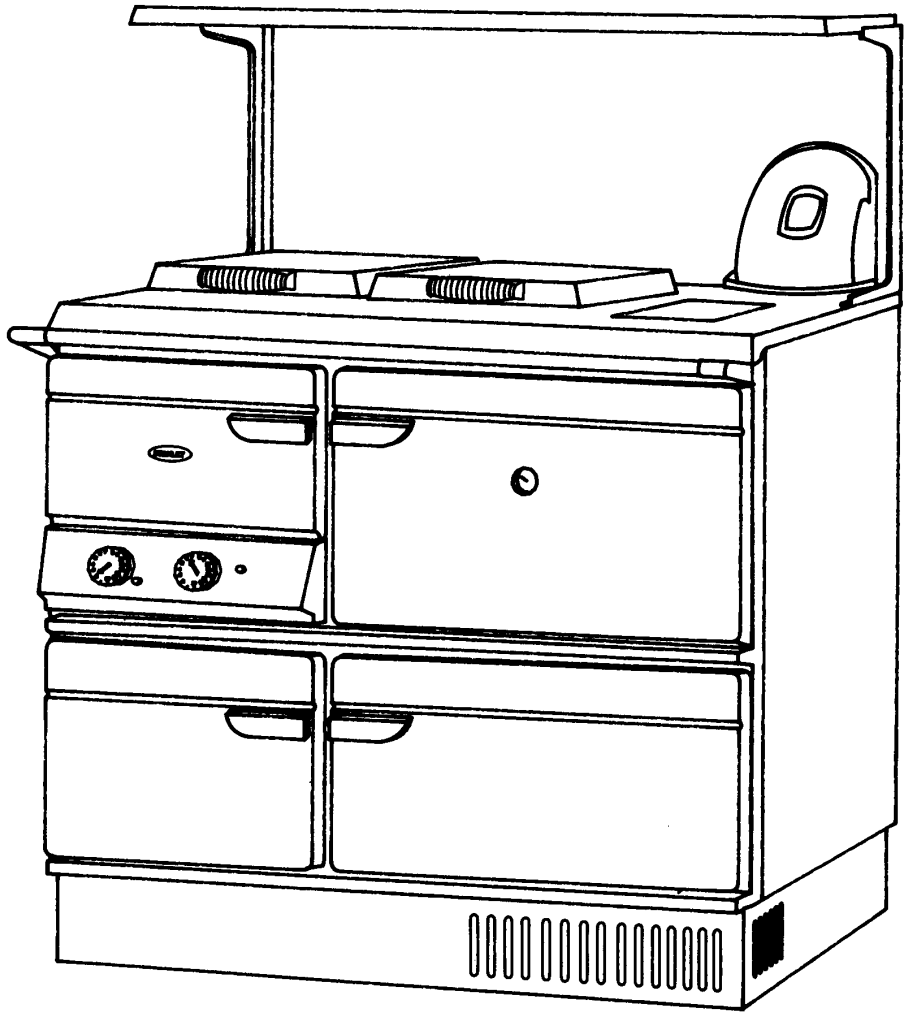
STANLEY

TURNING YOUR HOUSE INTO A HOME

Donard 60 Oil fired Cooker

(SUPER STAR 60 K OIL FIRED COOKER)



To ensure safety, satisfaction and reliable service, **this quality Cooker should be installed by a competent person.** The provision of a Central Heating facility, requires that the hot water supply system involved, conforms fully to good plumbing practice and established standards.

Installation and Operating Instructions

To be left with end user.

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Introduction

Congratulations on purchasing this fine Irish made Oil-fired Central Heating Cooker. It is built to exacting standards and it will give you every satisfaction in use.

Please read the following information before operating this product, this will enable you to familiarise yourself with the appliance.

Cookers can become very hot with use and retain their 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 surfaces or be in the vicinity when in use or until the appliance has thoroughly cooled down after use.

To ensure safety, satisfaction and reliable operation, this quality cooker should be installed and commissioned by a trained and competent person. The central heating facility and the hot water systems involved must conform fully to good plumbing practice, established standards and OFTEC recommendations.

This is a combination appliance capable of providing up to 17kW (60,000 Btu's/hr) to water. Space heating to room in which the appliance is installed is 3kW (10,000 Btu's/hr).

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.

Section 10 of the Consumer Protection Act 1987.
Safety, Health and Welfare at Work Act for Ireland, England, Wales and Scotland.

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

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.

IMPORTANT — Control of Substances Harmful to Health:

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.

TECHNICAL DATA

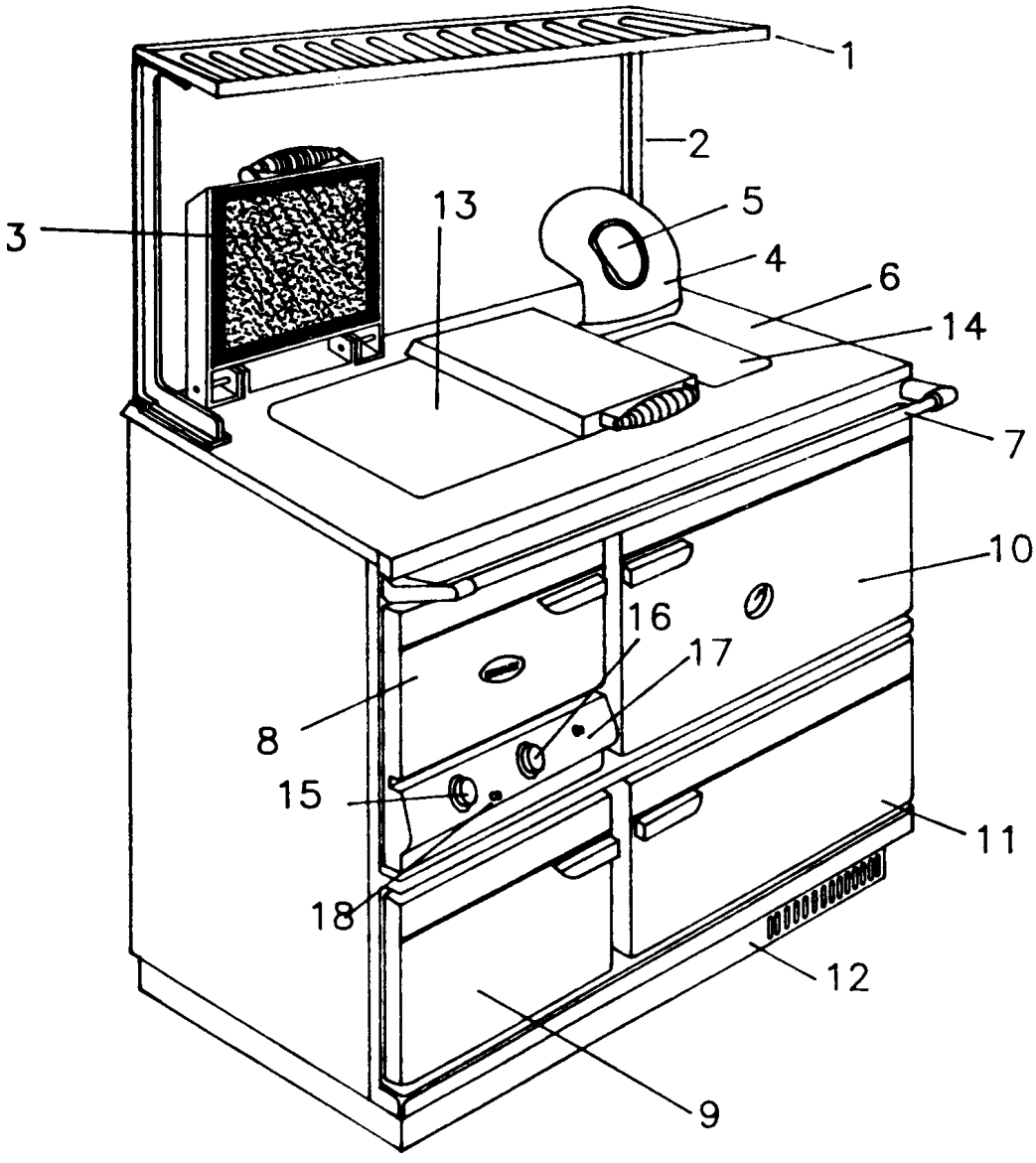
FUEL	28 sec Kerosene	
COOKER GROSS OUTPUT:	AT 2Kg = 2.27 litres Kerosene/hour (22 kW - 75,000 Btu's/hr)	
JET:	80 degree Solid Pattern (.65 US Gallons) 2.45 Litres	
OIL PRESSURE:	9.15 Atmospheres (130 p.s.i.)	
RADIATOR SURFACE:	Heating Surface only = 32.7 sq meters = 353 sq. ft.	
	Heating plus Domestic Hot Water = 30.2 sq. meters = 325 sq. ft.	
SPACE HEATING:	2.9 kW	10,000 Btu's
EXIT FLUE GAS TEMPERATURE:	331^{o}C	
EXIT FLUE GAS FLOW:	55.32 kg/Hr	
MAINS CURRENT	230v - 240v, 50Hz A.C.	
SUPPLY FUSE RATING	3 A	
IP PROTECTION DEGREE	IP 20	
ELECTRICAL INPUT	90 watts	
BOILER CONSTRUCTION	6mm & 4mm Mild Steel Plate	
MAX. BOILER WORKING PRESSURE	1.9 Bar	27.3 P.S.I.
TEST PRESSURE OF BOILER	2.7 Bar	40 P.S.I.
OPERATING TEMPERATURE		
LIMIT IN BOILER	96^{o}C	205^{o}F
BOILER CAPACITY	9.1 Litres	2.5 Gallons
COOKER WEIGHT	364 kgs	800 lbs

All technical data are taken under laboratory conditions and may vary in use.

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

SCHEMATIC

Fig 1.



1. Platerack (to order)
2. Splashback (to order)
3. Hotplate Covers
4. 150mm (6") 90^{o} Bend
5. Bend Cleaning Plate
6. Hob
7. Towel Rail
8. Firedoor
9. Burner Door
10. Main Oven Door
11. Simmer Oven Door
12. Base Frame
13. Hotplate
14. Simmer and Cleaning Plate
15. Boiler Thermostat
16. Oven Thermostat
17. Indicator Light
18. Reset Button/Hi Limit Stat

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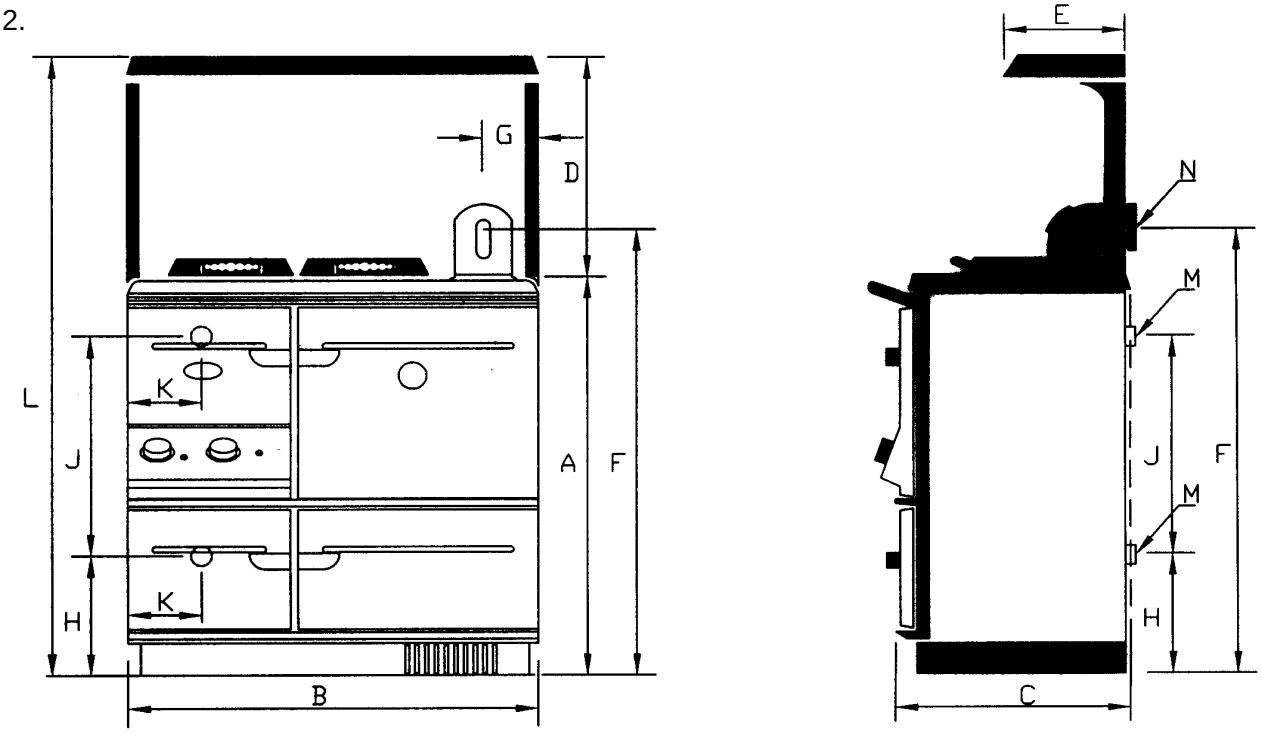
SPECIFICATION

Fig. 2.



