IS COOL.

LIGHTING THE OIL BURNER - See Fig. 9

1. Remove the oil control valve cover, then depress the trip lever **D** on the front of the oil control valve and turn the cooker oil control valve knob **C** to No.6 setting.
Allow 15 minutes for oil to enter and settle in cooker burner base.
 2. Open outer burner door adjacent to the bottom warming oven door, remove/lift out inner burner door.
 3. Lift hinged lighting cover on the front of the burner shell and expose the lighting port.
 4. Insert a taper through the lighting port and light the front wick, then close the lighting cover.
 5. Replace inner burner door and close outer burner door.
- NOTE:** ENSURE INNER COOKER BURNER DOOR IS CORRECTLY LOCATED AND SEALED.
6. Return oil control valve knob **C** to its No.1 setting for about 20 minutes, until the burner is hot, then re-set to No.6 for cooking.
 7. The cooker burner will gradually increase its oil rate, and raise the temperature of the oven, taking about 2 1/2 hours from cold to attain an oven temperature of 200°C (400°F), leaving the cooker oil control valve knob **C** at its No.6 setting.
Re-set the cooker oil control valve knob **C** to an intermediate setting and the oven temperature will maintain the desired temperature.
 8. Set the cooker oil control valve knob **C** to No.1 which is the minimum setting when cooking is not required and idling rate is needed.
 9. Ensure both hotplate insulating covers are closed down to conserve heat in hotplate.

INSTRUCT USER

1. Advise the User of the precautions necessary to prevent damage to the hot water system and to the building in the event of the system remaining inoperative during frost conditions.
2. Advise the User that, for continued efficient and safe operation of the appliance, it is important that adequate servicing is carried out at regular 6 monthly intervals.
3. Hand the User Instruction to the User and demonstrate the correct operation of the appliance and system controls. See notes under heading "METHOD OF APPLIANCE CONTROL" below.

METHOD OF APPLIANCE CONTROL

An individual controlled oil burner provides heat to the two ovens, hotplate and domestic hot water. Appliance controls are incorporated at the left-hand side of the cooker.

Oil Burner - See Fig. 9

The burner must be lit manually with a lighted taper to establish itself at low fire rate i.e. with the control knob set to No.1 position. Oil flow (heat input) is increased by manually turning the control knob to a higher number setting, to control the desired oven temperature.

No.1 position is the minimum (and idling) rate and setting up to No.6 will provide a maximum oven temperature of 270°C.

Before the temperature is attained, turn the knob setting down to suit the oven load and temperature requirements.

When not in use, set control knob to No.1 setting.

NOTE: THE BURNER IS INTENDED TO RUN IN A CONTINUOUSLY ALIGHT POSITION AT ALL TIMES - AT A LOW POSITION WHEN NOT USED FOR COOKING, THEN TURNING TO THE APPROPRIATE NUMBER WHEN REQUIRED, TURNING OFF THE COOKER IS NOT RECOMMENDED, UNLESS SERVICING IS REQUIRED.

NOTE: SMOKE/SMELL EMITTED DURING INITIAL USAGE

Some parts of the cooker have been coated with a light covering of protective oil. During initial operation of the cooker, 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.

LEAVE THESE INSTRUCTIONS WITH THE
USER FOR FUTURE USE

SERVICING INSTRUCTIONS

BI-ANNUAL SERVICING

It is important that a 6 monthly service be carried out by a competent Service Engineer and it is recommended that a contract be made with such an Engineer. Your Rayburn Stockist will provide advice on the location of the nearest Servicing Engineer, With normal use, cooker annual flueway clean and burner maintenance should be carried out immediately before and after the end of the heating season. An additional cooker flueway clean, halfway through the heating season, may be necessary in some cases.

The householder should be advised to turn OFF the cooker oil valve control knob, the night preceding the day of the service, so that the appliance will have cooled down by the following morning, in readiness for servicing.

