

Donard Solid Fuel Cooker



To ensure safety, satisfaction and maximum service, **this Cooker should be installed by a suitably qualified and competent person.** The provision of a Central Heating facility, requires that the hot water systems involved, conform fully to good plumbing practice and established standards.

INSTALLATION AND OPERATING INSTRUCTIONS

The manufacturers reserve the right to make alterations to design, materials or construction for manufacturing or other reasons subsequent to publication.

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OPERATING INSTRUCTIONS

This solid fuel cooker has been manufactured and supplied in compliance with the Health & Safety at Work Act 1974 section 6. We have taken every reasonable care that this product is designed and constructed to be safe and without risk to health when properly installed and used. This cooker is tested and approved prior to despatch.

This appliance is hot while in operation and retains its heat for a long period of time after use. Children, aged or infirm persons should be supervised at all times and should not be allowed to touch the hot working surfaces while in use or until the appliance has thoroughly cooled.

Notice: Any alteration that is not approved by Waterford Stanley may render the warranty void and can effect your statutory rights.

The complete installation must be done in accordance with current Standards and Local Codes. It should be noted that the requirements and these publications may be superseded during 3 the life of this manual.

Control of substances

This cooker may contain some of the materials indicated below. It is the users/installers responsibility to ensure his/her personal protection when handling the pertinent items:- fire cement, fuel beds, artificial fuels. When handling use disposable gloves. Glues and sealants - exercise caution. If they are liquid use face mask and disposable gloves. Glass yarn or rope, mineral wool, rock wool, insulation pads, ceramic fibre, coal dust may be harmful if inhaled. They may also irritate the skin, eves, nose and throat. Use disposable gloves, face mask and eye protection. Wash other exposed parts after handling. When disposing of the rubbish reduce dust with water and wrap them securely.

SUMMER OPERATION

(i.e. when Central heating is not in use).

The fire-box of this cooker can not be modified to reduce the boiler output while cooking. Therefore if cooking is carried out during the summer months then adequate dissipation of the heat produced be allowed for in your central heating circuit to ensure that the hot water within the circuit does not boil.



- 6" (150mm) Flue Box Flue Box Plate
- 5. 6.
- Hob
- 7. Towel Rail
- 8. Damper(Control) Fire Door 9.
- 10. Ashpit Door
- 11. Main Oven Door
- 12. Front Cleaning Door
- 13. Simmer Oven Door
- 14. Base Frame

- 17. Simmer and Cleaning Plate
- 18. Boiler Thermostat
- 19. Oven Thermometer
- 20. Blanking Plate
- 21. Primary Air Grill
- 22. Riddling Cover
- **Boiler Capacity -**
- 13.6 Litres = 3 gallons
- Cooker Weight -
- 352 Kg. = 774 lbs.

SPECIFICATION



Note: Dimensions stated are in millimetres unless otherwise stated and may be subject to a slight +/- variation.

FEATURE	METRIC
HOT PLATE	560 x 330
ROASTING OVEN	390W x 310H x 406D
SIMMERING OVEN	390W x 220H x 406D
FIREBOX	220W x 500H x 400D
ASHBOX	220W x 200H x 400D
FUEL CAPACITY	.02 Cu. METERS .
LOG SIZE	380 LONG

TECHNICAL DATA

COOKER OUTPUT: AT GROSS OUTPUT per hour 35 KW = 120,000 BTU's NET TO WATER per hour 17.5KW = 60,000 BTU's

RADIATION SURFACE: Heating surface only = 32.7 sq. Meters = 353 sq. ft. Heating plus Domestic Hot Water = 30.2 sq. Meters sq. ft.

INSTALLATION

Installation must comply with the following:

B.S. 8303 - Code of Practice for the installation of domestic heating and cooking appliances burning solid mineral fuels.

Building Regulations - Part J.

Local Authority by-laws and other specifications as they affect the installation of the cooker.

