Operating & Installation Manual

The Becton

Multifuel Stoves

Becton 18 Multifuel
(Shown With Optional Stand & Low Canopy)

PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

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Congratulations on your choice of an Aarrow Stove.

More than 20 years experience has been put into the development of our Becton Family to ensure ultimate performance and years of trouble free enjoyment.

Every detail on the fire has been carefully engineered and designed which is why we are so confident in the reliability of our product that we offer a ***Lifetime Guarantee****.*

Should you have any questions about our Becton Stoves that are not covered in this manual, please contact the Aarrow dealer in your area, or call our Technical support department on 01308 427234

CONTENTS

WARNING

TO ALL MULTIFUEL USERS

PETROLEUM COKE

SOME OF WHOSE BRAND NAMES ARE

"CALCO", "PETROCOKE" OR "WONDERCO"

MUST NOT BE BURNED IN THIS APPLIANCE

TO USE THESE FUELS WILL INVALIDATE THE APPLIANCE GUARANTEE

IF IN DOUBT CONTACT THE SOLID FUEL ASSOCIATION TELEPHONE NUMBER 0800 600 000
www.solidfuel.co.uk

THE USE OF SPARE PARTS OTHER THAN THOSE SUPPLIED BY AARROW FIRES LTD WILL INVALIDATE THE APPLIANCE GUARANTEE.

SAFETY

A fireguard conforming to BS 8423: 2002 should be used in the presence of children and old/or infirm people. If the appliance is used with the fire door open, a spark guard conforming to BS 3248 should be fitted.

Do not use aerosol sprays or any other flame near the appliance under fire.
Do not fit an extractor fan in the same room as the appliance.
Fire cement is caustic, hand and eye protection should always be worn, prolonged contact with the skin should be avoided.
Aarrow Fires Ltd will not be responsible for any consequential or incidental loss or injury however caused.

Before continuing any further with the installation of this appliance please read the following guide to manual handling.

- Always obtain assistance when lifting the appliance.
- When lifting always keep your back straight. Bend your legs not your back.
- Avoid twisting at the waist. It is better to reposition your feet.
- Avoid upper body/top heavy bending. Do not lean forwards or sideways when handling the fire.
- Always grip with the palms of your hands. Do not use fingertips for support.
- Always keep the stove as close to the body as possible. This will minimise the cantilever action.
- Use gloves to provide additional grip.

THE PRINCIPLE OF THE FIRE

Your Aarrow Fire is built to the highest standard of craftsmanship using the best materials and the most modern equipment available. It is a highly efficient and sophisticated piece of machinery and when properly installed and operated it should provide a lifetime of heating satisfaction.

Safety is the most important consideration when installing your fire. If not properly installed and operated a house fire may result. installation must comply with the Building Regulations and conform to all relevant fire safety standards.

Aarrow Fires produce a variety of appliances ranging from units, which are traditional in style to stoves which are modern in appearance, all bristling with "High Tech" features.

Model types include simple room heaters, convectors, integral boiler models and inset units. Your Aarrow Fire is constructed from either single or twin wall steel strengthened where necessary. Cast iron is used where appropriate for decorative features.

All fire doors are fitted with special high temperature ceramic glass panels through which the fire can be viewed.

Multifuel stoves are fitted with a cast iron grate to give full multifuel facility and positive de-ashing.

All models except integral boiler models are lined with firebricks or heat reflective panels which ensure complete combustion and provide a good heat store to even out fluctuations in burning.

An internal throat plate produces turbulence to encourage secondary combustion and directs the flue gas around the whole upper firebox before allowing it to escape up the chimney.

On multifuel appliances the primary air for burning enters the ash pit chamber beneath the grate, controlled by the air inlet mechanism.

Aarrow Fires are also fitted with an "air wash" so called because it provides a curtain of high speed preheated air behind the glass to help keep it clean and to provide secondary air/over draught.

The provision of two inlets on all multifuel stoves gives a wide range of primary air/secondary air, under draught/over draught combinations. The optimum settings will only be established by experience in firing the appliance, and will depend on type of fuel, the position of the appliance in the house, condition of chimney etc.

CHECK LIST

Inside the appliance you should find the following:

Part Description &Visual Aid (not to scale)	Becton Bunny	Becton 7	Becton 11	Becton 18
1. Grate Bars 	5	5	7	9
2. Fuel retainers 	2	2	2	2
3. Throat plate 	1	1	1	1
4. Flue spigot 	1(4”)	1(5”)	1(5”)	1(6”)
5. Hot plate 	1(4”)	1(5”)	1(5”)	1(6”)
6. Ash pan 	1	1	1	1
7.Operating tool 	1	1	1	1
8. Rear liners 	1	2	2	2
9. Side liners 	2	2	2	2
10. Fire door handle 	1	1	1	1
11. Instructions	1	1	1	1

TECHNICAL DATA	Becton Bunny	Becton 7	Becton 11	Becton 18
Room Min/Max Room Heater Only Output (kW)	1-5	1.5-7	2-11	3-18
Room Heater with Domestic Hot Water with add in boiler **type**	0	1 2	3 4	5 6
Max Output to Room (kW) Max Output to Water (kW)	3 2	4.4 3 2.6 4	8 5.5 3 5	14.4 11.5 3.6 6.5
Height (mm)	510	550	600	635
Width (mm)	400	470	580	670
Depth (mm)	340	345	355	420
Height to Centre of Rear Flue	385	435	485	500
Depth from Back to Centre of Flue	95	100	100	130
Flue Diameter	102 (4”)	127 (5”)	127 (5”)	152 (6”)
Weight packed (Kg)	54	69	86	137

FIREBOX LININGS & THROAT PLATE

The Becton Multifuel stoves firebox has reflective liners to the sides and rear) and a specially shaped throat plate which sits on the liners. If these are not in place please refer to page 17 to install these.

MULTIFUEL GRATE

The Aarrow Multifuel grate comprises of a series of reciprocating cast iron bars seated on a pivoted "comb". These should come fitted in your stove, if not please refer to page 18 for fitting and operation and also operating instructions on fuels for correct settings of the grate.

AIR INLET CONTROLS

Becton multifuel stoves have two air inlets:
•The air wash system (so called because its pre-heated high speed air washes across the inner face of the door glass, keeping it clear), which provides over draught, and
•The primary air inlet providing under draught to the base of the fire chamber through the gap between the body and the ash pit door.

PRIMARY AIR FOR MULTIFUEL

On Multifuel units primary air enters the appliance through the gap between the body and the ash pit door. The width of the gap is controlled by rotating the door knob (if hot, with operating tool) anti-clockwise to increase the the air inlet, clockwise to reduce the air inlet, or seal the ash door completely.

AARROW AIRWASH SYSTEM

The air wash has an internal sliding plate with slots, housed in a cover plate, and is located above the fire door. Sliding the control knob to the right as far as it will go achieves the fully open position. Sliding it to the left will shut off the air inlet slots As shown below.

Fig. 1 Fully Closed **Fig. 2 Fully Open**

Note: Opening or part opening of the ash door is controlled by the "interlock" device located in the front of the unit (refer to INTERLOCK section on page 9).

Even when all the slots are completely shut a "bleed" of secondary air will be maintained ensuring that inflammable gases are burnt off.

DISASSEMBLE AIRWASH

The Becton air wash may be disassembled for cleaning or adjustment. To achieve this, the following procedure should be followed:

This should only be carried out when the fire is cold and unlit.

•Support Air Wash cover with one hand

•Move cover up by smartly tapping the bottom with a hammer. (Fig. 3)

•Remove assembly from appliance.

•Clean and/or adjust.

•Refit using reverse procedure.

Fig. 3

INTERLOCK SYSTEM

Becton fires are fitted with an "interlock" system. A situation where the fire door is closed and the ash door is open may lead to serious over firing which could damage the appliance. Correct use of the doors and interlock system will ensure that this does not happen.

Operation is as follows:
A pivoted lug prevents closure of the fire door, unless the ash door has been shut first. When the fire door is shut the ash door knob can be turned anti-clockwise by up to 95 degrees creating a variable gap between the top of the ash door and the body, through which primary combustion air can enter the appliance.

Note: In order to turn the ash door knob sufficiently for the catch to release and permit the ash door to be opened fully THE FIRE DOOR MUST BE OPENED FIRST.

MULTI - PURPOSE OPERATING TOOL

Your Aarrow fire comes with a multi-purpose tool, which is used to open the ashpit door, riddling and setting multifuel grate position and for emptying the ash pan. (fig. 4)

Fig. 4

RIDDLING
Use the operating tool for setting the grate in the coal burning position or the wood burning position. This means that effective de-ashing (see page 13) takes place, and also allows the grate to be set in the coal burning or wood burning position, as indicated on the right hand side of the appliance.

DOOR TRIM

Becton fire doors are fitted with a brushed steel finish trim as standard. This, clips on to the small lugs at the top and bottom of the aperture in the cast iron fire door, as a "spring fit". When fitted, the trim locks the glass retaining clips in position. (Fig 5)

The fire door should be removed so that the above operations can be carried out on a workbench or similar. Remove the door by GENTLY tapping the door upwards; this will lift off of its hinges.

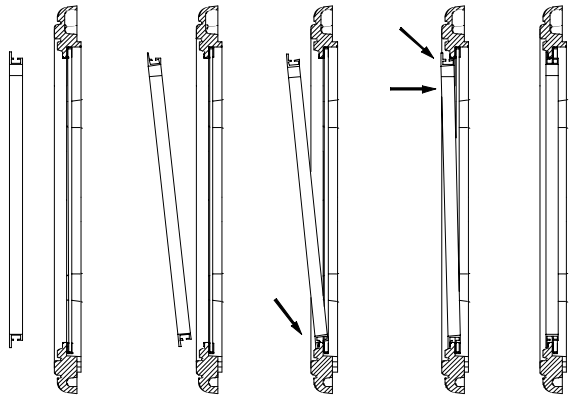


Fig. 5

FIRE DOOR GLASS

If necessary the glass can be removed as follows

Step 1 Remove the brushed steel finish trim by pressing on the curved edge at the top until the trim can be disengaged from the lugs.

Step 2 Slide the two glass retainer clips on one side only, inwards, towards the centre of the door as far as they will go.

Step 3 Pull this side of the glass away from the door casting, easing the tags on the glass retaining clips past the edge of the aperture in the door casting.

Step 4 Remove the glass completely. Store glass-retaining clips and white gasket (if sound) safely for re-use.

Step 5 Follow this procedure in reverse to fit replacement door glass or gasket.

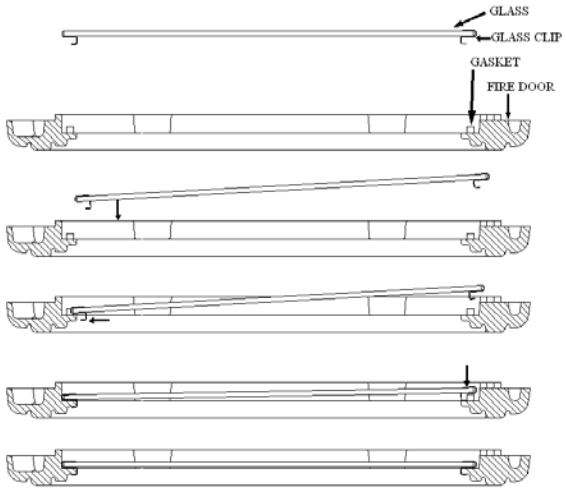


Fig. 6

DOOR ADJUSTMENT

The catch can be adjusted by sharply tapping the catch on the inside of the door.

Once the appliance has been under fire for a period of time the fire door may appear to have moved out of alignment with relation to the door aperture or catch on the door interlock mechanism. This is quite normal and due to the settling of the casing.

The fire door can be re-aligned by the user as follows:

•When the appliance is cold, open the fire door so that it is at a right angle to the front face of the fire.

•Lift the fire door up off the hinges.

•Gently tap the two hinge pins in a direction to compensate for the misalignment.(fig 7)

Fig. 7

•Refit the door and check to ensure it now sits square to the body; if not repeat above steps.

Raising the door as follows:

•When the appliance is cold, open the fire door so that it is at a right angle to the front.
•Lift the fire door up off the hinges.
•Drop one washer on the top and bottom hinge pin.

•Refit the door and check to ensure door is free of the interlock. If not remove and repeat fitting second washer.

FUEL RETAINER BARS

Fuel retainer bars are supplied with the fires.
For wood burning, 1 fuel retainer bar is used, affording a better view of the fire. Slide and lift the bar until it is clear of the guides at each side, and remove through the fire door opening.
The bars are symmetrical and of even lengths making incorrect fitting impossible.
Note: This operation should only be carried out when the appliance is unlit and cold.

FUEL TYPES

Wood- Any type of wood is suitable provided it is well seasoned and has a moisture content below 20%. This usually implies that the timber has been suitably stored to allow moisture to evaporate for at least nine months in the case of soft woods, and at least eighteen months in the case of hard wood. We recommend that for general burning, wood should be split into logs of no more than 130mm (5") diameter.
Larger logs can be used for overnight burning.

WARNING wet wood must not be used as this will greatly contribute to the creation of tar and creosote which may, in extreme cases, run down the chimney in liquid form. This will seriously damage both the chimney and the appliance, and increase the risk of chimney fire.

Note: If you have sticky tar inside the appliance or chimney your wood is 'Green' or too wet.

Recommended Reading:
"Wood as Fuel" available from the Forestry Commission.

Peat- Can be used in turf or briquette form, but again the moisture content must be low.

Paper- paper will burn successfully. Burn dry paper only or chimney damage will occur.

NEVER BURN PLASTICS OR WASTE IN YOUR STOVE.

Coal - Household coal produces a large amount of ash and smoke. If used the appliance and chimney will require frequent cleaning. Therefore soft house coal is **not** recommended.

Recommended fuels are as follows:
The Hetas Ltd, "Three Tick" appliance approval only covers the use of the following fuels in this appliance; Phurnacite, Phurnacite Plus, Centurion, Maxibrite, Extracite, Pureheat, Blazebrite, Taybrite, Sunbrite (Doubles/Singles), Anthracite (Large Nuts), and Welsh Dry Steam Coal (Large/Small Nuts).

Approval does not cover the use of other fuels either alone or mixed with the suitable fuels listed above, nor does it cover instructions for the use of other fuels.For latest details please refer to Hetas website www.hetas.co.uk.

Do not use Homefire (six sided) and smaller sizes than Stovesse, e.g. Beans, Peas,Grains.
Do not use petroleum based solid products such as Calco or Petrocoke.
To do so will invalidate the appliance guarantee

LIGHTING THE FIRE

Prior to lighting the fire for the first time check with the installer that:

- Installation and all building work is complete.
- The chimney is sound and has been swept and is free from obstruction.
- Adequate provision for combustion air has been made, i.e. a permanent vent of at least 550mm² per kW of rated output above 5 kW, is fitted in the room in which the appliance is installed.
- That Building Regulations and any local by-laws have been followed during installation (see installation instructions).
- All firebox liner panels are in place.
- Throat plate is in place.
- Where add in boilers are fitted ensure that the system is full of water and vented, and precautions have been taken to prevent corrosion (see installation Instructions).
- That the chimney draw has been checked and is within specification. With the chimney warm the draught should be between 1 - 2mm water gauge (0.1 - 0.2mbar).

WARNING: An over drawing chimney can cause over-firing resulting in damage to the appliance.

WARNING - ADD IN BOILERS: Do not light the fire if it is suspected that any part of the water system is frozen.

ENSURE THAT YOU HAVE READ & UNDERSTOOD THESE INSTRUCTIONS BEFORE LIGHTING THE FIRE.

