BILBERRY

BILBERRY SOLID FUEL NON BOILER STOVE

This appliance is hot while in operation and retains its heat for a long period of time after use. Children, aged or infirm persons should be supervised at all times and should not be allowed to touch the hot working surfaces while in use or until the appliance has thoroughly cooled.

When using the stove in situations where children, aged and/or infirm persons are present a fireguard must be used to prevent accidental contact with the stove. The fireguard should be manufactured in accordance with BS 8423:2002.

INSTALLATION & OPERATION INSTRUCTIONS

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INSERT STOVE INSTALLATION & OPERATING INSTRUCTIONS

NOTE: Please note that it is a legal requirement under England & Wales Building Regulations that the installation of the stove is either carried out under Local Authority Building Control approval or is installed by a Competent Person registered with a Government approved Competent Persons Scheme. HETAS Ltd operate such a Scheme and a listing of their Registered Competent Persons can be found on their website at www.hetas.co.uk.

GENERAL

This stove is suitable for a standard 16” or 18” wide by 22” high fireplace opening.

When installing, operating and maintaining your stove respect basic standards of fire safety. Read these instructions carefully before commencing the installation. Failure to do so may result in damage to persons or property. Consult your local Municipal office and your insurance representative to determine what regulations are in force. Save these instructions for future reference.

Special care must be taken when installing the stove such that the requirements of the Health & Safety at Work Act are met.

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

Fire Cement
Some types of fire cement are caustic and should not be allowed to come into contact with the skin. In case of contact with the skin wash immediately with plenty of water.

Asbestos
This stove contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek guidance and use appropriate protective equipment.

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

IMPORTANT WARNING: This stove must not be installed into a chimney that serves any other heating appliance.

The installation must be completed in accordance with current National and European Standards and Local Codes. It should be noted that the requirements and these publications may be superseded during the life of this manual.

PRE-INSTALLATION

After removing the stove from the packaging, open the fire door and remove the loose packing. Prior to installation all the internal components of the stove are removed to gain access to fixings and to make it lighter for installation.

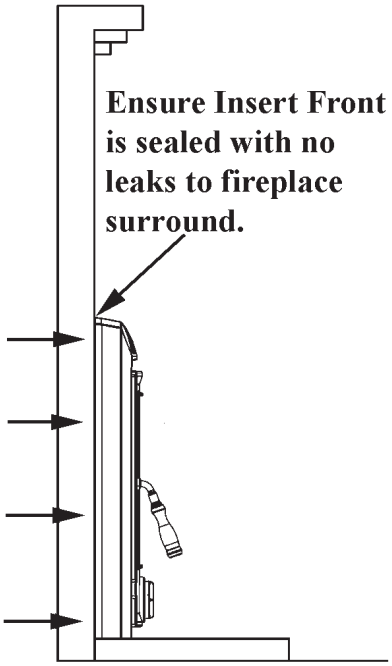
FITTING INSTRUCTIONS

The bilberry insert stove is suitable for installation into a existing masonry fireplace.

The stove can be installed with the firebrick in place provided the depth from the face of the fireplace to the firebrick is no less than 240mm,

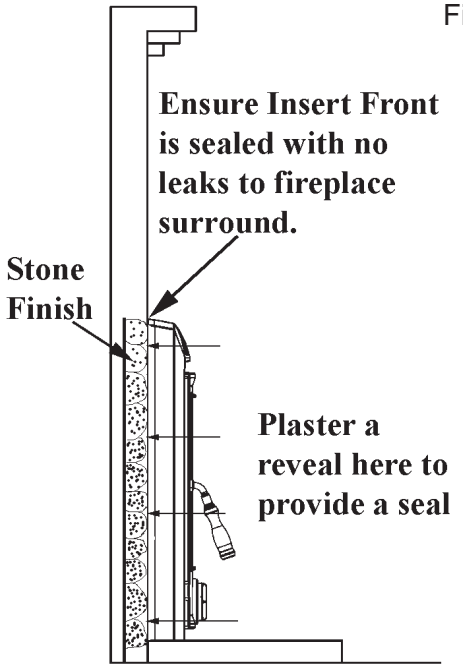
It is very important that there is no route for air leakage into the chimney other than through the stove hence the stove needs to make a seal to the front surface of the fireplace surround. See Fig.1

Fig.1



If this surface is an uneven finish for example a stone finish, a reveal will need to be plastered onto the fireplace where the stove meets it to provide a seal. If a seal is not provided the chimney will draw air around the stove rather than through it leading to poor stove performance. See Fig.1a

Fig.1a



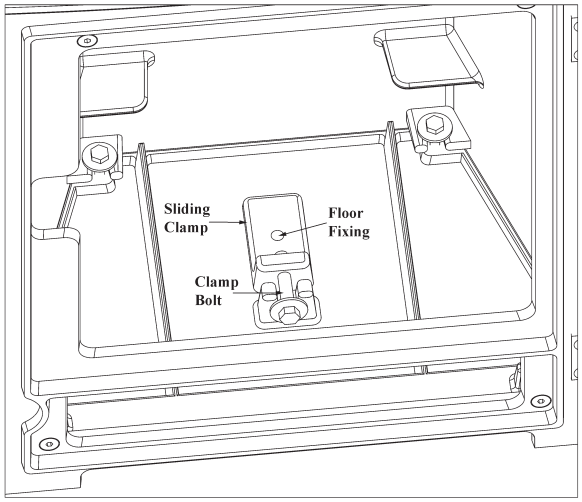
FITTING

Remove the following internal items from the stove. Baffles, firebricks, fire fence, grate ,ashpan., clamp bar and sliding clamp.