Before commencing any servicing, isolate the oil supply from the tank and ensure the oil control valve front trip lever is **OFF**.

STANDARD BI-ANNUAL SERVICE SCHEDULE

- a. Service clean of cooker boiler heat exchanger flueways.
- b. Service clean of cooker flueways and hotplate.
- c. Service maintenance clean/check of oil burner.
- d. Maintenance check on oil control valve.

TO OBTAIN SERVICING ACCESS

1. To obtain servicing access to oil burner and heat exchanger, proceed as follows:-
 - a. Lift out the hotplate.
 - b. Open the outer burner door and lift out the inner combustion chamber door.

TO REMOVE OIL BURNER

2. a. Break and disconnect the copper feed pipe at the front elbow of burner. Any residue oil in the copper pipe should be collected by a small tray receptacle.
- b. Lift out burner and remove the burner heat baffle, shell assembly, small vapourising chamber plate and wicks.
- c. Remove carbon deposit from wick grooves, oilways of burner base and the oil feed pipe. Gently brush any carbon deposits from shell assembly and top heat baffle. Check the burner wicks and replace in the reverse order of dis-assembly.

NOTE: EXAMINE THE VAPOURISING CHAMBER PLATE IS FITTED CORRECTLY, THE LIGHTING PORT IS AT THE FRONT OF THE SHELL ASSEMBLY AND THAT THE SHELLS ARE SEATED CORRECTLY ON THE BASE, REPLACE THE HEAT BAFFLE, BUT DO NOT OFFER BURNER ASSEMBLY TO APPLIANCE YET.

TO CLEAN THE FLUEWAYS

3. Remove oil burner assemblies as previously described.
 - a. Place a layer of paper in combustion chamber base plate.
 - b. Thoroughly brush boiler rear face and cooker LH side in an upward and downward direction. Brush across the oven top.
 - c. Remove layer of paper with fallen debris.
 - d. Brush and clean in between hotplate ribs on underside.
 - e. Examine soft rope seal located on underside of hotplate baffle plate, and replace if worn or frayed.
 - f. Examine soft rope seal located around hotplate aperture in top plate. Replace if frayed or damaged.
 - g. Examine soft seal rope located around inner combustion chamber door. Replace if frayed or damaged.
 - h. Replace hotplate ensuring that the underside fins lie over the combustion chamber.
 - i. Replace the oil burner assembly within the combustion chamber, and re-connect the copper oil pipe to elbow.

NOTE: ENSURE THE COPPER PIPE IS NOT KINKED OTHERWISE AIR LOCKING WILL PREVAIL.

TO CHECK THE OIL CONTROL VALVE

4. Check that the inlet valve from the oil tank is closed.
 - a. Remove the oil filter from the front of the oil control valve, draining the oil into a prepared receptacle. Clean the filter if necessary in kerosene or warm water and dry off. Inspect the sealing gasket of the filter and renew if necessary. Replace filter assembly within oil control valve.
 - b. Inspect and clean if necessary any filter on the oil supply tank to the oil control valve of the cooker. Flush the oil supply pipe and ensure it is not air locked.
 - c. Remove top cover of oil control valve, remove metering stem and clean, then check sealing grommet is satisfactory. Replace if worn. After refitting metering stems, ensure it is operating freely under the spring tension.

TO REMOVE OVEN TEMPERATURE INDICATOR

5. a. Open main oven door fully and remove four screws securing inner lining panel to outer door casting.
- b. Remove inner lining panel and slagwood insulation.
- c. Unscrew two hexagon nuts securing indicator to outer door casting, and remove indicator.
- d. Fit replacement indicator in reverse order of dismantling.
6. Check the oil rates of burner at low and high fire rates together with smoke sampling.

