



Inis Oirr MK2 Multifuel
14kw Boiler Stove
User and installation manual.



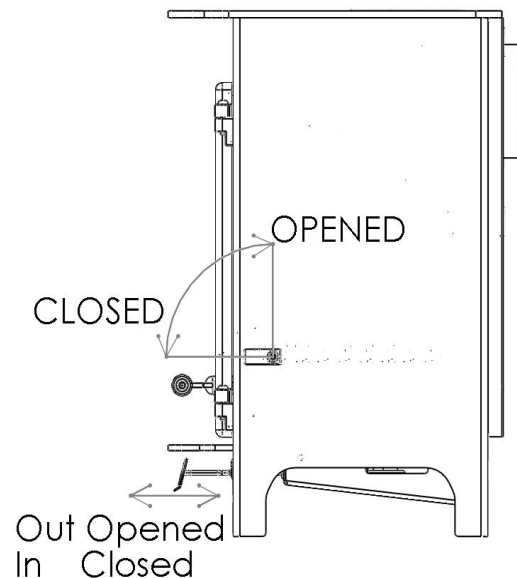
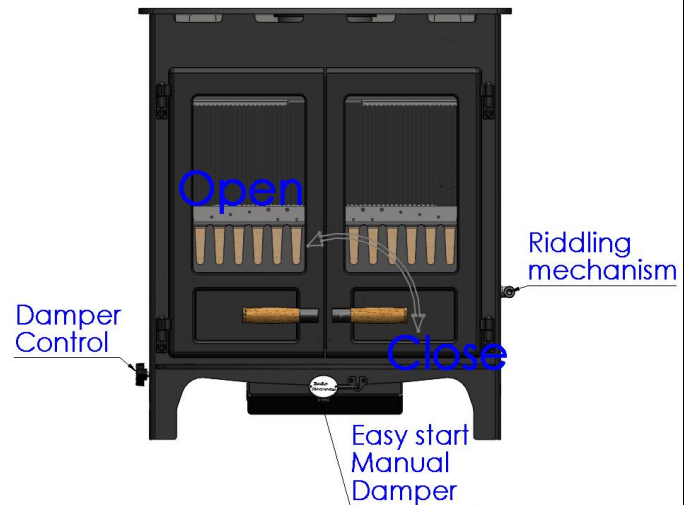
Inis Oirr MK2 Multifuel Boiler stove

Congratulations on the purchase of your new Inis Oirr MK2 Boiler stove. We here at Inis Stoves truly love building high quality stoves for our customers. The stove we produced for you was not just an appliance to us. We hope that you will see it as a focal point in your home. When fitted and operated correctly, you should enjoy many years, trouble free warmth from your Inis Oirr MK2 boiler stove. Please read the user manual fully before operating the stove.

As a general recommendation to all home owners, Inis Stoves highly recommend the use of fire alarms and carbon monoxide alarms to EN 50291 standard, in your home to protect you and your family from harm. In the event that an alarm sounds, evacuate everyone from the building immediately and do not re-enter the building until it is deemed safe to do so.

Stove features.

As shown, the twin doors are opened by turning the right side handle anti-clockwise over 90 degrees to just beyond vertical. When the right door is opened it pulls the left door opened as well to aid re-fuelling the stove and being able to open the doors with one hand only. Although the door handles have been designed to be operated with bare hands, when burning at full output over extended periods, a kitchen glove is recommend.



To riddle the grate, use the riddling hand tool and gently oscillate the riddler back and forth. Using excessive force can lead to damaging the riddling mechanism.

Normally it is advisable to have the doors closed at all times except when re-fuelling, de-ashing and when igniting the stove. If excess fuming to the room results at any time when the doors are opened, they should be closed immediately.

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The stove has been designed for ease of use by the operation of only one air control knob. This adjustment knob is found on the left hand side of the stove and to increase the air turn clockwise and to close turn anti-clockwise. Your Inis Oirr MK2 boiler stove has a manual "Easy Start" damper fitted to the underside of the stove and the damper is operated as shown the diagram above by pulling the damper out away from the stove to open and pushing fully in towards the stove to close.

To help with keeping the stove glass clean, load the fuel toward the back of the stove when lighting and fire the stove at a high rate and avoid prolonged periods at a very low setting.