With the fireplace and chimney cleaned, lay the stove into the fireplace, push the stove as far into the opening as possible , no more than 5mm from the final resting place.

Lay the sliding clamp piece into the opening in the base, push to the rear of the opening and mark the position for a floor fixing.

Fig.2

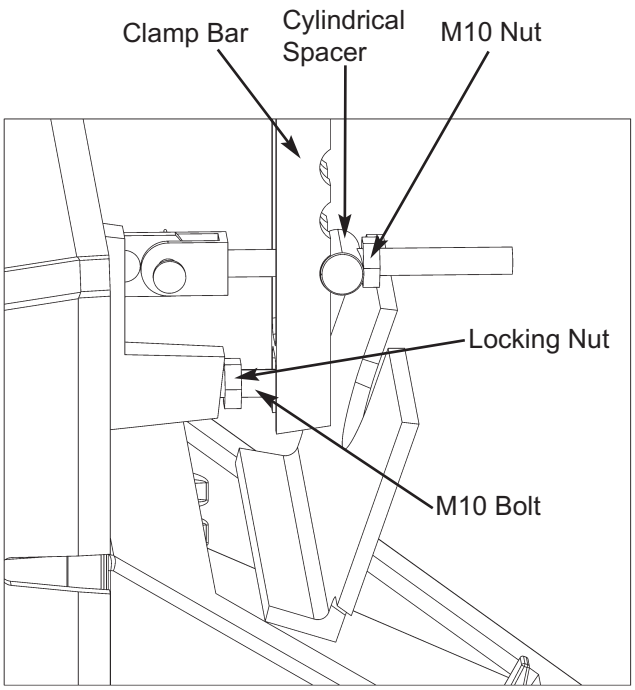


Drill the floor and secure the sliding clamp using a suitable floor fixing which is made entirely from metal.

With the floor fixing secure, while working through the stove place the clamp bar onto the threaded bar followed by the cylindrical spacer and fix it loosely using the M10 nut and washer provided . The clamp bar should be as close as possible to vertical when it is fully secured. If the clamp bar protrudes into chimney where it could cause an obstruction when chimney cleaning, the end of the clamp bar can be shortened. The M10 bolt and locking nut fixed to the rear of the stove can be adjusted to adjust the angle of the clamp bar. There are three positions in the clamp bar for the cylindrical spacer, use the uppermost position possible. See Fig.3.

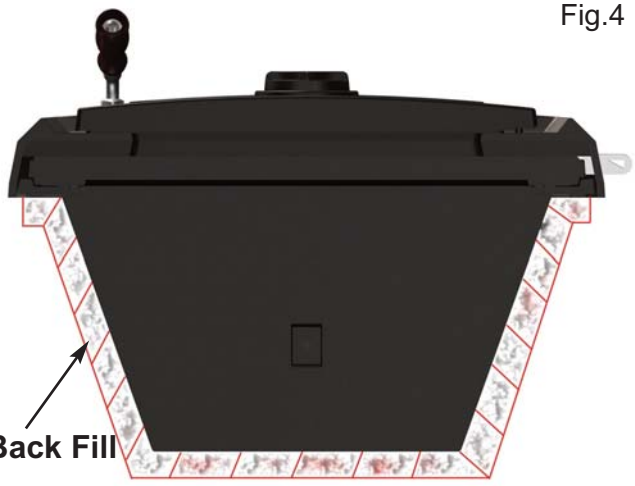
Tighten the M10 nut to secure the clamp bar and also tighten the sliding clamp bolt to pull the stove in on the bottom. Tighten both fixings a little at a time until the stove is clamped securely against the fireplace. Do not over-tightened. See Fig 2 & 3.

Fig.3



When the stove has been secured in position it is recommended to back fill the void between the stove and the firebrick with an inert material such as sand or fire gravel which will allow room for expansion but will prevent a build up of soot etc which could otherwise become a fire hazard. See Fig.4.

Fig.4



With the stove now fitted the internal components need to be replaced, first the lintel protection baffle needs to the fitted. The baffle needs to be placed up through the flue opening, one end first , then when it is through the flue opening it can be manoeuvred so the short edge is near the top of the flue opening and the long edge is vertical see Fig 5A , the short edge can then be moved forward into the flue opening and into a position where it will grip against the top edge of the flue opening see Fig 5B . In this position the baffle should be self supporting.