Dimensions	A	B	C	D	E	F	G	H	J	K	L	M	N
Metric (mm)	915	920	530	560	300	1047	130	325	525	190	1475	N/A	150
Imperial (inches)	36	36 1/4	20 7/8	22	11 3/4	41 1/4	5 1/8	12 3/4	20 5/8	7 1/2	58	1"BSP FEMALE	6

FEATURE	**METRIC**	**IMPERIAL**
Hot Plate	555 x 325	22 X 13
Roasting Oven	400W x 320H x 410D	15 1/4W x 12 1/4H x 16D
Simmering Oven:	400W x 225H x 410D	15 1/4W x 8 3/4H x 16D

NOTE: Dimensions stated below may be subject to a slight +/- variation.

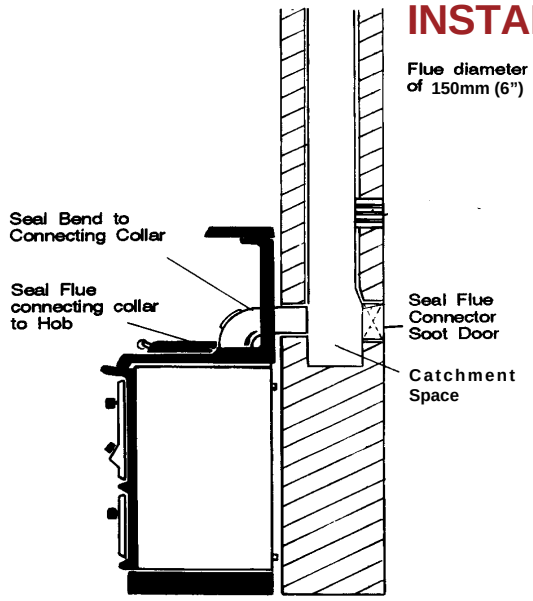
INSTALLATION

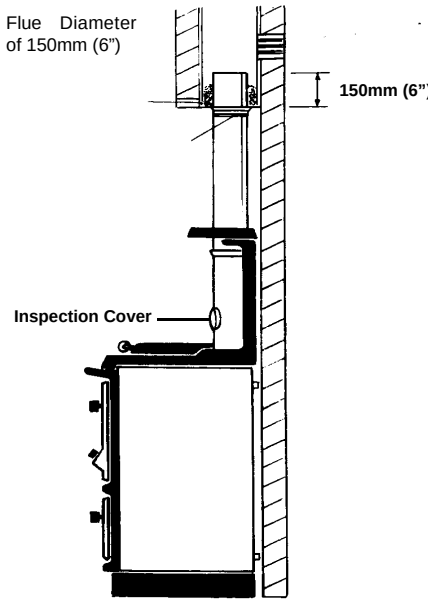
The Installation must comply with the following:

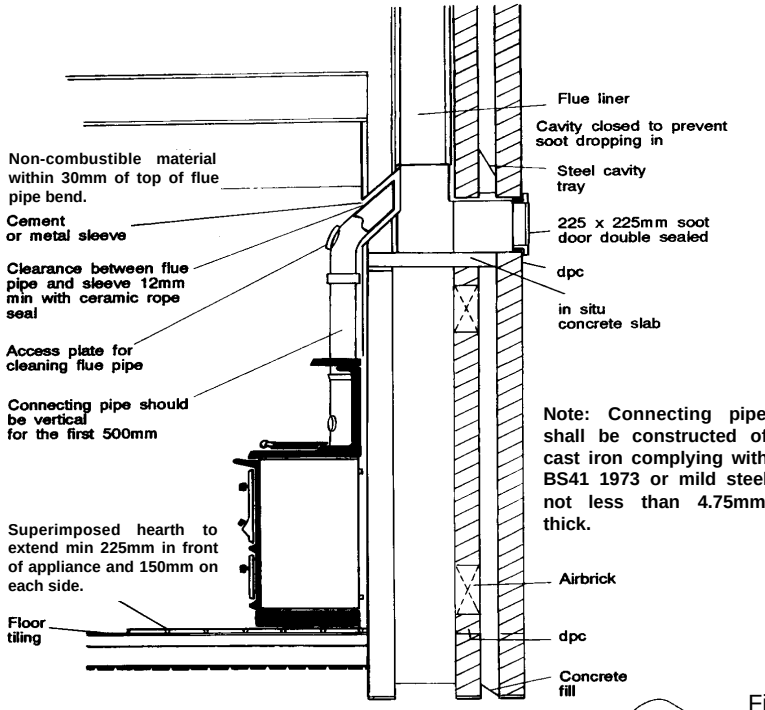
BS 5410: Part 1 Oil Installations under 45kW.
The Building Regulations: Part J England & Wales, Part F Section 4 Scotland, Part L Northern Ireland.
The Building Regulations: Part J Republic of Ireland.
The Control of Pollution (Oil) Regulations.
B.S. 5449: Forced circulation hot water central heating system for domestic installation.
Health and Safety at Work Act.
B.S. 7671: Requirements for Electrical Regulations.
Safety Document 635: The Electricity at Work Regulations.
B.S. 7593: Treatment of Water in Domestic Hot Water Systems.
B.S. 7074: Part 1 & 2: Hot Water Supply.
B.S. 4814: Sealed Systems

Fig.3

INSTALLATION







Note: Connecting pipe shall be constructed of cast iron complying with BS41 1973 or mild steel not less than 4.75mm thick.

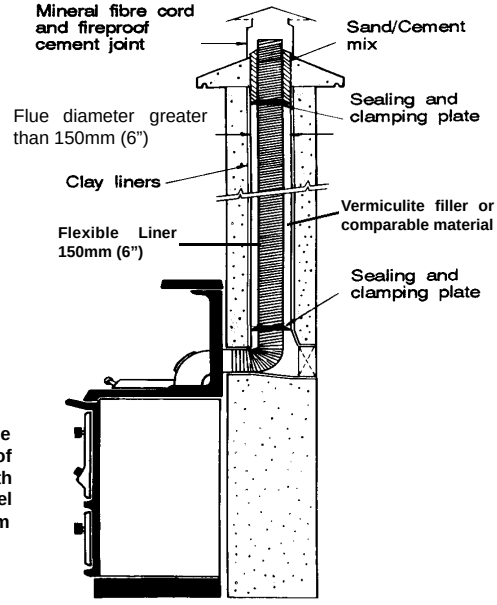


Fig.3a

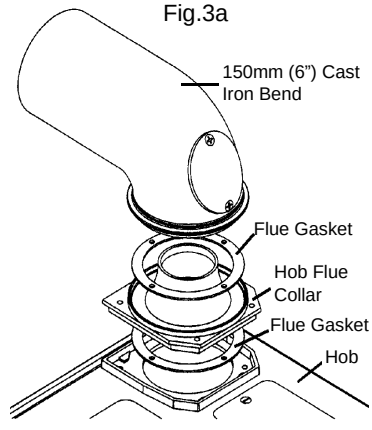
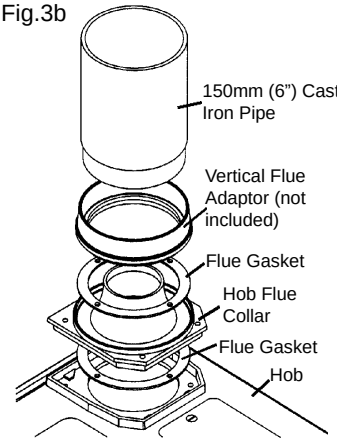


Fig.3b



SEALING

This cooker and flue system operate under a positive pressure, it is essential that all flue joints are tightly sealed against flue gas leakage and tested accordingly. (See fig. 3a & 3b)

PRE-INSTALLATION CHECK

Before installing the new cooker, check that the chimney is clean and clear of obstructions. Cracked brickwork and leaking joints must be made good.

Where flue piping passes through a closure plate with a sliding door, ensure that the pipe continues up and is ultimately connected to the flue liner and well sealed with fire cement.

Do not connect to a flue serving another appliance. Always ensure that the connection is to a chimney of

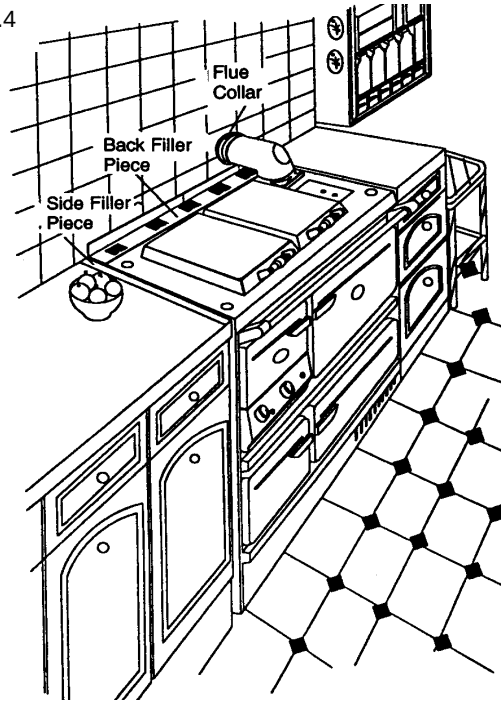
the same size. **NEVER CONNECT TO ONE OF SMALLER SIZE.** Flues wholly constructed of single skin pipe are not recommended under any circumstances, due to their inability to retain heat. Such chimneys will inevitably give rise to the formation of condensation.

Flue materials: Salt glazed earthenware flue, purposely made pre-cast sealed concrete chimneys, rigid or flexible stainless steel liners suitable for oil firing appliances.

IT IS NOT RECOMMENDED TO CONNECT TO A FLUE SMALLER THAN 150mm (6") OR IN EXCESS OF 175mm (7") DIAMETER.

NOTE: Fill voids and area around liner with vermiculite or a comparable approved material.

Fig.4



LOCATION

When choosing a location for this appliance you must have:

(a) Sufficient room for the installation (see clearances), a satisfactory flue and an adequate air supply for correct combustion and operation (see Ventilation and Combustion Air Requirements).

(b) Adequate space for maintenance and air circulation.

(c) Solid floor or base of non-combustible material which is capable of supporting the total weight of the appliance. (see Technical Data).

HEARTH CONSTRUCTION

When a non-combustible floor surface is not available then we recommend that the cooker be placed on a slab of pre-cast concrete 40mm ($1^1/_2$") deep or a slab of other insulating material. The hearth must extend 150mm (6") to either side of the appliance and 225mm (9") to the front. The cooker must stand on a flat surface.

ELECTRICAL SUPPLY

All wiring external to the appliance must conform to the current BS 7671 (U.K.), Safety Document 635, ETC: Part 1 Section 5.6.4 & The Electricity at Work Regulations. The cooker requires a 230V - 240V, 50Hz supply. Connection of the appliance and any system controls to the mains supply must be through a moulded on plug top, (with a 5 Amp fuse fitted) which is fitted to the appliance in accordance with EN 60335, Consumer Protection, SI 1994 No. 1768, plug and sockets etc. (safety) Regulations 1994.

ALWAYS INSTALL IN ACCORDANCE WITH CURRENT LOCAL WIRING REGULATIONS.

WARNING: THIS SUPPLY AND APPLIANCE MUST BE EARTHED (Refer to B.S. 7430: Code of Practice for Earthing).

Where a risk of low voltage can occur, a voltage sensitive device should be fitted to prevent start up of the burner so as not to endanger the installation.

To isolate the appliance completely, unplug from the mains socket. Always ensure that this socket is easily accessible and close to the appliance. Persons in charge of this appliance should be aware of this socket outlet position.

CLEARANCES TO COMBUSTIBLES

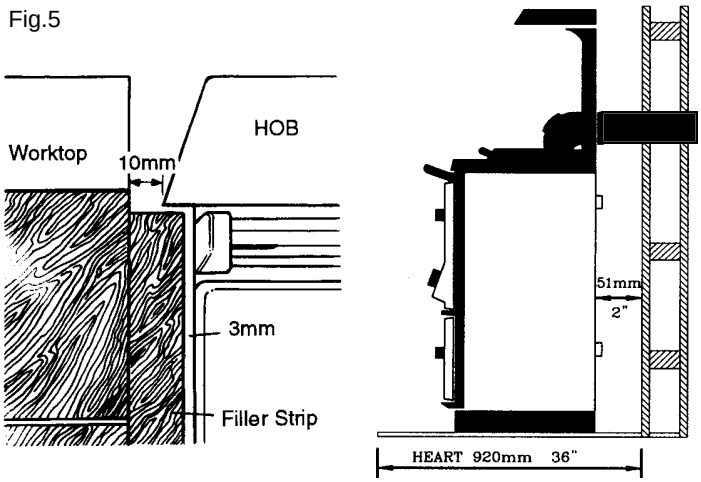
When using a tiled background and/or if you want to bring the Stanley to standard counter top depth (i.e. 600mm (24") and leave no gaps at the back of the cooker use the back filler piece which is 85mm ($3^1/_4$") deep. There is a flue pipe collar available which surrounds the flue where it meets the wall, giving a tidier finish to a tiled background. All filler pieces and flue pipe collar are available as optional extras. (see fig. 4)

When bringing the kitchen units up to the sides of the cooker hob leave a 10mm (3/8") gap between the hob and adjacent units (see fig. 5). This gap can be masked by fitting a filler strip up to the Stanley leaving a 5mm gap (see fig. 6). An optional hob rear cast iron filler strip is available, see fig.4.