The Inis Oirr MK2 boiler stove is fitted with a multi-grate which facilitates the combustion of various fuels. The multi-grate can also be riddled with the doors closed for cleanliness and safety. To achieve this use the riddling/ash pan removal tool as shown above.

First firing

When the stove is used for the first number of times the process of curing the paint will occur. To do this a small fire using only kindling wood should be lit for approximately 30 minutes, allow the stove to cool slightly then repeat the small fire using only kindling wood for another 30 minutes. The final action to cure the paint is to put on a strong fire before the stove has cooled down, at full output for at least one hour. The stove paint will emit fumes which are non-toxic

but a window should be opened to avoid fume build up during the curing process. Before you operate the stove, consult with the installer that all the relevant work has been carried out correctly and that they have ignited a small fire in the stove and it is operating correctly. Check that all relevant local, national and European Standards have been adhered to when installing the stove.

1. Inis Stoves is dedicated to the principal of using renewable fuels in all our stoves. We recommend using wood fuel in the stove if possible. Some recommended fuels for this stove are below,
 - A. Hard or soft woods below 20% moisture content,
Eco friendly formed wood fuels for example "EcoBrix".
 - B. Peat in solid form with low moisture content.
 - C. Solid fuels use only HETAS approved solid fuel, for example 'EcoBrite' nugget form smokeless coal.
2. Never use liquid fuels in the stove
3. When in operation, the stove will be hot and care should be taken to avoid injury.
4. When using solid fuels like smokeless coal, the ash pan should be emptied at least every day.
5. Never attempt to modify the stove in any way and always use genuine Inis Stove spare parts.
6. Never place combustible or non-combustible materials near, in or

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around the stove that will interfere with the proper heat convection and air supply to the stove. The stove surround should be fireproof. Never leave any fuels too close to the stove.

7. For safe and efficient operation of the stove, regular cleaning of the stove and chimney is essential. Dirty surfaces within the stove will lead to poor heat transfer to the water and the room and will waste your fuel.
8. Care should always be taken when emptying the ash pan of the stove. Hot ashes should never be put in a plastic dust bin, bag or container. Ideally, empty the ash pans when the ashes are cold.

Fuel

Inis Stoves recommend that wood be used to fuel the stove. Other fuels however can be burned in the stove.

Using wood to fuel the stove, the grate should be in the closed position. Excessive riddling should be avoided and a good ash layer on the grate is recommended. When using wood fuel, please ensure that the wood has moisture content below 20%. Well-seasoned and kiln dried wood will achieve this. Burning wood with a higher moisture content will result in much reduced heat output and a build-up of heavy tar deposits in the stove and chimney. To refuel the stove the firebox should be well filled without fuel falling out over the firebar against the doors. By operating the stove in this way,

refuelling should only be needed every 90 minutes (when burning wood) at full output and the stove will operate most efficiently and cleanly this way. Once the stove is fully hot the control knob can be used to adjust the firing rate down to the required output however to heat the water properly the dial usually needs to be kept above 6.

When using other recommended solid fuels, the grate should be in the open position. Fill the firebox up but do not have fuel over flowing over the firebar. Using smokeless nuggets like 'Ecobrite' a refuelling period of over 4 hours is achieved.

Household waste should never be burned in the stove.

Never burn petroleum coke in this stove as it will invalidate the guarantee.

Lighting the fire

The key to quick and easy lighting of the stove is the ample use of kindling wood. If too little kindling is used, the fire will be slow to start and will produce excessive smoke and deposits on the glass.

The grate should be put in the open position and both the thermostatic and "Easy Start" dampers fully open. Firelighters or well crumpled paper should be surrounded with small pieces of kindling toward the back of the grate.

Light the fire and with the door lock engaged but the doors slightly ajar let the fire light up. After the kindling is well alight add larger pieces of fuel to the fire and after a few more minutes

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this fuel should be well alight. The stove can be fully loaded now and a bright high temperature fire should result. Once the fire is well established the "Easy Start" manual damper should be closed. The stove's output will normally not require adjustment down of the thermostatic damper until after approximately 1-2 hours depending on the system size as the stove will take this time to fully heat up.

