



Version 1: 04/05/2023



Ottawa MF12 Ecodesign Multi-fuel Stove + MF12 With Stand

USER GUIDE

PLEASE RETAIN THIS GUIDE FOR FUTURE REFERENCE

Please read this user guide carefully when you assemble, install, operate and maintain your stove.

If you have any more questions, please contact your local dealer.

Warnings

MF12 may only be installed by registered members of a recognised competent person's scheme such as HETAS or under building control approval from your local authority. Failure to do so will void the manufacturer's warranty. This appliance must be installed in full compliance of all current Building Regulations (Approved Document J) and local regulations. All local, national and European standards must be complied with when installing this stove

Your Stove requires regular inspection, maintenance and the flue system swept once a year as a minimum. Failure to do so will void the manufacturer's warranty

MF12 stove are designed to burn wood or solid fuels only. Due care must be taken when the stove is in operation as all external surfaces will become hot. Incorrectly installed heating appliances can cause damage to property. It is common to experience excess fumes from the stove and/or paint upon initial lighting as the coatings cure. Protective clothing must be worn when handling sealants, rope seals, glass, adhesive & insulation. This stove must not be installed into a chimney shared with another heating appliance or in a room containing any form of air extraction.

Technical Specification

Model	Output	Output	Dimensions	Dimensions	Fuel	Outlet Size	Outlet
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	-Wood	- Coal	Overall	Firebox			Location
MF12	12.5kw	8.6kw	W570*D391.83* H575mm	W480*D255*H2 68mm	Multifuel	130mm / 5” Flue	Top & Rear

Clean Air Act

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).

In England appliances are exempted by publication on a list by the Secretary of State in accordance with changes made to sections 20 and 21 of the Clean Air Act 1993 by section 15 of the Deregulation Act 2015. Similarly, in Scotland appliances are exempted by publication on a list by Scottish Ministers under section 50 of the Regulatory Reform (Scotland) Act 2014. In Northern Ireland appliances are exempted by publication on a list by the Department of Agriculture, Environment and Rural Affairs under Section 16 of the Environmental Better regulation Act (Northern Ireland) 2016. In Wales appliances are exempted by regulations made by Welsh Ministers.

Further information on the requirements of the Clean Air Act can be found here:

<https://www.gov.uk/smoke-control-area-rules>

The Ottawa MF12 has been recommended as suitable for use in smoke control areas when burning seasoned wood logs. Each appliance has been factory fitted with a metal stop that prevents closure of the secondary air control beyond 33% and the tertiary air control beyond 25% open.

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.

Before Installing Your Stove

Suitable ventilation must be provided for the installation of your stove for safe, efficient operation and compliance with approved document J of the building regulations. Air vents must remain open at all times and be free of any obstructions. Extractor fans must not be present in the same room as a heating appliance. Please refer to the building regulations for minimum air vent sizes for your stove’s output.

This model is Cool Hearth Rated and can be installed on 12mm superimposed or decorative hearths. These must measure a minimum of 840mm x 840mm. If installed on a constructional hearth in an

existing fireplace, this must extend a minimum 150mm from either side of the stove and a minimum 225mm to the front. (300mm recommended)

Pre-existing chimneys must be in good condition and lined with a 5" flexible chimney liner, as a minimum. This can be stepped up to a 6" for example but cannot be reduced down. If a chimney does not exist, a suitable insulated twin wall flue system must be connected to the appliance. Again, with a 5" system as the minimum. All flue installations must be undertaken by a registered member of a government approved competent persons scheme and under building control approval from your local authority.

Chimney draw must be within specification for this stove to operate. 12 pascals. Anything higher requires a draught stabiliser to prevent over firing.