ALWAYS WEAR SUITABLE PROTECTIVE FIRE GLOVES WHEN REFUELLING YOUR STOVE.

SOLID FUEL BURNING

•Set the grate to 'coal' position.
•Ensure that the ash pan is in position and the fire doors are closed.
•Set the air wash to one quarter open position.
•Set the primary inlet to the fully open position
•Light in the normal manner with paper and kindling, or use a fire lighter.
•If using a gas poker be sure to remove it immediately the fire is alight.
•When the fire is well alight regulate the burning rate by adjusting the setting on the primary air inlet control.
•The air wash can be opened sufficiently to keep the door glass clean

BURNING WOOD

•Set air wash to fully open position.
•Proceed as for solid fuel but note the fire will burn up and become established more quickly.

MIXED FUELS

•As per coal but allow additional secondary air.
•The primary air inlet can be closed and burning regulated by means of the air wash above the door.

ANTRACITE

Anthracite is more difficult to keep in for long periods, consequently more care in setting the controls and some familiarisation is necessary when burning anthracite.
Use the smallest size fuel (Stovesse or Small Nuts). Proceed as for manufactured smokeless fuel. Leave the air inlet control open about a quarter or less.

Note: The high temperature paint acquires durability by being "cured" during the initial firings of the appliance will give off fumes which are non-toxic, but which certain persons may find have an unpleasant or irritant effect. Ensure that the area is well ventilated during this time.

OVERNIGHT BURNING

The appliance will bur overnight provided:
•Sufficient fuel is placed in the firebox.
•The controls are set correctly.
•Excess draught is not present in the chimney.
•Close the door.
•If the fire goes out with unburnt fuel left in the firebox increase the air opening slightly, and vice versa.

In the morning
Open the air control fully until embers begin to glow brightly and place pieces of fuel on the fire until it is well established.

WARNING: When wood is burnt slowly in a closed appliance it produces moisture and tar, which will create condensation and deposits in the chimney. This effect can be minimised by burning hard for a short period, about 20 minutes, twice a day. It is usually convenient to do this morning and night.

Note: To avoid chimney problems your fire should not be burnt slowly for longer than 12 hours without a period of fast burning.

WARNING: Properly installed, with a suitable flue and chimney and operated and maintained this appliance will not emit fumes into the dwelling. Occasional fumes from the de-ashing and re-fuelling may occur. However, persistent fume emission is potentially dangerous and must be investigated dy a Hetas registered installer.

Stop using the appliance if you smell fumes or see smoke escaping.

If fume emission does persist, the following immediate actions should be taken.
•Open doors and windows to ventilate room.
•Let the fire die or extinguish and safely dispose of fuel from the appliance.
•Check for flue or chimney blockage, and clean if required.

Seek expert advice from your HETAS registered installer. Do not attempt to re-light the fire until the cause of the fume emission has been identified and corrected.

ASH REMOVAL

The ash pan should be emptied at least twice a day or when the level of ash reaches the top of the ash pan. On no account should the ash be allowed to build up to touch the grate as this will greatly shorten its life.

DE - ASHING

It is necessary to maintain an ash layer on the upper surface of the grate bars, in order to protect them so de-ashing should cease as soon as the first red embers drop into the ash pan. Further de-ashing will cause heat build-up under the grate, which will considerably shorten its life. This operation should be carried out with the doors closed to prevent dust escaping into the room.

- Move up and down vigorously the riddling lever (ash will fall into the ash pan beneath the grate).
- When de-ashing is complete re-set grate to previous position.
- Empty ash pan.

Note: Do not force the riddling lever.

TO EMPTY THE ASH PAN

Open the fire door; open the ash door. Fit the fork end of the operating tool into the ash pan and remove from the ash pit chamber.

WARNING: The ash can be very hot. Empty only to a metal container. Even if the ash appears cold, red-hot pieces of ash may be concealed and could easily start a fire or cause an injury. Replace the ash pan and close ash door. Close the fire down.

CLINKER

The formation of clinker suggests that the unit is being over-fired. Any clinker forming on the grate should be removed when cold.

OVER-FIRING

Do not over fire your appliance. Using flammable liquids or too much wood or firing the fire at maximum for prolonged periods may result in over-firing. If the chimney connector or casing glows red it is being over-fired. If this occurs immediately close all air inlets to the appliance to reduce the air supply to the fire. Should a chimney fire occur immediately close the appliance down. Get everyone out of the house and call the fire brigade. A chimney fire may cause structural damage of the chimney. Do not use the appliance until the chimney and connector have been inspected and any damaged parts repaired or replaced. This should be done by a competent person such as a HETAS registered engineer.

CLEANING

IMPORTANT

Under some circumstances soot can quickly build up on the throat plate and adjacent areas. The throat plate should be removed and checked monthly, and any debris stripped off. Similarly, clean the upper surface of the firebox.

Refer to page 17 for instructions on throat plate removal/inspection.

ANNUAL MAINTENANCE

It is important that your fire is regularly serviced in accordance with these instructions. This should be carried out at least annually by a qualified person and should consist of the following.

Remove the firebricks lining and throat plate, inspect all gasketing on doors, glass etc., and re-order any items that may need replacing, from your Aarrow dealer. With a wire brush clean inside the appliance paying particular attention to the small inlet holes of the air wash on the inside, above the fire door and to the door.

Sweep the chimney and confirm that it is sound. Examine all joints in the flue pipe etc., and re-seal if necessary. Reassemble and leave with the air inlet and air wash control about half way open. This will allow a free flow of air through the appliance thus preventing moisture and condensation from building up inside the fire and chimney.

CHIMNEY SWEEPING

Sweeping should be carried out with an appropriate sized bristle brush and rods to suit chimney size and type. As with all appliances regular sweeping of the flue is essential to avoid the danger of blockage and the escape of poisonous fumes. Access for cleaning should also be incorporated in the chimney (e.g. soot door or access through register plate).

Any existing chimney should be swept prior to installation of the appliance, and swept again a second time **within one month** of regular use after installation to establish frequency of sweeping required. This should be done by a competent person such as a NACS chimney engineer who will provide a Certificate of Chimney Sweeping.

Sweep the whole flue way, including the outlet, at least twice per burning season. It is important that the flue ways, flue pipe and chimney be cleaned prior to lighting the fire after a prolonged shut-down period.

DOOR GLASS

The door glass should remain clear during normal daytime burning. However under certain conditions-such as burning at a low rate with damp wood, or overnight burning, the glass may become somewhat blackened. To remedy this, operate the appliance at a fast rate. Alternatively when the stove is cold open the door and clean the inside face of the glass with a damp cloth or with glass cleaner (available from fire stockists). A piece of cloth moistened with vinegar and dipped in wood ash **- not coal ash -** will provide a good soft scourer to remove the soot without scratching the glass.

OUTER FINISH

The outside finish of the appliance is a durable high temperature paint. It is best cleaned by brushing down with a clean shoe brush. Do not allow moisture to remain on the appliance whilst cold or surface rust may form.

The high temperature paint should not require attention for some time, depending on use. The hotter the fire burns the sooner repainting will be necessary. Aerosol tins of paint are available for complete refurbishing. Before repainting make sure that the fire is out and is cold.

- Remove the door glass.
- Lightly wire brush, or rub with wire wool, the body of the appliance to remove any loose paint powder.
- Mask or remove items such as brass work.
- Any adjacent brickwork, mantelpiece, hearth, etc., should be carefully masked for quite a distance around the appliance. (this precaution is to prevent discolouration of the surrounding brick work, wallpaper etc).

Re-spray in a well-ventilated area - avoid breathing the vapour. Refer to safety instructions on paint cans.

- When the paint is dry refit door glass and any other parts previously removed.
- Leave the appliance for eight hours before re-lighting.
- Burn slowly for the first four hours, then build up heat gradually to cure the paint.

Note: Use only genuine Aarrow touch-up spray as some paints interact. This could ruin the finish and invalidate the guarantee.

ACCESSORIES

STANDS

Elegant stands are available for the Becton free-standing fires. These increase the height of the appliance and rear flue outlet by approximately 150mm (6"). Check current brochure for details.

TRACERIES

For added decorative effect, beautiful Door Traceries are available for the complete Becton fires range.

PAINT

Matching aerosol paint to tone in any connecting flues, pipes or surrounding metalwork.

INTERCHANGEABLE CANOPIES

•To fit the interchangeable canopy (Fig 8): Remove the front clamps.
•Tilt the canopy as shown in stage 1.
•Engage the rear clips and pull fully forward.
•Fit the front clamps and tighten.
•Fit the required blanking plates as shown in stage 2.

Traditional canopies (High or Low) are available for Becton 7, 11, 18, For the Becton 'Bunny' only a low canopy only is available. They are easy to fit and can always be added afterwards.

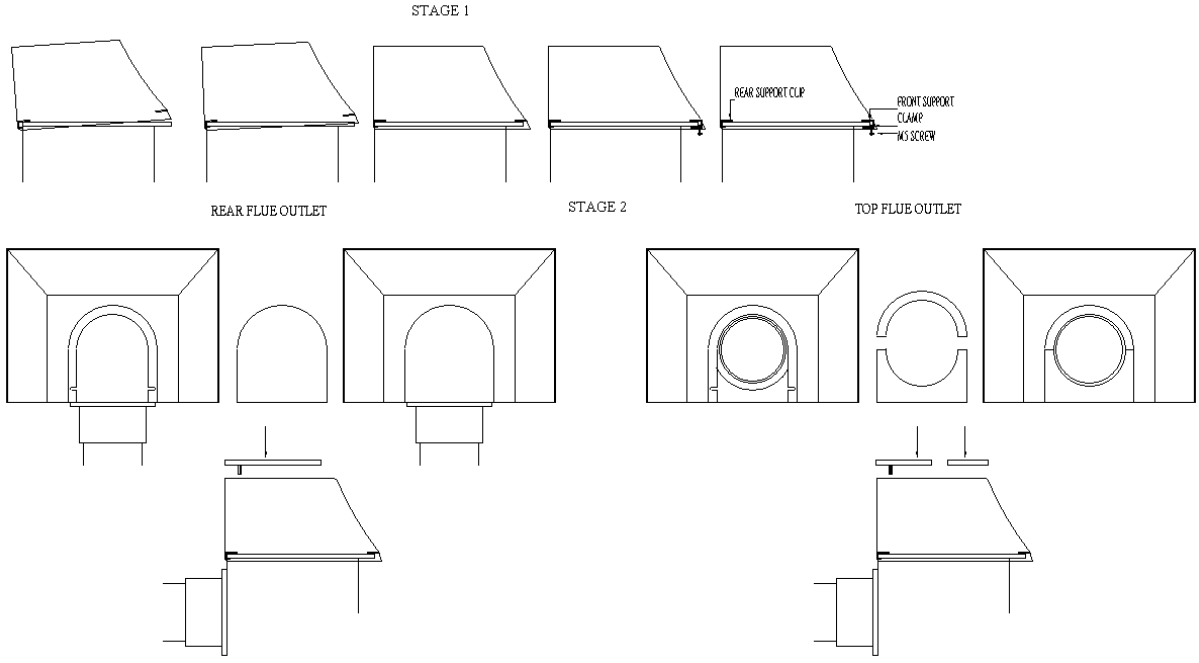


Fig 8

GENERAL PRECAUTIONS

Note - All installations must conform to the appropriate building regulations.

The Building Regulations for England and Wales 2000 ref Approved Document J 2002 edition (issued by the DTLR).
The Building Standards (Scotland) (Consolidation) Regulations.
Detailed recommendations for installation of appliances, chimneys and flues are outlined in the current issue of the following British Standards:- BS6461, BS8303 and BS4543.

Any Manufacturer's Instructions must not be taken as overriding statutory requirements.

During installation ensure that adequate precautions are taken to avoid unnecessary risk to yourself or any householder. In particular the danger from the caustic nature of the fire cement should be avoided by using these accepted methods:

- Wear gloves when handling fire cement.
- Wear goggles when chiselling or looking up chimneys.

Make sure that Building Regulations are adhered to during installation along with any local by-laws. In the case of heating systems make sure that the pipe work is correctly bonded to ensure electrical earthing.

HANDLING

By the time you read this you will appreciate the weight of the appliance. The Safety and handling guidelines as set out on page 5 of this manual should be followed.
To make movement easier internal fittings, fuel retainers, grates, firebox liners, flue outlets, hot plate, throat plate, etc., can be removed.

Care should be taken to make sure that the hinges are not damaged during installation.

HEARTH

The fire should be installed to stand on a constructional hearth of non-combustible materials not less than 125mm (5") thick conforming to Building Regulations. Dimensions of the hearth should project at least 300mm (12") forward of the front of the appliance and 150mm (6") at the sides. The surface of the hearth should be free of combustible materials. In most buildings with solid concrete floors the requirement will be met by the floor itself, but mark the perimeter of the hearth to ensure floor coverings are kept well away or use different levels to mark the hearth perimeter.

COMBUSTIBLE MATERIALS

A gap of at least 450mm (18") should be allowed between the appliance and any combustible materials including furnishings. Adjacent walls should be of suitable non-combustible construction, preferably brickwork. In large fireplaces take care that any supporting beam is protected by a 13mm (0.5") sheet of Masterboard/Supalux spaced 13mm (0.5") off the surface with strips of non-combustible material - not wood.

Make sure that there is a gap between an uninsulated flue system and any combustible material. This gap must be at least 3 x the outside diameter of the flue pipe, or 1.5 x the flue diameter to non combustible surfaces. see illustration p22.

AIR FOR COMBUSTION

There must always be a permanent means of providing air for combustion into the room in which the fire is installed. A permanent vent with a total free area of at least 550mm^2 for every kW rated output above 5kw should be connected directly to the outside air or to an adjacent room which itself has a permanent vent of the same size direct to the outside air. The fitting of an extractor fan to either of these rooms is not recommended.

FIREBOX LINER PANELS

The Becton Multifuel stoves use firebox liner panels to the base, sides and back. The Becton Multifuel stoves have reflective liners to the sides and back. The throat plate sits on top of the side and rear panels. These should come fitted to your fire, if however they are not proceed as follows to fit them.

•Remove the front fuel bars or multifuel grate.

•Set the small liner into the back of the fire.

•Insert side liner panels

•Fit the throat plate with the single bend and two cut outs to the front facing up. The projecting lugs sit on top of the side liners. The long centre tab on the back edge rests on the rear liners. The shorter turn-down tabs against the vertical face.

•Replace the front fuel retainer bars or multifuel grate.

Note: Neither the rear firebox liners nor the side firebox liners are "handed", both faces are suitable for direct contact with the fire.

Note: Cracking of lining panels does not effect efficiency.

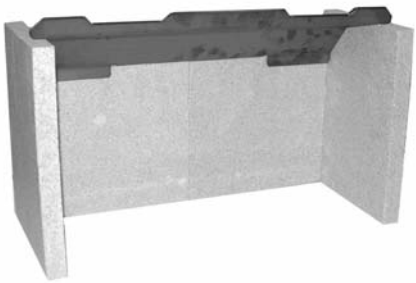


Fig. 9 ***Becton 11 multifuel liners and baffle.***

Fig. 10 ***Liners inserted in Becton 11***

Fig. 11 ***(Inserting Throat Plate)***

Fig. 12 ***Liners, throat plate and grate in Becton 11.***

REMOVAL OF THE THROAT PLATE

Blocked chimneys cause dangerous fumes to escape. Remove throat plate at least monthly to clean. Keep chimney and flue ways clear.