Continuous burning

Your Inis Oirr MK2 boiler stove is capable of continuous burning making overnight burning possible at a reduced output. To achieve overnight burning, open the thermostatic and "Easy Start" dampers fully until the fire is burning rapidly. Fill the firebox with a full charge of fuel and let it ignite fully. When the fire is burning brightly, the stove dampers can then be closed down. With the damper almost fully closed and the correct draught in the chimney, an 8-12 hour burn time is possible. For more heat output over a shorter time span the damper can be opened up as necessary. To avoid excessive blackening of the glass the damper should be left slightly open. To revive the fire after overnight burning, riddle the grate, refuel the firebox with a small amount of fuel, open the thermostatic and "Easy Start" manual dampers fully. Please be aware to avoid excessive condensation in the boiler during prolonged slow combustion and open the damper more if it does occur. After a prolonged period of slow combustion, the stove should be fired at a high rate for

at least 30 minutes to help burn off excessive soot deposits in the boiler ways and the flue system. It is very important that the installer has correctly set the pump stats so as to avoid cold water entering the stove for any extended periods. A minimum return temperature of 45 degrees Centigrade is required to avoid condensation within the boiler.

Ash clearance

The stove has two ash pans designed for ease of handling. The ash pans should be emptied before it is over filled to protect the grate from overheating especially when burning solid fuels as the ash is an excellent insulator and excess build-up of ash will cause grate damage.

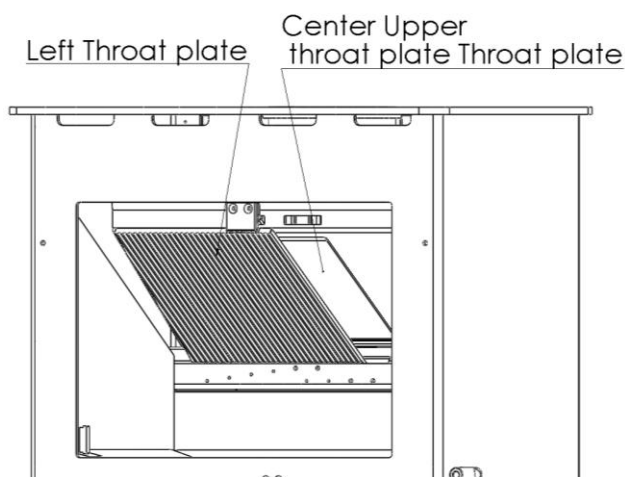
Stove cleaning and maintenance

Regular cleaning is essential for safe and efficient operation of the stove. During the heating season it is recommended to clean the stove weekly or fortnightly. Inspect on a regular basis the condition of the door seals and if found to be worn replace immediately. Only clean the stove when it is fully cold. A pair of gloves should be used when cleaning the stove and care should be taken to avoid injury as a number of the stove components are quite heavy.

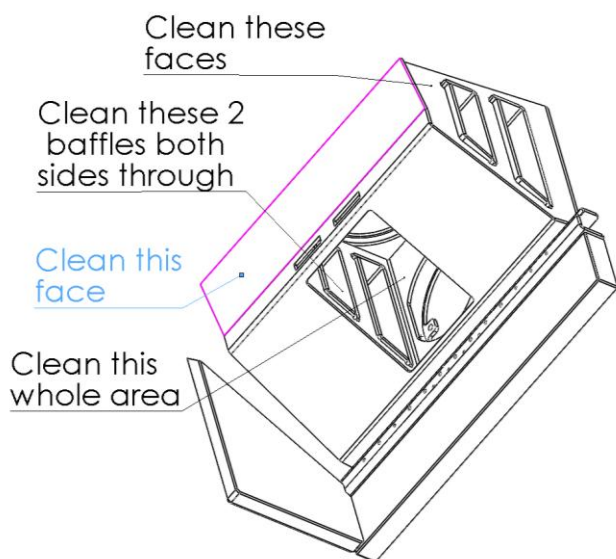
The cast iron throat plates are removed one at a time by pulling them slightly forward along their length until the retaining lugs are free of their slots. The plates can then be lowered away and

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removed. Next the upper centre plate can be removed by pushing upwards at the front of the plate and then lifting the plate vertical and dropping down into the firebox. Please see Fig below.