LEAVE SERVICING INSTRUCTIONS WITH THE USER FOR FUTURE USE

**For further advice or information contact
your local distributor/stockist**

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



Made by The AGA logo, which consists of the letters 'AGA' in a bold, white, sans-serif font inside a black, horizontally-oriented oval with a metallic, brushed-metal border.

Manufactured by
Aga
Station Road
Ketley Telford
Shropshire TF1 5AQ
England

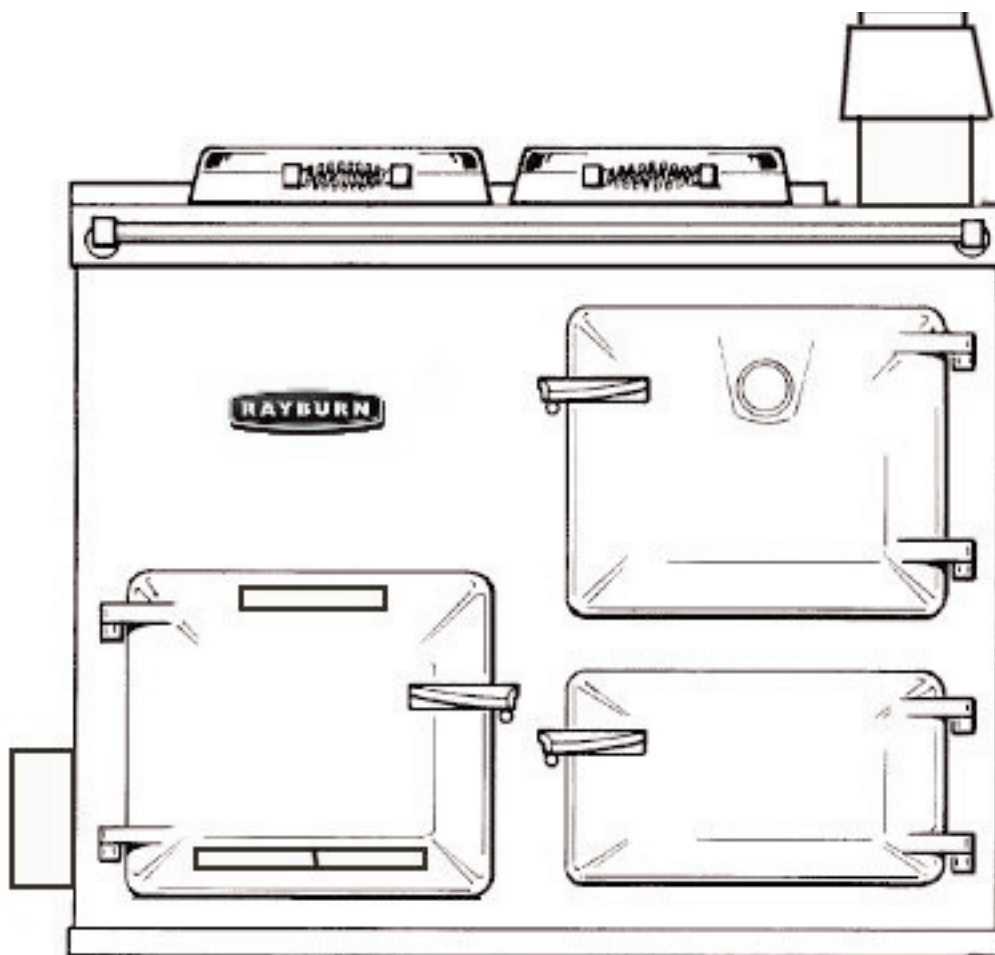
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Cookmaster 200K Heatranger 208K

