

An rogha is fearr

FIREBIRD



HEATING SOLUTIONS

SMOKE EXEMPT WOOD BURNING DRY STOVE • ROOM HEATER

SMOKE EXEMPT WOOD BURNING DRY STOVE

Instruction Manual



DEFRA
Approved
Smoke
Exempt



QUALITY STOVES DESIGNED FOR YOUR COMFORT



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1.0 INTRODUCTION

We would like to thank you for purchasing a high efficiency, Firebird smoke exempt wood burning dry inset stove (hereinafter referred to as “the inset stove”). The stove is manufactured in its entirety in our factory in Baile Mhic Íre, Macroom, Co. Cork, using the highest standard of workmanship and latest technology.

This instruction manual has been produced for the reference and guidance of qualified installation technicians.

You should ensure that all installation, servicing and commissioning works are carried out by a HETAS approved or competent, qualified engineer. It should be noted that it is the responsibility of the installer/householder to ensure that the inset stove is properly commissioned. Failure to do so may invalidate the warranty.

2.0 IMPORTANT SAFETY NOTES

- The term multifuel refers to commercially available solid fuels such as wood, smokeless coal and anthracite. The appliance shall not be used as an incinerator; only recommended fuels shall be used. Liquid fuels should never be used when lighting or filling the fire.
- Do not store liquid fuels in the close proximity to the inset stove.
- The inset stove is designed in such a way, that under normal burning conditions, the fumes pass up through the chimney flue and do not escape into the home. Please ensure that the flue system is checked regularly, that no cracks or openings are evident and that the seals on the inset stove are in good condition.
- ENSURE THE BAFFLES ARE ALWAYS IN PLACE WHEN LIGHTING THE INSET STOVE AND NEVER LIGHT A FIRE IF THE BAFFLES ARE NOT IN PLACE.
- THE INSET STOVE DOOR SHOULD NOT BE KEPT OPEN WHEN THE FIRE IS LIT/ BURNING.
- The inset stove should never be over stocked/over filled. The draught settings should be reduced if this occurs.
- A mechanical air supply should never be added to the inset stove.
- The inset stove reaches high temperatures and can be hot to touch. Ensure that safety guards (in accordance with BS8423:2002) are in place.
- Do not place any furniture or combustible material within 800mm of the inset stove.
- Please ensure that operating tools are used where provided. The stove becomes very hot during operation and should not be touched by bare hands.
- Ensure that BS 8303, code of practice for installation of domestic heating and cooking appliances burning solid mineral fuel, is adhered to at all times.
- Aerosols should not be sprayed near the appliance while alight.
- Ensure the following codes and standards are adhered to:
 - BS EN 15287 – 1:2007 design, installation and commissioning of chimneys.
 - BS EN 12828:2003 heating systems in buildings.
 - Method of calculation of the design heat load.

- Please read this manual carefully prior to installation of the inset stove.
- All local regulations, including those referring to national and European standards, need to be complied with when installing the appliance.

The Clean Air Act 1993 and Smoke Control Areas

Under the Clean Air Act, local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an “unauthorised fuel” for use within a smoke control area unless it is used in an “exempt” appliance (“exempted” from the controls which generally apply in the smoke control area).

The Secretary of State for Environment, Food and Rural Affairs has powers under the Act to authorise smokeless fuels or exempt appliances for use in smoke control areas in England. In Scotland and Wales this power rests with Ministers in the devolved administrations for those countries. Separate legislation, the Clean Air (Northern Ireland) Order 1981, applies in Northern Ireland. Therefore it is a requirement that fuels burnt or obtained for use in smoke control areas have been “authorised” in Regulations and that appliances used to burn solid fuel in those areas (other than “authorised” fuels) have been exempted by an Order made and signed by the Secretary of State or Minister in the devolved administrations.

The Firebird smoke exempt dry inset stove has been recommended as suitable for use in smoke control areas when burning dry wood, when fitted with a permanent stop to prevent closure of the secondary air control beyond 32mm and when operated in accordance with these instructions.

