

PEVEX SERENITY 40D 4.5kW INSET



MULTI FUEL STOVE

**SUITABLE FOR INSTALLATION IN A STANDARD UK 16" X 22" OPENING
CE AND EN13229 APPROVED**

**APPROVED FOR USE IN SMOKE CONTROL AREAS WHEN
BURNING DRY WOOD LOGS OR AUTHORISED FUELS**

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Congratulations on the purchase of your new Modern Serenity 40D Inset multi fuel stove designed to fit into a standard 16" x 22" fireplace opening. Your new purchase will provide you with a level of pleasure and comfort not previously experienced in your home.

The Serenity 40D is a British designed and produced contemporary convector stove and has been designed for easy installation and ease of use giving a lovely flame pattern when burning wood and a wonderful warm radiant and convection heat. It is highly efficient with its clean burn firebox with efficiencies above 80% (Net) when burning wood and features a modern black bordered glass window, vermiculite insulated firebox, convector casing and fitted with unique firebox heat scrubbing tubes to generate even more useful convection heat.

Please read and follow the advice and instructions on the safe and efficient operation of your stove to ensure it has a long trouble free life and also read and follow the installation instructions before installing the stove.

PART 1 OPERATING INSTRUCTIONS

A stove compared with an open fire is a very efficient heating appliance and must be installed and used safely and wisely, it is important to understand the working of such an appliance and to understand the process of converting the fuel into heat and its efficient transfer from the firebox to the room in order to gain the most from the stove.

A stove creates an almost perfect environment to burn wood in. The firebox will run at a very high temperature ideal to burn the volatiles given off in the burning process and the concise air controls allow minimal heat loss into the flue. A Serenity stove operates at an efficiency of between 66.5% and 75% on a Gross CV basis (73 - 83% Net) and is very much more efficient than an open fire avoiding the wasteful draughts normally associated with that type of appliance

Burning wood is the natural way to store the sun's energy to then be released in a carbon neutral process to heat your house when the need is most. On a cold winters night there is nothing to beat the release of heat and flame in a stove to raise the spirit.

The preparation and burning of wood as a fuel in stoves can be traced back many centuries, however it is a forgotten or maybe never fully discovered activity in the United Kingdom, we have much to learn from our European and Scandinavian neighbours whose colder winters have instinctively led them into a natural wood burning culture.

Wood for fuel is probably one of the most environmentally friendly energy sources, it is carbon neutral, trees used for fuel production regenerate very quickly and it is a pleasant and satisfying job preparing the firewood for the coming winters.

WARNING NOTE

Properly installed, operated and maintained this stove will not emit fumes into the dwelling. Occasional fumes from de-ashing and refueling may occur. However, persistent fume emission is potentially dangerous and must not be tolerated. If fume emission persists, 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 appliance
- 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 flue way or chimney blockage. For your own safety these must be kept clean at all times. **Any permanent air vent provided for combustion air must not be blocked off. There must not be an extractor fan fitted in the same room as the stove as this can cause the stove to emit dangerous fumes into the room.**

CHIMNEY CLEANING

The chimney should be swept at least once a year for smokeless fuels and a minimum of twice a year for wood and other fuels. It is important that the flue connection and chimney are swept prior to lighting up after a prolonged shutdown period. If the stove is fitted in place of an open fire then 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.

In situations where it is not possible to sweep through the stove the installer will have provided alternative means such as a soot door. After sweeping the chimney, the stove flue outlet and the flue pipe connecting the stove to the chimney must be cleaned with a flue brush.

It is possible to sweep through the Serenity stove by removing the lower vermiculite baffle and upper steel baffle to gain access to the flue pipe. The method of removal is described later in the manual on page 7.

The connecting flue pipe and stove baffle should be checked monthly to clear any fly ash or soot deposits.

USE OF A FIREGUARD

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 BS6539.

INSTRUCTIONS FOR USE:

First Firing

The stove has been treated with a heat-resistant coating, which hardens at a temperature of approximately 250⁰ C. This hardening process causes the production of smoke and malodorous fumes, so the room must be very well ventilated.

During the first firing, which should be carried out using approximately 1 kg of wood, the stoking door must be left slightly open and must not be closed until the stove is cold. This is to prevent the sealing rope sticking to the stove.

RECOMMENDED FUELS

The recommended fuels that can be burnt on these stoves are dry/seasoned wood logs and smokeless fuels.

Correct firing provides optimal heat output and maximum economy. At the same time, correct firing prevents environmental damage in the form of smoke and malodorous fumes and also reduces the risk of chimney fires.