Product Technical Guide

U.K Edition



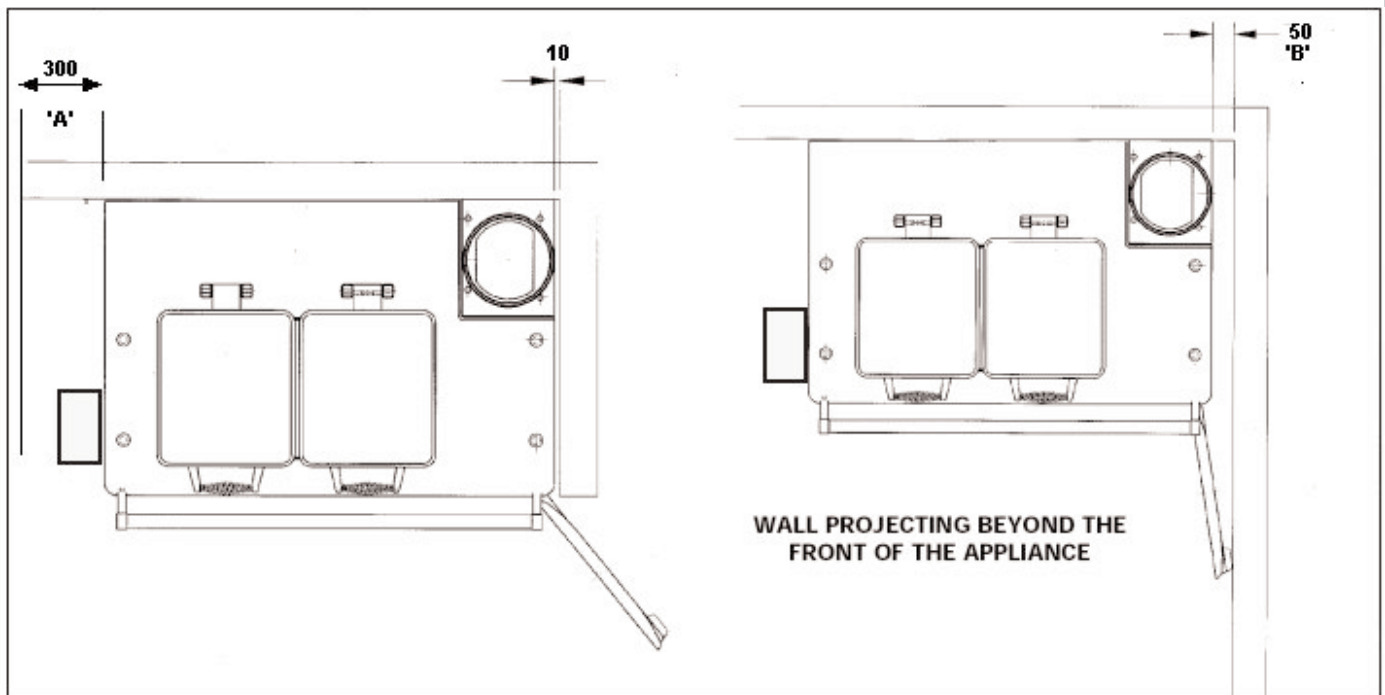
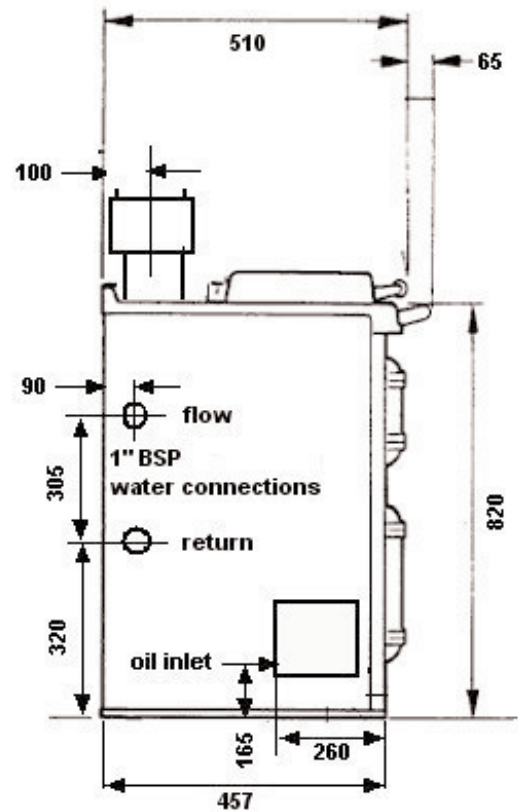
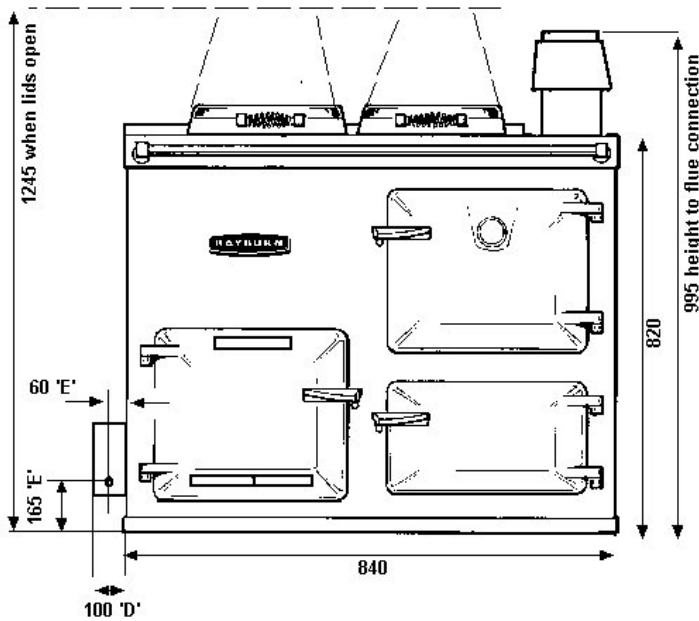
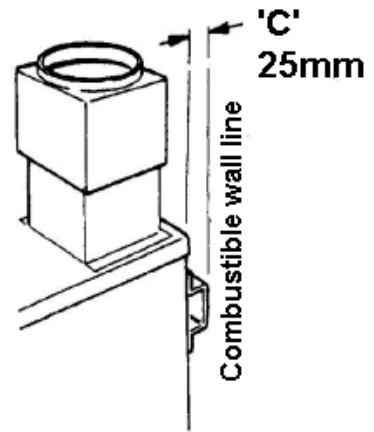
Specification

