

PARKRAY

THE FIRST NAME IN SOLID FUEL



CHILTERN



CUMBRIA

PARKRAY CHILTERN/CUMBRIA 36, 66, 99 & 111 INSET ROOMHEATERS

Installation Instructions



Approved for solid mineral fuel by HETAS Ltd.

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Handling.

Adequate facilities must be available for loading, unloading and site handling.

Glass.

Special care is required concerning the firedoor.

Fire Cement.

This material is caustic. Any fire cement which comes into contact with the skin, particularly with cuts, must be immediately washed off.

Electrical.

Any appliances with electrical components must be connected in accordance with the Installation Instructions and all wiring must comply with the current issue of BS7671 and installed by a competent person.

Flues, Combustion Air Supply and Siting of Roomheaters.

In addition to our detailed Installation Instructions, the current issue of relevant Codes of Practice, the current Building Regulations and any applicable local regulations must be observed.

Commissioning of Roomheater and System

All electrical connections must be checked and continuity of earthing satisfied.

Where any gas supply has been connected, this should be checked for soundness and correct setting of pressure.

All roomheaters should be checked under fire for soundness of all seals, joints and castings, and that the products of combustion are correctly clearing the chimney.

Inform User

When this roomheater has been commissioned it is important to go through the "Instructions for Use" with the customer to ensure a thorough understanding of components and use.

Asbestos

This roomheater contains no asbestos. Where there is a possibility of disturbing asbestos in existing installations specialist guidance must be sought.

Metal Parts

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

Gas Supply

Where a gas burner is supplied it **MUST** be installed by a competent person in accordance with the current issue of the Gas Safety (Installation and Use) Regulations.

Draw attention, if applicable, to the current issue of Gas Safety (Installation and Use) Regulations, Section 35, which imposes a duty of care on all persons who let out any property containing a gas appliance.

Read these instructions carefully

These instructions cover the basic principles to ensure satisfactory installation of the roomheater, although detail may need modification to suit local site conditions. In all cases the installation must comply with current Building Regulations, the current issue of British Standard 8303 and 7566. When installed in caravans or mobile homes the current issue of British Standard 5601 and BS6762 Part2 must be complied with. The fireplace surround must comply with the current issue of British Standard 1251.

NOTE. To meet the Combustion Air Requirements of the current Building Regulations, this roomheater requires a permanent air inlet to the room in which it is installed, with a minimum free area of 5500mm². Any applicable local byelaws and regulations must also be observed.

A. PREPARATORY WORK AND SAFETY CHECKS

1 IMPORTANT WARNING

Before installation it is essential to ensure that:

The chimney is sound and has no cracks or other faults which might allow fumes into the house. Older properties, especially, may have chimney faults or the cross section may be too large, that is, more than 230x230mm. Remedial action should be taken, if required, seeking expert advice, if necessary.

The chimney has been swept clean immediately before installation.

NOTE. Where a roomheater is connected to a flue which previously served an open fire, advise the user to have the flue swept again after one months regular operation.

The chimney is clear of obstruction.

This roomheater is not installed in a room in which an extractor fan is fitted as this may result in flue pull reversal and fume emission.

This roomheater may be operated using a 150mm (6in) diameter flue system when burning bituminous coal or wood, providing the fire doors remain Closed.

If the roomheater is to be operated with the doors open then the flue must have a minimum diameter of 200mm (8in).

Note: If the appliance incorporates a 150mm (6in) diameter flue system and bituminous coal or wood are burnt then it may be necessary to sweep the chimney more often.

2 PREPARING THE LOCATION

The location of the Parkray roomheater must conform with the dimensions shown on the back page and below.

The shaded area on the face of the fireplace surround illustrated is the minimum flat surface required.

The hearth must be fireproofed in accordance with the current Building Regulations.

The rear hearth must be flush with the front hearth, level, in good condition and at right-angles to the front face of the fireplace surround.

