

Domestic Gas Cookers & Ranges



Version 2 (2008)

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CKR1

**Initial Gas Programme
Revision**

Installation and Siting Locations

Gas Cookers are mostly designed as flueless appliances. That means they get their combustion air from the same room the combustion products are expelled to. As you will have already learned an openable window or similar is a must, and in rooms smaller than 10M³ require purpose provided permanent ventilation.

With this type of appliance opening its burners directly into the room (normally a kitchen) that is filled with combustible materials, and often wooden kitchen cabinets fitted all around it safety precautions are paramount. British Standards show standard minimum recommended distances from such fixed combustible items.

All cookers, especially those on flexible hoses should be installed on a completely flat surface, and plinths avoided except where no other installation options remain. Cooker chains and stability brackets are a pre-requisite to commissioning these appliances and to ensure their stability.

Appliance stability is exceptionally important for appliances with 'Drop Down' Oven Doors.

Stability devices normally have to be purchased separately and as an addition to the appliance. Examples will be shown here.

The manufacturer's Manual will give individual figures and should always be referred to . .

Installation of the Gas Supply

The gas supply should be checked for adequate size and inlet pressure 20mb +/- 2mb at the newly installed appliance.

The gas connection for the appliance can be of either the rigid pipe design or Flexible Connector.

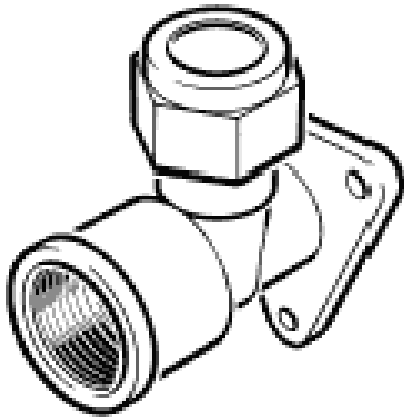
(Flue Cast Iron Ranges must be installed using rigid pipework!). Where Rigid Pipework is used it must be installed with a service isolation valve and union which will allow the appliance to be disconnected.

Flexible connections must conform to BS 669 Part 1, 1989 (Natural Gas)

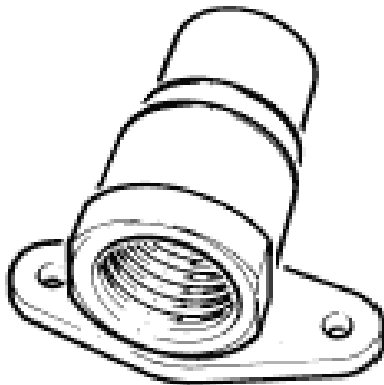
The rules for LPG differ. Natural Gas flexible connections are colour coded yellow whilst LPG are Red. Note also that jointing compounds used on Natural Gas may not be suitable for LPG.

Free standing cookers and ranges can be connected using a flexible hose and plug in (bayonet) connector.

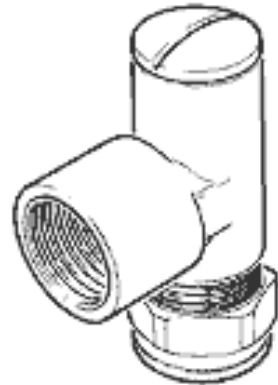
Current legislation suggest the correct installation position of the back plate and bayonet fitting to be 750mm from floor level. Since the appliance connection position varies from right to left depending on appliance the engineer should install the back plate and bayonet to allow the hose to fall in a uniform loop. See the diagrams below.



Back Plate Elbow



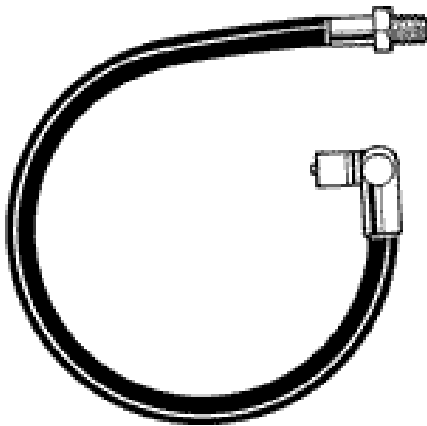
Hose Connector



Restrictor Connector

The Gas Supply is brought up to this terminating plate which has must be securely fastened to the wall.

