



Installation Instructions for AGA Oil Fired Cooker Models OC, OCB, OE and OEB

Consumer Protection Act 1987

As responsible manufacturers we take care to make sure that our products are designed and constructed to meet the required safety standards when properly installed and used.

IMPORTANT NOTICE: PLEASE READ THE ACCOMPANYING WARRANTY.

Any alteration that is not approved by AGA, could invalidate the approval of the appliance, operation of the warranty and could also affect your statutory rights.

Control of Substances - Health and Safety Important

This appliance may contain some of the materials that are indicated below. It is the Users/Installers responsibility to ensure that the necessary personal protective clothing is worn when handling, where

applicable, the pertinent parts that contain any of the listed materials that could be interpreted as being injurious to health and

safety, see below for information.

Firebricks, Fuel beds, Artificial Fuels - when handling use disposable gloves.

Fire Cement - when handling use disposable gloves.

Glues and Sealants - exercise caution - if these are still in liquid form use face mask and disposable gloves.

Glass Yarn, Mineral Wool, Insulation Pads, Ceramic Fibre, Kerosene Oil - may be harmful if inhaled, may be irritating to skin, eyes, nose and throat. When handling avoid inhaling and contact with skin or eyes. Use disposable gloves, face-masks and eye protection. After handling wash hands and other exposed parts. When disposing of the product, reduce dust with water spray, ensure that parts are securely wrapped.

PRE-INSTALLATION ADVICE

With specific exceptions, the installing of any type of AGA cooker is subject to the respective directions contained in the current Building Regulations and the Building Standards (Scotland) (Consolidation).

Practical guidance to meeting such requirements are contained in the Approved Document J 1/4/5 - Heat Producing Appliances in Schedule 1 of the Building Regulations.

In addition, Planning Permission may need to be obtained, which should be applied for separately.

THIS APPLIANCE IS A CONTROLLED SERVICE BY DEFINITION AND REQUIRES EITHER FITMENT UNDER THE REMIT OF BUILDING CONTROL OR INSTALLATION BY AN OFTEC REGISTERED 105 TECHNICIAN (CLASSED AS A COMPETENT PERSON) WHO CAN SELF CERTIFY HIS OWN WORKS.

ADDITIONAL PROVISIONS FOR AGA COOKERS

Such provisions for oil burning appliances are dealt with in Section 4 of the Building Regulations where the AGA Oil Fired Cooker, compares as follows:

Hearths

1. Section 4 - Para 4.24.

A Constructional Hearth should be provided to support the appliance.

Shielding of the Appliance

2. Section 4 - Para 4.28.

The surface temperatures of the sides and back of the appliance do not exceed 100°C and do not therefore require shielding as described in Section 3 - Para 3.2 (a) or (b) of the Approved Document.

Heat Exchangers - Models OCB and OEB only

This cast iron heat exchanger is 'listed' by the National Water Council and, when correctly installed, complies with Water Byelaws and Regulations.

The heat exchanger must be connected to a copper double feed indirect cylinder to BS 1566 Part 1 only.

NOTE: AGA OIL FIRED COOKERS ARE DELIVERED EX-WORKS UNASSEMBLED. ASSEMBLY IS UNDERTAKEN ON SITE BY THE AUTHORISED AGA DISTRIBUTOR.

Fuel

These appliances must only be used with Commercial Kerosene current issue to BS 2869 : Class C2 suitable for vapourising burners.

Cooker Base or Hearth

It is essential that the base or hearth on which the cooker stands should be level, and be capable of supporting the total weight of the respective cooker:

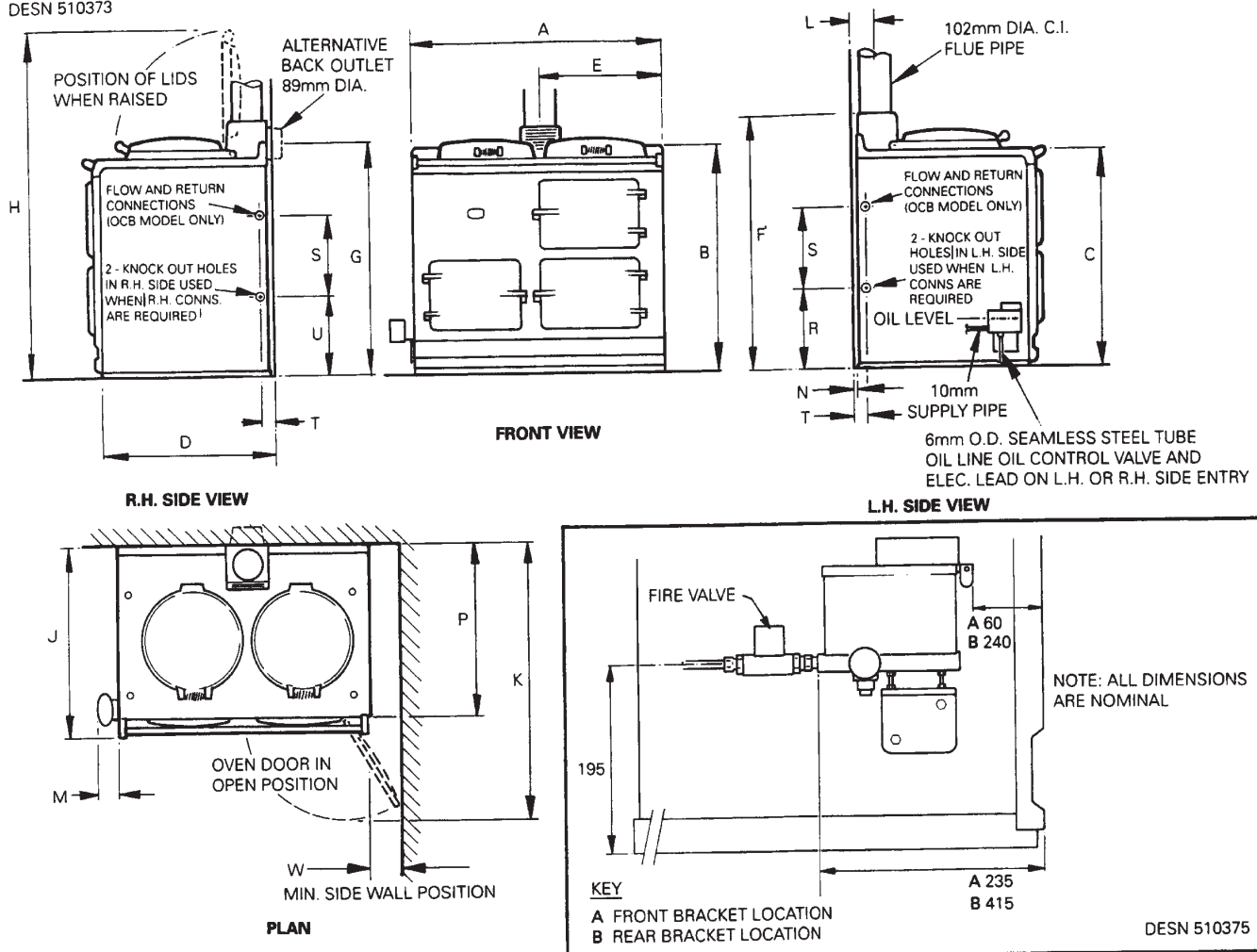
Models OC and OCB - 406 kg

Models OE and OEB - 584 kg

AGA OIL COOKER					
Maximum Operating Pressure 1.8 Bar	OC	OCB		OE	OEB
		90	135		
IDLING OIL cc per minute	3.7	5.0	6.0	4.4	6.0
RATE - LOW FIRE Heat Input (Btu/h)	7,690	10,390	12,470	9,145	12,470
COOKING OIL cc per minute	7.0	8.0	8.0	7.0	8.0
RATE - HIGH FIRE Heat Input (Btu/h)	14,550	16,630	16,630	14,550	16,630
Approximate Weekly Oil Consumption Litres	40.0	60.0	65.15	50.9	68.4
Gallons	8.8	13.3	14.35	11.2	15.05
BOILER OUTPUT		1.3 kW 4,435 Btu	2 kW 6,824 Btu		0.9kW 3,070 Btu

Models OC and OCB

DESN 510373



																Models		R	S	T	U
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	W	OCB 90	mm	499	127	53	530
mm	987	889	851	679	467	959	889	1330	756	1125	64	83	3	698	116	OCB 135	mm	452	187	53	470

The hearth must be of a non-combustible material for a minimum thickness of 12mm and comply with the respective clause in the Building Regulations.

The wall behind the cooker must be of a non-combustible material, for a minimum thickness of 25mm.

Installation Requirements

The installation of the appliance must be in accordance with the relevant requirements of the current Building Regulations and the Building Standards (Scotland) (Consolidation), current I.E.E. Wiring Regulations and the byelaws of the local Water Undertaking where applicable. It should be in accordance also with any relevant recommendations of the following current British Codes of Practice:

BS 5410: Installation of oil fired space heating and hot water supply purposes. Part 1. Boilers of rated output not exceeding 44kW.

