



## **COMERAGH - 50 OIL FIRED COOKER**



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

### ***INSTALLATION AND OPERATING INSTRUCTIONS***

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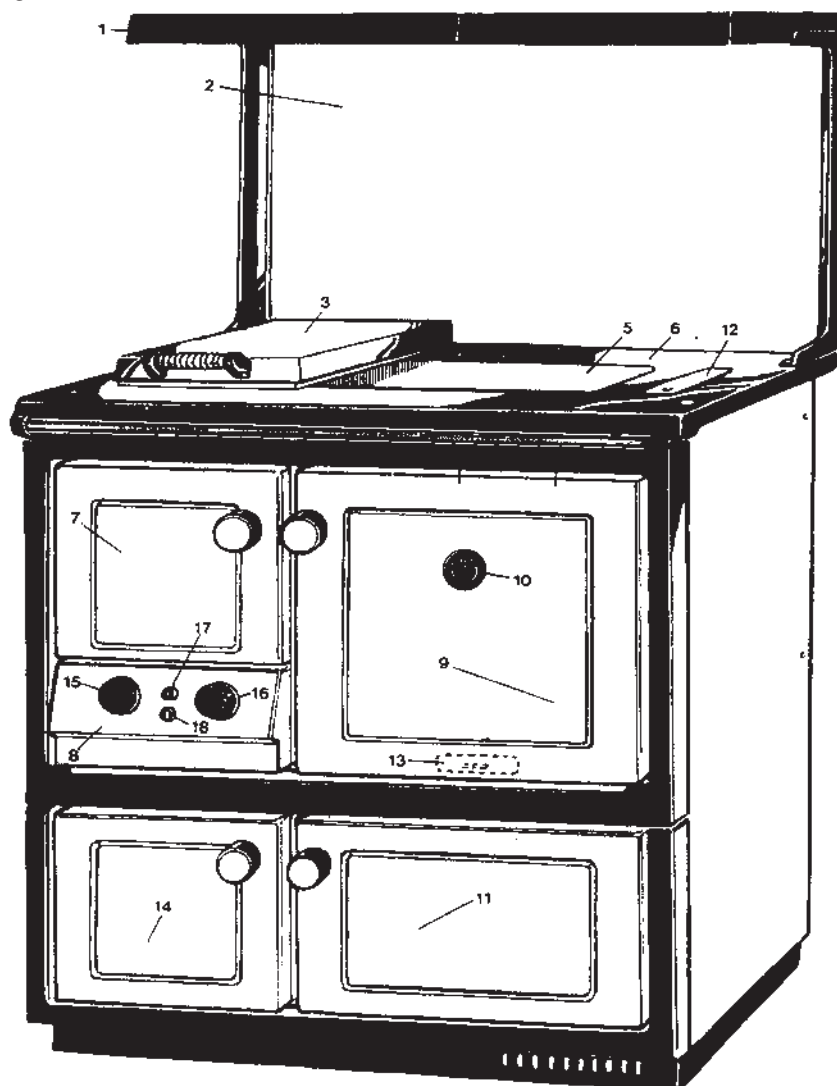
## INTRODUCTION

Congratulations on purchasing this fine Irish made Oil Fired Central Heating appliance. It is built to exacting standards and will give you every satisfaction in use. We invite you to read carefully these operating and installation instructions provided. This will enable you to familiarise yourself with this appliance.

**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.**

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 It should be noted that the requirements and these publications may be superseded during the life of this manual.

Fig.1



1. Plate Rack (to order)
2. Splash Back (to order)
3. Hot Plate Cover
5. Hot Plate
6. Hob
7. Fire Door
8. Control Panel
9. Main Oven
10. Oven Thermometer
11. Warming Oven
12. Side Flue Cleaning Plate
13. Bottom Flue Cleaning Plate
14. Burner Compartment
15. Boiler Thermostat
16. Oven Thermostat
17. Pilot Light
18. Re-set Button

**Central Heating Boiler Capacity:**  
9 litres = Gallons

**Cooker Weight:** 274Kg = 604lbs



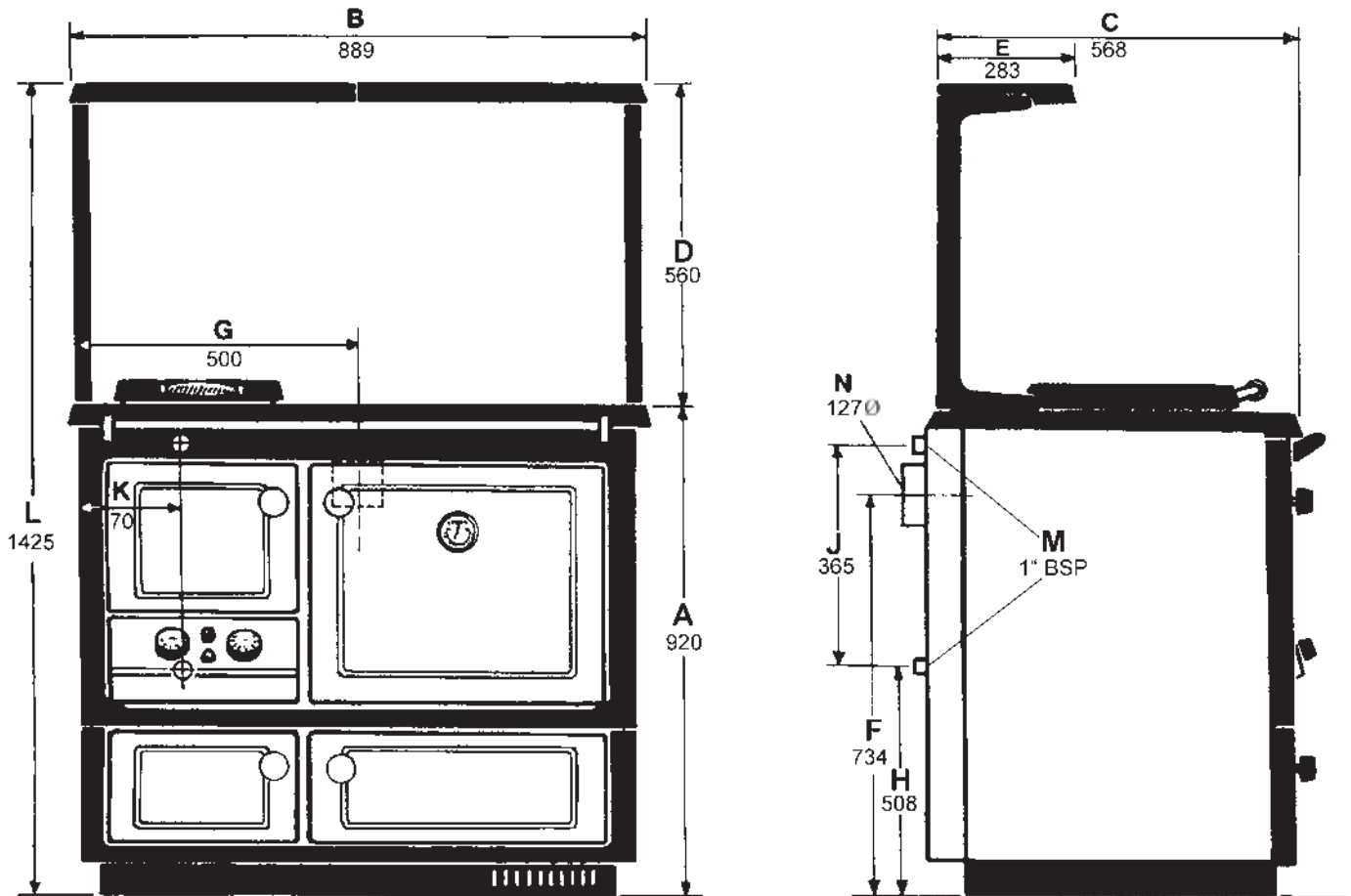
### IMPORTANT - CONTROL OF SUBSTANCES HARMFUL TO HEALTH

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, 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, 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.

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

## SPECIFICATION



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

FEATURE	METRIC (mm)
HOTPLATE	1.7 sq. meters
MAIN OVEN	400W x 324H x 396D
WARMING OVEN	390W x 290H x 440D

## TECHNICAL DATA

**THIS COOKER IS SUITABLE FOR HOMES UP TO 1,100 sq. ft. = 102 sq meters.**

Cooker Output:	At 1.8 kg = 2.08 Litres Kerosene/Hour
Gross Output:	20 kW = 69,000 Btu's/Hr
Net to Water:	13.7 kW = 47,000 Btu's/Hr (Max.)
Jet:	60 Degree Solid Pattern (0.60 U.S. gallons)
Oil Pressure:	8.16 Atmosphere = (120 p.s.i)
Radiation Surface:	Heating Surface only 22.2 sq. meters = 240 sq.ft. Heating and Domestic Hot Water 19.4 sq. meters = 210 sq. ft.

## INSTALLATION

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 requirements when properly used and installed.

The installation must comply with the following:

- \* B.S. 5410 Oil Installation Part 1 under 45 kW
- \* The Building Regulations Part J Ireland, England and Wales, Part F section III Scotland, Part L Northern Ireland.
- \* The Control of Pollution (oil) Regulations.
- \* B.S. 5449 Forced Circulation Hot Water Central Heating System for Domestic Installation.
- \* Health & Safety at Work Act.
- \* B.S. 7671 Requirement 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.

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

## LOCATION

When choosing a location for this appliance you must have:

- a) Sufficient room for the installation (see clearances) a satisfactory flue (see chimneys) and an adequate air supply for correct combustion and operation.
- b) Adequate space for maintenance and air circulation.

## HEARTH CONSTRUCTION

When a non-combustible floor surface is not available then we recommend that the cooker be placed on a slab of formed concrete 40mm (1 1/2") deep or a slab of other insulating material. This hearth must extend 225mm (9") to the front and 150mm (6") to either side of the appliance.