3 THE HEATING SYSTEM 99 and 111 ONLY

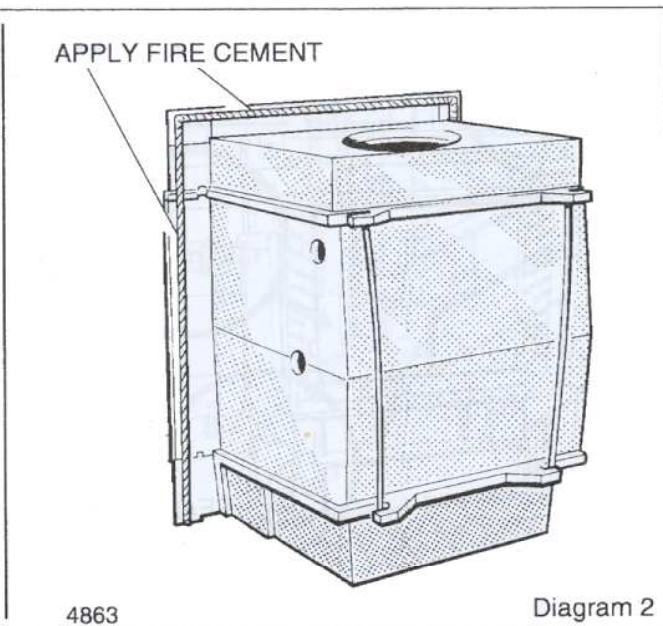
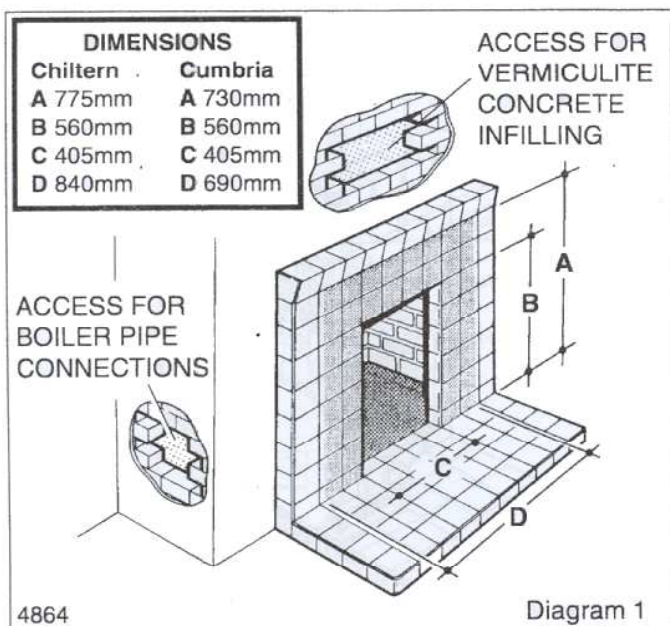
Domestic hot water and radiator systems must comply with and be vented in accordance with the current issue of British Standard 5449.

A suitable sized radiator should be fitted in parallel with the gravity hot water circuit to act as a heat leak, about 1.5kW.

It is recommended that the room back-up radiator is fitted with a thermostatic radiator valve, refer to BS7478 for guidance.

A double feed indirect hot water cylinder to the current issue of British Standard 1566 Part 1, should be used.

It is recommended that a gravity circuit is used to the cylinder and heat leak radiator, if this is not practicable then a pumped primary circuit may be employed.



B. INSTALLING THE APPLIANCE

NOTE. Only fire cement should be used for all points of sealing not fireclay or mortar.

4 PREPARATION OF BOILER

Remove strap from door latch. This is for transportation purposes only and is not required further.

To minimise the possibility of glass breakage during installation the firedoors may be removed.

With the firedoors open knock top and bottom hinge pins upwards using a drift. Support the weight of the door and remove the hinge pins. Take care not to lose the spacing washer on the top hinge, ease the door away from the frame.

NOTE. To avoid unnecessary readjustment when replacing parts removed, it is essential that the numbers on the label:

(a) on the inside of the firedoor and

(b) on the inside of the firebox - are the same.