Fig.5A

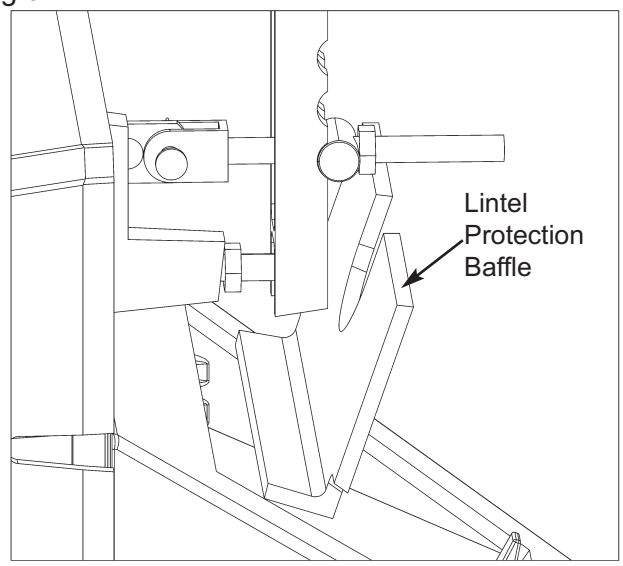
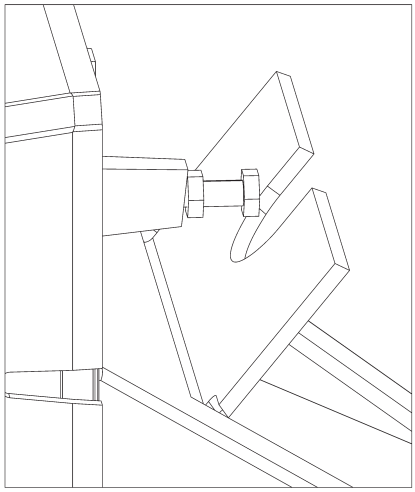
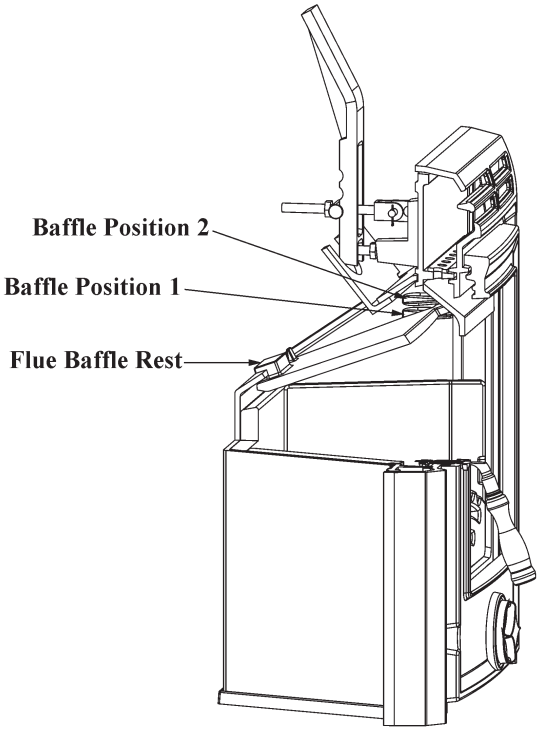


Fig.5B



To fit the internal flue baffle the back edge of the baffle rests on the back edge of the flue opening, see Fig.6, the supports for the front of the baffle are on the side castings, there are two baffle positions provided here, the lower position should be selected unless the flue draught is excessive when the upper position can be selected, see Fig.6, this shows two positions for the baffle, position 1 & position 2. The baffle is shown in position 1 this is the normal position.

Fig.6



The grate can be replaced next taking care that the narrow edge of the slots are to the top, see Fig.7, the firebricks can be returned to their original positions next and then the fire fence can be place in position with the legs on it dropping into the openings in the grate.

Replace the ashpan and the stove should now be ready to light.

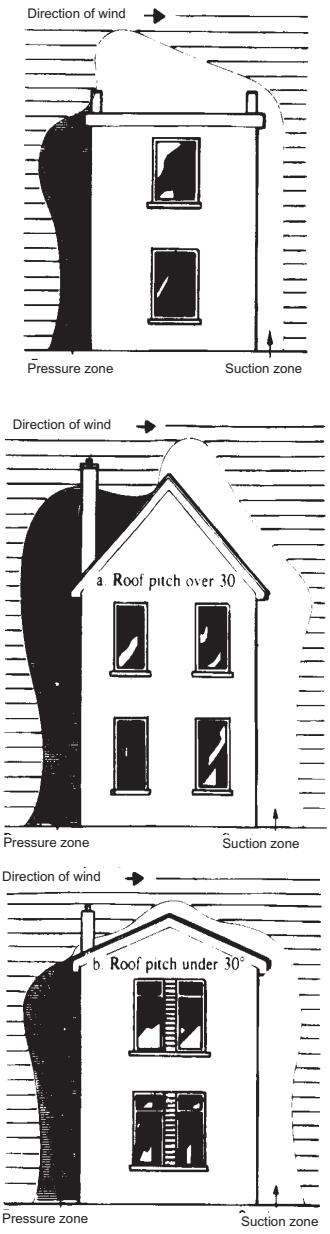
Fig.7

Narrow Edge to the top

DOWN DRAUGHTS

However well designed constructed and positioned, the satisfactory performance of the flue can be adversely affected by down draught caused by nearby hills, adjacent tall buildings or trees. These can deflect wind to blow directly down the flue or create a zone of low pressure over the terminal. A suitable anti-down draught terminal or cowl will usually effectively combat direct down blow but no cowl is likely to prevent down draught due to a low pressure zone. (See Fig.8)

Fig 8



VENTILATION AND COMBUSTION AIR REQUIREMENTS

It is essential that there is an adequately sized air vent in the room in which the product is installed. When calculating combustion air requirements for this appliance use the following: 550mm^2 per each kW of rated output should be provided, where a flue draught stabiliser is used the total free area shall be increased by 300mm^2 for each kW of rated output. If there is another appliance using air fitted in the same or adjacent rooms, it will be necessary to provide an additional air supply.

All materials used in the manufacture of air vents should be such that the vent is dimensionally stable, corrosion resistant, and no provision for closure. The effective free area of any vent should be ascertained before installation. The effect of any grills should be allowed for when determining the effective free area of any vent.

Air vents direct to the outside of the building should be located so that any air current produced will not pass through normally occupied areas of the room.

An air vent outside the building should not be located less than the dimensions specified within the Building Regulations and B.S. 8303: Part 1 from any part of any flue terminal. These air vents must also be satisfactorily fire proofed as per Building Regulations and B.S. 8303: Part 1.

Air vents in internal walls should not communicate with bedrooms, bedsits, toilets, bathrooms or rooms containing a shower.

Air vents traversing cavity walls should include a continuous duct across the cavity. The duct should be installed in such a manner as not to impair the weather resistance of the cavity.