## ELECTRICAL SUPPLY

All wiring external to the appliance must conform to the current B.S. 7671, B.S. 7462, Safety Document

635, ETC Part 1 section 5.4.6 and the Electricity at Work Regulations. The cooker requires 230V - 240V, 50Hz supply. Connection of the appliance and any system controls to the mains supply must be through moulded-on plug top with a 5 amp fuse, which is fitted to the appliance in accordance with E.N. 60335, Consumer Protection S.I. 1996 No. 1768, plug and sockets etc.. Safety Regulations 1994.

**Always install in accordance with current local wiring regulations.**

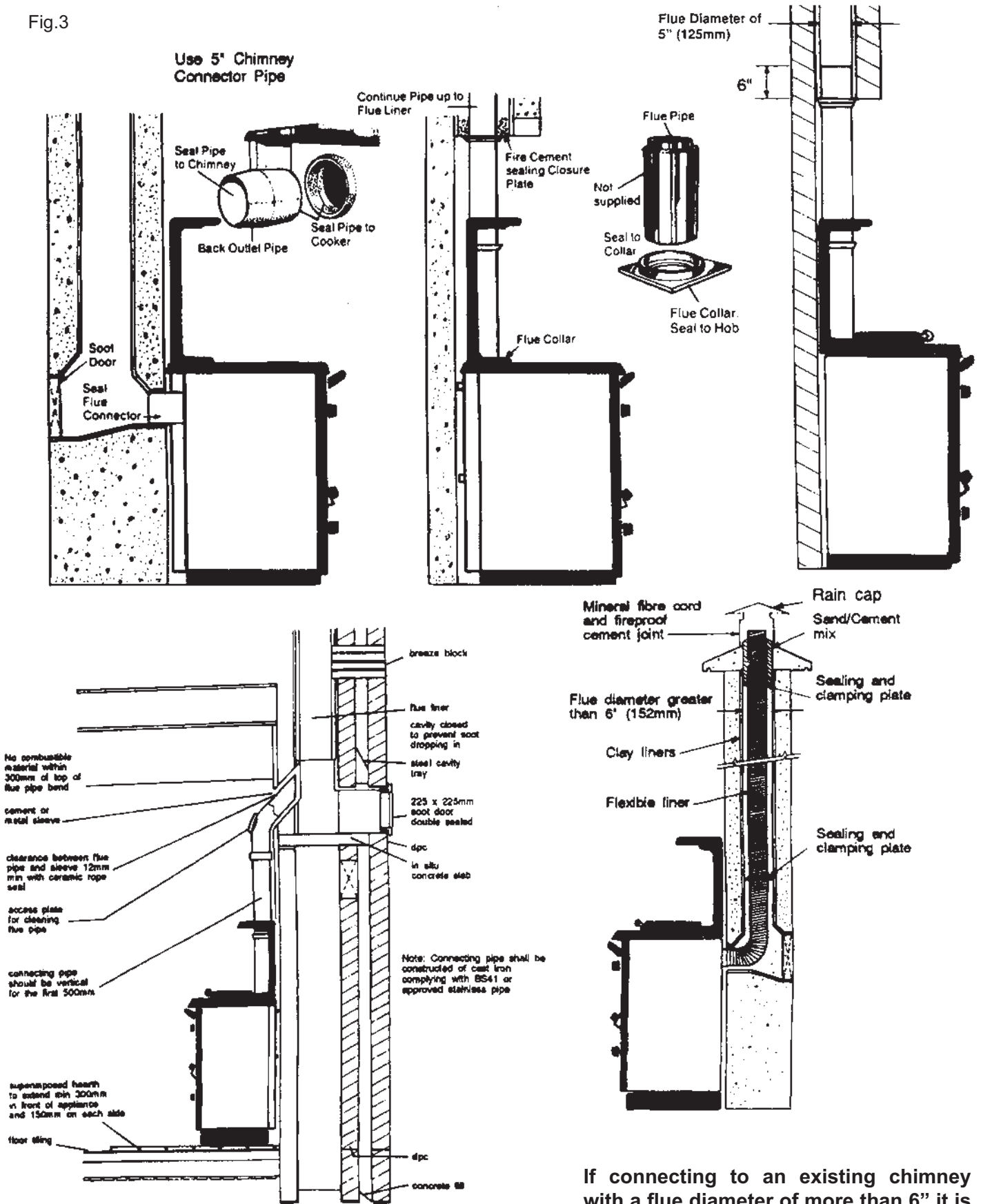
**WARNING: THIS SUPPLY MUST BE EARTHED (Refer to B.S. 7430 code of Practice for Earthing)**

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.

**The appliance must be positioned so that the plug is accessible.**

## INSTALLATION

Fig.3



If connecting to an existing chimney with a flue diameter of more than 6" it is necessary to line the flue using either 5" rigid or flexible stainless steel flue liner.

### 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.

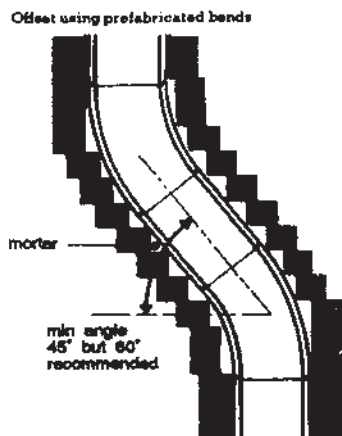
## CHIMNEYS

Generally the most effective chimney is one that is straight, avoid offsets, terminate with straight sided pot.

Where the standard masonry chimney is not available, a proprietary type of 125mm (5") twin wall, fully insulated pipe may be used.

If it is necessary to offset the chimney, the recommended angle is 60° to the horizontal and statutory minimum is 45°. (See Fig. 4)

Fig.4



The flue must be high enough 4.5mts (15ft minimum) to allow flue gases to vent into the clear air, away from turbulence that may be caused by roof structures, other chimney stacks etc. The venting terminal position should be 1 meter (3' 3") above any obstruction with a 7.6 meter (25') radius.

**NOTE: Never connect to a chimney or flue system serving another appliance.**

## FLUES

The chimney and flue pipes intended for use with this appliance should be mechanically robust, resistant to internal and external corrosion, non-combustible, and durable under the conditions to which they are likely to be subjected.

Flues require a suitable external terminal which should be designed to permit easy ingress of combustion products whilst providing protection against the entry of rain, birds and other foreign matter into the system. Flue pipes and accessories such as clips and stays should not be made of unprotected mild steel or other material which is likely to corrode.

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 chimney serving another appliance. Always ensure that the connection is to a

chimney of the same size. Chimneys 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.

## SUITABLE MATERIAL

- \* Mineral Fibre cement pipes conforming to B.S. 567.
- \* Insulated metal chimneys conforming to B.S. 4543 (a galvanised finish is not suitable).
- \* Clay flue linings conforming to BS 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. B.S. 1289.
- \* Cast Iron or acid resistant vitreous enamel lined mild steel to B.S. 41.

Where twin wall pipes are of sheet metal construction the length of pipe located externally should not exceed 1m (3' 3") unless it is readily accessible for renewal.

## CONNECTIONS

This appliance can either be connected to an approved masonry chimney or gas flue. This appliance may be connected either direct vertical or horizontal.

A vertical cast iron outlet pipe with cleaning door is available.

## ALL FLUE CONNECTIONS MUST BE THOROUGHLY SEALED.

Blocked chimneys are dangerous, keep chimneys and flueways clean; read the operating instructions.

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

Where an appliance spigot or flue pipe protrudes into the chimney, care should be taken to ensure that it does not block the chimney.

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

## DRAUGHT

While inadequate draught can seriously effect the efficient operation of the appliance, chimneys over 18 ft. (5.4m) or houses built on high ground can experience excessive draught.



If connecting to a chimney a steady draught of between 0.04 and 0.06 inches W.G. is required.

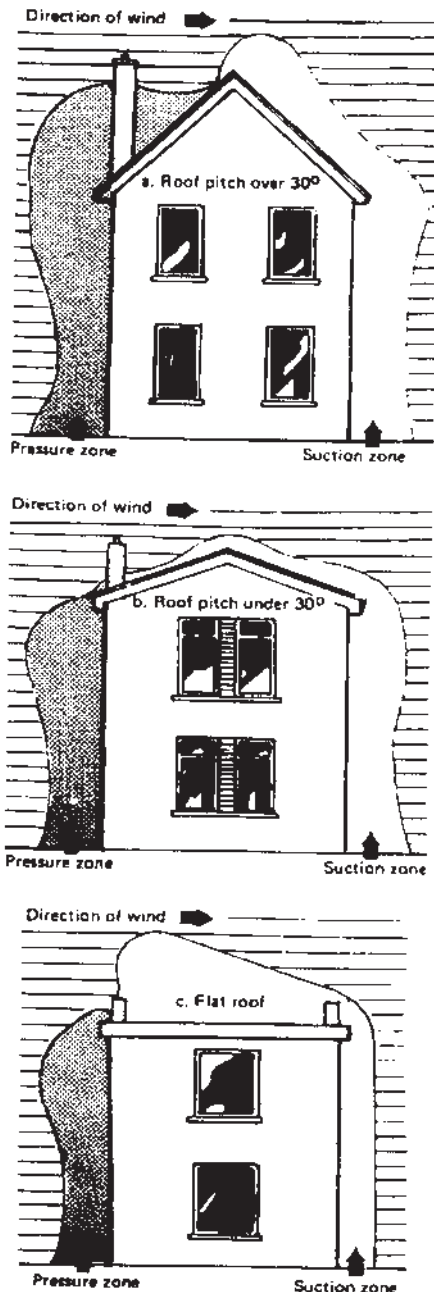
When a draught recorded is over 0.06 inches W.G. a stabiliser must be fitted.

## DOWN DRAUGHT

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 to create a zone of high pressure over the terminal.

