Errigal Solid Fuel 47K Cooker
Boiler & Non Boiler

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 It should be noted that the requirements and these publications may be superseded during the life of this manual.

When using the boiler stove in situations where children, aged and/or infirm persons are present a fire-guard must be used to prevent accidental contact with the stove. The fireguard should be manufactured in accordance with BS 8423: 2002.

ASSEMBLY, INSTALLATION & OPERATING INSTRUCTIONS

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INTRODUCTION

Congratulations on purchasing this fine Irish made Solid Fuel cooker which is built to exacting standards.

Please read the following information before operating this product.

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.

As manufacturers and suppliers of cooking and heating appliances, we take every possible care to ensure as reasonably practicable, that these appliances are so designed and constructed as to meet the general safety requirement when properly used and installed.

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 It should be noted that the requirements and these publications may be superseded during the life of this manual.

SAFETY NOTICE

PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL AND USE YOUR NEW COOK STOVE. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY OR EVEN DEATH. SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

IF THIS APPLIANCE IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

THIS APPLIANCE MUST BE CONNECTED TO A LISTED, HIGH-TEMPERATURE RESIDENTIAL TYPE AND BUILDING HEATING APPLIANCE CHIMNEY OR AN APPROVED MASONRY CHIMNEY WITH FLUE LINER.

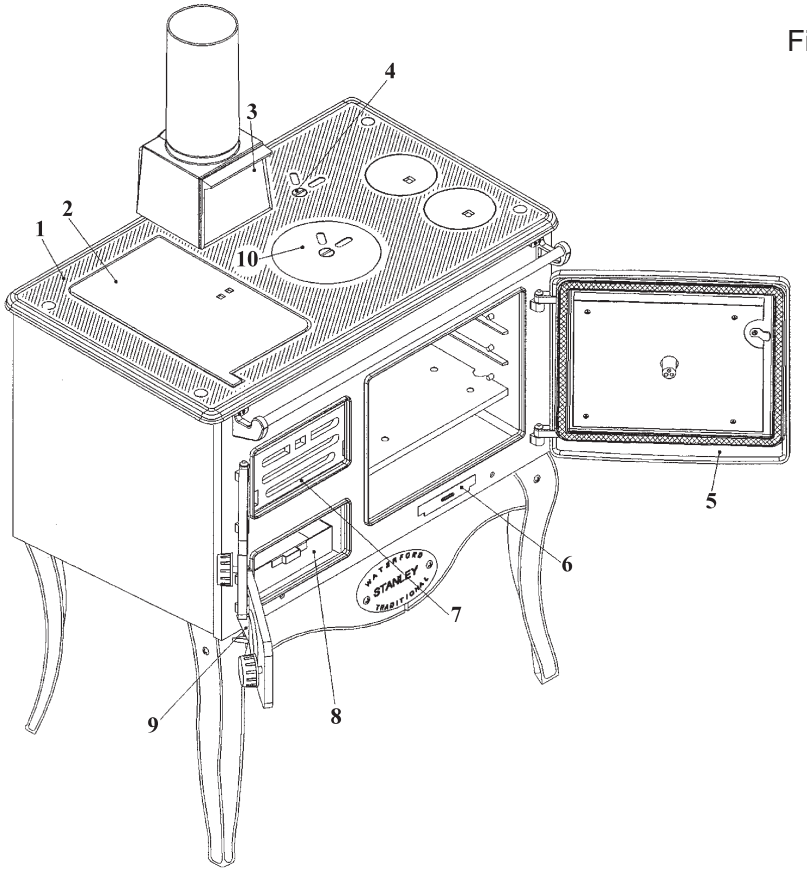


Fig.1

1. Hob
2. Hotplate
3. Bonnet Door
4. Direct Damper
5. Oven Door
6. Base Cleaning Door
7. Fire Fence
8. Ash Pan
9. Spin Valve
10. Oven Damper

guaranteed irish

IMPORTANT NOTICE: Any alteration to this appliance that is not approved in writing by Waterford Stanley will render the guarantee void.

CONTROL OF SUBSTANCES

It is the Users/Installers responsibility to ensure that the necessary personal protective clothing is worn when handling materials that could be interpreted as being injurious to health and safety. When handling Firebricks, Fire Cement or Fuels, use disposable gloves. Exercise caution and use disposable masks and gloves when handling glues and sealants. When working with fibre glass, mineral wool, insulation materials, ceramic blanket/board or kerosene fuel oil, avoid inhalation as it may be harmful. Avoid contact with skin, eyes, nose and throat. Use disposable protection. Installation should be carried out in a well ventilated area.

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

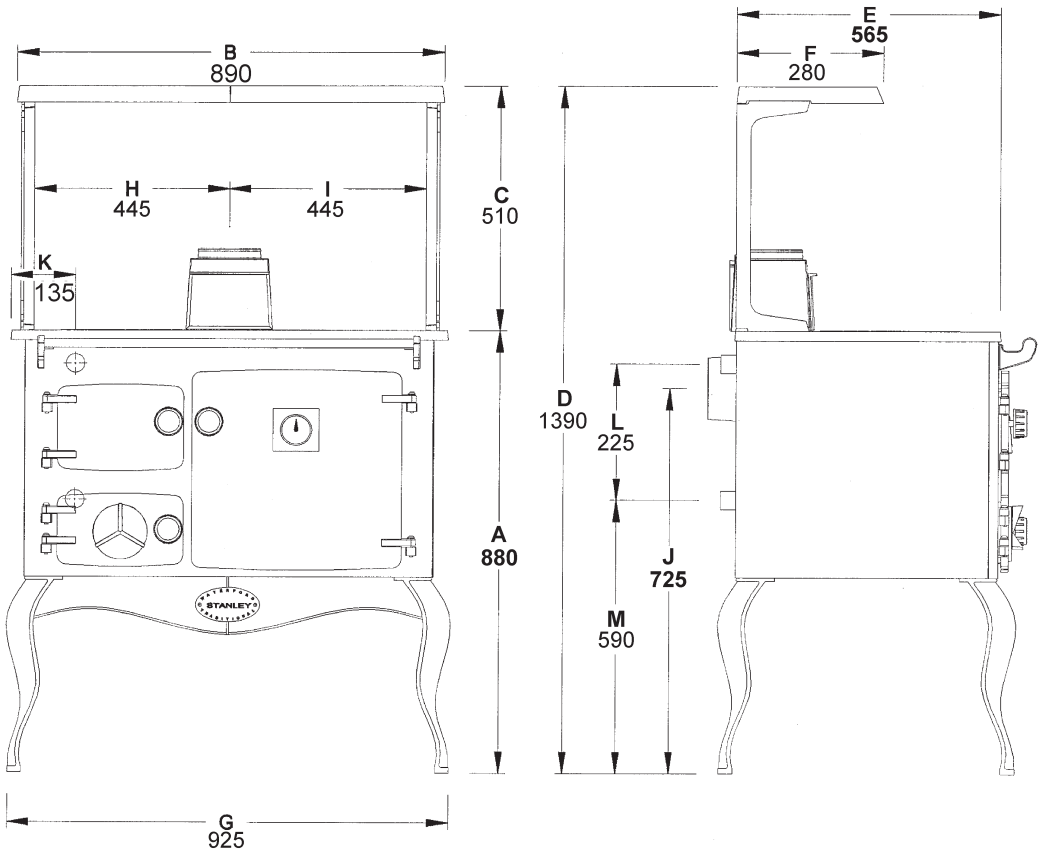
This cooker contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek specialist guidance and use appropriate protective equipment.