The Hose;



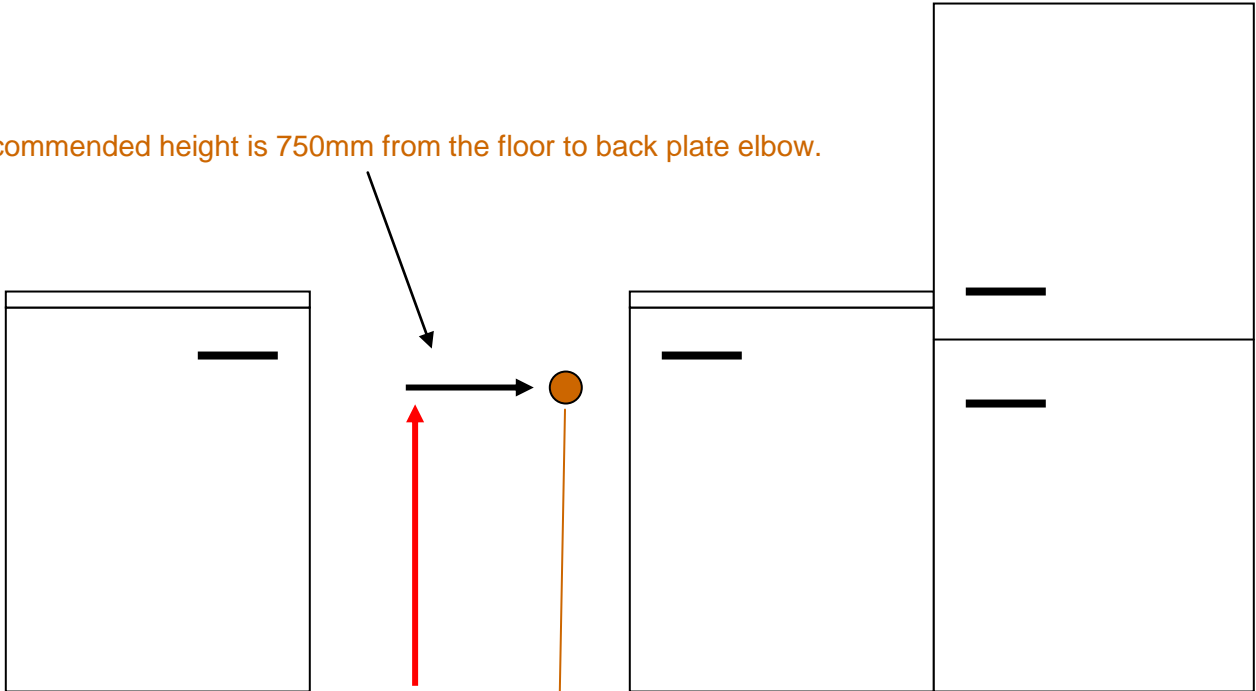
Hose with Right Angle Connection



Straight Connecting Hose

When the hose is connected it should fall naturally on its gravity into an un-forced loop. See below;

Recommended height is 750mm from the floor to back plate elbow.