Well seasoned woodfuel is essential for correct use. Make sure your fuel is kept dry. If the fuel is wet, a large proportion of the heat will be used to vaporize the water, and this energy will disappear up the chimney. It is clearly not only uneconomical to fire with wet fuel but also, as mentioned above, increases the risk of producing soot, smoke and other environmentally damaging by-products. When wood is used as a fuel it is important that it is dry, i.e. wood with moisture content less than 20%. Ideally firewood needs seasoning for at least 2 summers, logs should be stacked in a well ventilated situation, and logs over 100mm diameter should be split. The stack should be protected from rain but remain well ventilated.

APPLIANCE	WOOD LENGTH
Serenity 40D	290mm



FUELS USED IN SMOKE CONTROL AREAS

In a building in a smoke control area you are legally only allowed to use this appliance to burn dry/seasoned wood logs of the maximum length given above or authorised fuels. If you are unsure if your property is located in a smoke control area or need further guidance on fuels you should contact your Local Authority.

MIXED FUEL USE

Use of brown coal and smokeless fuel

Uni-logs (brown coal brickettes) may be burned on the stove. Good performance will be obtained using these brickettes. Approved smokeless solid fuels may also be used. Avoid over firing. A mixture of seasoned wood and smokeless fuel will provide extended burn times with a good flame picture.

USE OF BROWN COAL OR OTHER NON-AUTHORISED FUELS SHOULD NOT BE USED ON THE APPLIANCE IF LOCATED IN A SMOKE CONTROL AREA UNLESS IT IS PART OF A MANUFACTURED AUTHORISED FUEL.

It is essential when burning smokeless solid fuels that the ash pan is emptied on a daily basis. Ash must not be allowed to build up below the grate. Note brown coal and smokeless fuel should also be stored dry and ventilated.

Use of **Petroleum coke and liquid fuels** will invalidate the guarantee and **must not be used** as this will cause the stove to “over fire”. Operating at temperatures in excess of 500°C will cause irreparable damage which is not covered by the guarantee.

FUEL CONSUMPTION AT NOMINAL HEAT OUTPUT

	Nominal Output KW	Wood kg/hr	Smokeless Fuel (Ancit) kg/hr
Serenity 40D	4.5	1.4	0.7

Tested according to the requirements of EN13229 and is fully assessed and considered to meet UK smoke control requirements (see Appendix A). Note that different fuel consumption results may be achieved due to other factors which include the fuel, chimney draught and atmospheric conditions etc.

The nominal output is the output to which the stove has been tested. In practice, the stove burns with a heat output range between its minimum and maximum ratings.

LIGHTING AND COMBUSTION

The primary air is drawn into the stove through the air slider located below the door handle on the right hand side of the stove; pull the handle out to allow air to enter and push it in to shut off the air supply. As you pull the air slider out from its fully depressed position you will feel a “notch” which is a factory preset position allowing 20% of primary air to enter the stove. This is a recommended position during normal operation of the stove after the fire has established in the firebox, allowing a preset bleed of air to enter. In practice however, you may find it necessary to reduce/increase the air supply depending on the fuel you are burning and the draught of your chimney.

The secondary air is regulated with the aid of a slider above the door; sliding it to the right increases the air supply. The heated secondary air flows down the viewing window creating an “airwash” to keep the glass clean and feeding the fire; it is this secondary combustion that completes the burning cycle by turning unburned volatiles into flame. Finally, any remaining unburnt volatiles are burnt when preheated tertiary air enters the firebox through the tertiary air diffuser at the rear of the firebox.

As much as half of the heat obtainable from wood is achieved from secondary and tertiary combustion. It is important that the firebox temperature is maintained at a high level as this also aids complete combustion. For example, when first lighting a stove it is important to get it really hot before closing the burning rate down. The firebox temperature should reach 400°C which equates to approximately 250 °C at the flue pipe

The Serenity 40D inset stove is designed and has been tested to burn extremely cleanly with very little smoke discharge and is exempt for use in smoke control areas throughout the UK when burning dry wood logs. To comply permanent stops must be fitted to ensure that the secondary and tertiary air controls cannot be closed beyond 1.1cm open and 2cm open positions respectively. A permanent amount of secondary air must therefore enter the firebox to feed the fire producing negligible amounts of smoke and unburnt hydrocarbons. **The appliances will only be considered as exempt appliances if these stops are in place.**

LIGHTING THE STOVE



1. Put 2 small logs on a bed of ash spaced about 6-7cm apart. Place some scrunched up newspaper/paper with 1-2 firelighters in between .



2. Neatly stack dry kindling on top of the logs into approx 3 layers and light the bottom fire lighters.



3a. Fully open top air slider



3b. And lower air slider and leave the door slightly ajar to allow air to enter and the fire to establish.



4. With the door slightly open the fire will quickly build warming the stove and chimney. After about 5/10 minutes the door can be shut and the stove can be controlled by the air sliders. Shut the primary air slider to its 20% position and control the burning rate with the secondary air to give optimal combustion.