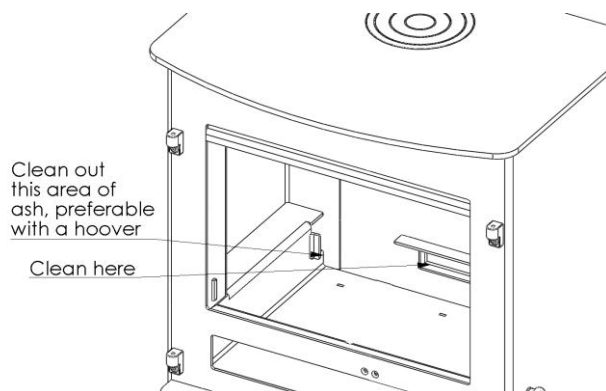
With the throat plate assembly now removed a flexible flue brush can be used to clean out the 3 flue-way baffles on either side of the heat exchanger (See below).



When the throat plate assembly is re installed, cleaning of the fire box/grate assembly can be done.

Firstly, lift away the front firebar (See exploded view of stove for detail). Next

the grate side plates are removed by moving the front end of the plate up. Once it is lifted up, it can be withdrawn. After withdrawal of both side plates, lift each riddler bar on the left side first and remove. With the riddler bars removed, the rear firebox plate can be removed by lifting up straight and lifting away.



Sometimes, after extended use a flathead screw driver may be needed to help lift the plate free. At this point all the vents and areas at the back of the firebox can be cleaned out (never clean the stove if it is still hot!!!). Inspect all internal parts of the stove and replace if needed. Only Inis Stoves genuine parts should be used in the stove To clean the paint of the stove we recommend the use of a slightly damp cloth with a mild detergent. Avoid using abrasive material on the paint of the stove.

If the stove is to be unused for a prolonged period of time, for instance over the summer months, the stove should be fully cleaned and a lubricant applied to all moving parts. The damper may be left slightly open to facilitate a little air movement through the stove and avoid moisture build up. Avoid excess opening of the damper as this will result in

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excess heat loss through the stove up the chimney. After a prolonged period being unused, inspect the chimney before use to ensure no blockage has occurred. Also ensure that the air vent to the room of the stove is clear. Inis Stoves highly recommends annual servicing of the stove as the service engineer will ensure correct and thorough cleaning of the entire stove.

Trouble shooting

NOTE: Excess fume emission to the room must not be tolerated.

Fire burns very rapidly and refuelling periods are not being met.

- 1 Chimney draught is very high, chimney damper may be required.
- 2 The fuel load is too small for the damper setting.
- 3 Door seals are worn.
- 4 Adjust the damper for proper fire control.

Fire will not burn properly

- 1 Chimney draught is too low
- 2 Damper is closed
- 3 Excessive horizontal flue used in rear flue connection
- 4 Ash covering all air ways into firebox
- 5 Chimney and/or stove blocked with ash or foreign body
- 6 Fuel is wet
- 7 No air vent present in room
- 8 Extractor fan in use

Some/all radiators not heating

- 1 Check that the fire is burning at full output
- 2 Check that the pipe stat for the heating is not set too high
- 3 Check if the system needs balancing and that the radiators are turned on. Check that a system link isn't preventing flow to the required radiators and that the radiators don't require bleeding.
- 4 Ask the installer to check that the stove is sitting level and that air has not built up in the boiler.
- 5 Check that the pump is working.
- 6 Check that the flow rate of the pump is not set too high or very low due to blockage etc.

Stove emits fumes

- 1 Chimney blocked
- 2 Door seals require replacing
- 3 Excess down draught in chimney
- 4 Chimney draught below 15Pa.

Riddler grate is locked up/ won't operate.

- 1 A foreign body like a stone or steel nail has jammed the riddler assembly. Dis-assemble the riddler mechanism and check.

Glass blackens excessively

If the stove is fitted correctly and the correct lighting and operation of the stove is adhered to, blackening of the glass should always burn off after a period of full output. A poor draught and/or the use of wet or improper fuel will often lead to excessive glass blackening.