Metal Parts

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

SPECIFICATION

Fig.2



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

FEATURE	METRIC
HOT PLATE	911.25 cm^2
OVEN	400W x 330H x 400D

TECHNICAL DATA

CHIMNEY DRAUGHT:	15 pa.
FLUE DIAMETER:	5” (127mm)
BOILER TAPPINGS:	1” BSP (28mm)
TEST PRESSURE OF BOILER (Where applicable):	40 PSI (2.75 Bar)
COOKER WEIGHT:	263 Kgs (579 lbs)
SPACE HEATING:	5 kW’s (17, 000) Btu’s

47K

Nominal Outputs - Manufactured smokeless fuels kW:

Typical refuelling intervals to obtain nominal outputs	2 hours 4 kgs
Nominal heat output to space 4.5kW	Nominal heat output to water 7.5 kW
Flue gas mass flow	9.0 g/s
Flue gas temp at nominal output	293 ºC
Gross Weight 263 kgs	Boiler Capacity 7.5 Litres
Flue outlet 127 mm	
This appliance has been tested in accordance with BS EN 13240	Flue draught 15 Pascals

High output cannot be maintained unless fuel is being burned at the above rates. The output for wood will be lower owing to the lower calorific value of the fuel.

Nominal Outputs - Wood Fuel kW:

Typical refuelling intervals to obtain nominal outputs	1 hours 4 kgs
Nominal heat output to space 5.7 kW	Nominal heat output to water 5.4 kW
Flue gas mass flow	10.4 g/s
Flue gas temp at nominal output	279 ºC
Gross Weight 263 kgs	Boiler Capacity 7.5 Litres
Flue outlet 127 mm	
This appliance has been tested in accordance with BS EN 13240	Flue draught 15 Pascals

All technical data are taken under laboratory conditions and may vary in use, flue draught conditions will effect performance

INSTALLATION

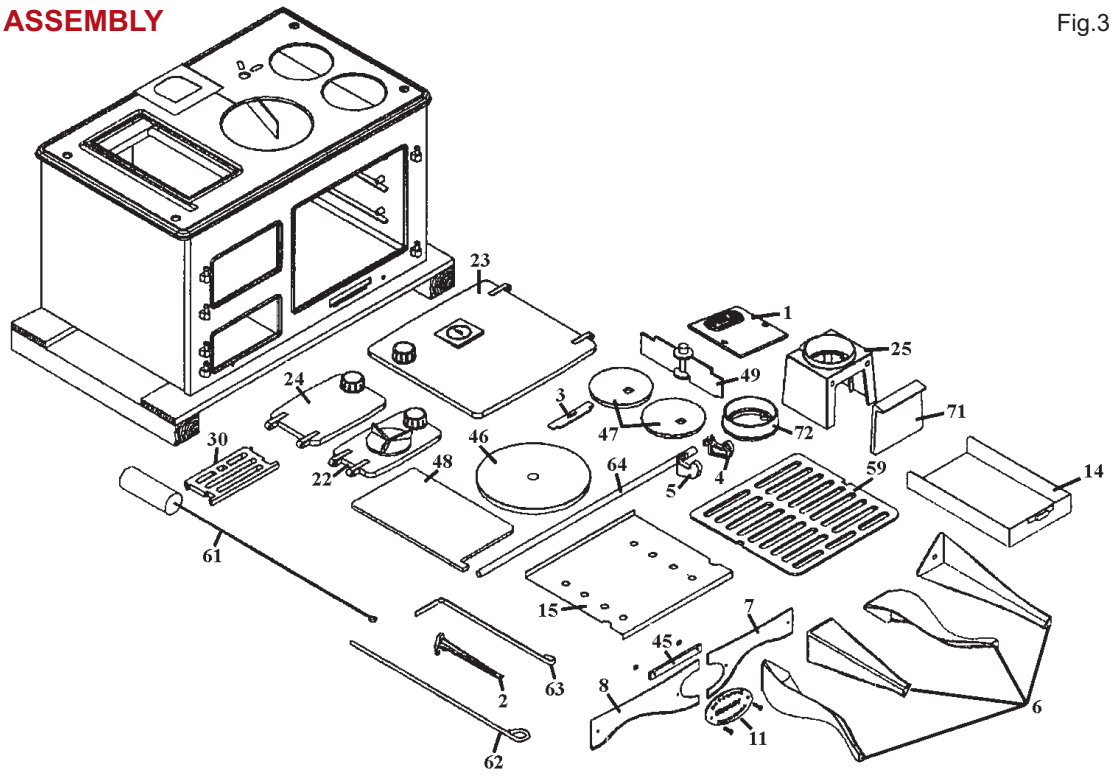
When installing, operating and maintaining a solid fuel heater, respect basic standards of fire safety. Read these instructions carefully before commencing the installation. Failure to do so may result in damage to persons and property. Consult your local municipal office, Fire Department and your insurance representative to determine what regulations are in force.

Any permanent electrical installations made during the installation of the heating system must be done by a registered competent electrician and in accordance with the current issue of BS 7671.

1. Hob Sealing Plate
2. Riddling/Operating Tool
3. Base Cleaning Door
4. Towel Rail Bracket LH
5. Towel Rail Bracket RH
6. Leg (4)
7. Plinth (RHS)
8. Plinth (LHS)
11. Nameplate
14. Ashpan
15. Oven Shelf (Sheet Iron)
22. Ashpit Door
23. Oven Door
24. Fire Door
25. Bonnet
30. Fire Fence
45. Plinth Joining Clip
46. Simmering Plate
47. Cleaning Cups (2)
48. Hotplate
49. Oven Damper
59. Oven Shelf (Cast Iron)
61. Cleaning Brush
62. Poker
63. Scraper
64. Towel Rail
71. Bonnet Door
72. Bonnet Ring

ASSEMBLY

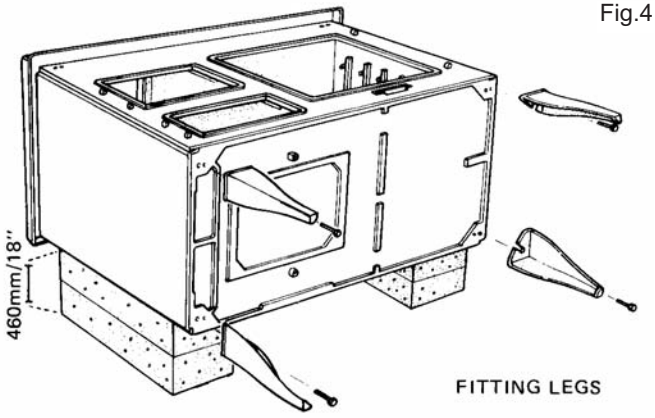
Fig.3



PRE-INSTALLATION ASSEMBLY

1. Remove packing strip from the top of the range. Place the sheet steel back plate to one side. Remove all loose components from the top of the range and firebox and the oven. Remove the oven door. Spread the components on the floor so you can identify them easily.

Fig.4



2. Place strong supports about 458mm (18") high behind the range. Space the supports behind it and lay the cooker on its back. (See Fig.4)

3. Fit the four legs (Part no. 6) to the four base corners (Part no. 52) using the hexagon-head bolts and washers. Note that each of the front legs has a screw hole in the front.

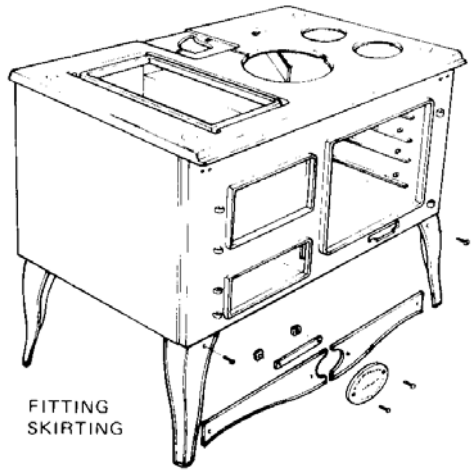
4. Lift the range off the supports. Stand it upright without putting any strain on the legs.

5. Join the two sections of the front plinth together (Part No. 7 and 8) by screwing the name plate (Part No. 11) and the plinth joining clip (Part No. 45) into position between the two sections and secure the two sections tightly to the name plate.

6. Fit the complete plinth under the front of the range inside the front legs using a screw and nut to secure it to each leg. (See Fig.5)

7. Move the range into position for installation. CAREFUL: Do not break a leg! Consult the Chimney & Location Sections before finalising the position for the range.