MULTIFUEL GRATE

GRATE

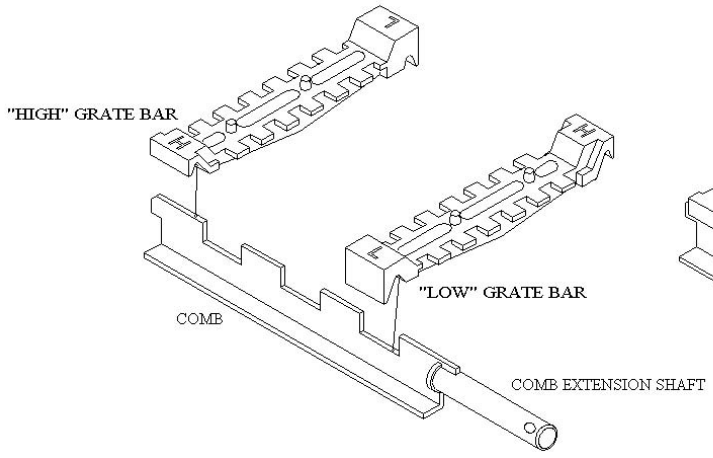
The grates in the Becton Multifuel units comprise a series of reciprocating cast iron bars seated on a pivoted "comb". All bars in the grate are identical, but every other bar is turned through 180 degrees, with the ends of the bars marked "H" sitting on the high sections of the comb, and the ends marked "L" sitting on the low sections.

ASSEMBLING THE GRATE

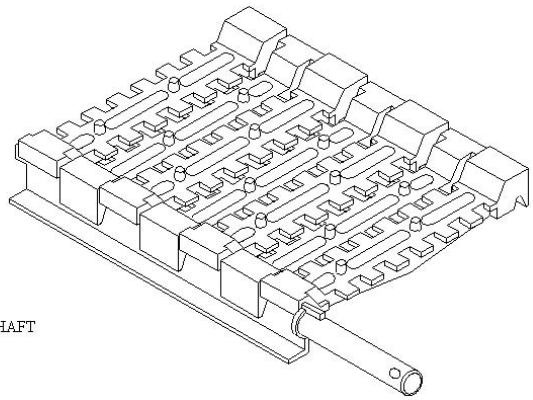
To assemble the grate, fit bars to low sections of the comb first, inserting end marked "H" into rear channel with groove on underside of bar located on upstand tab, and then lowering end marked "L" onto the low section of the comb. The upper bar is fitted in a similar manner, but with the end marked "L" inserted in the rear channel, and the end marked "H" seated on the high section of the comb.

GRATE BAR REPLACEMENT

After extended use it may be necessary to replace some of the grate bars. Periodic inspection of the bars is recommended and the removal of any nails or wire that may be present after burning wood. All the grate bars in each appliance are identical and can easily be lifted out after removal of the fuel retainers. Remove damaged grate bars and replace with casting of the same type, fitting as per instruction above. (Check Identification letters on the casting when reordering).



FITTING BARS TO COMB


ASSEMBLED GRATE

FITTING THE FLUE OUTLET AND HOT PLATE

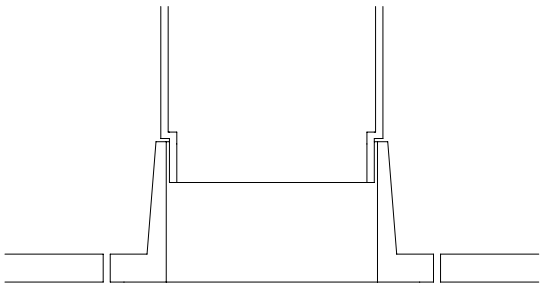
The flue outlet spigot is found inside the appliance. The hot plate (blanking plate) is supplied fitted to the top opening and is removed by turning clockwise (as is the flue outlet).

Smear a very thin layer of fire cement on the faces of the flue outlet and the blanking plate. Fit the outlet to the appliance in the desired position .

Lock into place by rotating anti-clockwise and tighten by tapping with a block of wood and mallet from the inside of the appliance. Similarly, fit the blanking plate to the unused opening. Clean off any surplus fire cement.

Place appliance on the hearth and make sure that it is level and does not rock.

Connect the chimney ensuring all joints are sealed with fire cement.



*NOTE
THE FLUE PIPE MUST BE FITTED INSIDE THE OUTLET SPIGOT FAILURE TO DO SO COULD RESULT IN THE SPILLAGE OF CONDENSATION ECT. RUNNING DOWN THE FLUE.

Fig. 13 Flue and Spigot Fitting

FLUES AND CHIMNEYS

Please remember that chimney draught is dependent on four main factors:
• Flue gas temperature.
• Flue height.
• Flue size.
• Flue terminal.

The stove must be connected to a suitable and efficient flue that provides a good updraught to safely take the products of combustion (fumes) from the stove outlet to the outside air. To ensure a good updraught it is important that the flue gases are kept warm and that the flue size suits the stove.

The termination of the outlet at the top of the flue also needs to comply with the Building Regulations. The minimum effective height of the flue must be at least 4.5 metres from the top of the stove to the top of the flue outlet. When warm the flue draught should be between 0.1 and 0.2 mb.

A chimney may comply with the regulations but still be subject to down draught and similar problems. A chimney terminating above the ridge level is generally less likely to suffer such problems.

If a new chimney is being provided it should fully comply with the relevant Building Regulations that specify the requirements for solid fuel burning installations. Suitable types of chimney include the following.

Masonry chimney built with clay or concrete liners, or a chimney block system meeting Building Regulations. These types of chimney should be installed in accordance with the Building Regulations and BS 6461: Part 1.

Factory made insulated chimney complying with BS 4543: Part 2 (often called "Class 1 prefabricated metal chimney"). These types of chimney should be installed in accordance with the Building Regulations and BS 7566: Parts 1 to 4.

Due to the gradual introduction of European Chimney Standards chimneys will be specified according to their performance designation as defined in BS EN 1443 that covers the General Requirements for chimneys. The minimum performance designation required for use with solid fuel burning stoves is T450 N2 S D3.

The flue and chimney installation must be carefully checked by a competent person before fitting the stove to ensure it is suitable and will work safely.

If the chimney is old (ie built of brick or stone without a liner) or being opened up for reuse additional checks and smoke testing as described in Appendix E of the Approved Document J 2002 Edition should also be carried out to ensure the flue and chimney are in good operating condition.

Unless the existing flue is in good condition with suitable access for collection and removal of debris. If the flue size is more than 225mm (9 inches) diameter or 200 x 200mm square, a suitable lining of 150mm (6 inches) diameter should be fitted, or if the flue length is over 5.5 metres one size larger than the appliance outlet should be fitted. This should be a double skin stainless steel flexible flue liner that is independently certified for use with solid fuel. Details of suitable linings for use with solid fuel are given in the Official HETAS guide that can be viewed on their website at www.hetas.co.uk

It is also important that suitable flue pipe complying with the Building Regulations is used to connect the stove to the flue in the chimney and that suitable access is provided into the flue for regular inspection and sweeping of the flueways.

The installer should comply with the Building Regulation requirements in respect of providing a Notice Plate giving details on the chimney, flue lining, hearth and fireplace installation. Approved Document J of the Building Regulations for England and Wales is available from The Stationery Bookshops and can also be viewed at the ODPM website at www.safety.odpm.gov.uk/bregs/brads.htm

Details on the relevant Building Regulations and BS British Standards are given in the "General Precautions" section page 16 of these instructions.
A chimney may comply with the regulations but still be subject to down draught and similar problems. A chimney terminating above the ridge level is generally less likely to suffer such problems.

Chimneys should be as straight as possible. Horizontal runs should be avoided except where the rear outlet of the appliance is used, in which case the horizontal section should not exceed 150mm (6") in length.

If the fire appears to be working hard but produces very little output to the room it is likely that excessive draw is present in the chimney, and that heat is being sucked out of the appliance and up the chimney. If this is the case we recommend the fitting of a draught stabiliser in preference to a flue damper, in the interest of safety and efficiency.

We do not recommend the use of a damper when burning solid fuel.

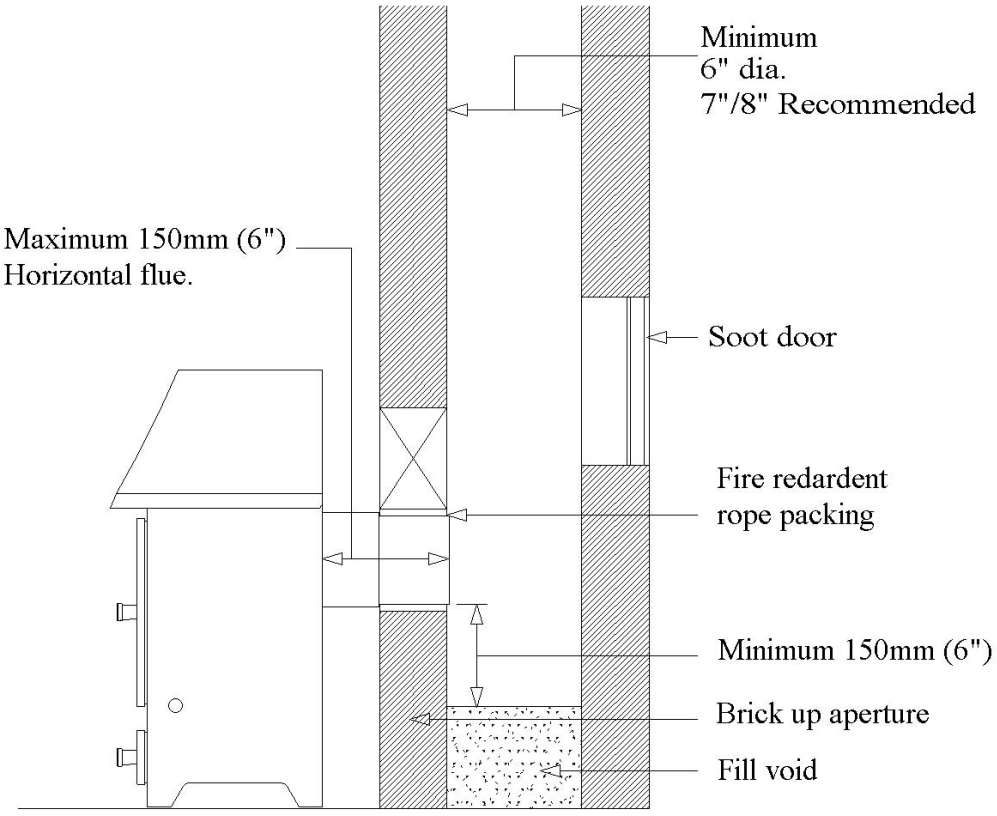
FOR ALL APPLIANCES

Access for cleaning the flue should be incorporated in the system other than through the appliance (e.g. a soot door or access through register plate). Purpose-made soot doors and inspection lengths are available from manufacturers of all systems.

Ensure that the whole length of the flue can be reached from the soot door.

Note: if the appliance is fitted with a draught stabiliser or if one is fitted to the flue pipe or chimney in the same room as the appliance, then the permanent air entry opening (or openings) should be increased by 300mm² for each kW of rated output.

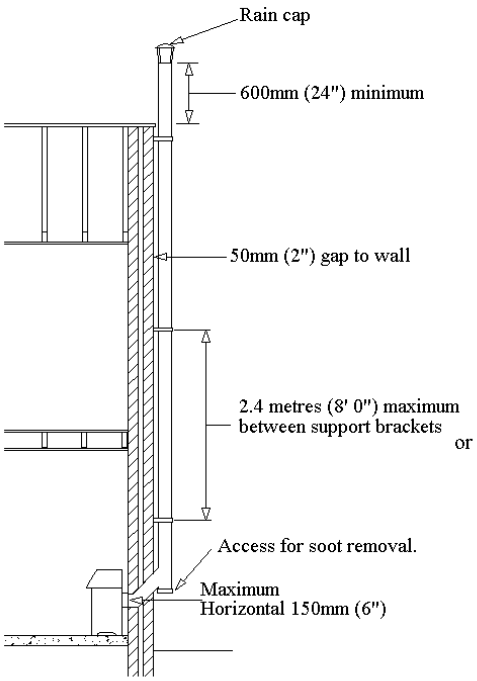
For advice on flues and chimneys contact;
NACE (National Association of Chimney Engineer): telephone 0800 0924019
www.nace.org.uk
or
NACS (National Association of Chimney Sweeps): telephone 01785 811732
www.chimneyworks.co.uk



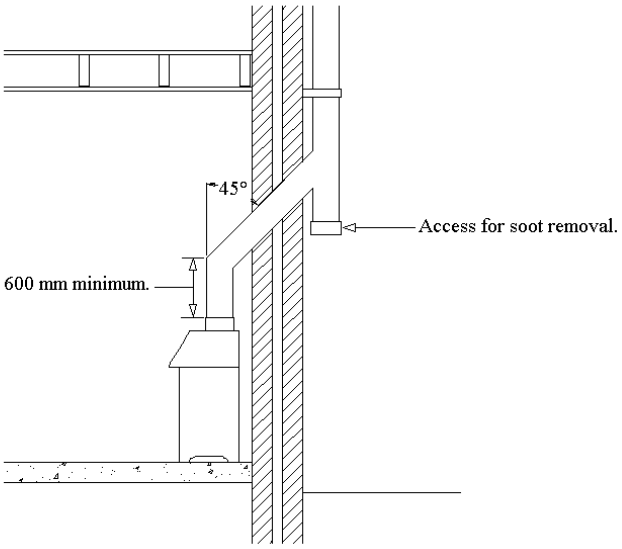
REAR FLUE OUTLET

TYPICAL METAL INSULATED CHIMNEY SYSTEM

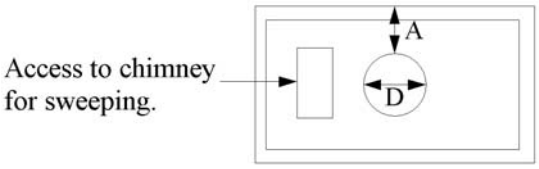
TO BE INSTALLED TO THE CHIMNEY MANUFACTURERS INSTRUCTIONS IN COMPLIANCE WITH BUILDING REGULATIONS AND BS7566 PTS 1-4



or

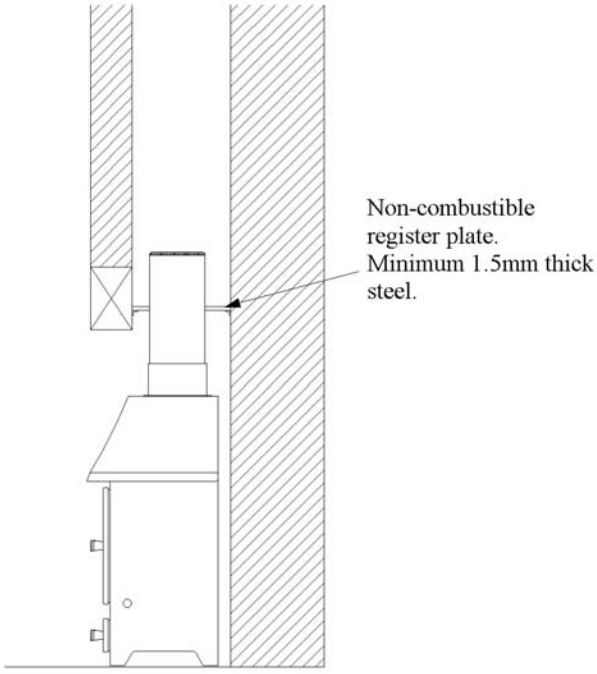


PLAN VIEW OF REGISTER PLATE AND CLEARANCES FOR NON INSULATED FLUES



A is minimum clearance for non-insulated flue =

1.5 x D to a non-combustible surface/material
or
3 x D to combustible surface/material



TOP FLUE OUTLET

ADD IN BOILERS

Becton multifuel stoves offer the option of a cantilever boiler or a slab boiler, which occupies the position of the rear firebox liner panels.