Appliance weight (uninstalled) ---	305 kg
Power Supply ---	No requirement for electricity
Maximum heat input ---	200K 5.48 kW 208K 7.42 kW
Fuel suitability ---	Class C2 Kerosene suitable for vaporising burners
Oil inlet ---	1/4" BSP
Flue outlet ---	100mm Vertical
Maximum flue gas temperature ---	330 deg C
Combustion air supply requirement ---	31 cm ² (e.g. 100mm diam or 9" X 3" plastic brick)
208K only	
Boiler/Heat Exchanger ---	Cast iron VE lined
Boiler connections ---	2 off 1" B.S.P
Maximum boiler output ---	2.35 kw/hr
Average hot water output ---	400 litre/24 hours

Dimensions

A Rayburn is assembled from individual enamelled cast-iron components, which may cause the product to vary slightly in its overall dimensions.

Consequently any recess should be generously dimensioned with a minimum width of at least 1150mm



General

Installation of an oil-fired range cooker is a 'controlled service' and is therefore notifiable to Building Control, unless self certified by a competent person, i.e. OFTEC registered.

This product is supplied partially assembled for completion and installation by a competent engineer.

Location

The floor should be level and strong enough to support the product weight of 305 kg and must be of non-combustible material.

Where the Rayburn is to be 'slot' fitted, a gap of 300mm (dimension 'A') is required to the left-hand side, to allow access to the control valve, with a gap of 10mm at the right-hand side.