Fig.5



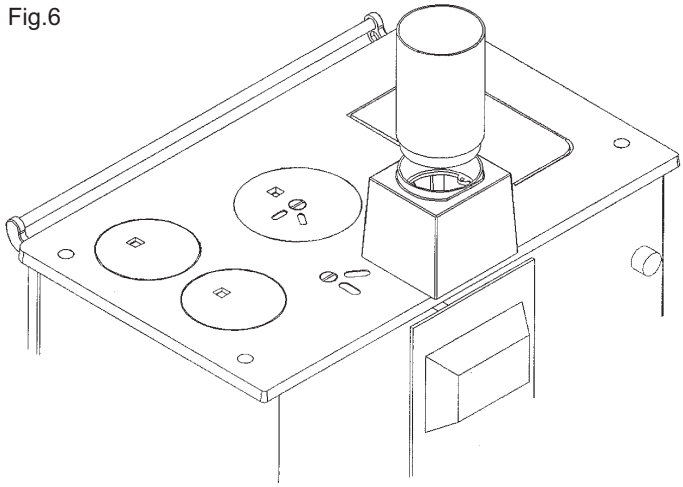
8. Place the oven damper in position (Part No.49) on top of the oven and place the simmering plate (Part No.46) in position above it. Place the oblong hotplate (Part No.48) and the two round cleaning cups (Part No.47) in position to complete the cooker top.
9. Place the bonnet (Part No.25) in position and fit its front cleaning door (Part no.71) in position.
10. Screw the towel rail brackets (Part Nos.4 and 5) to the top front of the range (Part No.10) and fix the towel-rail (Part No.64) in position between the brackets. Tighten up the screws.
11. Hang the fire door (Part No.24) and the ashpit door (Part No.22) on their hinges.
12. Place the oven shelves in position (Part No.15 & 59) the cast iron shelf below the sheet steel shelf.
13. Place the base cleaning door (Part No.3) in position beneath the oven door (Part No.23).
14. Screw the optional splashback (A) to its two supports (B) keeping the folded end to the bottom. Screw the platerack (C) to the splashback. Screw the complete assembly on to the cooker hob (Part No.9). (See Fig.8)

Note: The Platerack and splashback are an optional extra, not supplied as standard.

TOP FLUE EXIT

With the bonnet (Part No 25) in position on the hob, connect the bonnet ring (Part No 72) onto the top of the bonnet. The flue pipe is then connected to the bonnet ring as shown in Fig.6. Seal all joints using approved fire cement, ensuring that no cement blocks the flue passageway.

Fig.6



REAR FLUE EXIT

Replace the bonnet (Part No.25) with the hob sealing plate (Part No.1), using approved fire cement to seal the hob sealing plate to the hob. Remove the back sealing plate (Part No.37) and fit the rear outlet spigot (Part No.29) to the flue back (Part No.36). Connect the flue pipe to the rear flue spigot (see Fig 7). Seal all joints with fire cement ensuring that no cement blocks the flue passageways.

Fig.7

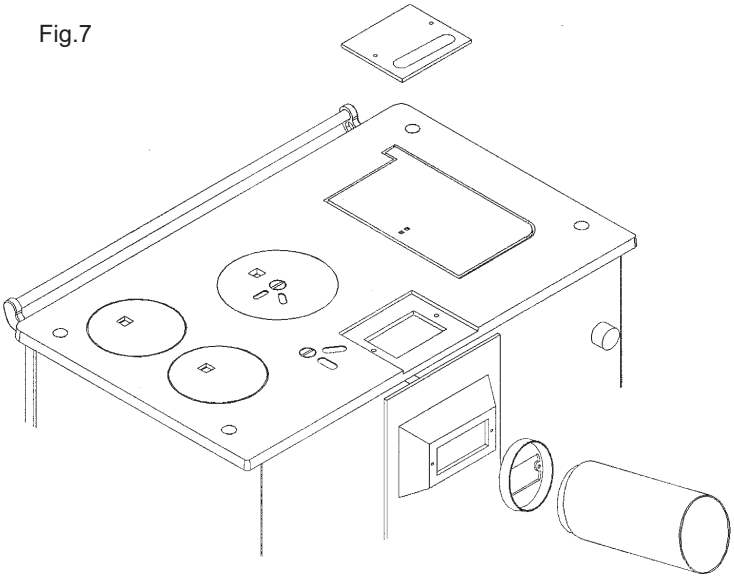
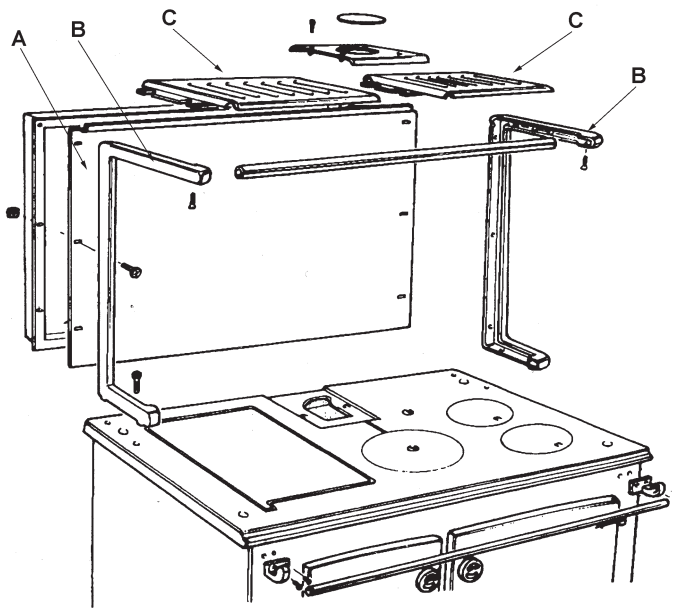


Fig.8



FLUES

The flue pipe must be fitted with a cleaning access. The flue and chimney must be inspected at least twice annually and cleaned when necessary. During periods of non-use, the flueway through the appliance should be ventilated. By leaving the spinwheel or ashdoor open, this will prevent the build up of condensation.

The position of all flues and chimneys must comply with Building Regulations.

FLUE PIPES

A flue pipe should only be used to connect an appliance to a chimney and should not pass through any roof space.
Flue pipes may be of any of the following materials:

(a) Cast iron as described in BS 41:1973 (1981)
(b) Mild steel with a wall thickness of at least 3mm.
(c) Stainless steel with a wall thickness of at least 1mm and as described in BS EN 10095:1999 specification for stainless and heat resisting steel plate, sheet and strip, for grade 316 S11, 316 S13, 316 S16, 316 S31, 316 S33, or the equivalent Euronorm 88-77 designation.
(d) Vitreous enamelled steel complying with BS 6999: 1989.

FLUE CLEANING

The flue pipe must be fitted with a cleaning access. the flue and chimney must be inspected at least twice annually and cleaned when necessary. During periods of non-use, the flueway through the appliance should be ventilated. By leaving the spinwheel or ashdoor open, this will prevent the build up of condensation.

CHIMNEY

The Waterford Stanley Solid Fuel Range must be connected to a Factory-Built Chimney, installed in accordance with the manufacturer's instructions or a lined masonry chimney, acceptable to the authority having jurisdiction. An existing masonry chimney should be inspected and if necessary repaired by a competent mason or be relined using an approved relining system.

THE CHIMNEY SERVING THIS WATERFORD STANLEY SOLID FUEL RANGE SHOULD NOT SERVE ANY OTHER APPLIANCES. If you intend to use a fireplace chimney, the fireplace opening must be sealed. The overall height of the chimney, measured from the floor on which the Range is installed must be at least 4.572 meters (15ft).

Do not use more than two elbows.

Chimneys for use with solid fuel appliances should be capable of withstanding a temperature of 1100^{O}C without any structural change which would impair the stability or performance of the chimney.

Chimney's should be built in accordance with BS EN 15287-1:2007, Design, installation and commissioning of chimney.

USE OF EXISTING FLUES AND CHIMNEYS

The spigot of this appliance will accept a 5" flue pipe. Stanley cast iron pipes are highly recommended for interior use. When connecting to an existing chimney it is necessary to line the flue using either 6" (150mm) rigid or flexible stainless steel flue liner. It is not premitted to reduce the diameter of the connecting pipe to less than the appliance outlet between the appliance and the chimney.