PRE-INSTALLATION CHECK - LOCATION

When choosing a location for this appliance you must have:

- (a) Sufficient room for the installation (see clearances), a satisfactory flue (see chimneys), and an adequate air supply for correct combustion and operation.
- (b) Adequate space for maintenance and air circulation.
- (c) Check that the chimney is clean and clear of obstructions. Cracked brickwork and leaking joints should be made good.

HEARTH CONSTRUCTION

Hearth should be strong enough to support total weight of cooker. When a properly constructed hearth is not available we recommend that the Cooker be placed on a slab of foamed concrete 7.5 cm (3") or a slab of other insulating material. This hearth must extend at least 45 cm (18") to the front and 30 cm (12") to each side,

CHIMNEY/FLUES

The chimney should have a cross sectional area of at least 176 sq. cm (28 sq. ins) or an inner diameter of 150mm to 230mm. (6" to 10"). (See fig. 1 & 2).

Do not connect to a chimney serving another appliance. Always ensure that the connection is to a chimney of the same size, never connect to one of smaller dimensions. Chimneys wholly constructed of single skin are not recommended under any circumstances. Due to their inability to retain heat, such chimneys will inevitably give rise to smoking, down draught and the formation of condensation.

The flue must be high enough (more than 4.6m (15ft.) in any case) to allow the flue gasses to vent into clear air, away from the turbulence that may be caused by roof structures, other chimney stacks etc. The venting position should be 1.0m (3'3") above any obstruction within a 7.6m (24'9") radius, if down draughts are to be avoided.



Where the standard masonry chimney is not available, a proprietary type of twin wall, fully insulated pipe may be used. As already stated, the minimum inner diameter must not be less than 15 c.m. (6") and the pipe must terminate at a point not lower than the main ridge or adjacent outside obstructions. With such installations access to the chimney must be provided for cleaning purposes.

Fig.3



FLUE BOX

Apply fire cement to the socket in the hob. Attach a short length of 6" (150mm) I.D. pipe approx. 10" (250mm) long to the outlet of the flue box by means of fire cement. Place the flue box on the hob and the pipe into the wall and consolidate the fluebox and pipe into the fire cement. Apply 3 or 4 coils of 10mm ($^{1}/_{2}$) insulating rope to the pipe and fill the wall cavity with fire cement. (See fig. 3).

FLUE PIPES/CONNECTIONS

Square bends and long horizontal runs of flue piping must be avoided. There is provision with the Cooker for two methods of installation i.e. top outlet or back outlet.

ALL FLUE CONNECTIONS MUST BE THOROUGHLY SEALED. Blocked chimneys are dangerous, use only recommended fuels, keep chimneys and flue ways clear; read the operating instructions.

STANLEY CAST IRON PIPES ARE HIGHLY RECOMMENDED FOR INTERIOR USE.

DRAUGHT REQUIREMENTS

When a draught recorded is over .10 inches W.G. a draught stabiliser should be fitted. Remember a proper flue is necessary for the efficient operation of the Cooker. The chimney should be capable of providing a continuous negative pressure of between .06 and .10 inches WG.

Excessive draught can be controlled by opening the Flue Box door one or two notches.

DOWN DRAUGHTS

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

A suitable anti-down draught terminal or cowl will usually effectively combat direct down draught but no cowl is likely to prevent down draught due to a high pressure zone. (See fig. 4).

Fig. 4



COOKER CLEARANCE

The Cooker should not be installed at zero clearance to combustible materials. The sides should have a minimum clearance of at least 7.5 cm (3") from combustible materials unless otherwise fully insulated.