5. After about 40/50 minutes and when the last flames go out a red hot ember bed will be left and further wood can be added.



6. Place 2/3 logs on the ash bed ensuring that the wood is not stacked too closely and with the air sliders fully open. The wood will ignite in 2/3 minutes. Shut the primary air and adjust the secondary air for optimum combustion.

Note:

If the fire dies down completely or embers are smoldering then it will be necessary to place some screwed up paper or firelighters onto the grate with some kindling or small pieces of wood to reestablish the fire once again. Leave the air sliders fully open and allow the fire to build before refueling with larger pieces of wood and then adjust the sliders for optimum combustion.

Do not overload the firebox by loading above the tertiary air diffuser at the back of the firebox and ensure that the wood is retained by the log guard. Always ensure that the wood is not tightly stacked so that air can circulate freely.

Do not leave door left open: Operation with the door open can cause excess smoke. The appliance must not be operated with the appliance door left open except as directed in the instructions.

Do not leave the airsliders completely open: Operation with the airsliders permanently open can cause excess smoke. The appliance must not be operated with air controls or dampers door left open except as directed in the instructions.

SAFETY PRECAUTIONS

A risk of blowback can arise if too much dry wood is placed in the stove and burnt with insufficient combustion air. This may result in the production of gaseous compounds which can ignite if the intake of primary and secondary air is insufficient and the firebox temperature too low.

To achieve optimal firing and the best possible heat output, the primary and secondary air intakes must be correctly adjusted. As a general rule, the fire should be regulated using secondary air supply, with which smoke and gases are

ignited. This produces a high level of efficiency and also keeps the viewing window clean because the secondary air 'washes over' the glass.

For woodburning it is an advantage always to leave some ash lying in the bottom of the combustion chamber. Take care when emptying the ash pan, as cinders can continue to burn in the ash for long periods of time.

NOTE: It is always advisable to leave the top air control open to allow the stove to operate to optimum combustion.

MAINTENANCE OF MATT BLACK PAINT FINISH

The surface of the stove has been treated with heat-resistant paint. The stove should be cleaned with a soft brush. Any damage to the surface in the form of chips or scratches can be repaired using touch-up paint, which is available in spray cans. If the stove has become grey in colour due to overheating, touch-up paint of this kind can be used to repaint the stove entirely. Alternatively the stove can be maintained with a traditional type of stove polish of which there are several proprietary makes available. **Do not use an aerosol spray when the stove is alight.**

CLEANING THE GLASS

Incorrect firing, for example using wet wood, or slow burning can result in the viewing window becoming covered in soot. This soot can be easily and effectively removed by using a damp cloth or when necessary a proprietary stove glass cleaner or an ordinary scouring liquid, when the glass is cold

OPERATIONAL PROBLEMS

In the event of smoke or malodorous fumes being produced, you must first check to see whether the chimney is blocked. The chimney must, of course, always provide the minimum draught necessary to ensure that it is possible to regulate the fire. However, the chimney draught may also be affected by weather conditions. Both wind and temperature can affect the performance of a chimney.

In cases where the wood burns too quickly, this may be due to excessive chimney draught. You should also check to make sure that the door seal is intact. If the stove produces too little heat, this may be due to the fact that you are firing with wet wood. A large proportion of the heat output will be used to dry the wood, resulting in both uneconomical heating and an increased risk of soot and tar deposits forming in the chimney.

STANDING DOWN AT THE END OF THE SEASON

At the end of the burning season the stove should be prepared for the stand down period, this is to prevent corrosion both in the stove and flue system.

The stove should be cleared of all ash, the baffle and flue ways cleared of soot and fly ash and the chimney swept.

All air vents should be in the open position and it is recommended that the door is left ajar to ventilate the chimney.

This is the ideal time to check for parts that may need replacing and to lubricate door hinges and catches. Also it is recommended that all screws holding the glass in place are removed and replaced with a high temperature lubricant.

PART II INSTALLATION INSTRUCTIONS (for UK excluding Scotland where local Building regulations must be conformed to).

It is essential that the installation is carried out by an experienced and competent installer who is HETAS registered (see www.hetas.co.uk). Under England & Wales Building Regulations it is a legal requirement that the stove is either installed by a competent person, which is an installer who is HETAS Registered, or that the installation is carried out under Local authority building control approval and inspection.

See the Building Regulations 2002 Approved document J

http://www.planningportal.gov.uk/uploads/br/BR_PDF_ADJ_2010.pdf

RECOMMENDED READING

Fireplaces Chimneys and Stoves by Michael Waumsley.
Published by the Crowood Press. ISBN1 86126 746 0

Health and Safety Precautions

Special care must be taken when installing the stove such that the requirements of the Health and 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 cases 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 the 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

ASSESSING THE REQUIREMENTS FOR THE INSTALLATION OF A STOVE

Your supplier or Hetas registered installer will be able to advise you on the individual requirements that are needed to install a stove safely.