5 SELECTING BOILER TAPPING

PARKRAY 66 ONLY

Please note that on this roomheater the holes in the side castings are sealed with metal discs. It is most important that only the two discs which correspond with the boiler connections are removed by tapping with a hammer from inside the roomheater.

The use of 1 in BSP barrel nipples is required, from the boiler through the appliance side casting.

NOTE. On no account should the screws on the casing adjacent to the pipe holes be removed or loosened.

ALL MODELS

Fit plugs in unused boiler tappings, according to the hand of connection required and make good the joints.

6 FITTING BOILER INTO RECESS

ALL MODELS

Dampen the rope on the return edge of the sealing flange and apply ample fire cement to form a seal.

Dampen the projecting edges and the bottom front edge of the front casting and apply ample fire cement.

Offer up the roomheater to the prepared recess, ensuring that it is central and that the rope on the casting return edges is hard against the fireplace surround.

Temporarily fit the side castings, firedoor and canopy to check the roomheater is correctly positioned relative to the surround.

Using a 6.5mm drill bit, drill through the hole in the base casting, then proceed with a No.12 Masonry drill deep enough into the hearth to accommodate the anchor plug provided. Push the plug into the hole, insert the screw provided and turn until fully tightened.

Seal over the screw head with fire cement. Remove any surplus fire cement, but make sure that the seal to the hearth and the surround is airtight.

7 MAKING PIPE CONNECTIONS

PARKRAY 66 ONLY

Remove the two boiler clips, one on each side casting. Place the boiler centrally and level in the roomheater and fix in position by using the two clips.

ALL MODELS

Make pipe connections to the boiler ensuring that the primary flow and return pipes rise. Fill the system and test for leaks.

PARKRAY 66 ONLY

Apply fire cement to seal around the flow and return pipes at the point of entry to the roomheater.

8 INFILLING AROUND THE ROOMHEATER

ALL MODELS

Infill the space between the casing and the brickwork structural opening with Vermiculite, Micafil or similar concrete.

The following mix is recommended: six volumes of Vermiculite granules to one volume of Portland cement, thoroughly mixed together.

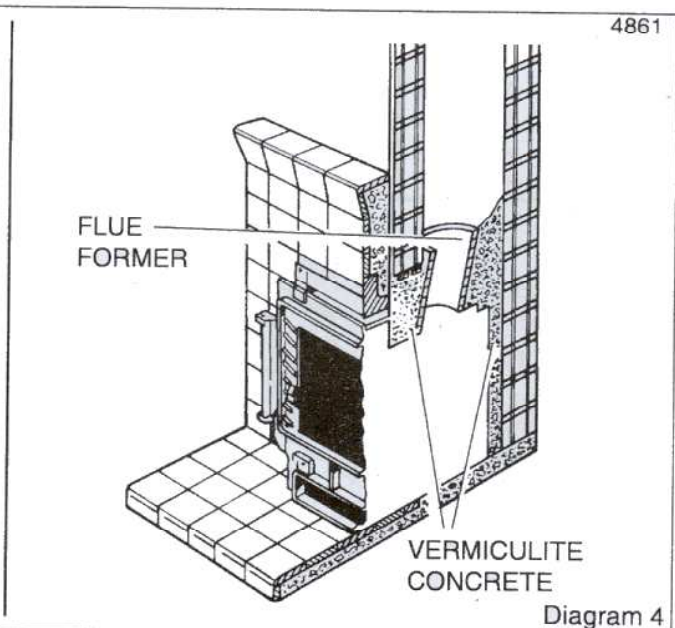
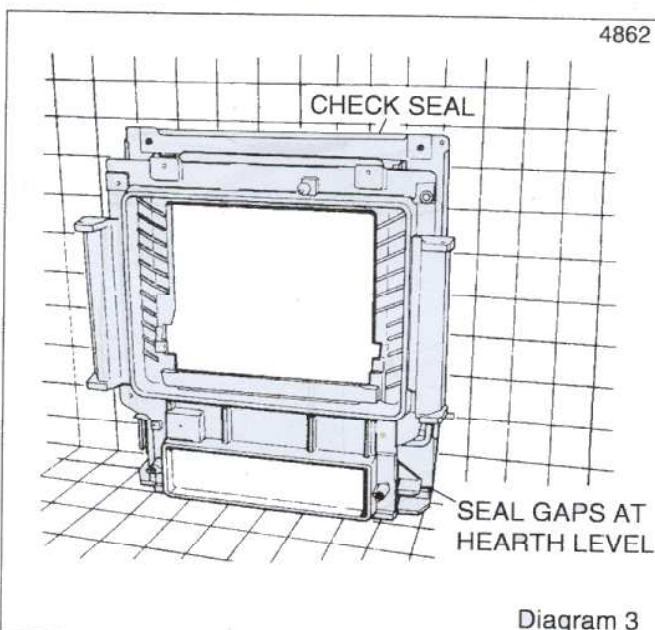
Sufficient water only should be added so that when a handful of the mixture is squeezed no more than one or two drops of water are released.