PLUMBING See Fig. 5

		PIPE	FUNCTION	PIPE	FUNCTION
RADIATOR	FIRST				
HEATING	FLOOR	1	PUMPED FLOW TO RADIATORS	7	HOT WATER FLOW
CIRCUITS		2	PUMPED RETURN EX "	8	COLD WATER (EX TANK)
		3	PUMPED FLOW TO RADIATORS	9	COLD FEED-HEAT SYSTEM
	GROUND	4	PUMPED RETURN EX "	10	OPEN VENT-HEAT SYSTEM
CYLINDER	FLOOR	5	GRAVITY FLOW TO CYLINDER	11	COLD FEED TO CYLINDER
HEATING		6	GRAVITY RETURN EX "	12	HOT WATER VENT
CIRCUIT	FIRST			13	MAINS WATER
	FLOOR			Т	THERMOSTAT
					ISOLATING VALVES

This diagram illustrates the basic principals of water systems and is not to be regarded as a working drawing.



Recommended indirect cylinder 135-180 litres, depending on domestic requirements with a 2.5 cm (1") flow and return pipes not exceeding 7.8m (25'6") each in length. Cylinder and pipework should be lagged to minimise heat losses.

REGULATIONS

The plumbing must be in accordance with all relevant regulations and practices. It must include a gravity circuit with expansion pipe, open to the atmosphere. The central heating will normally be pump-driven as with other types of boilers. In indirect domestic water closed circuit central heating the system is thermostatically controlled by the unit mounted in the ashpit door.

BOILER OUTPUT

High output cannot be maintained unless fuel is being burned at a rate of 4.6 Kg. per hour of coal. When burning peat or wood, reduced output will apply because of the lower calorific value of the fuels.

GRAVITY CIRCUIT

The gravity circuit consists of the domestic hot water tank of 135 - 180 litres indirect cylinder, fixed in an upright position, recommended for hot water storage and it should be connected to the boiler by 25mm (1") ID flow and return piping. The pipes should not exceed 7.8m (25'6") each in length and anything in excess of 4.6m (15ft.) must be fully lagged. The shorter the run of pipe work the more effective the water heating efficiency and to this end, the cylinder should be fully lagged. For safety's sake do not have any valves on this circuit.

Fig. 5



THERMOSTAT COMPLETE WITH KNOB DOOR GLASS WITH THERMOMETER CLEANING DOOR LOCKING PLATE OVEN DOOR FRAME OVEN TOP CLEANING PLATE TO HOB CLEANING PLATE TO HOT PLATE HANDLE TO HOT PLATE COVER BODY INSULATION WOOL HOB INSULATION ROPE FIRE DOOR INSULATION ROPE TOP OVEN BOTTOM & BOTTOM CLEANING DOOR TO FRONT TOWEL RAIL BRACKET L.H. TOWEL RAIL BRACKET R.H. OVEN WIRE FRAME SHELF BONNET BLANKING PLATE HOTPLATE HOTPLATE COVER HOTPLATE COVER HINGE BOTTOM OVEN SIDE L.H. BOTTOM OVEN SIDE R.H. BOTTOM OVEN BACK FRONT TOP FLUE GUIDE DOOR KNOB COMPLETE SUMMER PLATE BONNET COVER CLIPS BACK TOP FLUE GUIDE SECONDARY AIR TUBE CON LINK TO FIRE BAR ASH PIT DOOR ASH PIT DOOR COVER TOP OVEN SIDE L.H. TOP OVEN SIDE R.H. TOP OVEN BACK SIMMER OVEN DOOR FIRE DOOR ROPE OVEN DAMPER KNOB BONNET PLATE OVEN DAMPER AXLE FIRE BAR STANDARD ROASTING TIN GRID FIRE DOOR LINING BONNET FRONT OVEN BASE PLATE BASE FRAME FIRE BAR SPECIAL MAIN OVEN DOOR PLATE TO COVER DESCRIPTION FIRE BAR FRAME SIDE PANEL L.H. SIDE PANEL R.H. WINDOW GLASS WINDOW FRAME BONNET COVER OVEN TOP EXT. OVEN DAMPER BONNET BACK FLUEWAY R.H. DOOR CATCH STEAM VENT DOOR HINGE **BACK PANEL** FIRE DOOR OVEN TOP FIRE TOOL OVEN TIN ASH PAN BOILER FRONT HОВ ITEM 44. , α ω 38. 39. 41. 43.