It is most important that the stove is the correct size. This means that the output should match the heat requirements of the room. Also to be considered is the fuel choice and the provision of suitable and convenient storage with easy access to the stove.

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.

Having decided on the ideal appliance then the installation should be fully assessed. The chimney requirements should be carefully assessed. Hearth requirements should be carefully specified, remember the building regulations lay out the minimum requirements. The chances of damaging a floor or carpet will be much reduced if the depth of a hearth is extended beyond the minimum. Any combustible materials should be at least 500mm distant from the sides and back and 800mm clear of the door and should never be allowed to exceed 80 °C. For further advice on chimney and hearth also see details below.

Assess also the fireplace surround if any is to be used, it is essential that combustible materials are not used close to the stove and flue pipe of a stove. This requirement may vary depending on the construction of a stove but is advised to keep combustible materials at least 50cms or preferably 1metre away from the stove or flue pipe.

THE FOLLOWING ITEMS ARE INCLUDED WITH THE STOVE

A pair of leather gloves for operation of door handle and refueling the stove, calcium silicate (Skamolex blue) convector casing insulating panels, an offset flue collar, and ashpan handle that can also be used for opening the stove door.



Leather gloves



Skamolex blue (calcium silicate) insulation material



Offset 5" dia flue collar

HEARTH

The fireplace and hearth should conform to at least the minimum requirements laid out in the Building Regulations Approved Document J. The hearth should be able to accommodate the weight of the stove and its chimney if the chimney is not independently supported

Stoves must stand on a non-combustible hearth that must extend at least 300mm in front and 150mm to either side and rear if the flue outlet is from the top.

DIMENSIONS AND CLEARANCES

No Combustible materials should be used in the construction of a fireplace or within the chimney or used in the installation of a stove, flue or chimney.

Care should also be taken in the construction of hearths or fireplaces to ensure that suitable provision is taken to allow for expansion and contraction of the construction materials.

CLEARANCES FROM COMBUSTIBLES

Recommended minimum clearance from rear to combustible material 300mm
Recommended minimum clearance from front to combustible material 800mm

REMOVAL OF BAFFLES

The Serenity is fitted with a twin baffle system to improve efficiency with the lower one made from vermiculite and the upper one made from steel. Removal of both baffles gives immediate access into the flue system for sweeping. Both baffles have been designed to be easily removed without the need for tools.

1. Removal of lower vermiculite baffle



1. Serenity showing the lower vermiculite baffle in place



2. Carefully remove the left hand fire brick



3. Support the baffle and carefully remove the right hand brick

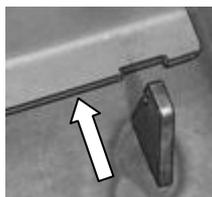


4. Gently remove the baffle by tilting it and easing it out of the stove

2. Removal of upper steel baffle



1. Lift the rear of the steel baffle up to clear the rear locating pegs and ease it backwards



1b. locating peg



2. As you move the baffle back it will disengage from the front support slot allowing it to be rotated down on the rear pegs



3. The baffle can now be lifted off the rear pegs and tilted out of the stove. Assembly is the reverse

CHIMNEY IMPORTANT WARNING

This stove must not be installed into a chimney that serves any other heating appliance. The chimney must be a minimum height of 4.5 metres overall height and be in accordance with Building Regulations Approved Document J. Any chimney, either masonry or a prefabricated stainless steel system must be constructed and installed according to building regulations. It is recommended that the minimum diameter of the flue liner is 150mm (125mm when Defra approved). For new masonry chimneys we recommend pumice cement liners. A chimney draught of at least .06" (1.5mm) is recommended. If it is found that there is excessive draught in the chimney then a draught stabiliser should be fitted.

Provision must be made for easy sweeping of the chimney. A soot door can be built into a masonry chimney and flue pipe is available with cleaning doors.

Any bend in the chimney or connecting fluepipe should not exceed 45°. 90° bends should not be used.

PREPARING THE OUTER CONVECTION BOX FOR INSTALLTION

The design of Serenity is such that the inner combustion unit is easily fitted or removed from the outer convection box. The outer convection box forms the critical connection to the chimney with the bolt on offset flue collar.

Before fitting the outer convection box, it will be necessary to remove the inner combustion chamber. The stove is shipped fully assembled so it will be necessary to remove all the inner firebricks to gain access to the adjustable feet. It will be easier to conduct the installation with the door removed and reassembling it after the stove is fully installed. Remove the upper and lower door pins whilst supporting the door which will allow it to be lifted away (**fig A**). Remove the side bricks and lower baffle which has been described in the previous section in “removal of baffles” and then the rear brick, grate and base bricks (**fig B**) which can then be easily removed exposing the adjustable stove feet (**fig C**).