However, if the R/H side wall protrudes beyond the front of the cooker, then the R/H clearance must be increased to 50mm. See dimension 'B'

If the rear wall is of combustible material, then a gap of 25mm must be maintained, using the spacing brackets supplied with the product. See dimension 'C'

Wall tiles must not overlap the top-plate.

Oil Supply

The installation of the oil storage tank and pipeline should only be carried out by a competent person. A 'risk assessment' will need to have been made of the proposed oil-storage arrangements.

Oil storage tanks may be of plastic or steel construction and ideally of 3000 litres capacity, located on an approved design of base. For actual guidance on tank installation please refer to OFTEC guidance sheets T19, T1/131. The tank must incorporate an isolation valve and fuel filter/strainer.

Fuel must arrive at the Rayburn oil control valve (OCV) by gravity, requiring the base of the oil tank to be more than 630mm above the base of the Rayburn.

If this cannot be achieved it may be necessary to use a proprietary oil-lifter, but an electricity supply will then become essential.

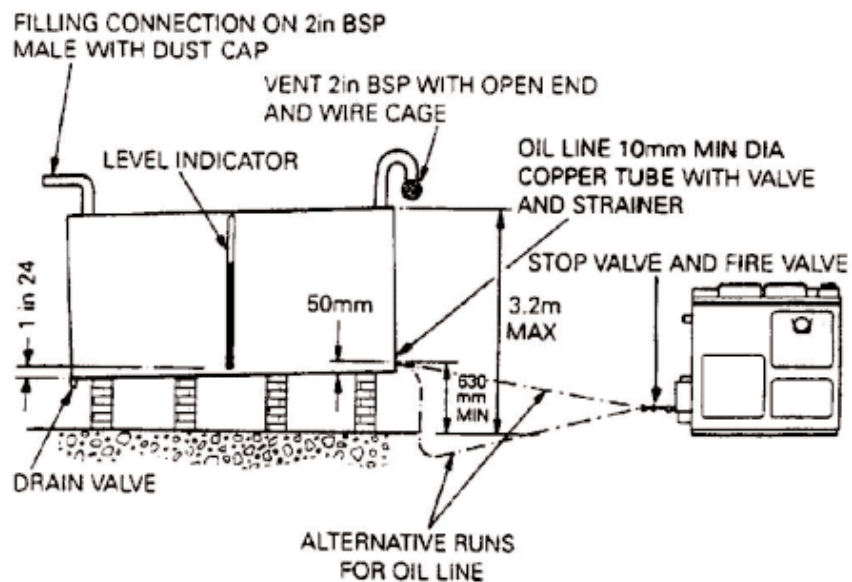
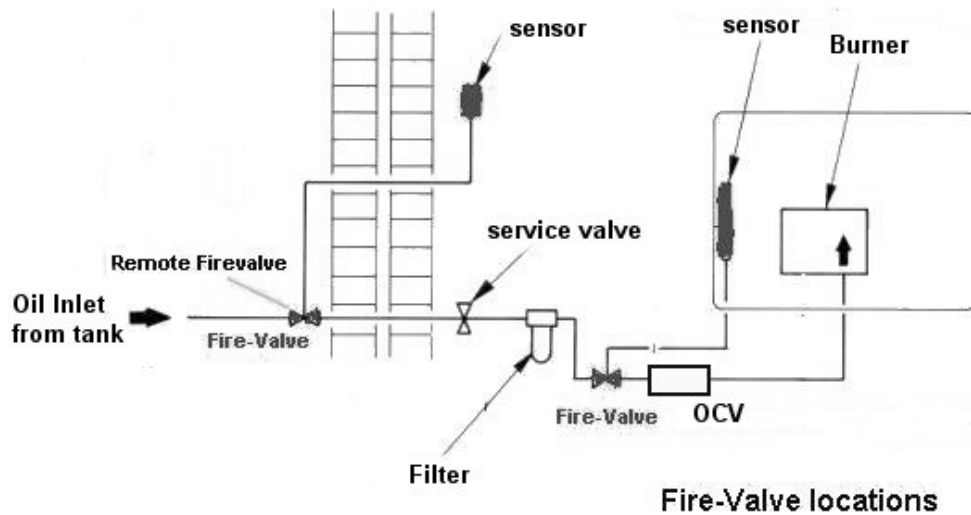
If the tank height is greater than 3.2m, a pressure reducing valve will be required located immediately before the Rayburn.

