

# SELECT SOLID FUEL MODEL

OPERATING INSTRUCTIONS



**THE AUTHENTIC ORIGINAL SINCE 1854**

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# INTRODUCTION

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We are pleased that you have chosen an ESSE cooker. We would ask that you read the following operating instructions very carefully.

Correctly installed and operated, your ESSE cooker will give satisfactory service for many years.

We feel certain that you will enjoy the warmth and comfort of your ESSE cooker and, perhaps more importantly, you will more than enjoy the superb quality of the cooking.

**BON APPETIT!**

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# YOUR COOKER

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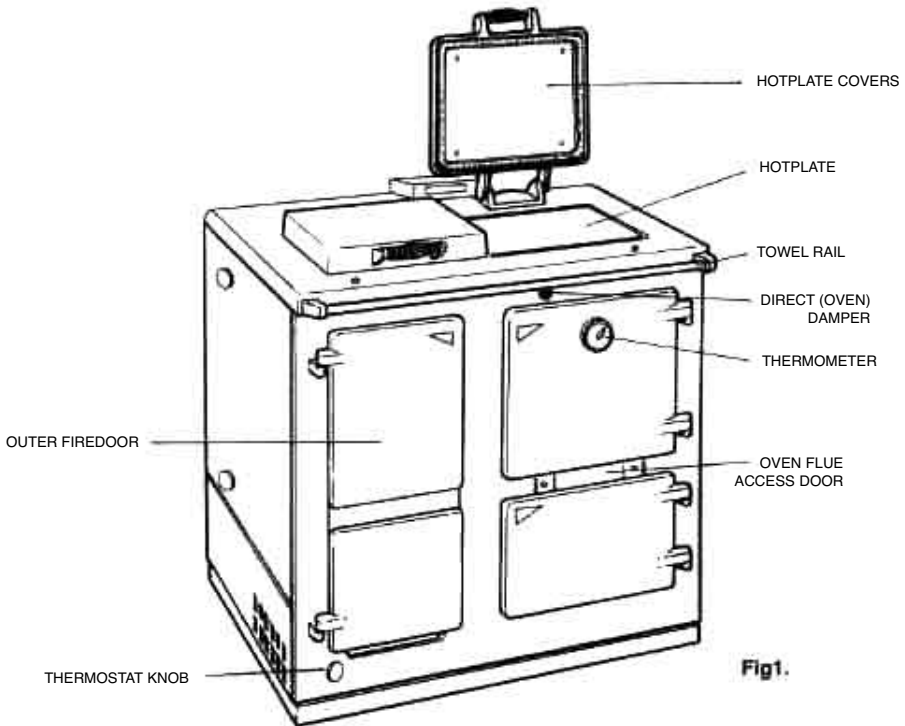


Fig1.

The cooker has two ovens, the upper oven fitted with a thermometer for general use and a lower oven suitable for slow cooking and warming.

The firebox behind the left-hand outer fire door contains a water boiler and a shakeable bottom grate, and the ashpan is located behind the ash-pit door.

## IMPORTANT

(i) Direct damper is fully open when the round knob is pulled fully out and closed when fully in. There is no in-between position.

(ii) The damper must always be open (pulled out) when lighting from cold and when fuel is added.

(iii) When using the oven, close the damper to allow heat to circulate around the oven.

## TOOLS AND ACCESSORIES

A universal tool, flue rake and flexible flue rake are supplied with the cooker, together with two wire shelves, a cake tray and a meat tin. Shelves fit both ovens.

## FIREBRICK LININGS

The three removable firebox bricks must be lifted out in winter when maximum hot water is required for central heating purposes. They should be replaced in warmer months when hot water demand is less.

After removing the hotplate (see Fig. 9) remove the bricks in order of front, back and left-hand. Replace in reverse sequence.

The right-hand oven side brick must not be moved under any circumstances.