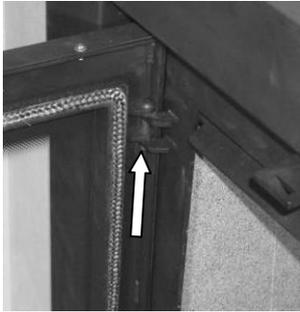


Fig A Upper door pin



Fig B Base and rear bricks



Fig C Adjustable feet

With all the base bricks removed, it will be possible to undo the 4 adjustable feet using either a 17mm socket or box spanner (**fig D**). Undo the bolts in a figure of 8 manner to lower the combustion unit in the outer convection casing which will disengage it from the offset flue outlet. Once the bolts have been undone by about 20mm then the stove unit can be slid out of the convection casing (**fig E**). The outer convection casing is left with the 125mm flue outlet attached which is held on with three 13mm bolts which needs removing to allow for chimney connection (**fig F**).



Fig D Undo the adjustable feet with a 17mm socket



Fig E Slide stove out of outer convection casing



Fig F Outer convection casing and offset flue outlet

The outer convection box should be fitted to a pre-prepared fireplace recess and insulated to the sides and rear using rockwool, calcium silicate or vermiculite cement.

The chimney connection should be made when fitting the outer convection box, the flue outlet may be either:

- Connected to a flue pipe and liner with backfill (**Fig G**)
- Flaunched into an existing gather using a suitable mortar (**Fig H**)
- Directly connected to an existing chimney with a sump connector or closure plate (**Fig I**)

It is important that the outer convection box is completely sealed to the chimney from the room.