Fitting:

•Remove the fuel retainers, rear firebox liner panels and throat plate.

•Knock out the blanking discs in the back plate corresponding to the terminals on the boiler.

•Introduce the boiler to the appliance through the main fire door and locate the terminal pipes through the back plate holes and seal around boiler terminals with fire cement.

•Engage locking nuts to the thread of the terminals and tighten to secure the boiler in position, ready for connection to flow and return pipes.

•Replace throat plate (slab boilers only) and fuel retainers.

Do not fit throat plate with cantilever boiler.

Note: On boilers the terminal which is approximately flush with the edge of the boiler and marked "TOP" must be fitted uppermost, to prevent "Kettling".

WATER CONNECTIONS

Heating systems

The size of the heating system which can be run, will depend on the output rating of the appliance. It will be necessary to work out heat loss calculations for the system proposed in order to establish the kW/hr rating. An appliance that will meet this figure can then be chosen; (for boiler outputs please refer to the brochure).

The constructional requirements of installing and connecting the appliance also need to be taken into account when selecting. Design and calculations for individual heating systems should be carried out by a qualified heating engineer. In many cases your supplier will be able to offer advice and assistance.

Direct Systems

Stainless steel boilers, either factory fitted or retro-fitted as add-in boilers enable connection to direct systems to be made without the need to change the cylinder or to fit an expansion tank. This applies to domestic water supply only **and should not be done when in an area with soft water.** If radiators are used then an indirect system must be utilised.

To connect the cylinder use 28mm copper pipes. Ensure that the pipes rise continuously to the cylinder.

Ensure that the runs are not too long, i.e. 20ft maximum each for flow and return. Install the cylinder above the level of the fire, and as close to it as possible. (the higher the cylinder the faster the circulation). Ensure that no valves are present in the circulating pipes.

Indirect Systems- The Domestic Hot Water Circuit

In addition to providing hot water the primary circuit is essential in providing a "heat leak" to absorb excessive heat produced in the event of the circulation pump shutting down.

Heat is produced in varying quantities while the fire is alight and care must be taken to ensure that effective circulation can occur around the primary circuit to carry heat away and thus stop boiling. The output of any radiator installed as a "heat leak" should not be less than 10% of the rated output of the appliance. The radiator should **not** be fitted with a control valve.

The cylinder must be of the indirect type with a minimum capacity of 110 litres, conforming to BS 1566 part 1.

Primary flow and return pipes should be 28mm diameter. The cylinder should be installed at a higher level than the appliance, and as close to it as possible (the higher the cylinder the faster the circulation). The flow and return pipes should not be longer than 20ft each. Pipe runs should rise continually from the boiler to the cylinder.
A radiator of approximately 25 sq.ft. should be connected into the primary circuit, if installed in the bathroom it provides a means of drying towels in the summer.

Safety Vent Circuit

This circuit consists of a cold feed pipe, expansion pipe, and expansion tank. The possibility that water may boil can never be completely ruled out, and it is therefore vital to ensure that cold water can be supplied to the boiler and steam vented from it at all times.

The expansion tank should have a capacity of at least 7 % of the system's water capacity. The cold water feed pipe should be at least 22mm diameter.

There must not be any shut off valves in the circuit. Pipes should be run to avoid air locks. A spring safety valve should be fitted to the expansion pipe close to the boiler.

It is often possible, and is good practice, to utilise the primary flow and return as part of the safety circuit. The ball valve should have a copper ball. The overflow pipe from the expansion tank should be 28mm diameter copper. Pipes in unheated spaces must be lagged.

FINAL CHECK

Before handing over the installation to the customer it is strongly recommended that the appliance is lit and the functioning of the chimney, hot water and heating system is checked.

A checklist (Pre-lighting Checks) appears in the Operating Instructions, but in addition to this the installer should:

- **Operate the heating system and set the pump head.**
- **Balance the radiators.**
- **Re-vent and ensure no air locks.**
- **Check the circulation round the primary system and the heat leak radiator, particularly when the pump is running, to ensure circulation is not reversed.**
- **Be sure that the chimney is operating and that ALL smoke and fumes are vented to the atmosphere through the chimney terminal.**
- **Check all joints and seals.**
- **Clean the outside of the appliance to prevent any stains becoming burnt on.**
- **Check the flue draught which should read 1 - 2mm, or 0.1 - 0.2mbar.**

The following details **must** be checked and completed in full by the installer at the time of installation. Please answer all questions as fully as possible. **Aarrow Fires Ltd** can not be held responsible for chimney or installation.

HOT WATER SYSTEMS	
Is the boiler cross-flowed?	YES / NO
Are the pipes correctly sized?	YES / NO
What is the calculated output required to heat the system?	
Is a heat leak fitted?	YES / NO
What is the return water temperature?	
Is the pump thermostatically controlled by a pipe stat?	YES / NO
What is the height and distance of the hot water tank above the stove?	

CHECKLIST

Hearths, Fireplaces, Flues and chimneys

This checklist is to ensure hearths, fireplaces, flues and chimneys are satisfactory, and to show what you have done to comply with the requirements of The Building Regulations 2000 Approved Document J 2002.

1. Building address, where work has been carried out.....

.....

2. Identification of hearth, fireplace chimney or flue	
3. Firing capability: solid fuel/gas/.	
4. Intended type of appliance. State model and output.	
5. Ventilation provisions for the appliance: State type and area of permanently open vents.	
6. Chimney or flue construction a) State the type or make and whether new or existing. b) internal flue size (and equivalent height, where calculated - natural draught gas appliances only). c) If clay or concrete flue liners used confirm that they are correctly jointed with socket end uppermost and state jointing materials used. d) If an existing chimney has been refurbished with a new liner, type or make of liner fitted. e) Details of flue outlet terminal and diagram reference. Outlet Details: Complies with: f) Number and angle of bends. g) Provision for cleaning and recommended frequency.	
7. Hearth. Form of construction. New or existing?	
8. Inspection and testing after completion Tests carried out by: Tests and results Flue inspection: visual, sweeping, coring ball, smoke Appliance (where included) spillage	

I/we the undersigned confirm that the above details are correct. In my opinion, these works comply with the relevant requirements in Part J of Schedule 1 to the Building regulations.

Print name and title.....Profession.....

Capacity.....Telephone.....

Address.....Post code.....

Signed.....Date.....

Registered membership of..(e.g. CORGI, OFTEC, HETAS, NACE, NACS).....

PARTS LIST

Part Description	Visual Aid (not to scale)	Becton Bunny Part No.	Becton 7 Part No.	Becton 11 Part No.	Becton 18 Part No.
1. Fuel Retainers		AFS155	AFS152	AFS153	AFS154
2. Throat Plate		AFS1018	AFS1019	AFS1020	AFS034A
3. Grate Bar Set		AFS001	AFS001	AFS001	AFS002
4. Hot Plate		AFGS064	AFS010	AFS010	AFS011
5. Operating Tool		AFS008	AFS008	AFS008	AFS008
6. Ashpan		AFS058	AFS050	AFS051	AFS052
7. Flue Spigot		AFS009A	AFS009	AFS009	AFS011

Part Description	Visual Aid (not to scale)	Becton Bunny Part No.	Becton 7 Part No.	Becton 11 Part No.	Becton 18 Part No.
8. Liner Set		AFS1015	AFS1016	AFS1017	AFS1045
9. Side Liner		AFS1058	AFS1060	AFS1062	AFS1064
10. Back Liner Set		AFS1059	AFS1061	AFS1063	AFS1065
11. Glass Replacement Kit Complete with Gasket		AFS069	AFS088	AFS090	AFS092
12. Glass Clips		AFS070	AFS089	AFS091	AFS093
13. Hinge kit Comprises 2 Hinges & 4 Fixings Per Set.		AFS047	AFS047	AFS047	AFS047
14. New 2002 Airwash		AFS1077	AFS1077	AFS1077	AFS1077

PARTS LIST

Part Description	Visual Aid (not to scale)	Becton Bunny Part No.	Becton 7 Part No.	Becton 11 Part No.	Becton 18 Part No.
15. Fire Door Rope Kit Complete with Door Rope Glue.		AFS048	AFS048	AFS048	AFS048
16. Main Door Assembly Complete with Handle,Glass, Gaskets,Clips and Seal.		AFS018	AFS042	AFS043	AFS044
17. Decorative Door Surround		AFS094A	AFS095	AFS096	AFS097
18. Fire Door Locking Assembly		AFS204	AFS204	AFS204	AFS204
19. Aarrow Fires Gauntlet Gloves		AFS997	AFS997	AFS997	AFS997

Guarantee

Once again we would like to thank you for buying a Becton fire.

When you buy an Aarrow Fire, you are not only buying a first class appliance - you are buying a commitment from us to look after you and your appliance for as long as you want.

The Becton Stoves come with a ***Lifetime Guarantee*** against splitting or cracking of the main body. The main body being defined as the steel outer casing and items fixed immovably to the casing. All other parts are covered by a one-year no-quibble parts Guarantee.

This Guarantee shall not apply to any part that has been altered in any way, or which in our judgment has been subjected to misuse, neglect, accident, abuse and fair wear and tear.

Items which would be subject to fair wear or tear, firebox liner panels, fuel retainers, throat plate, door rope, door glass and gaskets are not covered by the guarantee. However, should you have any problems with your appliance please contact your Aarrow stockist who will have the knowledge and facilities to help you.

Claims are not valid where the installation does not conform to local Building Regulations and fire codes.

The Guarantee is conditional upon the appliance being serviced and checked annually by a qualified heating engineer.

The Manufacturers decision shall be final.

If your appliance proves to be defective as a result of faulty materials or workmanship during guarantee, we will repair or replace it FREE OF CHARGE as long as the fire has been installed according to the manuals instructions and the Final Installation Check List on p24 has been completed and signed by a suitably qualified engineer.

USE OF SPARE PARTS OTHER THAN THOSE SUPPLIED BY AARROW FIRES LTD WILL INVALIDATE THE APPLIANCE WARRANTY.

All Guarantee periods commence on the date of purchase and are non-transferable.

Our Lifetime Guarantee is offered as an addition to your statutory rights.

If you think your fire is not working correctly or in the event of a breakdown, **please call your local dealer.**
When you contact them, they will want to know:

1.Your Name, Address/Post Code and Telephone Number
2.Serial Number
3.Clear and concise details of the fault

CUSTOMER REGISTRATION

See card enclosed

To guarantee the very best in after-sales service, do not forget to complete and return your Customer Registration Card within 14 days (a stamp is required).

Just complete the form and return it to us to:
1. Benefit from our Lifetime Guarantee.
2. Register your appliance for a full year's Parts Guarantee.

Please contact us direct 01308 427234 if no Customer Registration Card is included.

SERVICE RECORD

Date of Visit	Company	Work Carried Out	Signature

Should you have any questions about your Becton Multifuel Stove that is not covered in this manual please contact your Aarrow retailer.

Please keep all repair receipts safely.

Please ensure you have this manual available when an engineer visits as they will complete the service record chart.

Lifetime Guarantee

For your peace of mind

Aarrow Fires gives a Lifetime Guarantee against manufacturing defects of the main body* of its Becton range of fires. Additionally, all other parts are covered by a one year no quibble replacement guarantee. This guarantee covers replacement of the item only and does not extend to any other costs, including labour, incurred in its replacement. Documentation must be retained and produced in the event of a warranty claim. This guarantee specifically does not cover accidental damage, misuse, wear & tear. The use of non Aarrow replacement parts will invalidate your warranty. For full details contact your local Aarrow dealer. All guarantees are in addition to your statutory rights. Please see page 24 for further information regarding the guarantee.

*The main body defined as the steel outer casing and items fixed immovably on to this casing.

No fears and no tears with

The **Becton**

Family

FINAL FACTORY CHECK LIST

Model.....

Serial No.....

QUALITY	
FINISH	
PARTS	
FLUE OUTLET	
HOT PLATE	
FUEL RETAINERS	
GRATE	
FIREBOX LININGS	
THROAT PLATE	
AIR WASH	
DOOR CATCHES	
INTERLOCK	
ASH PAN	
OPERATING TOOL	
OPERATING INSTRUCTIONS	

I've checked it and it's O.K.

Assembled by.....

Checked by .....

Please ensure the enclosed registration card is completed and returned to Aarrow Fires and the following information completed for your own information.

Date of Purchase.....

Name and address of supplier.....

.....

.....

**** Please ensure installer completes INSTALLATION CHECK LIST details on page 25 of this manual.***

If an add in boiler is fitted please also ensure information on page 24 is completed.

Operating & Installation Manual

The Becton MK 3

Range of Gas Stoves

(Becton 7 MK 3 Gas Stove)

PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

Aarrow Fires Ltd
The Fireworks
Bridport
Dorset, DT6 3BE
Great Britain

Tel. (44) 01308 427234
Fax. (44) 01308 427441
www.aarrowfires.com

CE

FOR USE IN COUNTRIES
GB & IE

Rev 11
Part No. AFS1125

Congratulations on your choice of an Aarrow Stove.

More than 20 years experience has been put into the development of our Becton Family to ensure ultimate performance and years of trouble free enjoyment.

Every detail on the fire has been carefully engineered and designed which is why we are so confident in the reliability of our product that we offer a Lifetime Guarantee.

Should you have any questions about our Becton Stoves that are not covered in this manual, please contact the Aarrow dealer in your area, or call our Technical support department on 01308 427234

Flaming Good Fires!

CONTENTS

INTRODUCTION

References in this manual to British Standards and Statutory Regulations and Requirements apply only to the United Kingdom. For Ireland the rules in force must be used.
Before installation, check that the local distribution conditions, nature of the gas, pressure and the adjustment of the appliance are compatible.
The manual is an important part of the appliance and must by law be handed to the end user on completion of the installation.

SAFETY NOTICES

- Do not attempt to burn rubbish or any other material in this appliance.
- This fire must only be operated with the fire door shut and secured.
- Do not use the appliance if the glass is cracked or broken.
- Do not make any unauthorised modifications to the appliance.
- It is recommended that the fire be guarded to protect the young and infirm using a fireguard complying with BS8423:2002.
- **Coal set** -The coal set contains Refractory Ceramic Fibres (R.C.F), which are man made vitreous silicate fibres. Excessive exposure to these materials may cause temporary irritation to the eyes, skin and respiratory tract. Care must be taken when handling these items to ensure the release of dust particles is kept to a minimum. To ensure that the release of fibre from these items is kept to a minimum, during installation and servicing it is recommended that a vacuum cleaner fitted with H.E.P.A. filters is used to remove any dust, soot or any other debris accumulated in and around the appliance. This should be performed before and after the installation. It is recommended that any replacement item(s) are not broken up but sealed within a heavy duty polythene bag and clearly labelled "R.C.F. waste". This is not classified as "hazardous waste" and may be disposed of at a tipping site licensed for the disposal of industrial waste. Protective clothing is not required when handling these items but it is recommended that gloves are worn and normal hygiene rules are followed.
Always wash your hands before eating or drinking.
- In the event of a gas emergency, consult the telephone directory and ask for your local gas supplier.

GENERAL INFORMATION

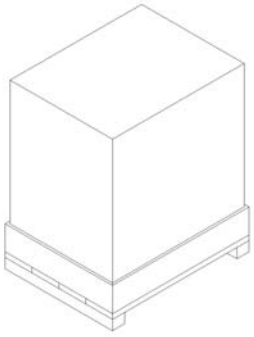


Fig 1

Palleted cardboard carton.
440mm x 560mm x 550mm high

Becton Bunny Packed wt. 45Kg
Becton 7 Packed wt. 56Kg

All materials, appliances and equipment used should be fit for their purpose, be of suitable quality and workmanship and should comply with the applicable British Standards.