An existing flue pipe or chimney that has proved to be satisfactory when used for solid fuel can normally be used for this appliance provided that its construction, condition and dimensions are acceptable. Flues that have proven to be unsatisfactory, particularly with regard to down draught, must not be considered for venting this appliance until they have been examined and any faults corrected. If there is any doubt about an existing chimney, a smoke test should be carried out.

Before connecting this appliance to a chimney or flue pipe which has previously been used with another fuel, the chimney or flue pipe must be thoroughly swept and/or lined accordingly.

All register plates, restrictor plates and dampers etc. which could obstruct the flue at a future date must be removed before connecting this appliance.

The combustion products from this appliance will have a descaling effect on hardened soot deposits left from burning solid fuels.

ALTHOUGH THE CHIMNEY MAY HAVE BEEN CLEANED OF LOOSE SOOT PRIOR TO INSTALLATION, IT IS IMPERATIVE THAT THE CHIMNEY IS INSPECTED FOR SCALED SOOT PARTICLES AFTER THE FIRST MONTH OF OPERATION AND ANY LOOSE MATERIALS REMOVED TO AVOID BLOCKAGE.

LOCATION

There are several conditions to be considered in selecting a location for your Waterford Stanley Solid Fuel Range.

a. Position in the area to be heated - central locations are usually best.

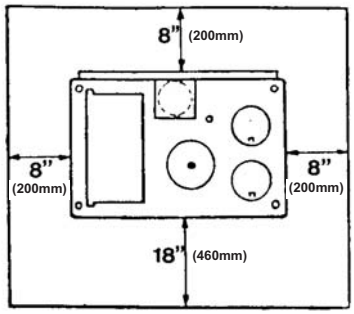
b. Allowances for proper clearances to combustibles.

FLOOR PROTECTION

When installing the Waterford Stanley Solid Fuel Range on a combustible floor, a floor protector consisting of a layer of non-combustible material at least 3/8" (9mm) thick, or of at least 1/4" (6mm) thick covered with a 1/8" (3mm) sheet of metal is required to cover the area under the heater and to extend to at least 18" (460mm) at the front and 8" (200mm) to the sides and back of stove. This will provide protection from sparks and embers which may fall out from the door when stoking or refuelling.

Floor Protection and Location

Fig.9



To be used for all installations

CLEARANCES TO COMBUSTIBLES

Maintain at least the following clearances to all combustible material:

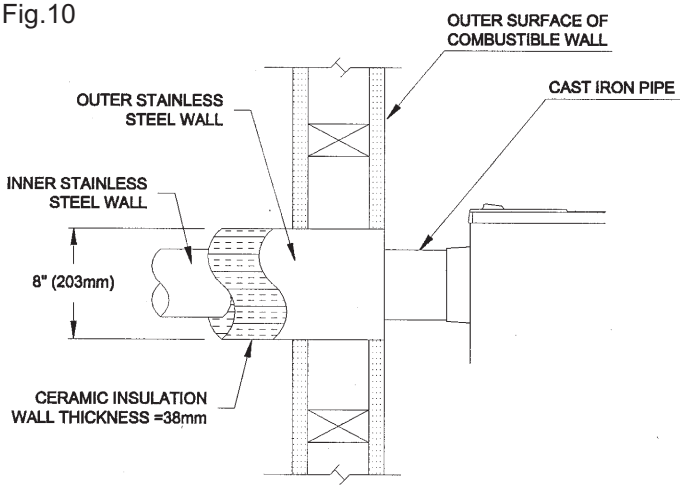
Front	460mm
Back	250mm
Oven Side	60mm
Oven Side with Optional Shelf Fitted	60mm
Firebox Side	60mm

The minimum clearance to non-combustible materials should be maintained at least 50mm (2") from the back of the range.

Never obstruct free air circulation from around the cooker. Where the flue passes through a combustible material a twin wall solid packed insulated chimney connector must be used and come flush with the outer surface material and run all the way to the masonry chimney or to the point of termination of the factory made chimney. (see Fig. 10).

Additional insulation must also be fitted to the wall to protect the area around the flue and flue box. The insulation must reach a minimum distance of 150mm either side of the flue/flue box and follow the line of the flue. The minimum specification for this material is Superwool 607 LTI with a density of 320kg/m3, a thickness of 10mm and a self finish. There must be a minimum 16mm air gap between the insulation board and an adjacent combustible wall surface. A higher specification material maybe used but the air gap must be maintained.

Fig.10



VENTILATION & COMBUSTION AIR REQUIREMENTS

It is imperative that there is sufficient air supply to the cooker in order to support correct combustion.

Never cover or close air vents

The air supply to this appliance must comply with B.S. 8303: Part 1 and Building Regulations.

The minimum effective air requirement for this appliance is 65cm^2 for both 47K and 30K models. If flue is fitted with a flue draught stabaliser, the air requirement needs to be increased to 83cm^2. When calculating combustion air requirement for this appliance use the following equation: a total free area of at least 550mm^2 per kW of rated output above 5kW shall be provided. Where a flue draught stabiliser is used the total free area shall be increased by 300mm^2 for each kW of rated output. If there is another appliance using air fitted in the same or adjacent room, it will be necessary to calculate additional air supply.

All materials used in the manufacture of air vents should be such that the vent is dimensionally stable and corrosion resistant.

The effective free area of any vent should be ascertained before installation. The effect of any screen should be allowed for when determining the effective

free area of any vent. Air vents direct to the outside of the building should be located so that any air current produced will not pass through normally occupied areas of the room.

An air vent outside the building should not be located less than the dimensions specified within the Building Regulations from any part of any flue terminal. These air vents must also be fire proofed as per Building Regulations.

Air vents in internal walls should not communicate with bedsits, toilets, bathrooms or rooms containing a shower.

Air vents traversing cavity walls should include a continuous duct across the cavity. The duct should be installed in such a manner as not to impair the weather resistance of the cavity.

Joints between air vents and outside walls should be sealed to prevent the ingress of moisture. Existing air vents should be of the correct size and unobstructed for the appliance in use.

ITS NOT RECOMMENDED FOR AN EXTRACTION FAN TO BE FITTED IN THE SAME ROOM AS THIS APPLIANCE BUT IF THERE IS AN EXTRACTOR FAN SHOULD NOT BE FITTED IN THE SAME ROOM AS THIS APPLIANCE. IF THERE IS AN AIR EXTRACTION FAN FITTED IN THE ROOM OR ADJACENT ROOMS WHERE THIS APPLIANCE IS FITTED, ADDITIONAL AIR VENTS WILL BE REQUIRED TO ELEVIATE THE POSSIBILITY OF SPILLAGE OF PRODUCTS OF COMBUSTION FROM THE APPLIANCE/FLUE WHILE THE FAN IS IN OPERATION.

Where such a installation exists, a test for spillage should be made with the fan or fans and other appliances using air in operation at full rate, (i.e. extraction fans, tumble dryers) with all external doors and windows closed.

If spillage occurs following the above operation, an additional air vent of sufficient size to prevent this occurrence should be installed.

SMOKE SPILLAGE TEST

In all installations a spillage test should be carried out to ensure there is sufficient combustion and the flue system is adequate.