INJECTOR TEE

Where the gravity and central heating circuits join together to return to the Cooker we recommend the use of an injector tee connection, situated as close to the unit as possible. This type of tee encourages a stable flow of hot water through both circuits and helps to prevent priority being given to the stronger flow, which is most commonly the pumped central heating circuit. (See fig. 6).

WATER CIRCUIT TEMPERATURE

The return water temperature should be maintained at not less than 40°C so as to avoid condensation on the boiler and return piping. Fitting a pipe thermostat to the return from the gravity circuit and wiring it into the pump control will ensure that no cold water will be returned from the central heating circuit before the water from the gravity circuit has warmed up to the common return pipe and boiler. If this is not sufficient to keep the boiler temperatures above the required minimum, a three-way mixing valve may be fitted to the flow pipe to divert some hot water straight back into the return. Such a valve can be operated either manually or electrically in conjunction with a return pipe thermostat.

PIPE THERMOSTAT

Another advantage of fitting a pipe thermostat on the gravity return is that priority will always be given to the domestic hot water supply.

FUELS

The Cooker output levels are assessed on standard House Coal of good quality. Reduced outputs will result when fuels of lower calorific values are used. Wood logs up to 38cm (15") long are suitable.

All fuels should be stored under cover and kept as dry as possible prior to use.

SECONDARY AIR PIPE

The Secondary Air Pipe is for use with House Coal, Timber and Peat Fires only. It must be removed when burning Anthracite or other smokeless fuels.

CIRCULATING PUMP

It is recommended that the selected pump be of a

FUEL CALORIFIC VALUE

Anthracite 25 - 50mm	Calorific Value	8.2 kW/KG	=	14,000 BTUS/LB
House Coal 25 - 75mm	Calorific Value	7.2 kW/KG	=	12,300 BTUS/LB
Timber - Firebox Size	Calorific Value	5.0 kW/KG	=	8,600 BTUS/LB
Peat Briquettes -	Calorific Value	4.8 kW/KG	=	8,300 BTUS/LB
Bog Peat -	Calorific Value	3.4 kW/KG	=	6,000 BTUS/LB

proprietary type and manufacture, and be adequate to give the required temperature differential between the flow and return. The pump should be able to meet the requirements of the system design and be fitted in a readily accessible position. It may be positioned either on the boiler section flow or the return, depending on the system design.

Isolating valves (preferably of the keyless type) must be fitted to the inlet and outlet of the circulating pump to facilitate service and replacement of pump without draining the system.

Pipework not forming part of the useful heating surface should be insulated to help prevent heat loss and possible freezing, particularly where pipes are run through roof spaces and ventilated underfloor spaces. Cisterns situated in areas which may be exposed to freezing conditions should also be insulated.

Draining taps must be located in accessible positions which permit the draining of the whole system, including the appliance and hot water storage vessel. Draining taps should be at least 1/2in. (12.5mm) BSP nominal size and be in accordance with BS 2879.

The appliance boiler section should be connected to a cistern water supply, subject to a maximum head of 18.25m (60ft).

The heating system must be designed (and adjusted if necessary) to give a temperature differential across the boiler at full output of $10^{\circ} - 14^{\circ}C$ ($18^{\circ} - 35^{\circ}F$). 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

INHIBITORS

We strongly recommend the use of corrosion inhibitors and anti-freeze solution in the system. Use only quantities specified by the inhibitor manufacturer. Add inhibitor only after flushing when finally re-filling the system. Refer to BS 7953.

Fig. 6



OPERATION



Fig. 7

unavoidable the pipes should rise upwards in the direction away from the appliance.