Before continuing any further with the installation of this appliance please read the following guide to manual handling.
- Always obtain assistance when lifting the appliance.
- When lifting always keep your back straight. Bend your legs not your back.
- Avoid twisting at the waist. It is better to reposition your feet.
- Avoid upper body/top heavy bending. Do not lean forwards or sideways when handling the fire.
- Always grip with the palms of your hands. Do not use fingertips for support.
- Always keep the stove as close to the body as possible. This will minimise the cantilever action.
- Use gloves to provide additional grip.

IMPORTANT NOTICES

A qualified gas engineer must carry out the installation and servicing of this appliance in accordance with these instructions and in compliance with current Building Regulations. ***Such person must be a registered CORGI engineer.***
This appliance is designed to run on natural gas only. **Warning - Only use the appliance with the specified gas.**

The fire is fitted with a safety device to shut down the appliance if there is inadequate flue draw. If the fire shuts down for no apparent reason check chimney and air inlets to the room. In all cases the fire must not be re-lit until the safety aspects have been checked by a qualified gas engineer.

Please note the following;

- The safety device must **never** be put out of action.
- Sealed components must not be interfered with.
- Servicing instructions and part identification numbers are given towards the back of the manual.
- Only use genuine **Aarrow** parts for replacements.
- Ventilation, purpose built ventilation is not normally required for either appliance, normal adventitious room ventilation being sufficient.
- Coal Set, see safety notice on page 4.

All surfaces except the control knob, the control door handle and control door are considered to be working surfaces.

Warning: Under no circumstances must the fire be operated if the glass is cracked or broken.

Warning: If it is known or suspected that an operational or ignition fault exists on the appliance, it must not be used until it has been investigated and corrected by a qualified gas engineer.

Warning: ***THIS GAS APPLIANCE MUST BE SERVICED EVERY TWELVE MONTHS BY A QUALIFIED GAS ENGINEER.***

STATUTORY REQUIREMENTS

The current Gas Safety (Installation and Use) Regulations (as amended).

The Building Regulations for England and Wales 2000 ref Approved Document J 2002 edition (issued by the DTLR).

The Building Standards (Scotland) (Consolidation) Regulations.

Detailed recommendations are outlined in the current issue of the following British Standards:- BS5440 parts 1 and 2, BS5871 part 1 and BS6891.

Any Manufacturer's Instructions must <u>not</u> be taken as overriding statutory requirements.

CERTIFICATION

This appliance is CE certificated for performance and safety. Therefore, it is important that no alteration is made to the appliance.

Any alteration not approved by **Aarrow Fires Ltd. will invalidate the guarantee.**

TECHNICAL DATA Category I_{2H} For use in GB and IE at a supply pressure of 20mbar		
	Becton Bunny Natural Gas	**Becton 7 Natural Gas**
Main Burner	Aeromatic AC13/112511 (mod 334)	Aeromatic AC13/112511 (mod 334)
Injector	Bray 82-700	Bray 82-700
Max. Heat Setting Heat Input (net)	3.7 kW	5.0 kW
Gas Rate Cold Setting Pressure	0.391m³/hour 1.5mb	0.529m³/hour 3.5mb
Min. Heat Setting Heat Input (net)	2.4 kW	3.3 kW
Gas Rate	0.254 m³/hour	0.349 m³/hour
NOx CLASS	CLASS 4	CLASS 4

FIRE DIMENSIONS

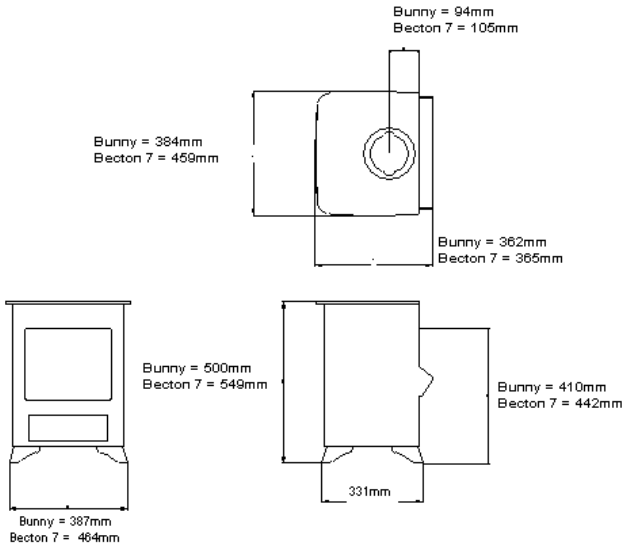


Fig. 2

FITTING THE LINING PANELS

Becton 7 only. The lining panels supplied are to be installed into the fire before the coal matrix is fitted. Note: The lining panels are reversible (brick or plain pattern)

Ensure the appliance is cold.
With the fire door open, the glass retaining frame and the coal set removed, proceed as follows:
Do not force the linnings into position.

1. Position the rear lining face down at the rear of the fire. Ensure the cutout faces the rear of the fire.

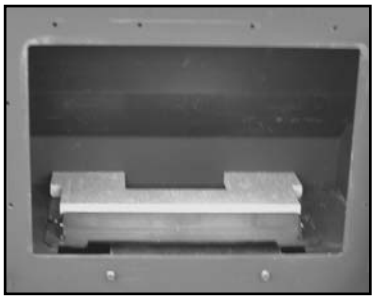


Fig. 3a Positioning the rear lining

2. Locate side lining in the right hand side of the fire. First position the tall edge into the radius at the front of the fire.(See Fig.3b below)

Fig. 3b Fitting the R/H side lining

3. Then rotate the rear edge until the top faces match up the angle faces at the rear of the fire.
(See Fig. 3c) Repeat exercise for the left hand side.

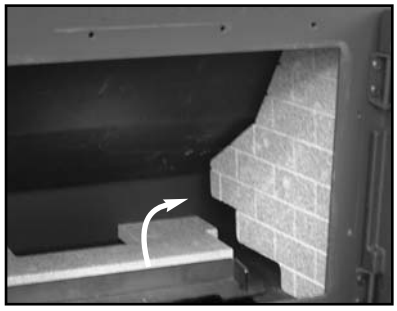


Fig. 3c Fitting the side linings

4. Rotate the rear lining to bring it vertical (Fig. 3d)

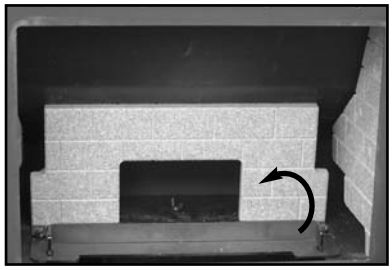


Fig. 3d Rotating the rear lining

5. Centre the assembly. Line up each end of the rear lining with the edges of the fixed matrix plate. (See Fig. 3e)

Fig. 3e Liner panels assembled in the fire.

Once the lining panels are fitted, arrange the coals.
See “Arranging the coals” on page 8.

ARRANGING THE COALS

Safety Notice - Please see SAFETY NOTICES ref. Coal set page 4.
Warning: The coals and the coal matrices are fragile ensure they are handled carefully.
Ensure location is correct. Do not force the matrix into position. If the coals and/or the coal matrices are damaged they must be replaced with genuine Aarrow replacement sets.
Warning: An incorrect coal layout may cause soot to build up inside the fire and therefore invalidate the guarantee.
Ensure the appliance is cold.
Step 1 Place the base matrix on the matrix plate centrally between the end tabs of the location bar. (Fig 4a)

Fig 4a

Step 2 Place the rear matrix cut out section over the base matrix and centralise the assembly between the end tabs of the location bar. Ensure the rear matrix is pushed back against the location bar. (Fig 4b)

Fig 4b

Step 3 **Becton 7 only**. Locate 2 off end coals each side of the base matrix. (See underside of coals for hand identification) (Fig 4c).

Fig 4c

LIGHTING & CONTROLLING THE FIRE

Under no circumstance must the fire be operated if the glass is cracked or broken.

Open the gas control access door situated at the bottom of the appliance. **Always use the control door HANDLE.**

Step 1a. To ignite the pilot push the control knob in, turn anti-clockwise towards the spark position and hold in for 15 seconds. (Fig 5a)
The pilot can be viewed through the L/H & centre front slots in the base matrix.

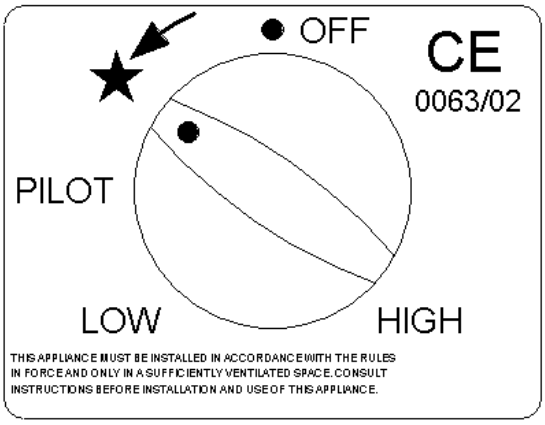
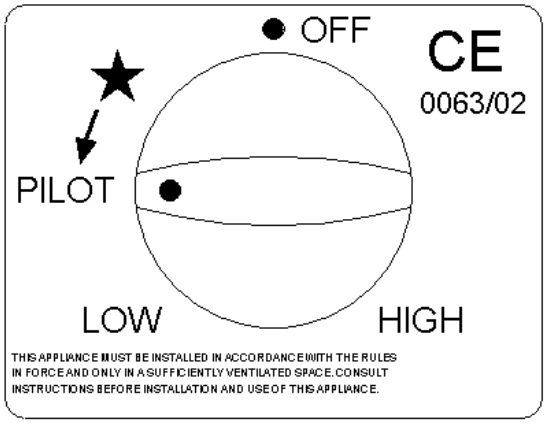


Fig 5a

Step 1b. Keep the control knob pressed in and turn



anti-clockwise to the pilot position. (Fig 5b)

Fig 5b

Step 1c. Keep the control knob pressed in for a further 15 seconds and then release. The pilot will remain alight.

If pilot does not remain alight repeat this procedure.

Please note that when purging the gas supply it is usual to have to keep the control knob depressed in the spark position for longer periods of time.

Step 2. To ignite the main burner, rotate the control knob anti-clockwise to the **HIGH** position (fig 5c)

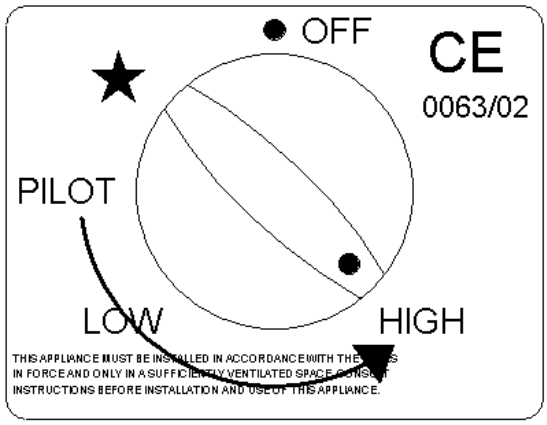


Fig 5c

For maximum heat output leave the control knob at the high position

For minimum heat output, rotate the control knob clockwise to the **LOW** position. (Fig 5d)

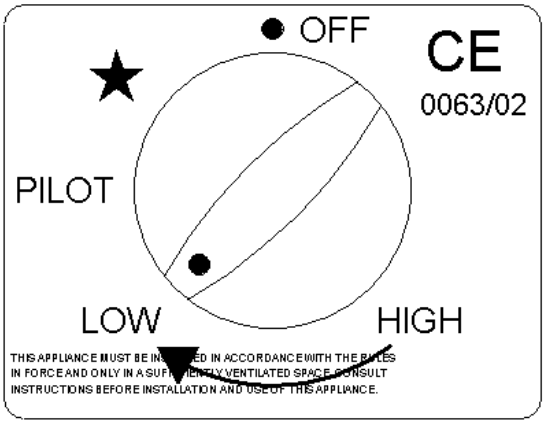


Fig 5d

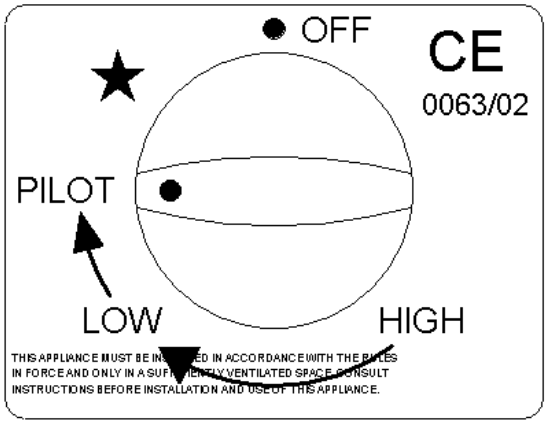


Fig 5e

Step 3. To turn the main burner off while keeping the pilot alight, rotate the operating knob back to the **PILOT** position. (Fig 5e)

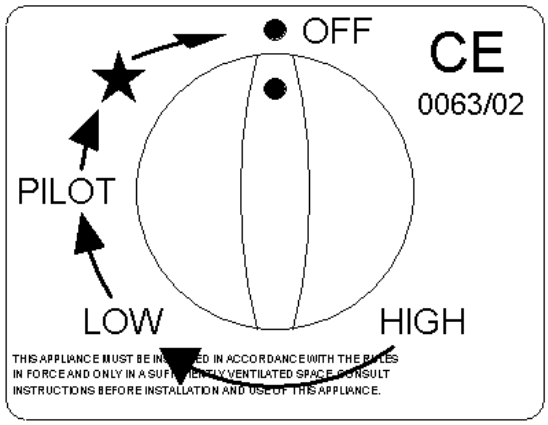


Fig 5f

Step 4. To extinguish the pilot, turn the control knob to the **OFF** position. (Fig 5f)

Incorporated into the pilot assembly is a flame failure device designed to shut off the gas supply in the event of the pilot flame being extinguished while the fire is unattended.
Should the pilot flame blow out accidentally or intentionally whilst the fire is running, **no attempt should be made to re-light the gas for at least three minutes.**

To restart the fire turn the control knob to the off position and repeat the lighting & controlling the fire instructions.

The flame failure device is a safety feature required by law and must not be put out of action by the installer. If this device or any of its parts are to be replaced, only original manufacturer's parts are to be used.

Repeated operation of the flame failure device indicates that there maybe a problem with the flue draw. In this situation no more attempts at operating the appliance should take place and your qualified gas engineer should be contacted to investigate and rectify the problem.

INSTALLING THE FIRE

*Your **CORGI** qualified gas engineer should install the fire in accordance with the following regulations and standards:-*
The Gas Safety (Installation and Use) Regulations 1998 (as amended).
The Building Regulations for England and Wales 2000 ref; Approved Document J 2002 edition (issued by the DTLR).
The Building Standards (Scotland) (Consolidation) Regulations.
BS5440 parts 1 and 2 1990, BS5871 And these Installation Instructions.

Warning: Failure to comply with the regulations, requirements, or these instructions will invalidate the guarantee and could have hazardous consequences.

Please note that in tight recesses the gas supply point may be inaccessible. Therefore it may be necessary to connect the pipe for the gas supply to the fire before installing the fire into its recess.

FITTING THE FEET

Care should be taken when fitting the feet not to damage the painted surfaces of the fire.

• The feet (4 off) are positioned in each corner of the fire base using the washers and screws provided.

• ***Tools required***: A no. 2 pozidrive screwdriver.

FLUE SYSTEM

The stove must be connected to a suitable and efficient flue that provides a good updraught to safely take the products of combustion (fumes) from the stove outlet to the outside air. To ensure a good updraught it is important that the flue gases are kept warm and that the flue size suits the stove.