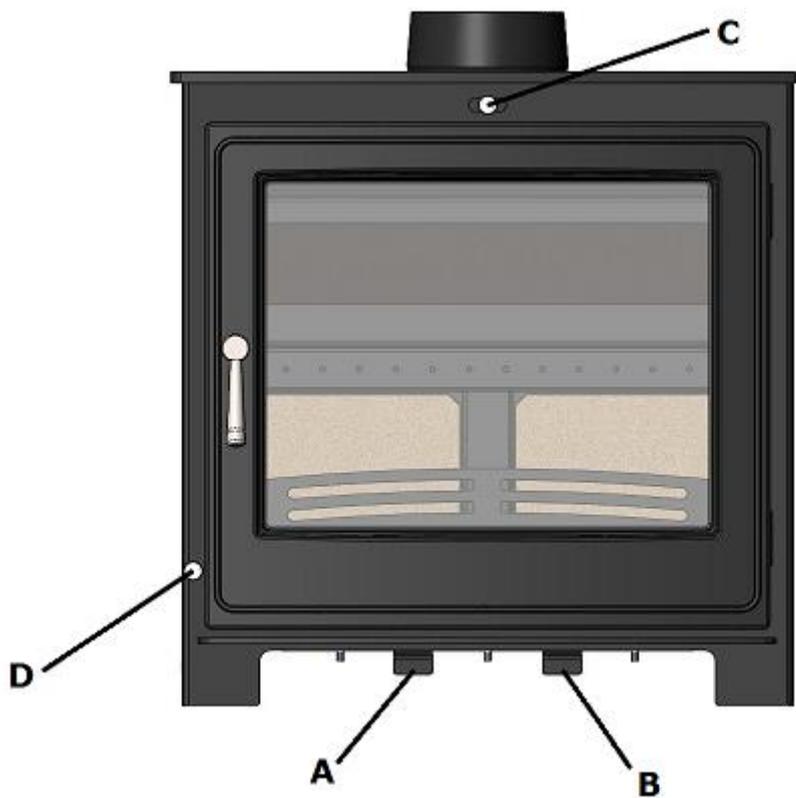
Upon receipt of your stove, please ensure all insulating fire bricks are in position to the sides and rear of the fire box and the baffle plates are secured in position as these may have become misplaced during transit. The outlet collar and blanking plate are supplied with screws for securely fixing to the top and rear outlets. If you are installing this stove in a Smoke Controlled Zone, you must install the smoke control slide plate (found in the flue collar box) .

Please check all components of your stove are in good working condition prior to an initial burn. Your stove has adjustable primary and tertiary air intakes below the door and a secondary air intake above the door, an externally controlled riddling grate and door mechanism.

Space for fire – Distances to Combustible Materials

Model	Distance to Combustibles – Rear (mm)	Distance to Combustibles – Side (mm)	Suitable For 12mm Hearth
MF12	700	400	YES

Basic Operation



Your stove comes equipped with 4 Main controls:

Primary Air Control (A) – The main air control, used predominantly during start-up/lighting of your stove. This works on a push-pull slider system

Tertiary Air Control (B) – Your tertiary air control allows you to control the amount of hot air fired into the burning chamber to re-ignite the smoke for a more complete burn. This works on a push pull slider

Secondary Air Control (C) – This works on a left to right slider system and controls the flow of secondary air into the stove. This air allows the stove burn to be controlled at a lower burn rate, as well as the air wash that keeps the glass clean.

Riddler Control (D) – This is the control for the riddling grate. This works on a push-pull slider system

Lighting Your Stove

Your new stove is fitted with an adjustable primary air intake, controlled by the slider at the base of the model, an adjustable secondary air intake positioned to above the door (which also controls the air wash system) and an adjustable tertiary air intake, controlled by the bottom right-hand slider, for complete combustion of all fuels. The air is drawn from the rear of the stove, through the direct air connection, which allows for the connection of a direct air kit.

It is advised to light a number of small fires to 'bed in' your new stove and ensure the longevity of the metal construction and any coatings. Creating too large a fire too soon can lead to warping of the body of the stove as the metal expands and doesn't reset. You should never use more than 2 quarter logs in the firebox at the same time as this will lead to over firing and will void the manufacturer's warranty.