Joints between air vents and outside walls should be sealed to prevent the ingress of moisture. Existing air vents should be of the correct size and unobstructed for the appliance in use. If there is an extraction fan fitted in adjacent rooms where this appliance is fitted, additional air vents may be required to alleviate the possibility of spillage of products of combustion from the appliance/flue while the fan is in operation. Refer to B.S. 8303 Part 1.

Where such an installation exists, a test for spillage should be made with the fan or fans and other appliances using air in operation at full rate, (i.e.extraction fans, tumble dryers) with all external doors and windows closed.

If spillage occurs following the above operation, an additional air vent of sufficient size to prevent this occurrence must be installed.

Especially Airtight Properties:-

If the stove is being fitted in a property where the design air permeability is less than $5m^3$ / ($h.m^2$) (normally newer properties built from 2006), then a permanent ventilation must be fitted to provide $550mm^2$ of ventilation for each kW of rated output. If a draught stabiliser is also fitted then the requirement is $850mm^2$ per kW of rated output.

PERMANENT AIR VENT

The stove requires an adequate air supply in order for it to operate safely and efficiently. The installer may have fitted a permanent air supply vent into the room in which the stove is installed to provide combustion and/or ventilation air. This air vent should not under any circumstances be shut off or sealed.

Extractor Fan

There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit smoke and fumes into the room.

COMMISSIONING & HANDOVER

On completion of the installation allow a suitable period of time for any fire cement and mortar to dry out, when a small fire may be lit and checked to ensure the smoke and fumes are taken from the stove up the chimney and emitted safely to the atmosphere. **Do not run at full output for at least 24 hours.**

On completion of the installation and commissioning ensure that the operating instructions for the stove are left with the customer. Ensure to advise the customer on the correct use of the appliance with the fuels likely to be used on the stove and warn them to use only the recommended fuels for the stove.

Advise the user what to do should smoke or fumes be emitted from the stove. The customer should be warned to use a fire guard to BS 8423:2002 in the presence of children, aged and/or infirm persons.

LOCATION

There are several conditions to be considered in selecting a location for your stove.

A. This product is designed to be installed into a masonry fireplace.
B. Allowances for proper clearances to com - bustibles.

CLEARANCE TO COMBUSTIBLES

This appliance must be installed in a recess, the recess should not contain any combustible materials. Wooden battens and plaster board should not be used within the clearance to combustibles. The minimum clearance to combustibles required is 300mm to the top, 200mm to the sides, 550mm directly to the front and 350mm to any combustible flooring.

Fig 9

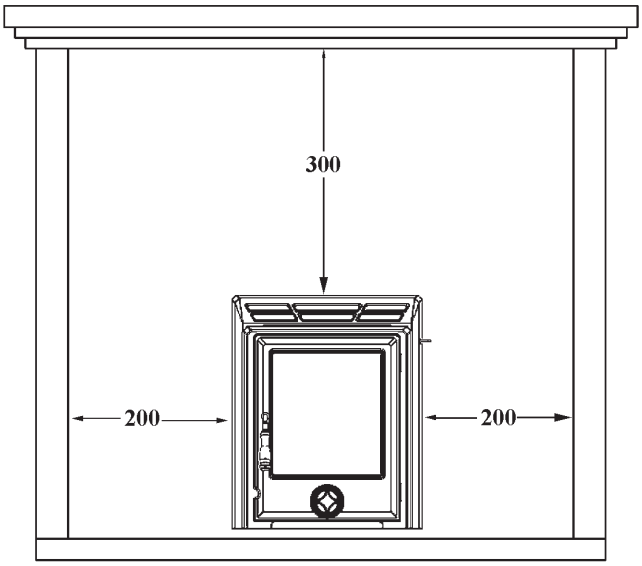
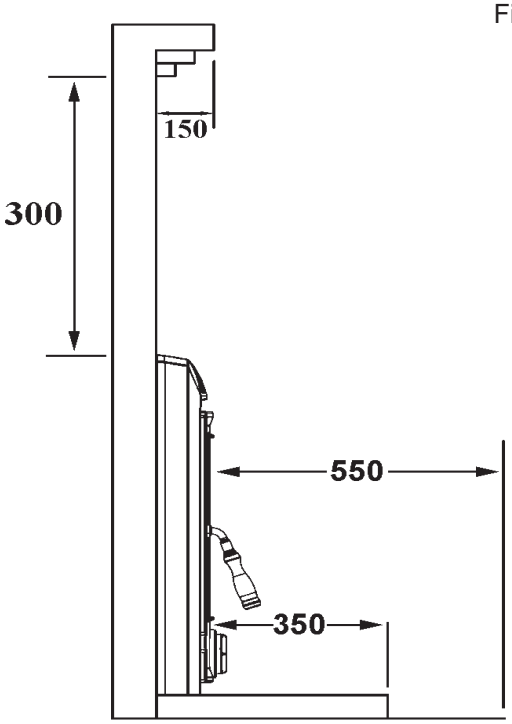
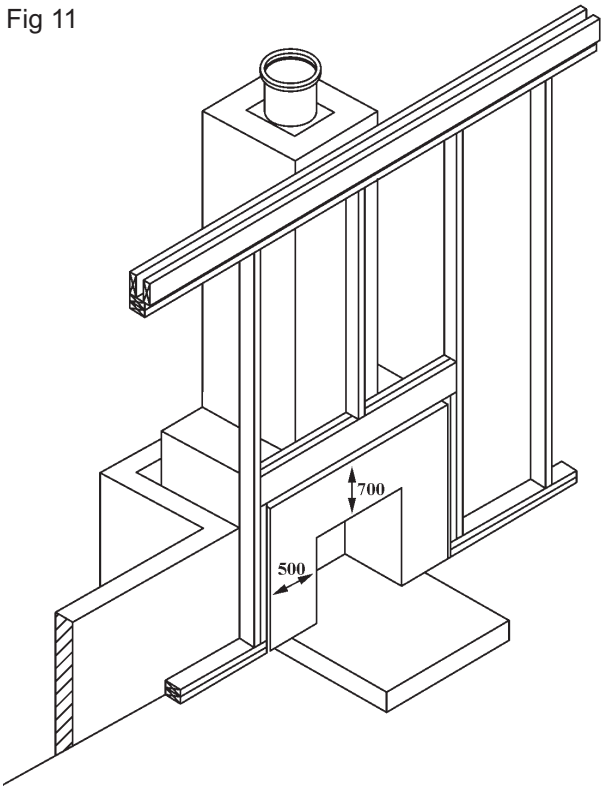