The termination of the outlet at the top of the flue also needs to comply with the Building Regulations. The minimum effective height of the chimney must be at least 3 metres and when warm the flue draught should be between 0.05 and 6mb (0.5mm to 6mm water gauge).
The Bunny requires a minimum flue size of 100mm (4 inches) and the Becton 7 requires a minimum flue size of 125mm (5 inches). If the stove is being connected to a chimney with an internal flue size greater than 225mm (9 inches) diameter or 200 x 200mm square, a 125mm (5 inches) diameter stainless steel flexible flue liner complying with BS 715 should be installed in the flue.
If a new chimney is being provided it should fully comply with the relevant Building Regulation Requirements and BS 5440: Part 1. Suitable types of chimney include the following.

• Masonry chimney built with clay or concrete liners, or a chimney block system meeting Building Regulations.

• Precast concrete gas flue block complying with BS 1289: Part 1

Factory made metal chimney complying with BS 715 (often called "Twin wall Class 2 chimney") or Factory made metal insulated chimney complying with BS 4543: Part 2 (often called "Class 1 prefabricated metal chimney"). To ensure the flue gases are kept warm an insulated chimney system should be used if the chimney is positioned outside the building.

The flue must be terminated with a suitable chimney pot or cowl and the chimney or flue shall be swept prior to installation unless the chimney is clean and unobstructed.

The flue and chimney installation must be carefully checked by a competent person before fitting the stove to ensure it is suitable and will work safely. The flue must also pass a Flue flow test (smoke test) to BS 5440: Part 1.
For advice on flues and chimneys contact;
NACE (National Association of Chimney Engineer): telephone 0800 0924019
www.nace.org.uk
or
NACS (National Association of Chimney Sweeps): telephone 01785 811732

The Becton gas stove is designed so that the flue can be fitted to either the top or the rear of the appliance.

Fit the flue spigot and blanking plate for either top or rear flue outlet in accordance **with figure 6a or 6b (below).**

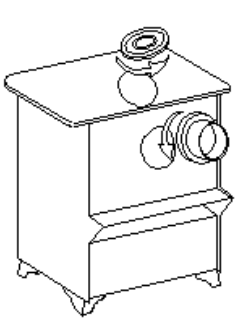


Fig 6a

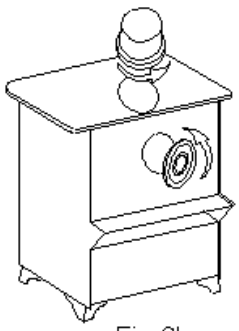


Fig 6b

Lock the blanking plate in place by rotating anti-clockwise and tighten by tapping gently with a block of wood and mallet. Fit the spigot to the unused opening in the same way. The units are sealed by the attached gaskets.

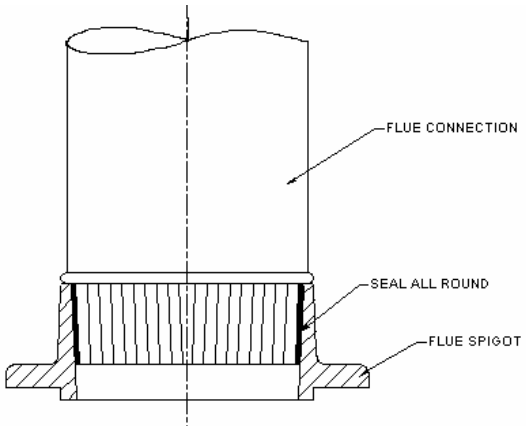


Fig 6c

REAR FLUE

Open Hearth

Fit and seal a 'T' section (with soot box) directly into the flue spigot. The maximum horizontal section allowed is 150mm.

Provide a minimum vertical height of 600mm of flue from the height of the rear flue outlet. **See figure 7b.**

Closure Plate

#Connect the flue spigot to the rear outlet.
#Connect a flue extension to the spigot.
#Fit the closure plate in fireplace.
#Position the fire so the flue extension passes through the hole in the closure plate.
#Ensure all joints are suitably sealed.
See Figure 7c.

TOP FLUE

Provide a minimum vertical height of 600mm of flue measured from the top of the appliance. **See Figure 7d.**

Move the fire, with flue spigot in place, into position under the flue and seal the spigot/flue connection with fire cement. (Ref. Fig. 6c).

It is recommended that a smoke test is performed inside the fire to ensure that adequate flue draw is evident.

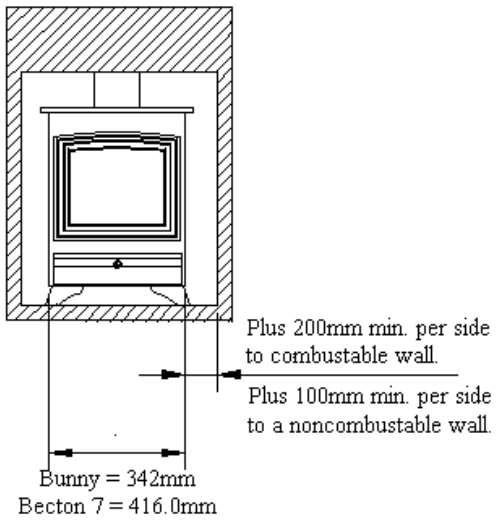


Fig 7a

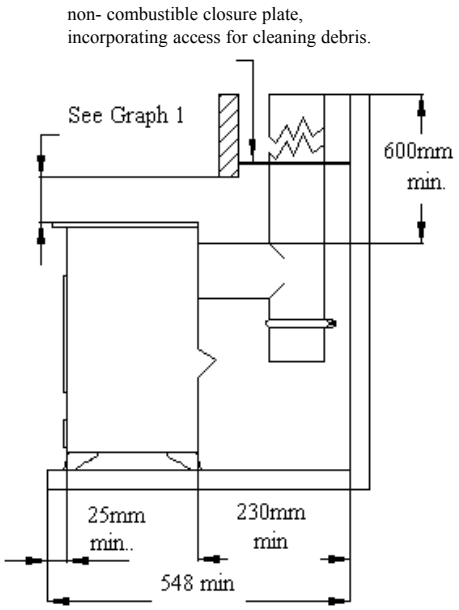


Fig. 7b.

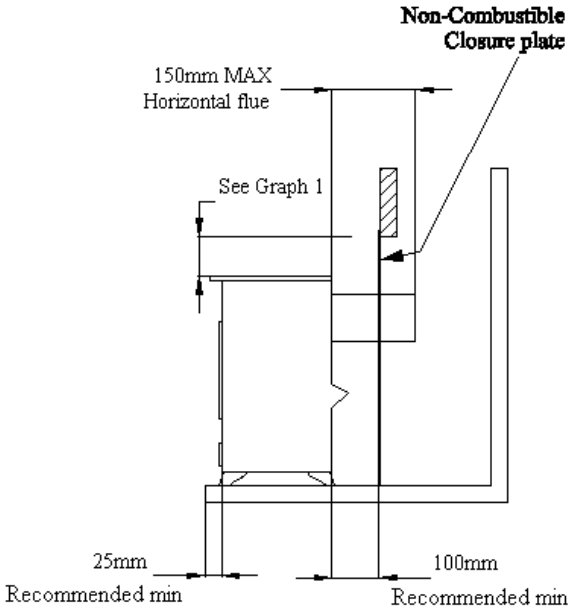


Fig. 7c

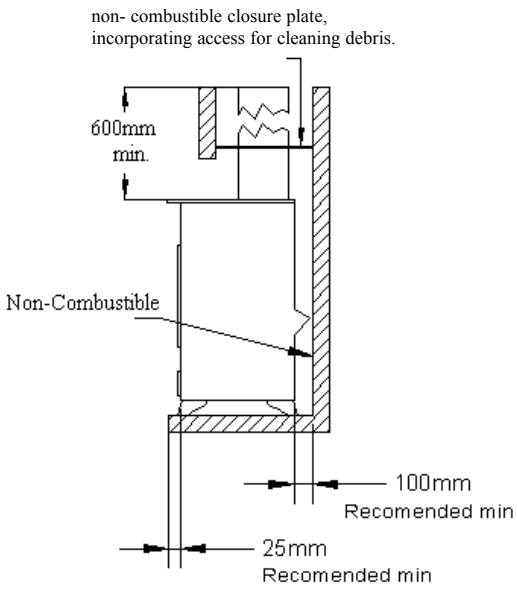


Fig. 7d.

FIRE LOCATION

The appliance must <u>not</u> be installed in a room or space, which contains a bath or shower.

This fire is designed for use with either top or rear flue outlets and must be mounted on a hearth with a minimum of 12mm non-combustible material thickness.

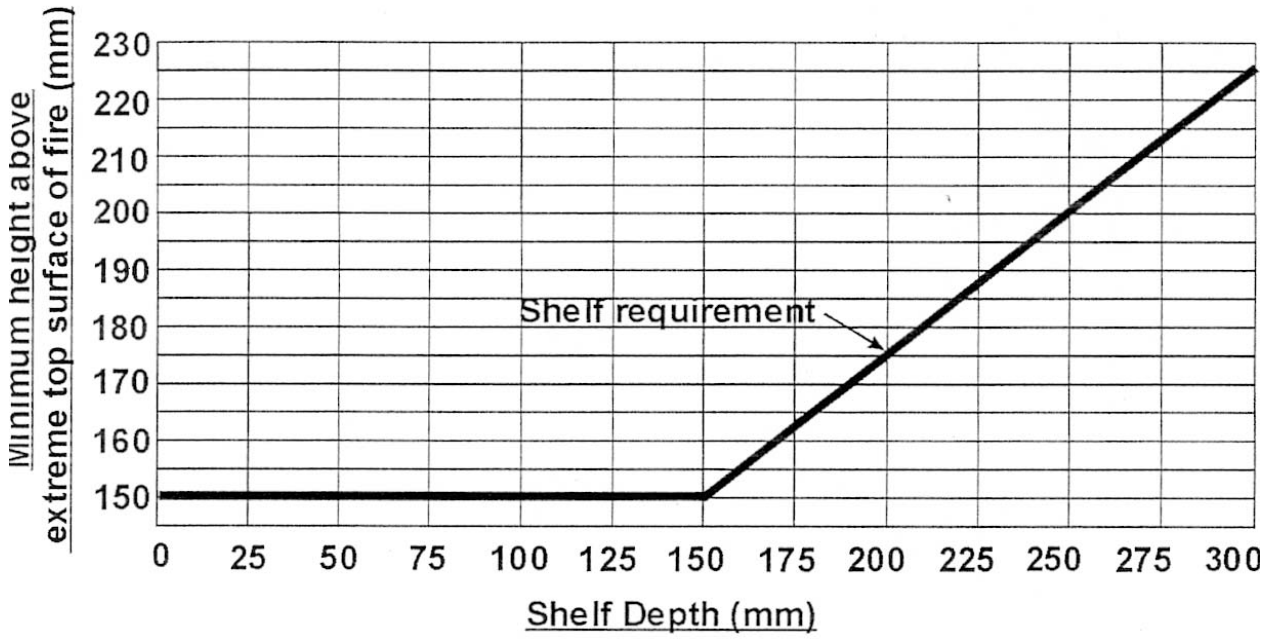
There must be a minimum of 200mm clearance from the sides of the fire to any combustible sidewalls. Fig7a.
For clearance from the top of the fire to any combustible shelf. Fig 7b. (See Graph 1).
There must be a minimum of 230mm from the rear of the fire to any combustible back wall. Fig 7b.

With a ***Non-combustible*** back wall the fire can be pushed back until the top diverter touches the wall, although to improve access and air circulation a minimum distance of 100 mm is recommended. *Fig 7c.*

Reference non-combustible side walls a minimum of 100mm is recommended.

Do not place any furniture or furnishings (including curtains) within 1 metre of the fire.

The minimum height from the extreme top surface of the fire to the underside of a shelf or other projection made of wood or any other **combustible material** is shown on graph 1.



Graph 1.Combustible Shelf Clearances

The recommended minimum height from the extreme top surface of the fire to the underside of a **non combustible** shelf is 100mm.

HEARTH REQUIREMENTS

To comply with current Building Regulations the fire must stand on a fireproof hearth, which has an upper fireproof layer of 12mm non-combustible material. If the rear of the fire is to be pushed up against a surface it must be of a non-combustible material.
The hearth must protrude at least 25mm in front of the glass window and 150mm either side.
The hearth must not be capable of inadvertent covering by a carpet or rug. This should be achieved by either:
The hearth being 50mm above the level of the room floor. A 50mm high fender or kerb being fixed around the edge of the hearth.

CONNECTING THE GAS SUPPLY

Once the fire is in place it is then possible to connect the gas supply. The gas supply point is located at the rear of the appliance and should be connected in accordance with the following requirements.
Check that the appliance is suitable for the gas supply; refer to data labels on packaging and/or the fire for gas type. **Note: Natural gas and Propane (LPG) models are not interchangeable.**

The gas installation must be in accordance with the current issue of BS6891.Gas supply pressure at the fire should be 20mbar for natural gas.
The gas supply should be connected with the 1/4"BSP nut and olive with 8mm tubing.

A maximum pipe run of 1.5 meters (or 5 feet) should be adhered to and copper tubing may be used provided a distance of 25mm is maintained between pipe-work and any surface of the fire. A gas service cock should be fitted adjacent to the fireplace to enable safe removal of the appliance for servicing. After fitting the supply, operate the gas cock (supplied) and check all joints up to the termination of the supply pipe for gas tightness using a soap/water solution and the pressure drop method.

To check the pressure to the burner it is necessary to ignite the appliance and set to 'high rate'.
This is carried out by following instructions on pages 9 and 10.
Cold setting pressures are in the Technical data section on page 6.

The pressure test point is located through the hole in the valve bracket marked 'test point',
See Fig.8 below.

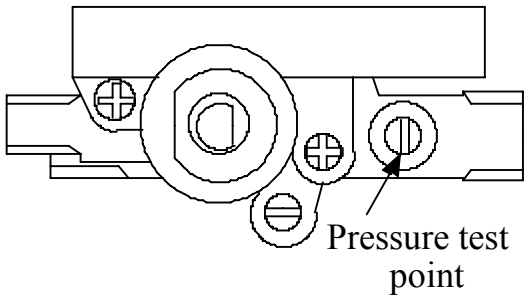


Fig. 8

TEST SEQUENCE

ENSURE FIRE IS OFF

1. Open control door.
2. Loosen test point screw.
3. Connect hose of test equipment to test point through the test point hole in bracket. (If necessary open fire door and remove coal set, base matrix plate and heatsheild. Close door on completion)
4. Turn on fire and set flame on high.
5. Take reading.
6. Turn fire off.
7. Remove test equipment hose.
8. Re-tighten test screw (If necessary replace heatsheild, matrix plate and coal set.

FIRE TESTING

Flame failure device testing

Step 1 Ignite the appliance in accordance with page 9 and run for 60 seconds.

Step 2 Turn the appliance off to extinguish the pilot, listen for a snap at the control valve. This should occur within 60 seconds of the pilot flame being extinguished. The snap sound will be the magnet disengaging, and thus shutting off the flow of gas to the pilot and burner.

Spillage Test

A qualified gas engineer should Perform a spillage test as follows:

Step 1. Close all doors and windows.

Step 2 Light the appliance and set to the high rate.

Step 3. Allow fire to warm up for 10 minutes.

Step 4. Position the smoke match at the back of the fire centrally beneath the draught diverter as shown in **Fig 9.**

All of the smoke should be drawn into the fire.
If this does not occur the appliance must be disconnected and the flue checked.

Step 5. **If there is an extractor fan in any room, this must be turned on and any doors between it and the fire left open, repeat the spillage test.**

Repeated operation of the spillage monitoring system indicates that there maybe a flue draw problem. In this situation no more attempts at operating the appliance should take place and your gas engineer should be contacted.