Successfully lighting a fire can be inhibited by cold air in the flue and changeable weather conditions (please see our section on Autumn & Spring Syndrome) and so our reverse fuel stacking method detailed below provides the best chance of lighting a fire on all occasions as the initial heat created is targeted upwards to warm the air within the flue rather than down into larger logs at the base of the fire box:

1. Check that both the primary, secondary and tertiary air intakes are in the open position.
2. Remove larger lumps of burnt material from the firebox, leaving a 1cm layer of fine ash to insulate the grate.
3. Have to hand all fuel required; kindling (small and larger pieces), firelighters, matches and a selection of logs ranging from small to large quarter pieces.
4. Create a grid of dry kindling using 6 pieces and place firelighters within the 4 squares of the grid.
5. Strike a match and light the firelighters within the grid of kindling and leave the door open.
6. As the kindling takes, gradually place larger kindling on top of the fire and leave the door open.
7. Once the fire is established, spread the kindling a little to expand the fire bed using an appropriate tool.
8. Place the smallest of your logs onto the fire being careful not to extinguish the flames and leave the door open.
9. Gradually build the fire by adding larger logs and begin closing the door. Closing the door will reduce the oxygen feeding the fire so this must be done gradually whilst checking the fire remains established.
10. Once the fire is fully established with the door closed, control the ongoing burn using the air intakes. Wood requires an air supply from above for secondary combustion and is controlled by the secondary air intake whereas coal requires this from below using the primary air intake.
11. Allow for a small build-up of ash when burning wood to insulate the fire box sufficiently or to remove any unwanted ash build up, simply operate the externally controlled riddling grate.
12. To extinguish the fire, close the primary air intake fully and then the secondary. Do not completely close all air intakes at once to allow the fuel to efficiently burn out. Once extinguished, close all air intakes and dampers completely.

Spring and Autumn syndrome

Stoves utilise the effect of air current within the flue to both exhaust the products of combustion and to induce air into the stove.

Normally, because the air within the house is warmer than the outside air the flue is exhausting air from the stove even when it is not operating.

- A hot flue does not “draw” air into a stove, it is the differences of densities that motivate the lighter gases upwards.
- The greater the temperature difference between the gases within the flue and the surrounding air, the greater the difference in densities and the greater the motivation.
- The taller the flue, the greater the weight of the equivalent volume of denser air, the greater the motivation.

During the changeable weather conditions of Spring and Autumn the outside temperature can rise suddenly and become warmer than the temperature within the house.

This causes the air within the flue to reverse its normal flow pattern and air travels down the flue. The most obvious outcome of this will initially be a smell from the flue and while this is not harmful it may be unpleasant if the flue has not been swept as often as it should have been.

Because of the warmer outside temperature, the house will feel colder than it is, and the desire to light the stove and at least match the outside temperature will reveal another problem, the stove will not light.

If sufficient air is coming down the flue the stove will appear to begin its lighting cycle, but smoke will emanate from what are normally air inlets and into the room.

The stove may continue to operate in this fashion for a considerable time but because the flue is operating in reverse there is no possibility of any warm air produced by the stove travelling up the flue to warm it, and reverse the flow.

If the house feels colder than the outside temperature, do not light the stove without clarifying that the air is travelling up, rather than down, the flue.

As mentioned previously, a smell of soot is an indication that the flue is operating in reverse but by opening the stove’s door and placing a hand within the stove, it should be possible to confirm the air

flow. Leaving the stove door open for a few minutes may allow enough air through the flue to warm its fabric sufficiently, to at least stall the air flow, which will make lighting possible.

If you have cold air continuously sinking down the chimney you need to try and get as much heat in the chimney, as quickly as possible. This can be achieved by lighting a few sheets of news paper on some very thin pieces of kindling. The objective is to get that sudden burst of heat up the chimney, to reverse the negative flow.