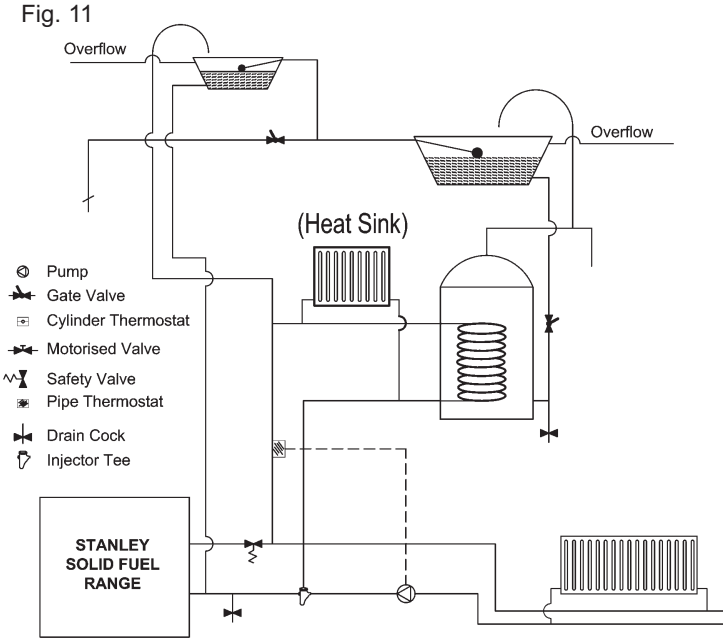
The spillage test is carried out as follows:

1. Light/burn appliance under normal conditions in accordance with this installation manual.
2. Close all doors and windows.
3. Operate all appliances requiring air at full rate (eg. extraction hoods, tumble dryers etc).
4. Check for smoke spillage.

PLUMBING

Diagrams illustrate the basic principles of water systems and are not to be regarded as working drawings.

Fig. 11



NOTE: We strongly advise the use of pipe lagging and also the use of a frost thermostat if the installation is likely to be exposed to situations where the temperatures will drop to a level consistent with frost.

Central Heating and Indirect Domestic Hot Water.

Recommended indirect cylinder 135 litres, depending on domestic requirements with a 28mm flow and return pipes not exceeding 7.8m each in length. Cylinder and pipework should be lagged to minimise heat losses.

HEATING SYSTEM

The system must include a gravity circuit with expansion pipe, open to the atmosphere. The central heating must be pump-driven as with other types of boilers. The primary air valve controls the heating rate of the boiler, Closed = minimum, Open = maximum output. (See operating instructions).

The central heating system must be designed and installed in accordance with the following standards: 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 a domestic hot water tank of 135 litres. An indirect cylinder to BS 1566 must be used. A heat leak radiator with a heat output minimum 1kW should also be connected on the gravity circuit. It should be connected to the boiler by 28mm diameter flow and return piping. The pipes should not exceed 7.8m each in length and anything in excess of 4.6m 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. In the interest of safety do not have any valves on this circuit. It is recommended to fit a drain point at the lowest level of the system and at any point that may not drain if the system is emptied.

HEATING

Care should be taken to ensure that the heating installation is correctly installed and that it complies with all relevant codes of practice. If this appliance is being connected to an existing system, it is strongly recommended to check the following.

(a) That the pipework is adequately insulated (where applicable).
(b) Check all controls e.g. pump, pipe thermostat etc, are operating satisfactorily and are compatible with the requirements of the cooker.
(c) Cleanse the system and add suitable inhibitor.

Only competent personnel should be employed to carry out your heating installation.

PIPE FITTINGS

Materials used for installation work should be fire resistant, sound and should conform to the current editions of the following or their equivalent:

1. Ferrous Materials
   B.S. 1387: Steel tubes
   B.S. 1740: Steel pipe fittings
   B.S. 5295 & jointing materials

2. Non-ferrous materials
   I.S. 238: Copper tubes
   B.S. 4127: Stainless steel tubes
   EN 29453:Solder
   I.S. 239: Compression tube fittings
   B.S. 1552: Manual shut-off valves

WATER CIRCUIT TEMPERATURE

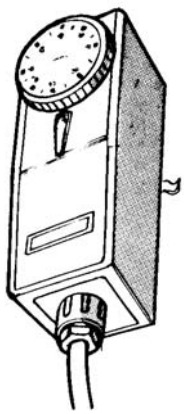
The return water temperature must be maintained at not less than 50º C so as to avoid condensation on the boiler and return piping. Fitting a pipe thermostat to the return from the gravity circuit and wiring it into the pump control will ensure than no cold water will be returned from the central heating circuit before the water from the gravity circuit has warmed up 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.

Fig.12



COMMISSIONING & HANDOVER

Ensure all parts are fitted in accordance with the instructions.

On completion of the installation allow a suitable period of time for any fire cement and mortar to dry out, before lighting the stove. Once the stove in under fire check all seals for soundness and that the boiler and water system are operating correctly.

Ensure that the flue is functioning correctly and that all products of combustion are vented safely to atmosphere via the chimney terminal.

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.

CARE FOR YOUR CENTRAL HEATING SYSTEM

We strongly recommend the use of suitable corrosion inhibitors and anti-freeze solution in your heat ing system, in an effort to minimise black oxide, sludge and scale build-up, which effects efficiency.

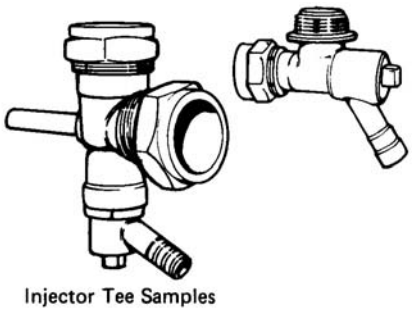
In hard water areas the use of a suitable limescale preventer / remover is advised.

Use only quantities specified by the water treatment product manufacturer. Only add to the heating system after flushing and finally refilling. Refer to BS 7953.

INJECTOR TEE (Central Heating)

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. This way, there will be no shortage of hot water to the taps when the heating is on.

Fig.13



Injector Tee Samples

DRAINING

Key - operated drain taps to B.S. 2879 should be provided in accessible positions in all low parts of the system. However it should be noted that there may be short sections of pipework e.g. when passing under doorways that may not be possible to drain.

GENERAL MAINTENANCE

It is important that the user is familiar with their heating system and that they ensure regular checks and maintenance which can limit unnecessary breakdowns.

We recommend that you evaluate the overall insulation in your house, i.e. attic, external walls, windows, external doors. Insulation and draught proofing can greatly reduce running costs, while equally enhancing living conditions.

FUELS

This appliance has been tested using manufactured briquetted smokeless fuel (Ancit) for closed appliances, sized between 20g and 140g and seasaoned wood logs. Other fuels are commercially available and may give similar results. All fuels should be stored under cover and kept as dry as possible before use.

Do not use fuels with a Petro-coke ingredient as this may cause the grate to overheat, causing damage. Reduced outputs will result when fuels of lower calorific values are used. Never use gasoline or gasoline type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or freshen up a fire in this heater. Keep all such liquid well away from the heater at all times. Operate the stove only with the fuelling door closed except for re-fuelling.

This appliance has obtained HETAS Ltd approval as a ‘continuous’ operating appliance for burning manufactured briquetted smokeless fuel as the recommended fuel, it also has approval as an intermittent operating appliance for burning wood logs. 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.

WARNING NOTE

Properly installed, operated and maintained this stove 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 stove.

(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.

FUEL CALORIFIC VALUES				
Anthracite 25-50mm	C.V.: 8.2 kW/Kg	=	14,000 Btu's/lb
House Coal 25-75mm	C.V.: 7.2 kW/Kg	=	12,300 Btu's/lb
Peat Briquettes	C.V.: 4.8 kW/Kg	=	8,300 Btu's/lb

REFUELLING

Before refuelling the range, open the direct damper (Part No.51). Add the fuel, and after refuelling ensure that the direct damper is closed, otherwise oven temperature will drop and the fire box may overheat.

Note: Only the recommended fuels as outlined in the section on fuels may be used during refuelling of the range.

CONTROLLING THE FIRE

The direct damper must be kept closed except when initially lighting the fire or during refuelling. The burn rate is adjusted by controlling the primary air using the spin valve. The primary air is increased by turning the spin valve anticlockwise, and decreased by turning it clockwise (see Fig.14). The oven damper under the round hot plate controls the chimney draught which also adjusts the burn rate. (see Fig.15). For normal running leave the oven damper in the open position. It may be necessary to close the damper to assist with overnight burning or in conditions of excessive flue draught. It is possible to direct more heat to water and less to the oven by opening the direct damper and closing the oven damper.

