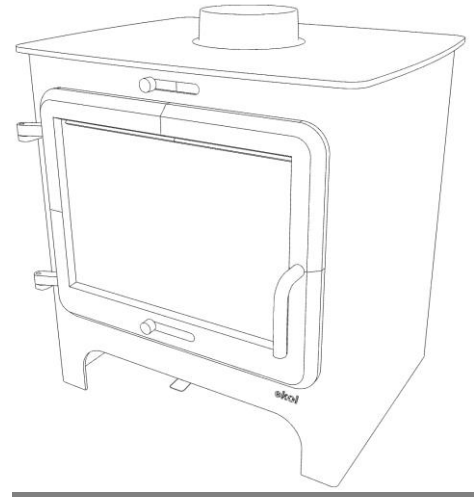


## **Ekol Clarity 12 – INSTALLATION AND OPERATING INSTRUCTIONS.**



### **INTRODUCTION**

#### **SAFETY**

Safety is the most important consideration when using and installing your stove. If not installed and used correctly, a house fire could result. Installation must comply with relevant national and local Building Regulations and fire safety standards.

**IN THE EVENT OF CHIMNEY FIRE, EVACUATE THE PROPERTY AND CALL THE EMERGENCY SERVICES.**

Your stove will be heavy and care needs to be taken when lifting - 2 people will normally be required to lift.

#### **UNPACKING**

Your stove will have several of its components stored inside the stove itself for transportation.

Do NOT drag the stove on its legs – it must be carefully lifted into place.

The flue spigot can also be bolted to the flue outlet – the stove has two options for flue outlet – one on the top and one at the rear. - Most people use the top outlet but depending on where you intend to position the stove in relation to your chimney, you may wish to use the rear outlet – in this case, remove the blanking plate at the rear and secure into the top outlet instead.

Inside the stove you will find a glove which must be used when opening the door or when adjusting air vents when the fire is hot.

### **INSTALLATION**

Installation of your stove must comply with relevant local and national Building Regulations and fire safety standards.

## **TECHNICAL**

Model; "Ekol Clarity 12"

Nominal Heat Output – 12 kW

Net Weight of Stove – 125kg (low height) 136kg (tall version).

Max Height - 600 mm (low height) 826mm (tall version).

Max Width - 620 mm

Max Depth - 375 mm

Flue Diameter - 150mm (6")

Mean flue gas temperature directly downstream of the flue spigot – 370 degrees C. (with closed doors).

Flue gas mass flow – 9.8 g/s

Mean CO emission (at 13% Oxygen) – 0.31%

Net Energy Efficiency 77 %

The stove must not be installed within the specified minimum distances to combustible materials: A gap of at least 580mm needs to be left between the stove and any combustible materials at the sides and 680mm to the rear. Adjacent walls should be of non-combustible materials and construction, preferably masonry or brickwork.

Your stove will require a constant air supply, and should not be used at the same time and in the same room/space as extractor fans or any device which may draw air supply away from the stove. It should consist of a total free area of at least 3850mm<sup>2</sup>. The vent should be positioned such that it is not liable to blockage.

The stove should be installed on a level floor with adequate load bearing capacity.

The stove needs to stand on a hearth of non-combustible materials not less than 12mm thick conforming to Building Regulations.

NOT suitable for installation in a shared flue system.

If installed in a standard type chimney, a register plate needs to be fitted inside the chimney.

When purchasing flue pipe, 6" diameter is required. The flue pipe must be fitted INSIDE the flue spigot, and sealed with a generous amount of Fire Cement.

Access should be provided for cleaning the flue gas connector and chimney flue to ensure that the passageways for exhaust gases remain free from obstruction.

We recommend that you have a qualified fitter install your stove. The British recognised standard for solid fuel installations is HETAS. You can find a HETAS qualified installer in your area by going to the HETAS website – [www.hetas.co.uk](http://www.hetas.co.uk).