Leave minimum 52mm (2") at rear of cooker to a combustible material (see fig. 5). Leave minimum 26mm (1") at rear of cooker to a non-combustible material (see fig.6)

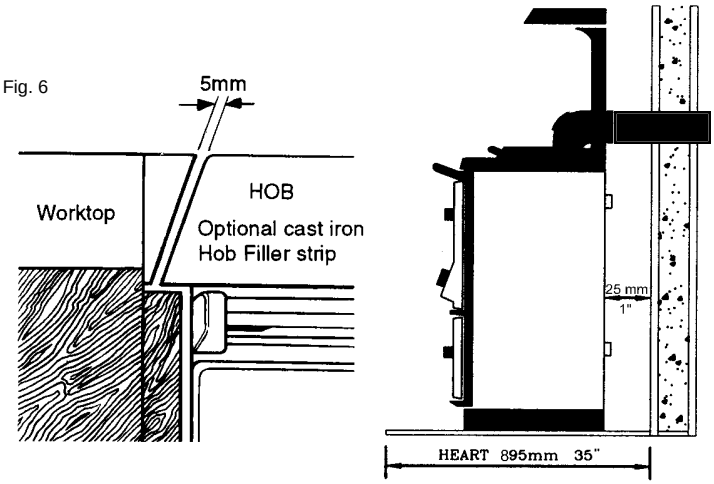
If optional hob rear filler piece is to be fitted leave 87mm clearance between hob and wall surface.

Fig.5



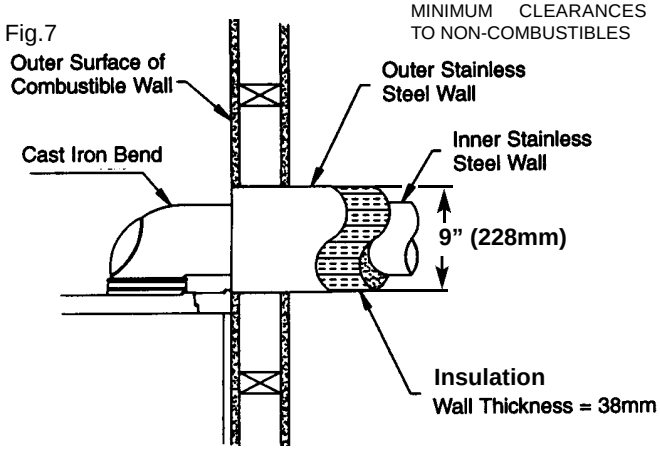
MINIMUM CLEARANCES
TO COMBUSTIBLES

Fig. 6



MINIMUM CLEARANCES
TO NON-COMBUSTIBLES

Fig.7



Where the flue passes through a combustible material a twin wall solid packed insulated chimney connector must be used and must come flush with the outer surface of the material and run all the way to the masonry chimney or to the point of termination of the factory made chimney. (See Fig.7).

FLUE HEIGHT

The flue must be high enough, not less than 4.5m (14' 6") measured vertically from the appliance outlet to the top of the flue terminal to allow the gases to vent into clear air, away from the turbulence that may be caused by roof structures, other chimney stacks, etc. The venting terminal position should be in accordance with the Building Regulations & B.S. 5410: Part 1.

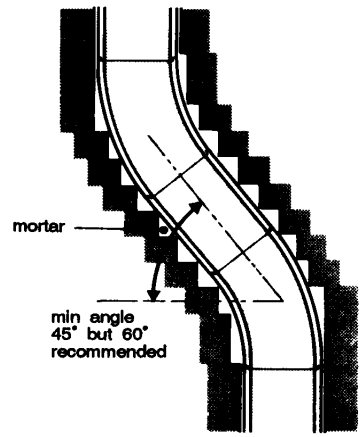
FLUE SYSTEM

Where a standard masonry chimney is not available, a proprietary type of non-combustible or non-corrosive material 150mm (6") twin wall, fully insulated pipe may be used. The pipe must terminate at a point not lower than the main ridge or adjacent outside obstructions. Where such installations exist, access to the chimney must be provided for cleaning purposes.

Horizontal runs more than 305mm (12") and 90° bends numbering more than 2 per installation should be avoided.

If it is necessary to offset the chimney the recommended angle is 60° to the horizontal and the statutory minimum is 45°. (See Fig. 8).

Offset using prefabricated bends Fig.8



CONNECTIONS

A cast iron 90° bend with cleaning door is supplied with the cooker. A vertical cast iron outlet pipe with cleaning door is available to order.

ALL FLUE CONNECTIONS MUST BE THOROUGHLY SEALED. Blocked chimneys are dangerous, keep chimneys and flueways clear, read the operating instructions.

DONARD CAST IRON PIPES AND BENDS ARE HIGHLY RECOMMENDED FOR INTERIOR USE.

NOTE: Maximum horizontal length should not be more than 300mm (12").

WHERE THE APPLIANCE SPIGOT OR FLUE PIPES PROTRUDES INTO THE CHIMNEY, CARE SHOULD BE TAKEN TO ENSURE THAT IT DOES NOT BLOCK THE CHIMNEY.

FLUE CLEANING

The flue pipe must be fitted with a cleaning plate. The flue must be inspected annually and cleaned when necessary.

USE OF EXISTING FLUES AND CHIMNEYS

When connecting to an existing chimney it is necessary to line the flue using either 6" (150mm) rigid or flexible stainless steel flue liner. (See fig. 3)

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, restricter plates and dampers etc. which could obstruct the flue at a future date must be removed before connecting this appliance. Where a chimney is not required to be lined a suitable void must be provided at the base to contain any debris which might fall from the inside wall, so as to prevent that debris from obstructing the appliance flue outlet. (Removal of debris should be facilitated by the provision of an access door). This void should have a depth of not less than 250mm (10") below the appliance connection.

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.

FLUE LINERS

Chimney's lined with salt glazed earthenware pipes are acceptable if the pipes comply with BS 1181 and must be 150mm (6"). When lining an existing chimney, a liner approved to B.S. 4543, Parts 1, 2, & 3 should be used. The liner should be secured at the top and bottom by using closure/clamping plate firmly sealed and secured and an approved terminal used at the top. (See fig.3)

It is essential that every flue system be inspected and tested by a competent person for its correct effectiveness, to ensure that the combustion products are completely discharged to the outside atmosphere.

DRAUGHT REQUIREMENTS

If connecting to a chimney a steady draught of between **1mm** (**.04) and 1.5mm (.06) inches** W.G. is required.

When a draught recorded is over 1.5mm (.06) inches W.G. a draught stabiliser must be fitted externally. While inadequate draught can seriously effect the efficient operation of the appliance, chimney's over 5.4meters (18ft) or houses built on high ground can experience excessive draught.

VENTILATION AND COMBUSTION AIR REQUIREMENTS

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

The air supply to this appliance must comply with B.S. 5410 Part 1.

The minimum effective air requirement for this appliance is 94 cm^2. When calculating combustion air requirements for this appliance use the following equation: 550mm^2 per each kW of maximum rated output above 5 kW. These requirements are illustrated in OFTEC Technical Book No.3 & B.S. 5410 Part 1.

If there is another appliance using air fitted in the same or adjacent room, it will be necessary to refer to B.S. 5410 Part 1 to calculate the additional air supply.

All materials used in the manufacture of air vents should be such that the vent is dimensionally stable, corrosion resistant, and no provision for closure.

The effective free area of any vent should be ascertained before installation. The effect of any grills 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 and B.S 5410 Part 1 from any part of any flue terminal. These air vents must also be satisfactorily fire proofed as per Building Regulations and BS 5410 Part 1.

Air vents in internal walls should not communicate with bedrooms, 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. If there is an 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. (Refer to B.S. 5410 Part 1).

Where such an 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.

OUTSIDE AIR CONNECTION

This appliance may be connected direct to the outside of the house for its combustion air supply.

1. If this option is used additional combustion air is not required, as indicated in B.S. 5410 Part 1.
2. Remove the blanking plate located at the back of the cooker and remove the primary air grill located at the front of the cooker base. Fix solid blanking plate over the front of the base (See fig. 8a & 8c) The primary air grill may be disregarded.
3. Connect the optional 125mm (5") spigot to the rear, see fig. 8b.
4. To connect this cooker to an outside air supply use 125mm (5") kit to order. (See fig. 8b).
5. Air inlets 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. This duct must also be satisfactorily fire proofed as per Building Regulations.
6. Joints between air vents and outside walls should be sealed to prevent ingress of moisture.

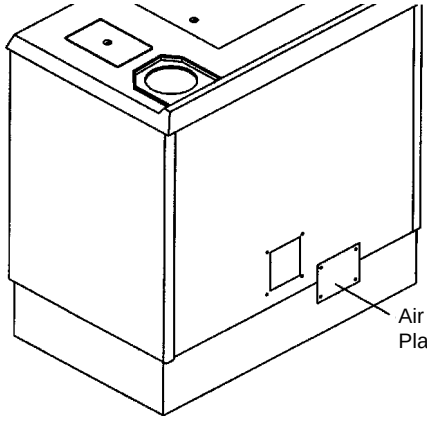


Fig.8a

Fig.8b

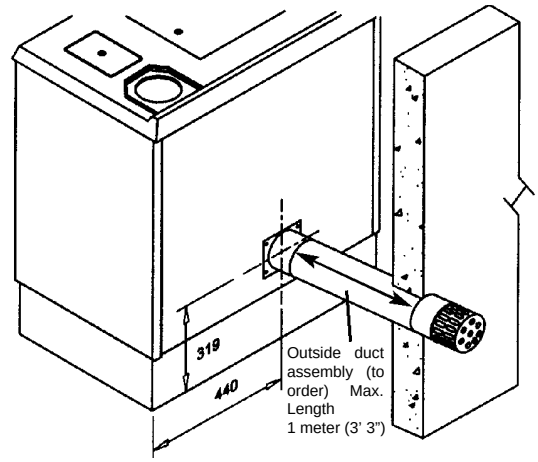
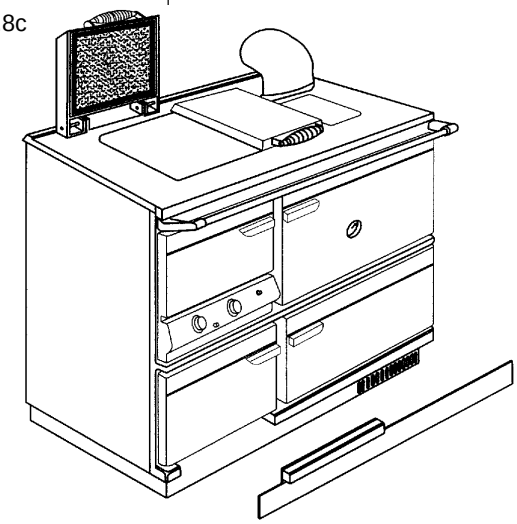


Fig.8c



DOWN DRAUGHTS

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

A suitable anti-down draught terminal or cowl will usually effectively combat direct down blow but no cowl is likely to prevent down blow due to a high pressure zone. (See figs 9 & 10). Ensure that any cowl used will not restrict the flue exit, or cause excessive back pressure.

FACTORY-MADE INSULATED CHIMNEYS

Factory-made insulated chimneys should be constructed and tested to meet the relevant standards and recommendations given in:

* B.S. 7566 – Installation of factory-made chimneys conforming to B.S. 4543 for domestic appliances.

  Part 1: Method of specifying installations design information.

  Part 2: Specification for installation design.

  Part 3: Specification for site installation.

  Part 4: Recommendation for installation design and installation.

Fig.9

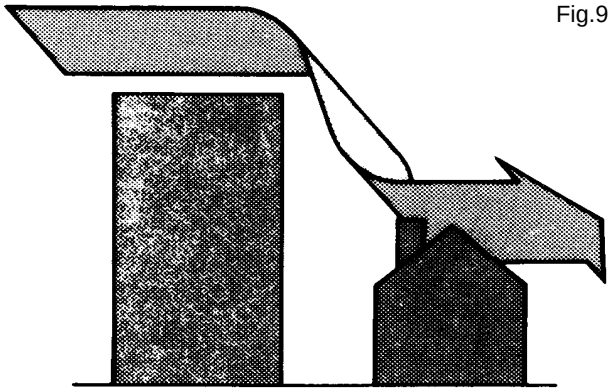
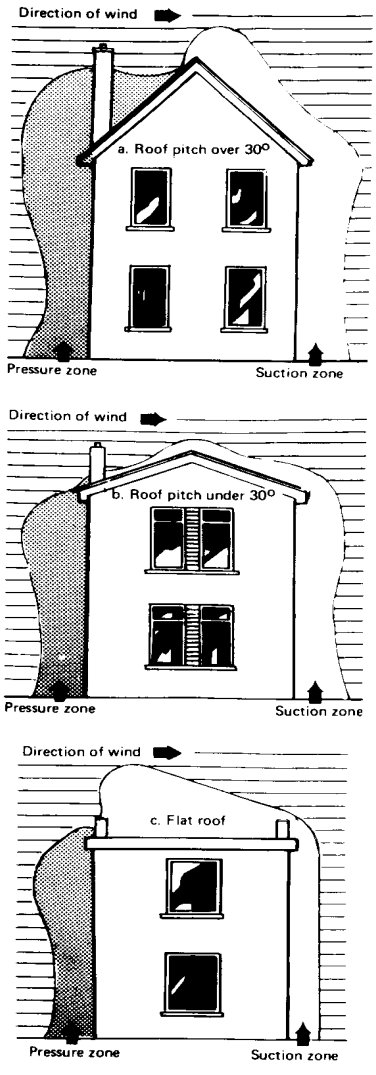


Fig.10



SUITABLE MATERIALS

* Mineral Fibre cement pipes conforming to B.S 7435.
* Insulated metal chimneys conforming to B.S. 4543 (a galvanised finish is not suitable for exterior use).
* Clay flue linings conforming to B.S. EN 1457.
* Pre-cast concrete chimney blocks, incorporated into the building structure. It is particularly important that the correct connection block be provided at the base of the flue conforming to B.S. 3572.
* Cast iron or acid resistant vitreous enamel lined mild steel conforming to B.S. 41.
* Sheet metal conforming to B.S. 4076.

HEATING

Note: The cooker must be connected to a fully pumped system.

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

(a) That the system is sound.