Fig 10



If there is a studded wall surrounding the fireplace as in Fig.11, ensure the clearances in this Fig are adhered to.

Fig 11



FLOOR PROTECTION

It is recommended that this appliance is installed on a solid, level, concrete base, a non combustible hearth conforming to current Building Regulations must extend to the front of the appliance.

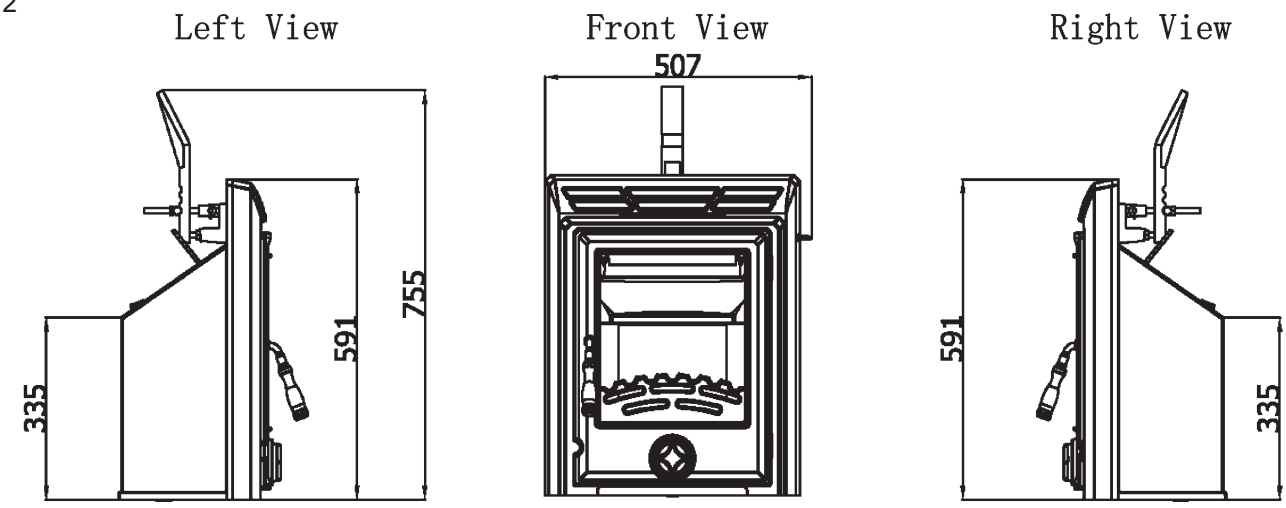
CO ALARM

Waterford Stanley strongly recommend the fitting of a CO Alarm in the same room as the appliance, this is a compulsory requirement under UK Building Regulations. Further guidance on the installation of a carbon monoxide alarm is available in BS EN 50292:2002 and from the alarm manufacturers instructions.

Provision of an alarm must not be considered a substitute for either installing the appliance correctly or ensuring regular servicing and maintenance of the appliance and chimney system.

DIMENSIONS

Fig 12

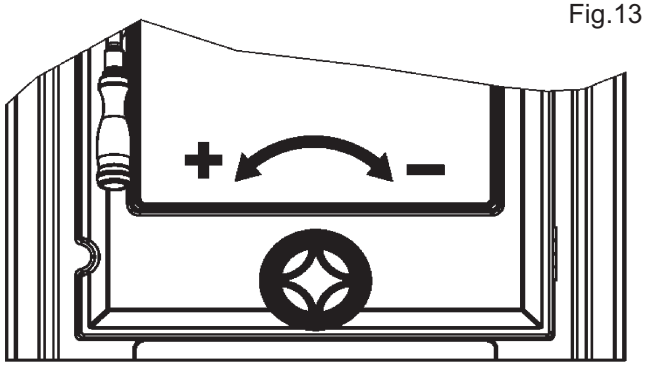


TECHNICAL DATA	
Nominal Output Manufactured Smokeless Fuel Room kW	3.7
Typical refuelling intervals to obtain nominal outputs	MSF 1.3 hours
Flue Gas Mass Flow	MSF 3.2 g/s
Flue Gas temp at nominal output	206^{o}C
Gross Weight: kgs	84.5
Chimney Diameter	8”
This appliance has been tested in accordance with BS EN 13229	

PRIMARY AIR CONTROL SPIN VALVE

When burning manufactured smokeless fuels, the spin valve located near the bottom of the door, controls the primary air supply to the stove. For maximum heat output and burn rate rotate the spin valve fully in an anti-clockwise direction. For a minimum burn rate rotate the spin valve fully in a clockwise direction until fully closed. For nominal heat output the spin wheel will need to be open about 1.75 turns depending on the draught conditions of the chimney. You will soon learn the spin valve settings to best suit your requirements. The spin valve is factory set so that it only opens 2 full turns. See Fig.13.