The connection between the roomheater spigot and the chimney should be made with a length of 150mm diameter flue forming pipe, or cast iron offset connector.

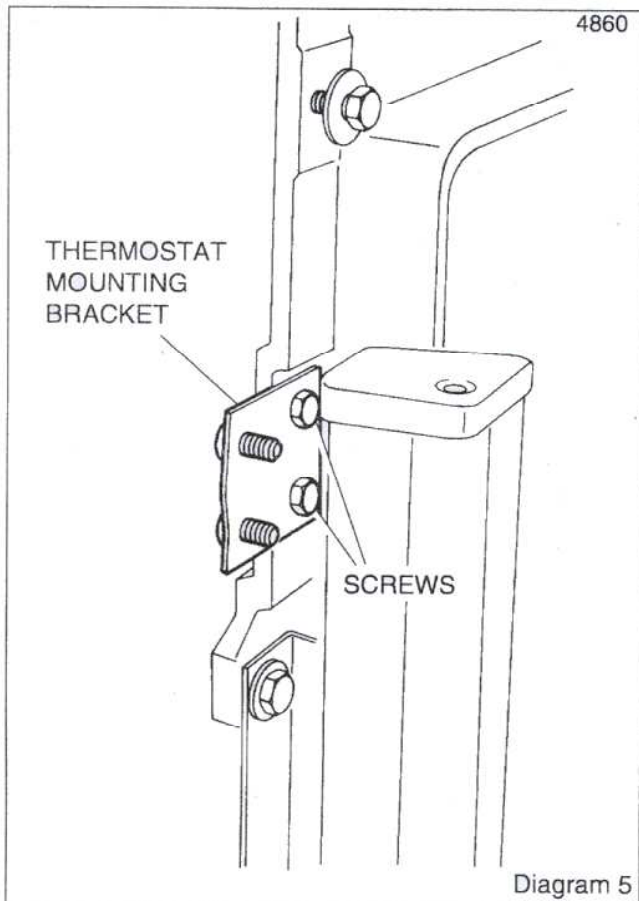
The length of pipe will depend upon the distance from the top of the flue spigot to the chimney.

Cover the top front of the roomheater for protection. Centralise the pipe and then completely fill-in round with Vermiculite concrete, particularly behind the fireplace surround. All pockets or cavities must be filled.

Make good the holes in the face and side of the chimney breast, ensuring that they are completely airtight.



C. FINAL ASSEMBLY AND ADJUSTMENT



9 THERMOSTAT MOUNTING BRACKET

Remove bracket from frame pack - attached to the de-ashing arm.
Position bracket on left hand side of inner front with the attached screws facing forward.

Secure with the two M6x10 hexagon headed screws (black), supplied in the control knob/screw pack.

10 AIR CONTROL (PARKRAY 36)

THERMOSTATIC CONTROL (PARKRAY 66)

See fitting instructions packed with air control.

Position air plate midway along threaded spindle and secure with locknut (B).