Fig. 2

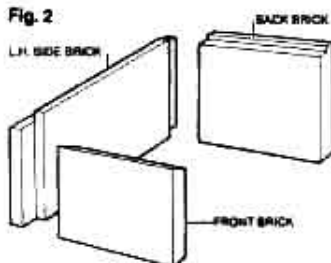
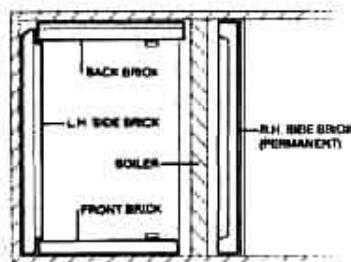


Fig. 3



## BRICK LIFE

Whilst every effort is made to purchase refractory fire bricks of the highest quality from our suppliers, unfortunately the nature of the material is very brittle and can become cracked or broken quite easily. Extreme care must be used when handling the fire bricks during installation and removal, also care must be taken when actually refuelling the appliance to avoid damaging the brick lining.

Under normal circumstances the bricks should last a reasonable length of time provided they are properly looked after. Unfortunately, however, free of charge replacements cannot be issued as they are not covered by the guarantee.

## FIREDOOR AND ASHDOOR

The cooker has an outer firedoor held in the closed position by a magnetic catch. The firedoor and ashdoor are located behind this outerdoor (see Fig. 8, page 7).

### To open and close doors:

Refer to Figs. 4 and 5.

1. Pull the handle (1) outwards.
2. Move the catch (2) anti-clockwise and (3) pull door open.

The firedoor will rest open against the ashdoor and the ashdoor will rest open on the floor.

3. Reverse the procedure to close the doors.

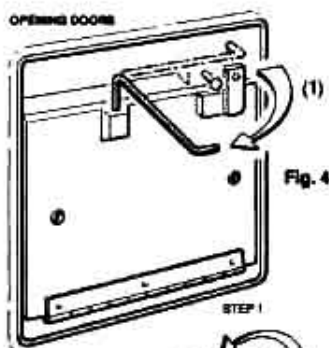


Fig. 4

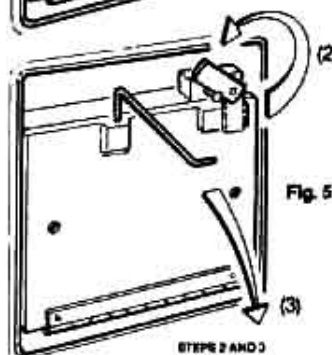


Fig. 5

## LIGHTING A FIRE

Check that the direct damper is fully open; i.e. fully out.

Remove any ash from the bottom grate and ashpan: remove ashpan leaving ashdoor open.

Ensure the hotplate is in position.

Lay paper and kindling on the bottom grate, close the fire door and light the paper through the bottom grate.

When paper is alight, replace ashpan, close ashpit door and fully open sliding damper in ashpit door.

Allow firewood to burn up and add fresh kindling, establishing a fire in the normal way.

**Note:** Always start off with a small fire to establish draught quickly and eliminate smoking. Too much fuel initially will cause a slow build-up of heat and smoke will be emitted round the hotplate.

## SHAKING THE BOTTOM GRATE

Refer. to Fig. 6.

Open the outer fire door.

Insert universal tool into grate bar and boiler recess as shown.

Move the tool up and down and the grate will move backwards and forwards.

Shaking is best done with the ashdoor closed to avoid dust, but it can be done with the ashdoor open if required.

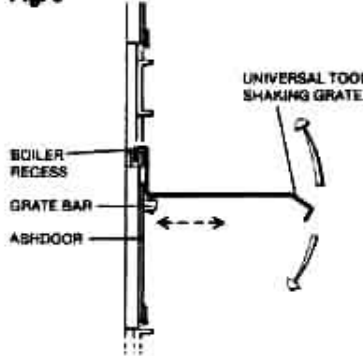
To remove the bottom grate, first clear it of ash and cinders, open ash door and remove ashpan. Pull grate fully out, then lift slightly and pull out further. Lift the grate from underneath and tilt it downwards at the front slightly and slide the grate out.

## GRATE LIFE

The cast iron bottom grate should last a reasonable amount of time provided the ashes are removed regularly and the fire-

box is maintained properly. Bottom grates which become cracked due to build up of clinkers or the burning of unapproved fuels will **not** be replaced free of charge, even if inside the guarantee period.

Fig. 6



## EMPTYING THE ASHPAN

Refer to Fig. 7.

Normally the ashpan should be emptied at least twice in 24 hours, but this will depend on usage and type of fuel.