Building Regulations

J1/4/5: Provision for introduction of air supply and discharge of products of combustion for appliances.

BS 4543: Specification for chimney for oil fired appliances. Part 1 - 3.

Building Regulations

J1/4/5: Provision for protection against fire and heat.

LOCATION

The location chosen for the appliance must permit installation and the provision of a satisfactory flue and an adequate air supply. The location must also provide adequate space for servicing and air circulation around the appliance. See 'Installation of Cooker'.

In particular, please ensure the control box mounted to the side of the AGA, fire valves, isolation valves and their line fittings are always accessible to ensure they can be accessed for future service and maintenance requirements.

OIL SUPPLY

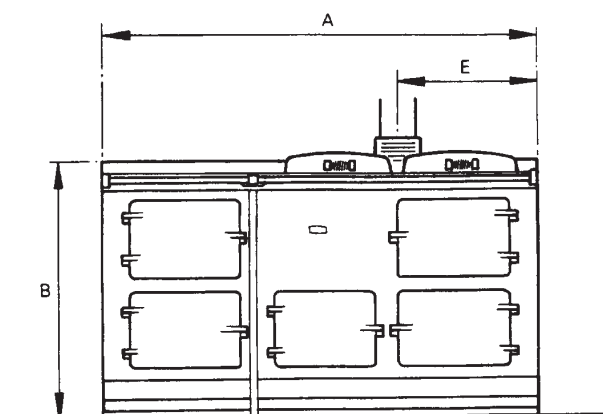
Oil Storage - See Fig. 1 on page 4.

The recommended oil tank size is 1400 litres (300 gallons) minimum, and the Codes of Practice governing its installation are covered by BS 5410.

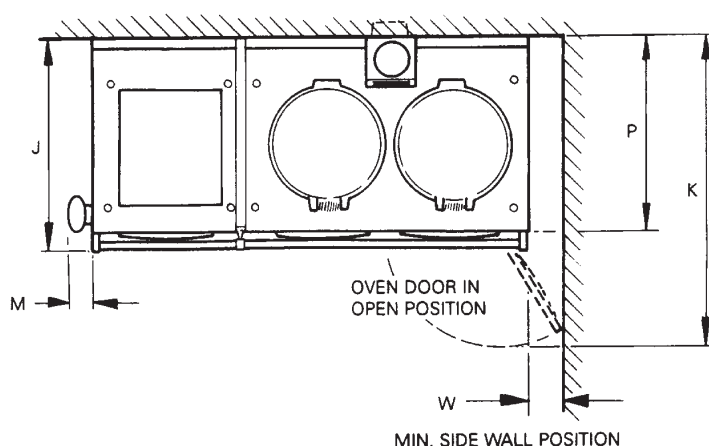
The requirements for mild steel tanks should be to BS 799: Part 5 and advice should be sought from the manufacturers for the installation of Plastic Oil Tanks as

Models OE and OEB

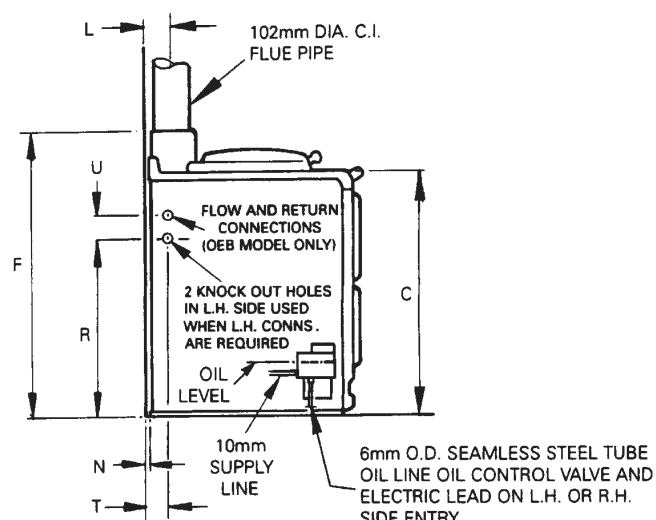
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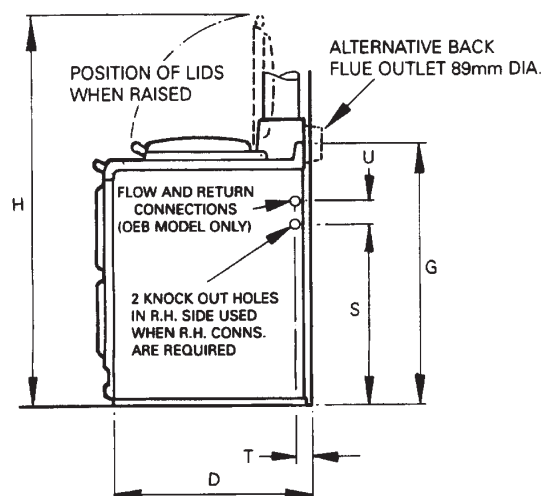
FRONT VIEW