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Chimney fire

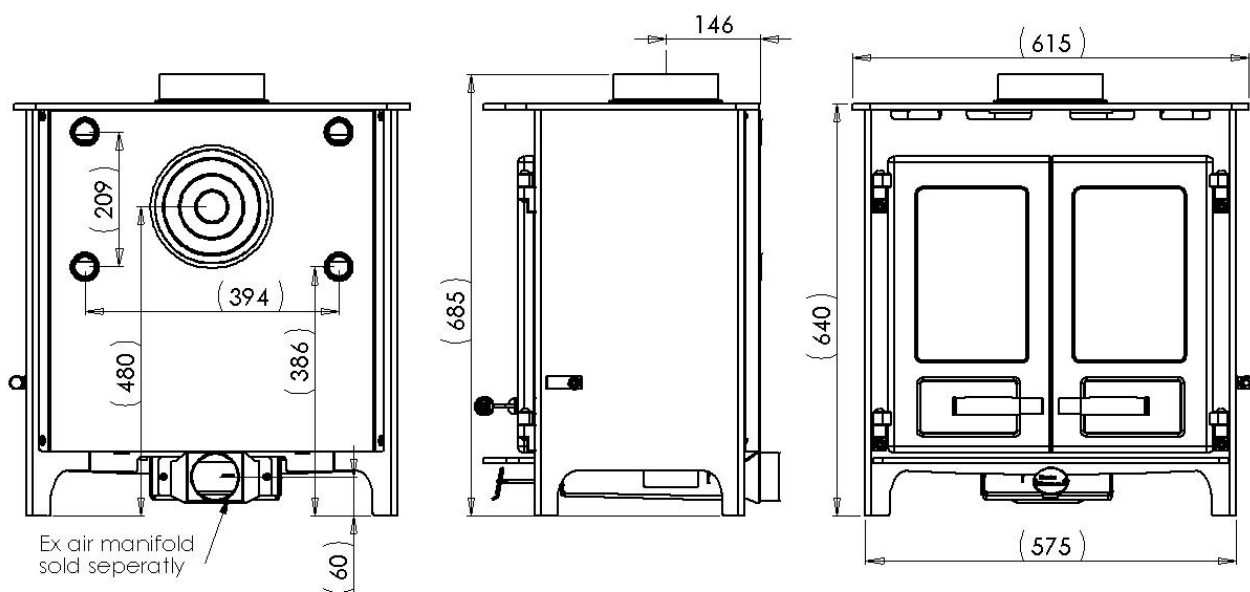
If the stove and chimney are kept clean, no fire should occur. If however it does happen, close the stove damper fully, close the stove doors tightly. Only once the fire in the stove and chimney has gone out should the stove be opened and the stove and chimney cleaned thoroughly. If the fire is substantial and doesn't extinguish, the fire brigade should be called. After a chimney fire, expert help should be sought to have the chimney examined for any damage before the stove is used again.

- If further help is needed please contact the retailer of the stove. We take pride in choosing retailers who have a proven track record in customer service.
- If we still have an issue that hasn't been resolved please contact the Inis Stoves technical department. Please have this manual with you when you call.

Should you have an issue?

In the event that you do have an issue that you aren't sure about please follow the following procedure.

- Firstly contact the installer and discuss the issue with them.



Inis Oirr MK2 Boiler/Roomheater

Installation Manual

Specification		
Output	Kw	14
Water	Kw	8.5
Flue Dia	mm	153
Flue Gas Temperature		266
Fuel		Wood, eco fuels, peat dried, smokeless coal
Min distance to combustibles		
Rear	mm	150
Sides	mm	250
CO @ 13%O2	%	0.14
Stove Mass		165
KG		
Max Hearth Temp		52

Installation Instructions

The heat outputs as shown above were obtained using well-seasoned hardwood using a refuelling time of 1.5 hrs. The wooden crating the stove was shipped in can be cut up for fuel in the stove.

Health and Safety precautions

Please ensure that the installation of the stove complies with all the requirements of the relevant Health and safety at work acts applicable. Some materials used in fire cement are caustic and contact with the skin should be avoided. In case of contact with the skin wash with plenty of cold water. If any structural work is required for installation please take note of the possible presence of asbestos. If the presence of asbestos is found please

contact a registered asbestos removal firm.

Combustion and ventilation air requirements

Proper air supply must be insured to the room into which the stove is to be installed. A permanent vent opening with a minimum free area of 65 cm sq. must be present and ensure that the vent cannot be blocked for example by fallen leaves and that any grills that fit the vent do not lessen the cross section of the vent. Under no circumstances should there be an extractor fan in the same room as the stove, to avoid the possibility of combustion gases being drawn into the room.