LIGHTING THE FIRE

Thoroughly check all pipe work for leaks, especially the pipe connections to the boiler before lighting. Allow the Cooker to build up heat slowly at first. Check that all dampers and catches are operating correctly and ensure that all flue connections are thoroughly sealed. See that the user has a copy of the operating instructions.

Fully open the thermostat and direct damper and kindle with paper and sticks in the usual way and ignite by using a taper or rolled wad of paper inserted into the ashpit. Under no circumstances should any inflammable liquid i.e. petrol, paraffin etc. be used to light the fire. When the fire is well established close the direct damper fully and keep it closed. Add fuel to the firebox as required and adjust the thermostat to suit the current requirements.

FUELLING

When fuelling open the direct damper as this will help to eliminate smoking. Afterwards be sure to close the output from the boiler. Never pack fuel tightly or fill the firebox to capacity. A lower level fire is more effective particularly in regard to water heating efficiency. The maximum fuel level is up to the bottom of the firebox door and rising upwards at a 30Þ angle towards the back of the firebox.

CONDENSATION

If the appliance is run for extended periods on a low

fire, especially when burning wood or peat the fire can cool down to such an extend that vapour in the flue gases may condense. This will make the inside of the flue damp so that the soot sticks to the flue and the tarry mixture formed may drip down into the appliance. It is always a good idea to run at a high rate whenever possible, because it is so easy to light, a lot of people, especially in the Summer, run the appliance for just a few hours with a strong roaring fire. The appliance is then allowed to die until the hot water is used up and then is relit. From



the appliance and flue point of view, this is a better technique than running a low fire continually. (Fig. 7)

EXTERNAL RIDDLING

Lift the sealing flap on the ash door and insert the operating tool into the hole until it engages with the

spigot on the grate and move vigorously. In addition it is also recommended that the firebed itself be thoroughly raked at intervals thus loosening up such debris as clinker, stones, etc. which are then easily removed. (Fig. 8).

ASH REMOVAL

Some attention should be paid to the amount of ash that is allowed to build up in the firebox. Wood has better burning characteristics if a bed of ash is allowed to build up, riddling only being necessary to level up the fire (for cooking, for example). Coal or smokeless fuels, on the other hand, burn better if they are well riddled to allow a good airflow to the fire. For slow combustion it is better to have a thicker ash bed for all fuels. Therefore, do not riddle the fire before slowing it down for overnight burning, but riddle it if required in the morning or before cooking.

When using anthracite or coal avoid excessive firing conditions. High temperatures are unnecessary and can do serious harm to the cooker. The first indication that overheating is taking place will be the formation of clinker (melted ash) in the firebox and this should be removed immediately otherwise damage will occur to the firebars and cooker components and any damage here should be repaired without delay.



ASHPAN

The ashpan must be emptied as required otherwise ash will build up to a point where it interferes with the natural flow of cool air through firebars and as a consequence these will be damaged.

THERMOSTAT WITH MANUAL OVERRIDE

The air supply to the fire is controlled by the thermostat probe inserted into the boiler and the control knob attached to the ash door.

The automatic thermostat has 6 settings which control the heat to which the boiler water will rise for central heating purposes. Setting 0 will close the thermostat, setting 3 will give a nominal burning rate of $2^{1/2}$ to 3kg per hour of house coal. Setting 5 will give maximum water heating and high oven

temperatures.

The thermostat will close down when the water heat reaches the temperature chosen by the selected setting, it will close fully when the water temperature



reaches 90 - 95° C when set at 5 - to prevent boiling.

(See Fig. 9 & 10)

The thermostat manual override has 4 settings which retain the air flap in a predetermined open position for steady heat when baking and cooking. It will only close fully when the water temperature reaches 90 - 95°C to prevent boiling.

OVERNIGHT BURNING



There is a small air bypass into the ashdoor and this is normally sufficient when the thermostat is closed to hold the fire at least 10 hours after banking. If the fire is out and the fuel unburned set the control knob of the thermostat from 1/2 to 1 in order to sustain overnight burning.