PLAN



L.H. SIDE VIEW



R.H. SIDE VIEW

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	W
mm	1487	889	851	679	467	959	889	1330	756	1125	64	89	3	698	632	595	51	67	116

an alternative consideration.

The oil storage tank must be positioned with the bottom of the tank not less than 450mm, and the top not more than 3.2m above the base of the cooker.

Oil Pipe Line

The oil line from the storage tank to the appliance should be fitted with a remote acting fire valve (such as a Teddington KBB-66°C) located outside the building, or where the supply enters the wall on the inside of the building and with the heat sensing phial of the fire valve, located as near as practicable on the valve side of the cooker.

A 5-10 micron oil filter should also be fitted in the oil line, and the minimum size of the copper oil pipe line should not be less than 10mm diameter.

A stop valve must be fitted near the appliance, in an accessible position.

Oil Control Valve

Oil is metered to the oil burner and controlled by a constant level oil valve, complete with a low voltage Electric Top, which is electrically activated by the cooker thermostat to maintain the optimum oil rate and heat input.

A remote acting fire valve is located adjacent to the oil control valve on the inlet side, with the sensing phial located behind the outer burner door.

The oil control valve can be bolted on either LH or RH side of the cooker, or at some other convenient position adjacent to the cooker and in the same room as the cooker, by the Authorised AGA Distributor who will connect up to the burner. If the control valve is fitted away from the cooker, the oil line between the valve and cooker must not exceed 1m in length. The connection for the oil line to the control valve is 1/4in in B.S.P.

FLUE SYSTEM

See Fig.2 on page 4.

Detailed recommendations for fluing are given in the current Building Regulations J1/4/5.

The following notes are intended to give general guidance:

The cross sectional area of the flue serving the appliance must be not less than the area of the flue outlet of the appliance and be at least 4.5m high.

The flue pipe to be used must be not less than 102mm

internal diameter. Flue pipes and fittings should be constructed from one of the following materials:

- a) Mild Steel with a wall thickness of 3mm minimum.
- b) Stainless Steel to BS 1449: Part 2.
- c) Cast iron to BS 41, acid resistant vitreous enamel lined.
- d) Mild Steel, acid resistant vitreous enamel lined to BS 1344: Part 2.

CHIMNEYS

Flue Gas Temperature: Min 100°C Max 150°C

Chimneys should be built of masonry or be assembled from factory-made insulated components.

Masonry chimneys may be built of any masonry material, with a lining, or if flue blocks, without a lining.

The chimney lining should be 150mm minimum diameter and be formed of moisture and acid resistant liners to BS 1181 with rebated or socketed joints uppermost.

Alternatively, linings may be imperforate clay flue pipes as described in BS 65 or flue blocks to BS 1289 and installed to BS 6461:Part 1.

A 127mm minimum diameter factory-made insulated chimney, complying to BS 4543:Part 1 - 3 may be fitted and installed to BS 7566: Parts 1 to 4.

Where a chimney is to be used which is not composed of or lined with a non-porous acid resistant material, it may be lined with a stainless steel flexible flue liner such as the CHIMFLEX LW from RITE-VENT LTD, suitable for oil fueling. The internal diameter of the liner must be not less than 127mm and the number of joints must be kept to a minimum. If the flue liner is not connected directly to the appliance flue chamber socket, a flue pipe which is constructed from one of the materials in 'Flue Systems' (a) to (d) above should form the connection between the flue chamber socket and flue liner.

Before connecting the appliance to or inserting a liner into a flue that has been previously used, the flue must be thoroughly swept clean of any soot and loose material. If a register plate, restrictor plate, damper, etc., is fitted in the flue it must be removed before connecting the appliance to, or inserting a liner into the flue.

The flue should terminate with a fitment of a flue outlet terminal.

The point of termination must not be within 600mm of an openable window, air vent or any other ventilation opening.

For correct operation of the appliance, the flue should have a minimum pull of 1mm H₂O and a maximum 5mm H₂O.

For conditions above 5mm pull, an additional stabiliser should be installed in the flue (in the same room).