## **OPERATING INSTRUCTIONS**

### **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 "Ekol Clarity 12" has been recommended as suitable for use in smoke control areas when burning seasoned wood.

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

## **FUEL**

Wood- All types of wood are suitable provided they are well seasoned, UNTREATED, and have a moisture level between 12% and 20%. For soft woods, typically they will need to have been left in suitable storage for 9+ months in order for the moisture to evaporate. For hardwoods, this will usually be 18 months+. It is recommended that logs should be no more than 5" or 125mm in diameter. If you are unsure of the moisture content of your fuel, then you can buy a moisture meter which will indicate the moisture levels in your fuel.

Liquid fuels must NEVER be used.

**WARNING:** Wet timber should not be used as this will create excess tar deposits in the chimney and stove and could increase the risk of chimney fire. Timber which is not of a suitable moisture content will also create more smoke and harmful emissions.

Manufactured smokeless coals and anthracite can be used and will all have different qualities and effects. – Do NOT use Petro-Coke based fuels or any petroleum based fuels as this will invalidate the warranty. Never use your stove as incinerator to burn waste or rubbish. Any coal burned should be coal suitable for a multi-fuel stove (some coal is only for use on open fires and burns too hot for a stove).

Never use your stove as incinerator to burn waste or rubbish.

## **AIR INLET CONTROLS**

Your stove has three air inlet areas-

The upper vent provides air supply for the air-wash system and allow air into the higher areas of the fire box – this is called the Secondary air – when this vent is open, the door glass is kept clean by high speed air rushing downwards across the inside of the glass. By moving the Secondary vent knob to the right, airflow into the stove is increased. The secondary air vent is set such that the closure plate does not seal fully, thus allowing some constant air supply into the stove.

The lower vent knob on the bottom of the door controls the provision of Primary air – this is the primary source of air supply for combustion. Sliding the knob to the right increases the amount of Primary airflow into the stove.

The third (Tertiary) vent control is located underneath the stove and controlled by a lever/ knob tucked under the bottom shelf. Moving the lever forward increases the airflow into the stove. The air is then channelled through a chamber on the back of the stove and to the rear of the firebox, and enters the firebox via a series of small holes in the throat plate. Even in the closed position a certain amount of air will still be allowed to enter the stove. This is legally required to ensure the stove maintains level of combustion not likely to create excessive smoke.

## **TOOLS**

The glove is provided for adjusting the air inlets and for opening the door when the stove is hot, as these knobs will heat up when in use.

NOTE – all parts of the stove will become hot during use and care needs to be taken to avoid injury through burning.

## **LIGHTING THE FIRE**

- Prior to lighting the fire for the first time, ensure that-
- Installation and building work is complete.
- The chimney is suitable and sound and has been swept and free from obstruction.
- Adequate ventilation and provision for combustion air has been made.
- That the stove installation has been carried out in accordance with Building Regulations and any applicable local regulations as well as these installation instructions.
- That chimney draw has been checked and within specification. (The stove has been tested at nominal output with a flue draught of 12 Pa)

ENSURE THAT YOU HAVE READ AND UNDERSTOOD THESE INSTRUCTIONS BEFORE LIGHTING THE FIRE, AND THAT YOU ARE CONFIDENT THE STOVE HAS BEEN INSTALLED CORRECTLY.

ALWAYS WEAR A PROTECTIVE GLOVE WHEN REFUELLING YOUR STOVE.

## **Ignition (When New)**

On day one, a curing procedure for the curing of paint must be followed:

3 small fires each with kindling and a couple of half normal size logs should be burnt, each lasting approx. 45 minutes to 1 hour. Between each fire, allow the stove to cool down slightly, allowing approx. 40 minutes cooling between each fire.

After all three fires, allow to cool completely, then a normal fire can then be lit allowing the stove to get up to normal temperature. Following this procedure will help the paint to cure properly, prolonging the life of the paint surface.