Warning: The spillage monitoring system is a safety feature required by law and must not be adjusted or put out of action by the installer. If the spillage monitoring system or any of its parts are to be replaced, only original manufacturers parts are to be used.

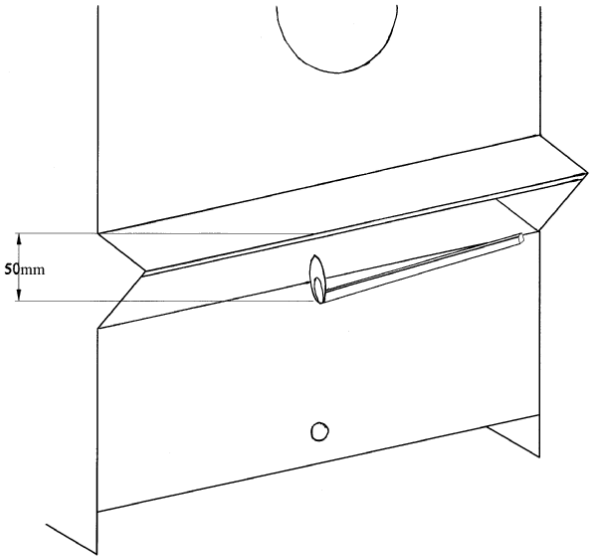


Fig. 9

Note: The fire will give off non-toxic fumes when first used. This is perfectly normal and is due to the paint curing, it will disappear after the first few hours. Once the spillage test is complete open windows and doors to ventilate the area.

INSTALLATION CHECK LIST

CHECKLIST

Hearths, Fireplaces, Flues and chimneys

This checklist is to ensure hearths, fireplaces, flues and chimneys are satisfactory, and to show what you have done to comply with the requirements of The Building Regulations 2000 Approved Document J 2002.

1. Building address, where work has been carried out.....

.....

2. Identification of hearth, fireplace chimney or flue	
3. Firing capability: solid fuel/gas/.	
4. Intended type of appliance. State model and output.	
5. Ventilation provisions for the appliance: State type and area of permanently open vents.	
6. Chimney or flue construction a) State the type or make and whether new or existing. b) internal flue size (and equivilent height, where calculated - natural draught gas appliances only). c) If clay or concrete flue liners used confirm that they are correctly jointed with socket end uppermost and state jointing materials used. d) If an existing chimney has been refurbished with a new liner, type or make of liner fitted. e) Details of flue outlet terminal and diagram reference. Outlet Details: Complies with: f) Number and angle of bends. g) Provision for cleaning and recommended frequency.	
7. Hearth. Form of construction. New or existing?	
8. Inspection and testing after completion Tests carried out by: Tests and results Flue inspection: visual, sweeping, coring ball, smoke Appliance (where included) spillage	

I/we the undersigned confirm that the above details are correct. In my opinion, these works comply with the relevant requirements in Part J of Schedule 1 to the Building regulations.

Print name and title.....Profession.....

Capacity.....Telephone.....

Address.....Postcode.....

Signed.....Date.....

Registered membership of..(e.g. CORGI, OFTEC, HETAS, NACE, NACS).....

DETAIL OF PILOT ASSEMBLY

It is strongly recommended to leave the pilot on permanently. This will keep the fire and its components, including the ceramic coal set in a warmer state and assist ignition to the burner.
This in turn will reduce condensation in the chimney and any associated flue problems.
The pilot can be viewed through the L/H & centre front slots in the base matrix.

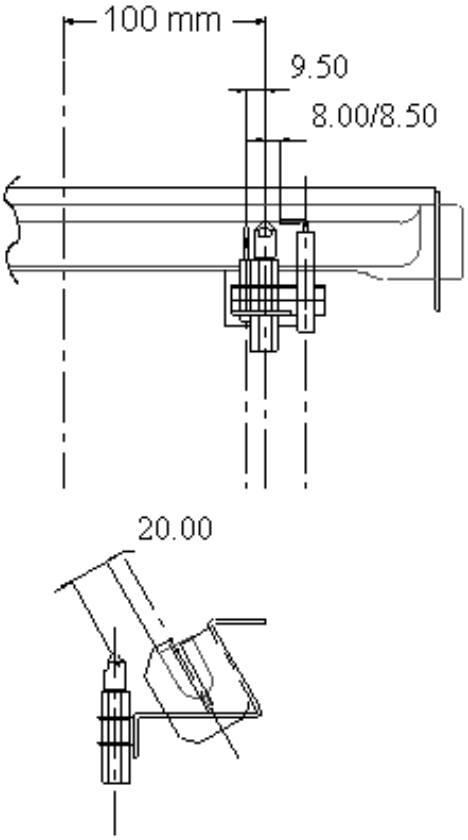


Fig. 10

DOOR TRIM

Becton Fire doors are fitted with a brushed steel finish trim as standard. The trim is secured using 3 off tabs and located in the slot section of the trim and secured with 3 off nuts. (See Fig. 11a below.)

Fig. 11a Location of the 3 off tabs

Note! To fit a tracery the trim must first be removed. The fire door can only be fitted with one item at a time.

REPLACEMENT OF THE DOOR TRIM

Ensure the appliance is cold.

Step 1 Remove the fire door.

This is carried out by opening the door (secured with a magnet) and lifting it off its hinges.

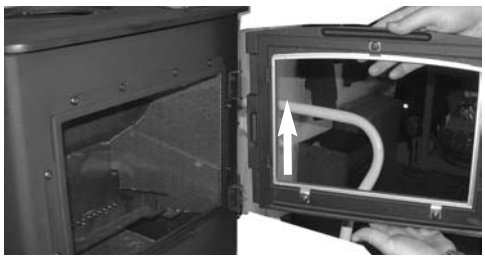


Fig 11b Lifting the door off its hinges

Step 2 Place the door on a flat surface and remove the single tab. The tracery can now be removed. (See Fig. 11c below)

Fig. 11c Untightening the single tab

Step 3 The trim will now lift off the remaining 2 tabs. See Fig. 11d.

Fig 11d

Step 4 Repeat the above steps in reverse to replace the trim.

FIRE DOOR GLASS & SEAL

If necessary the glass and seal can be removed as follows:

Ensure the appliance is cold.

Step 1 Open the fire door.

Step 2 The glass frame is secured using M5 screws. Remove all but the bottom 2 screws. See Fig. 12 below.

Fig. 12 Removing the Glass Frame

Step 3 Loosen the two remaining screws to enable you to lift off the glass frame and the glass and gasket assembly together.

To re-fit the glass & seal. First ensure sealing faces are clean and free from dust. Then follow the removal steps in reverse.

Note! The screws must be firmly secured to reform the seal.

BURNER ASSEMBLY

To remove the burner assembly proceed as follows;

Ensure the appliance is cold.

Step 1 Turn off the gas supply at the gas service cock.

Step 2 Disconnect the supply inlet pipe at the rear of the fire.

Step 3 Open door and remove the glass frame and glass gasket assembly.

Step 4 Remove the coal set and fire box linings.

Step 5 Remove the matrix location plate. Undo the three retaining nuts and lift out.

Step 6 Remove the heat shield. Undo the two retaining nuts located on the left hand side of the shield. Slide the shield backwards and lift out carefully. Do not damage the covering.

Step 7 Remove the gas valve control knob. Pull off.

Step 8 Remove the 15mm retaining flange nut. 17mm socket.

Step 9 Remove two off posi-drive screws just inside the fire door aperture.

The burner assembly will now lift out.

After replacement of burner assembly, ensure that a check on the gas tightness of any new joint is carried out.

REGULAR SERVICE

See "SAFETY NOTICES" ref coal set page 4.

Any soot debris should be removed from the fuel bed regularly by the end user.

Ensure the appliance is cold.

Step 1 Isolate the gas supply from the fire.

Step 2 Open the fire door and remove the glass frame and the glass/gasket assembly (Note the fire door is secured with a magnet).

Step 3 Carefully remove and clean the coal set of any soot deposits with a soft a brush.

Step 4 Remove any soot deposits from inside the fire using a vacuum cleaner. (See “Safety Notices” under ‘**Coal set**’ on page 4).

Step 5 Replace the coal set. See assembly procedure on page

Step 6 Replace glass/gasket assembly and glass frame.

Step 7 Close fire door.

ANNUAL SERVICE

THIS GAS APPLIANCE MUST BE SERVICED EVERY TWELVE MONTHS BY A QUALIFIED GAS ENGINEER.

See "SAFETY NOTICES" ref coal set page 4.

Ensure the appliance is cold.

Step 1 Isolate the gas supply to the fire using the gas cock supplied at installation.

Step 2 Open the fire door, (Held closed using a magnet).

Step 3 Remove the glass frame and the glass/ gasket assembly.

Step 4 Carefully remove and clean the coal set of any soot deposits using a soft brush.

Step 5 Carefully remove and clean the firebox linings. Where necessary.

Step 6 Inspect the chimney and flue terminal ensuring they are in good working order and sweep as necessary to ensure no debris blocks the flue. Please note periodic chimney sweeping is vital to gas fire maintenance.

Step 7 Remove matrix location plate and valve heat shield. Clean any soot deposits from inside the fire using a vacuum cleaner. See “Safety notes”on page 4.

Step 8 Inspect the pilot assembly to ensure that it is clean, unobstructed and in good order.

Step 9 Check system for gas soundness.

Step 10 Replace heat shield and matrix location plate.

Step 11 Replace fire box linings.

Step 12 Replace coal set.

Step 13 Replace glass/gasket and glass frame and close the fire door.

Step 14 Carry out spillage test as per instructions on page 16.

CLEANING OUTER SURFACES

To clean the outside first the appliance must be cold.

The outside finish of the fire is a durable high temperature paint, this will give off a slight odour during the first few days of operation. It is best cleaned by using a soft brush. Do not allow moisture to remain on the fire whilst cold or surface rust may occur.

CLEANING THE GLASS

To clean the glass the appliance must be cold.

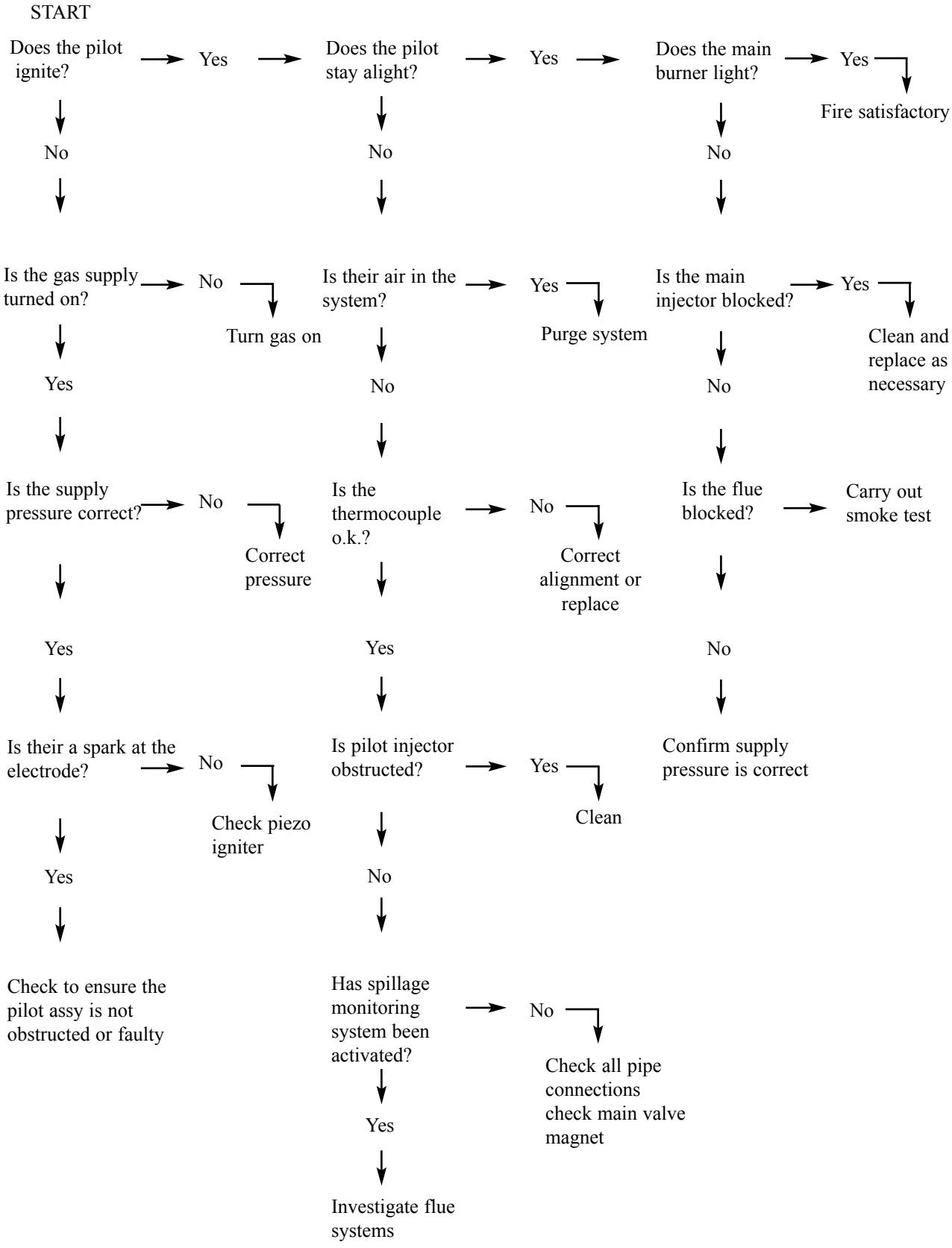
Step 1 Open the fire door. (This is held closed using a magnet)

Step 2 Remove the glass frame and the glass/gasket assembly (See page 19).

Take care not to damage the glass or gasket when cleaning.

Step 3 Replace glass frame and the glass/gasket assembly. Close the fire door.