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When deciding on where to place a vent, the installer must ensure that the position will not cause undue air currents through occupied areas of the room. General points to note when fitting a vent are,

- Building Regulations specify minimum distances to flues and chimneys when placing a vent.
- Where the vent is passing through a cavity wall, the vent must have a continuous duct across the cavity. This duct must prevent the ingress of moisture to the cavity and the room.
- If the vent is to be installed into another internal room it must not be a toilet, bathroom, bedroom or separate living area such as a chalet.

External air for airtight and HRV fitted buildings

Due to the increase in building standards airtightness and the use of Heat Recovery Ventilation, this stove is available with external air capability through the use of an external air manifold fitted to the Damper box of the stove. A flexible aluminium pipe of 75mm internal diameter can be used to connect off this manifold onto the air supply pipe. To bring air to this connection duct it is advisable if possible to run a 4" whether proof pipe from one face of the house to the other end

which will help to balance high and low pressure zones due to wind conditions. The flexible aluminium duct can then be connection to a Tee piece off of the 4" duct. The 4" pipe must be fitted with grilles to prevent the entrance of rodents, moisture and debris. Particular attention must be paid to the HRV unit if its suction fan into the building fails and a negative pressure within the building develops. It is strongly advisable to install a vent in the room that allows negative pressure air movement into the building in this event. It is also most important to fit a Carbon Monoxide Alarm approved to EN 50291 standard in the room where the stove is fitted.

In addition to installation instructions supplied, the requirements of BS.8303 and BS.6461 Parts 1&2; 1984 must be fulfilled. Also all local authority bylaws and domestic building regulations should be taken into account, including those referring to national and European Standards regarding the installation of solid fuelled burning appliances, flues and chimneys must be observed.

Hearth and Fire Surround

If the installer has any doubts as to the positioning of the stove and necessary fire proofing, expert advice should be sought before any work begins. The stove must be placed onto a fire proof hearth of at least 12mm in depth and no combustible materials is used

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unless adjacent fireproofing fitted. The stove positioning and hearth size are governed by building regulations for class 1 appliances. The hearth must extend 300mm to the front of the stove, and by 150mm to the sides of the stove. The installation must allow good air circulation around the stove to maximise heat transfer to the room and to avoid the fireplace overheating. To achieve this, at least an air gap of 300mm above the stove and 150mm either side should suffice.

Please note that in an installation with a wooded mantelpiece or wood beam, a greater air gap of up to 650mm, or the use of appropriate shielding should be fitted. Building regulations should also be checked in this regard.

Chimney

This stove is not suitable for a shared flue arrangement.

Chimneys must satisfy standard EN 15287:2007 and Building Regulations Approved document J.

A draft test should always be performed prior to the fitting of the stove to ensure that a proper draught in the chimney is present (20PA Constant). A chimney height of at least 4m from the top of the stove must be used. The chimney diameter must be at least 153mm. The chimney must be in good condition, be cleaned and free from cracks and blockages.

The chimney must not have too great a cross sectional area and if it is (Max 200mm Diameter), the chimney should be lined with a suitable flue liner for

solid fuel. All chimneys and or flues used must be sealed for the best possible performance.

If a chimney is not present, then a prefabricated block chimney or twin walled flue can be installed.

The draught in the chimney must be at least 20 Pa when warm and must not suffer from down draughts and if there is an excessive draw in the chimney a draught stabiliser should be fitted. If a draught stabiliser is installed please ensure more air ventilation is provided into the room. If any doubt exists please contact a chimney expert.

In some cases although quite rare a chimney will not produce a sufficient and stable draught and the fitting of the stove to this chimney will not produce satisfactory clean and proper output. It is very important to examine alternatives before connecting the stove in this case.

Connection to flues

Building Regulations Approved Part J must be adhered to installing a fabricated flue system for the stove. When installing the stove to the chimney care should be taken to assure that the chimney can be swept and soot removed properly and easily. If the stove is to be connected using the top flue outlet the chimney can be swept through the stove, however for rear flue outlet connections, it will most often require the fitting of a soot door. A number of flue and soot door arrangements are possible and the advice of a qualified chimney expert should be sought.