Fig.13

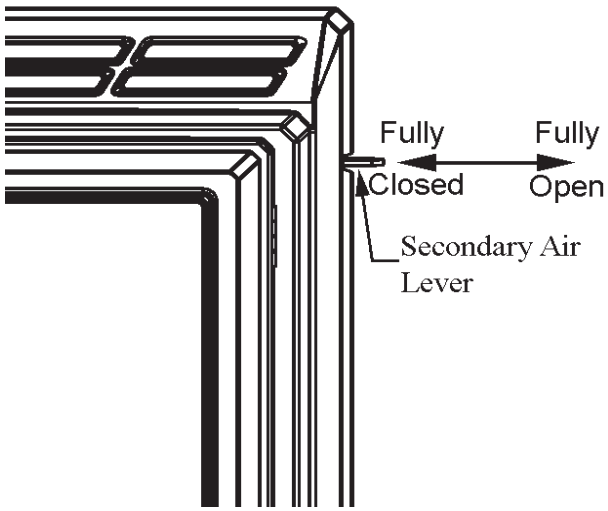


SECONDARY AIR CONTROL - SLIDER

When burning wood, push the secondary air slider situated on the right hand side of the door inwards. The air control is a push/pull operation, push the slider inwards for fully closed and outwards for fully open.

The control can be gradually moved between fully open and fully closed for the desired setting. Fully open will be the hottest setting, as this will provide the maximum air to the fire and will help to clean the glass even after it has become sooty. This control can be used in conjunction with the spin valve but generally the fire will perform best if the slider is used when burning wood and the spin valve is used when burning manufactured smokeless fuels. These controls are hot when the appliance is in use. **Use the glove provided to operate air controls and door handle when they are hot. See Fig.14.**

Fig.14



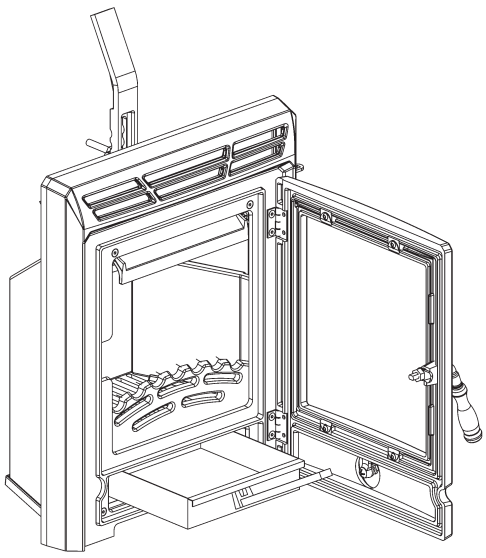
RECOMMENDED FUELS

This appliance has been tested and approved using mineral smokeless fuels. The quoted efficiency and output relate to burning such fuels, whilst the appliance is capable of burning other solid fuels the output and performance will be different from values given. Other fuels are commercially available and may give similar results. Do not use fuels with a Petro-coke ingredient as this may cause the grate to overheat, causing damage. Reduced outputs will result when fuels of lower calorific value are used. All fuels should be stored under cover and kept as dry as possible prior to use.

RE-FUELLING

When refuelling the fire, do not overfill the appliance, the top 75mm (3”) of the firebricks should be visible when the fuel has been loaded. See Fig.15.

Fig.15



Before refuelling with manufactured smokeless fuel poke the fire with the poker provided to remove ash from the firebed and allow it to fall through into

the ashpan. Before opening the door, open the spin valve by turning it anti-clockwise, as this will help to eliminate any smoke or fly ash resident in the combustion chamber. Add fuel to fire, taking care not to overfill higher than the front firebars. Close fire door and re-set spin valve to required setting. Do not operate this appliance with the fire door open.

When burning wood the requirement to poke the fire is much less. Take care when poking the fire that no embers fall from the fire onto the hearth or surrounding areas.

SLOW BURNING

To achieve slow burning when burning wood close the secondary air slide and open a few millimetres using the glove provided. Slow burning will cause the window glass to blacken and should not be used for a long period as it will leave sooty deposits in the flueways. Opening the air slide will increase the heat output and will clear the glass.

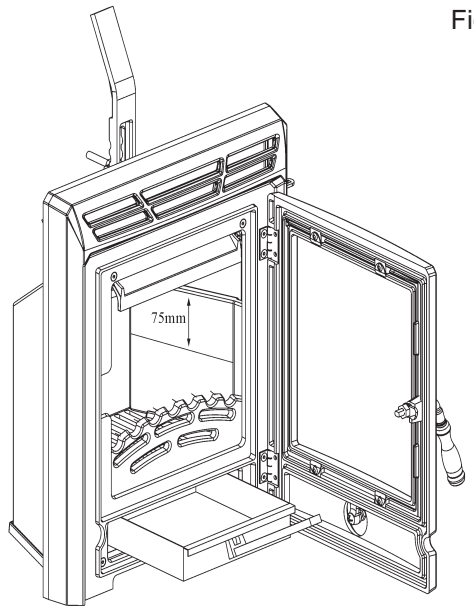
To obtain slow burning when burning coal, close the secondary air fully and partially open the spin valve.

DE-ASHING

Never allow the ashpan to over fill as it will cause damage to the grate. Empty the ashpan before lighting. Always ensure that ashes have thoroughly cooled before removing the ashpan. Open the fire door and remove ashpan using the operating tool. Close the fire door. When the ash is disposed of, replace the empty ashpan. (See Fig.16) Do not leave the fire unattended with the fire door open, even for a minute.

WARNING - NEVER DISPOSE OF ASH WHEN STOVE IS LIGHTING.