Further information on the requirements of the Clean Air Act can be found here: <http://smokecontrol.defra.gov.uk/>.

Your local authority is responsible for implementing the Clean Air Act 1993, including designation and supervision of smoke control areas and you can contact them for details of the Clean Air Act requirements.

3.0 TERMS & CONDITIONS OF WARRANTY

- This Firebird product is designed and manufactured to give many years of trouble free service. We provide a comprehensive warranty of 5 years on the inset stove shell and a 2 year warranty on other parts from date of installation, provided installation has occurred within 12 months from date of purchase.

Other parts include:

- Ceramic glass for thermal breakage-supply only.
 - Refractory materials.
 - Rope seals, glass seals and cement seals.
 - Grates.
 - Paint finish.
- The warranty will only apply if the inset stove is installed by a HETAS approved or competent, qualified engineer and is serviced annually thereafter. It is important to retain a copy of all service records and/or invoices.
 - This warranty does not cover special, incidental or consequential damages, injury to persons or property, or any other consequential loss.
 - The warranty does not cover installation and operational related problems such as draught related issues external to the stove, inadequate venting or ventilation, excessive offsets, negative air pressure caused by insufficient burning of improper fuel.
 - The warranty does not cover impact damage to enamel.
 - Please ensure the warranty registration form (at the back of this manual) is fully completed by a HETAS approved or competent, qualified engineer and returned to Firebird within 28 days of complete installation and commissioning.
 - The following terms, laid out in the warranty must be adhered to:
 - (a) All claims under the warranty must be within the above stated time limits.
 - (b) Warranty implies that the product shall be free from defective parts or workmanship for a period of warranty cover which begins from the date of installation.
 - (c) The inset stove must be installed and commissioned by a HETAS approved or competent, qualified engineer in accordance with a) this instruction manual
b) all relevant standards and codes of practice.
 - (d) Maintenance should be carried out at the intervals outlined in this manual.
 - (e) Firebird can accept no liability in respect of any defect arising from incorrect installation, negligence, fair wear and tear, misuse, alteration or repair by unqualified persons.
 - (f) The warranty extends to reasonable labour costs except in the case of a 5 year warranty period whereby any valid claim made after 3 years will not include labour costs.
 - (g) Firebird's prior authorisation must be obtained before examination or repair of the inset stove takes place.
 - (h) Firebird will examine all claims made under the warranty and for any claims deemed invalid, costs incurred will be borne by the householder.
 - (i) The inset stove must be used for domestic heating purposes only.
 - (j) Any defective part removed under any or all of the warranties, **MUST** be returned to Firebird.

**THE STATUTORY RIGHTS OF THE HOUSEHOLDER
ARE NOT AFFECTED BY THIS WARRANTY**

4.0 INSTALLATION INSTRUCTION

4.1 PERFORMANCE

The following highlights the output and test performance of the inset stove:

Firebird 18" Smoke Exempt Wood Burning Dry Stove

Fuel Type	Wood
Output to Space - kW	5
Efficiency - %	75.9
CO (@13% O ₂)	0.26
Mean Flue Gas Temp °C	292
Flue Gas Mass Flow g/s	4.6
BS Standard	BS EN 13229:2001
Weight - kg	105
Test Type	Intermittent
Minimum safe distance from combustible materials: sides 200mm and shelf 300mm.	

Heat outputs and efficiencies are based on heat over a one hour period, using Ancit solid fuel. Outputs are obtained by independent testing to BS Standard EN 13229.

The appliance is capable of intermittent operation when burning wood logs and both intermittent and continuous operation when burning smokeless fuel.

4.2 HEALTH AND SAFETY

When installing the inset stove, please ensure that the following Health & Safety Regulations are met:

- UK - Health and Safety at Work Act 1974.
- IRL - Safety, Health and Welfare at Work Act 2005, (Construction Regulations 2006).

Installation, commissioning and/or servicing should only be carried out by a

HETAS approved or competent, qualified engineer.

The small amounts of adhesives and sealants used in the manufacture of this appliance are cured and do not present any known hazards when used for their intended purpose.