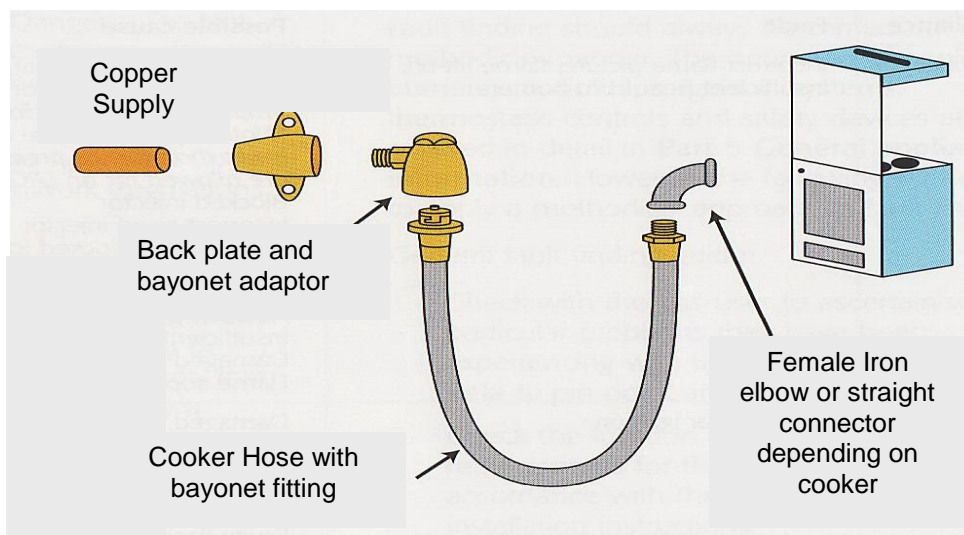


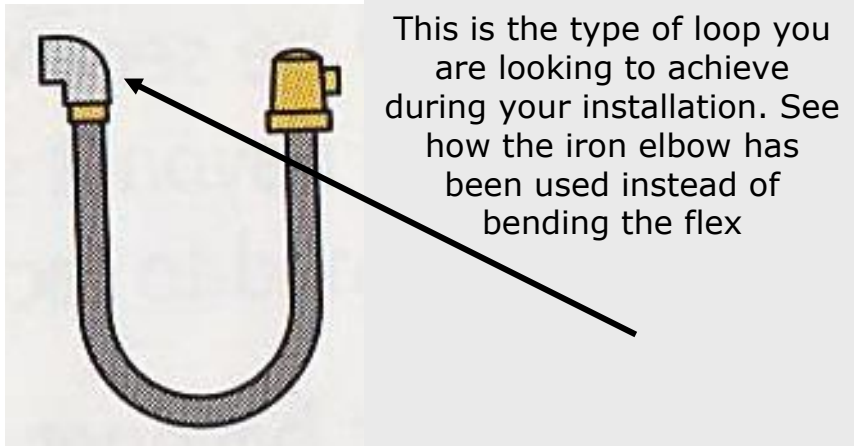
Up to this time you are likely to find the existing installation 500 to 600mm from the floor and 50 to 150mm from the side. We would recommend that 50 to 150mm in is still a good bet, but the installation will dictate.

Installing the Cooker Hose.

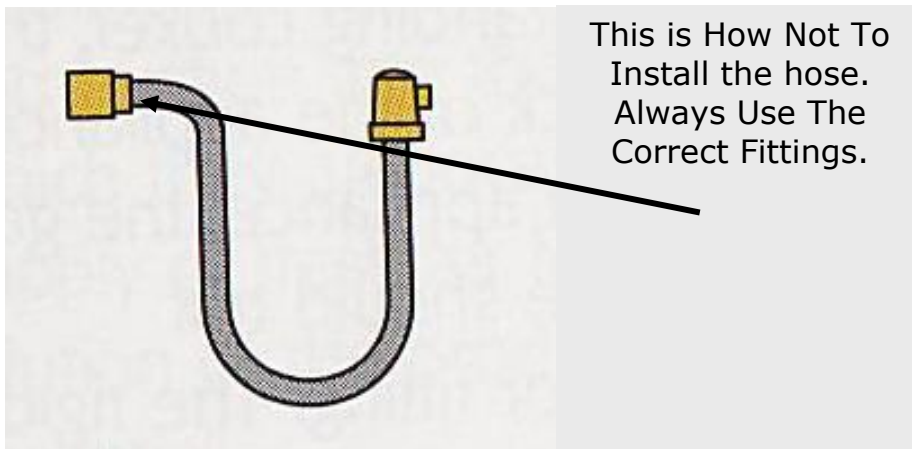
To avoid damaging the hose it should be installed so that when the appliance is returned to its fixed position that there is no undue tension on the flex or connections.

The common fittings used to make this connection are shown below.





One of the biggest mistakes is for example installing the back plate and hose on the same side as the cooker connection. For the above loop to be achieved they have to be situated on opposite sides, otherwise when the cooker is pushed in it will cause adverse stress on the hose.



Gas Hobs (Hotplates)

Gas Hobs must be fitted using rigid connections, unless otherwise stated by the appliance manufacturer. The appliance supply connections should also incorporate a service isolation valve and means of disconnection.

Gas Cookers in Multi Occupancy Buildings

Where a gas cooker is fitted in a multi occupancy property where in addition to an AECV the meter ECV is remote from the flat and stored amongst various other meter ECV's remote to the property, say in the basement or outside. In this instance it is possible for the gas to be mistakenly isolated by another property. For this reason all new appliances must incorporate a flame supervision device for the hob burners and over/grill etc.

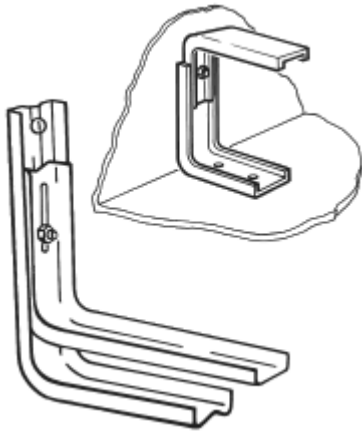
Stability Devices

Herewith a choice of stability devices necessary to prevent a gas cooker from toppling over.