Fig.16



MAINTENANCE

CREOSOTE: Formation and Need for Removal
When some fuels are burned slowly, they produce tar and other organic vapours, which combine with expelled moisture to form creosote. The creosote vapours condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited creosote makes an extremely hot fire.

CHIMNEY CLEANING

The chimney should be cleaned twice annually. The chimney can be cleaned through the stove by removing the fire lining and the baffle. Always use a brush with plastic bristles that is the correct size to reach all areas of the flue.

Where the chimney is believed to have served an open fire installation it is possible that the higher flue gas temperature from a closed appliance may loosen deposits that were previously firmly adhered, with the consequent risk of flue blockage. It is therefore recommended that the chimney be swept a second time within a month of regular use after installation.

It is also important to clean the appliance flue-ways, flue-pipe and chimney prior to lighting up after a prolonged shut-down period.

REMEMBER COAL GASES ARE TOXIC

WARNING

There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit fumes into the room.

IMPORTANT NOTES

Now that your Solid Fuel Stove is installed and no doubt you are looking forward to many comforts it will provide, we would like to give you some tips on how to get the best results from your stove.

1. We would like if you could take some time to read the operating instructions/hints, which we are confident, will be of great benefit to you.

2. Do not burn fuel with a high moisture content, such as a damp peat or unseasoned timber.This will only result in a build up of tar in the stove and in the chimney and the possibility of a chimney fire.

3. **CLEAN THE FLUE-WAYS OF THE STOVE EVERY WEEK AND ENSURE THAT THERE ARE NO BLOCKAGES. CHECK FLUE-WAYS BEFORE LIGHTING ESPECIALLY AFTER A SHUT-DOWN PERIOD. PLEASE REFER TO MANUAL FOR INSTRUCTIONS.**

4. Before loading fresh fuel into the firebox, riddle fully to remove all ashes this will allow better and cleaner burning. See Re-Fuelling Section.

5. Never allow a build up of ashes in the ash pan, as this may cause the grate to burn out prematurely.

6. Allow adequate air ventilation to ensure plenty of air for combustion.

7. Do not burn rubbish/house hold plastic.

8. Clean the chimney at least twice a year.

9. Burning soft fuels such as timber and peat will stain the glass. Regular cleaning will prevent permanent staining.

10. Keep all combustible materials a safe distance away from the appliance, please see section for clearances to combustibles.

11. Never Use Aerosols near stove when alight.

12. For safety reasons never leave children or the elderly unaccompanied while stove is in use. Use a fireguard.

13. Avoid contact with appliance when in use as the stove reaches very high operating temperatures.

14. This appliance should be regularly maintained by a competent service engineer. Use only replacement parts recommended by Waterford Stanley. Using unauthorised parts will invalidate your guarantee and may cause damage or injury.

Before lighting the Stove check with the installer that the installation work and commissioning checks described in the installation instructions have been carried out correctly and that the chimney has been swept clean, is sound and free from any obstructions. As part of the insert's commissioning and handover the installer should demonstrate how to operate the Stove correctly.

LIGHTING

IMPORTANT: The first few fires should be relatively small to permit the refractory to set properly and to season the stove.

1. Before lighting the stove, ensure that any build-up in the firebox has been removed and that the ashpan has been emptied.

2. Open the spin valve by turning it anti-clockwise.

3. Lay a few crumpled sheets of paper on the hearth and then a few small sticks, kindling or an approved fire-lighter.

4. Ignite and close the door.

5. **Never use inflammable liquid i.e. gasoline, petrol paraffin etc. to start or "freshen up" a fire in this heater.**

6. When the fire is well established add fuel to the firebox and adjust the spin valve to the required setting.

WARNING NOTE:

Properly installed, operated and maintained this stove 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 not be tolerated. If fume emission does persist, then the following immediate action should be taken:

(a) Open doors and windows to ventilate room.

(b) Let the fire out or eject and safely dispose of fuel from the stove.

(c) Check for flue or chimney blockage and clean if required.

(d) Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.

The most common cause of fume emission is flueway or chimney blockage. For you own safety these must be kept clean at all times.

FIRE SAFETY

To provide reasonable fire safety the following should be given serious consideration:

1. The installation of smoke detectors.

2. A conveniently located class 'A' fire extinguisher to contend with small fires resulting from burning embers.

3. A practical evacuation plan.

4. A plan to deal with a chimney fire as follows:

    a. Notify the fire department.
    b. Prepare occupants for immediate evacuation
    c. Close all openings into the stove.
    d. While awaiting the fire department watch for ignition to adjacent combustibles from over head stove pipe or from embers or sparks from the chimney.

GLASS

1. How to clean:

The glass will clean itself when there is sufficient heat generated by burning fuel. If a build-up of creosote occurs on the glass it may be due to draft conditions, poor quality fuel or very low burning for a long time. Only clean glass when stove is thoroughly cooled.

2. Glass Replacement:

a. Open the door fully.
b. Remove the four corner screws and clips and carefully remove the broken glass.
c. Clean the glass recess in the door.
d. Attach adhesive thermal tape to the perimeter of the replacement glass.
e. Place the thermal tape side of the glass into the door recess and replace the four corner clips.
f. Tighten screws.
g. Replace glass only with ceramic glass 5mm thick.

CO ALARM

Waterford Stanley strongly recommend the fitting of a CO Alarm in the same room as the appliance, this is a compulsory requirement under UK Building Regulations. Further guidance on the installation of a carbon monoxide alarm is available in BS EN 50292:2002 and from the alarm manufacturers instructions.

Provision of an alarm must not be considered a substitute for either installing the appliance correctly or ensuring regular servicing and maintenance of the appliance and chimney system.