NOTE: If your Firebird inset stove is not installed, operated and maintained properly a house fire may result!

Additional Material Safety Items:

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, 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 specialist 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.

4.3 AIR SUPPLY

It is essential that you provide an adequate air supply for safe and efficient operation of your inset stove. The air supply will ensure efficient combustion. Failure to do so could result in smoke filling into the room or blackening of glass.

Air Requirements

A permanent air entry opening or openings, with a total free area of at least 550mm² per kW of rated output above 5kW, shall be provided. Under no circumstances should this be less than 6500mm².

If a flue draught stabiliser is fitted, then the first 5kW of rated output is 300mm² per kW and the balance of the rated output is 850mm² per kW.

For newer build properties, the requirements may need to be higher if the design permeability of the home is less than 5m³/h.m². For more details, see approved document J of the Building Regulations.

This appliance is capable of having the air supply introduced through the base (see below). The same equation with respect to total free area must be adhered to. Please order a room sealed kit from Firebird to ensure air tightness is achieved

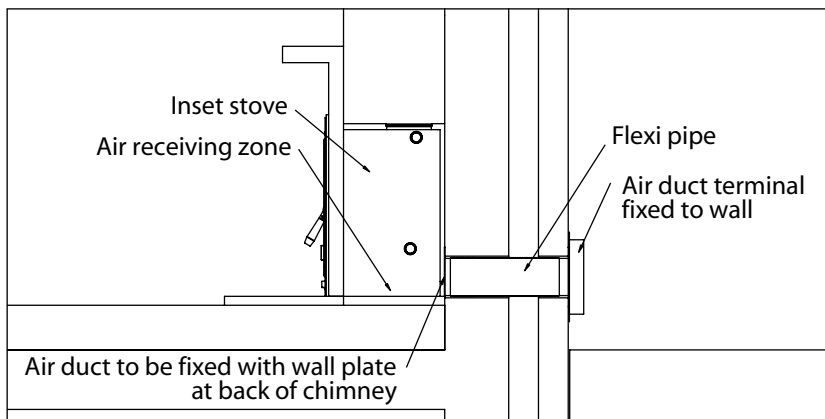
NOTE: Only Firebird's room sealed kit can be installed with a Firebird inset stove. Please refer to kit instructions for full guidelines.

NOTE: No extractor fan should be fitted in the same room as the appliance.

4.4 FIREPLACE

When fitting into an existing fireplace, remove fireback or boiler and clear out any loose back fill material.

Access to the front of the chimney breast may be required, via a hole, for fixing the flue pipe and back filling.



4.5 HEARTH

The appliance must be installed on a hearth that can take the weight and is of a non-combustible material.

Ensure that when installing the appliance, the following regulations are met:

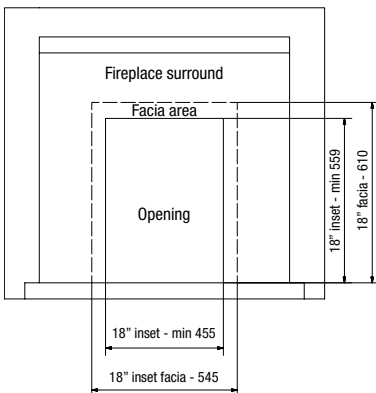
IRL - Building Regulations 1997, Technical Guidance Document 5, states that the hearth must extend in front of the appliance by 500mm and to the sides by 150mm.

UK- Building regulations for class 1 appliances state that the hearth must extend in front of the appliance by 300mm and to the sides by 150mm.

4.6 CHIMNEY/FLUE

In order for the appliance to have sufficient draw to perform satisfactorily, a height of no less than 4.5 meters, vertically from the top of the appliance to the top of the chimney, is required. Alternatively, chimney design with sufficient draught can be calculated, in accordance with EN13384-1.

NOTE: a flue draught requirement of at least 12 Pa is required.



Limiting dimensions of surround and opening

The existing chimney must be checked before installing the appliance. It must be sound, free from cracks and blockages and swept. It should not have an excessive cross sectional area greater than 250mm x 250mm square or equivalent area.