There are 2 types of stability device. The Bracket and the Chain.

The bracket is used where the appliance design has incorporated a slot at low level in the back panel of the appliance.

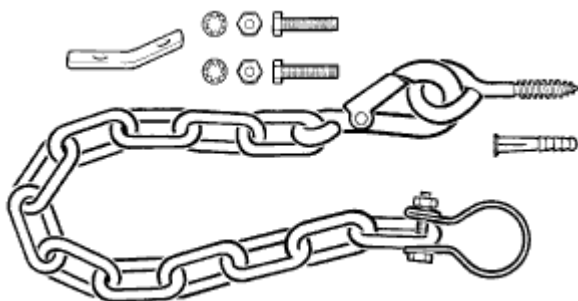
Type 1



Stability Bracket

The stability bracket is used where the appliance design has incorporated a slot at low level in the back panel of the appliance.

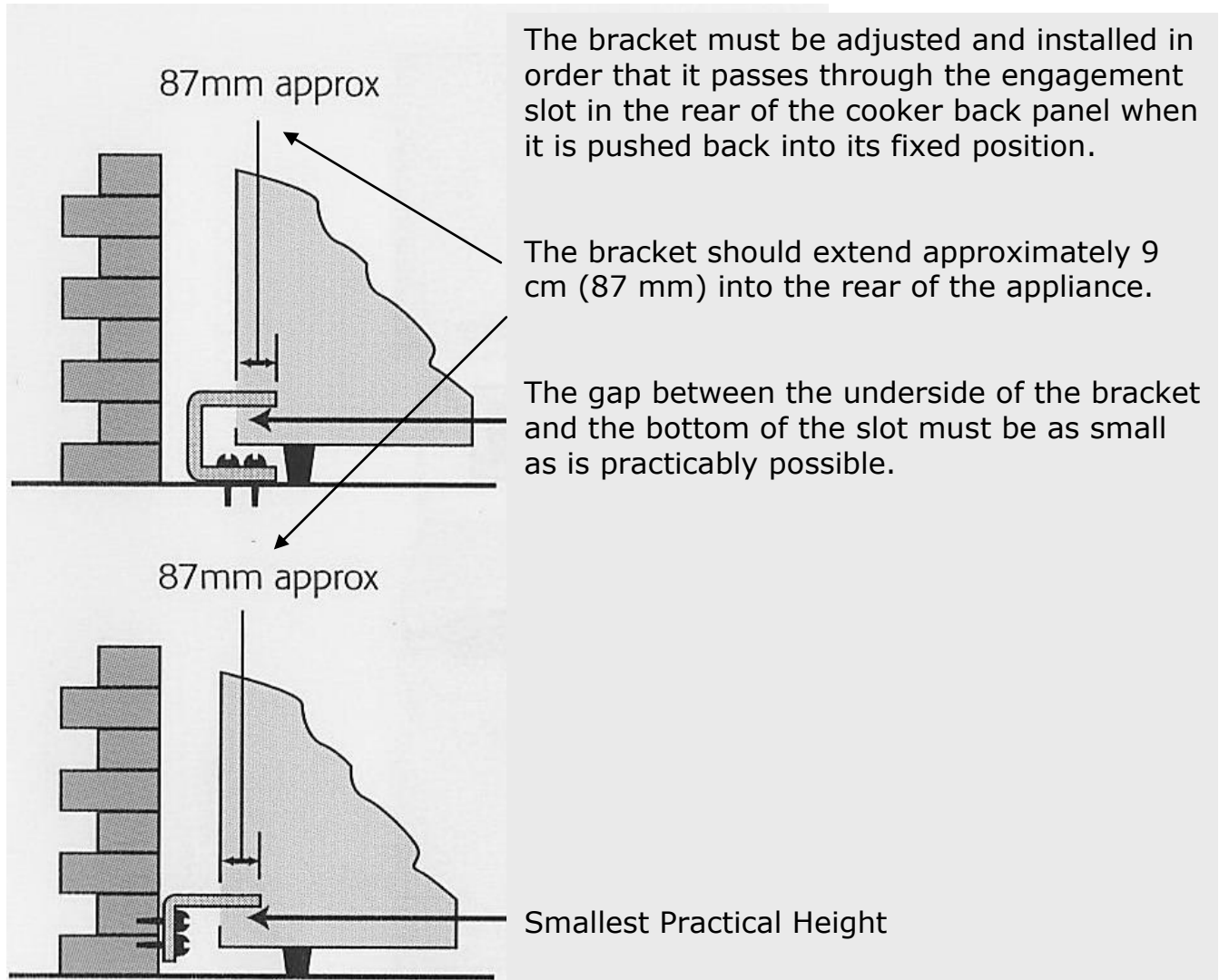
Type 2



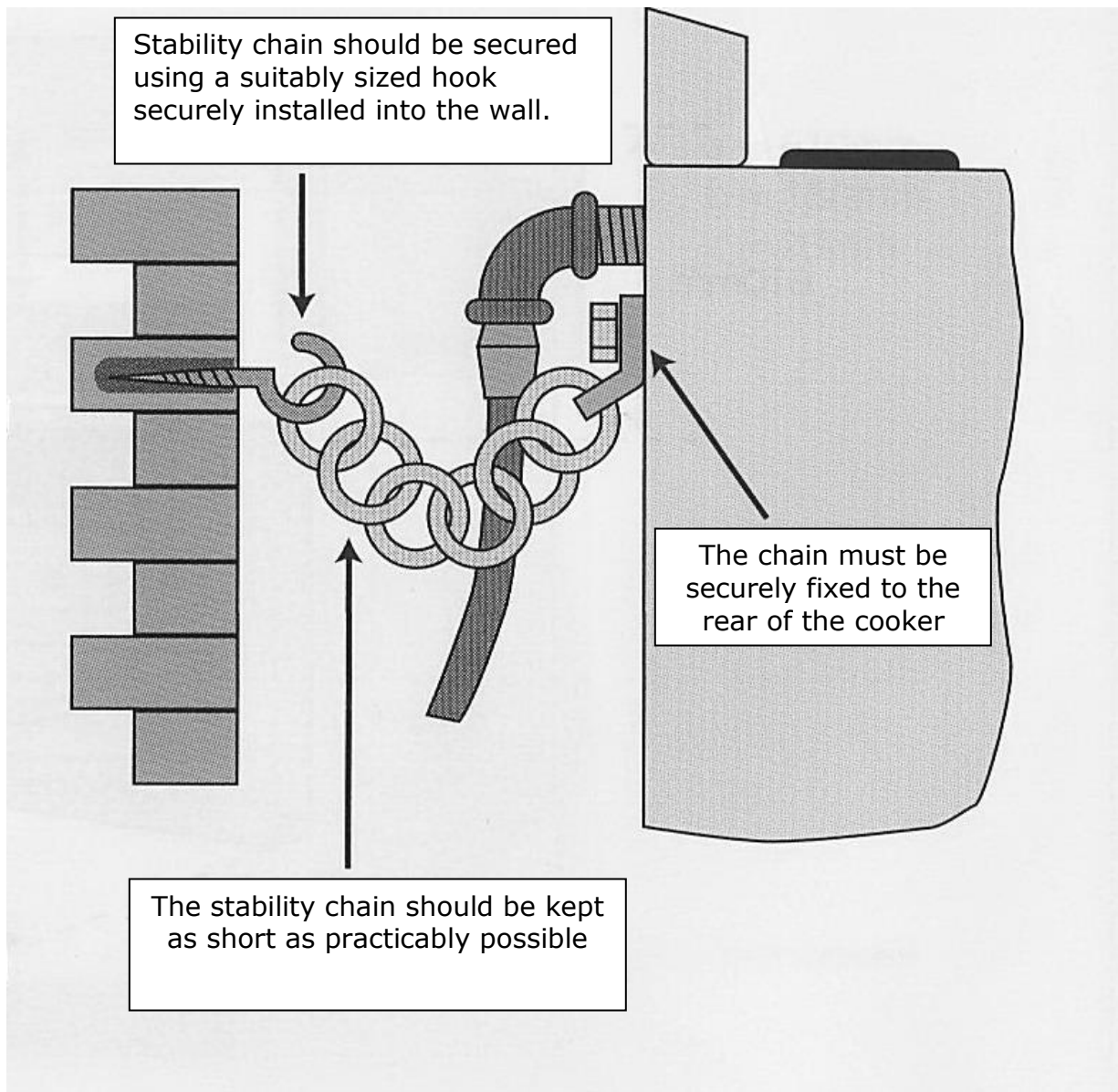
Cooker Chain

The Cooker Chain is used where the appliance design has not incorporated a slot at low level in the back panel of the appliance.

