



# Donard Wood Burning 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. When using the boiler cooker in situations where children, aged and/or infirm persons are present a fireguard must be used to prevent accidental contact with the cooker. The fireguard should be manufactured in accordance with BS 6539.

## ***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

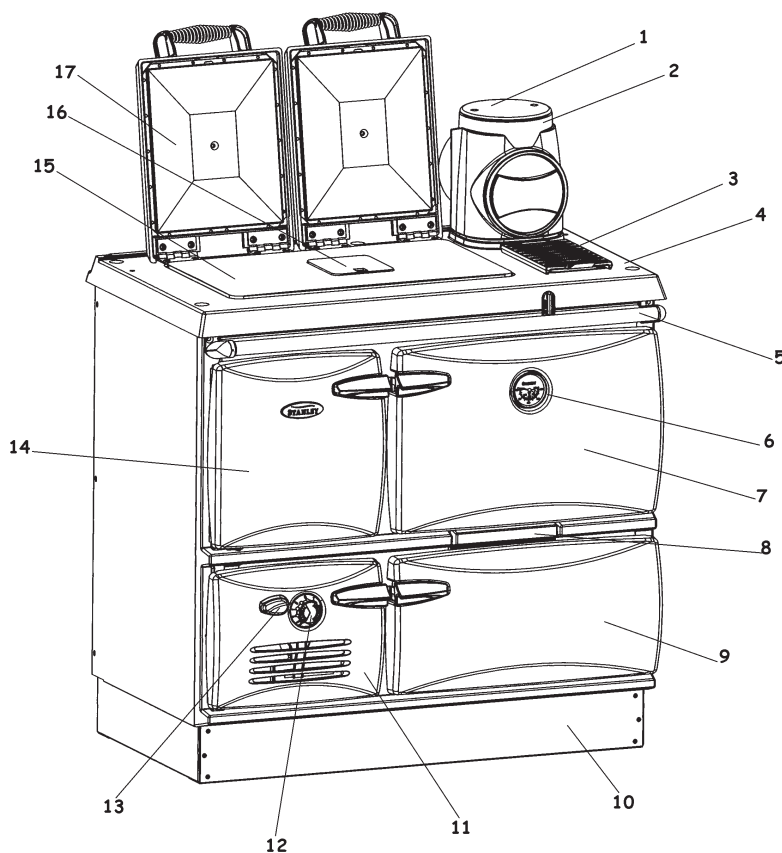
This Wood Burner cooker has been manufactured and supplied in compliance with the Health & Safety at Work Act 1974 section 6. We have taken every reasonable care that this product is designed and constructed to be safe and without risk to health when properly installed and used. This cooker is tested 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 It should be noted that the requirements and these publications may be superseded during the life of this manual.

### SCHEMATIC



1. Blanking Plate
2. 6" Flue Box
3. Trivet
4. Hob
5. Towel Rail
6. Oven Thermometer
7. Main Oven Door
8. Front Cleaning Door
9. Warming Oven Door
10. Base Frame
11. Ashpit Door
12. Boiler Thermostat
13. Riddling Cover
14. Fire Door
15. Hotplate
16. Cleaning Panel to Hotplate
17. Hotplate Covers

### 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, and ceramic fibre may be harmful if inhaled. They may also irritate the skin, eyes, 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.

### Handling

Adequate facilities must be available for loading, unloading and site handling.

### Fire Cement

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

### Asbestos

This cooker contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek specialist guidance and use appropriate protective equipment.

## Metal Parts

When installing or servicing this cooker care should be taken to avoid the possibility of personal injury.

## SUMMER OPERATION

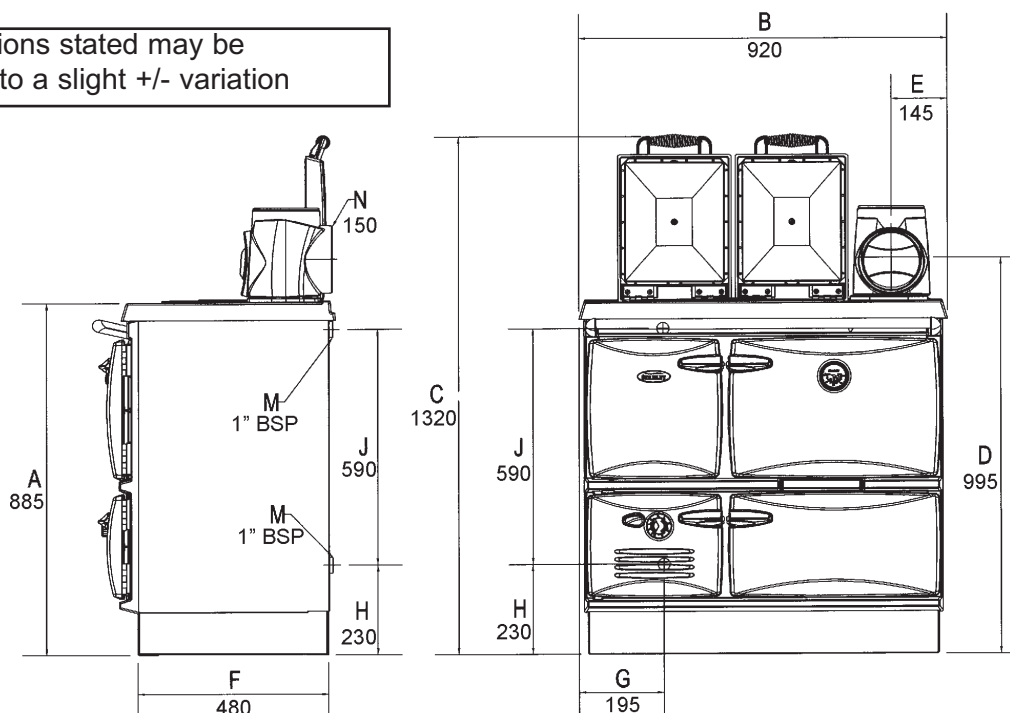
(i.e. when Central heating is not in use).

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 must be allowed for in your central heating circuit to ensure that the hot water within the circuit does not boil.

## SPECIFICATION

**Note:** Dimensions stated may be subject to a slight +/- variation



At Nominal Output			
Total Heat (kW)	14.1	Refuelling period (hrs)	1.4
Heat to Space (kW)	5.6	Max water pressure (bar)	1.75
Heat to Water (kW)	8.5	Boiler capacity (litres)	16
Mean Flue gas temperature downstream of spigot (°C)	288	Weight (kgs) Net:	360
		Weight (kgs) Gross:	400
Flue gas mass flow (g/s)	16.6		
Minimum flue draught (Pa)	15		
Minimum Clearances to combustibles	125mm back and sides		
Additional insulation must be provided in the area of the flue box and flue pipe	See text in Cooker Clearance page		

This appliance has been tested in accordance with BS EN 12815 to burn wood logs only and is suitable for continuous operation.

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

## INSTALLATION

Please note that it is a legal requirement under England and Wales Building Regulations that the installation of the cooker is either carried out under Local Authority Building Control approval or is installed by a Competent Person registered with a Government approved Competent Persons Scheme. HETAS Ltd operate such a Scheme and a listing of their Registered Competent Persons can be found on their website at [www.hetas.co.uk](http://www.hetas.co.uk). Special care must be taken when installing the cooker such that the requirements of the Health and Safety at Work Act are met.