The chimney and connecting flue pipe must have a minimum diameter of 150mm and its dimension should not narrow to less than the size of the outlet socket of the stove at any point.

Do not connect the inset stove to a chimney flue which is connected to another appliance.

It is essential that you use only stainless steel pipes for your inset stove and that all installations are carried out in accordance with building regulations and manufacturer's instructions. Always fit pipes with the narrow side down, to allow any creosote to run down the inside of the pipe. This avoids possible fire risk.

Firebird recommend that a thorough inspection of the chimney is carried out prior to installation and on a regular basis thereafter.

The chimney should be of sound construction, free from debris, capable of withstanding extremely high temperatures and have no evidence of cracks or other faults.

Best installation practice is to install a flue lining suitable for solid fuels. A rigid connection adaptor should be used to connect the flue liner to the inset stove.

Pipe bends should be kept to a minimum and there should be no more than two 45° bends on any installation.

Flues should not pass through ceilings, floors or any form of combustible walls without adequate, approved insulation having been installed, to protect the combustible material.

If the stove is fitted in place of an open fire, the chimney should be swept one month after installation to clear any soot falls which may have occurred due to the difference in combustion between the stove and the open fire.

4.7 INSTALLING AND BACK FILLING

1. Remove the inset stove from its packaging and inspect for any damage.
2. Fit the appliance into the opening, making sure it is central. A good seal should be made between the flange and the surround.
3. Remove any excess fire cement from around the flange.
4. Ensure the stove is fixed to the hearth. There are 4 preformed holes on the side frames of the base to facilitate fixing.
5. Before back filling, check the flue connections. Ensure that the materials used for back filling are non-combustible.
6. Fit the flue connector to the top of the appliance so that it is central to the chimney and extends to the point where the chimney narrows. Ensure that the flue manufacturer's instructions are adhered to at all times.
7. Back fill the appliance with vermiculite concrete (the mix 6:1; 6 volumes of vermiculite to 1 volume Portland cement mixed thoroughly) add enough water to activate the cement.

8. All voids must be filled and the flue pipe flaunching into the chimney, so that no soot can collect when sweeping the chimney.
9. Make good the holes in the front and side of the chimney breast, ensuring they are airtight. Remove any material from inside the appliance and check the flue pipe is clear.

4.8 CHECKS BEFORE LIGHTING

NOTE: Prior to lighting the inset stove, allow sufficient time for the back fill to dry at normal conditions.

The following checks should be carried out prior to lighting a fire in the inset stove:

1. The fire grate is in place.
2. The flue is clear.
3. Ensure that baffles are in place.
4. Check the door fitting.

4.9 COMMISSIONING

Light the fire and check all joints and seals. Ensure that fumes and smoke are being taken up the chimney and no fumes are entering the room.