FIREDOOR SPIN VALVE

Heated secondary air enters the firebox through a



BOILER INSULATING PLATE



spin valve in the firedoor back plate while the valve is open to assist combustion of smoke volatiles. Close when burning anthracite. (See Fig. 11)

ASHDOOR SPIN VALVE

The ashdoor spin valve allows additional air to the firebox for marginal draught conditions. This can be adjusted to suit your requirements. Close when setting the cooker for overnight burning. (See fig.12)

This plate is fitted by removing the hotplate and sliding the insulating plate down between the boiler and oven side. Make sure that the spacing projections are facing the oven and the top flange is resting on the boiler. Replace the hotplate.

The boiler insulating plate may be used with the summer plates or on its own as a means of reducing the boiler output and increasing the heat to the oven. (See fig. 13)

FUEL ECONOMY

It is more economical to operate the Cooker on a 24 hours per day basis if possible.

SUMMER GRATE & HEAT SHIELD



Fig.15



CONTENTS

QTY

- 1. Support legs (2)
- 2. Summer Grate (1)
- 3. Back Heat Shield Plate (1)
- 4. Side Heat Shield Plate (2)
- 5. Front Heat Shield Plate (1)

ASSEMBLY

1. Remove the rocker grate through the ash pit door. Brush down the sides of the fire chamber and clean out the debris before fitting the summer grate and heat shields.

- 2. Insert the support legs (item 1) through the fire door and rest them on the shaker grate support lugs. To lock support legs into position, fit legs as per fig. 15.
- 3. Insert the summer grate (item 2) through the fire door and rest it on the support legs (item 1).
- 4. Insert the heat shield plates in the following order items 3, 4 and 5.
- **NB.** When using the summer grate and heat shields it will be necessary to use a poker to clear ash before refuelling.

ASSEMBLY INSTALLATION INSTRUCTIONS



To obtain a reduction in boiler output during the summer the Cooker is supplied with a removable summer grate and cast iron heat shield plates as standard.

Remove the existing rocker grate and stand the summer grate on the supporting legs after inserting it through the firedoor. Fit heat shield plates as shown in diagram. (See fig. 14 & 15)

HOTPLATE INSULATING COVERS

The insulating covers retain most of the heat that would otherwise be radiated into the kitchen. They also retain the heat in the hotplates so that rapid heating of cooking utensils will result when one or both of them are lifted for cooking purposes. (See Fig. 16)

COOKING UTENSILS

For best cooking results use heavy based, flat bottomed utensils.

USE OF OVENS

When baking or roasting, close the direct damper and open the thermostat fully until the thermometer shows a temperature about 50° F higher than that which is required. Then close the thermostat to a point where the required temperature is sustained (a little practice will soon show how much thermostat adjustment is necessary). Much will depend on the strength of the chimney draught. It will be found that a thermostat setting of 3 will be suitable in most cases.

The main oven is heated on all four faces.

Fig.17



The simmering oven is heated on the top face only.

The temperature will be about half that of the main oven, for slow cooking, of casseroles, stews, soups etc.

INTERNAL/FLUE CLEANING

The flue or chimney will need to be cleaned regularly. How often will depend a lot on how your Cooker is run, but, to start with, make a point of inspecting the flue system every one or two weeks. This period may well be extended as time goes by if there is little sign of deposits. Some people find they need to sweep the flue every six to eight weeks but a longer period is more normal and in some cases this may be as long as 12 months.