A suitable anti-down draught terminal or cowl will usually effectively combat direct down draught but no cowl is likely to prevent down draught due to a high pressure zone. (See fig. 5)

Fig.5



## USE OF EXISTING FLUES AND CHIMNEYS

When connecting to an existing chimney it is necessary to line the flue using either 5" (125mm) rigid or flexible stainless steel flue liner.

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 proved to be unsatisfactory, particularly with regard to down draught, should not be considered for venting this appliance until they have been examined and any faults corrected.

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

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

Where a chimney is not to be lined a suitable void should 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 on any oil burning 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.

## 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.
- \* Part1: Method of specifying installations design information.
- \* Part 2: Specification for installation design.
- \* Part 3: Specification for side installation.
- \* Part 4: Recommendation for installation design and installation.

## FLUE LINERS

Chimney's lined with salt glazed earthenware pipes are acceptable if the pipes comply with BS 65 and must be 150mm (6").

The approved liner should be secured at the top and bottom by sealing the clamping plates, and an approved terminal used at the top.

It is essential that every flue system be inspected and tested by the installer upon completion, to ensure that the combustion products are completely discharged to the outside atmosphere.

## VENTILATION & COMBUSTION AIR REQUIREMENTS

1. It is imperative that there is sufficient air supply to the burner of the cooker in order to support correct combustion.
2. The air supply to this appliance must comply with BS 5410 Part 1.
3. The minimum effective air requirements for this appliance is 95cm<sup>2</sup>. When calculating combustion air requirements for this appliance use the following equation: 550mm<sup>2</sup> per kW of maximum rated output above 5kW. These requirements are illustrated in OFTEC Technical book No.3 and B.S. 5410 Part 1.
4. The vent must either be connected direct to an outside air supply or to adjacent rooms having a permanent vent to the outside.
5. If there is another combustion 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.
6. All materials used in the manufacture of air vents should be such that the vent is dimensionally stable and corrosion resistant.
7. The effective free area of any vent should be ascertained before installation. The effect of any gauze or screen should be allowed for when determining the effective free area of any vent.
8. Air vents to be 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 B.S. 5410 and Part J of the Building Regulations. (i.e from any part of any flue terminal). These air vents must also be satisfactorily fire proofed as per Building Regulations Part B.
9. Air vents in internal walls should not communicate with bedrooms, toilets, bathrooms or kitchens.

10. 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.
11. 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.

## CLEARANCES TO COMBUSTIBLES

Minimum clearances to combustible materials:  
Maintain at least the following clearances:

50mm (2") from rear of cooker. (see fig.7)

10mm <sup>1</sup>/<sub>2</sub>" from the lower edge of the hob to the work top when aluminium strip is not fitted. (See fig.6).

5mm from the lower edge of the hob to the work top when aluminium strip is fitted. (see fig.8)

3mm from cooker front edge to kitchen units filler strip. (see fig.10).

## Minimum clearance to non-combustible materials:

25mm (1") to rear (see fig.9).

Never obstruct free air circulation from around of entering the cooker grills.

Fig.6

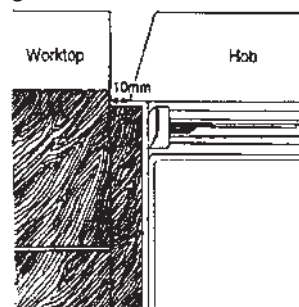


Fig.7

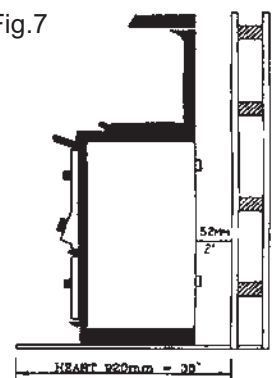


Fig.8

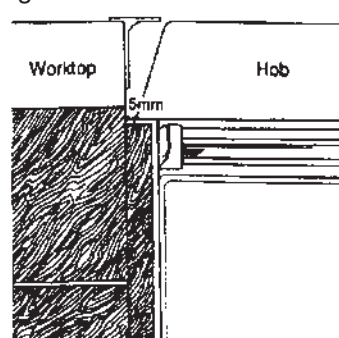


Fig.9

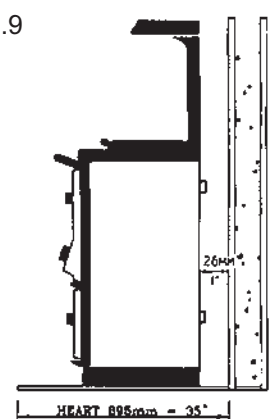
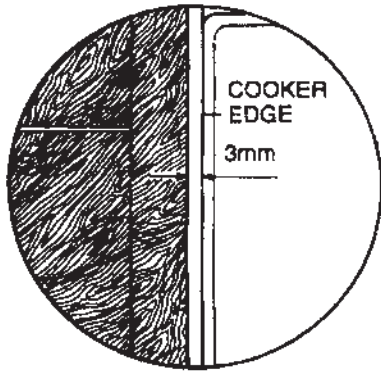


Fig.10



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 of material and run all the way to the masonry chimney or to the point of termination of the factory made chimney.

**HEATING**

Care should be taken to ensure that the heating system 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?

**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 temperature will dip to a level consistent with frost.

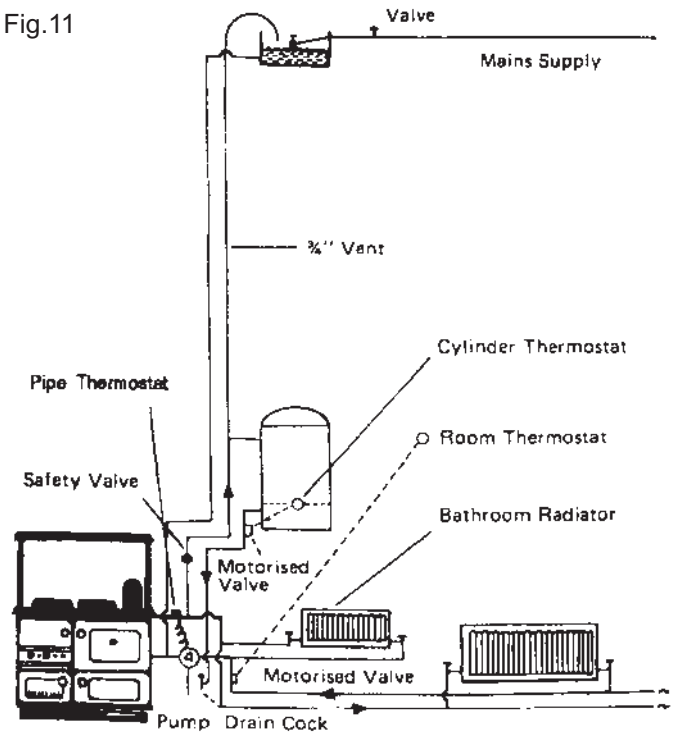
The use of motorised valves, room thermostats, radiator thermostatic valves, domestic hot water controllers, etc, can greatly enhance a heating system and we recommend their use.

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

It is important that no external control devices e.g. economisers be 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. (see figs. 11 to 17 inclusive).

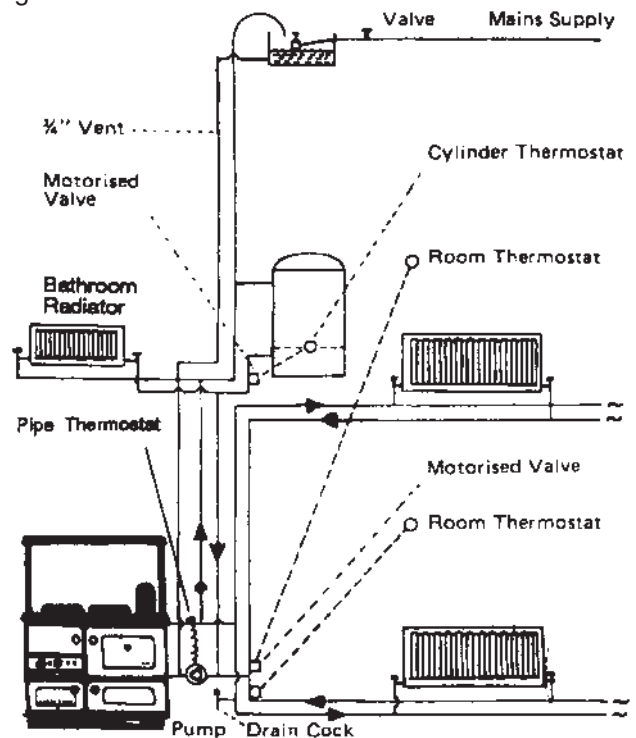
**Bungalow Fully Pumped Using Motorised Valves**