Chimney Terminations

All chimneys should terminate above the roof ridge level in accordance with current Building Regulations and statutory requirements as outlined in BS 6461:Part 1 and BS 7566:Parts 1 to 4.

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

A suitable anti-downdraught terminal such as the Marcone will usually effectively combat low pressure

down-blow but no known cowl is likely to prevent downdraught due to a high pressure zone.

AIR SUPPLY

Detailed recommendations for air supply are given in the current Building Regulations J1/4/5 - Section 1.

The following notes are intended to give general guidance:

Kitchen or Internal Space Air Supply

Wherever a flued appliance is to be installed, it must have a permanent air vent. This vent must be either direct to outside air or to an adjacent room or internal space which must itself have a permanent air vent of at least the same size direct to outside air. The minimum effective area of the permanent air vent in the outside wall must be 24.2cm² (3.7in²) for OC, OCB and OE models. Model OEB requires 29cm² (4.5in²).

Air Extract Fans

Building Regulations 1990 permit the installation of an air extract fan in a kitchen containing an oil fired appliance. The appliance must be able to operate effectively whether or not the fan is running as follows:

1. Ensure the fan duty is capable of coping with the respective kitchen room volume. Avoid an oversize

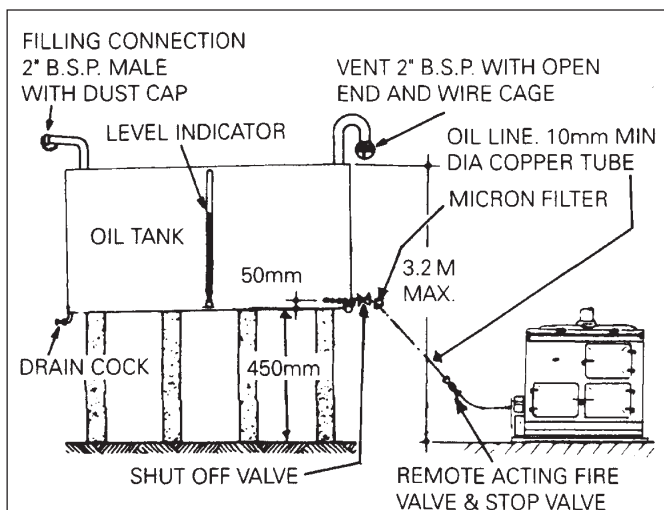


Fig.1 - Oil Storage Tank and Pipeline details

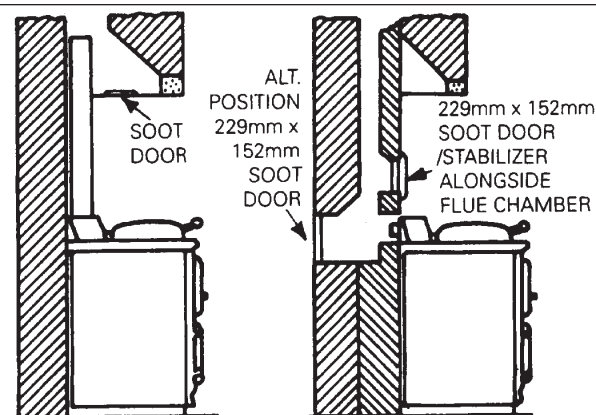


Diagram 1 Cooker installed in a recess with flue pipe passing through the register plate into the throat of the chimney.

Diagram 2 If a recess is to be partially or completely bricked in, a primary flue can be constructed in the new brickwork up to the throat of the chimney. Alternatively, if a new chimney is constructed immediately behind the cooker, a direct connection can be made into it.

Fig.2 - Flue Layouts

fan duty performance.

2. Follow the directions recommended by the fan manufacturer on the necessary air ingress needed for the fan or overhead cooker hood, then add this compensatory area to that recommended for the appliances primary air needs, to form a permanent air vent.
3. Ensure the wall location of the fan does not deprive the appliance of primary air

THE HOT WATER SYSTEM (Models OCB and OEB only)

In a domestic hot water system, the water storage vessel must be of the indirect cylinder or calorifier type.

NOTE: RELAXATION OF INDIRECT CYLINDER DIRECTIVE IS PERMISSIBLE IN REGIONAL AREAS OF PROVEN SOFT WATER STATUS, WHERE A VITREOUS LINED BOILER IS AVAILABLE FOR CONNECTION TO A DIRECT COPPER CYLINDER UTILISING NON-FERROUS PIPES AND FITTINGS—OCB 90 AND OCB 135 ONLY.