Push on control knob and turn fully anti-clockwise (Mk 0).

Loosely attach control to thermostat mounting bracket using two M6 hexagon-headed nuts supplied in the control knob/screw pack (A).

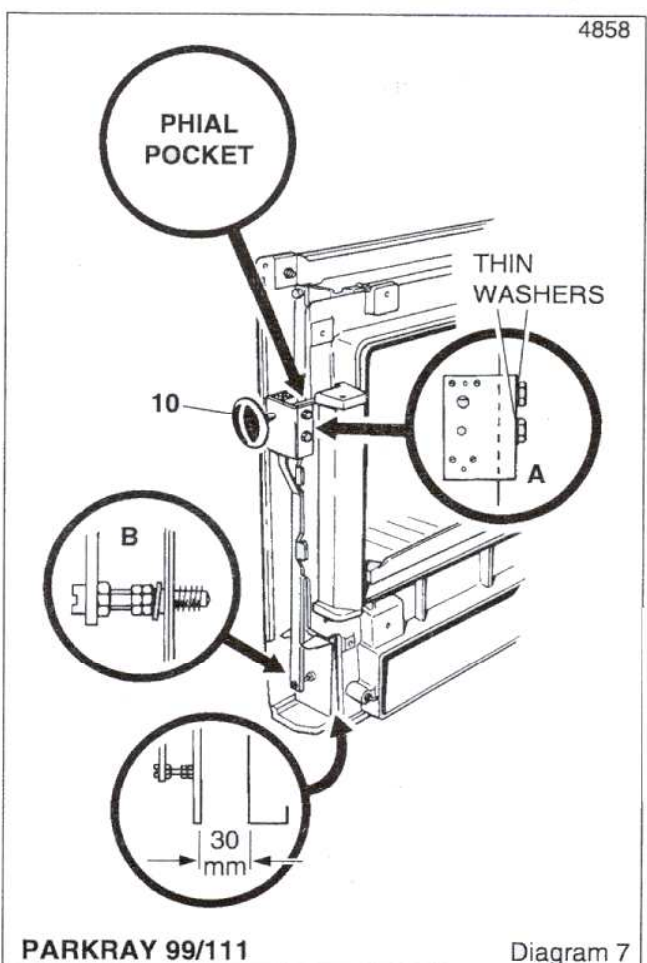
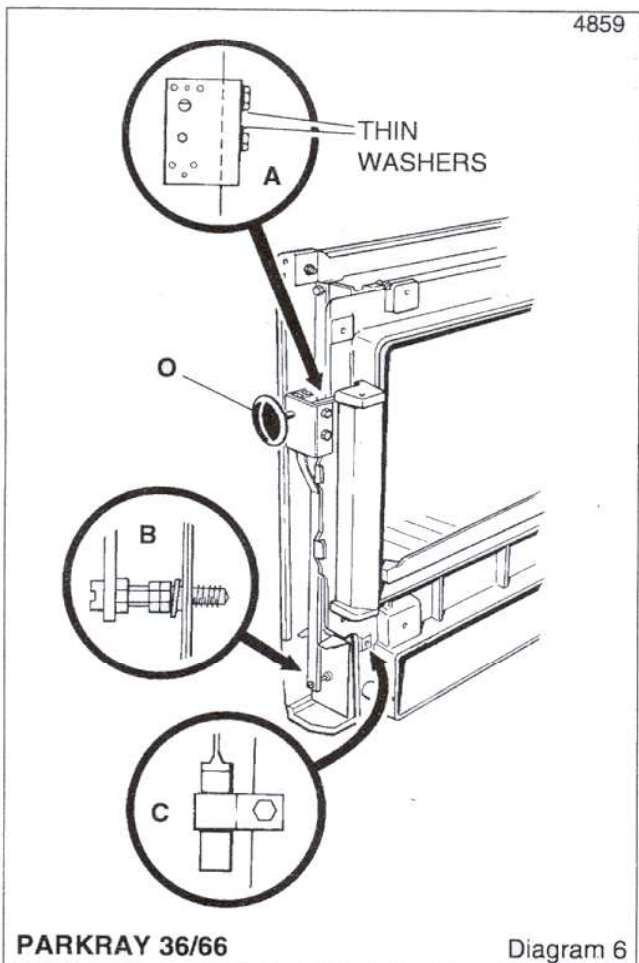
Position control so that the plate just touches the air inlet port and then lightly tighten either the top or the bottom hexagon-headed screw so that the plate, when closed, completely covers the inlet port.