(b) That pipework is adequately insulated (where applicable).

(c) Check all controls, i.e. pump, motorised valves, time control, radiator valves etc., are operating satisfactorily and are compatible with the requirements of the cooker.

(d) Are any modifications necessary to make the heating system more efficient?

(e) Cleanse the system and add suitable inhibitor.

SAFETY VALVE

A non-adjustable 3 bar safety valve must be fitted to the primary flow pipe adjacent to boiler connection ensuring that any discharge will not create a hazard to occupants or cause damage to electrical components or property.

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.

The use of motorised valves, room thermostats, radiator thermostatic valves, domestic hot water controllers, etc, can greatly enhance a heating system and we recommend their use.

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

It is important that no external control devices e.g. economisers are directly fitted to this appliance unless covered by these installation instructions or agreed with the manufacturer in writing. Any direct connection of a control device not approved by the manufacturer could make the guarantee void.

PIPE FITTINGS

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

1.1 Ferrous Materials

BS 4127 Stainless steel tubes.

BS 1387 Steel tubes.

BS 1740 Steel pipe fittings.

BS 6956 Jointing Materials

1.2 Non-Ferrous Materials.

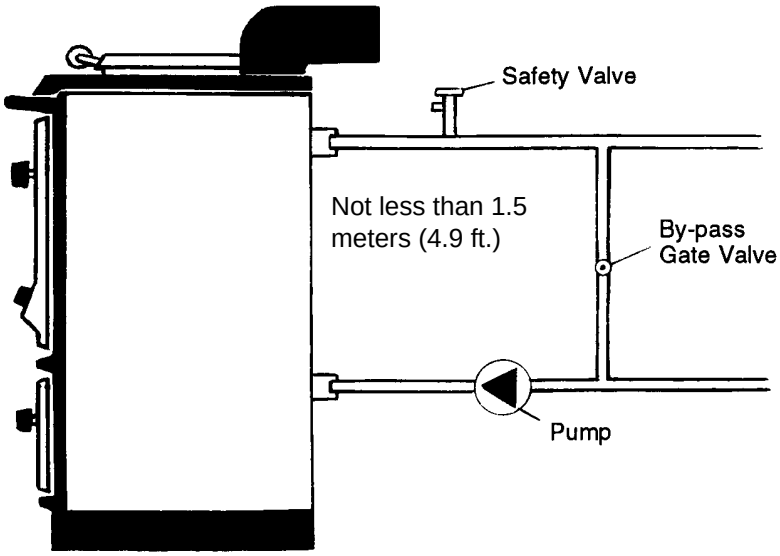
EN 29453 Soft Solder Alloys .

BS 864 Compression tube fittings.

BS 2871 & BS E.N. 1057 Copper and Copper Alloys.

BY-PASS LOOP

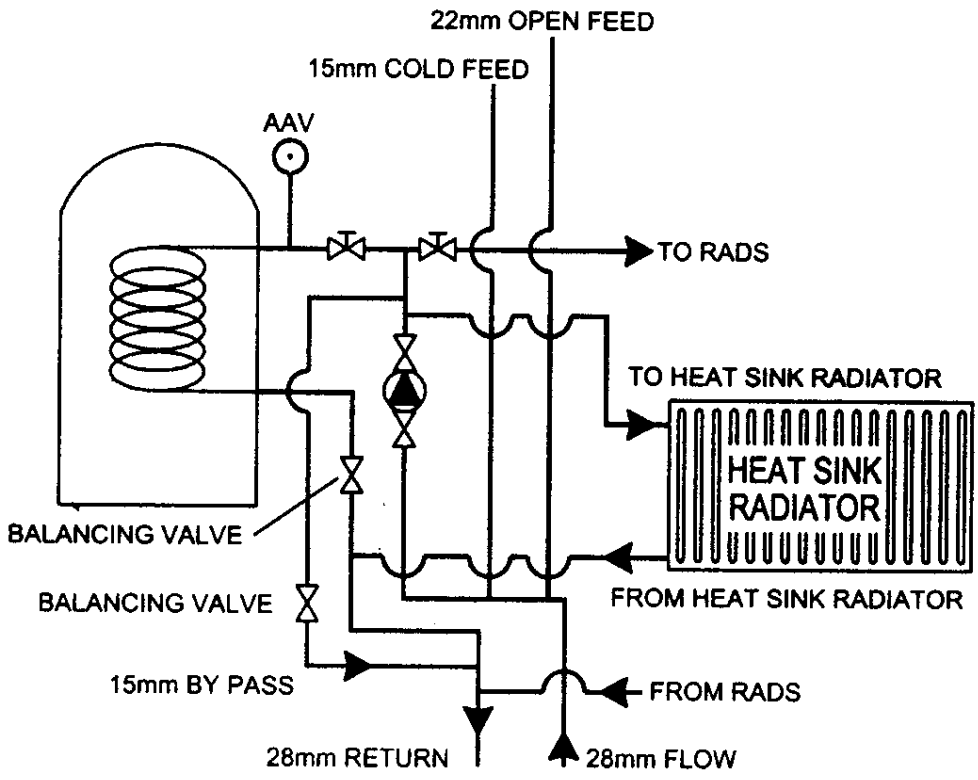
Fig.11



A 15mm system by-pass must be fitted not less than 1.5 meters (4.9ft) from the cooker to allow correct water circulation for the pump and to prevent condensation forming in the boiler. This should be balanced. A heat sink radiator must be installed in addition to the By-Pass Loop (See Fig.11 & 11A)

AIRING CUPBOARD LAYOUT

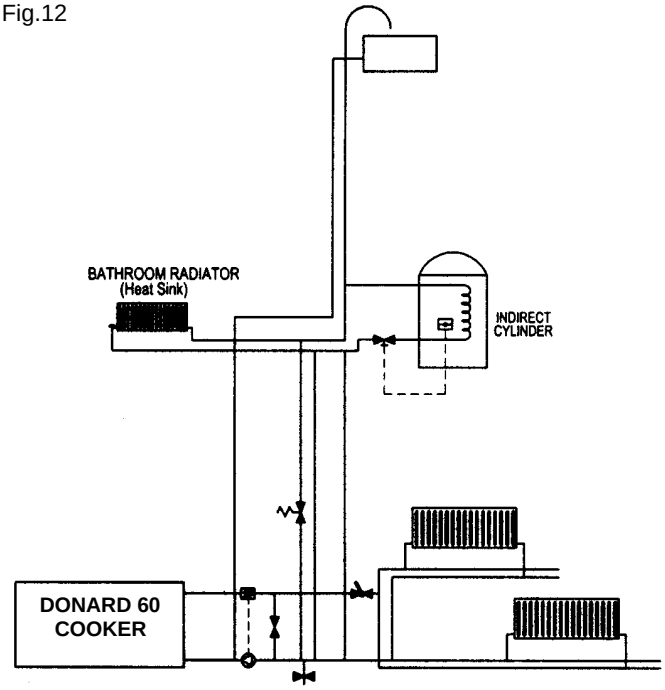
Fig.11a



The following diagrams illustrate the different types of central heating systems to which this appliance can be connected, but are not to be used as working drawings.

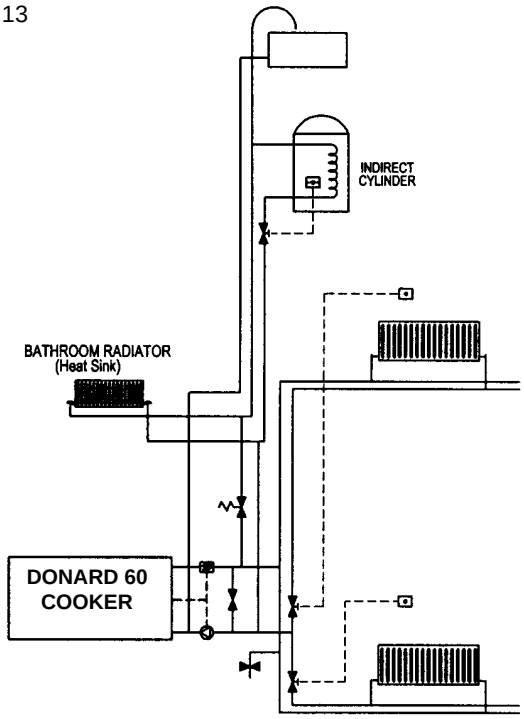
2 STOREY HOUSE FULLY PUMPED

Fig.12



2 STOREY HOUSE FULLY PUMPED USING MOTORISED VALVES

Fig.13



Autovent
Pump
Balancing Valve
Cylinder Thermostat
Non Return Valve
Motorised Valve
Safety Valve
Pipe Thermostat
Drain Cock
Room Thermostat
Expansion Vessel
Autofill Valve
Lever Valve

BUNGALOW FULLY PUMPED USING MOTORISED VALVES

Fig.14

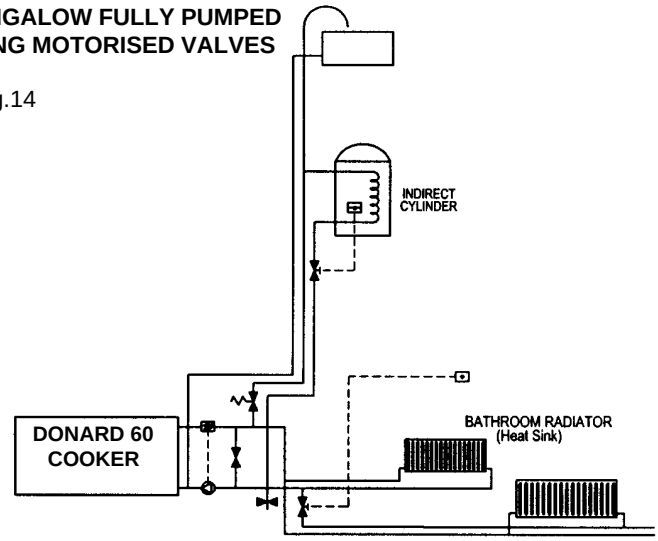
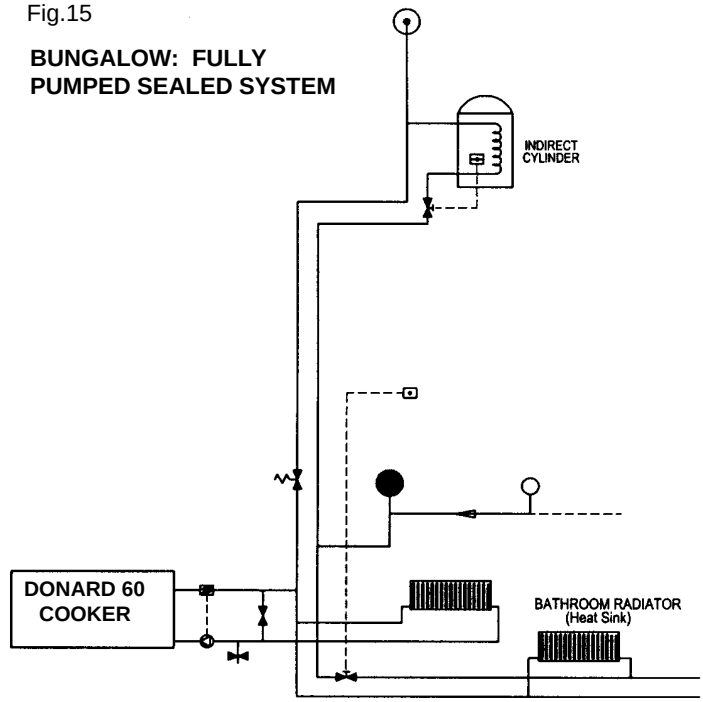


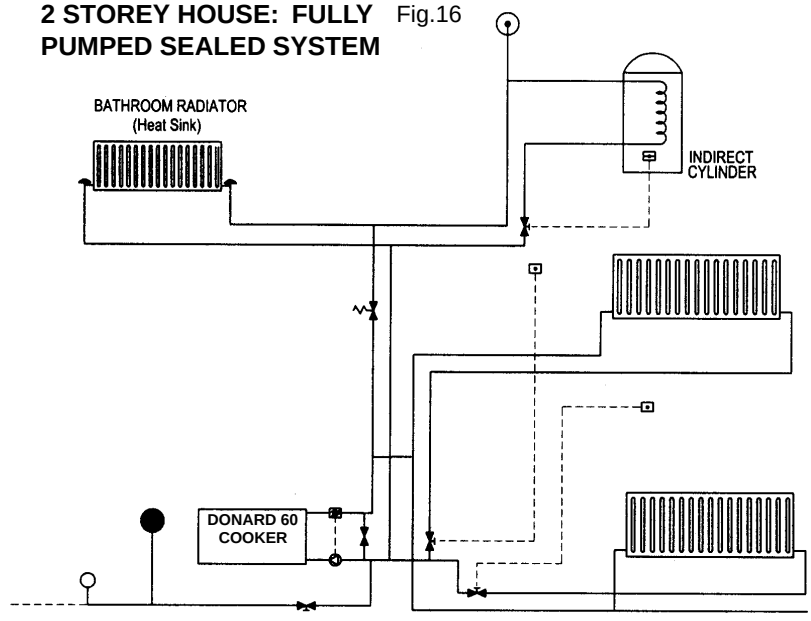
Fig.15

BUNGALOW: FULLY PUMPED SEALED SYSTEM



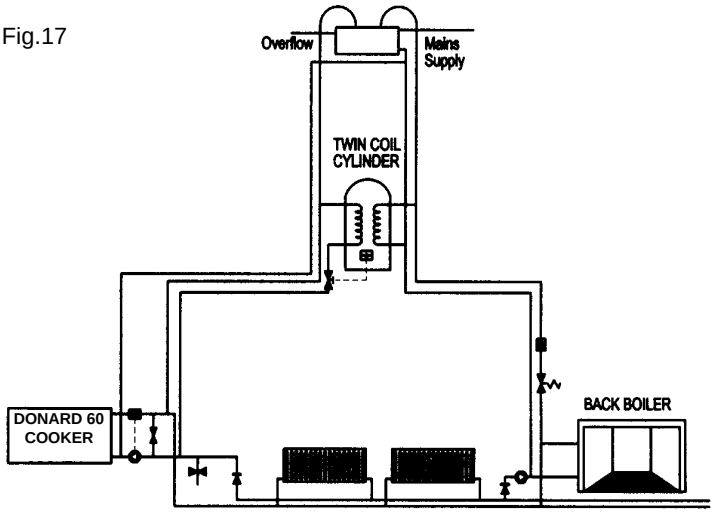
2 STOREY HOUSE: FULLY PUMPED SEALED SYSTEM

Fig.16



INTERLINK SYSTEM

Fig.17

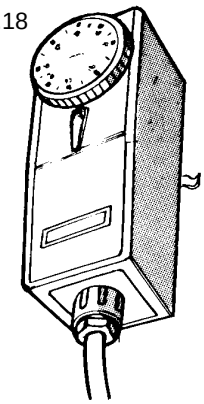


PIPE THERMOSTAT

The fitting of a pipe thermostat to the common flow pipe within 150mm (6") of the cooker is recommended in order to activate the water circulation pump when water in the boiler reaches 60°C. This will ensure that return temperatures are maintained and allow the pump to "run on" to transfer any residual heat to prevent possible overheating. (See fig. 18 & 19).