Fig.14

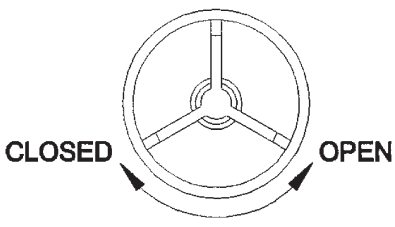
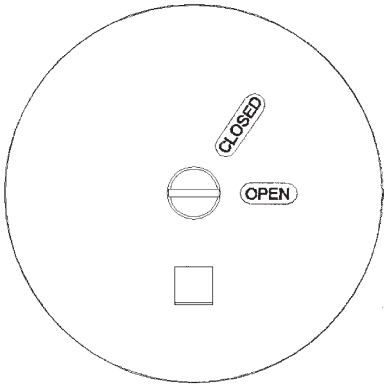


Fig.15



You will get to know how to use the spin valve and oven damper in conjunction for the optimum range performance. Ensure that both the ashpit door (Part No.22) and the fire door (Part No.24) are closed securely during firing. Opening the spinwheel 2-3 turns for mineral fuels and 3-4 turns for wood logs is a good starting point to understand the operation of the cooker.

KEEP ALL COMBUSTIBLE MATERIALS AT LEAST 1220mm (4 Feet) AWAY FROM THE RANGE. They include rugs, fabrics, furnishings, papers, firewood, etc. NEVER dry clothing on or within 1220mm (4 Feet) of the range.

OVERNIGHT BURNING

Open the spin valve (Part No.73) by a quarter turn and close the oven damper (Part No.49); riddle the fire and refuel. In the morning open the air valve and damper and riddle the fire; when it is again burning brightly, refuel. If it is found that the fire is completely burned out then new settings should be tried in respect of the spin valve. On the other hand if the fire is out and the fuel unburned then the reverse should apply.

DE-ASHING

The ash pan (Part No. 14) must be emptied regularly, otherwise ash will build up to a point where it interferes with the natural flow of cool air through the fire bars and as a consequence these will be damaged.

The ashpan is accessed by opening the ashpit door (Part No.22) and is removed using the riddling tool (Part No.2).

Note: The ashpan must be replaced in position before the range is fired.

DISPOSAL OF ASHES

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground well away from all combustible materials

pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed they should be retained in the closed container until all cinders have thoroughly cooled.

MAIN OVEN

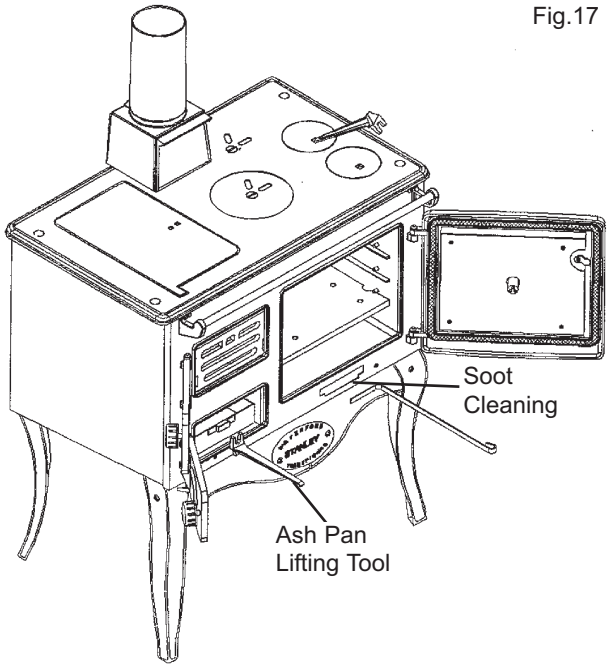
When baking or roasting, open the oven damper and spin valve fully until the thermometer shows a temperature about 20°F (10°C) higher than that which is required. Then close the Spin Valve to a point where the required temperature is sustained (a little practice will soon show how much adjustment is necessary). Much will also depend on the strength of the chimney draught. Remember the direct flue damper must be kept fully closed as a by-pass is provided to allow waste gases through at all times. When baking or roasting, if it is found that the surface of the food is cooking too quickly then position the plain steel shelf in the top of the oven so as to act as a heat shield which will protect the food on the shelf beneath.

THE HOTPLATE

Use the hotplate and the cooking-top of the range for boiling simmering, frying, grilling, braising, etc. (Hotter side is to the left) Best results can be obtained by using flat bottomed utensils. The lacquer which was applied to protect the surface-ground hotplates will burn off and give a strong odour during the burn off process. Keep the hotplates clean with a wire brush. Over a short period you will quickly adapt to the best ways and means of using the cooker-top in order to obtain utmost satisfaction and efficiency.

USE OF TOOLS

Fig.17



WARNING! THIS APPLIANCE IS HOT WHILE IN OPERATION, USE TOOLS PROVIDED WHEN ADJUSTING CONTROLS.

DO NOT HEAT UP SEALED OR UNOPENED CONTAINERS OF FOOD.

DO NOT USE AEROSOL SPRAY NEAR THE COOKER WHEN IT IS ALIGHT.

CAUTION! IF USING A DEEP FAT FRYER ON THIS APPLIANCE, NEVER LEAVE THE FRYER UNATTENDED AND NEVER ATTEMPT TO EXTINGUISH A FIRE USING WATER. PLACE A SOAKED TOWEL OVER THE TOP OF THE PAN TO EXTINGUISH FLAMES AND REMOVE PAN FROM SOURCE OF HEAT.

IF IN ANY DOUBT IMMEDIATELY EVACUATE THE BUILDING AND CALL THE FIRE BRIGADE.

OVER-FIRING

When using anthracite, coke or coal avoid excessive firing conditions. High temperatures are unnecessary and can only 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 not only to the cooker components but also to the fire bricks and any damage here should be repaired without delay.

HINTS ON FIRE SAFETY

To provide reasonable fire safety the following should be given serious consideration:

1. The installation of smoke detectors.
2. A conveniently located Class A fire extinguisher.
3. A practical evacuation plan.
4. A plan to deal with chimney fire as follows
   (a) Notify the fire department
   (b) Prepare occupants for immediate evacuation.
   (c) Close all openings into the stove
   (d) While awaiting fire department, watch for ignition of adjacent combustibles from overheated stove pipe or hot embers or sparks from the chimney.

NOTE: Inspect the chimney flue weekly until a safe frequency is established.

LIGHTING THE FIRE

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.***
* ***Check water system is not frozen.***

1. Open the Fire Door.
2. Lower Fire Fence by lifting up and then tilt forward. Fuel may also be loaded through the opening hotplate.
3. Open the Spin Valve fully by rotating it in an anit-clockwise direction. Turn the direct damper to open by using the operating tool.
4. Kindle with paper and sticks in the usual way.
5. Ignite by using a taper or rolled wad of paper.
6. Lift up the fire fence and close the fire door.
7. **Under no circumstances should any flammable liquid i.e. petrol, paraffin etc., be used to light the fire.**
8. When the fire is well established, and the flue is warm, close the direct damper fully and keep it closed.
9. Add fuel to the firebox as required and adjust the spin valve to suit the current requirements.

Note: It is also possible to access the firebox by lifting the hotplate. (See Hotplate Section).

IMPORTANT: UNDER NO CIRCUMSTANCES SHOULD ANY FLAMMABLE LIQUID, GASOLINE KEROSENE, LIGHTER FLUID OR CHARCOAL- STARTERS BE USED TO LIGHT OR "FRESHEN UP" THE FIRE. "KEEP ALL SUCH LIQUIDS WELL AWAY FROM STOVE (COOKER) WHILE IN USE"

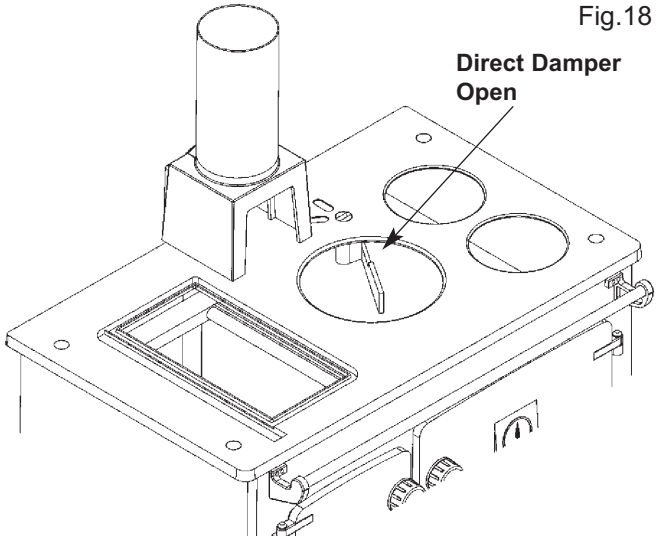
THIS APPLIANCE IS HOT WHILST IN OPERATION, KEEP CHILDREN, CLOTHING AND FURNITURE A SAFE DISTANCE AWAY.