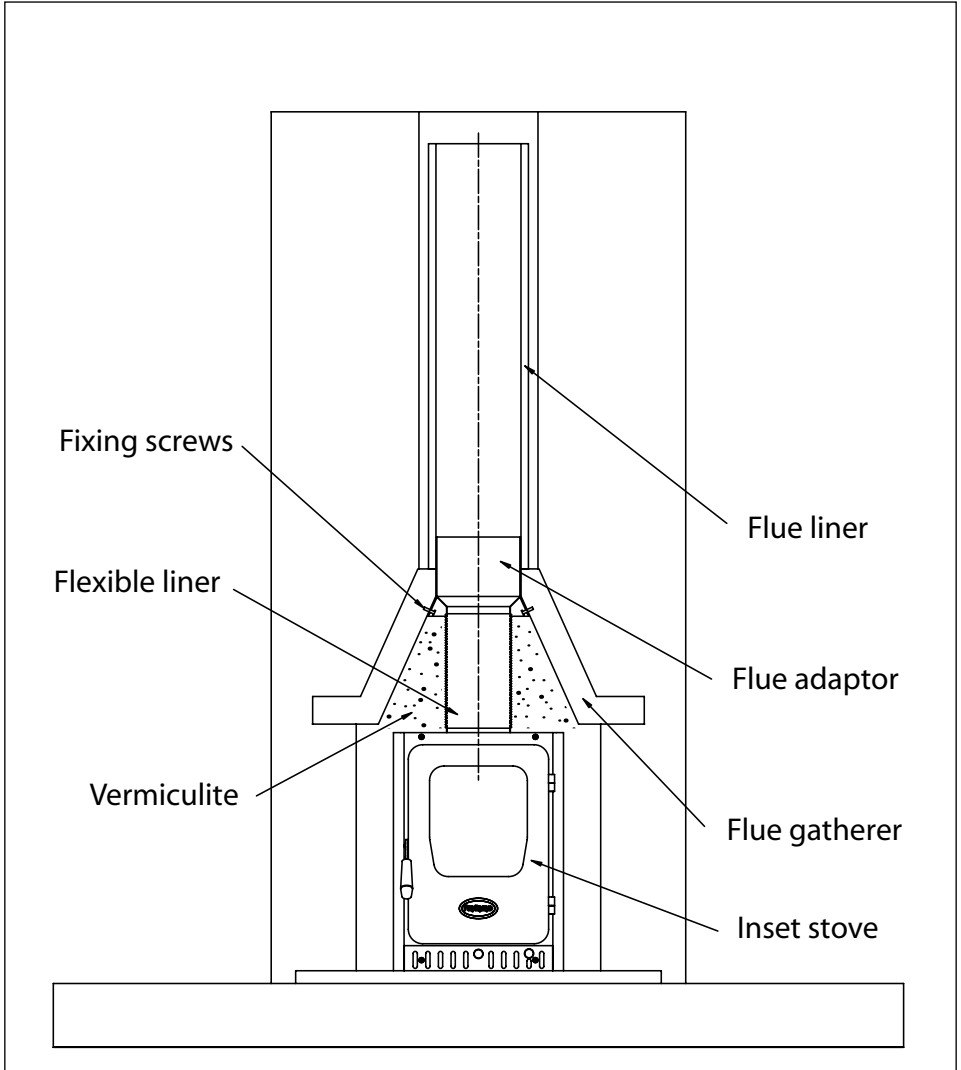
Before completing the commissioning, the householder should be advised as to the operation of the inset stove.