Always empty the ashpan before the level reaches the top of the ashpan sides and never allow ash to reach the underside of the bottom grate as this may cause permanent damage to the bottom grate.

Recommended procedure is:

1. Shake bottom grate.
2. Remove ashpan and empty ashes.
3. Replace ashpan and close ashdoor.

Never operate the cooker for more than a few minutes without the ashpan in place.

Fig. 7



## CONTROLLING YOUR COOKER

There are two air controls:

1. A thermostatically operated control in the boiler, controlled by a knob at the lower left-hand front (see Fig. 1).
2. A sliding damper in the ashpit door (see Fig. 8).

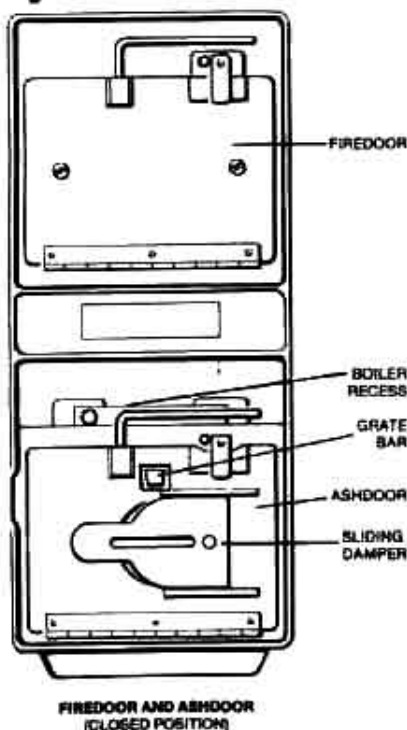
These two air controls must be used in conjunction with one another to achieve the following results.

### MAXIMUM HEAT TO WATER

Leave the sliding damper **closed**.

Obtain required water temperature by use of thermostat control.

Fig. 8



### (B) MAXIMUM HEAT TO OVEN

Open sliding damper and close direct damper. This will over-ride the thermostat and allow oven and hotplate temperatures to be boosted.

Close the sliding damper at the end of such periods of use.

Where oven and hotplate are the predominant part of the cooker operation, the thermostat control can be set at No. 1 position and the cooker operated manually using the sliding damper.

The ashdoor must remain closed at all times except when lighting the fire or emptying the ashpan.

Never leave the cooker unattended when the ashdoor is open.

Avoid excessive fire temperatures as these may cause serious damage to the cooker. Clinker formation - ash fused together - is usually the sign of excessive firing and clinker may even fuse itself to the firebrick lining, causing damage to the bricks themselves.

### PLEASE REMEMBER

1. The cooker will not respond immediately to changes in air control and damper position, there will be a time-lag between changes and temperature increase in oven and hotplate.
2. Running with a too intensive fire can cause harm to the cooker and be wasteful of fuel.
3. Woodburning calls for a different technique, due to its nature as a fuel. See notes on woodburning at the end of these instructions.
4. **Always ensure that the ashpit door is firmly closed before opening the fire door.**

## OVERNIGHT BURNING

The cooker is designed for continuous operation with smokeless fuels and can be burned overnight for 10 hours at an idling rate. When burning wood it may be necessary to use coal to maintain combustion overnight, reverting to wood during the day when charging can be made at more regular intervals.

To set for overnight burning, shake the bottom grate, empty the ashpan and add a small amount of fuel. Allow to burn for 15 minutes with sliding damper fully open, then add fuel up to the level of the fire-door opening at the front of the fire-box, sloping the fuel upwards to the rear. Never overfill via the hotplate opening so as to permit fuel to spill out of the fire-door if it is opened or accidentally opens. The sliding damper and thermostat control setting will depend upon the type of fuel used and the chimney draft and can only be learned by experience.

Next morning open the damper and air control fully and leave for 10 minutes or so. Give the bottom grate a shake five or six times, but do not overshake.

If the hotplate is required immediately, lift the cover and use the hotplate before adding fuel.

Check the state of the fire after **15 minutes** and add fuel as necessary - a small amount is better initially in order to build a bright fire.

## NORMAL FIRE OPERATION

The rate of burning will obviously depend on the service required. It is best to operate the cooker with a bright fire, adding small amounts of fuel at regular intervals.