When the flow temperature falls below this setting the pipe thermostat will de-activate the circulating pump and allow the cooker to operate. (See Fig.18).

Fig.18



If a second optional pipe thermostat is used see (S Plan fig.19) then it should be fitted within 8" of the cooker common flow. It must be set at 85° and wired to make temperatures rise to activate the central heating motorised valve should this temperature be achieved, this will ensure that any excessive heat is transferred from the boiler.

NOTE: BOTH THERMOSTATS MUST BE CONNECTED TO MAKE ON TEMPERATURE RISE.

WATER CIRCUIT TEMPERATURE

The return water temperature must be maintained at not less than 50°C so as to avoid condensation on the the boiler and return piping. Fitting a pipe thermostat to the flow pipe and wiring it into the pump control will ensure rapid circulation of the hot water to avoid premature burner shut down being activated by the cooker thermostat when the central heating circuit is in use.

INDIRECT DOMESTIC CYLINDER

The cooker must only be connected to an indirect cylinder of recommended size of 180 litres using 28mm (1") diameter flow and return piping. It is recommended that the cylinder is lagged together with pipework with runs in excess of 4 meters (13').

NOTE: One radiator (normally the bathroom) should be selected for use as a heat sink, and connected to open circuit only. (See Fig.11A).

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, window and external doors. Insulation and draught-proofing can greatly reduce running costs while equally enhancing living conditions.

DRAINING

Key-operated drain taps to B.S. 2879 should be provided in an accessible position 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.

CARE FOR YOUR CENTRAL HEATING SYSTEM

We strongly recommend the use suitable corrosion inhibitors and anti-freeze solution in your heating 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.

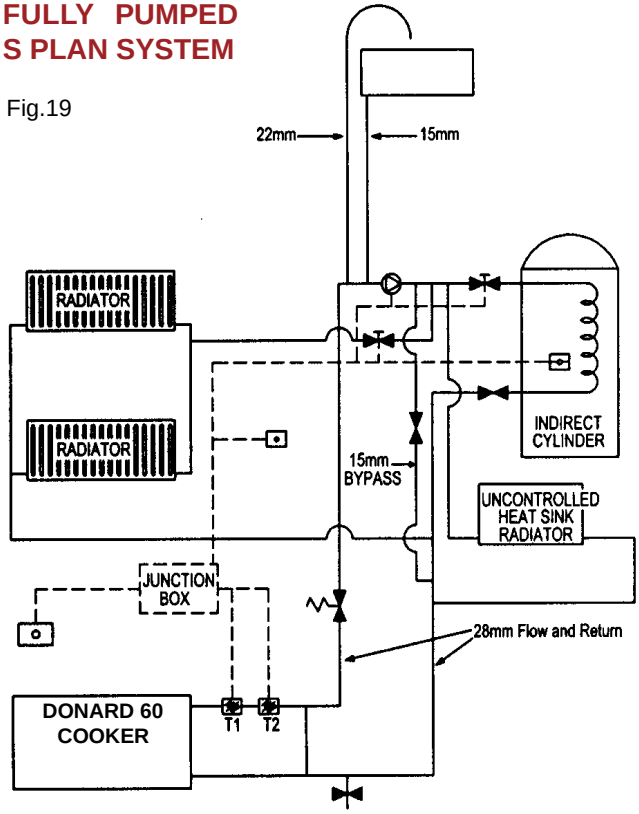
SERVICING

To ensure continued efficient and safe operation of the appliance, it is recommended that it is checked and serviced by an Authorised Stanley Service Engineer at least once a year.

Flexible oil lines should be inspected at each and every service visit. There are varying types of line with guarantee periods between 1 and 5 years. It is important in the interest of safety that flexible lines are changed at regular intervals. Inspect for date code stamp and if the line is out of its guarantee period or shows signs of being kinked or damaged, replace immediately.

FULLY PUMPED S PLAN SYSTEM

Fig.19



FUEL INSTALLATION

OIL STORAGE TANKS

In order to enable sediment and water to be removed from steel tanks a drain valve must be fitted.

Oil storage tanks made of steel and all connecting equipment (e.g. filling pipes, and vent pipes) should comply with B.S. 799 Part 5. Galvanised steel must not be used. Polyethylene (Plastic) tanks should comply with OFTEC standard OFS T100 and or equivalent. Oil should never be stored in transulent plastic containers.

An isolating valve should be fitted at the tank outlet, in an accessible position so that the oil supply to the appliance can be shut off if required. This isolating valve must be of a type suitable for use with oil. (see fig. 20,21,22, & 23).

Oil storage tanks support must be carried out in accordance with the tank manufacturer recommendations. Tanks should be located in the most un-obstructive position possible having taken safety, filling, maintenance and the need, if any, to provide a head of oil for the burner into consideration.

FUELS

THE RECOMMENDED FUEL FOR THE COOKER BURNER IS CLASS C2 KEROSENE 28 SECOND VISCOSITY FUEL OIL.

FUEL SUPPLY LINE

The oil supply line from the oil storage tank to the appliance should be of an approved and suitable pipe with a minimum internal diameter of 10mm (3/8”) using the flexible oil line supplied as the final connection to the pump.

Oil supply pipes are normally run in annealed copper tube complying to EN 1057, it can be obtained in coil or half hard form for use with bending machines. This pipe can also be obtained with protective plastic sheathing applied. Fittings for copper pipe should be compression of the flared manipulative type to B.S. 864 : Part 2. Steel pipes complying with B.S. 1387, if used, must be protected from corrosion. Galvanised pipe and fittings must not be used.

Screwed joints must only be made with taper threads complying to B.S. 1740 : Part 1.

Jointing materials must be of types intended for use with oil fuel. Special petroleum - resisting compounds and PTFE tape are suitable. External pipes should preferably be run with a continuous rise towards the direction of flow, so that air can be vented off. It is important to avoid high points which could cause air locks.

Exposed lengths of oil supply pipe must be properly supported by purpose made clips securely fixed in place. Metal clips formed so as to hold the pipe on to a saddle are preferred. Consideration should be given to avoiding routes which expose the pipe to severe chilling which could cause freezing of the oil. Where pipes are buried, they must be protected from accidental damage. The use of joints underground should be avoided if at all possible. If joints have to be fitted in pipes laid below ground, access to them must be provided.

An oil filter (5 - 10 micron) and stop valve must be fitted to the fuel feed line and located near the supply tank and facilities should be provided to enable it to be serviced without draining down the oil supply system. (See Figs. 20,21,22, & 23).

At the point where the oil line enters the building, the oil line must be fitted with an approved remote acting fire valve, which meets the requirements of B.S. 5410 : Part 1, fitted with the appropriate length of capillary. The heat sensoring phial of the fire valve must be fitted to the clip provided in the burner compartment. It is absolutely essential that the fire valve is located externally and is as close as possible to the appliance. For existing installations where the oil supply is built into the structure internally, the remote acting fire valve should be fitted where the oil supply line is first exposed internally. This type of layout is not recommended for new installations.

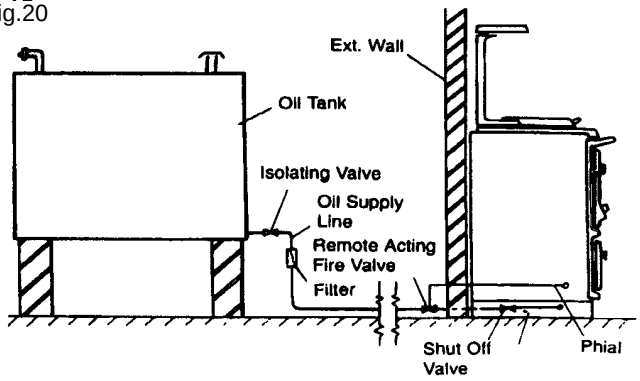
When gravity feed is used (the most common) the minimum head should not be below 1m (3'3") and the maximum head should not exceed 6.5m (21' 3").

NOTE: The pump is factory set for a single pipe installation.

Single pipe supply system: Tanks servicing this appliance by means of a single pipe need to be positioned so that they will apply the minimum head required 1 meter (3' 3") of oil to the burner when the fuel level is at its lowest point.

Refer to BS 5410 to calculate the additional head requirement relating to pipe length and size.

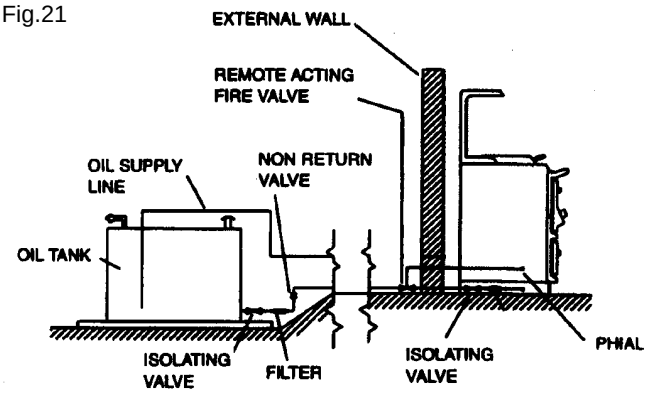
Fig.20



Two pipe supply system: If the tank base is below the level at which the gravity feed to the burner can be maintained a two pipe oil supply system may be adopted. (See fig. 21). The non-return valve in the supply line of the two pipe system is required to prevent oil running back from the burner and un-priming the oil pump. The non-return valve in the return line is only required if the top of the tank is above the burner. Its purpose is to prevent oil running back through the burner during maintenance.

TWO PIPE SYSTEM: BOTTOM OF OIL STORAGE TANK BELOW OR LEVEL WITH BURNER

Fig.21

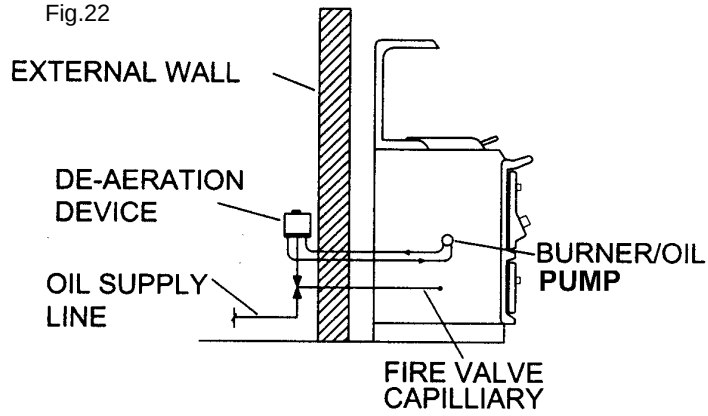


Single pipe system with de-aeration device fitted: This system can be used where the tank base is below the level at which gravity feed to the burner can be maintained and the burner incorporates an oil pump. The chamber is fitted close to the burner and is linked to the tank by a single pipe, thus saving the return pipe required by the two pipe system as described previously. Any air in the oil brought up from the tank is bled off in the de-aeration chamber.

De-aeration chambers must always be installed externally to buildings because they emit small quantities of vapour. The chamber is connected to the oil pump in the burner of the appliance by normal two pipe loop.