### Installation must comply with the following:

Building Regulations - Part J.

It should be noted that the Building Regulations requirements may be met by adopting the relevant recommendations given in British Standards BS 8303, BS EN 15287-1 (Replacing BS 6461 which has been withdrawn) and EN 12391-1 (replacing BS 7566 which has been withdrawn) as an alternative means to achieve an equivalent level of performance to that obtained following the guidance given in Approved Document 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. If the stove is fitted in place of an open fire then the chimney should always be swept again, one month after installation, to clear any soot falls which may have occurred due to the difference in combustion between the stove and the open fire.
- (d) This cooker must not be installed into a chimney that serves any other heating appliance.
- (e) There must not be an extractor fan fitted in the same room as the cooker as this can cause the cooker to emit fumes into the room.
- (f) The cooker requires an adequate air supply in order for it to operate safely and efficiently. The installer may have fitted a permanent air supply vent into the room in which the cooker is

installed to provide combustion and/or ventilation air. This air vent should not under any circumstances be shut off or sealed.

## 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 7.5cm (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

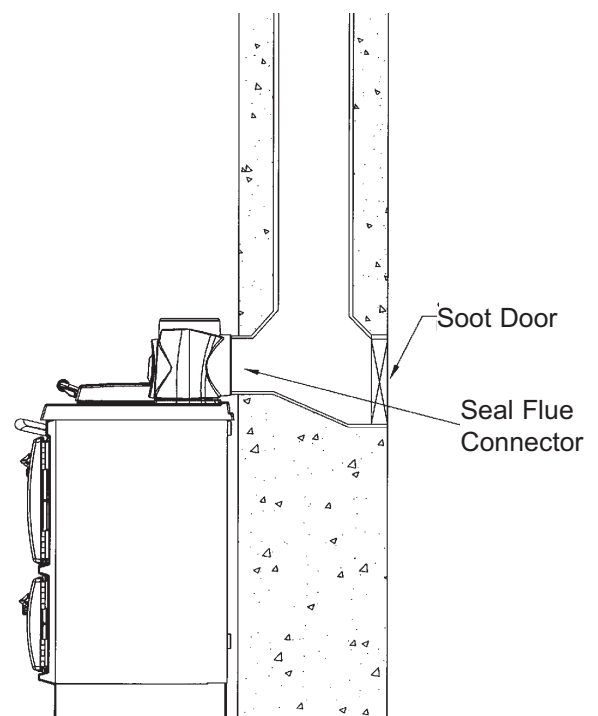
The chimney should have a cross sectional area of at least 176 sq. cm (28 sq. ins) or an inner diameter of 150mm to 200mm. (6" to 8"). (See Fig. 1 & 2).

Do not connect to a chimney serving another appliance. Always ensure that the connection is to a chimney of the same size or larger, 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.

Refer to Building Regulations Approved Document J for further information and regulations regarding flue sizing and positioning.

Fig.1



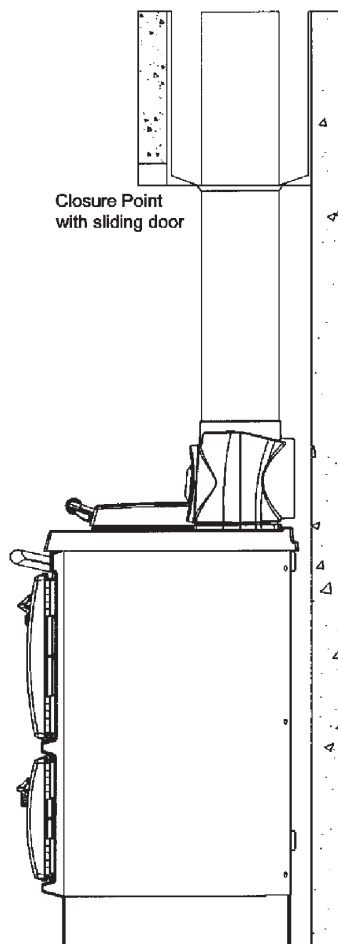


Fig.2

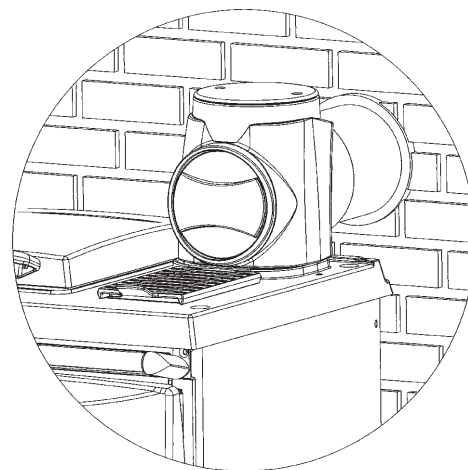


Fig.3

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.

## VENTILATION & COMBUSTION AIR REQUIREMENTS

It is imperative that there is sufficient air supply to the cooker in order to support correct combustion and a permanent air vent must be fitted.

The air supply to this appliance must comply with current UK and Irish Building Regulations.

The minimum effective air requirement for this appliance is 50.1 cm<sup>2</sup>. In Ireland this free air vent must be increased to 65.0 cm<sup>2</sup>. This is increased to 92.4cm<sup>2</sup> where a flue stabiliser is fitted for both countries. If another appliance is fitted in an adjacent room it will be necessary to calculate an additional air supply.

Air vents should be of the correct size, maintained and kept free of obstruction. An extractor fan must not be fitted in the same room as the appliance.

## 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).

Ensure any cement used does not obstruct the inside of the flueway. If the appliance is installed near combustible material then as well as adhering to minimum clearances additional non-combustible insulation must be fitted to the wall to protect the area around the flue and fluebox. The insulation must reach a minimum distance of 150mm either side of the flue/fluebox and follow the line of the flue. The minimum specification for this material is Superwool 607 LTI with a density of 320kg/m<sup>3</sup>, a thickness of 10mm and a self finish. There must be a minimum 16mm air gap between the insulation board and an adjacent combustible wall surface. A higher specification material maybe used but the air gap must be maintained.

## FLUE PIPES/CONNECTIONS

Square bends and long horizontal runs of flue piping must be avoided. Use two 45 degree bends in preference to one 90. The maximum horizontal run is 300mm (12"). Ensure there is adequate access to all parts of the flue for proper cleaning. 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 25 Pascals (.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 minimum draught of 15 Pascals (0.06 inches WG).

Excessive draught can be controlled by rotating the spin valve on the flue box in an anticlockwise direction.

## 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).

## COOKER CLEARANCE

The Cooker should not be installed at zero clearance to combustible materials. The sides should have a minimum clearance of 125mm from combustible materials unless otherwise fully insulated. If the cooker is installed near combustible materials then the requirements contained above in the Flue Box section must be followed.