OPERATE APPLIANCE ONLY WITH FUELLING DOOR AND ASHPIT DOOR CLOSED.

CLEANING INSTRUCTIONS

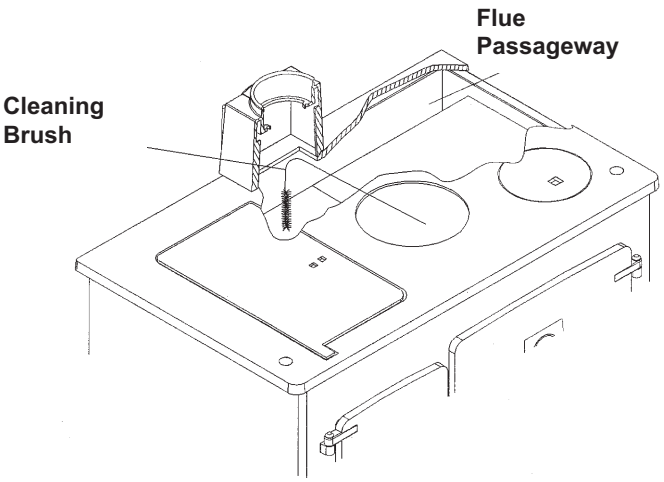
Remove the hotplate & simmering plate (Part No.48 & 9), the bonnet door (Part No.25), the oven damper (Part No.49) and the cleaning cups (Part No.47) from the top of the cooker. See Fig. 18. If the flue is connected to the back outlet configuration, the hob sealing plate (Part No.1) is removed instead of the bonnet door.

Fig.18



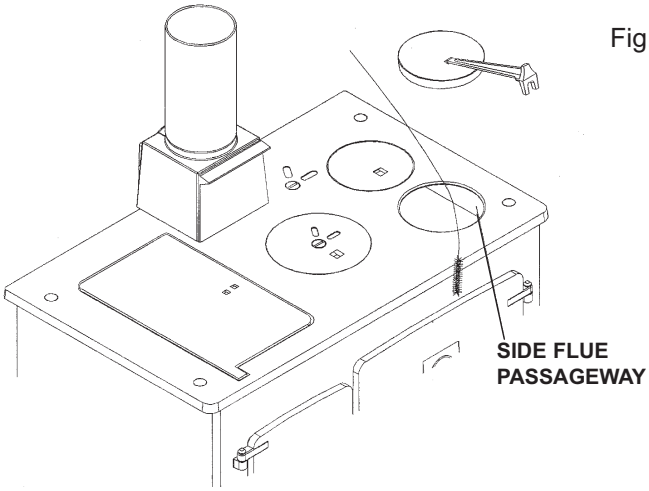
All deposits from the flue pipe and the top of the oven may be brushed both into the firebox and down the back flue passage way. See Fig. 19.

Fig.19



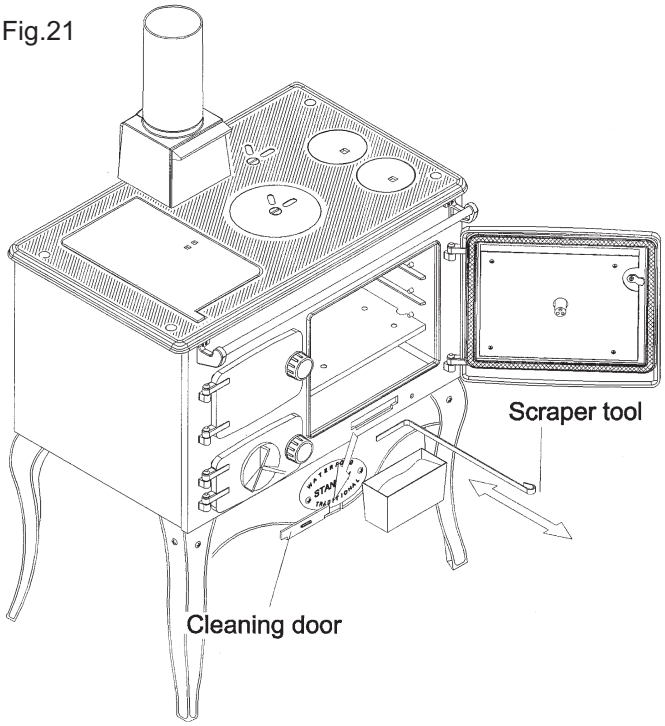
Deposits which have accumulated on the side of the oven must also be brushed downward. (See Fig 20)

Fig.20



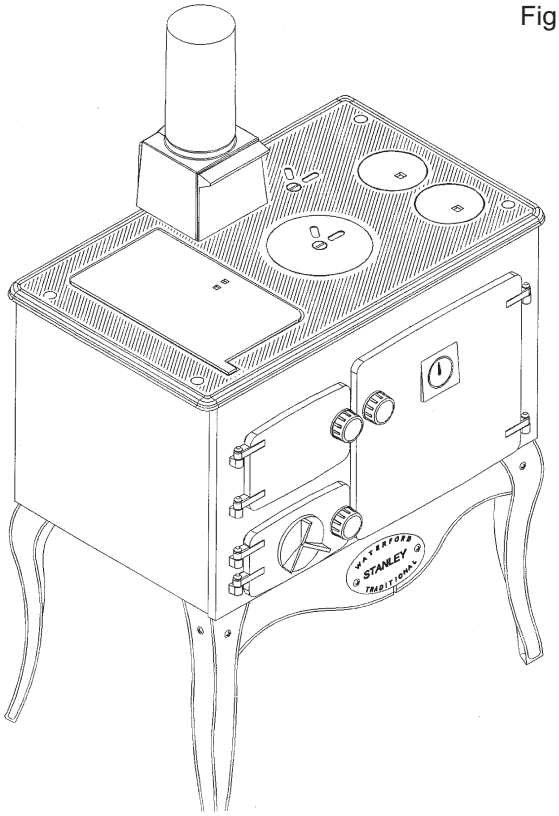
To remove all the accumulated deposits, take off the cleaning door (Part No.3) situated immediately under the oven on the front of the cooker and thoroughly clean out the residue from the side flue, back flue and base plate using the scraper tool (Part No. 63). This operation is essential, otherwise the flow of combustion gases will be obstructed or even stopped, and satisfactory oven temperature will not be maintained, apart from which such deposits will cause smoking. See Fig.21.

Fig.21



Replace all loose parts which have been removed making sure that all cooking surfaces have been thoroughly cleaned on the underside. See Fig.22. It is important to replace the cleaning door and to make sure it is sealed tight. Failure to do so will impair oven performance.

Fig.22



CLEANING THE MILD STEEL PARTS

The steel side panels and splash back must not be cleaned with steel wool. Use only washing up liquid in hot water with a lint free cloth. Dry off and apply a coat of good quality furniture polish.

CLEANING THE OVENS

Grease spillages will burn off from the oven interior, when the oven is hot and any other loose materials can be wiped out with a cloth, when cold. Stubborn stains in the oven and on the shelves in the oven can be cleaned off with a paste of bread soda and water.

CLEANING THE HOT PLATE

The hotplate may be cleaned using a small amount of oil or fine steel wool to remove rust and cooking stains. Dry off with a lint free cloth and apply a light coat of cooking oil to preserve the finish.