Fig.11



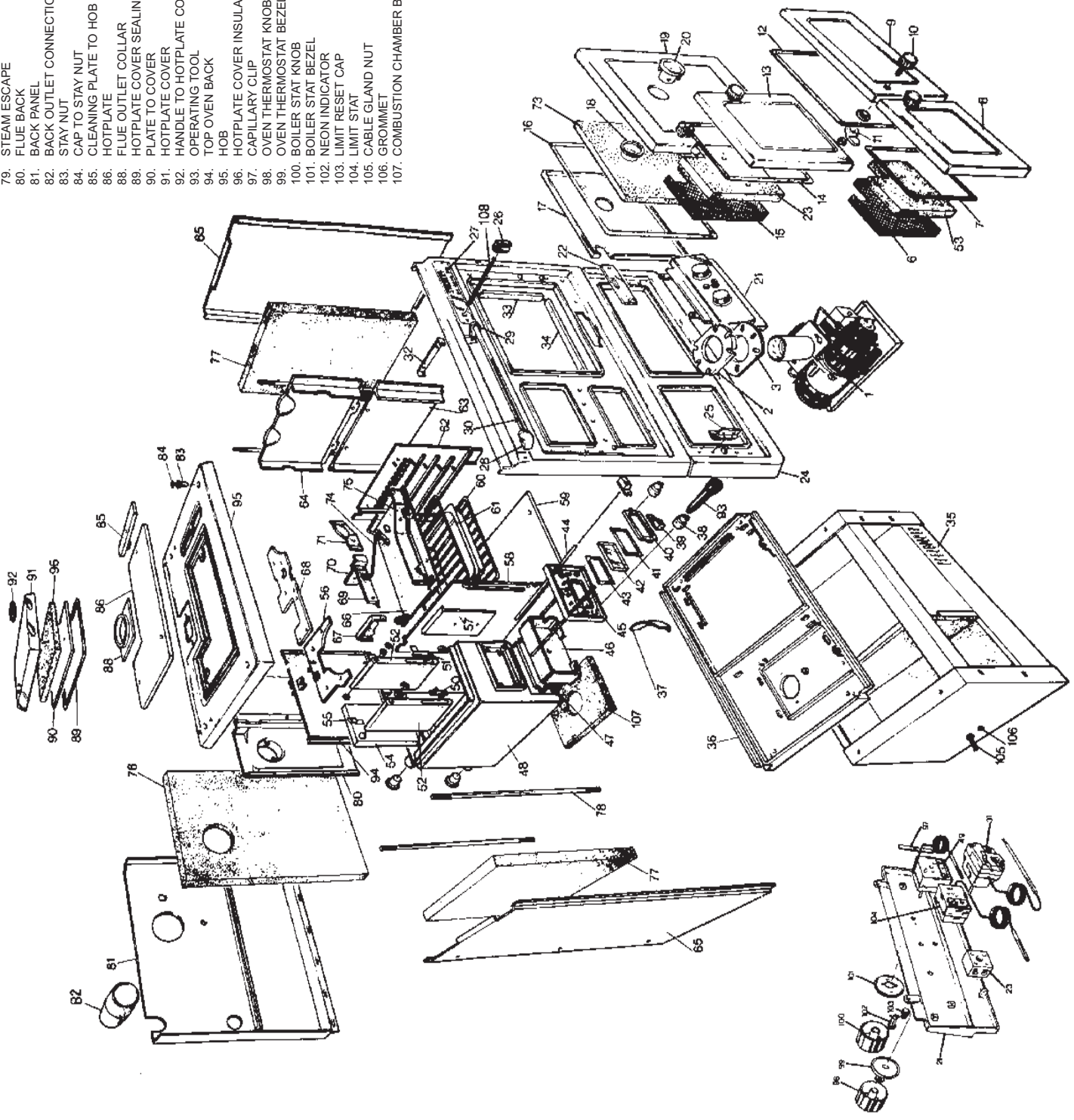
**2 Story House Fully Pumped Using Motorised Valves**

Fig.12



# EXPLODED VIEW

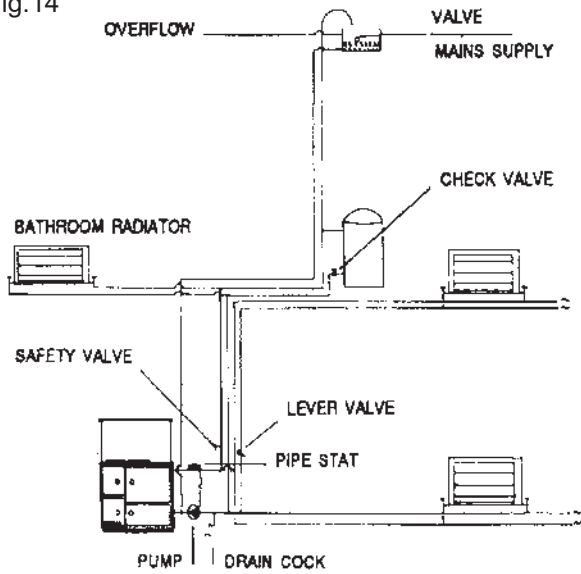
- 78. STAY RODS
- 79. STEAM ESCAPE
- 80. FLUE BACK
- 81. BACK PANEL
- 82. BACK OUTLET CONNECTION
- 83. STAY NUT
- 84. CAP TO STAY NUT
- 85. CLEANING PLATE TO HOB
- 86. HOTPLATE
- 88. FLUE OUTLET COLLAR
- 89. HOTPLATE COVER SEALING ROPE
- 90. PLATE TO COVER
- 91. HOTPLATE COVER
- 92. HANDLE TO HOTPLATE COVER
- 93. OPERATING TOOL
- 94. TOP OVEN BACK
- 95. HOB
- 96. HOTPLATE COVER INSULATION
- 97. CAPILLARY CLIP
- 98. OVEN THERMOSTAT KNOB
- 99. OVEN THERMOSTAT BEZEL
- 100. BOILER STAT KNOB
- 101. BOILER STAT BEZEL
- 102. NEON INDICATOR
- 103. LIMIT RESET CAP
- 104. LIMIT STAT
- 105. CABLE GLAND NUT
- 106. GROMMET
- 107. COMBUSTION CHAMBER BASE BAFFLE



- 1. OIL BURNER
- 2. FLANGE GASKET
- 3. BURNER DOOR MESH
- 6. BURNER DOOR SEALING ROPE
- 7. BURNER DOOR
- 8. WARMING DOOR
- 10. DOOR KNOB
- 11. DOOR CATCH
- 12. WARMING DOOR SEALING ROPE
- 13. FIRE DOOR
- 14. FIRE DOOR SEALING ROPE
- 15. FIRE DOOR MESH
- 16. OVEN DOOR SEALING ROPE
- 17. OVEN DOOR PANEL INNER
- 18. GASKET
- 19. OVEN DOOR
- 20. THERMOMETER
- 21. CONTROL PANEL
- 22. CLEANING DOOR TO FRONT
- 23. FIRE DOOR INSULATION
- 24. BOTTOM FRONT FRAME
- 25. DOOR HINGE
- 26. DAMPER KNOB
- 27. NAMEPLATE
- 28. TOWEL RAIL BRACKET LH
- 29. TOWEL RAIL BRACKET RH
- 30. TOWEL RAIL
- 31. OVEN THERMOSTAT
- 32. CAPILLARY CLIP
- 33. SIDE CAPILLARY COVERING
- 34. BOTTOM CAPILLARY COVERING
- 35. BASE
- 36. BASE PLATE
- 37. DEFLECTOR PLATE
- 38. CONTROL KNOB
- 39. COVER PLATE TO BAFFLE AXLE
- 40. VIEWING GLASS FRAME
- 41. VIEWING GLASS FRAME GASKET
- 42. VIEWING GLASS
- 43. VIEWING GLASS GASKET
- 44. BAFFLE AXLE
- 45. COMBUSTION CHAMBER PLATE COVER
- 46. CONTROL PANEL INSULATION BOX
- 47. COMBUSTION CHAMBER FRONT BAFFLE
- 48. BOILER
- 49. BOILER THERMOSTAT
- 50. BAFFLE AXLE LINKAGE PIECE LH
- 51. BAFFLE AXLE LINKAGE PIECE RH
- 52. SWING BAFFLE
- 53. BURNER DOOR INSULATION
- 54. COMBUSTION CHAMBER BACK BAFFLE
- 55. BAFFLE BRACKET
- 56. HOB PROTECTING PLATE SMALL
- 57. OVEN PROTECTING PLATE
- 58. TOP OVEN SIDE LH
- 59. OVEN BASE PLATE
- 60. OVEN SHELF
- 61. OVEN BAKING TIN
- 62. OVEN RH SIDE
- 63. BOTTOM FLUE WAY
- 64. TOP FLUE WAY
- 65. SIDE PANEL
- 66. OVEN TOP
- 67. DAMPER GUIDE LH
- 68. HOB PROTECTING PLATE LARGE
- 69. DIRECT DAMPER
- 70. DAMPER GUIDE RH
- 71. TOP BACK FLUE GUIDE
- 72. DAMPER BRACKET
- 73. TOP OVEN DOOR INSULATION
- 74. DIRECT FLUE DAMPER ROD
- 75. FRONT FLUE GUIDE
- 76. BACK INSULATION
- 77. SIDE INSULATION WOOL

## 2 STORY HOUSE FULLY PUMPED

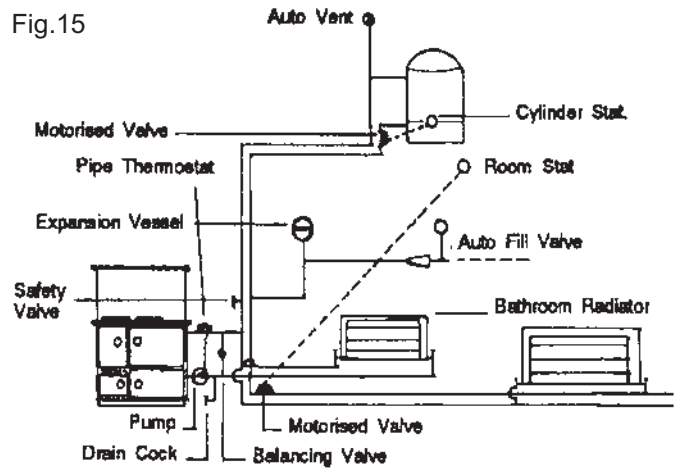
Fig.14



These 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.