SERENITY STOVE – EXAMPLES OF CONNECTION INTO CHIMNEY SYSTEMS

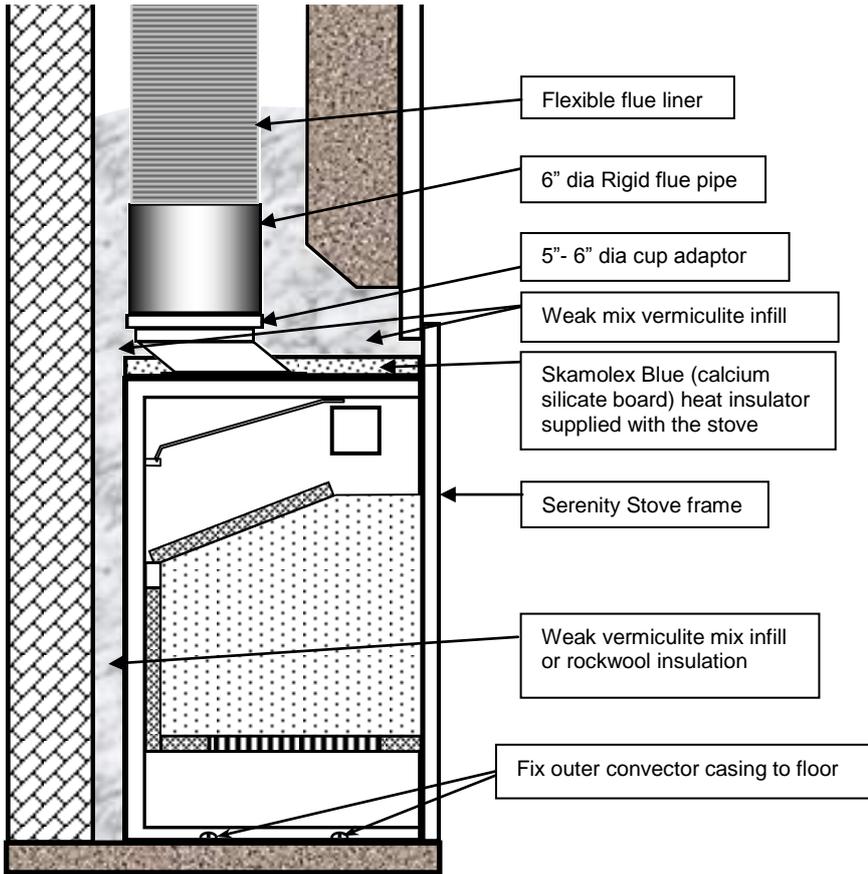


FIG G – Connection into a flue liner

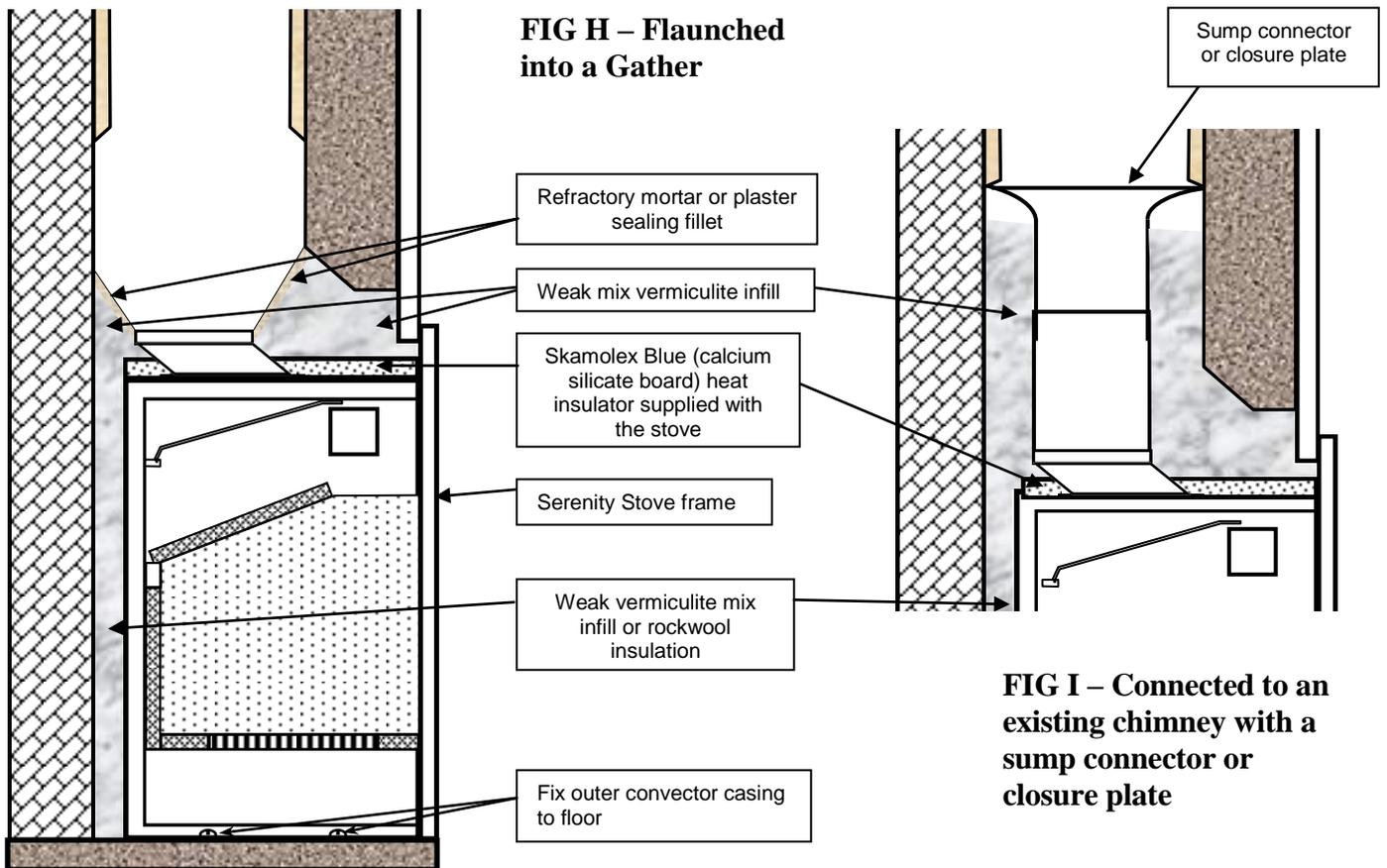


FIG I – Connected to an existing chimney with a sump connector or closure plate

THE CHIMNEY CONNECTION.

The flue pipe for connecting the appliance to the chimney must be installed according to Building Regulations Approved Document J and its diameter must be not less than the diameter of the outlet of the appliance and must be a minimum 6" diameter (unless Defra approved which allows it to be installed with a 5" dia flue). The fluepipe must be adequately sealed to both the stove and the chimney to avoid any leakage.

We recommend also that no more than 1 metre of plain uninsulated flue pipe be used to connect to the chimney.

ALL CHIMNEYS SHOULD BE SWEEPED AND INSPECTED BEFORE INSTALLATION OF ANY APPLIANCE

For relining existing chimneys 316 or 904 grade stainless steel liners or pumice cement liners in accordance with Building Regulations Approved Document J should be used. Liners should be suitably insulated. We recommended that any chimney relining is carried out by an experienced and competent installer who is HETAS registered (see www.hetas.co.uk). The HETAS Guide to Approved Products and Services lists Chimneys and lining systems suitable for use with solid fuel.