WARNING:-

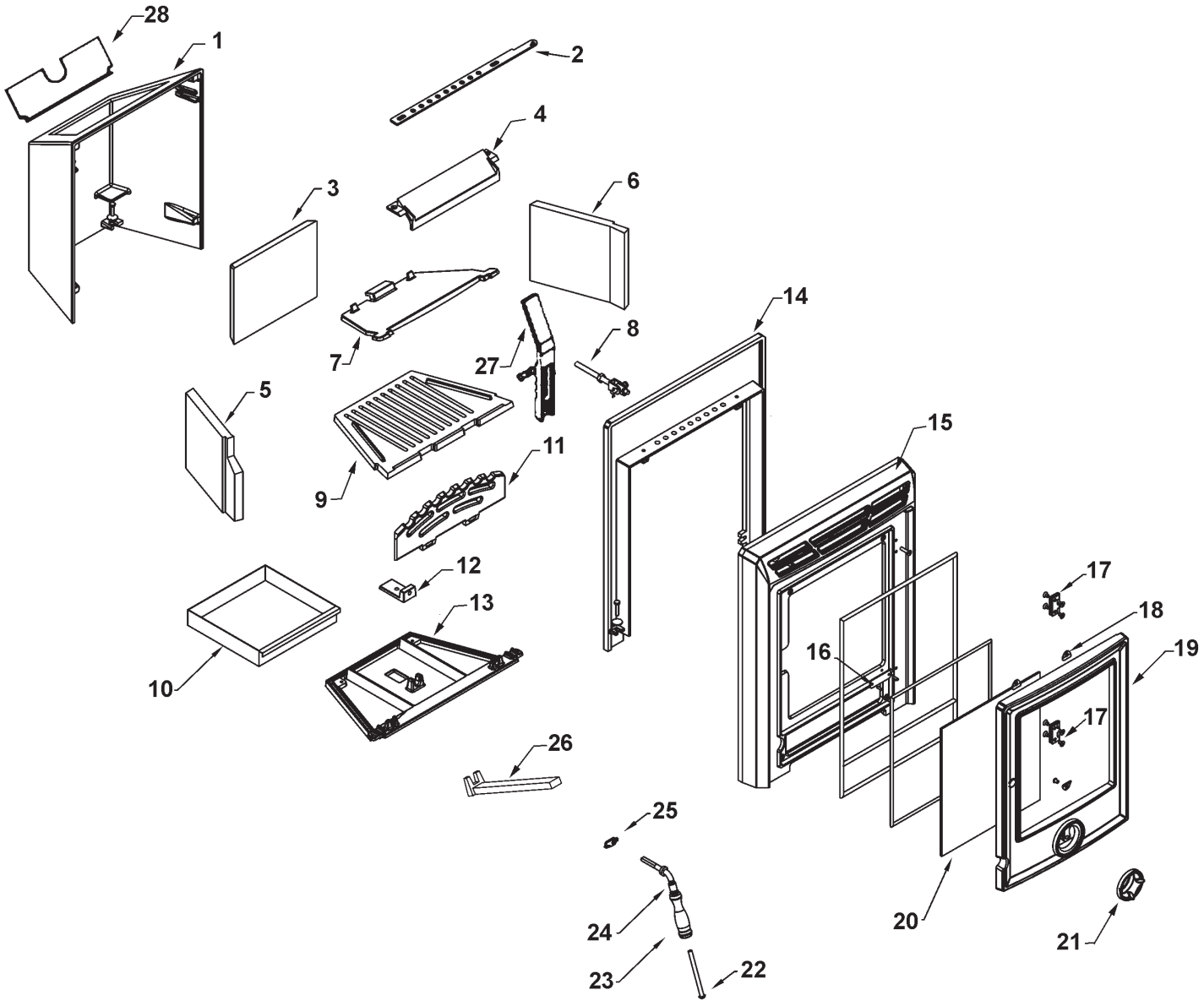
If the CO Alarm sounds unexpectedly:-

1. Open Doors and windows to ventilate the room and then leave the premises.
2. Let the fire go out.

SUMMER SHUTDOWN

For summer shutdown of the stove, ensure all ashes have been cleaned from the ash compartment and that the air control is open, to avoid condensation in the stove firebox and possible corrosion during this shutdown period.

EXPLODED VIEW



1. BODY BACK - I11S60
2. AIR WASH SHUTTER - CA1113 - I11S
3. BACK BRICK - FRI11S11
4. AIR WASH COVER - I11S09
5. LH SIDE BRICK - FRI11S12L
6. RH SIDE BRICK - FRI11S13R
7. TOP BAFFLE - I11S41
8. SWIVEL BOLT - CA1115
9. GRATE - I11S14
10. ASHPAN - CA1206
11. FIREFENCE - I11S20V1
12. SLIDING CLAMP - I11S61
13. BASE - I11S01
14. FRONT BODY - I11S59

15. FRONT - I11S03
16. SERIAL NO. PLATE - CAL1115
17. DOOR HINGE - CA1602
18. GLASS CLIP - CA1112
19. FIRE DOOR - I1107
20. DOOR GLASS - CA10I11
21. SPIN VALVE - CAF170
22. M8 BOLT - CA0267-002
23. DOOR HANDLE - CA0102 - ZH
24. DOOR HANDLE AXLE - CA0101
25. DOOR CATCH - CA1505
26. ASHPAN HANDLE - CA0105
27. CLAMP BAR - I11S46
28. FLUE BAFFLE - I11S35

NOTES

Waterford Stanley Ltd.,
Unit 210, Waterford Industrial Estate,
Cork Rd., Waterford
ROI Sales: 051 302 300
NI Sales: 028 8772 2195

BILBERRY

Rev:001 101112

Made In China