For good hotplate temperatures a bright fire is essential. Where hot water is the

most important consideration, larger amounts of fuel may be added at longer intervals, but overfilling will result in sluggish performance due to the mass of unburnt fuel on top of the fire. Shake the bottom grate at regular intervals to prevent ash build-up on top of the bottom grate. Failure to do so will result in fall-off in performance as air cannot pass to the burning fuel.

Hard and fast rules for operation cannot be given, as the type of fuel used will determine the attention required.

## HOT WATER

The amount of hot water will depend on whether the boiler is operated with or without firebricks, the type of fuel and the requirements for the ovens.

Boiler, hotplate and ovens are all served by the same fire and a high boiler output will mean a high oven temperature and vice versa. The highest amount of hot water will be obtained by running with all bricks out and burning smokeless fuel with the oven temperature about 500 F. The lowest hot water output will be obtained with all bricks in at low oven temperature.

During cold weather periods, when hot water is required for radiators, the cook will be operated without bricks or with part bricks, depending on the number of radiators installed. For woodburning, the removal of the bricks means a larger fire-box volume, but output will always be lower than coal or smokeless fuels.

Control of the boiler is the thermostat setting. It should be remembered that the boiler will provide a continuous supply of heat the whole time that the cooker is alight. Even during overnight burning, the greater part of heat from the burning fuel will be taken up by the boiler.

## OVENS

The interior surfaces of the ovens and the main outer parts are enamelled. This is a durable finish, easy to clean, but requires care.

The ovens are fitted with anti-pull out stops to prevent shelves from being pulled out accidentally. To insert a shelf, push back on the runner until it meets the stop, lift the front end of the shelf to allow the rear end to pass the stop, push back slightly then lower and push shelf fully back into the oven. To remove a shelf, pull forward until it stops, lift front end, pull forward to clear stop, lower shelf and pull out of oven.

The top oven is fitted with a thermometer and has four runner positions for the shelves. Two wire trays are provided and a baking tray for scones, etc., placing the food on the shelf, then inserting into the oven on top of a wireshelf.

Certain cooking operations can be carried out by placing dishes directly on the oven bottom.

The lower oven temperature is linked to that of the top oven, but will be lower by about 150°F. Normally the maximum temperature that can be expected will be 300°F, with the top oven at 450°F.

When using the oven, de-ash the fire by shaking the bottom grate and adding small quantities of fuel to build up a bright fire.

The air control being adjusted to give a bright fire, allow the oven temperature to build up, closing air control and damper to maintain the temperature required.

**Remember:** After idling, the oven may take 60 to 90 minutes to reach 450°F and this time should be used for food preparation, etc.

During prolonged periods of cooking, add fuel in small quantities at intervals of about 1 to 1 1/2 hours for smokeless fuels or as necessary for wood. Shake the grate at similar intervals.

## OVEN TEMPERATURE CHART

	°F	°C	GM
Very Cool	225	110	1/4
	250	130	1/2
Cool	275	140	1
	300	150	2
Moderate	325	170	3
	350	180	4
Moderately Hot	375	190	5
	400	200	6
Hot	425	220	7
	450	230	8
Very Hot	475	240	9

## THE HOTPLATE

The hotplate is surface ground and intended for use with machine base utensils. As heat passes from the hotplate to utensil almost entirely by conduction, good contact is essential and a thin-bottomed utensil will result in poor heating performance, especially if the bottom is not flat or uneven.

The hottest part of the hotplate is the left-hand end.

The hotplate can be lifted out for flueway cleaning.

Always keep the hotplate cover down, except when using the hotplate.

## GENERAL HINTS

1. Always ensure the hotplate is correctly located when the cooker is in use.
2. Do not operate the cooker to such an extent that any position outwith the firebox becomes "red-hot".
3. Never use petrol, paraffin or similar liquids to start or "freshen-up" the fire. Keep all such liquids well away from the cooker while it is in use.

## ALTERATION TO HOTPLATE

The original three piece hotplate design has been replaced by a one-piece type incorporating a removable plug at the left hand end. An additional tool is supplied for removing the plug.

Any replacement hotplate will be supplied in the new form.

The hotplate beds down on the sealing rope in the hob and the top surface of the hotplate should project between 3 and 8mm above the hob level.