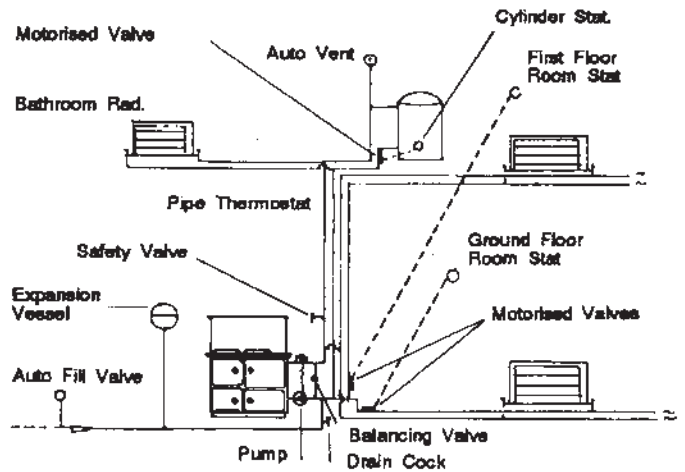
## BUNGALOW FULLY PUMPED SEALED SYSTEM

Fig.15



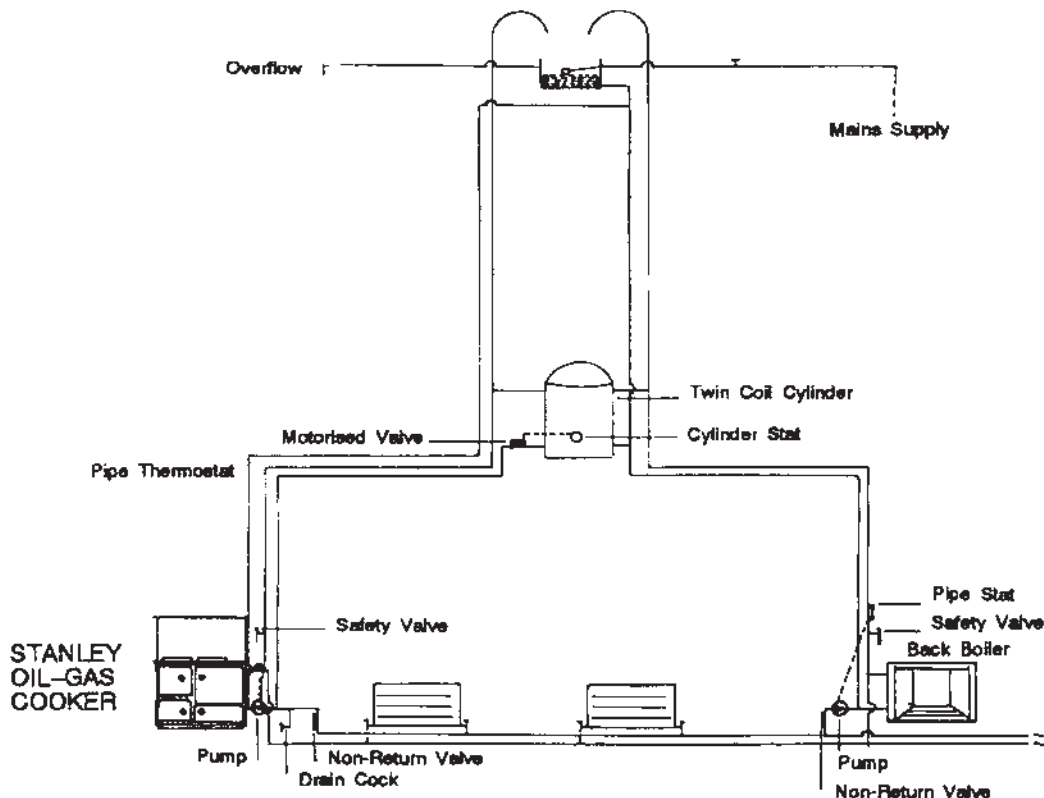
## 2 STORY HOUSE FULLY PUMPED SEALED SYSTEM

Fig.16



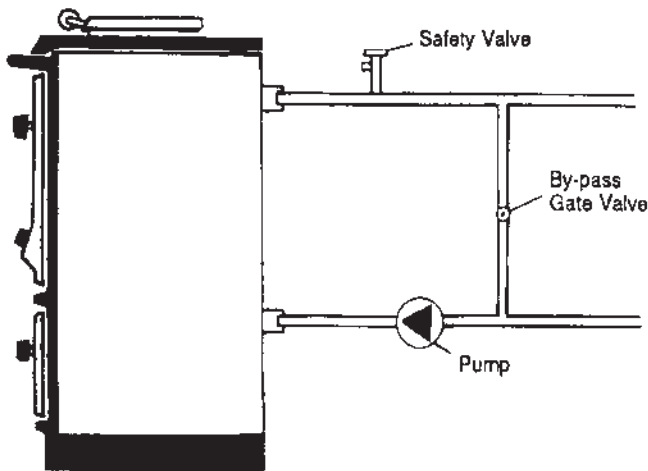
## INTERLINK SYSTEM

Fig.17



## BY-PASS LOOP

Fig.18



## 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 and wiring.

## WATER CIRCUIT TEMPERATURE

The return water temperature must be maintained at not less than 50° C (122° F) so as to avoid condensation on the boiler and return piping. Fitting of a by-pass loop, and 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.

## PIPE THERMOSTAT

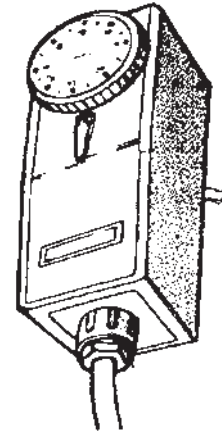
The fitting of a pipe thermostat to the common flow pipe within 150mm (6") of the appliance is required in order to activate the water circulation pump when water in the boiler reaches 60 C. This will ensure that return temperatures are maintained and allow any residual heat to be dissipated to prevent possible overheating.

When the flow temperature falls below 60 C the pipe thermostat will de-activate the circulating pump and allow the cooker to operate. (See Fig. 19)

We strongly recommend the fitting of a by-pass loop to prevent condensation forming in the boiler, this should be balanced to avoid short circuiting of the heating system.

A heat sink radiator/towel rail may be installed if desired in addition to the by-pass loop.

Fig.19



## 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.

## INDIRECT DOMESTIC CYLINDER

The cooker must only be connected to an indirect cylinder of recommended size of 135-180 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 (12").

**NOTE:** One radiator (normally the bathroom) should be selected for use as as heat sink, and connected to open circuit.

## GENERAL MAINTENANCE

It is important that the user is familiar with their heating system and that they carry out 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 and external doors. Insulation and draught proofing can be greatly reduce running costs while equally enhancing living conditions

## FUEL INSTALLATION

### OIL STORAGE TANKS

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 translucent 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 manufacture recommendations. Tanks should be located in the most unobstructive 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 KEROSENE 28 (CLASS 2) 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 9mm (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 E.N. 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 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).

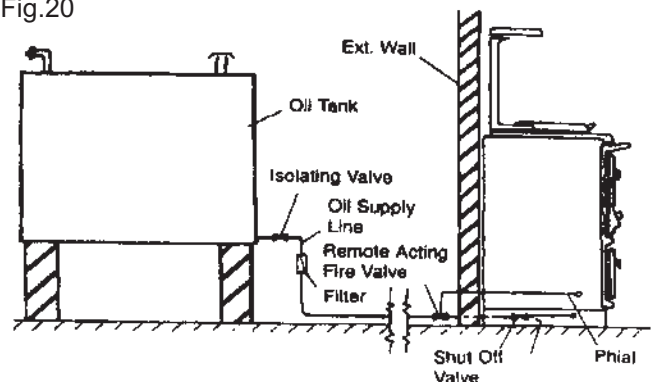
At the point where the oil line enters the building, the oil line must be fitted with an approved remote acting fire valve e.g. Teddington KBB, which meets the requirements of B.S. 5410 : Part 1, fitted with the appropriate length of capillary. The heat sensing phial of the fire valve must be fitted 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.

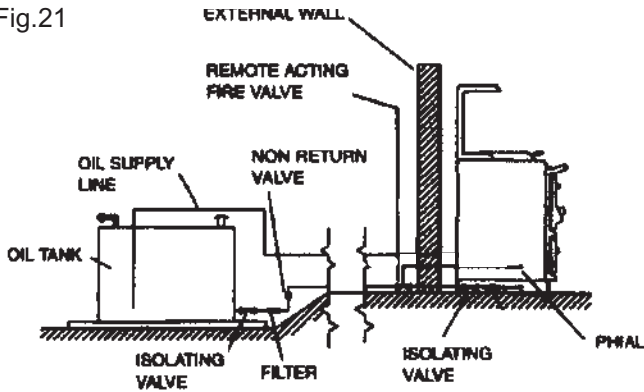
Fig.20



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.22). A non-return valve in the supply line of the two pipe system is required to prevent oil running back from the burner and unpriming 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



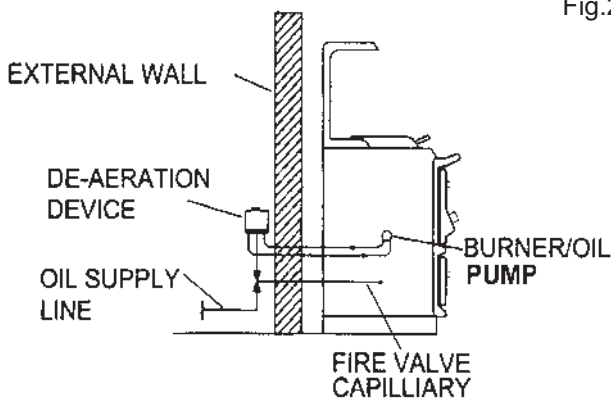
**Single pipe system with de-aeration device fitted:**

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 a normal two pipe loop.

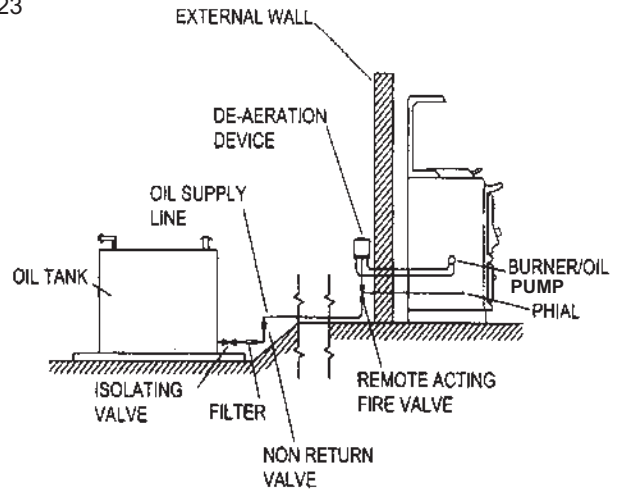
**DETAILS OF DE-AERATION DEVICE CONNECTORS**

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, Ireland & Wales, Part F - Section III Scotland and Part L Northern Ireland.