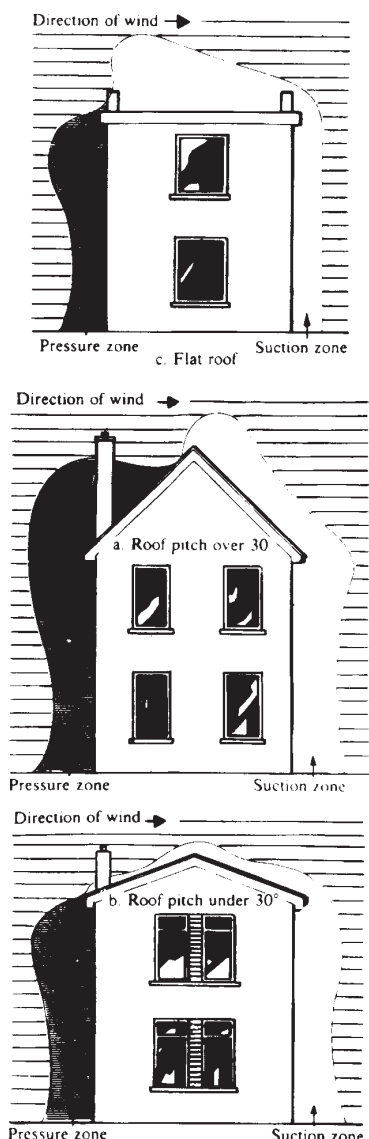
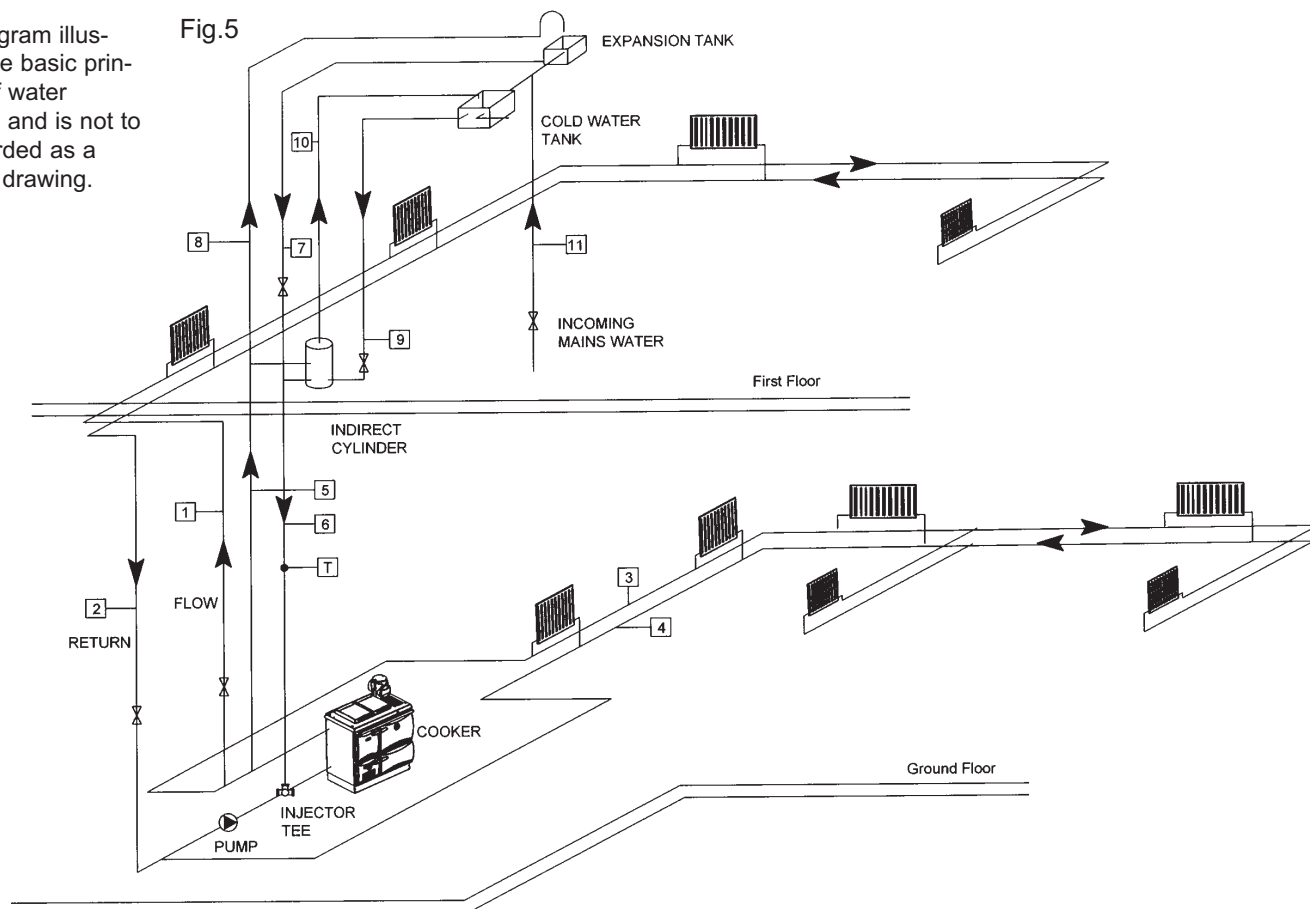


Fig. 4

## PLUMBING

		PIPE	FUNCTION	PIPE	FUNCTION
RADIATOR HEATING CIRCUITS	FIRST FLOOR	1	PUMPED FLOW TO RADIATORS	7	HOT WATER FLOW
		2	PUMPED RETURN EX	8	COLD WATER (EX TANK)
	GROUND FLOOR	3	PUMPED FLOW TO RADIATORS	9	COLD FEED-HEAT SYSTEM
4		PUMPED RETURN EX	10	OPEN VENT-HEAT SYSTEM	
CYLINDER HEATING CIRCUIT	GROUND FLOOR	5	GRAVITY FLOW TO CYLINDER	11	COLD FEED TO CYLINDER
		6	GRAVITY RETURN EX	12	HOT WATER VENT
	FIRST FLOOR			13	MAINS WATER
				T	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 28mm 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. This appliance is not suitable for a pressurised sealed system.

The installation of any electrical services during the installation of this boiler and the associated heating system must be carried out by registered competent electrician and in accordance with the requirements of the latest issue of BS 7671.

The central heating system must be in accordance with BS EN 14336:2004: Heating Systems in Buildings. Installation and commissioning of water based heating systems. BS EN 12828: 2003; Heating Systems in Buildings. Design of water based heating systems. BS EN 12831:2003; Heating Systems in Buildings. Method for calculation of the design heat load.



## 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 28mm 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.

The hot water cylinder must be in accordance with BS 1566 Copper Indirect Cylinders For Domestic Purposes, Part 1: Specification For Double Feed Indirect Cylinders.

## 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.

In some circumstances it may be possible to overheat the appliance and the water inside will boil. This will be evident by the sound of a knocking noise coming from the appliance and pipes around the house. If this occurs close off all air controls and manually start the central heating pump if fitted. One radiator on the heating circuit should be uncontrolled to act as a heat leak in the event that the appliance overheats and has nowhere to discharge a build up of hot water should the heating circuit be satisfied. Be aware that steam and boiling water will be expended from any open vent from the heating system probably in the roof space at the expansion tank.

In the unlikely event that the appliance is not operating in freezing conditions the water must be drained from the boiler to prevent frost damage.

## 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

Wood logs up to 38cm (15") long are suitable.

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

### FUEL CALORIFIC VALUE

Wood - Calorific Value 5.0 kW/KG = 8,600 BTUS/LB

## CIRCULATING PUMP

It is recommended that the selected pump be of a 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° - 14°C (18° - 35°F).