To remove the hotplate, first remove the plug as below, then remove the hotplate by hand. The hotplate should only be removed when the cooker is cold.

When replacing the hotplate, ensure the plug cutout is to the left, i.e. above the firebox and the plug is fitted with the small cut-out on its underside facing to the right as shown in the illustration.

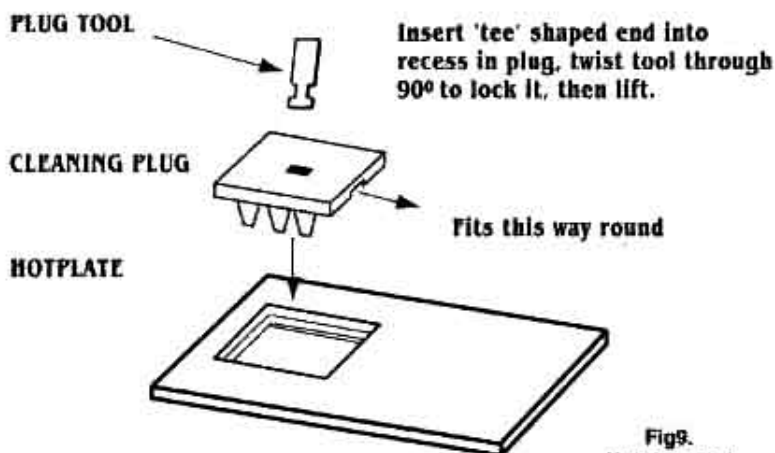


Fig9.  
Hotplate and  
Filler Plug assembly

## FLUEWAYS AND CHIMNEYS

Blockage of the flueways or chimney will cause dangerous fumes to leak into the room which may not be visible. It is important that cleaning is carried out at regular intervals, irrespective of whether smokeless fuels are used or not. An access for a sweep's brush into the chimney must be made during installation.

**Note:** Smoke may sometimes occur in the first few minutes from lighting when the chimney is cold and draught conditions poor.

## FLUEWAY CLEANING

The interval of flue cleaning will depend on the type of fuel used and the way the cooker is operated. The longest interval will be when smokeless fuel is used and the shortest when burning house coal.

It is important to remember that all fuels give rise to soot or ash deposits and regular cleaning is essential.

Cleaning points are:

A removable door in the fluebox and a removable door between the upper and lower ovens held in position by two screws.

Use the flue rake to remove soot and ash. Ensure flueways are kept clear. Do not operate the cooker when any of the removable doors are not in position.

## ENAMEL CLEANING

Enamel is simply a coloured glass coating added to the metal to give a durable and hygienic finish. It can be damaged by scratching or by sudden application of cold liquids onto its surface when hot. Clean with a cloth and soapy water, preferably while the cooker is still warm. Proprietary non-scratch liquid cleaners for enamelled surfaces may be used, but nylon pan scrubbers can scratch the enamel. Abrasive cleaners must not be used. Spilled liquids should be removed as soon as possible. Spilled fruit juices and other acidic products can remove the gloss surface from the enamel if left for any length of time.

## FUELS

The following solid smokeless fuels are recommended:-

Sunbrite doubles, Anthracite stove nuts, Welsh dry steam coal (large nuts), Coalite, Phurnacite.

In non smoke control areas certain grades of House Coal trebles, large nuts, doubles or nuts may be used.

Petroleum coke based fuels must **NOT** be used.

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## TIPS FROM THE SOLID FUEL KITCHEN

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### ● POTS AND PANS

It is important to use pots and pans that have a ground base and that are flat-bottomed on the hotplate.

Cookware made of cast iron, aluminium, glass and earthenware is suitable for the solid fuel oven.

### ● THE OVEN FLOOR

Use the bottom of the solid fuel cooker for browning the bases of bread or pasties by placing them directly onto the oven floor.

### ● THE OVENS

Take advantage of the different temperatures of the top and bottom ovens, which can be used simultaneously for different purposes.

A solid fuel oven is the "original" slow cooker - you can safely leave a tasty dish to cook overnight on the right setting.

### ● THE HOTPLATE

The temperature versatility here is very important - the area of the hotplate over the fire is the hottest, while the area over the oven is cooler. Quick boil on the former and then transfer for simmering on the latter.