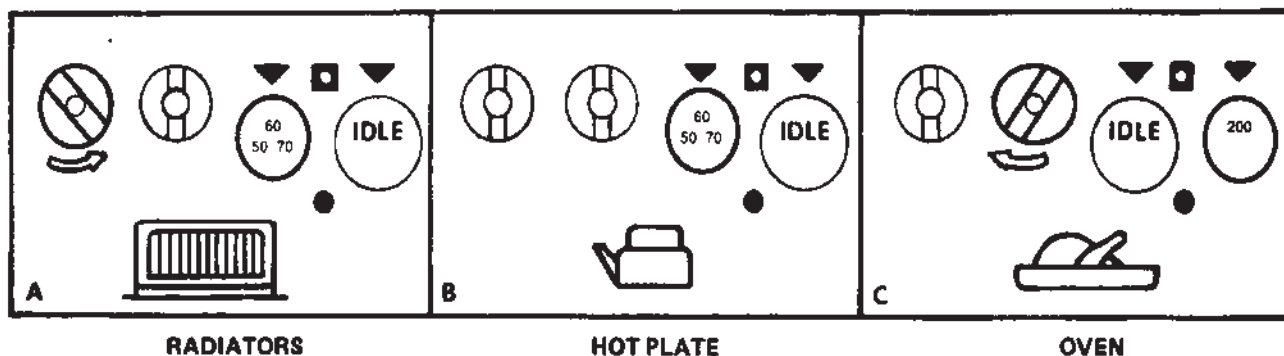
## OPERATION

### PRE-OPERATIONAL CHECKS

- (a) Check that the boiler and heating system is full of water and purged of air.
- (b) Check that all valves in the oil line are open and that the filter and oil pump are purged of air.
- (c) Check that appliance control thermostats are in the off position.
- (d) Check that the cooker is connected to the mains electricity supply.

### 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 the radiators as required.
- (e) Turn on the cooker control knobs to the required setting.



There are three main heating modes as follows, determined by the position of the Boiler Baffles which are located by rotating the control knobs. (See 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 in the UP position.
3. Set the boiler thermostat to required temperature.
4. To reduce oven temperature while maintaining maximum boiler output open the direct damper

#### Setting B:

##### High Hot Plate Output with Boiler and Oven.

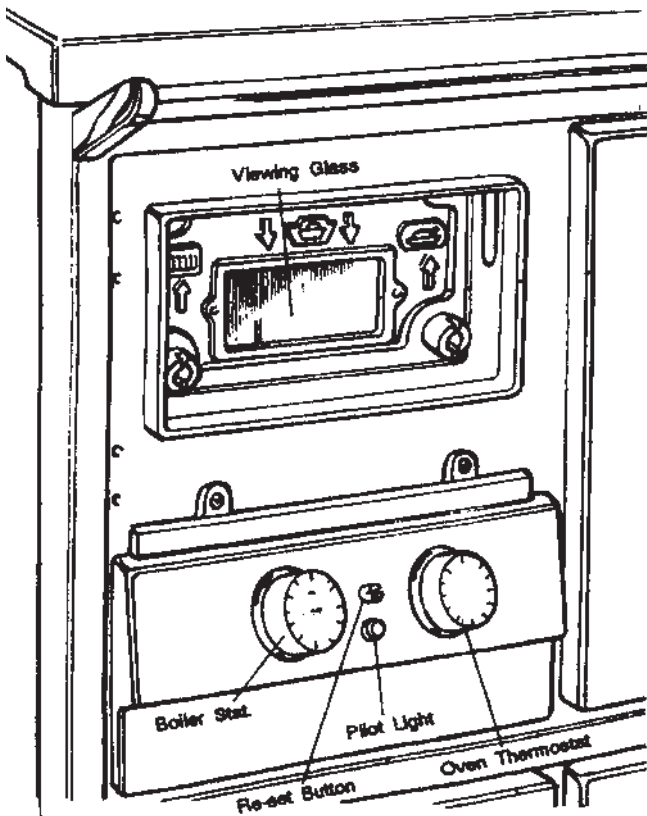
1. Set the oven thermostat to idle.
2. Turn both boiler baffle control knobs to down position.
3. Set the boiler thermostat as required to control hot plate temperature.

#### 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 in the Up position.
3. Set the oven thermostat to the required cooking temperature.

Fig.24



**Pilot Light**

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

**Reset Button**

The thermostat reset button will pop out if thermostat setting are exceeded.

To reset simply unscrew the protective cap and press button inwards.

**To Switch Off**

Turn both thermostats to "off".

**OVENS**

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

The **WARMING OVEN** is heated on top face only and is ideal for heating plates and keeping food warm.

**BURNER DOES NOT IGNITE**

- Check (a) That electricity is switched on;
- Check (b) That oil supply valve is open;
- Check (c) That the thermostat reset button is pressed in;
- Check (d) That the burner lockout button is pressed in. If the Lockout button (located inside the burner compartment) glows red - press to reset.

Fig.25

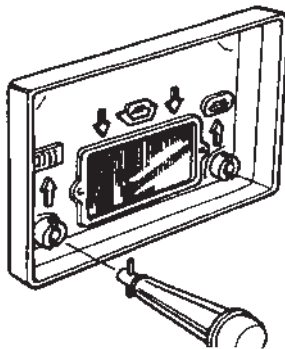


Fig.26

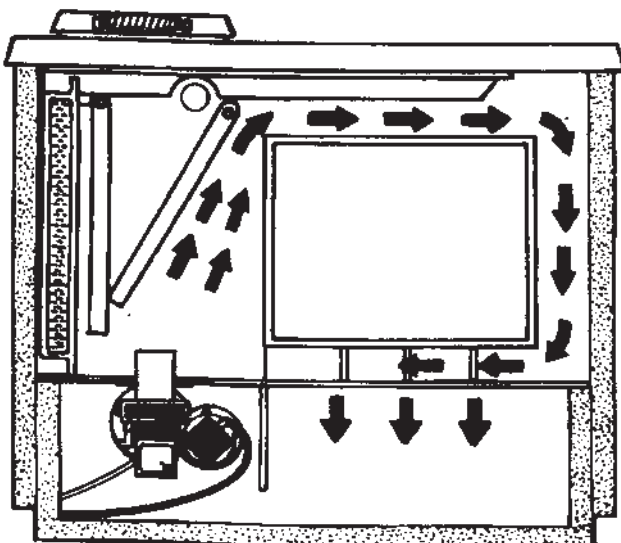
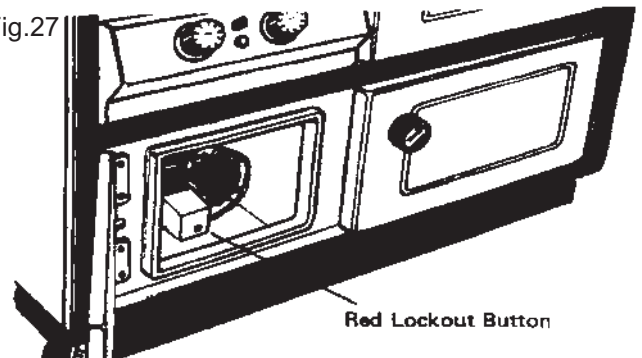


Fig.27



**CENTRAL HEATING**

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

<b>Setting A</b>	Max. Output	47,000 Btu/hr
<b>Boiler</b>		
<b>Setting B</b>	Max. Output	18,000 Btu/hr
<b>Hot Plate</b>	Min. Output	12,000 Btu/hr
<b>Setting C</b>	Max. Output	10,000 Btu/hr
<b>Oven</b>	Min. Output	6,000 Btu/hr

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

The boiler will therefore operate at its maximum output at setting A of the controls with the thermostat turned up to 75°C. A range of outputs from the boiler may be obtained to suit individual requirements by adjusting the thermostat between 50°C and 75°C.

### SUMMER SETTING

For Summer use and lower Boiler Output use setting C. When using the oven in its position turn the oven thermostat to the required temperature.

### HOTPLATE

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

For maximum hotplate temperature use setting B.

### HOTPLATE INSULATING COVER

The insulating cover retains most of the heat that would otherwise be radiated into the kitchen. It also retains the heat in the hotplate, so that rapid heating of cooking utensils will occur when lifted for cooking purposes. (See Fig.28)

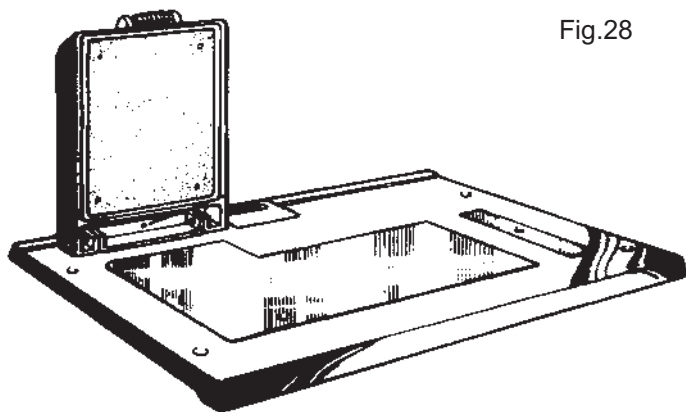


Fig.28

**IMPORTANT: ALWAYS CLOSE DOWN HOT-PLATE COVERS WHEN THE COOKER HOT-PLATE IS NOT BEING USED.**

### COOKING UTENSILS

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

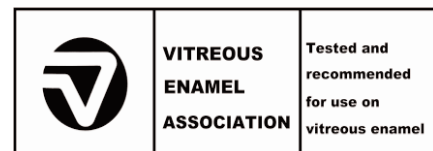
### CLEANING

**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.

### EXTERNAL AUTOMATIC TIMESWITCH

We recommend that this appliance be connected to an external automatic timeswitch (not supplied) which will control the light-up and shut-down operation period.