Over Firing

Over firing any stove is dangerous and means the stove is being used beyond its capacity. If the burner or connections glow red, the appliance is being over fired and will void your warranty. The same applies if the internals for your stove gain a reddish tinge which is a common feature of an over-fired stove.

Under Firing

When fuel is burnt slowly it will produce higher levels of moisture, tar and creosote which will create condensation and deposits in the chimney. If you are to burn your stove at a reduced rate, it must be combined with periods of fast burning to clean the stove. Under firing can be caused by the burning of wet wood. When burning wet wood the stove does not get hot, as you are effectively boiling the water in the wood.

Slow combustion

Should you wish to burn your stove at a slow rate, light the stove in the normal way to achieve nominal burn. Once optimum flue temperature has been achieved, close the primary air control and reduce the secondary air control to no more than 25%. This will allow the fuel to burn slowly whilst still emitting a comfortable heat.

Refuelling onto a low fire bed

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 that the new fuel charge will ignite in a reasonable period. If there are too few embers in the fire bed, add suitable kindling to prevent excessive smoke

Fuel overloading

The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke.

Ash Removal

The supplied ash pan must be emptied regularly and never allowed to build up to touch the underside of the multifuel grate. Some fuels will create more denser deposits than others. Ensure that you clean the stove on a regular basis.

Fuel Guide

Wood fuel naturally has high water content and is not suitable for combustion until seasoned for approximately two years to achieve a moisture level below 20%. Only then can this be used in your stove. Wood fuel purchased from an approved source may still require some drying out to remove surface water before use. We recommend only using fuel from approved Woodsure suppliers – look for the Woodsure – Ready to Burn logo.

High density hardwood has a slow, steady output producing twice the heat of softwood and is carbon neutral. For perfect fuel storage, please allow for plenty of air to circulate your wood fuel.

Refuelling Periods and Procedure

The efficient burning of your stove depends on many factors. The type of fuel you use will define how often you need to refuel the stove. Hard wood will burn longer and steadier than softer woods, which will burn quickly and produce less heat. We advise the use of Seasoned Hard Wood in log sizes which do not exceed the maximum log size.

We suggest that you refuel every 45 minutes to 1 hour, dependent on fuel.

Wood fuel with water content greater than 20% ('green wood') must not be used for combustion in a MF12 stove. The recommended maximum dimensions of wood logs are as specified below:

Model	Maximum Length - mm	Maximum Diameter - mm
MF12	480	200

Any moisture must evaporate before the wood fuel will produce heat and during this process the wet wood will create excessive tar and creosote deposits, damaging both your stove and chimney system and increasing the risk of a chimney fire.

Never burn plastics, household waste or treated timber in your stove.

At nominal output, refuelling is required approximately every 45 mins - 1hr. When refuelling, open air intakes to establish a hot bed of fuel and allow to burn at maximum output for a few minutes before adjusting air intakes. If there is not a sufficient hot bed of embers when refuelling, smoke may be emitted from the appliance. Use smaller logs or kindling to reduce this. Do not overload the fire box. Fuel load should not rise above the insulating fire bricks and/or touch the baffle plate.

Operation with the door open can cause excessive smoke. Operation with the air controls or appliance dampers open can cause excessive smoke. The appliance must not be operated with air controls, appliance dampers or door left open except as directed in this user manual.

Maintenance

Your new stove must be regularly maintained.

The grate should be cleaned after use and free of heavy build-up of ashes to prevent this from burning out, especially with the use of anthracite coals.

The stove, connectors and chimney should be swept regularly, recommended three times a year by HETAS.

Please check fire bricks regularly. These will crack due to the heat of the stove, but this will not affect operation or heat output. Replacement bricks can be purchased when they crumble or disintegrate.

Allow the stove to cool before cleaning surfaces with a soft brush or lint free cloth. Heat resistant coatings are available to renew the finish.