VITREOUS ENAMEL CLEANING

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

If this stove is 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. For stubborn deposits a soap impregnated pad can be carefully used on the vitreous enamel.
3. Use only products recommended by the Vitreous Enamel Association, these products carry the Vitramel label.

VITREOUS ENAMEL Association — Tested and recommended for use on vitreous enamel

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

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.

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:
Incase 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 10lb 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.

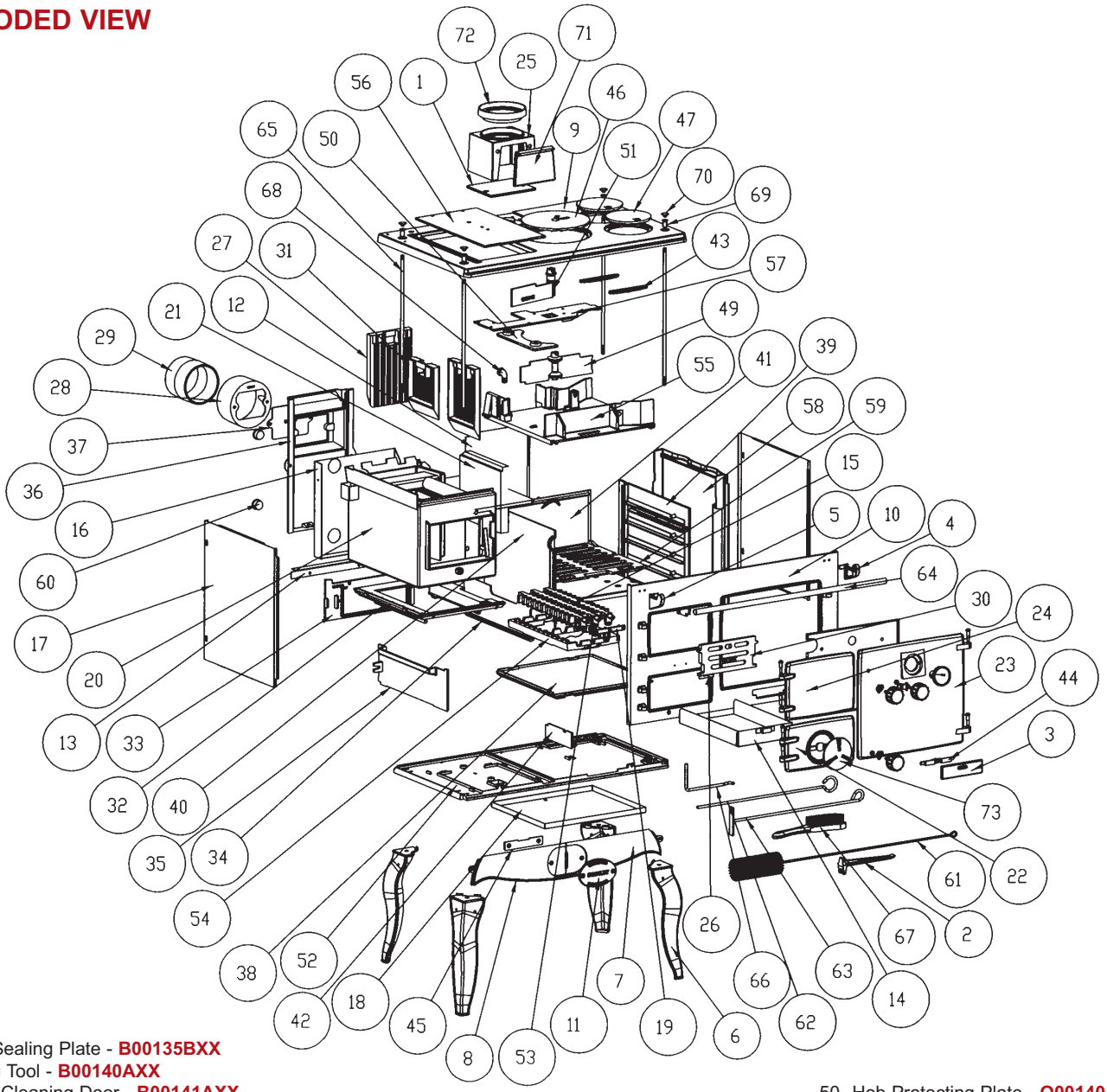
After a chimney fire, have the chimney inspected by a professional chimney sweep or cooker installer.

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.

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.

EXPLODED VIEW



1. Hob Sealing Plate - **B00135BXX**
2. Lifting Tool - **B00140AXX**
3. Front Cleaning Door - **B00141AXX**
4. Towel Rail Bracket RH - **B00142AXX**
5. Towel Rail Bracket LH - **B00143AXX**
6. Leg - **B00144AXX**
7. Plinth RH - **B00145AXX**
8. Plinth LH - **B00146AXX**
9. Errigal Machined Hob - **B00151DXX**
10. Front - **B00152DXX**
11. Name Plate - **B00156AXX**
12. Small Back Panel - **F00056CXX**
13. Angle Bracket - **F00057AXX**
14. Ashpan - **F00058AXX**
15. Oven Shelf - **F00061AXX**
16. Back Panel LH - **F00062BXX**
17. Side Panel - **F00069CXX**
18. Base Panel - **F00071AXX**
19. Fire Bar Link - **F00097AXX**
20. 47K Boiler - **F00201EXX**
21. Solid Brick - **H00036AXX**
22. Ash Pit Door - **L00034AXX**
23. Oven Door Assembly - **L00058AXX**
24. Fire Door - **L00059AXX**
25. Bonnet - **B00124AXX**
26. Serial Number Plate - **N00234BXX**
27. Summer Brick - **Q00096BXX**
28. Spigot - **Q00097AXX**
29. Flue Outlet Connection 5" - **Q00098AXX**
30. Fire Bar - **Q00111AXX**
31. Summer Brick - **Q00112AXX**
32. Bottom Grate Frame - **Q00114AXX**
33. Ashpit Back - **Q00115BXX**
34. Ashpit Side RH - **Q00116AXX**
35. Ashpit Side LH - **Q00117AXX**
36. Flue Back - **Q00119BXX**
37. Back Sealing Plate - **Q00120AXX**
38. Oven Bottom - **Q00121BXX**
39. Oven Side RH - **Q00122BXX**
40. Oven Side LH - **Q00125BXX**
41. Oven Back - **Q00128CXX**
42. Flue Check - **Q00129AXX**
43. Hotplate Cup Clips - **Q00132BXX**
44. Cleaning Door Clip - **Q00133AXX**
45. Plinth Joining Clip - **Q00134AXX**
46. Simmering Plate - **Q00136BXX**
47. Hotplate Cup - **Q00137AXX**
48. Hotplate - **Q00138CXX**
49. Oven Flue Damper - **Q00139AXX**
50. Hob Protecting Plate - **Q00140AXX**
51. Damper With Cut Out - **Q00142AXX**
52. Base - **Q00146CXX**
53. Fire Bar Standard - **Q00148AXX**
54. Shaker Bar Frame - **Q00234AXX**
55. Oven Top - **Q00235EXX**
56. Ashpit Bottom - **Q00595AXX**
57. Hob Protection Plate - **Q00620AXX**
58. Oven End Flue - **Q00723BXX**
59. Shelf Diffuser - **Q00728AXX**
60. Boiler Plug - **V00016AXX**
61. Cleaning Brush - **V00072AXX**
62. Poker - **V00073AXX**
63. Scraper - **V00074AXX**
64. Towel Rail - **V00077AXX**
65. Stay Rod - **V00082DXX**
66. Hotplate Lifter - **V00086AXX**
67. Wire Brush - **V00093AXX**
68. Steam Vent - **W00904AXX**
69. Stay Rod Nut - **W00920AXX**
70. Stay Rod Nut Cap - **W00923AXX**
71. Bonnet Door - **B00125AXX**
72. Bonnet Ring - **B00147AXX**
73. Spin Valve - **B00128AXX**

Manufactured by
Waterford Stanley Ltd.,
Unit 210, IDA Industrial Estate, Cork Road,
Waterford, Ireland.
Tel: (051) 302300 Fax (051) 302315
www.waterfordstanley.com