## 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 appliance.

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

## 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 can be cleaned off with a paste of bread soda and water.

## HOTPLATE

The hot plate may be cleaned by 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.**

## SERVICING

Provided that the cooker has been operated normally and that the correct grade of oil has been used it will be found that the burner and cooker flueways will need servicing every 6 - 12 months.

We recommend that the cooker and burner be serviced by an Authorised Stanley Service Agent. Your Stanley distributor will let you have the name of your local service agent.

**NOTE: - DURING THE ANNUAL SERVICE, THE FLEXIBLE OIL LINE MUST BE CHANGED.**

## CHIMNEY CLEANING

Whichever type of flue is chosen, there must be cleaning access to the whole of the flue system. The flue of the chimney will need to be cleaned regularly. The combustion products of any burning appliance will have a descaling effect on hardened soot deposits left from burning solid fuels.

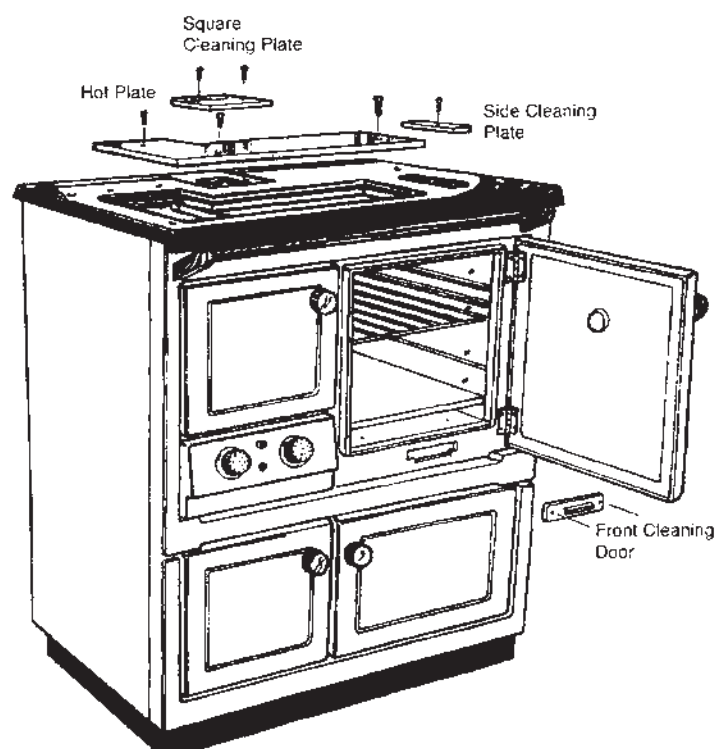
Although the chimney may have been cleaned of loose soot prior to installation, it is imperative that the chimney is inspected for scaled soot particles after the first month of operation and any loose materials removed to avoid blockage.

The frequency of cleaning thereafter will depend a lot on how your cooker is run, but, to start with, make a point of inspecting the flue system every six months. This period may well be extended as time goes by if there is little sign of deposits.

## FLUE CLEANING

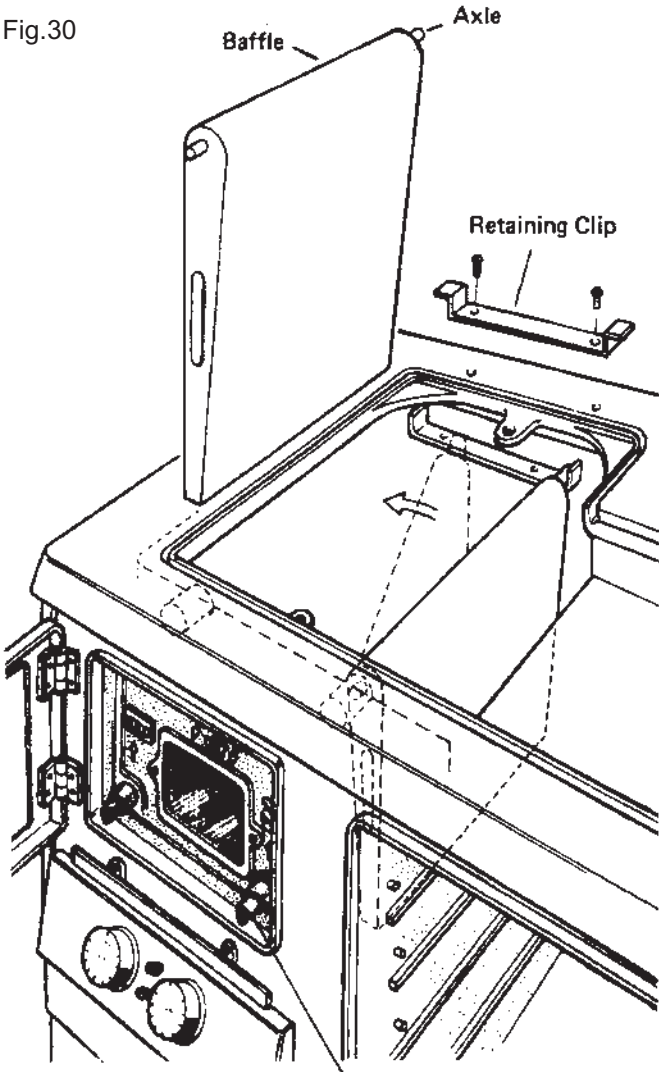
1. Remove the 3 retaining screws from the hot plates and also the screws of the long cleaning plate. Remove hotplate and cleaning plate. Remove the two screws from the front cleaning door and lift off. Remove the two screws from the square cleaning plate and lift off.
2. All deposits from the flue and the top of the oven may be brushed down the right hand side of the oven. Deposits which have accumulated on the right hand side of the oven should also be brushed downwards. Brush the back flueway downwards.
3. To remove these deposits thoroughly, clean out the residue from the side flue and base plate through the front cleaning door opening.
4. To replace these parts reverse the above procedure.

Fig.29



## BAFFLE REMOVAL

Fig.30

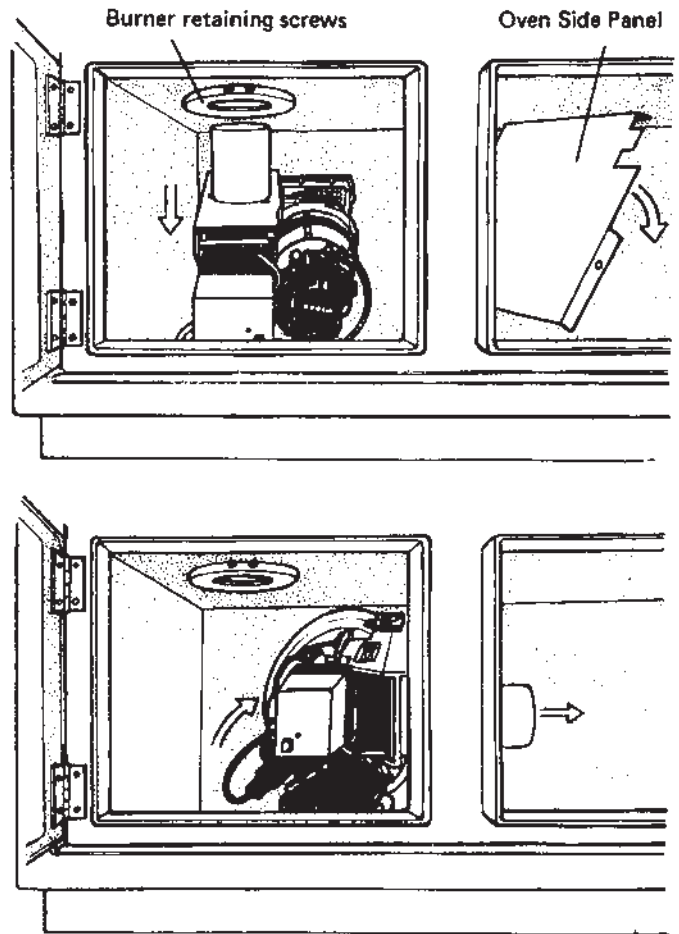


1. Remove the Hot Plate as described on page 15.
2. Remove the Baffle retaining clip by taking out the two retaining screws.
3. Swing the left hand Baffle over to the right at the back and push it back to take the axle out of the front socket. Then lift it upwards, clear of the operating lever.
4. Swing the right hand Baffle over to the left and remove it in the same way.
5. Replace in the reverse order.