Remove and clean the baffle plate once a month to remove tar and sooty deposits.

Sooty deposits will be removed from the glass through the application of high heat (air wash) and can also be cleaned when cool with a suitable glass cleaner.

Only replace stove glass with heat resistant glass. Wet logs, pokers and slamming will damage the glass. Glass is not covered under any guarantee because of this.

Where a chimney has previously served an open fire, a second sweeping is recommended within a month of using your stove as the higher temperatures may dislodge previously embedded soot and tar deposits.

When not in use (through the summer months), it is advisable to ensure the stove is clear of all ash and fuel and air in takes are left open to prevent condensation build up.

Do not modify your stove and ensure chimneys are clear before every heating season.

Rope seals will require checking and potentially replacing annually. Check all moveable parts regularly.

To monitor the output and efficiency of your stove, we recommend the use of a Stove Thermometer, available from your local approved dealer.

To maximise the output and efficiency of your stove, we recommend the use of a Swift or Swift Plus Stove Fan, available from your local approved dealer.

Trouble Shooting

The most common assumption amongst stove users is a fault with the stove. This is incredibly unlikely due to the limited mechanical nature of a wood burner. Stoves are not designed to be airtight and the effective lighting of a fire, control and draw is dictated by the chimney system which can easily over or under draw due to many factors.

Fire Won't Light

Is there sufficient ventilation in the room to supply air to the stove? A permanently open-air brick must be installed with your stove and extractor fans must not be present. Are the air intakes open and free from blockages? Is an approved fuel being used in line with the guide in this user manual? Has the chimney been swept? Does the flue draw fall between the required levels?

Fuel Burns Quickly

Over firing occurs when too much air is being drawn into the stove due to the chimney system over drawing. Do the doors close correctly? Are rope seals intact? Are the glass retaining clips loose? Is the correct fuel being used? It is not unusual to require a draught stabilizer to reduce the draw on a stove due to excessive flue draught.

Blow Back

If the doors are closed prematurely or intakes are not open enough after refueling, small explosions can force air through the seals of the stove.

Smoke Leaks From The Stove

As stoves become more insulated and efficient, greater care must be taken when re-fuelling to prevent smoke from entering the room when opening the door. To minimise this, we recommend only re-fuelling when the fuel has burned right down and then 'burp' the door by opening initially just a crack. Then allow the airflow in the burning chamber to settle before completely opening the stove door and re-fuelling.

If the chimney system has been installed in line with current building regulations by a registered installer, this will always provide the required draw to remove all harmful gases and smoke from the fire box. If smoke is emitted from the stove, please refer to your chimney installer.

If you are having persistent issues with smoke entering the room, then you may need to speak to your installer again but issues to look at include; Is the system at least 4.5m? Are there any horizontal runs in the flue system greater than 150mm? Is the chimney blocked? Are there strong

winds pushing the smoke back down the chimney? Is the flue diameter correctly sized? Are air vents open? Is a correctly sized air brick installed in the room the stove is in?

Glass Blackens Quickly

The air wash system fitted as standard in a stove utilises the most effective system of warming the air along the entire length of the fire box before jetting it down behind the glass. Increasing the heat and opening the secondary air intake will clear the glass.

The Stove or Door Has Warped

This is due to over firing of the stove beyond its capacity. You must start with small fires over the course of a few days to 'bed in' the stove before taking it to maximum output.

No Heat is Being Emitted

Hot air rises and will be lost up the chimney if this is not suitably capped off with a Chimney Closure Plate (Register Plate) and sealed with a heat resistant cement or silicone. Is your chimney over drawing and burning through fuel too quickly? Does your wood fuel have less than 20% moisture content? Is the baffle plate sited correctly? Is your stove fitted too tight in the fireplace, without a good size gap around it? The stoves works by air flowing around it, being heated up and pushed back into the room. If there is no air flow around the stove, the heat will not floe back into the room.