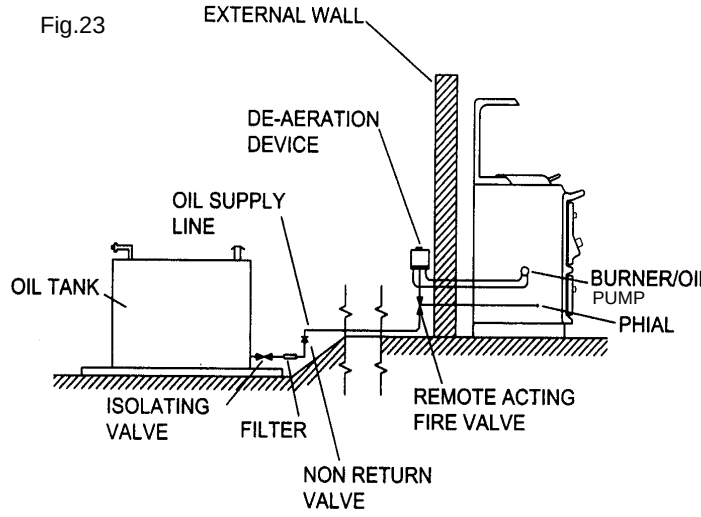
DETAILS OF DE-AERATION DEVICE CONNECTORS

Fig.22



SINGLE PIPE SYSTEM: WITH DE-AERATION DEVICE BOTTOM OF OIL STORAGE TANK BELOW OR LEVEL WITH BURNER

Fig.23

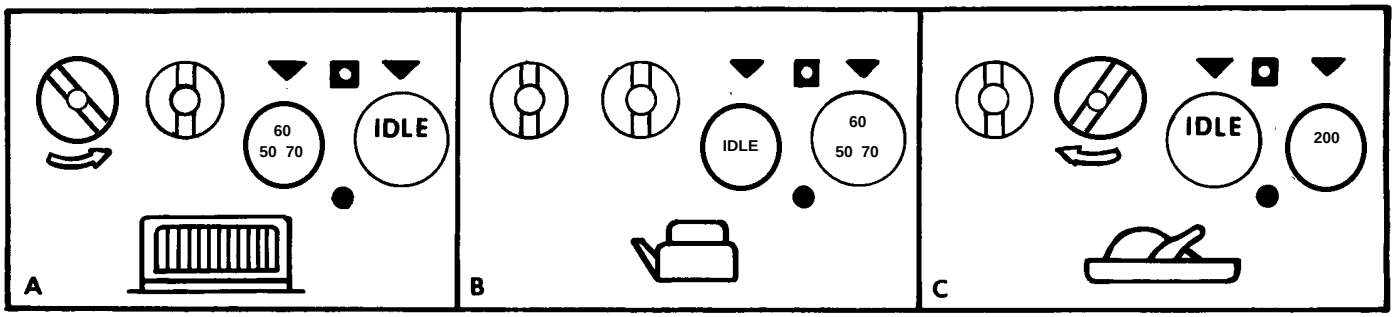


These requirements are further explained within the following documents:

* B.S. 5410 : Part 1 : Code of Practice for oil firing installations up to 45 kW output capacity for space heating and hot water supply purposes.
* OFTEC Technical Information Book Three. Installation requirements for oil fired boilers and oil storage tanks.
* The Building Regulations Part J: England, Wales, Part F - Section 4 Scotland and Part L Northern Ireland.
* The Building Regulations Part J: Rep. Ireland.

OPERATION

The hotplate in this appliance is treated with a protective coating, which when heated will evaporate and will cause an odour for a short period on first lighting.



RADIATORS HOT PLATE OVEN

HEATING MODES

There are three main heating modes as follows, determined by the positioning of the boiler baffles which are located by rotating the control knobs. (See above and Figs. 24 & 25).

Setting A
High Boiler Output with Hot Plate and Oven

1. Set the oven thermostat to idle.
2. Turn the left hand boiler baffle control knob anti-clockwise until it engages.
3. Set the boiler thermostat to required temperature.

Setting B
High Hot Plate Output with Boiler and Oven

1. Set the boiler thermostat to idle.
2. Turn both boiler baffle control knobs to down position.
3. Set the oven thermostat as required to control hot plate temperature.

Setting C
High Oven Output with Hot Plate and Low Boiler Output

1. Set the boiler thermostat to idle.
2. Turn the right hand boiler baffle control knob clockwise until it engages.
3. Set the oven thermostat to the required cooking temperature.

Fig.24

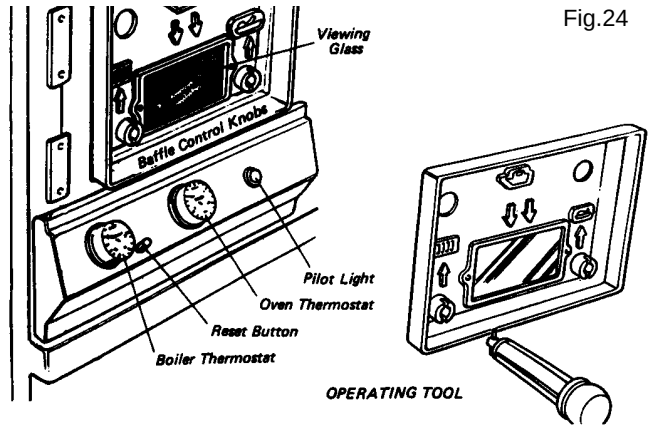
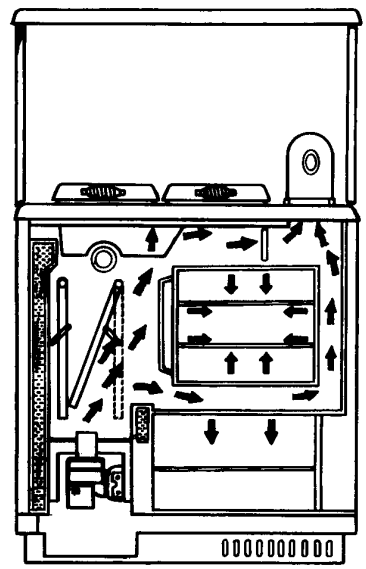


Fig25



LIGHTING

(a) Switch on the electrical supply.

(b) Select operating mode by opening the fire door and turning the baffle control knob with the tool provided to the required position.

(c) Turn on the oil supply.

(d) Turn on radiators as required.

(e) Turn on the cooker control knobs to the required setting.

Indicator Light/Pilot Light

The red light will be on whilst the burner is firing and it will go out when the temperature selected is reached.

Reset Button / High Limit Stat

The thermostat reset button will pop out if the thermostat settings are exceeded.

To reset simply unscrew the protective cap and press button inwards. If high limit situation persists contact your local Stanley Agent.

To Switch Off

Turn both thermostats to “off”.

OVENS

The MAIN OVEN is heated on all four faces and may be used for roasting and baking when in Setting C, Oven Mode.

The SIMMERING OVEN is heated on the top face only. The temperature will be approximately half that of the main oven, and is ideal for slow cooking, casseroles, stews, soups etc.

BURNER DOES NOT IGNITE

Check:

(a) that the electricity is switched on.

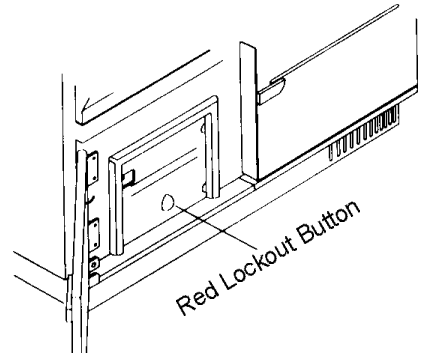
(b) that the oil supply valve is open.

(c) that the thermostat reset button is pressed in.

(d) that the burner lockout button is pressed in. If the lockout button (located inside the burner door) glows red – press to reset. (See Fig. 26).

(f) If in doubt contact your local Stanley Approved Commissioning Service Agent.

Fig.26



CENTRAL HEATING

The boiler output is determined by the position of the boiler baffle as follows:

Setting A
Boiler Max. Output ..17.6 kW - 60,000 BTU’s/hr

Setting B
Hotplate Max. Output ....11 kW - 38,000 BTU’s/hr
Min. Output .....6 kW - 20,000 BTU’s/hr

Setting C
Oven Max. Output .....7 kW - 25,000 BTU’s/hr
Min. Output .....2.6 kW - 9,000 BTU’s/hr

(The above may vary slightly depending on individual installation conditions)

The boiler therefore will operate at its maximum output at setting A of the controls with the thermostat turned up to 90°C. A range of outputs from the boiler may be obtained to suit individual requirements, normal operating setting 75/80°C by adjusting the thermostat between 50°C and 90°C. In this mode hot plate and oven cooking temperatures are achieved but will vary depending on central heating conditions.

SUMMER SETTING

For Summer use and lower boiler output use setting C. When using the oven in this position turn the oven thermostat to the required temperature.

HOT PLATE

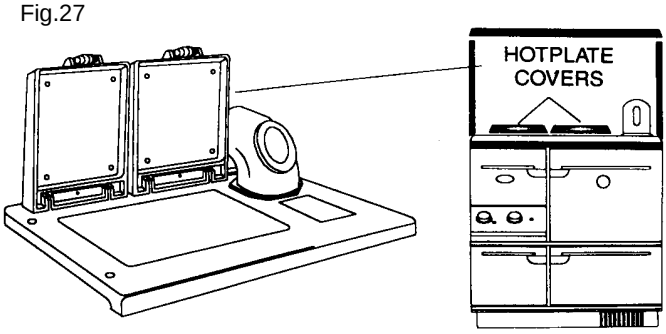
The hot plate is machine ground for maximum heating and it is temperature graded, the left hand side over the burner being the hottest at setting A and B and the right hand side is suitable for simmering.

For maximum hotplate temperature use setting B.

HOT PLATE INSULATING COVERS

The insulating covers retain most of the heat that would otherwise be radiated into the kitchen. They also retain the heat in the hot plates so that rapid heating of cooking utensils will occur when one or both of them are lifted for cooking purposes. (See Fig. 27).

Fig.27



IMPORTANT: WHEN HOTPLATE IS NOT IN USE ENSURE THAT HOTPLATE COVERS ARE IN A DOWN POSITION.

COOKING UTENSILS

For best cooking results and economy of operation use heavy based, flat bottomed utensils.

IMPORTANT: DO NOT USE MIS-SHAPENED PANS WHICH MAY UNSUITABLE. DO NOT USE ROUND BASED WOKS.

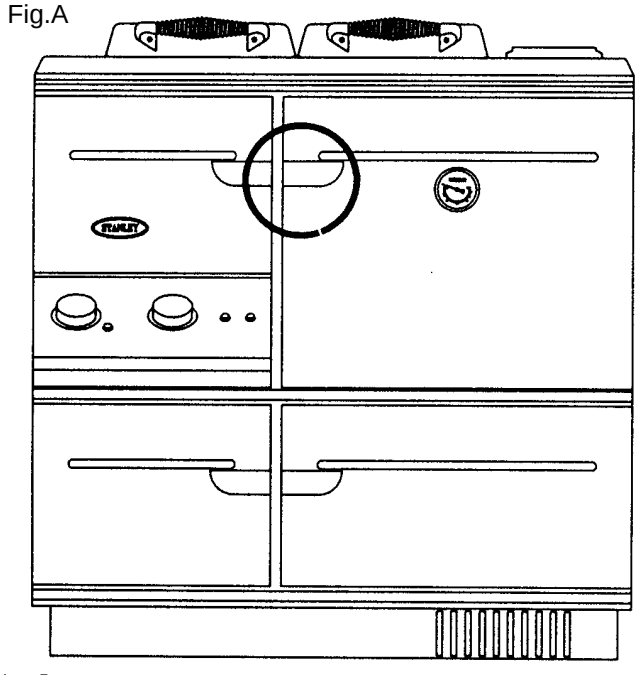
IMPORTANT: WE DO NOT RECOMMEND DEEP FAT FRYING ON THIS APPLIANCE.

HEATING SYSTEM CONTROLS

We recommend the use of zone control valves especially in larger systems (see plumbing schematics).

OPENING COOKER DOOR

Fig.A



To open the cooker door grip the door handle between the fingers and thumb as per Fig.C, swing the door handle in an outwards and upwards direction as shown in Fig. D.

Fig.B

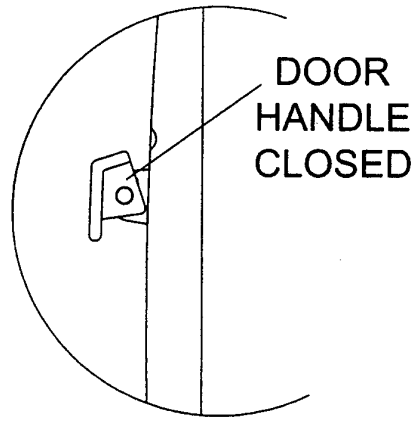


Fig.C

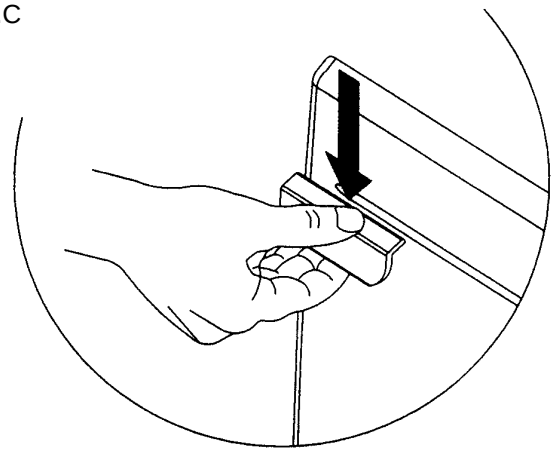


Fig.D

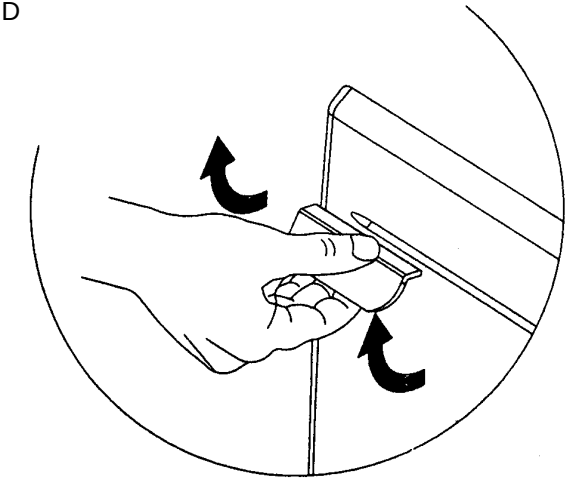
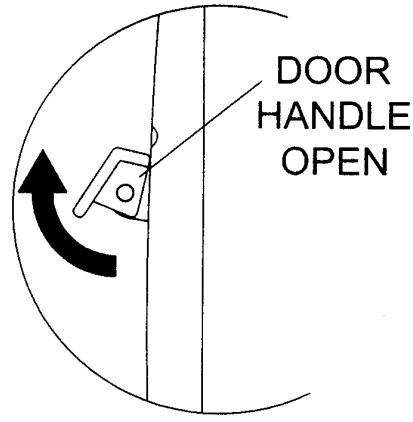