Secure by tightening the other M6 hexagon headed nut.

Adjust the flap along the threaded spindle so that when the knob is fully anti-clockwise (Mk10) the plate closes against the inlet port. Secure with locknut (B).

Insert sensing phial into clip, as shown "C" (66 only).

Turn control knob several times to check free movement of control.



11 THERMOSTAT (PARKRAY 99 and 111)

See also fitting instructions packed with thermostat.

Position air plate midway along threaded spindle and secure with locknut (B).

Push on control knob and turn fully clockwise (Mk.10).

Insert sensing phial into pocket in boiler,

Loosely attach control to thermostat mounting bracket using two M6 hexagon-headed nuts supplied in the control knob/screw pack (A).

Position control so that the plate is dimensioned away from the air inlet port (C) as shown and then lightly tighten either the top of the bottom hexagon-headed screw so that the plate, when closed, completely covers the inlet port.

Secure by tightening the other M6 hexagon-headed nut.

Turn control knob several times to check free movement of control.

12 BOTTOMGRATE SHAKER BAR

NB. If the bottomgrate shaker bar has been removed, it should be replaced in the following manner.

Thread the actuating lever through the square hole in the right-hand side casting of the appliance.

Thread the locating bush on to the actuating lever with the projection on the locating bush innermost and position in the square hole with the projection pointing downwards.

Locate the opposite end of the shaker bar on the bracket.

13 FRAME AND DE-ASHING LINKAGE (ALL MODELS).

Fit frame and de-ashing linkage according to instructions packed with frame.

14 FIREBOX PARTS

PARKRAY 36 and 66

Replace the lower back brick, bedding it in fire cement to prevent any leakage up the back and apply a fillet of fire cement between the top of the brick and the upper back brick/boiler.

Replace the side bricks, packing the space between the end of the lower back brick and side of appliance with slag wool.

Seal the gap at the rear edge of the side bricks to the upper back brick/boiler and lower back brick with fire cement.

ALL MODELS

Replace the bottomgrate bars, ensuring the five Y-sectioned chrome iron bars are positioned in the centre of the firebed. The four remaining cast iron bars should be positioned on both sides.

Replace the ashpan, throat plate, protection plate, front fire bars and ashpit cover.

15 FIREDOORS

Refit firedoors in turn, lining up the top bracket and door holes, insert the spacing washer between hinge and bracket and push in the hinge pin. Line up the bottom bracket and door holes and insert hinge pin. Finally tap both hinge pins fully home.

Check that the doors are correctly bedded, there should be no gap greater than 0.25mm. If necessary adjust at door hinge brackets and door latch.

16 COMMISSIONING THE SYSTEM

If possible, for the 111 model only, ask the customer the type of fuel they are likely to burn, that is, solid mineral, bituminous coal or wood.

If solid mineral fuel the single throat plate **MUST** be in place.

If bituminous coal, then the **DOUBLE** throat plate **MUST** be in place.

For wood burning, the throat plates are removed.

ALL MODELS

A small fire may be lit immediately but do not run at full output for at least 24 hours.

During commissioning of a combined domestic hot water small bore system, the pump should be adjusted to give the correct rate of water flow against the small bore circuit resistance, and the system correctly balanced, (see later section on how to balance a system).

17 ADVISING THE CUSTOMER

Make sure that the "Instructions for Use" are available for the customer. Where possible go through the instructions so that the customer is fully aware of the importance in keeping the chimney and flue damper clean and for the model 111 the correct throat plate is used when burning solid mineral fuel or bituminous coal **OR** its removal when burning wood.