10mm diameter copper pipework would normally be used for the fuel supply line, but with lengthy pipe runs this may need to be increased to 15mm diameter. Preferably the pipe should fall continuously towards the Rayburn.

Oil Supply

Fuel connection is 1/4" BSP, into the OCV fixed to the left hand side panel. The OCV cannot be relocated elsewhere.

A remote acting fire-valve rated at 66 deg C must be installed as shown, with its body located outside of the property and the sensor located adjacent to the Rayburn. A second fire-valve should be fitted immediately before the OCV and with its sensor located within the Rayburn burner housing on the securing clips provided. An oil-filter must also be fitted prior to the OCV.



Typical Oil storage layout

Flue system

This appliance is designed to work on an Open or Conventional flue only, with a minimum effective height of 4.5 metres. A negative flue draught is required in the region of 1.0mm (.04") WG

If the flue draught is likely to exceed this amount (e.g. with a tall chimney), then a proprietary flue stabilizer will be required.

The initial flue pipe from the Rayburn can be of vitreous enamelled steel or cast iron, having a diameter of 100mm. It is advisable to rise vertically from the Rayburn for at least 600mm before a bend is introduced. Bends should be kept to a minimum and must allow the flue to continue to rise at least by 45 degrees.

The main flue can be a masonry chimney with a 125mm diameter stainless-steel lining, suitable for temperatures up to 330 deg C. Alternatively, clay linings are suitable or flue blocks. If it is an existing chimney, it must be first swept and a new lining fitted or the existing flexible lining renewed.

If there is no masonry chimney available, then a prefabricated, twin wall, factory insulated system may be used of an appropriate material, normally stainless-steel. Internal diameter should be 125mm. Note that the appliance operates in a 'dry' condition with a negative draught and has a maximum flue gas temperature of 330 deg C.

There must also be some provision for cleaning access.