## BURNER REMOVAL

### SWITCH OFF ELECTRICITY AND OIL SUPPLY

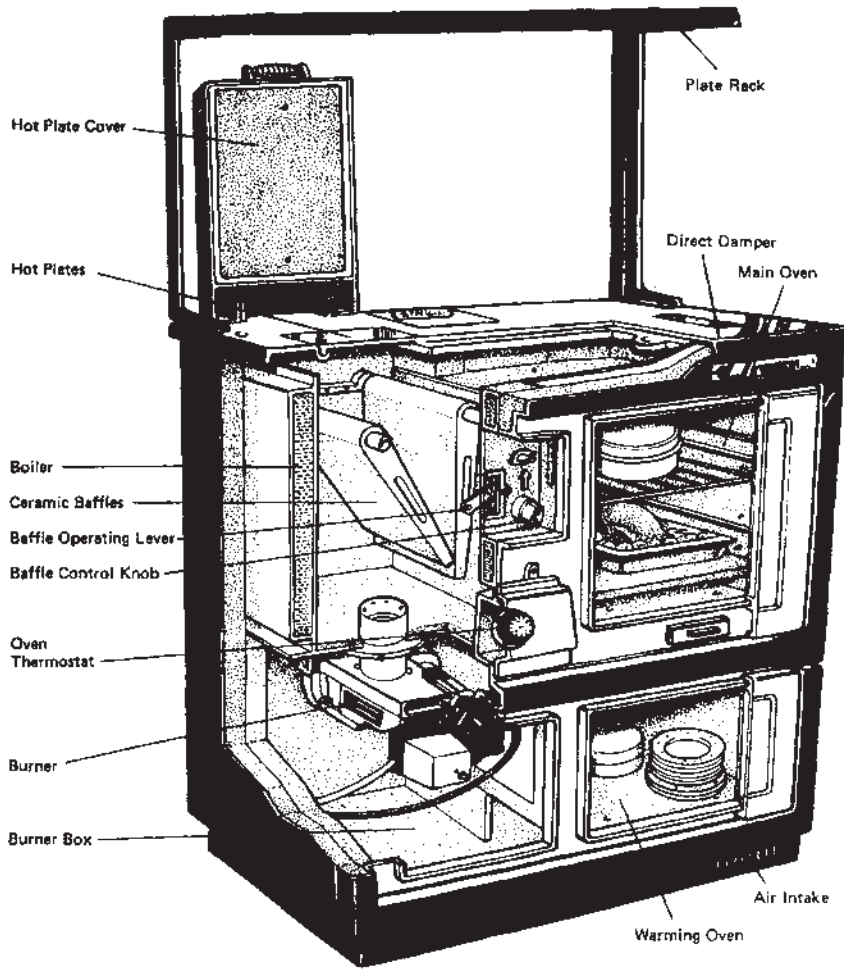
Fig.31



1. Open the burner compartment door and the warming oven door.
2. Remove the Oven side panel by taking out the back screws and the front screw.
3. Slacken the two Burner retaining screws and lower the Burner gently until it is clear of the collar.
4. Tilt the Burner blast tube towards the right making sure that the oil line and electrical leads are free of obstructions.
5. Remove the Burner through the warming oven door and carry out the necessary service.
6. Replacement is the reverse of the above sequence.

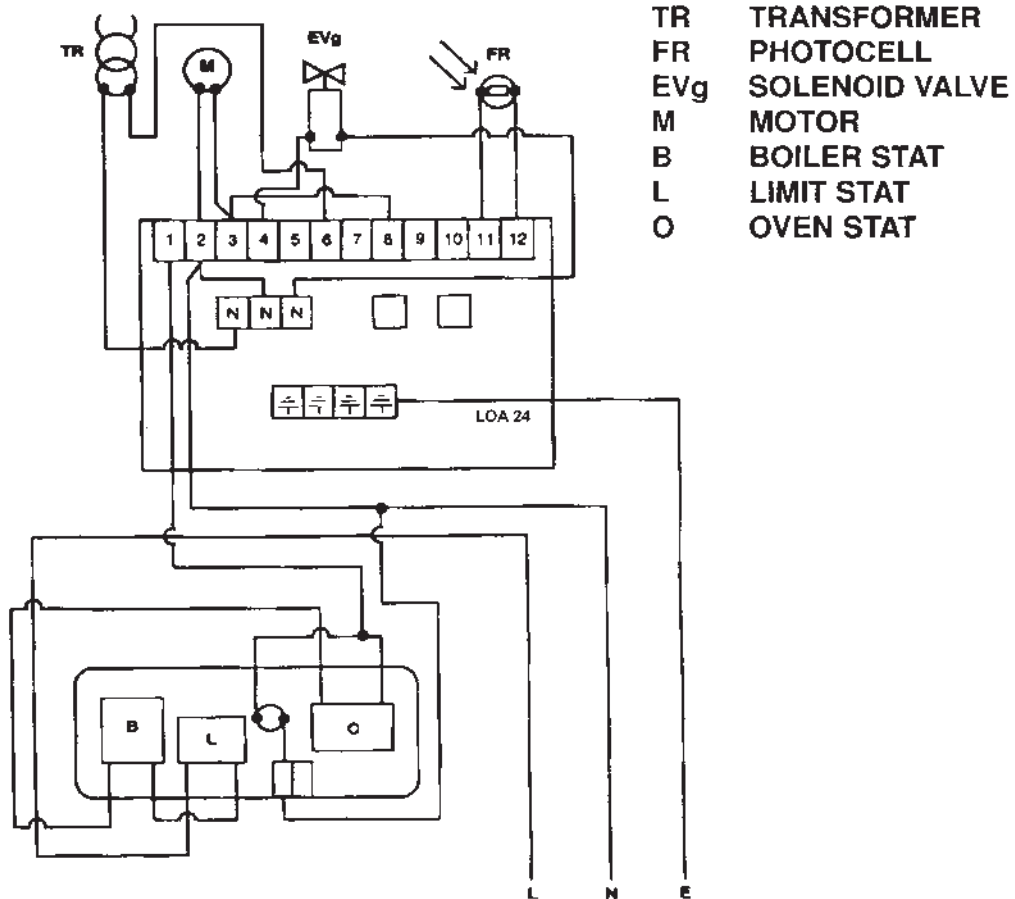
## COMERAGH 50 OIL FIRED COOKER GENERAL CONSTRUCTION

Fig.32



### WIRING DIAGRAM

Fig.33



## FAULT FINDING

1. Poor Chimney Draught	(a) Obstruction (b) Too Low (c) Too Wide (d) Crack in Wall	(a) Clear and Clean (b) Raise Height above Ridge (c) Fit Flue Liner 15cm (d) Repair Cracks
2. Excessive Chimney Draught	(a) High Chimney	(a) Fit Draught Stabiliser
3. Down Draught	(a) High Trees (b) High Buildings (c) Low Chimney (d) Negative Pressure Zone	(a) Raise Chimney Height (b) Raise Chimney Height (c) Raise Chimney Height (d) Fit Cowl
4. Cooker Smoking	(a) Insufficient Primary Air (b) Chimney Choked (c) Side Flueways Choked (d) Down Draught	(a) Provide Air Inlet to adjust Burner air intake (b) Clean Chimney (c) Clean Flueways (d) Raise Chimney Height or Fit Cowl
5. Hot Plate not Heating	(a) Baffles incorrectly set (b) Burner Cutting Out (c) Utensils not Flat	(a) Set Baffle knobs (b) Increase cooker thermostat setting (c) Use machined based Utensils
6. Oven not Heating	(a) Boiler Baffles incorrectly set (b) Flue ways blocked with soot	(a) Set Baffle Knobs (b) Clean Out
7. Radiators not Heating	(a) Baffles incorrectly set (b) Pump not Working (c) Pipe thermostat set too high (d) Air in System (e) Pipe System faulty (f) Excessive no. of radiators (g) Radiator valves not balanced	(a) Set Baffle Knobs (b) Check and Replace if Defective (c) Reduce thermostat settings (e) Check pipe sizes and circuit (f) Turn off unneeded radiators (g) Adjust valves to give even flow
8. Domestic Hot Water Cylinder not Heating	(a) Cylinder too Large (b) Flow Pipe too Small (c) "Check Valve" closed (d) Cylinder thermostat set too low (e) Pump not working	(a) Use 135 - 180L Cylinder (b) Use 25 mm. Bore Pipe (c) Open "Check Valve" (d) Increase thermostat setting (e) Check and replace if defective
9. Intermittent Performance	(a) Cooker starved of Primary Air (b) Extraction Fan in Room (c) Dirt in nozzle (d) Dirty Burner (e) Worn Nozzle (f) Dirty Flueways (g) Dirty Oil Filter	(a) Provide Air Inlet in Room (b) Provide additional Air Inlet in Room (c) Replace Nozzle (d) Service Burner (e) Replace Nozzle (f) Clean Flueways (g) Clean or Replace
10. Domestic Hot Water Rusty	(a) Leak in indirect Cylinder Coil (b) Incorrect Cylinder Fitted	(a) Replace Cylinder (b) Check with Installer

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

## INSTALLATION CHECK LIST

### Flue System

Tick  ✓

1. If connecting to an existing chimney, the appliance should be connected to a 125 (5") diameter continuous, rigid or flexible flue pipe that terminates in excess of 0.6 metres from the nearest point on the roof measured vertically, and in excess of 2.3 metres measured horizontally.
2. If using an external flue, the appliance should be connected to a 125mm (5") diameter rigid insulated flue pipe that terminates in excess of 0.6 metres from the nearest point on the roof measured vertically and in excess of 2.3 metres measured horizontally.
3. Minimum Flue Height of 4.6 metres (15 feet).
4. Any horizontal flue sections should not exceed 450mm (18").
5. The chimney serving this appliance should not serve any other appliance.
6. A suitable flue terminal should be fitted at the flue termination point.
7. Closure -clamping plates should be used to seal the top & bottom of the chimney.
8. If the flue passes through a combustible wall, a twin wall insulated connector must be used and come flush to the external surface of the wall.
9. The flue should be capable of producing a continuous draught of between 0.04" to 0.06" w.g.

### Location

1. The cooker should be installed on a non-combustible material capable of supporting the weight of the unit.
2. The cooker should be positioned so as to maintain a 10mm gap between the cooker and the adjacent kitchen units.

### Plumbing

1. A three bar safety valve must be fitted to the primary flow pipe adjacent to the boiler connection on the stove.
2. The cooker must be connected to a fully pumped system using 28mm flow & return supply pipes.
3. The pump should be controlled by a pipe stat with the stat positioned on the flow pipe as close as possible to the cooker.
4. A 15mm system by-pass must be fitted not less than 1.5 metres from the cooker.

### Ventilation & Combustion Air Requirements

1. The room in which the appliance is located should have an air vent of adequate size to support correct combustion when all air-using appliances are working at full capacity (see Ventilation & Combustion Air Requirement Section for specific details).

### Oil Supply

1. The oil supply tank should be fitted with an isolating valve and filter.
2. The stove should be connected to a supply line with a minimum internal diameter of 10mm ( $3/8$ ") and must be fitted with a remote acting fire valve.

**Manufactured by**  
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