INSTALLATION OF THE OUTER CONVECTION BOX AND FRAME

Once connection of the flue outlet has been made to the flue and liner, the outer casing can be inserted (**Fig J**) into the pre-prepared fireplace. Ensure that the 1" thick skamolex blue insulator remains on top of the casing when you insert it. The convection box should be pushed fully home until it locates against the front face of the fireplace and checked to make sure it is flush and true before securing to the hearth by drilling and fixing with screws (not supplied). Additional insulation should be included behind and to the sides of the casing (**FIG G**) before you insert the casing, through the flue outlet or pouring vermiculite down the sides of the liner from the top of the chimney.

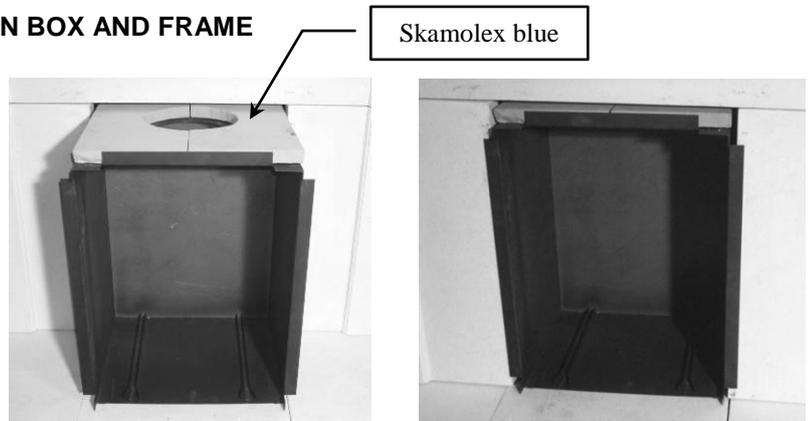
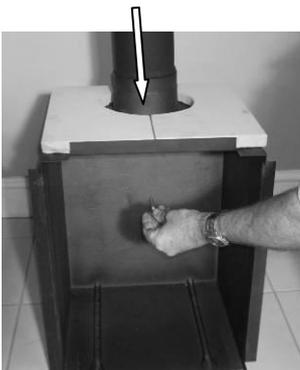


Fig J – Slide the convector casing into the pre-prepared fireplace with the Skamolex blue insulation on top

Fig J - Push the casing all the way home and secure to the floor with screws (not supplied)



The offset collar can now be installed onto the outer convection box by pulling it down through the outlet hole and on top of the casing securing it with the three M8 bolts.



Insert the frame into the convector casing ensuring that it is pushed fully home and correctly aligned. Once the position has been set, drill the inner tails through the preset holes and screw in self tapping screws (not supplied) to secure.

INSTALLATION OF FIREBOX

The firebox is inserted in the reverse order as the disassembly by referring back to figures **A** to **E**. Ensure that the leg bolts are protruding 20mm which will enable the stove to be slid into the convector casing (inside the guide rails) pushing it all the way home. The stove is then “jacked up” by rotating each of the leg bolts by one turn, and in a figure of eight pattern, so that the stove is lifted up evenly until the top air tubes (**Fig K**) are touching the top of the convector air casing (shine a torch into the top convector air gap to check) and ensure that they are touching on the left and right hand tube and along its entire length. This will ensure that the flue spigot on the firebox has fully “docked” with the offset flue collar and the stove is assembled correctly.

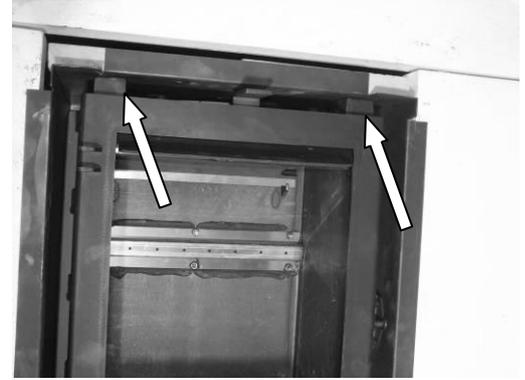


Fig K – Top air tubes must touch top of casing



Assemble the internal baffles beginning with the upper steel baffle in reverse order as shown on page 7.

Insert the rear brick (ensure that it is the correct way round with cutouts for screw heads to the rear) followed by the base bricks and then the left hand side brick. Note that the front base brick has a chamfered edge that lies against the front of the stove. The Skamol baffle can then be gently maneuvered into position sitting it on the side brick and the rear tertiary air diffuser. The right hand side brick is then gently inserted followed by the cast iron grate and the front fence which pushes in between the front brick and the frame.



Insert the ashpan



The final assembly is reassembling the door back onto the stove by inserting the door pins through the hinges and checking that the door latch works correctly. Adjustment of the door latch is possible by removing the right hand side brick and undoing the two locking bolts and resetting the position accordingly.