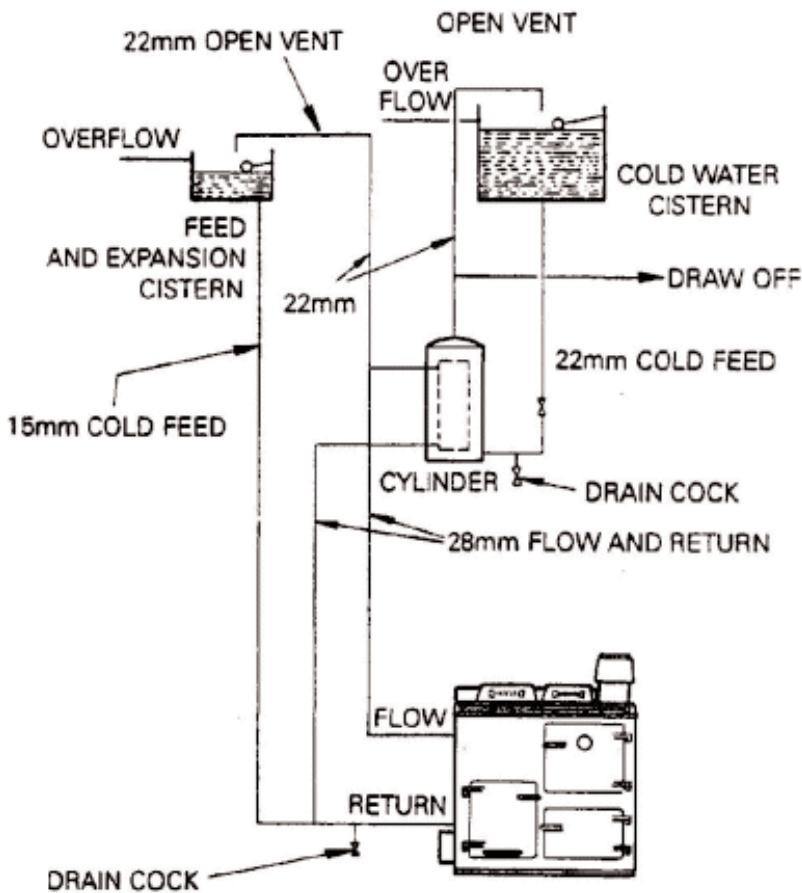
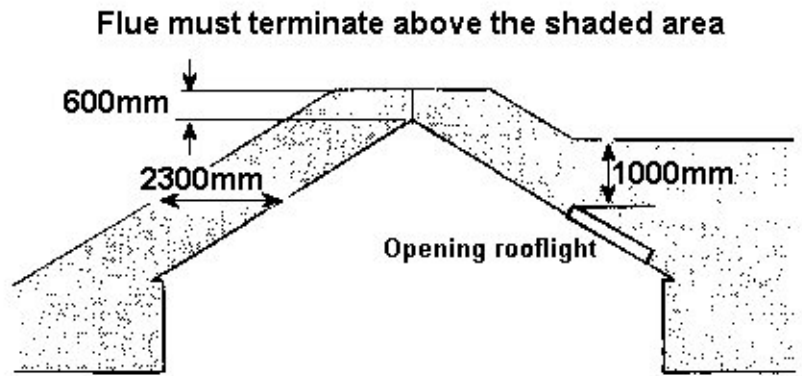
An approved oil terminal or cowl must be fitted and the flue must terminate above roof height in accordance with BS Codes of practice, 5410. Generally this means that the terminal should be at least 600mm measured vertically from the roof, although additional clearances will be required in some situations.

If the flue terminal location is likely to be subject to occasional wind turbulence (e.g. due to adjacent tall trees or hills) an anti-down-draught cowl may be used, but if the problem is due to a high pressure zone, no known cowl can guarantee to overcome this. Extra height may be the only answer.

Ridge vent terminals or gas appliance cowls must not be used with this Rayburn.

The flue must only serve the Rayburn as sharing with another appliance is not allowed.

Typical minimum clearances for a flue termination



Typical hot-water system

then allows for a suitable corrosion inhibitor to be added.

28mm diameter pipes should be used for the flow & return pipework, which should be arranged so as to allow for gravity circulation. A maximum length of 5 metres each (i.e. distance between the Rayburn and the storage cylinder) will ensure the hot water performance is maintained. No thermostat valves or other restrictions must be fitted to this pipework.

The storage cylinder should be factory insulated and of the double feed type, with a capacity of 140 litres.

Interconnection plumbing with other heating products can be complicated and is not recommended.

Under no circumstances must the 308K burner be alight unless the boiler is connected to the hot-water system and filled with water.

Domestic Hot Water (Model 308K)

The cast-iron heat exchanger has a vitreous lining, with a maximum output of 2.3kW/hr when the burner is at high fire, e.g. with the OCV at its highest setting.

Average hot-water production with normal cooking activities over a 24 hour period is 400 litres.

If demands for hot water are likely to be rather less than this amount, it is permissible for a towel rail to be connected, providing that the heated surface area does not exceed .5 m².

This cooker must be connected to an open-vented system only and although a direct system is permissible under certain circumstances in known soft water areas, an indirect system is to be much preferred. This



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**This leaflet is a pre-installation guide only.
For further advice or information please refer to the product owners manual or contact
your local Rayburn Specialist**

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

The Rayburn 200 series are manufactured by
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