## 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.

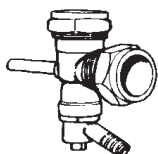


Fig. 6



Injector Tee Samples



Typical Logs

## COMMISSIONING & HANDOVER

On completion of the installation allow a suitable period of time for any fire cement and mortar to dry out, when a small fire may be lit and checked to ensure the smoke and fumes are taken from the cooker up the chimney and emitted safely to the atmosphere. Do not run at full output for at least 24 hours.

On completion of the installation and commissioning ensure that the operating instructions for the cooker are left with the customer. Ensure to advise the customer on the correct use of the appliance with the fuels likely to be used on the cooker and warn them to use only the recommended fuels for the cooker.

Advise the user what to do should smoke or fumes be emitted from the cooker. The customer should be warned to use a fireguard to BS 6539 in the presence of children, aged and/or infirm persons.

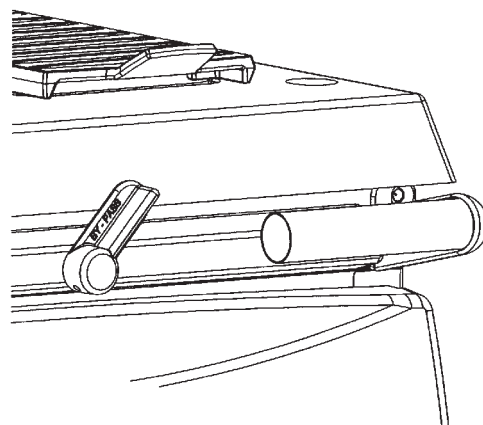
## OPERATION

### GENERAL USAGE ADVICE/WARNINGS

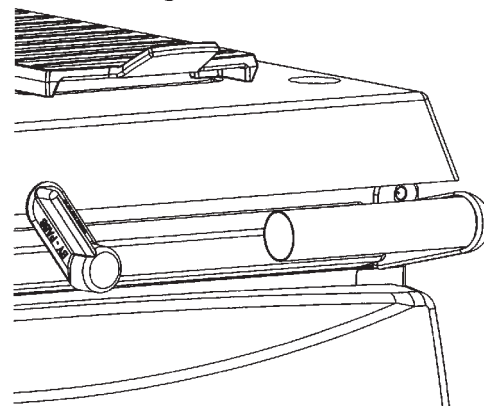
- \* Please warn children not to sit or stand on the cooker or to use the cooker as a 'step-stool' to gain access to high cupboards or shelves.
- \* Curtains near the cooker may be displaced by draughts and become a fire risk. Always ensure clearances to combustible materials are maintained for any curtains near the cooker.
- \* Always take care when heating containers and ensure that any sealed containers are firstly opened before heating.
- \* It is not advisable to use the cooker for deep-fat frying because of the fire risk.
- \* Do not use an aerosol spray near the cooker when it is alight because of the risk of explosion or flash-back.
- \* Always use the operating tools where necessary to avoid touching hot parts with bare hands.

**WARNING - DO NOT USE THIS APPLIANCE FOR DRYING FABRICS**

Fig.7



**Fully Open - priority to water heating**



**Fully Closed - priority to oven heating**

Fig. 8

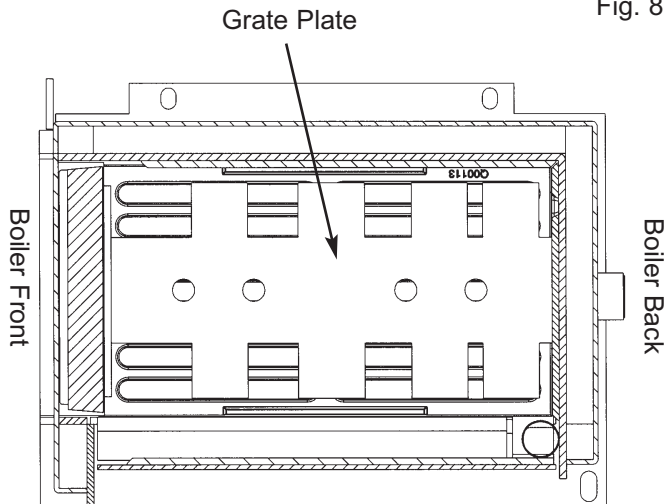
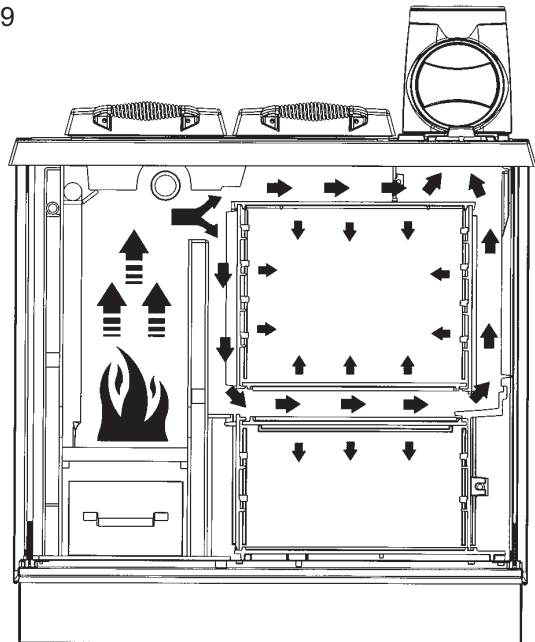


Fig.9



## 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.

When using the cooker in situations where children, aged and/or infirm persons are present a fireguard must be used to prevent accidental contact with the cooker. The fireguard should be manufactured in accordance with BS 6539.

Before lighting the appliance check with the installer that the installation work and commissioning checks described in the installation instructions have been carried out correctly and that the chimney has been swept clean, is sound and free from any obstructions. As part of the commissioning and handover procedure the installer should demonstrate how to operate the appliance correctly.

**WARNING - DO NOT LIGHT THE STOVE IF THERE IS A POSSIBILITY THAT ANY PART OF THE HEATING SYSTEM MAY BE FROZEN.**

## FUELLING

When fuelling open the bypass damper as this will help to eliminate smoking and shortly after refuelling the damper can be returned to the closed position. 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 30° angle towards the back of the firebox.

This appliance has obtained HETAS Ltd approval as a continuous operating appliance for burning natural wood logs only as the recommended fuel. HETAS Approval does not cover the use of other fuels either alone or mixed with the recommended fuel, nor does it cover instructions for the use of other fuels.

This appliance is fitted with a shaped flat plate to burn wood on. There are holes in the plate to allow ash to fall through into the ashpan below. When refuelling, de-ash the fire with a poker to make sure that the ash is falling freely and that clinker is not building up.