VENTILATION

Adequate ventilation must be provided in accordance with building regulations (Doc J Oct 2010).

Purpose made ventilation is not required on the Serenity but sufficient adventitious ventilation must be available. Houses built after 2008 where the air leakage rate is less than than 5m³/hour/m² then a ventilator equivalent to 550mm² per kW output will be required (4.5kW x 550mm = 2475mm²).

COMMISSIONING

The installer should carry out the following checks and ensure that the stove is fully functional. We strongly recommend that a first firing is included in the commissioning process

1. Check all flue pipe connections
2. Check door latch mechanism
3. Check door and glass seals are all intact and secure
4. Warm chimney and check draught.
5. Instruct customer in use of stove.
6. Leave instructions for customer
7. Check that after initial firing the door seals are not stuck to the body of the stove

Appendix A

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.

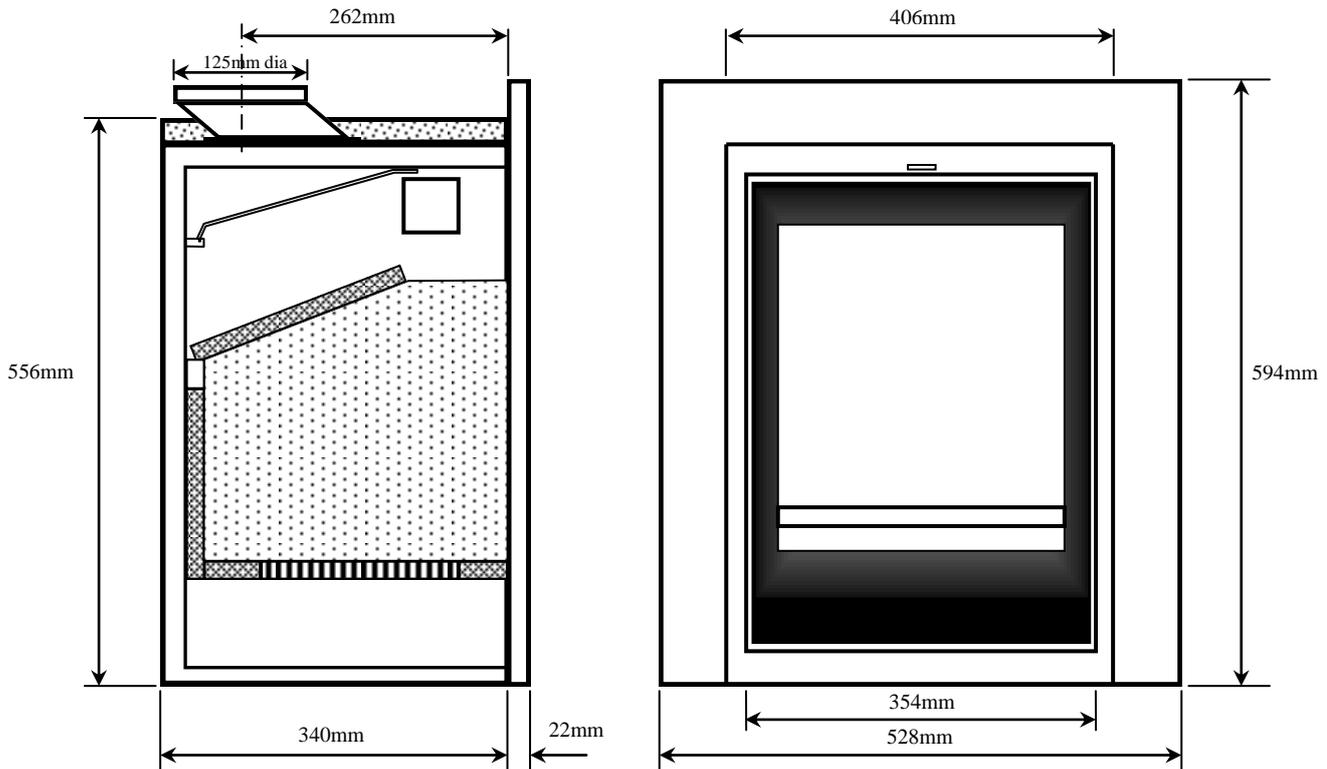
The **Serenity 40D Inset** has been recommended as suitable for use in smoke control areas when burning wood fuel.

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 Clean Air Act requirements.

Appendix B

TECHNICAL DETAILS



TECHNICAL DATA

Nominal output kW	4.5	
Range rating kW	2-5	
Heating area square metres	10-100	
	Wood	Ancit
Average combustion gas temp C	294	262
Efficiency Net	80%	83.5%
CO% @ 13% O2	0.14%	0.21%
Fuel consumption kg/hr	1.4	0.71
Weight kg	55	