Demonstrate flue damper removal and general use of the operating tool. When burning solid mineral fuel or bituminous coal, remind the customer that they must not run the appliance for any period of time with the door open. Advise the customer what to do should fumes be given off from the appliance. The slow combustion air bypass hole(s) in the ashpit cover should be left closed but inform the customer regarding the adjustment. The customer should be warned to use a fireguard in the presence of children, aged or infirm people. The fireguard should comply with the current issue of British Standard 6539.

WARN the customer that petroleum based coke is dangerous it can cause fumes, flue gas explosions and structural damage.

Petroleum based coke in its pure form or as part of a blended fuel, must not be used on this appliance.

Wood or bituminous coal should not be burnt in a smoke controlled area.

D. SUPPLEMENTARY NOTES

HOW TO BALANCE THE SYSTEM (99 and 111) TWO PIPE SYSTEM

Having completed and filled the system, light the fire with the pump off to obtain a good gravity circulation to the cylinder.

Set the pump on its minimum setting, NOTE pump heads generally are more than adequate for the average domestic system and in general, rarely need to be set above minimum setting.

Fully open all wheelhead radiator valves. If there are any thermostatically controlled valves have them at the maximum setting and if necessary, open windows to ensure the valves stay open.

Make sure that all radiators are vented of air since an air lock will prevent the free flow of water.

Fully close all lockshield valves on the radiators then open each one about $\frac{1}{4}$ turn from shut. If a radiator is a large single panel or a double panel or a long loop, open these lockshield valves about $\frac{3}{4}$ turn from shut. If quick opening valves are used, these amounts of opening may even then be too great. Check temperature of each radiator inlet pipe. If after a few minutes any are still cold, open the lockshield valve very slightly. Checking on each radiator, it should be found that hot water is slowly creeping along the top and evenly down the radiators, with each radiator heating at the same rate. If heat is passing more quickly down one radiator than the others, slightly close the lockshield valve on the one heating too quickly. If the hot water is not entering the radiator, open lockshield valve slightly.

NOTE. Less than a $\frac{1}{4}$ of a turn at any time is desirable when altering the lockshield valves.

Remember, that after any alteration to the lockshield valves, a short time should be allowed to elapse to see whether the desired rate of flow is then achieved. When all radiators have heated to the same temperature, there should be a very slight temperature difference between the inlet and the outlet pipes on each radiator.

The radiator flow and returns near the boiler should have a temperature difference of approximately 20°F (10°C).

These temperature differences can normally be checked by feel but thermometers can, of course, be used.

After some experience in balancing systems, as suggested above, it will be found that this can be done relatively quickly.

NOTE. The advantage of this method, is that with a good fire burning it is possible to feel the hot water passing slowly through each radiator thus giving time to make any re-adjustments to any lockshield valves to achieve the maximum efficiency with the system.

SYMPTOMS OF AN UNBALANCED SYSTEM

The radiators will not heat up satisfactorily.