The hot water storage vessel should be insulated, preferably, with not less than 75mm thick mineral fibre or its equivalent.

Pipework should be insulated to help prevent heat loss and possible freezing, particularly where pipes are run through roof spaces and ventilated under floor spaces. Cisterns situated in areas which may be exposed to freezing conditions should also be insulated.

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

The use of horizontal pipe runs should be avoided wherever possible in order to prevent the collection of air in the system. If horizontal runs are unavoidable, the pipes should rise upwards in the direction from the boiler.

Hot water systems should be in accordance with the relevant recommendations in BS 6700.

WATER CIRCULATION SYSTEM (Models OCB and OEB only)

The cooker boiler should be connected to a cistern water supply and subject to a maximum head of 18.25m (1.8 bar) and water carrying copper tubes should be to BS 2871:1.

The 28mm minimum diameter primary flow pipe must rise continuously from the cooker boiler to the cylinder to ensure good gravity circulation and have an open vent.

The 28mm diameter primary flow and return pipes must not exceed 5.5m in length and be well insulated.

Water Connections (Models OCB and OEB only)

The two 28mm copper flow and return pipes from the boiler can be obtained for right hand or left hand connections.

Hot Water Storage Vessel (Models OCB 90 and OEB)

It is recommended that an indirect 190 litre (40 gallon) hot water storage cylinder of the double feed type (e.g. Manufactured by Albion Cylinders) complying with BS 1566 Part 1:DF Type 10, should be lagged and fixed vertically as near as possible to the cooker.

For an OCB 135 model, a 280 litre (60 gallon) hot water storage cylinder of the double feed type complying with

BS 1566 Part 1:DF Type 12, should be lagged and fixed vertically, as near as possible to the cooker.

The water draw-off pipes to the taps must be dead leg connection from the vent/expansion pipe. A drain tap must be fitted at the lowest point of the system.

ELECTRICAL SUPPLY

WARNING! Isolate from supply before carrying out repairs or adjustments.

Wiring external to the appliance must be installed in accordance with the current National and Local Regulations and Standards.

The cooker is supplied with a double insulated isolating transformer, designed for 230v ~ 50Hz supply and protected by a resettable fuse (resets within 2 minutes, after isolating transformer from mains).

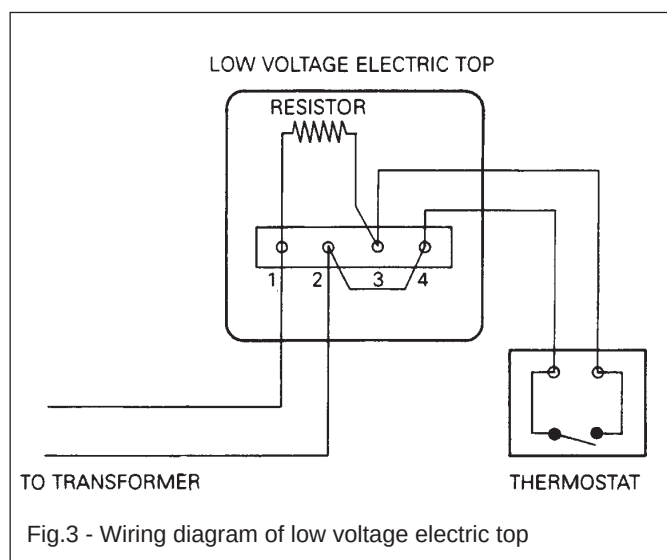
The transformer leads are connected to the low voltage electric top mounted on the oil control valve top.

See Fig. 3.

The transformer can be plugged directly into an unswitched, shuttered socket-outlet. The socket should be accessible and adjacent to the appliance.

WARNING! The low voltage electric top must not be connected directly to the mains supply.

Always use an AGA Transformer



TILING

Where the cooker is to stand in a recess or against a wall which is to be tiled in no circumstances should the tiles overlap the cooker top plate.

FLUE CHAMBER OUTLETS

The cooker flue chamber can be converted to provide either a horizontal or vertical flue outlet.

An extended horizontal flue connection is allowed upto a maximum of 150mm in length when a back chimney is constructed immediately behind the cooker (No bend connections are allowed).

The vertical flue outlet is used for main flue connection via a 100mm diameter flue pipe between the flue chamber and the chimney, etc.

Where the flue passes through a wall to reach a flue it must rise at a minimum angle of 45°.