## CONDENSATION

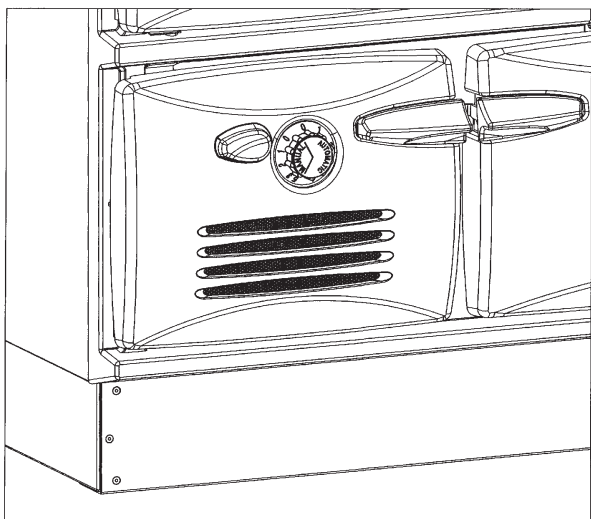
If the appliance is run for extended periods on a low fire, especially when burning wood or peat the fire can cool down to such an extent that vapour in the flue gases may condense. This will make the inside of the flue damp so that the soot sticks to the flue and the tarry mixture formed may drip down 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)

## ASH REMOVAL & DISPOSAL

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 on top of the grate and a plate is supplied for this purpose. It is not possible to riddle the grate and ash will have to be removed by poking.

Your cooker is provided with a steel ashpan. This ashpan should be emptied everyday. If ashes are allowed to build to grate level you could damage the firebars by overheating. We recommend that you remove ashes after you have riddled the fire following overnight burn. Ashes should be placed in a metal or non-combustible container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible material, pending final disposal. If ashes are buried in soil, or otherwise dumped they should be retained in the closed container until they are thoroughly cooled.

Fig.10



## 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.

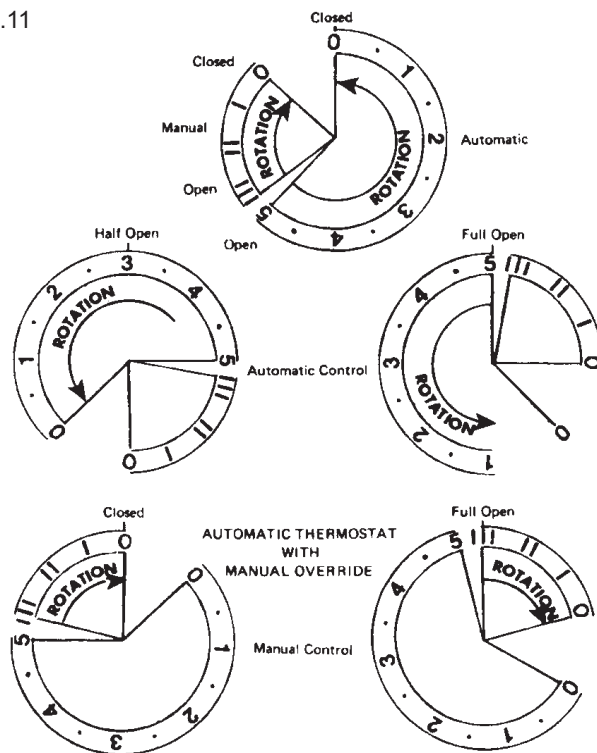
The automatic thermostat has 6 settings which control the heat to which the boiler water will rise for central heating purposes. Setting 0 will close the thermostat, setting 3 will give a nominal burning rate. Setting 5 will give maximum water heating and high oven temperatures.

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. 10 & 11)

The thermostat manual override has 4 settings which retain the air flap in a predetermined open position for steady heat when baking and cooking.

Fig.11



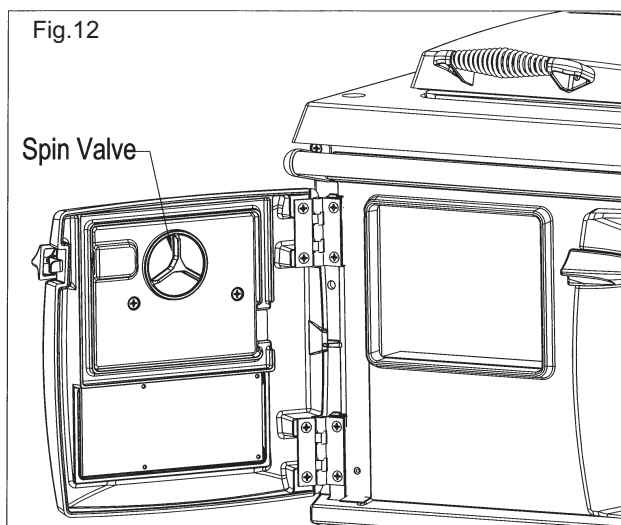
## OVERNIGHT BURNING

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 spin valve in the firedoor back plate while the valve is open to assist combustion of smoke volatiles. Normally 1-2 turns is sufficient. Close for overnight burning. (See Fig. 12)

Fig.12

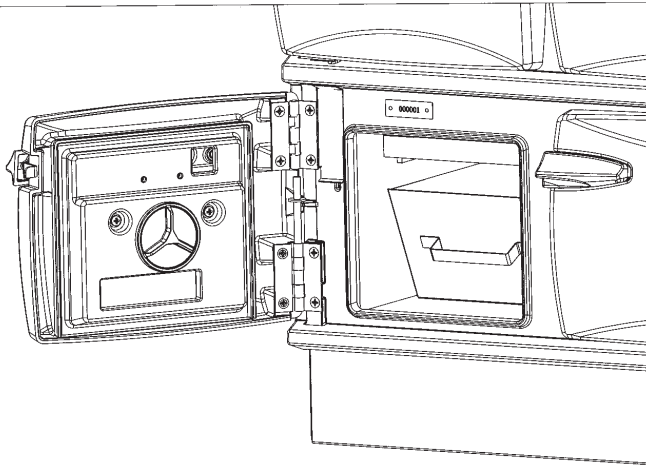


## ASHDOOR SPIN VALVE

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. Normally 1-2

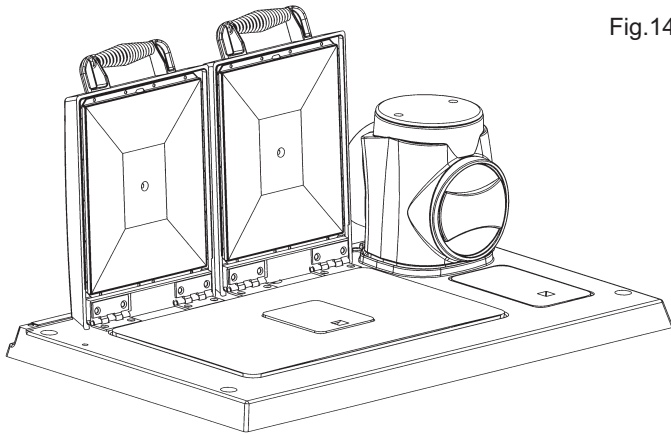
will be sufficient during the cooking period. This control will reduce the effectiveness of the thermostatic control and may overheat the boiler. This control should be used with care after gaining experience of the heating capability of the appliance. Remember to close this control after the cooking period. (See Fig.13)

Fig.13



### HOTPLATE INSULATING COVERS

Fig.14



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.14)

### 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, but may have to be supplemented by opening ashdoor and firedoor spin valves.

The main oven is heated on all four faces. 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.

### GRATE REMOVAL

Remove the cast iron boiler liners which hang on the boiler, and remove the steel wood burning grate. Lift the back of the cast iron grate and push it in towards the back of the boiler until the front edge is passed 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.