Fig.E



WIRING DIAGRAMS

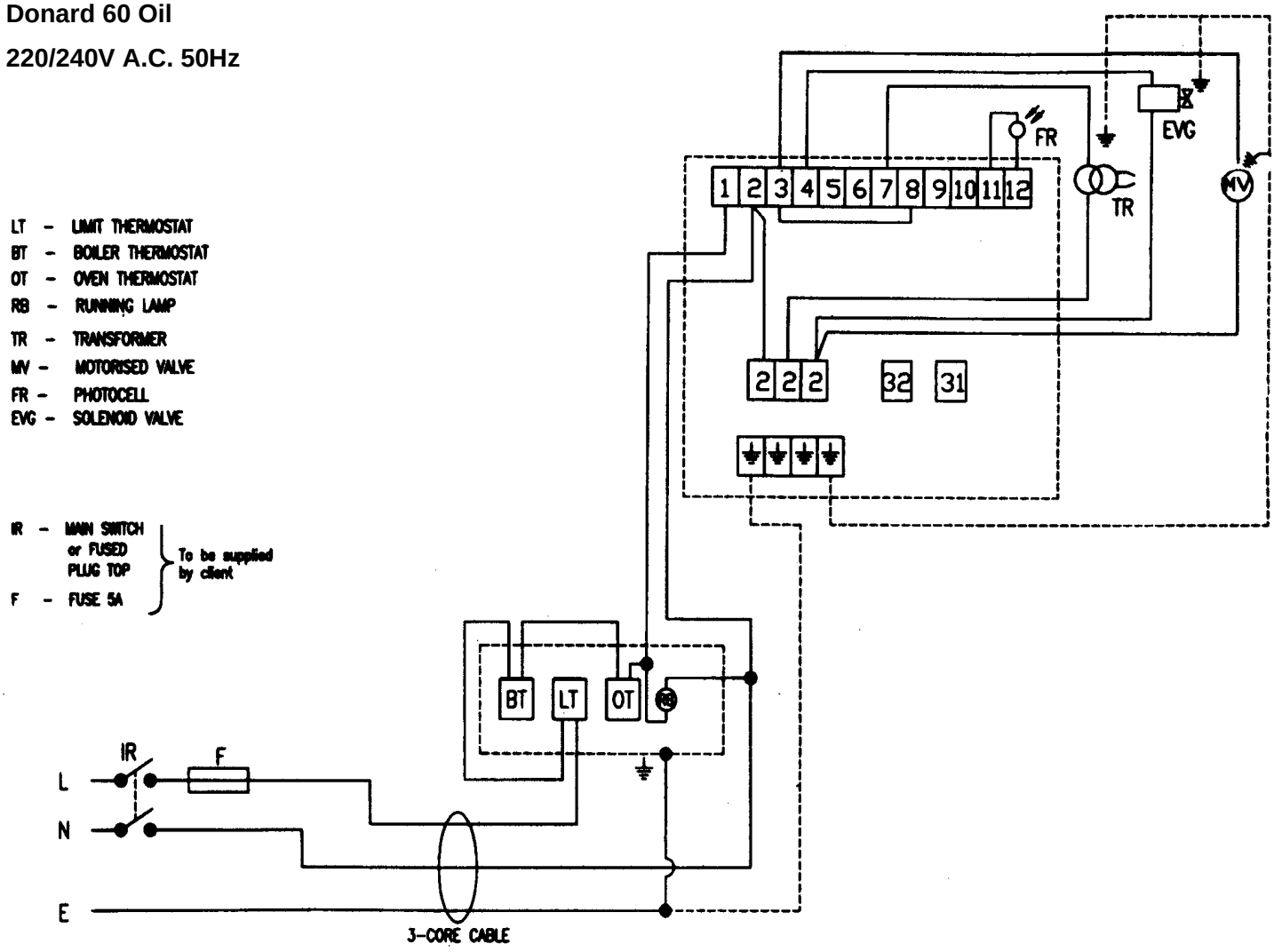
Fig.28

WARNING:

Before carrying out any servicing or maintenance isolate cooker from mains supply as switching off the time switch will not break constant live circuit.

Donard 60 Oil

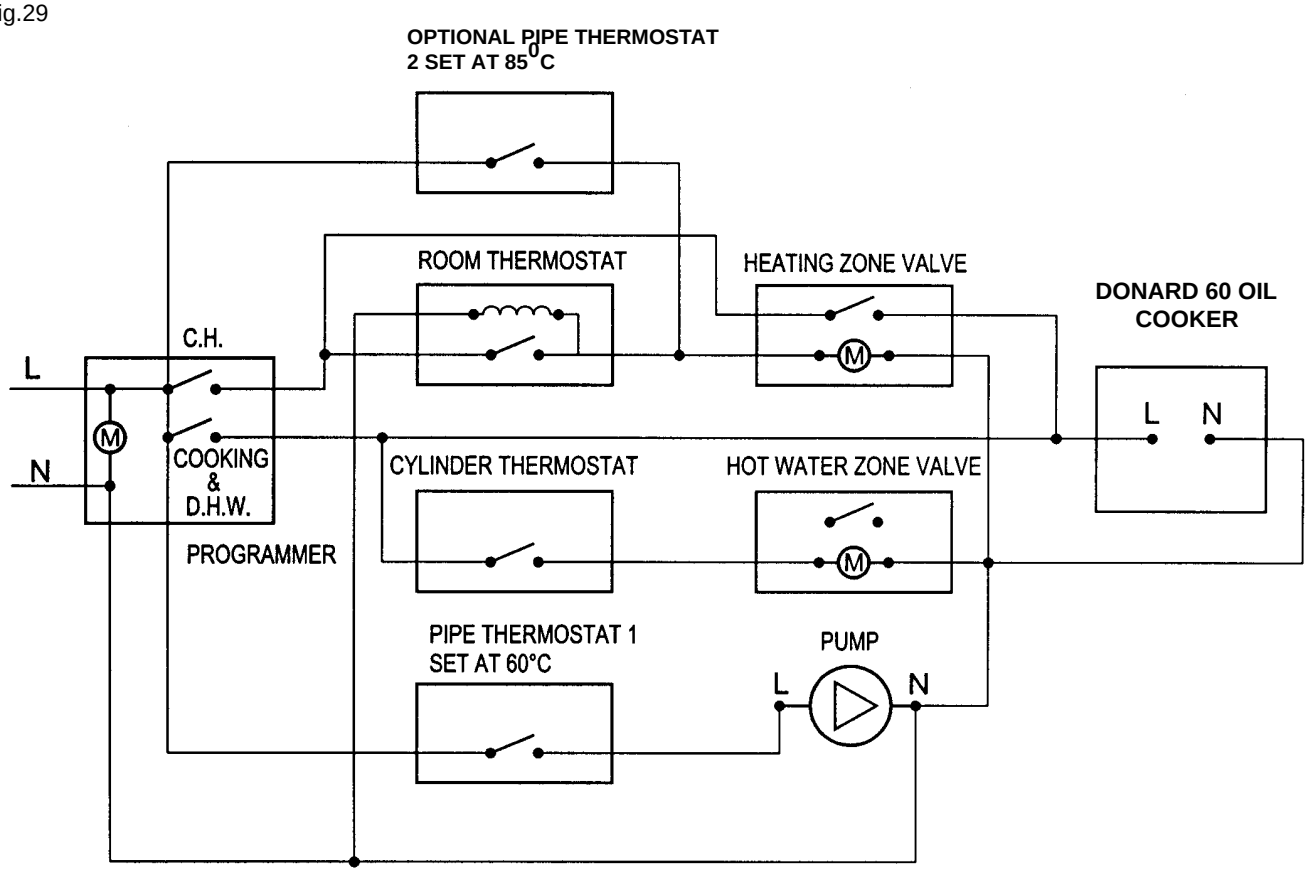
220/240V A.C. 50Hz



WARNING: THIS APPLIANCE MUST BE EARTHED

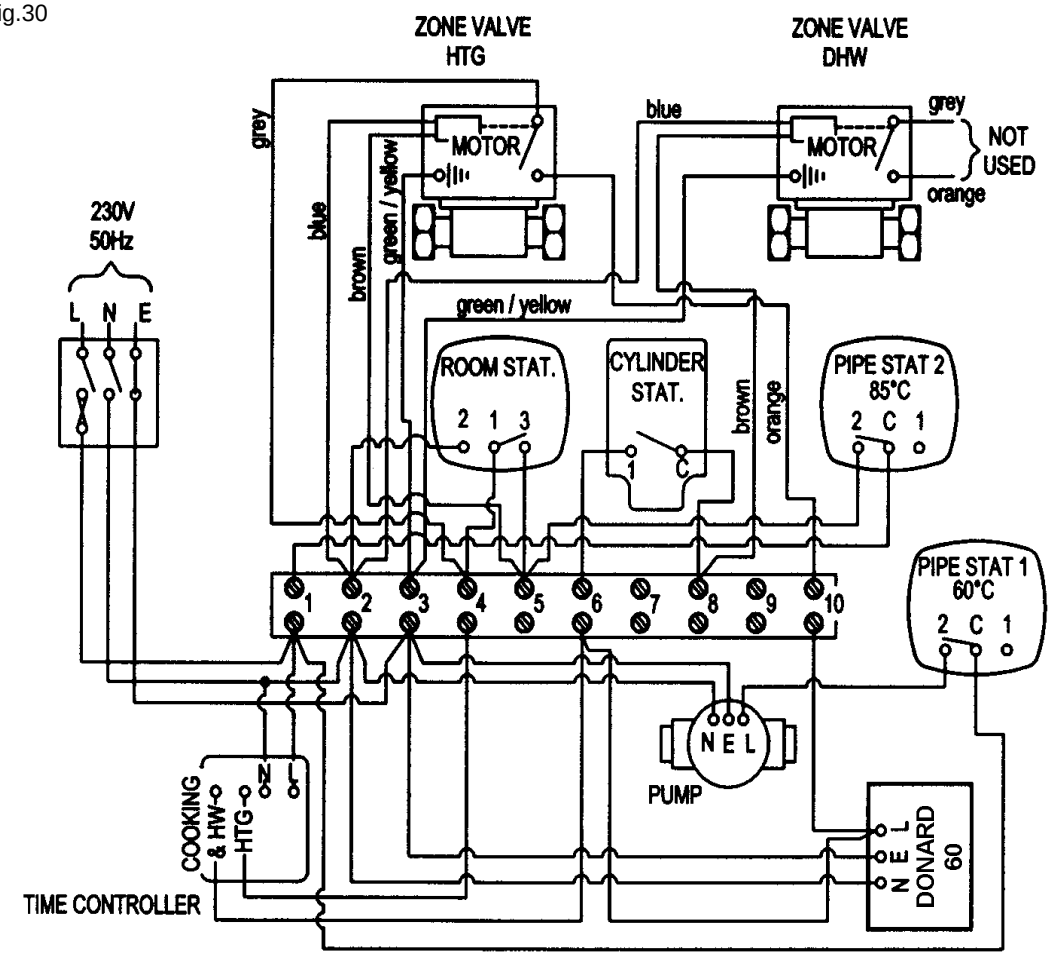
S PLAN WIRING DIAGRAM

Fig.29



WIRING DIAGRAM

Fig.30



COMMISSIONING CHECKS

1. Check that the boiler is full of water.
2. Check all wiring is correct.
3. Turn on the electrical supply.
4. Check lockout (8 secs).
5. Check and set combustion.
6. Check free movement of baffles.
7. Check oven and boiler thermostats for correct operation.
8. Check the remote acting fire valve.
9. Check that pipe stat is fitted.
10. Check temperature setting - pipe stat.
11. Check T between flow 11°C (20°F).
12. Check heating circuit and balance if necessary.
13. After the system has achieved its operating temperature, a flue gas analysis and check for smoke should be carried out. Undertake flue draught reading and check for spillage.
14. Check the correct position of the air shutter, which gives the highest reading of CO_2 without exceeding a smoke of No. 0 - 1 (Bacharach). Refer to the manufacturer's instructions for additional information.
15. Although the pump pressure is factory set, it must be checked and adjusted if necessary. This must be done in conjunction with an oil pressure gauge.
16. Check if complete system is working correctly.
17. Check all items from packaging are removed from ovens and the shelves are properly positioned.
18. Current for flame indication: 35 µA.
19. After withdrawing the mains cable, tighten the anti- tug gland located at the left side of the cooker base level.

FUNCTION

Normal Start

Pre-ignition and pre-purging, pre-ignition alone: 7 seconds Oil is released, and the burner operates, if the flame forms within the safety time of: 10 seconds.

Post ignition after oil release:

BHO 61 - 5 seconds.

False light at start

If oil is released and no flame is established the control will cut out within the safety time of : 10 seconds.

No flame formation at start

If oil is released and no flame is established the control will cut out within the safety time of: 10 seconds.

Flame failure in operation

In the event of flame failure in operation the oil supply is cut off and the control restarts the burner as described under the heading "Normal start". On flame failure, immediately after burner start, the control will initiate re-ignition.

Flame monitoring

The flame is monitored by photo unit LD.