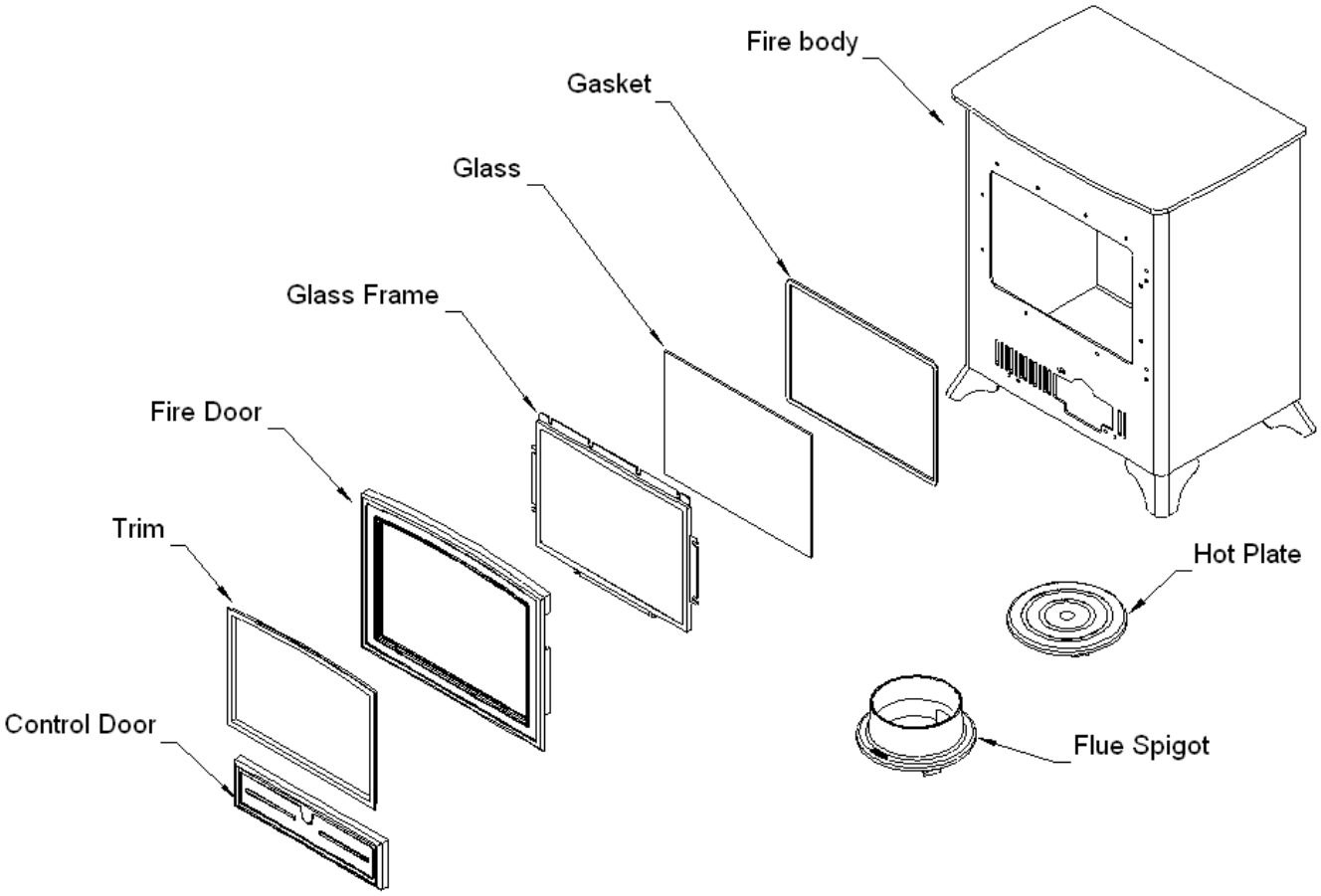
FAULT DIAGNOSIS



GENERAL COMPONENTS

Spare parts can be obtained by contacting the original supplier of the fire or Aarrow Fires.

Fire Body Ancillary Components.
Only use genuine Aarrow parts.



ACCESSORIES AND OPTIONS

Paint- Matching aerosol paint to tone in any connecting flues, pipes or surrounding metalwork

Tracery or Trim - Note: When fitted one replaces the other.

Add on Canopies

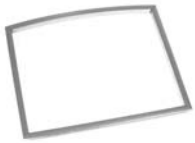
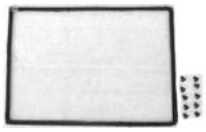
Bunny - Low available only
Size: 400mm wide x 345mm deep.
Raises the stove approximately 140mm.

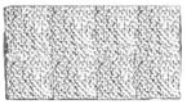
Becton 7 - High and low are available.
Size:-480mm wide x 345mm deep
High. Raises the stove approximately 240mm
Low. Raises the fire approximately 180mm.

NOTES

Part Description	Visual Aid (not to scale)	Bunny mk3 Part No.	Becton 7 mk3 Part No.
1. Becton 7 mk3 Coal Set		-	AFGS1075
1a. Becton Bunny mk3 Coal Set		AFGS1074	-
2. Co-pilot assembly		AFGS089	AFGS089
3. Elbow Injector		AFGS090	AFGS090
4. Gas Control Valve		AFGS091A	AFGS091
5. Magnetic Catch for mk3 Gas Fires.		AFGS1073	AFGS1073
6. Hinge Kit To Fit Either Door. Comprises 2 Hinges & 4 Fixings Per Set.		AFS047	AFS047

SPARE PARTS

Part Description	Visual Aid (not to scale)	Bunny mk3 Part No.	Becton 7 mk3 Part No.
7. Control Door Handle Assembly		AFGS1085	AFGS1085
8. Burner & Fixing		AFGS1076	AFGS1077
9. Pipe Set Complete With Connectors		AFGS080	AFGS080
10. Decorative Door Surround (Trim)		AFS094A	AFS095
11. Fire Door Assembly complete with Magnet Lock and Trim		AFGS1078	AFGS1079
12. Glass Replacement Kit with Gasket & Fixings.		AFGS1080	AFGS1081
13. Hotplate		AFGS064	AFGS010
14. Flue Outlet Spigot		AFGS1082	AFGS1083

Part Description	Visual Aid (not to scale)	Bunny mk3 Part No.	Becton 7 mk3 Part No.
15. Becton 7 mk3 Lining Kit		-	AFGS1072
16. Large Ceramic Panel		AFGS093	AFGS093
17. Medium Ceramic Panel		AFGS094	AFGS094
18. Small Ceramic Panel		AFGS1084	AFGS1084
19. Gas Tap		AFGS025	AFGS025
20. Manual		AFS1125	AFS1125
21. Feet and Fixings		AFS1013	AFS1013
22. Aarrow Fires Gauntlet Gloves		AFS997	AFS997

GUARANTEE

Once again we would like to thank you for buying a Becton fire.

When you buy an **Aarrow Fire,** you are not only buying a first class appliance - you are buying a commitment from us to look after you and your appliance.

The Becton Gas Stoves come with a ***Lifetime Guarantee*** against splitting or cracking of the main body. The main body being defined as the steel outer casing and items fixed immovably to the casing. All other parts are covered by a one-year no-quibble parts Guarantee.

This Guarantee shall not apply to any part that has been altered in any way, or which in our judgment has been subjected to misuse, neglect, accident, abuse and fair wear and tear.
This Guarantee shall not include or extend to paint, glass or coal matrix and does not cover installation and operational related problems such as use of unapproved fuel, down draft or spillage caused by environmental conditions and inadequate ventilation.

Claims are not valid where the installation does not conform to local Building Regulations.

The Guarantee is conditional upon the appliance being serviced and checked annually by a qualified gas engineer.

The Manufacturers decision shall be final.

If your appliance proves to be defective as a result of faulty materials or workmanship during guarantee, we will repair or replace it FREE OF CHARGE as long as the fire has been installed according to the these instructions and by a CORGI Registered fitter, who has completed and signed the Installation Check List on page 17. The fire must also be serviced in accordance with these instructions and the record of Annual service on page 30 should be completed by your service engineer.

All Guarantee periods commence on the date of purchase and are non-transferable.

Our Lifetime Guarantee is offered as an addition to your statutory rights.

If you think your fire is not working correctly or in the event of a breakdown, **please call your local dealer.**
When you contact them, they will want to know:

1.Your Name, Address/Post Code and Telephone Number
2.Serial Number
3.Clear and concise details of the fault

CUSTOMER REGISTRATION

See card enclosed

To guarantee the very best in after-sales service, do not forget to complete and return your Customer Registration Card within 14 days (a stamp is required).

Just complete the form and return it to us to:
1. Benefit from our *Lifetime Guarantee.*
2. Register your appliance for a full year's Parts Guarantee.

Please contact us direct 01308 427234 if no Customer Registration Card is included.

SERVICE RECORD

Date of Visit	Company	Work Carried Out	Signature

Should you have any questions about your Becton Gas Stove that is not covered in this manual please contact your Aarrow retailer.

Please keep all repair receipts safely.

Please ensure you have this manual available when an engineer visits as they will complete the service record chart.

Lifetime Guarantee

For your peace of mind

Aarrow Fires gives a Lifetime Guarantee against manufacturing defects of the main body* of its Becton range of fires. Additionally, all other parts are covered by a one year no quibble replacement guarantee. This guarantee covers replacement of the item only and does not extend to any other costs, including labour, incurred in its replacement. Documentation must be retained and produced in the event of a warranty claim. This guarantee specifically does not cover accidental damage, misuse, wear & tear. The use of non Aarrow replacement parts will invalidate your warranty. For full details contact your local Aarrow dealer. All guarantees are in addition to your statutory rights. Please see page 29 for further information regarding the guarantee.

*The main body defined as the steel outer casing and items fixed immovably on to this casing.

No fears and no tears with

The **Becton**

Family

FINAL FACTORY CHECK LIST

Model.....

Serial No.....

QUALITY	
FINISH	
COAL SET	
REGISTRATION CARD	
LINING SET	
FLUE OUTLET	
HOTPLATE	
OPERATING INSTRUCTIONS	
GAS COCK	
FEET & FIXINGS	

I've checked it and it's O.K.

Assembled by.....

Checked by .....

Please ensure the enclosed registration card is completed and returned to Aarrow Fires and the following information completed for your own information.

Date of Purchase.....

Name and address of supplier.....

.....

.....

**** Please ensure installer completes INSTALLATION CHECK LIST details on page 17 of this manual.***

Operating & Installation Manual

Becton Electric Stove

Becton Electric Stove

PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

Aarrow Fires Ltd
The Fireworks
Bridport
Dorset
DT6 3BE
Great Britain

Tel. (44) 01308 427234
Fax. (44) 01308 423441
www.aarrowfires.com

Rev 2
Autumn 2003

Congratulations on your choice of an Aarrow Stove.

More than 20 years experience has been put into the development of our Becton Family to ensure ultimate performance and years of trouble free enjoyment.

Every detail on the fire has been carefully engineered and designed which is why we are so confident in the reliability of our product.

Should you have any questions about our Becton Stoves that are not covered in this manual, please contact the Aarrow dealer in your area, or call our Technical support department on 01308 427234

Flaming Good Fires!

INSTALLATION

WARNING - THIS APPLIANCE MUST NOT BE USED IN A BATHROOM.

WARNING - DO NOT USE THIS HEATER IN THE IMMEDIATE SURROUNDINGS OF A BATH, A SHOWER OR A SWIMMING POOL.

WARNING - THIS HEATER MUST NOT BE LOCATED IMMEDIATELY BELOW A FIXED SOCKET OUTLET.

WARNING - DO NOT USE THIS HEATER WITH A PROGRAMMER, TIMER OR ANY DEVICE THAT SWITCHES THE HEATER ON AUTOMATICALLY, SINCE A FIRE RISK EXISTS IF THE HEATER IS COVERED OR POSITIONED INCORRECTLY.

UNPACKING AND ASSEMBLY

The feet and necessary fixings are packed with the heater.

Care should be taken whilst assembling the feet so as not to damage the painted surface of the heater.

Note: *The high temperature paint acquires durability by being "cured" in initial use. During this process the heater will give off fumes which are non-toxic, but which certain persons may find an unpleasant or irritant effect. Ensure that the area is well ventilated during this time.*

- Do not turn the heater upside down
- Lay the heater gently on it's back.
- The feet are positioned in each corner of the heater and fixed using the washers and screws provided.
- Using a No. 2 pozidrive screw-driver tighten the screws.

POSITIONING YOUR HEATER

Always ensure that the heater is stood on a firm, level base near to, but not directly beneath a suitable mains supply socket.

Ensure that curtains and furniture are not positioned close to the chosen position, as this would create a potential fire hazard.

The doors of this heater are made from cast iron and are therefore quite heavy.
When moving into position please take this into account.

SAFETY WARNINGS

FOLLOW these instructions carefully.
Never cover or obstruct in any way the heat slots at the back of the heater.

The heater carries a warning '**DO NOT COVER'** to alert the user to the risk of overheating that exists if the heater is accidentally covered.

The casing of this heater is designed to get **HOT**. Care should be taken not to touch the fire during operation.

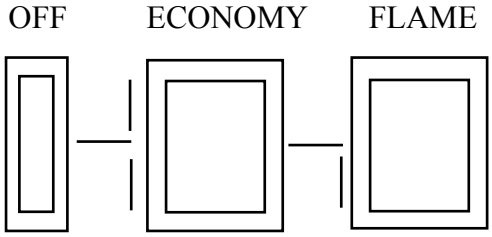
It is recommended that a fire guard is provided when the room is used by elderly, infirm or young persons.

USING THE HEATER

Switching on your heater

• Ensure before connecting to the mains, that all the switches are in the **OFF** position.

Located on the right hand side of the heater you will find the switches to operate the fire.



The first switch 'A (as indicated in the diagram above), switches on the fire and operates the flame effect. If you only require the flame effect with no heat, ensure switch 'B' is in the centre position and switch 'C' is in the flame position.

• **For Economy setting**- Switch B to ECONOMY. Leave C to FLAME. You will hear the fan running at a lower speed and will feel a low heat coming from the grille.

For 1kW setting

• Switch (B) down to 1kW, leave 'C' set to flame. You will hear the fan speed up and feel an increased amount of heat coming from the grille.

For 2kW setting

• Leave 'B' set at 1kW and switch 'C' +1kW. Again you will continue to hear the fan and feel more heat from the grille.

Note: Switches 'B' and 'C' will not operate without switch 'A' being on.

THERMOSTAT OPERATION

To set the room temperature, turn the knob fully clockwise to the 'MAX' position.
When the room is at the desired temperature, turn the knob slowly towards the 'MIN' position until the thermostat clicks. The heater will now maintain the selected temperature.

MAINTENANCE

WARNING - BEFORE UNDERTAKING ANY MAINTENANCE OR CLEANING, DISCONNECT FROM THE POWER SUPPLY.

CARE

Do not use water, detergents, abrasive cleaning powder or polish of any kind on the body of the heater. Lightly brush with a medium dry brush.

TROUBLESHOOTING

No Heat or Light

- Check heater is plugged in and switched on at the mains.
- Check the switches are correctly set.
- Check the 13A fuse in the plug. Replace if necessary.

Light but no Heat

- The thermostatic safety cut out has operated. This will re-set after a short period of time, when the fire cools.
- Ensure the air supply and venting are not restricted.
- The thermostat may have cut out or maybe set to high for the room temperature. Please refer to the 'thermostat operation' paragraph in these instructions.
- If still blowing cold air, unplug the heater and phone our helpline.

No Flame-effect

- Unplug the heater and phone our helpline.

Noise from the fans

- Unfortunately there is always some noise from the fans, we have done our utmost to reduce this but they will never be completely silent.

GUARANTEE

Your Becton Electric stove carries a guarantee against defects of manufacture and faulty workmanship for a period of one year from the date of purchase.
However, should you have any problems with your heater please contact your Aarrow stockist who will have the knowledge and facilities to help you.

This Guarantee only applies in the United Kingdom.

Aarrow Fires Ltd will not be responsible for any consequential or incidental loss, damage, or injury however caused.

USE OF SPARE PARTS OTHER THAN THOSE SUPPLIED BY AARROW WILL INVALIDATE THE APPLIANCE WARRANTY.

All Guarantee periods commence on the date of purchase and are non-transferable.
Our Guarantee is offered as an addition to your statutory rights.

Guarantee applicable to original purchaser only. Not transferable.

This installation and operating manual gives sufficient details to enable the appliance to be installed and maintained. If further information is required, our you **local dealer** will be pleased to help.
Please telephone 01308 427234 (local rates apply)

When you contact them, they will need to know :

1. Your name, address, post code and telephone number.
2. Date of purchase and supplier details
3. Name of installer
4. Stove serial number
5. Clear and concise details of the fault.

Please complete the following for you own records

Date of Purchase.....Model.....Serial Number.....

Name and Address of Supplier.....
.....
.....

Name and Address of Installer.....
.....
.....

This appliance conforms to:
European Community standard EN60335-2-30:1997
Low Voltage Directive 73/23/EEC
Electromagnetic Compatibility Directive 89/336/EEC

Specification subject to change without prior notice.

Aarrow Fires Limited
The Fireworks, North Mills, Bridport, Dorset, DT6 3BE

www.aarrowfires.com

Tel:01308 427234
Fax 01308 423441

email:info@aarrowfires.com

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