For most efficient heat transfer to water jacket, all



Every week, depending on the type of fuel used, it will be necessary to take off the cleaning access plates to remove deposits. Some people use a vacuum cleaner to remove these deposits. The procedure is as follows: Allow cooker to cool down surfaces that come into contact with the flue gases should be kept clean. Regular cleaning will maintain the efficiency of the unit. Use the scraping tool to remove deposits from the inside surfaces of the firebox, the flue ways and top water tube. Regularly look at the top and side of the oven by removing the hotplate cleaning panel and removing the deposits with scraper. To help keep deposits to a minimum, it is a good idea to have a fast fire for 15 minutes at least once a week. Loose deposits will be scoured off and will make the necessity of cleaning out less frequent.

completely, remove all loose sections on top of the Cooker, open the direct damper, remove the flue box



plate from the flue chamber and remove the cleaning door from the front of the Cooker in order to obtain access. Remove the hotplate cleaning panel and hob cleaning plate, and clean the heat collecting fins on the hotplate. Carbon deposits on these surfaces will reduce efficiency by up to 20%. All deposits from the flue pipe and the top of the oven may be brushed both into the firebox and down the side of the oven.

Deposits which have accumulated on the side of the oven must also be brushed downwards. To remove the accumulated ash and soot, thoroughly clean out the residue from the side flues and base plate through the front cleaning door opening — this operation is essential otherwise the flow of hot gases will be obstructed and satisfactory oven temperatures will not be maintained, apart from which such deposits may contribute to smoking. Replace all the loose parts which have been removed making sure that all cooking surfaces have been thoroughly cleaned on the underside. (See Figs. 17, 18 & 19).

GRATE REMOVAL

Lift the back of the grate and push it in towards the back of the boiler until the front of the bars pass the front casting. Tilt the grate up on the right hand side, drop down the left hand side towards the back of the boiler and pass the grate through the opening in the front casting, taking care not to damage the enamel.

CLEANING

IMPORTANT: BE CAREFUL OF THE HOT APPLIANCE.

General cleaning must be carried out when the cooker is cool.

Stanley cookers are finished in a high gloss vitreous enamel. To keep the enamel in the best condition observe the following tips:

- 1. Wipe over daily with a soapy damp cloth, followed by a polish with a clean dry duster.
- 2. If milk, fruit juice or anything containing acid is spilt on the hob or down the cooker, be sure to wipe it immediately or the vitreous enamel may be permanently discoloured. Jam and preservatives containing sugar can permanently damage the vitreous enamel.
- 3. Keep a damp cloth to hand while cooking, to wipe up any spills as they occur, so they do not harden and become more difficult to remove later.
- 4. 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.
- 5. Use only products recommended by the Vitreous Enamel Association, these products carry the Vitramel label.



- 6. In the oven, spills and fat splashes are carbonised at high temperatures: occasionally brush out with a stiff brush. The shelves can be soaked and cleaned with a cream cleanser.
- 7. Both insulating covers should be raised and allowed to cool before cleaning the enamel with a soapy damp cloth. Use a wire brush to keep the cast iron hotplate clean.

DO NOT USE ABRASIVE PADS OR OVEN CLEANERS CONTAINING CITRIC ACID ON ENAMELLED SURFACES. ENSURE THAT THE CLEANSER MANUFACTURERS INSTRUCTIONS ARE ADHERED TO.