Installing Stability Devices

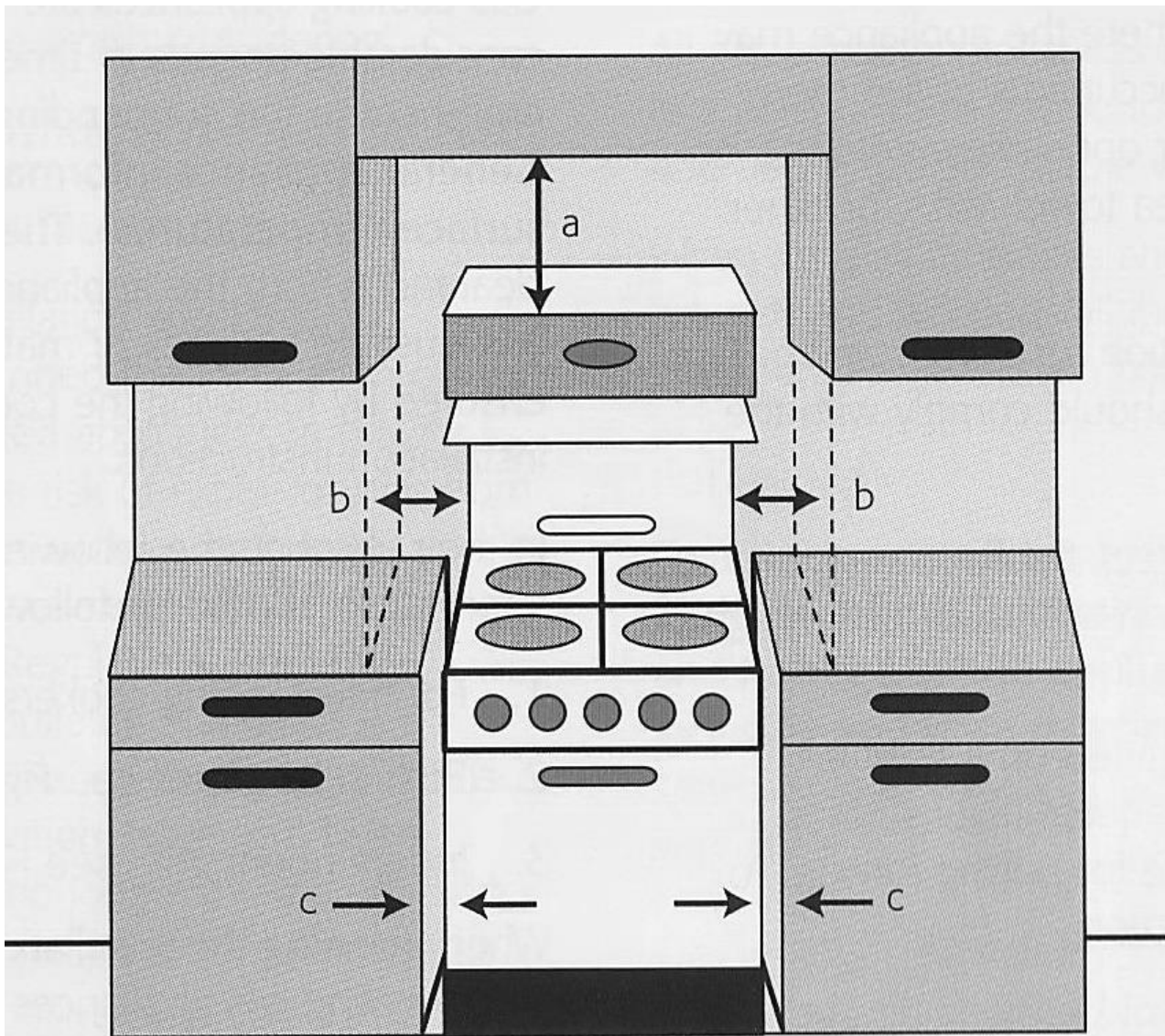


Most Freestanding cookers will have adjustable feet. Always ensure these are set to level the appliance and that a spirit level is used to confirm this once installed. The appliance should not wobble, ensure all the feet are set correctly.



The above diagram shows a typical chain connection for appliance stability.