## **Ignition (On-going, once above procedure has been followed)**

- Ensure all air inlets are fully open
- Construct a pile of kindling in the middle of the grate using approximately 1kg of kindling wood
- Light with a single chemical firelighter
- Partially shut the door but leaving it cracked open slightly
- After about 5 minutes or when the fire is well established, shut the door
- After a further 3-5 minutes as the fire starts to die, add a further three larger pieces of wood weighing approx 2kg.
- Once these logs are alight, and after about 7 minutes or so, a normal load of 4 logs weighing approximately 3.8kgs in total can be added
- Once this load is burning well, the Primary air vents can be closed, with the Secondary and Tertiary vents left open.

## **Refuelling**

- Open the Primary air vents
- Add up to 3.8kg of wood

- After about 2 minutes or when flames from the fresh fuel fully established, close the Primary vents
- At high power output, your stove will require refuelling approximately every hour.
- It is important to follow these instructions in order to achieve clean burning and to maximise the efficiency of the stove
- Do not leave the fire unattended until flames are well established on the newly charged logs
- Always refuel onto hot embers.
- Reduced burn rates can be achieved by reducing the openings of the Secondary and Tertiary air vents.

### **Refuelling on to a low fire bed**

- If there is insufficient burning material in the firebed 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.

### **Operation with 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.

### **Dampers left open**

- Operation with the air controls or dampers 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

## **UK Clean Air Act 1993 - Smoke Control Areas**

The Ekol Clarity 12 wood-burning stoves are suitable for use in smoke control areas when used in accordance with these instructions.

*WARNING- The high temperature paint covering the stove will give off some fumes during the initial few uses of the stove. The fumes are non-toxic, but some people may find them unpleasant – Ensure the area is well ventilated during this period.*

The output ratings of this stove are based on around 1.4kg of seasoned logs which would require refuelling every hour.

This stove is suitable for intermittent burning, and should not be used constantly for extended periods. Not suitable for overnight burning.

Under certain abnormal weather conditions, e.g. down draughts, it may be difficult to get sufficient draw through the appliance to achieve good combustion. When this happens, the stove should not be used.

## **CLEANING/MAINTENANCE**

Regular cleaning of the stove is essential for safety and efficiency. The ash should be emptied at least after every use, and during use if burning for longer periods.

When cold, the inside of the stove should be given a regular sweep out.

The flue and flue pipe will require cleaning with a suitable chimney brush, to minimise build up of soot and tar. You chimney will also require periodic sweeping.

If the glass becomes stained from the inside, the air-wash vent may need opening more during use.

The high temperature paint which your stove is finished in should last many years with normal use, but when it does eventually require re-finishing, black heat resistant paint in spray cans can be purchased from most hardware stores. – Do not use regular paint which is not high temperature resistant.

After prolonged periods of not using the fire, the stove and flue system should be checked for blockages prior to re-lighting.

We recommend regular servicing and safety checks are carried out by a qualified engineer.

There must be no unauthorised modification of the appliance. Use only replacement parts recommended by the manufacturer.

### **GUARANTEE**

The main body of your stove is guaranteed for 5 years when all guarantee terms are followed including registering your guarantee via the website within 30 days of purchase. Please register here: <http://www.defrastoves.com/guarantee-registration.htm> Failure to register within 30 days will limit your guarantee to 12 months from date of purchase. This does not include glass, grates, inner linings/firebricks, door seals, over-firing incorrect use or installation not carried out by a competent person or in accordance with building regulations. – You should have zero problems with your stove unless it is abused and if treated well your stove will last and last.

### **What to do in the event of a chimney fire:-**

- cut off the air supply to the stove, i.e. close the primary and secondary air supplies
- move any combustible materials well-away from the stove
- get everyone out safely
- make sure that the fire brigade has clear access
- call 999

If you have any questions or concerns regarding the safe use of your stove, please contact us.