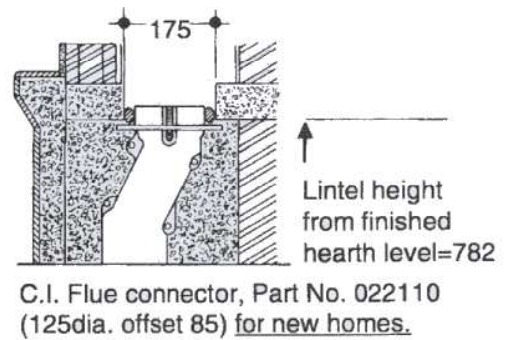
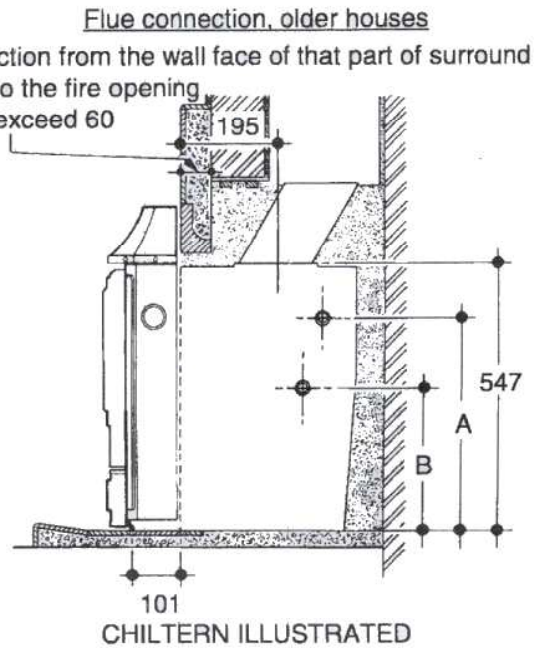
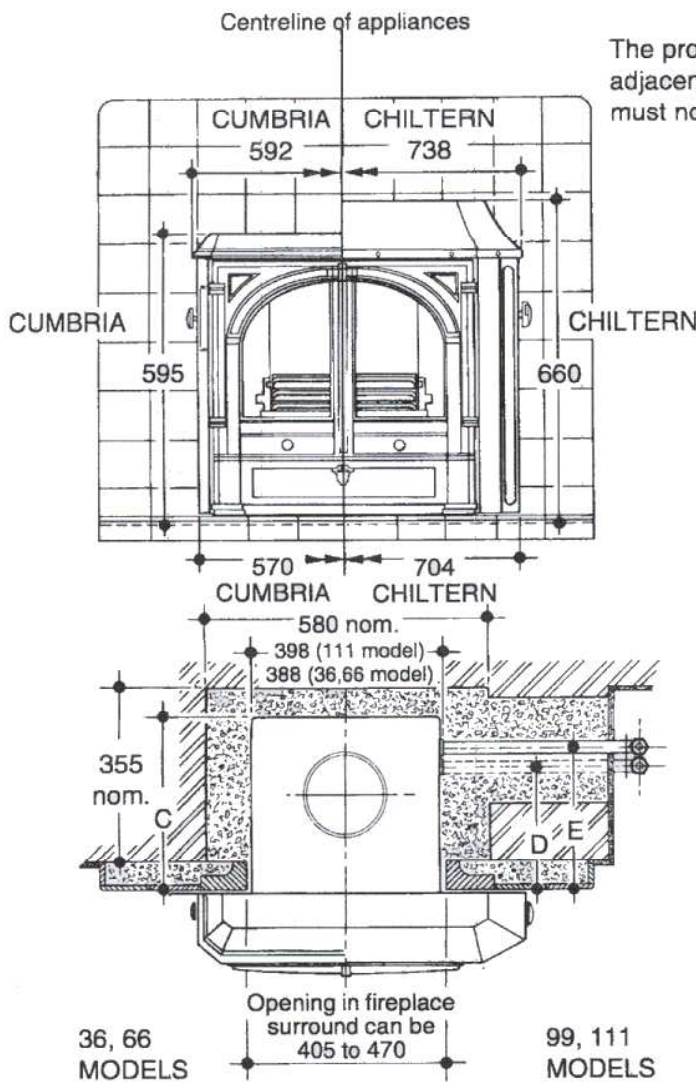
The domestic hot water cylinder will not reheat and goes cold when the radiators are on.

A higher than normal fuel consumption.

INSTALLATION AND DRAWINGS AND DIMENSIONS

Dimensions quoted apply to all models, unless otherwise stated

(All dimensions in millimetres)



| DIMENSION | 36 | 66 | 99 | 111 |
|-----------|-----|-----|-----|-----|
| A | N/A | 406 | 428 | 519 |
| B | N/A | 267 | 286 | 173 |
| C | 245 | 245 | 349 | 356 |
| D | N/A | 184 | 252 | 232 |
| E | N/A | 184 | 292 | 269 |

Diagram 8



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