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Horizontal sections of flue should be avoided or at least kept to a minimum.
Horizontal flue sections from the stove or on any part of the flue pipe should be 6" MAXIMUM in the horizontal. If the flue needs to carry in any particular direction greater than 6", the flue should rise at 45 degrees to the horizontal so as to prevent the degradation of the draught. 90 degree bends must be avoided in the flue system. The flue collar and the blanking plate have sealing rope fitted to them and must be checked that they are fully tight before fitting. The installer must ensure that the chimney and or flue system is installed correctly as Inis Stoves is not responsible for incorrect installation.

Soot doors

Where the flue is installed from the rear flue outlet, the use of a soot door is necessary for proper sweeping of the chimney and removal of the soot.

Adequate access to the soot door is necessary. The soot door may be placed in the existing block work or on a suitable register plate between the flue pipe and the chimney.

Central heating and domestic hot water systems

The stove can be used to heat both hot domestic water and central heating. It is best practice to have a radiator fitted in the room the stove is to be fitted to allow greater flexibility in heating this room.

The stove is designed for open vent central heating systems and a gravity feed circuit usually to the domestic hot water should be present. This gravity feed circuit should rise directly up from the stove and be vented at the top to atmosphere. A minimum of 1" diameter piping must be used on the gravity circuit and this circuit must not exceed 8 meters horizontal distance from the stove. An unvalved heat sink radiator should be fitted to the gravity circuit with a heat capacity of 1.0Kw to allow for the removal of excess heat in the case of a pump failure. All plumbing circuits to and from this appliance MUST be cross-connected.

It is important that the return water temperature is not too low (below about 45 degrees Centigrade), to avoid excess condensation in the boiler, gas ways and chimney and avoid corrosion. This can be achieved by the fitting of a low limit thermostat on the return pipe on the gravity circuit that will stop the pump if the water temperature drops to low on the gravity return circuit.

The plumbing circuit should always have a drain cock at the lowest point to facilitate the draining of the system if required. An injector Tee must be fitted to the return of the gravity and pumped circuits if they are to be connected together.

System controls

The stove is controlled by the single control dial on the left hand side of the stove once it is alight.

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The “Easy start” manual damper must be closed once the stove is fully alight if the heating controls are automated. Please check the user manual for proper operation. The heating system can be controlled by system links, time switches or other controls provided that an unvalved heat sink radiator is present and a low limit pipe stat is fitted to the gravity return pipe to the stove. There should always be a high limit pipe stat fixed on the flow to the central heating circuit set at 90 degrees centigrade to start the pump in the event the low limit stat fails.

Initial firing pre-check

Before firing the stove for the first time points to check for after installation are,

1. Inspect the ash-pit and firebox of the stove to ensure all the various grate components and fire bricks did not become dislodged during transport and fitting.
2. Check that the chimney is sound and clear.
3. The room has vents as described above.
4. That all the sealing joints have had time to set properly.
5. That all door seals etc. are correct and present.
6. That the damper is operational and working properly.
7. That all installation guidelines have been adhered to.
8. That all local national and European guidelines and laws have been followed.

Initial firing

The first fire should be quite small to ensure prompt extinguishing of the fire in the event of a problem. The user manual contains details on how to start a fire in the stove.