INSTALLATION OF COOKER (General)

The complete cooker is floor mounted and the space in which the appliance is to be fitted must have the following minimum dimensions:

	OIL VALVE ON L.H. SIDE	
	Model OC and OCB	Model OE and OEB
Width	1303mm	1803mm
*Depth	1130mm	1130mm
Height	1400mm	1400mm

	OIL VALVE ON R.H. SIDE	
	Model OC and OCB	Model OE and OEB
Width	1187mm	1687mm
*Depth	1130mm	1130mm
Height	1400mm	1400mm

* Depth dimension includes door opening.

This space includes the following minimum clearances for servicing:

Between wall and cooker side - 200mm adjacent to oil control valve.

If the oil control valve is not fitted against the cooker side panels, then the width across a recess which does not protrude beyond the front of the cooker may be reduced.

to:

OC, OCB	1000mm
OE, OEB	1500mm

A 3mm gap is required each side between the cooker top plate and adjoining work surfaces that maybe fitted. This is to allow for the safe removal of the top plate should this be required at a later date.

Above the raised insulating cover handle - 60mm.

To facilitate further oil servicing, a minimum clearance of 1000mm must be available at the front of the cooker.

Flue pipes and fittings must not be closer than 25mm to combustible materials and where passing through a combustible partition such as a ceiling or roof, must be enclosed in a non-combustible sleeve providing a connector space of at least 25mm.

Spacers around flue pipes passing through walls or floors should be sealed against the passage of smoke and flame.

ASSEMBLE THE COOKER AS SEPARATELY INSTRUCTED AND INSTALL/CONNECT THE OIL BURNER ELECTRICAL SUPPLY.

COMMISSIONING AND LIGHTING THE BURNER

NOTE: BURNER BASE ENSURE THAT:

1. THE BASE IS LEVEL.
2. IT CONTAINS A 6mm DEPTH OF OIL.
3. THE BURNER SHELLS ARE SEATED PROPERLY

Lighting the Burner - See Fig. 4 & 5 below.

1. Ensure all oil valves are open and oil is in the oil control valve. Turn control knob **E** to MK6 position.
2. Lift up the reset lever **A** on the front of the oil control valve **B**.

NOTE: THE ACTUATING LEVER C ON THE ELECTRIC TOP MOUNTED ON THE OIL CONTROL VALVE TOP PERMITS MANUAL CONTROL TO OBTAIN MAXIMUM OIL FLOW RATES IN THE EVENT OF POWER FAILURE AND DEPRIVATION OF THERMOSTAT USE. ENGAGE THE ACTUATING LEVER C BY PUSHING TO THE LEFT AND ENGAGING IN THE NOTCH OF THE COVER.

THIS ALLOWS THE ACTUATING PLUNGER BUTTON TO EXTEND UPWARD AND GIVE HIGH FIRE OIL RATE.

USE ACTUATING LEVER WITH POWER FAILURE ONLY.

3. Open outer burner door **D**, lift off inner door **H** and set control thermostat knob **E** to Mark No. 6.
4. After allowing 15 minutes for oil to settle in the burner base, lift the lighting flap **F** on the front of the outer burner shell and light the front wick through the lighting aperture.
5. Close the lighting flap **F**, refit inner door **H**, and close the outer burner door **D**.
6. Connect transformer to mains supply.
7. The oil burner will gradually increase its oil rate, and under the control of the thermostat, bring the complete cooker up to temperature equilibrium, overnight.