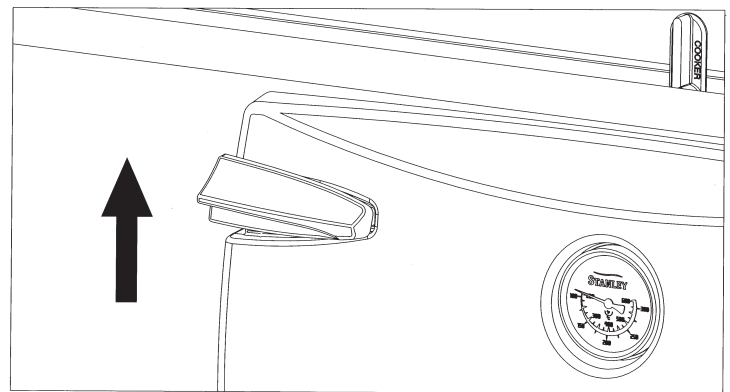
### FIREBRICK REMOVAL

The firebricks are made of cast iron and hang on the inside of the fire chamber. They are hung on supports and can be easily removed and replaced if required.

### OPENING COOKER DOOR

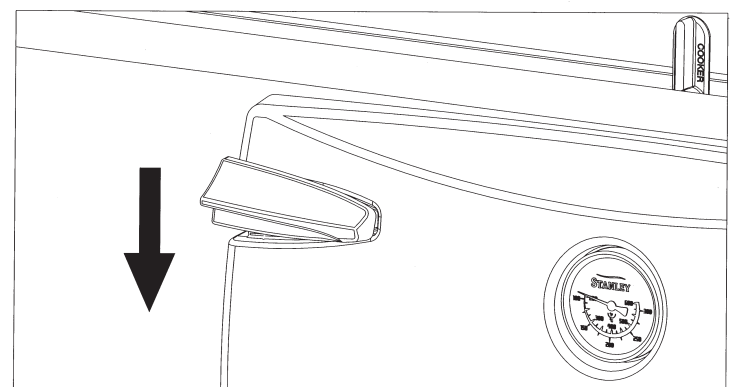
1. To Open Door Lift handle and pull door open. See Fig. 15.

Fig.15



2. To Close Door - Lift handle, push door closed, press down to engage latch and release. See Fig.16.

Fig.16



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## MAINTENANCE

### **WARNING: DO NOT CLEAN COOKER WHEN HOT.**

To ensure that the Waterford Stanley Woodburning Cooker will operate safely and with maximum efficiency, the entire installation must be properly maintained. During periods of use, the range, chimney connectors, joints and the main flue itself must be kept clean and in good working condition. You can clean the connectors manually. Use an approved chimney cleaner to clear creosote deposit and repeat as often as necessary. If you use only seasoned hardwoods, then only occasional chimney cleaning will be necessary. Using a chemical cleaner is not a substitute for sweeping.

### **EFFICIENT ECONOMICAL USE OF WOOD**

Wood combustion occurs in three stages. First the moisture is evaporated (converted to steam), then the volatiles are distilled and finally the fixed carbon (charcoal) is burned. All stages of combustion can occur at the same time, such as when fresh fuel is added to the glowing embers.

Moisture must be evaporated and dispersed before wood will burn. Consequently, wood should be cut and dried for a period of several months (preferably a year) before it is used. The moisture content of some trees may be as high as 100%, i.e. equal in volume to the wood itself. After dry storage over six to ten months the moisture content will usually range from 15% to 25%. Splitting the wood prior to storage reduces drying time and this results in more even burning. It minimises condensation of the water vapour and volatile distillates, that in turn creates creosote deposits in chimney flues.

It is apparent that greater efficiency and safety will ensue from burning moderate quantities of dry wood in a hot fire than using green or wet wood that only smoulders.

The Cooker ensures that air enters the fire chamber over the fire. This assures complete combustion which in turn minimises heat losses up the flue and reduces the amount of unburned gasses and distillates to the flue. If you have no alternative but to use softwood, like elder, spruce or pine, or when green wood has to be used, then the result will be low heat and the formation of much creosote. In these conditions the fire must receive plenty of draught which will help to prevent creosote forming.

Cut your wood to size: 380mm (15") logs, which will fit the Cooker fire chamber. The longer the logs the better and more enduring the fire will be.

Hardwoods are best for heat. These include: Beech, Cherry, Ash, Oak, Hickory, Hard (Sugar) Maple, Birch, Larch (Tamarack) and Elm. Elm is hard to split but is fine for a slow burning fire, and like all other woods, it is all the better for seasoning. Your hardwood ashes will benefit the garden; they contain valuable minerals including carbon, potash, phosphorus, copper, manganese etc.

### **CREOSOTE- Formation and Need for Removal**

When wood is burned slowly, it produces tar and other organic vapours, which combine with expelled moisture to form creosote. The creosote vapours condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire. If creosote has accumulated it should be removed by sweeping to reduce the risk of a chimney fire.

### **CHIMNEY FIRES**

Failing to maintain your cooker properly can lead to a chimney fire. Chimney fires occur when combustible deposits on the inner walls of the chimney ignite. These combustible deposits, called "creosote" are a natural by-product of woodburning. A fire hazard exists if 1/4" of creosote (or more) coats the inner walls of the chimney.

#### **Prevention:**

Chimney fires do not occur in clean, intact, properly installed chimneys. Have a professional chimney sweep clean and inspect your appliance at least once a year. More frequent cleanings may be required, based on the type of fuel burned, the type of appliance, and the frequency of use. In general, an older appliance or one that is used frequently will require more than one cleaning per year.

#### **Detection:**

The first indication of a chimney fire is usually the noise, a roaring sound that grows louder as the fire's intensity increases. Clouds of black smoke and sparks will be seen exiting the top of the chimney, in severe fires, flames can extend several feet above the chimney.

#### **Action:**

In case of a chimney fire follow these steps but do not put yourself or others in peril:

1. Call the fire brigade immediately.
2. Get everyone out of the property.

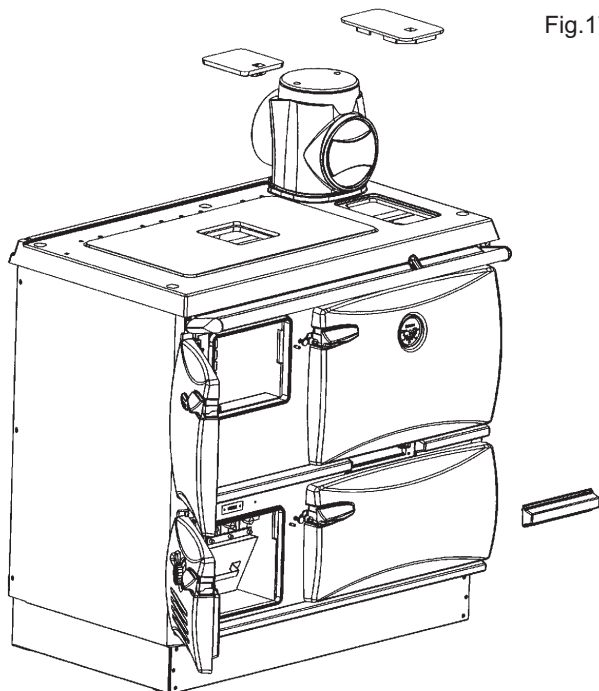
3. Close down the air supply to the appliance i.e. the primary air spinner and the flue damper. Limiting the fire's air supply will reduce its intensity. If there is a damper in the chimney connector, plug or close the opening.
4. If a fire extinguisher is available open the appliance door just enough to insert the nozzle of a 10 lb dry chemical fire extinguisher rated for Class ABC fires. Discharge the entire content of the extinguisher into the appliance and shut the door.
5. If possible, wet down the roof and other outside combustibles to prevent fires ignited by shooting sparks and flames.
6. Closely monitor all combustible surfaces near the chimney. During severe chimney fires, these surfaces can become hot enough to ignite.