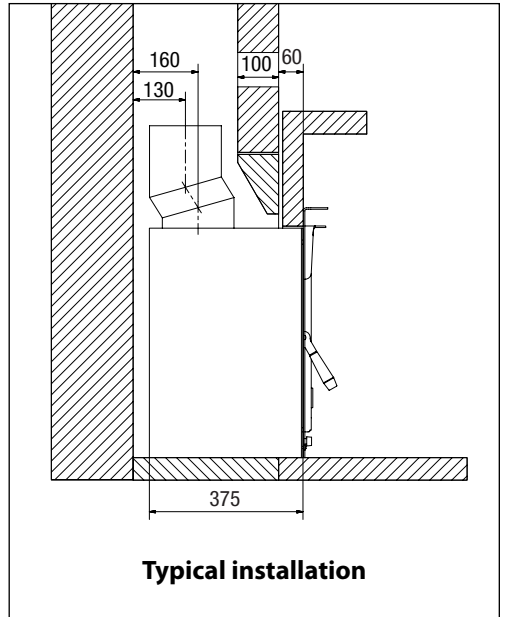
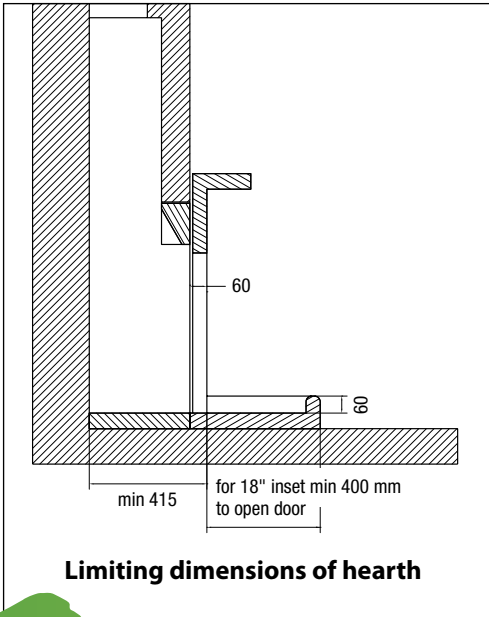
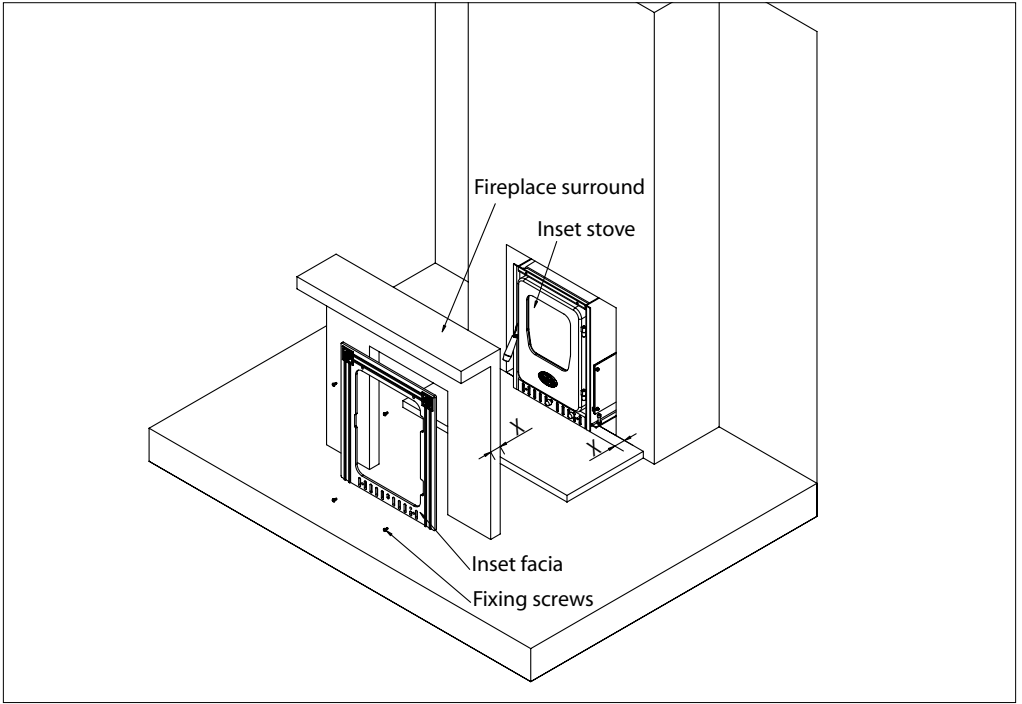
The instruction manual should remain with the householder.

CO Alarms:

Building Regulations require that whenever a new or replacement, fixed solid fuel or wood/biomass appliance is installed in a dwelling, a carbon monoxide alarm must be fitted in the same room as the appliance. Further guidance on the installation of the carbon monoxide alarm is available in BS EN 50292:2002 and from the alarm

manufacturer's 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.





5.0 OPERATING INSTRUCTIONS

5.1 FUELS

HETAS Ltd. approval covers the burning of wood.

The two main factors to be considered when burning wood, are the moisture content and the density.

Moisture in wood will have an effect on the CV (amount of heat per unit volume), as any moisture in the wood has to be boiled away before the wood will burn. It can also create smoke and tars which could be corrosive and increase the risk of a chimney fire.

Well-seasoned logs can have approximately twice the CV of unseasoned green logs.

Hard wood logs are denser than soft wood logs and tend to burn for a longer period of time.

Within smoke control areas, wood burned in the appliance must be dry, seasoned wood, with maximum length of 25cm and maximum diameter of 15cm.

Air dried wood should be seasoned for at least 12 months before burning.