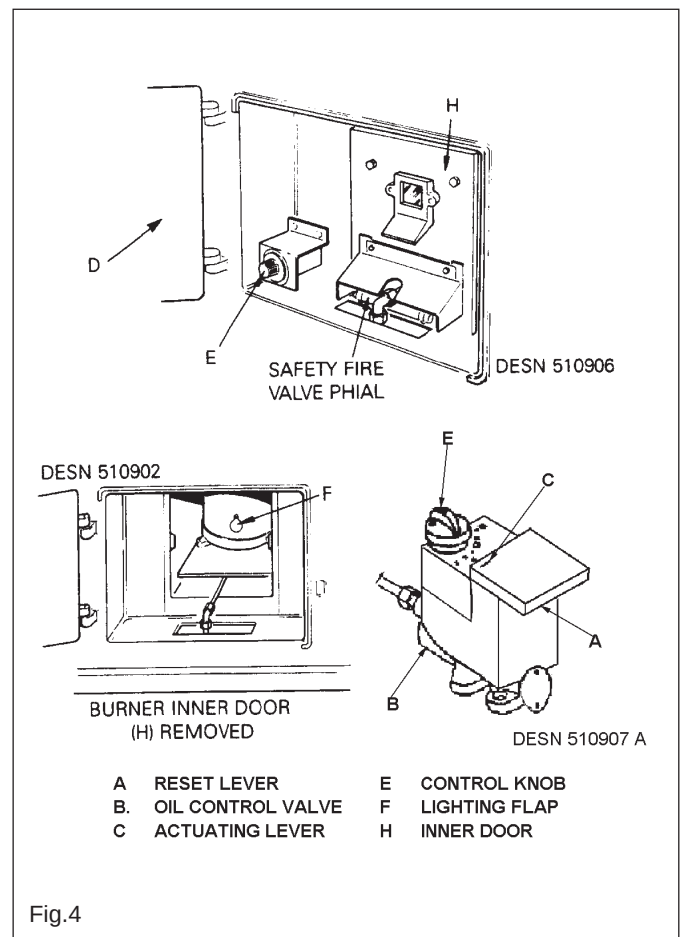


Fig.4

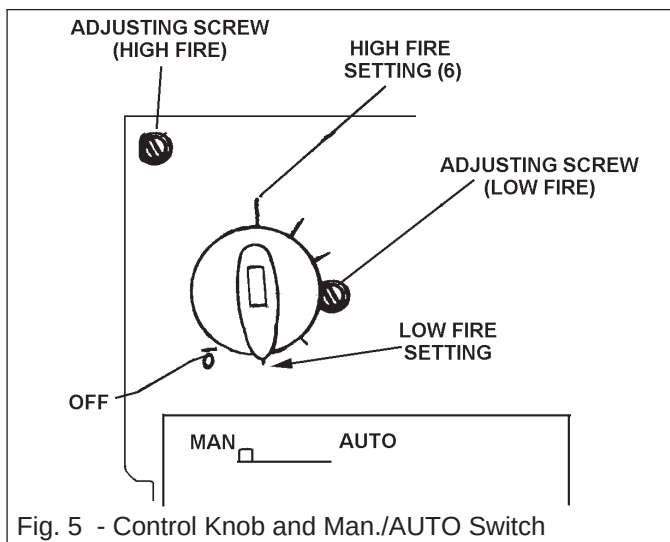
USER'S INSTRUCTIONS

Hand the Operating Instructions to the User for retention and instruct the user in the safe operation of the appliance.

Advise the User of the precautions necessary to prevent damage to the Domestic Hot Water system and to the building in the event of the Domestic Hot Water system remaining inoperative during frost conditions.

Finally, advise the User that, for continued efficient and safe operation of the appliance it is important that adequate servicing is carried out at regular intervals recommended by the AGA Distributor.

LEAVE INSTRUCTIONS FOR FUTURE USE



Oil Rate and Combustion Checks

1. Remove the blanking plate and the oil filter within the oil control valve and connect an oil flow gauge assembly. The flow gauge must be capable of measuring up to 10cc per minute.
2. With the burner alight at high fire, check that the oil rate corresponds with the rates given on Page 1.
3. After 30 minutes on high fire, sample the flue products, just below, but within the bottom of the flue chamber with a Baccarach Smoke Pump.
The Smoke Test should indicate a Baccarach Smoke No. 0 - 1.
4. Disconnect the oil flow gauge and replace oil filter and blanking plate in oil control valve.

Automatic Control

The oil flow supply (heat input) is modulated by the electrical de-activation of the oil control valve top mechanism in conjunction with the control thermostat.

At idling temperature, the oil flow modulates down to minimal rates sufficient to maintain the cooker up to full temperature, with the indicator or or about the centre of the silver section of the heat indicator. If not, rotate the thermostat knob as necessary, but allow at least 12 hours between re-settings. Once the correct setting has been found, the cooker will operate automatically to maintain the cooker at full temperature.

When the cooking loading commences, a fall in oven temperature will cause the electrical activation of the oil valve top and subsequent increase in oil flow to a high fire condition, until recovery to its idling temperature is allowed.

Electrical Power Failure

Despite the loss of electrical power, normal cooking temperatures can still be obtained, but control must be manual only.

Method: Holding the actuating lever on the top of the oil control valve, push it to left and engage it in the notch of the cover. Electrical thermostat control will not be possible until the actuating lever is dis-engaged.

To Extinguish the Oil Burner

To completely extinguish the oil burner. Turn control knob fully clockwise to 'O' position, and isolate the electrical supply from the cooker.

If the cooker is being left out of use for more than a few hours or if the fuel supply has run out, turn off the valves on the oil feed line from the storage tank.

**For further advice or information contact
your local AGA Specialist**

With AGA's policy of continuous product improvement, the Company reserves the right to change specifications and make modifications to the appliances described and illustrated at any time.



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