After a chimney fire, have the chimney inspected by a professional chimney sweep or cooker installer.

**IMPORTANT:** Only use replacement parts that are authorised by the manufacturer of this appliance and fitted by a recognised engineer. Do not make modifications that are not authorised by the manufacturer as this may affect the safety or running of the appliance.

### INTERNAL/FLUE CLEANING

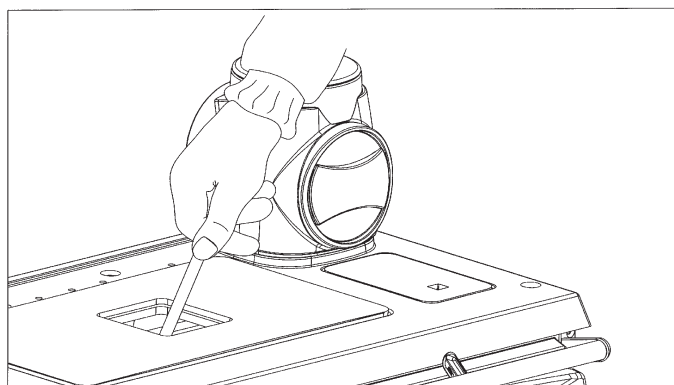
The bonnet and chimney should be inspected at least twice monthly during the heating season to determine if a creosote build-up has occurred. If creosote has accumulated it should be removed to reduce the risk of a chimney fire.



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 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 fire-box, 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.

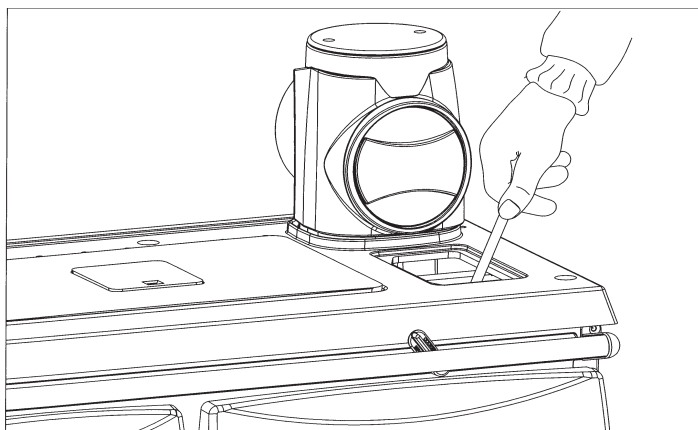
Fig.18



Every week, it will be necessary to take off the cleaning access plates to remove deposits. The procedure is as follows: Allow cooker to cool down 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, 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).

Fig.19



### WARNING NOTE:

Properly installed, operated and maintained this cooker will not emit fumes into the dwelling. Occasional fumes from de-ashing and re-fuelling may occur. However, persistent fume emission is potentially dangerous and must not be tolerated. If fume emission does persist, then the following immediate action should be taken -

- (a) Open doors and windows to ventilate room
- (b) Let the fire out or eject and safely dispose of fuel from the cooker
- (c) Check for flue or chimney blockage and clean if required
- (d) Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.

The most common cause of fume emission is flue-way or chimney blockage. For your own safety these must be kept clean at all times

### SPARE PARTS

Spare and replacement parts can be obtained from your Waterford Stanley dealer or direct from the manufacturer. Always use a qualified service/heating engineer when servicing is required. Use only replacement parts. Do not make unauthorised modifications.

### CO AWARENESS

Any solid fuel appliance emits carbon monoxide which is an odourless gas. Usually this will pass safely up the flue. If the flue is not maintained properly or in certain unusual conditions, this gas can be spilled into the room. In a well ventilated room this is not a problem but we advise fitting a CO monitoring

device which will warn householders of the presence of high levels of Carbon Monoxide and will allow corrective action to be taken in good time. These items can be purchased locally and are about the size and cost of a smoke alarm.

People affected by CO poisoning may have one or any of the following symptoms:-

Headaches, Nausea (sickness), Drowsiness or 'Flu like' symptoms. The elderly and young are particularly at risk and may show the effects first.

Preventative action should include :-

- \* Regularly checking the appliance and flue for blockage,
- \* Having the appliance regularly serviced by a competent person,
- \* Making sure vents and grilles are not blocked or obstructed
- \* Fitting a CO alarm.

### PERIODS OF PROLONGED NON-USE

If the cooker is to be left unused for a prolonged period of time then it should be given a thorough clean to remove ash and unburned fuel residues. To enable a good flow of air through the appliance to reduce condensation and subsequent damage, leave the air controls fully open.

### 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.



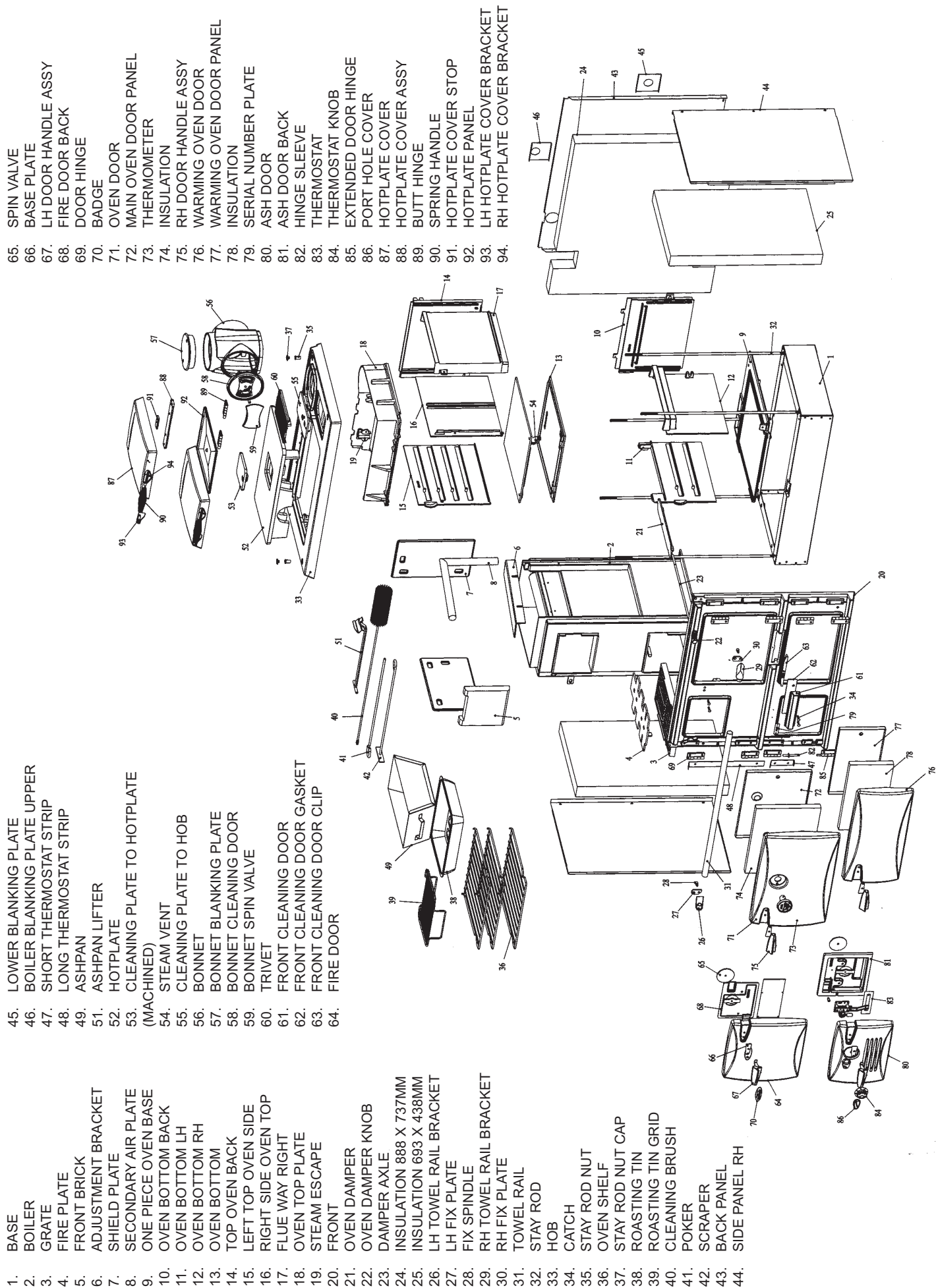
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- If spills do become baked on, a cream cleanser can be used. For stubborn deposits a soap impregnated pad can be carefully used on the vitreous enamel.
  - Use only products recommended by the Vitreous Enamel Association, these products carry the Vitramel label.