Note: In accordance with the latest ISO and DIN standards, type BHO activates the safety relay if the photo unit is exposed to light in the pre-purging period.

Control of flame signal

The photo current is measured with a D.C. amp-meter (moving coil instrument) which is connected in series with the photo unit.

SERVICING

We recommend that the cooker and burner be serviced annually by an Authorised Stanley Service Engineer.

Your STANLEY distributor will let you have the name of your local service agent.

TO SERVICE THE COOKER, THE FOLLOWING PROCEDURE SHOULD BE ADOPTED.

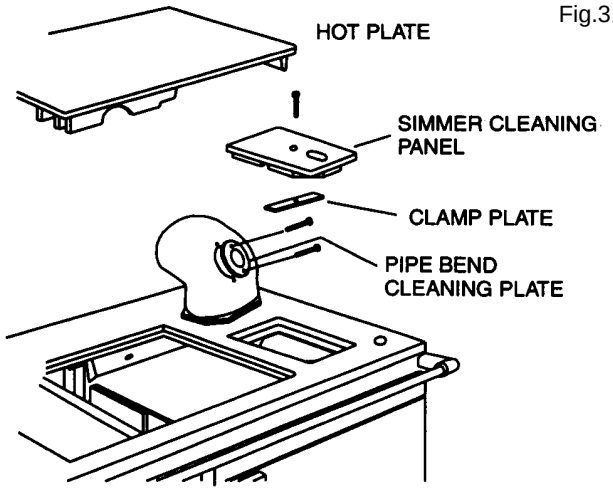
WARNING!
ISOLATE THE ELECTRICAL AND OIL SUPPLY TO THE COOKER.

IMPORTANT: THE BRAIDED FLEXI OIL LINE SHOULD BE CHECKED ON EVERY ANNUAL SERVICE AND REPLACED AT LEAST EVERY 3 TO 4 YEARS.

FLUE CLEANING (See Figs. 31 & 32)

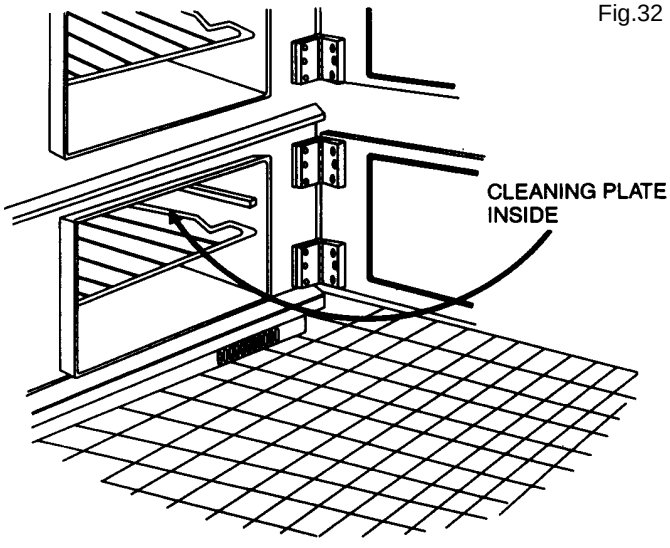
1. Remove the retaining screws from the hotplate and also the screw of the simmer cleaning plate. Remove hotplate and cleaning panels. Remove the oven passage way cleaning plate located on the top of the warming oven and also the bend cleaning plate.
2. All deposits from the flue pipe and the top of the oven may be brushed down the left hand or right hand sides of the oven. Deposits which have accumulated on both the left and right hand sides of the oven should also be brushed downwards.

Fig.31



3. To remove these deposits thoroughly, clean out the residue from the side flues and base plate through the warming oven cleaning opening.
4. Check flue and clean as necessary.

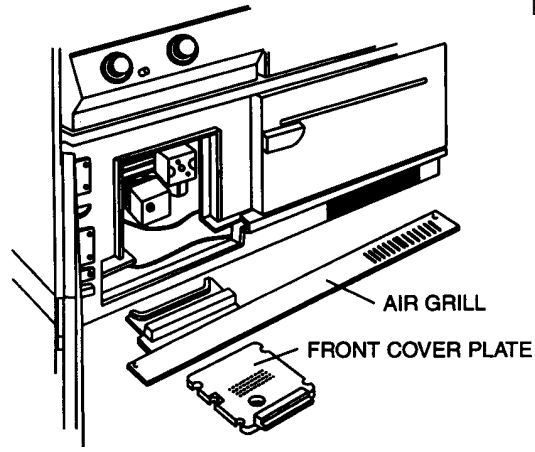
Fig.32



FIREBOX CLEANING

1. SWITCH OFF ELECTRICAL AND OIL SUPPLY TO THE COOKER.

Fig.33



2. To remove the burner take out the four screws from the base frame which will drop the air grill and cover plate. Remove the four outer screws from the cover plate of the front of the burner area. Slacken the two screws holding the burner in place and drop the burner down. (See Fig.33).

   Withdraw the burner assembly complete. (See Fig. 34 & 35).

   Care should be taken not to damage the electrical and oil leads connected to the burner.

BURNER HOLDING SCREWS Fig.34

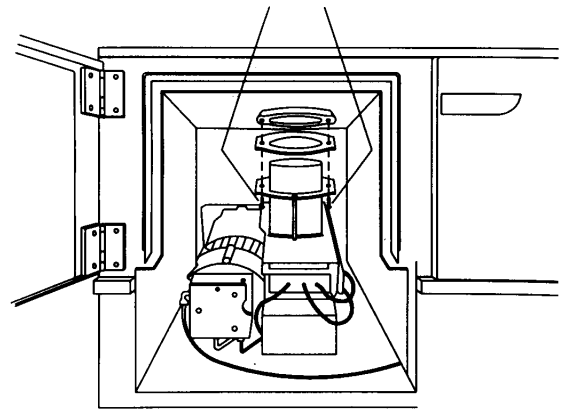
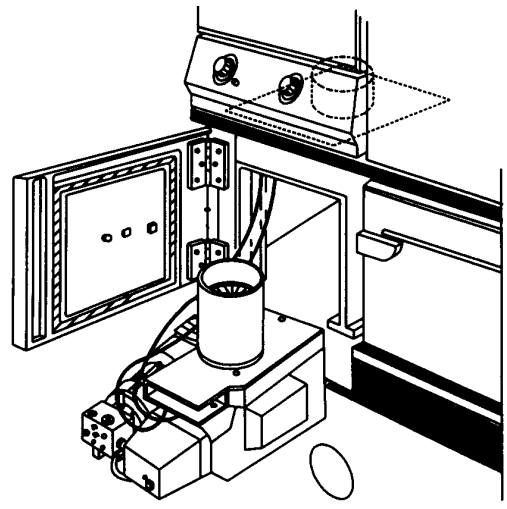


Fig.35



3. The burner may now be serviced by a competent person. The nozzle must be replaced during annual servicing.

4. To clean deposits from the boiler baffles set to position B and clean both sides down in to firebox. Remove all soot deposits from the boiler, and the firebox baffles, and generally clean out the firebox area. N.B.: Do not use a scraper on the ceramic baffles. Check condition of baffles and oven protection plate and replace if necessary.

   It is helpful to use a vacuum cleaner to collect dust deposits that will have accumulated.

5. Care should be taken when refitting the burner assembly that the insulation material over the burner blast tube is not damaged. Also ensure that the electrical and oil leads are not twisted. Push the burner assembly into position and ensure a good seal. Tighten screws, replace air grill and cover plate, etc.

6. Replace the oven passage way cleaning plate, simmer cleaning plate and bend cleaning plate, ensuring that the surfaces have been cleaned and that fresh fire cement or gasket has been used. Use new insulating tape before replacing the hotplate, clean off cement from hotplate cleaning panel and apply fresh cement or gasket. Tighten home fully the retaining screw in the cleaning panel connected to the tie bar.

7. Switch on electrical and oil supply. The cooker is now ready for operation.

8. Undertake combustion test, flue draught and check for spillage.

CLEANING

IMPORTANT: BE CAREFUL OF THE HOT APPLIANCE.

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

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

1. Wipe over daily with a soapy damp cloth, followed by a polish with a clean dry duster.

2. If milk, fruit juice or anything containing acid is spilt on the hob or down the cooker, be sure to wipe it immediately or the vitreous enamel may be permanently discoloured. Jam and preservatives containing sugar can permanently damage the vitreous enamel.

3. Keep a damp cloth to hand while cooking, to wipe up any spills as they occur, so they do not harden and become more difficult to remove later.

4. If spills do become baked on, a cream cleanser can be used. For stubborn deposits a soap impregnated pad can be carefully used on the vitreous enamel.

5. Use only products recommended by the Vitreous Enamel Association, these products carry the Vitramel label.

6. In the oven, spills and fat splashes are carbonised at high temperatures: occasionally brush out with a stiff brush. The shelves can be soaked and cleaned with a cream cleanser.

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

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

MILD STEEL

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.

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.

HOT PLATE

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

WARNING: THIS APPLIANCE MUST NOT BE INCORRECTLY USED.

IMPORTANT: WE DO NOT RECOMMEND DEEP FAT FRYING ON THIS APPLIANCE**.**

CONDENSATION

If this appliance is run for extended periods on the low settings the unit can cool down to an extent that vapour in the flue gases may condense. This will make the inside of the flueways damp, creating a sooty deposit which will reduce the efficiency of the appliance.

It is best to run this appliance occasionally at the higher setting in order to prevent the formation of condensation.

GENERAL SERVICING AND CLEANING OF THE APPLIANCE

It is recommended that this appliance is serviced annually.

1. Ensure all electrical and fuel supplies are isolated.
2. Ensure that a dust sheet is placed in front of the cooker.
3. Check the chimney for damage or leaks.
4. Remove pipe bend cleaning plate.
5. Remove the retaining screws from the hot plate and also the simmer cleaning plate screws.
6. Lift off hot plate and cleaning panels.
7. Cover the blast tube within the firebox.
8. Carefully brush through the cleaning pipe.
9. All deposits to be brushed down the left or right side of the oven.
10. Deposits on the oven to be brushed downwards.
11. To remove the deposits, thoroughly clean out the residue from the side flues and base plate, through the oven passage cleaning door located at the top of the warming oven.
12. Remove cover over blast tube in fire box.
13. Vacuum out the fire box area.
14. When cleaning this appliance be careful not to damage ceramic baffles.
15. Re-assemble the cooker and carry out each commissioning check as specified.
16. When replacing the cleaning and hot plates, check soundness of gaskets and replace if necessary.

FAULT FINDINGS

PROBLEM	CAUSE	REMEDY
1. Poor Chimney Draught:	(a) Obstruction.	(a) Clear and clean.
	(b) Chimney too low.	(b) Raise height above ridge.
	(c) Chimney too wide.	(c) Fit flue liner 150mm (6”)
	(d) Crack in wall.	(d) Repair cracks.
	(e) No flue liner	(e) Fit flue liner
2. Excessive Chimney Draught	(a) High chimney.	(a) Fit external draught stabiliser.
3. Down Draught:	(a) High trees	(a) Raise chimney height.
	(b) High buildings	(b) Raise chimney height.
	(c) Low chimney.	(c) Raise chimney height.
4. Cooker Smoking:	(a) Insufficient primary air.	(a) Provide room air inlet or adjust burner air intake.
	(b) Chimney blocked.	(b) Clean chimney.
	(c) Side flueways restricted.	(c) Clean flueways.
	(d) Down Draught.	(d) Raise chimney height or fit anti-downdraught cowl.
5. Hot Plate Not Heating:	(a) Baffles incorrectly set.	(a) Set baffle knobs.
	(b) Burner cutting out.	(b) Increase cooker thermostat setting.
	(c) Utensils not flat.	(c) Use machined based utensils.
6. Oven Not Heating:	(a) Boiler baffles incorrectly set.	(a) Set baffle knobs.
	(b) Flueways blocked with soot.	(b) Clean out.
7. Radiators Not Heating:	(a) Baffles incorrectly set.	(a) Set baffle knobs.
	(b) Circulating pump not working.	(b) Check and replace if defective.
	(c) Pipe thermostat set too high.	(c) Reduce thermostat settings.
	(d) Air in system.	(d) Bleed system.
	(e) Pipe system faulty.	(e) Check pipe sizes and circuit.
	(f) Excessive number of radiators	(f) Turn off un-needed radiators.
	(g) Radiator valves not balanced.	(g) Adjust valves to give an even flow.
8. Domestic Hot Water Cylinder Not Heating	(a) Cylinder too large.	(a) Use 180 litre cylinder.
	(b) Flow pipe too small.	(b) Use 28mm bore pipe.
	(c) ‘Balancing valve’ closed.	(c) Open ‘check valve’.
	(d) Cylinder thermostat set too low.	(d) Increase thermostat setting.
	(e) Circulating pump not working.	(e) Check and replace if defective.
9. Intermittent Performance:	(a) Cooker starved of primary air.	(a) Provide air inlet in room.
	(b) Extraction fan in room.	(b) Provide additional air inlet in room.
	(c) Dirt in nozzle.	(c) Clean or replace nozzle.
	(d) Dirty burner.	(d) Service burner.
	(e) Worn nozzle.	(e) Replace nozzle.
	(f) Dirty flueways.	(f) Clean flueways.
	(g) Dirty oil filter.	(g) Clean or replace.
10. Domestic Hot Water Rusty:	(a) Leak in indirect cylinder coil.	(a) Replace cylinder.
	(b) Incorrect cylinder fitted.	(b) Check with installer.

It is of the utmost importance to keep the flue pipe and chimney clear of deposits. Blocked or partially obstructed flueways and chimneys will cause dangerous fumes to be emitted into the room, these may well be invisible.

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STANLEY
TURNING YOUR HOUSE INTO A HOME