Installation Clearances - Cookers_T



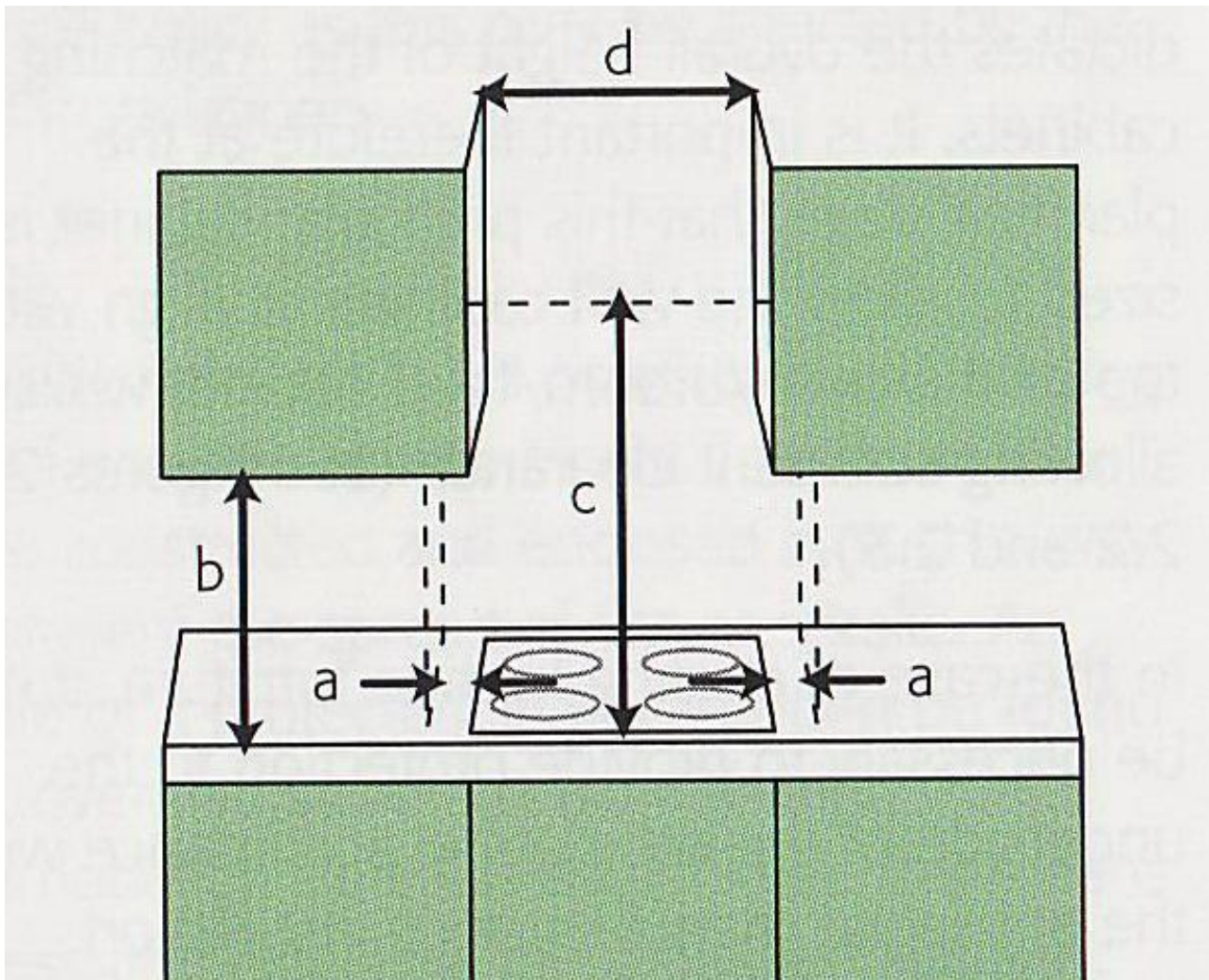
a = minimum distance between grill hood and any cupboards above = 610mm

b = minimum distance either side of hotplate and grill = 150mm

c = minimum distance either side of the oven = 20mm

Minimum clearances for cooker installation

Installation Clearances – Hotplate



a = distance to combustible materials to side of hob (ie Larder cupboard) = 50mm

b = min distance to adjacent high level cupboards from base = 460mm

c = min distance from burners to combustible materials directly above = 760mm

These are only recommended clearances where the manufacturer has not given clear guidance.