Wood that has been contaminated or treated with varnish, paint or other coatings and preservatives, should not be used. Not only does it release noxious chemicals into the air, but it can also contribute to the amount of tar and deposits building up in your chimney.

NOTE: You should never over stock/over fill your inset stove. This is necessary to

avoid fuel falling out onto the glass door and also to avoid chimney fires.

5.2 LIGHTING AND CONTROLLING

NOTE: Ensure the baffles are properly installed prior to lighting the inset stove as per Figure 1. Carry out all checks as per 4.8.

Figure 1.



Place some kindling and a firelighter on top of the grate, add some dry kindling and a sufficient bed of fuel to enable a good fire to take off.

Fully open out the secondary air control (right hand side) and open the primary air control (left hand side) to about half way. See Figure 2.

Figure 2.



Light the fire and close the door. The room should be kept well ventilated on the first lighting, as there may be an odour and some smoke may be released. This is just the paint reacting to the heat and will only last for a short time.

When the fire is well lit, adjust the primary and secondary air controls to give you the required level of flame. See Figure 3. For best results, wood will generally need more secondary air than primary air.

The following can be used as a starting base for settings:

- Wood - primary air set on closed; secondary air set on 3.

Please note however, that these may differ with respect to fuel quality and draught.

The householder should ensure that they become familiar with the settings to find the optimum solution for their particular stove.

Figure 3.



Refueling the Appliance

When burning wood, always have the primary air fully open on refuelling and leave it open for approximately 2 minutes or until flames have fully established, before closing down the air control to the desired setting.

If there is insufficient burning material in the fire bed to light a new fuel charge, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash so that the new fuel charge will ignite within a reasonable period. If there are too few embers in the fire bed, add suitable kindling to prevent excessive smoke.

Recommended refuelling volumes are as follows (to achieve outputs highlighted in section 4.1):

18" Smoke Exempt Wood Burning Dry Stove:

- Wood logs - 1.22kg/hr.

Once the new fuel has taken, adjust the secondary air control.

5.3 CLEARANCE OF ASH

The ash pan should be emptied on a regular basis and always before it becomes too full. See Figure 4. If ash is left to build up close to the grate, it will cause damage to it.

Figure 4.



The ash pan is best emptied before you riddle the fire, when the ash is at its coolest. **Check under the ash pan once a week and clean this area if necessary. See Figure 5. Ensure the bottom plate (under the ash pan) is always replaced after cleaning.**

Figure 5.



5.4 THROAT PLATE (BAFFLES)

5.4.1 INITIAL BURNING

In the first month after installation, the baffles should be checked before each ignition to establish a burning pattern to fuel type. This is necessary because some fuels deposit more soot than others. In addition please refer to 4.6 of this manual "cleaning of flue one month after installation".

5.4.2 REGULAR CHECKING

Remove and clean any fly ash or soot that has built up. This should be done on a regular basis, about once a month or more as deemed necessary.

5.5 CO ALARMS

Your installer should have fitted a CO alarm in the same room as the appliance (see also section 4.9). If the alarm sounds unexpectedly, follow the instructions under item no 6.6 below.

5.6 EXTRACTOR FANS

Do not fit an extractor fan in the same room as this stove. This may cause the stove to emit fumes into the room.

6.0 MAINTENANCE

6.1 CLEANING

When cleaning the glass, always do so when the inset stove is cold. Abrasive cleaners or pads should never be used on the glass. For stubborn deposits, use a proprietary stove glass cleaner or ceramic hob cleaner.

The front of the appliance may be wiped with a damp, lint free cloth and then dried with a dry lint free cloth. Again, make sure the appliance is cold.

6.2 DOOR SEALS

Check that the seals are in good condition and in the correct place. If they are worn, they should be replaced.

6.3 WHEN NOT IN USE

In the summer months or anytime that the inset stove is not being used for a long period of time, clean out the inside thoroughly and open the primary air control slightly.

This will help to prevent condensation, and hence corrosion.

6.4 CHIMNEY CLEANING

The chimney should be cleaned at least once a year and this can be done through the inset stove. Remove the throat plates (baffles) and fire bars prior to undertaking a chimney clean.