Open the stove door and listen for wind up the chimney. If this is the case, install a draught stabiliser or damper to prevent this. The

Protection Against Fire Risk

When choosing where to site your stove, it is imperative that you adhere to the minimum distances to combustibile materials as quoted in this manual. During prolonged use of the stove, the radial area will always be of an elevated temperature to the rest of the room.

Whilst the minimum distances are more than sufficient to fixed items, care should be taken to ensure that items such as curtains, small soft furnishings such as padded foot stools etc are not likely to be placed in this area.

Another risk factor to consider is the storage of logs around the stove area. If piled close to the sides of the stove, heat will build up during the prolonged use of the burner. Over time, this will cause the core of the logs to heat which could cause them to start smouldering. If this goes unnoticed, it can lead to ignition of the logs.

If unsure, or in need of advice, please do not hesitate to contact either your installer or directly.

Chimney Fire Prevention

Causes

The biggest cause of chimney fires is a build-up of deposits such as wood tar or coal soot. As these build up over time, the risk of chimney fire becomes greater. The deposits will release combustibile volatiles as they heat up from the fire below. Eventually, these may ignite if the temperature reaches ignition point.

The easiest and most effective way to stop this happening is regular cleaning of the flue/chimney. This should be done in ratio to the fire usage. We recommend flue sweeping at least once a year.

How To Spot A Chimney Fire

The first sign of a chimney fire is a roaring noise. This is coupled with excess smoke pouring from the chimney pot. If you see flames coming from the chimney, this will point to the whole flue being alight.

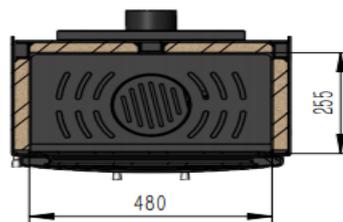
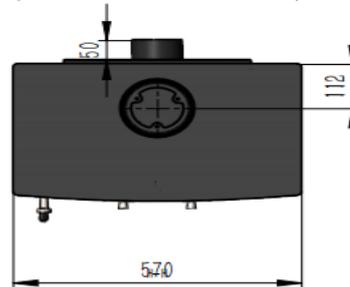
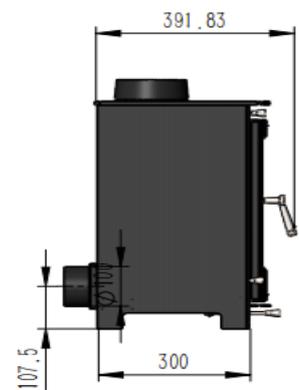
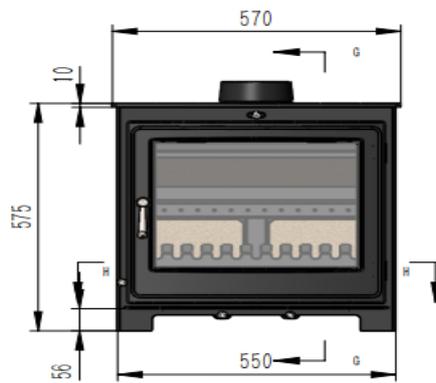
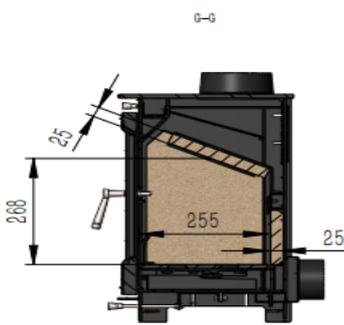
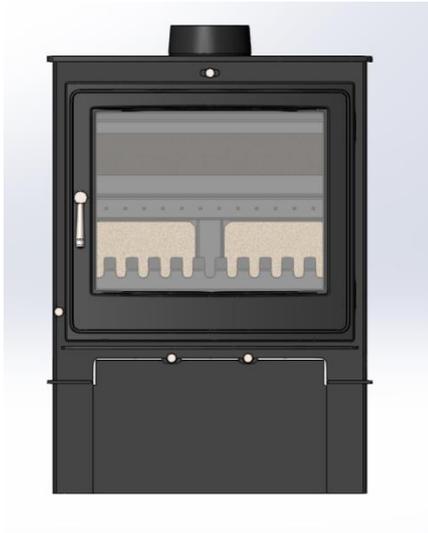
If you discover a chimney fire, please take the following action:

1. Call the fire brigade
 2. Ensure all air vents and flue dampers are shut to reduce the chimney fire's oxygen supply
 3. Move flammable materials, furniture, ornaments away from the fireplace
 4. Feel the chimney breast throughout the house - if it is getting hot then move furniture away from it
 5. Do not pour water on the fire if you have a stove
 6. Ensure the Fire Brigade can access the loft space Ultimately, ensure that you are safe from harm.
- Your brand-new stove has been lovingly crafted and built to last and will be your companion for life if cared for and maintained correctly.

It may be the industry standard to solely guarantee the body of a stove, but we understand that the safe, efficient, ongoing operation of your stove involves much more.

Technical Drawings/ Performance Data

MF12	Wood	Anthracite
Nominal Heat Output kw	12.5 kW	8.6 kW
Total Efficiency %	81.0 %	75.5 %
Mean CO Emission (at 13% O2)	0.05%	0.08%
Flue Gas Mass Flow g/s	9.0	8.6
Mean Flue Gas Temperature °C	282°C	285°C



Guarantee

The main body of your stove is guaranteed for 5 Years.

Incorrect use or installation not carried out by a registered HETAS installer will void the guarantee. The only exceptions will be if the install has been signed off by your local authority or suitably qualified Oftec installer. In addition to this the stove must be serviced annually by a suitably accredited chimney sweep or stove installer. For example, HETAS / METAC / NACS. In this service any perishable parts that are damaged will need replacing. Please keep hold of these receipts, as they will most likely be required in an unlikely event that a claim was to be made. We will only ever be liable for the stove itself and will not cover the cost of installation or de-installation of a product. We urge customers to check the stove over prior to it being installed to double check there is no courier damage or obvious defects with the stove. Any potential Issues are easier to resolve before the stove is installed.

Notes:

If a fire brick is only split but is still fully protecting the shell, then it does not always need replacing in the service. They only need replacing when they have crumbled away, exposing the stove's shell.

If the seal is leaking air into the fire this does need changing right away. Any excess air could cause the burner to over fire. In some cases, the rope is fine and the handle simply needs adjusting to make the door lock a little tighter.

If the glass is not split and is only crazed then it does not need replacing to keep in line with the guarantee terms.

Please keep a record of all services as this will be required if a claim is ever put forward.

As a company we will only ever be responsible for the product itself and would not cover installation / de-installation of any product that did have to be replaced.

The guarantee period will begin when the stove has been invoiced. Please keep hold of your invoice as this will be requested if a claim is started. If this is not provided upon request, we will not be able to escalate your claim. The guarantee will begin from the sale date on the invoice and we do not cover any cost incurred when removing faulty appliances or installing new ones, even if it has been proven that the stove is faulty. For full guarantee details please visit www.ecosystoves.co.uk. With every claim we will require a signed copy of the sign-off sheet.

BROKEN FIRE BRICKS



It is common for vermiculite bricks to break. They are fully heat resistant but can be quite fragile. The most common bricks to break are the base and back bricks as these take the brunt of abuse. To ensure the longevity of your fire bricks, please ensure that you gently place fuel in the fire and do not over stack fuel. We would also suggest leaving a small bed of ash in the fire at all times. This helps the wood burn more efficiently and also acts a cushion between the log and the brick itself. If a brick is split it will not need replacing and this could potentially happen at any point. We only suggest changing bricks when they have crumbled away, exposing the stove's body.