Issues to check for once the stove is alight are,

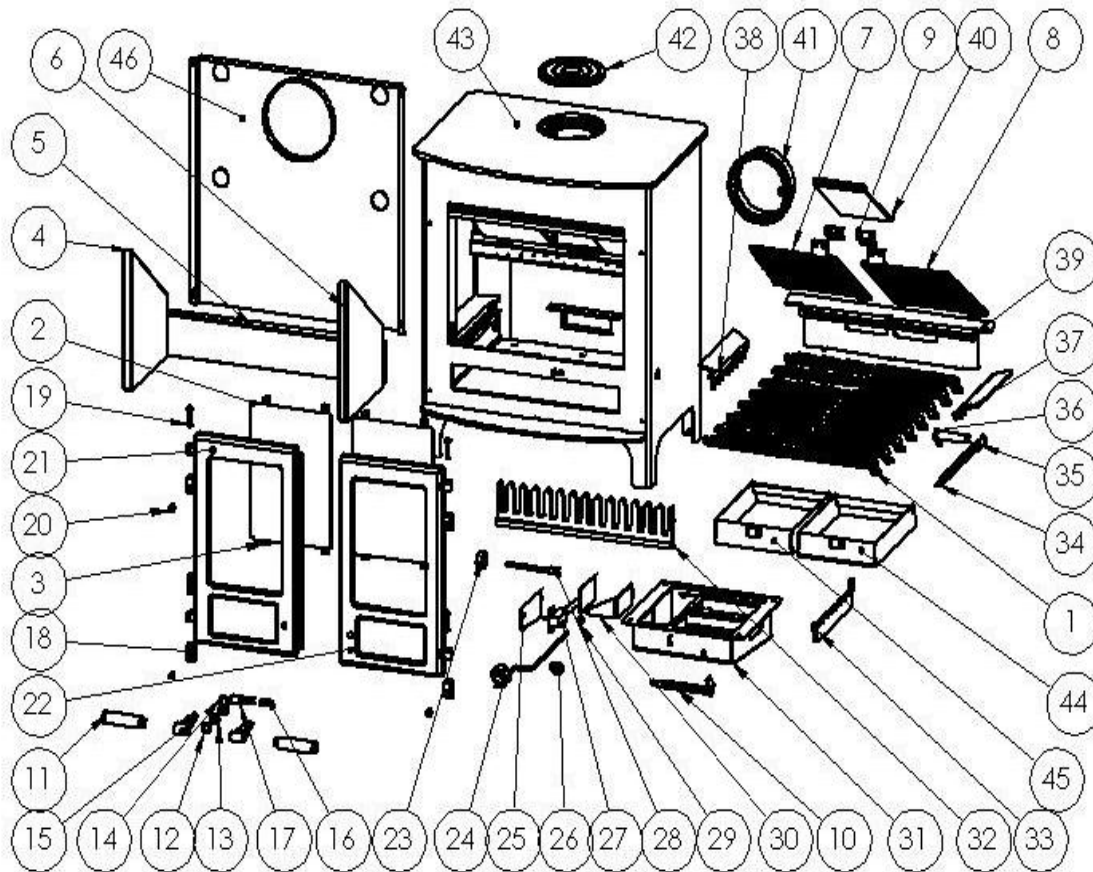
1. That no fumes are being emitted into the room,
2. That a window is open in the room to remove fumes from the paint on the stove being emitted. Please see the paint curing procedures in the user manual.
3. Check that all the radiators etc. are heating and that there is no air present in the system.

Commissioning and handover.

Once the initial fire and the correct operation of the stove have been established, the user must be instructed on the proper operation and maintenance of the stove.

Answer any queries or issues the user may have and seek advice from Inis Stoves with regard to any issue you may not be in a position to answer.

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Item #	Description	Qty	Item#	Description	Qty
1	Riddler bar	6	25	Damper box cover plate	1
2	Door glass	2	26	"Easy start" damper push rod brace	1
3	Door glass clip	8	27	Thermostatic damper	1
4	Left Brick (part of set)	1	28	Thermostatic damper drive	1
5	Rear Brick (part of set)	1	29	"Easy Start" damper push rod bushing	1
6	Right Brick (part of set)	1	30`	"Easy Start" damper slider	1
7	Left throat plate casting	1	31	Damper box	1
8	Right throat plate casting	1`	32	Firebar casting	1
9	Throat plate casting bracket	2	33	Riddler bar centre support plate	1
10	Hand tool	1	34	Riddler bar linkage	1
11	Walnut handle	2	35	Riddler mechanism outer section	1
12	Door lock washer	2	36	Riddler mechanism inner section	1
13	Door lock spacer	2	37	Firebox side plate left	1
14	Door lock	1	38	Firebox side plate right	1
15	Door handle body	2	39	Firebox rear section	1
16	Door lock wear plate clamp	1	40	Throat plate upper plate	1
17	Door lock wear plate	1	41	Flue collar	1
18	Door hinge block	4	42	Flue way blanking plate	1
19	Door hinge pin	4	43	Stove body	1
20	Door hinge block mount bolt	4	44	Ash pan right	1
21	Door casting left	1	45	Ash pan left	1
22	Door casting right	1	46	Stove back panel	1
23	Thermostatic damper dial	1	47	Door seal kit (not shown)	1
24	"Easy start" damper push rod/badge	1	48	Door glass seal kit (not shown)	1

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