FAULT FINDINGS

1.	Poor Chimney Draught	(a) (b) (c) (d) (e)	Obstruction Too Low Too Wide Crack in Wall Shared by another unit	(a) (b) (c) (d) (e)	Clear and Clean Raise Height above Ridge Fit Flue Liner 15 to 23 c.m. Repair Cracks Cut of other Unit.
2.	Excessive Chimney Draught	(a)	High Chimney	(a)	Open Flue Cover of fit Draught Stabiliser
3.	Down Draught	(a) (b) (c)	High Trees High Buildings Negative Pressure Zone	(a) (b) (c)	Raise Chimney Height Raise Chimney Height Fit Cowl
4.	Cooker Smoking	(a) (b) (c) (d)	Insufficient Primary Air Chimney Choked Side Flueways Choked Down Draught	(a) (b) (c) (d)	Provide Room Air Inlet Clean Chimney Clean Flueways Raise Chimney Height
5.	Hot Plate Not Heating	(a) (b) (c)	Soot Under Hot Plate Fire too Low Utensils not Flat	(a) (b) (c)	Remove and Clean Build better Fire Use machined based Utensils
6.	Oven Not Heating	(a) (b) (c) (d)	Poor Chimney Draught Flueways blocked with soot Damper open to Chimney Faulty Thermostat	(a) (b) (c) (d)	Raise Height or Fit Cowl Clean Out Close Damper Check and replace if necessary
7.	Radiators Not Heating	(a) (b) (c) (d) (e)	Pump not Working Air in Radiators Pipe System Faulty Excessive Number of Radiators Radiator Valves not adjusted	(a) (b) (c) (d) (e)	Check and replace if defective Vent Radiators Check Pipe Sizes and Circuit Turn off un-needed Radiators Adjust Valves to give even flow
8.	Domestic Hot Water Cylinder not heating	(a) (b) (c) (d) (e)	Cylinder too Large Flow Pipe too small Flow Pipe crossed Cylinder too far away Hot water from boiler not reaching cylinder	(a) (b) (c) (d) (e)	Use 135 - 180 L Cylinder Use 25mm Bore Pipe Reverse Flow Pipe Not more than 7.8m fully lagged. Adjust Flow Control Valves or fit injector tee.
9.	Intermittent Performance	(a) (b) (c) (d) (e) (f)	Cooker starved of Primary Air Extraction Fan in room Cooker subjected to wind change Dirty Flueways Poor Fire Uncontrolled Burning	(a) (b) (c) (d) (e) (f)	Provided Air Inlet in Room. Provide additional Air Inlet in room Raise Chimney of Fit Cowl Clean Flueways Frequently. Burn more Fuel Repair or Replace Thermostat
10.	Domestic Hot Water Rusty	(a) (b)	Leak in Indirect Cylinder Coil Incorrect Cylinder Fitted	(a) (b)	Replace Cylinder Check with installer

It is of the utmost importance to keep the flue pipe and chimney clear of deposits by regular sweeping of the chimney irrespective of whether the fuel used is classed as smokeless or not. All fuels give rise to soot or ash deposits and regular cleaning is essential for safe operation.

Blocked or partially obstructed flueways and chimneys will cause dangerous fumes to be emitted into the room, these may well be invisible if a smokeless fuel is burned.

	INSTALLATION CHECK LIST	Tick √				
Flue System						
1.	Minimum Flue Height of 4.6 metros (15 feet).					
2.	Appliance should be connected to a minimum of 1.8 metres (6 feet) of 150mm (6") flue pipe with a horizontal run not exceeding 300mm (12").					
3.	Appliance should be connected to a chimney of less than 250mm (10") in diameter (otherwise the chimney must be lined with a 6" flue liner).					
4.	The chimney venting position must be above the main ridge of the roof or adjacent outside obstructions.					
5.	The chimney serving this appliance should not serve any other appliance.					
Lo	cation					
6.	Clearance to combustible materials must be maintained as specified in the Clearance to Combustibles section.					
7.	If the cooker is located on a combustible surface, a floor protector must be used to cover the area underneath the heater, extending 18" from the front of the cooker and 8" from the back & sides.					
Ρlι	umbing					
8.	Appliance must be connected to a gravity circuit using 1" ID flow & return piping.					
9.	The length of pipes from the cylinder to the cooker should not exceed 7.8 metres $(25^{1}/2 \text{ feet})$.					
10.	A circulation pump should be fitted to the return pipe and controlled by a pipe stat fitted to the flow pipe of the gravity circuit to the cylinder.					
Ventilation & Combustion Air Requirements						
11.	The room in which the appliance is located should have an air vent of adequate size to support correct combustion (see Ventilation & Combustion Air Requirement Section).					

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