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 adhered, with 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

6.5 CHIMNEY FIRES

If the instructions in this manual are followed and the chimney is cleaned once a year, chimney fires should not occur.

Should the chimney go on fire, close both air intakes and ensure the door is fully closed. This should be enough to ensure the chimney fire dies. If the fire continues, then call the fire brigade. Do not open the inset stove door at any time during this period as it may cause re-ignition.

Leave the door closed until the inset stove is cold.

The chimney must be swept and carefully examined for damage after a chimney fire.

6.6 EMISSIONS CONTROL

6.6.1 Excess Smoke - Control measures

Ensure that the door is closed at all times during the burning of fuel in the stove. Operation with the door open can cause excess smoke. The door should only be opened for re-fuelling purposes.

Attention must also be given to air control dampers on this appliance. Failure to control the dampers correctly can result in excess smoke. Please refer to section 5.2 of this manual for instructions.

6.6.2 Smoke from Appliance

Properly installed, operated and maintained, this stove will not emit fumes into the dwelling. Occasional fumes from 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:

1. Open all windows and doors to ventilate the room.
2. Let the fire go out.
3. Check for flue or chimney blockages and clean if required.
4. Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.
- 5 Do not light the fire until the problem is rectified.

The most common cause of fume emission is a flue way or chimney blockage. For your own safety, these must be kept clean at all times.

6.7 SERVICING

The following is a guideline checklist which can be used during servicing. Note that other checks may be required (system dependant):

- Check flue to ensure it is clear and free from soot.
- Remove baffles, clean and ensure they are replaced correctly.
- Check air supply to room or inset stove. Ensure that it is clean, secure and free from debris.
- Ensure that all seals are in good condition.
- Ensure that air wash openings are clear.

6.8 SPARE PARTS

For spare parts please contact Firebird directly on the following numbers:

Ireland: + 353 (0)26 45253

7.0 TROUBLE SHOOTING

FIRE WILL NOT BURN

Check that:

- Primary and secondary air inlets are open with no obstructions.
- Chimney and baffles are clear.
- Correct fuel is being used. Note the recommendation is to use good quality coal. The test results of this stove have been achieved using smokeless coal.
- Air supply to room is adequate and not blocked.

FIRE NOT RESPONDING TO AIR CONTROLS/OVER BURNING

Check that:

- The door is fully closed.
- Both air controls to the appliance are fully closed.
- The door seals are in place and in good condition.
- The correct fuel is being used.

REDUCING BLACKENING OF GLASS

This stove is designed with an air wash, the function of which is to reduce deposits on the glass. Please note that certain fuel types can cause blackening of glass.

Check that:

- The appliance is not being starved of air.
- Bad quality fuel or damp fuel is not being used.
- The balance between primary and secondary air is correct.

ADVERSE WEATHER CONDITIONS

Draught may be affected during bad/poor weather conditions. In this case, air adjustments may be required.





8.0 WARRANTY REGISTRATION



HEATING SOLUTIONS

Please complete the following details and return to Firebird to register your Firebird Smoke Exempt Wood Burning Dry Stove warranty.

HOUSEHOLDER

Name:

Address:

.....

.....

Tel:

INSTALLER

Name:

Address:

.....

.....

Tel:

STOVE DETAILS

Firebird Smoke Exempt Wood Burning Dry Stove

18" Smoke Exempt Wood Burning Dry Stove. Serial Number:

Stove and System Check

- Stove installed and system tested to manufacturer's manual and regulations.
- Sufficient air requirements (room air vent) installed (minimum 4" or 100mm).

Chimney/Flue System

- Clay pot connection.
- Stainless steel relining.
- Flue diameter (minimum flue diameter of 150mm).

Chimney/Flue Requirements

- Chimney cleaned.
- Flue system sealed.

Flue Draught

Flue draught test complete. Result of test (min. 12 Pascal's draught).

Handover Details

- First ignition of stove complete.
- Operation and controls confirmed.
- Manuals handed to householder.

INSTALLER SIGNATURE DATE

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

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