Testing Ovens and Hotplates

The Following steps are just examples of safety tests that might be carried out on ovens and hotplates

The burners on the hotplate need to be inspected visually. Access can be made to the injectors for visual inspection or cleaning.

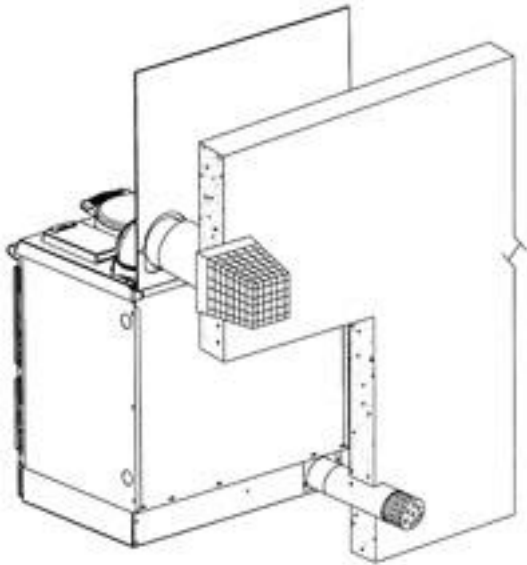
- Test the hob burners at full flame – all on together check flame picture
- Turn all the hob burners down to their low flame setting and ensure the flame holds on each of the burners.
- Turn the flame back to max and then off.
- Test and inspect the oven and grill burners. Ensure the metal fretting on the grill burner is not heat damaged and is fully intact. Inspect the flame picture.
- Ignite the oven and test the oven door seal and thermostat. After ignition the oven burner will modulate to full flame. Allow this to run for 10 minutes on all but the new appliances. Many of the older units have a bypass or weep valve which if blocked will be unable to maintain a low burner flame to ignite the main gas as the oven cools leaving a dangerous situations. After 10 minutes turn the thermostat down to its lowest setting and observe to confirm the flame is settled at low and the burner is still alight.
- Some hobs have glass lids. In order that these are not accidentally lowered causing a serious danger of injury should the burners still be on, a safety cut out device is often fitted. It is law today. Turn on the burners and lower the lid to ensure the safety device is working.

Range Cookers

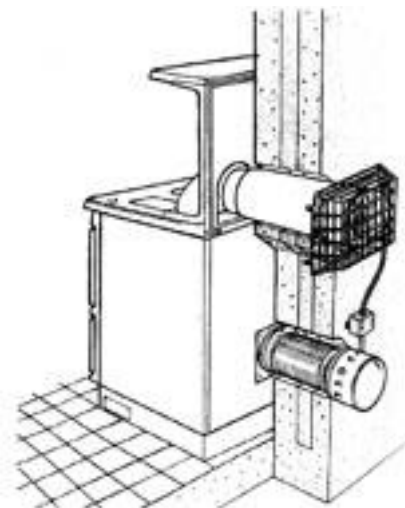


This type of appliance is used to provide heating hot water and cooking in alone appliance. Due to the appliances' gas rate and total heat input it is not safe for this appliance to be installed without a flue. The models even when they were solid fuel had open flue. These days the range has also been adapted with Room Sealed Balanced and Open and Room sealed fan models.

Take a look at the following illustrations.



Room Sealed Range Air Inlet and Separate Flue



As above

Range incorporating Heating Boiler and Cooker. Open Flue Model



- 1 'CoolerTouch' handle
- 2 Spring-assisted hinges for easier lifting
- 3 Heavy duty 'Dog Bone' hotplate with ground finish
- 4 Cast iron top plate with high quality black enamel finish
- 5 Finned heat transfer casting with high thermal mass
- 6 High quality enamel finish in a choice of 6 colours
- 7 Flue down draft protection system (gas only)
- 8 Insulated hob lids
- 9 Large 54 litre ovens with full depth roasting pan
- 10 Heavy duty shelving system
- 11 Heat distribution channels specifically developed for even, controllable oven temperature
- 12 'Slam shut' door catches
- 13 Steel front plate and insulated steel doors
- 14 Built-in programmer to control the cooker
- 15 Thermostatic control of central heating water
- 16 Cooker oven thermostat control
- 17 State-of-the-art, electrically-controlled gas or oil pressure jet burner technology
- 18 Exceptionally quiet, twin burners to independently heat the cooker and boiler
- 19 Choice of 4 sizes of boiler
- 20 Towel rail

All the relevant gas safety installation and use regulations apply to the installation, testing and commissioning of these appliances.
Please refer to the manufacturer'