- 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.
- 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.**

# EXPLODED VIEW



## FAULT FINDINGS

1. Poor Chimney Draught	(a) Obstruction (b) Too Low (c) Too Wide (d) Crack in Wall (e) Shared by another unit	(a) Clear and Clean (b) Raise Height above Ridge (c) Fit Flue Liner 15 to 23 c.m. (d) Repair Cracks (e) Cut of other Unit.
2. Excessive Chimney Draught	(a) High Chimney	(a) Open Flue Cover of fit Draught Stabiliser
3. Down Draught	(a) High Trees (b) High Buildings (c) Negative Pressure Zone	(a) Raise Chimney Height (b) Raise Chimney Height (c) Fit Cowl
4. Cooker Smoking	(a) Insufficient Primary Air (b) Chimney Choked (c) Side Flueways Choked (d) Down Draught	(a) Provide Room Air Inlet (b) Clean Chimney (c) Clean Flueways (d) Raise Chimney Height
5. Hot Plate Not Heating	(a) Soot Under Hot Plate (b) Fire too Low (c) Utensils not Flat	(a) Remove and Clean (b) Build better Fire (c) Use machined based Utensils
6. Oven Not Heating	(a) Poor Chimney Draught (b) Flueways blocked with soot (c) Damper open to Chimney (d) Faulty Thermostat	(a) Raise Height or Fit Cowl (b) Clean Out (c) Close Damper (d) Check and replace if necessary
7. Radiators Not Heating	(a) Pump not Working (b) Air in Radiators (c) Pipe System Faulty (d) Excessive Number of Radiators (e) Radiator Valves not adjusted	(a) Check and replace if defective (b) Vent Radiators (c) Check Pipe Sizes and Circuit (d) Turn off un-needed Radiators (e) Adjust Valves to give even flow
8. Domestic Hot Water Cylinder not heating	(a) Cylinder too Large (b) Flow Pipe too small (c) Flow Pipe crossed (d) Cylinder too far away (e) Hot water from boiler not reaching cylinder	(a) Use 135 - 180 L Cylinder (b) Use 25mm Bore Pipe (c) Reverse Flow Pipe (d) Not more than 7.8m fully lagged. (e) Adjust Flow Control Valves or fit injector tee.
9. Intermittent Performance	(a) Cooker starved of Primary Air (b) Extraction Fan in room (c) Cooker subjected to wind change (d) Dirty Flueways (e) Poor Fire (f) Uncontrolled Burning	(a) Provided Air Inlet in Room. (b) Provide additional Air Inlet in room (c) Raise Chimney of Fit Cowl (d) Clean Flueways Frequently. (e) Burn more Fuel (f) Repair or Replace Thermostat
10. Domestic Hot Water Rusty	(a) Leak in Indirect Cylinder Coil (b) Incorrect Cylinder Fitted	(a) Replace Cylinder (b) 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 metres (15 feet).
2. Appliance must be connected to a 150mm (6") flue pipe with a horizontal run not exceeding 300mm (12").
3. Appliance should be connected to a chimney of less than 200mm (8") 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.

### *Location*

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.

### *Plumbing*

8. Appliance must be connected to a gravity circuit using 28mm ID flow & return piping.
9. The length of pipes from the cylinder to the cooker should not exceed 7.8 metres (25<sup>1</sup>/<sub>2</sub> feet).
10. A circulation pump should be fitted to the return pipe and controlled by a pipe stat fitted to the return 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).

## WARRANTY

### CONDITIONS OF WARRANTY

Your Stanley cooker is guaranteed against any part that fails (under normal operating conditions) from the date of installation of the appliance. If the unit is not installed within six months of date of purchase, the warranty will commence six months from the date of purchase. The warranty is given only to the original consumer/purchaser only and is non-transferable. The appliance must be installed by a suitable qualified person and installed as per the requirements of this manual. Failure to comply with the installation requirements will void your warranty. Waterford Stanley reserve the right to replace any part due to manufacturing defect that fails within the warranty period under the terms of the warranty. All Oil & Gas appliances must be commissioned by an authorised Stanley Engineer to validate your warranty. The unit must be used for normal domestic purposes only and in accordance with manufacturer's operation instructions.

### LIMITS OF LIABILITY

*The warranty does not cover:*

- \* Special, incidental or consequential damages, injury to persons or Property, or any other consequential loss.
- \* Any issue with caused by negligence, misuse, abuse or circumstances beyond Waterford Stanley's control.
- \* Any issue with wear and tear, modification, alteration, or servicing by anyone other than an authorised service engineer.
- \* Installation and operational related problems such as draught related issues external to the cooker, inadequate venting or ventilation, excessive flue offsets, negative air pressure caused by insufficient burning of improper fuel.
- \* Damage caused to the unit while in transit.
- \* Enamel discolouration due to over firing, enamel damage caused by impact, damage to baffles caused by over firing and fading of surface finish on casting.
- \* Stress fractures on bricks.
- \* Rust on cast iron parts unless reported prior to unit being installed.

**Note:** Adequate clearance must be maintained around the appliance to ensure the ease of part removal in the possible event of their damage/failure. Waterford Stanley are not responsible for any costs incurred in the removal of items installed in the vicinity of the appliance that have to be moved to facilitate a part replacement.

All warranty claims must be reported to the Waterford Stanley Service Department and must be submitted with the product serial number (located on the front casting), date of purchase, proof of purchase (if requested) and details of the specific nature of the problem.

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## NOTES

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## NOTES

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**Manufactured by**  
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