For deep fat frying, bring to temperature on the "cool" side. Introduce cold food and then return to temperature on the "hotter" side.

Cooking directly on the hotplate is another facility - griddle scones, burgers, sausages, steaks, and even Welsh Rarebit can be cooked directly on the surface. White meringues can be dried on a baking tray sitting on the hob overnight.

Additionally, by using a barbecue griller you can produce your own toasted sandwiches on the oven top.

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# NOTES ON WOODBURNING

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## ● FUEL

The cooker can accept wood up to 16" long and up to 4" x 4" section. For best results, use well seasoned hardwood such as oak, ash, elm or beech. Allow wood to dry out for as long as possible before using it.

Logs cut and dry stored for twelve months are the ideal. The wetter the wood the more difficult to burn and the greater the likelihood of chimney condensation.

**Remember** - the cooker is not a rubbish burner; for good performance, good quality fuel is required.

## ● FUEL CONSUMPTION

This will depend on the facilities required; a good quality wood may only have a calorific value of up to 5,000 Btu per pound weight so for 50,000 Btu/hr output the consumption will be in the region of 10lb wood per hour minimum as heat goes to hotplate, oven and boiler.

## ● LIGHTING

Light as for smokeless fuels. It is usually unnecessary to open the ashpit door, the slider providing sufficient air for initial lighting. When kindling is well alight add larger logs until the fire is established.

## OPERATION

Generally, as for smokeless fuels; the cooker will require more frequent refuelling and less frequent de-ashing. For overnight burning use coal or smokeless fuel on top of the embers to maintain the fire, then revert to wood burning during the day.

The best arrangement will probably be to use wood as available when the cooker is not required to operate at full combustion rate to give maximum hot water, reverting to other solid fuels for periods of maximum output.

## ● SOME POINTS TO REMEMBER

1. Wood is clean fuel, leaving little ash. This ash is a valuable garden fertiliser. Place ashes in a metal container, preferably with a lid, leaving the container on a non-combustible floor until ashes are cold and ready for disposal.
2. It is bad practice to run the cooker continuously at low burning rates as condensation may form in the chimney.

When wood is burned slowly, it produces tar and other organic vapours which combine with expelled moisture to form creosote. Creosote vapours condense in the relatively cool chimney of a slow burning fire and as a result creosote residue can accumulate on the chimney and flue lining. When ignited the creosote makes an extremely hot fire within the chimney.

The flue and chimney should be inspected at least twice monthly to determine if a creosote build up has occurred. If creosote has accumulated it should be removed to reduce the risk of a chimney fire.

3. Resinous softwood will burn faster and give a higher output for shorter periods than hardwoods; but care is required due to length of flame produced and increases in chimney temperatures.
4. The boiler face may become encrusted with tarry matter and this may have to be removed by scraping. If a hot fire is burned for a short period each week, this should help to remove the deposit.

TYPICAL REPLACEMENT ITEM	SPARE PART NO
Ashpan	2040-057
Bottom Grate	2040-058
Left Hand Side Fire Brick	2040-070
Front Fire Brick	2040-071
Rear Fire Brick	2040-072

## AND FINALLY

We expect your Esse range to live up to all your expectations in terms of performance and reliability, and we would pass on the following additional information so that you can ensure your cooker/boiler is installed and maintained properly in the future.

We must insist that your installer fills in the commissioning/installation guarantee card and most importantly that he **records the measurement of the chimney draught**. Chimney draught (or rather a lack of it) is the most common cause for complaint received by us regarding solid fuel appliances. In the unlikely event that you require a member of our service team to attend your installation the expense of the visit will be **fully chargeable** to you if no commissioning/installation guarantee card has been sent back to us.

Boiler (heat exchanger) life and flue-way life can be shortened dramatically by ignoring two simple pieces of sound advice: first to drain down the water system during long periods of time when the cooker is off. Secondly to keep the flueways clear by cleaning regularly.

Make sure your plumber/installer adds the correct amount of rust inhibitor to your central heating system, and ensure that no decay to the cooker can occur due to ingress of rain down your flue or chimney. When the cooker is on and working any moisture will evaporate, but when the cooker is off the mild steel interior of the cooker is vulnerable..