BROKEN / CRAZED GLASS



The glass used in all fires is fully approved heat resistant ceramic glass. This glass will not break through heat but can easily break if struck with a log or similarly hard object. This is why the glass is not covered by any manufacturer of stoves. Common causes for glass breakages are customers closing the door when a log is still sticking out. Glass will not always break straight away and can be chipped or weakened. It will then often break at a different time with seemingly no contact. When replacing glass, ensure you only pinch up the glass clips. If they are over-tightened it could cause the glass to break.

Cloudy, 'milky' or crazed glass is caused by unburned acidic condensates etching the ceramic glass and unfortunately this cannot be easily removed. It is definitely not faulty glass but instead does have more to do with the quality of the fuel that you burn and the way that you operate your stove (long slumbering). This is less common on wood-only models as it is often caused by the high sulfur content in some coals. It is, however, possible. If your glass is crazed, it does not need changing and is safe to use.

Rusty Stove



All stoves on the market are either made from mild steel or cast iron. The mild steel models like this are shot blasted and then painted with high temperature black paint. This will protect the stove but if the stove remains damp or wet for a long time the oxidization process (surface rusting) will begin.

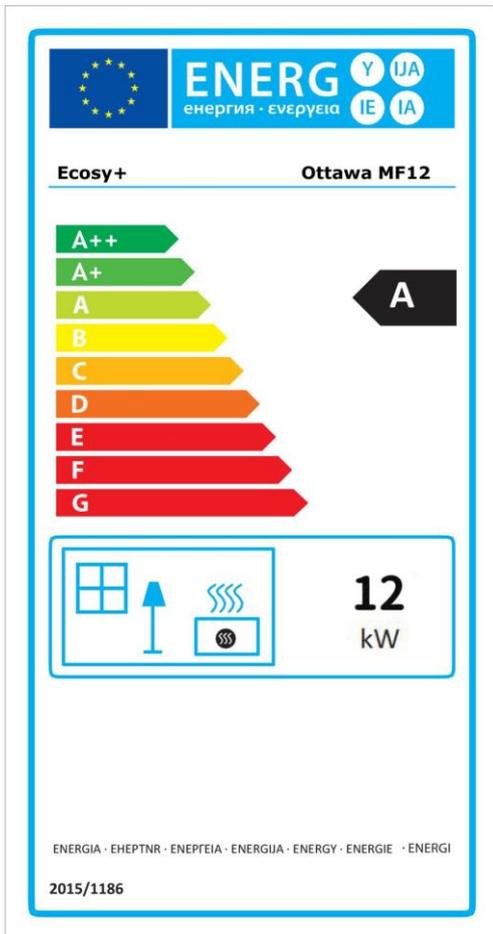
Over time, if your stove begins to develop rust it will either be caused by:

- The stove being kept in a damp environment – For example if the stove was left in a damp place for a long time prior to fitting. Or, the stove is in a damp room and not lit too often.
- The chimney is leaking water onto the stove.
- The stove is being cleaned with a wet cloth and not dried quickly.

Luckily, the resolution for this is not too hard. In most cases the stove will just need a wipe down with a dry cloth and touching up with some Calfire Flatt black paint. This will bring the paint back to a nice finish and will not reappear, assuming the cause of the stove getting damp / wet has been rectified. Please see the below attached picture as an example for a stove that is beginning to rust.

We hope you enjoy your new stove!

All the best Ecosy+ Stove



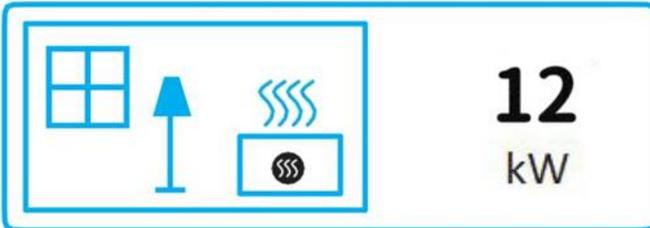


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Ottawa MF12



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