

Model: _____

Serial Number: _____

Technical Information	EW	EWB
Nominal heat output kW	9.7	10.5
Boiler heat output kW	—	2.6
Combustion air requirement m ³ /h	40	55
Air vent size cm ²	30	50
Weight of appliance Kg	370	375
Minimum chimney draught Pascals	12	12
Mean flue gas temperature °C	250	255
Flue gas mass flow g/s	18.5	13.7
This appliance is not suitable for installation in a shared flue system		

ADDITIONAL SERVICEABLE PARTS

1. Brick Linings

ESSE Cooking Stove

INSTALLATION INSTRUCTIONS

MODEL: EW & EWB



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THIS APPLIANCE MUST BE COMMISSIONED BY A HETAS REGISTERED ENGINEER OR A COMPETENT



GENERAL SAFETY INFORMATION

In the UK, the installer has a responsibility under the Health and Safety at Work Act 1974 to provide for the safety of persons carrying out the installation. Attention is drawn to the fact that fire cement is caustic and hands must be washed thoroughly after use. The appliance is heavy (Max 380Kg) and care must be taken during handling. Although the appliance does not contain asbestos products, it is possible that asbestos may be disturbed in existing installations and every precaution must be taken.

These instructions give a guide for the installation of the appliance but in no way absolve the installer from responsibilities to conform to British Standards, in particular BS8303, BS6461 and BS5449, relating to the installation of solid fuel appliances (including wood and peat) and codes of practice for central heating installations in domestic premises. The installation should also comply with local Building Regulations and Local Authority Bye-Laws.

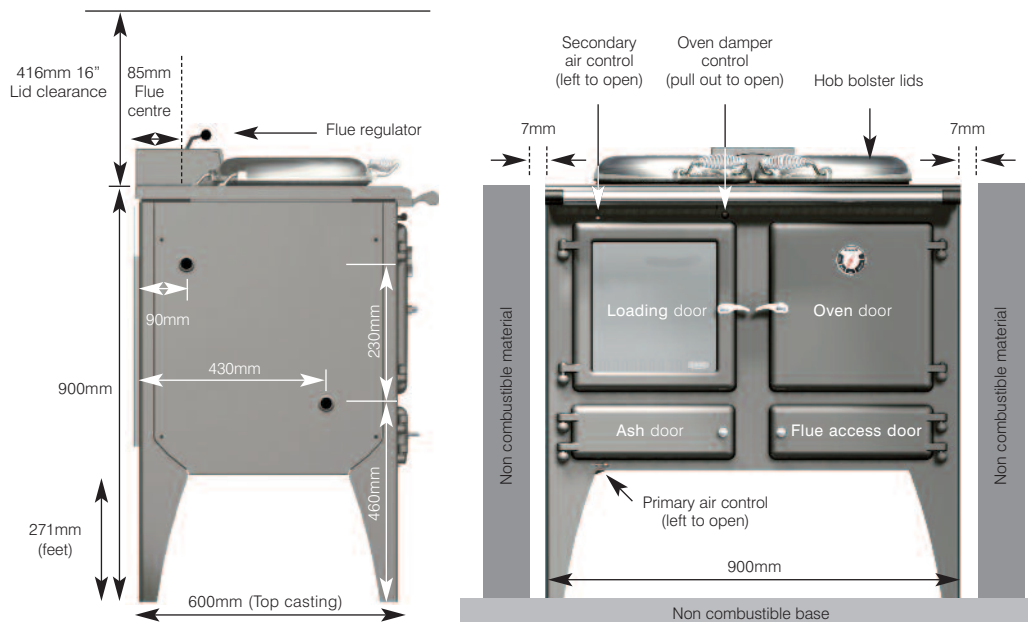
Outside of the UK, the installer must comply with all local, national & european standards that apply.

It is also recommend that a smoke alarm and appropriate fire safety equipment such as a fire extinguisher and fire blanket are installed in the kitchen as a safety precaution.

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The Cooking Stove - Fig.1 Dimensions and boiler tapping



SAFE CLEARANCES FROM COMBUSTIBLE MATERIAL

	EW	EWB
From side (mm)	300	200
From back (mm)	500	400

Note: The space beneath the appliance is not a fuel storage area.

Any adjacent combustible material should be far enough away from the cooking stove so as not to rise 60°C above the room temperature when the cooking stove is in operation. If necessary, any adjoining walls should be protected from the effects of heat.

Note: The illustration above provides essential boiler tapping measurements and will help when selecting the location of the cooker.

THE IMPORTANCE OF A HEALTHY FLUE

The successful operation of this appliance is entirely dependent on the adequate performance (pull) of the chimney or flue to which it is connected. A partially blocked or dirty flue can have disastrous implications for an otherwise perfectly installed ESSE as can be seen here looking at the underside of the hotplate from 2 identical ESSEs.

A) Has been used regularly for over a year following simple ESSE maintenance guidelines (supplied with this appliance) and with a clean flue drawing correctly.

B) Was just 6 weeks old when the picture was taken and shows how quickly tar deposits will build up if the flue performance is poor and clogged with old soot as it was in this case.

Good draft & clean flue

Efficient wood burning, clear flue ways, minimal soot and no tar deposits.



Poor draft & dirty flue

Inefficient wood burning, blocked flue ways, lots of soot and tar deposits.



CHIMNEY AND FLUE INFORMATION

The successful operation of the cooking appliance relies on the adequate performance of the chimney to which it is connected. The following chimney guidelines must be followed:

- 1 It should have an internal cross section of no less than 320 cm.sq (200mm dia.) If a flueliner is used, it should be 6" diameter and be made of suitable material for burning wood). The flue diameter is 6".
- 1 Voids in the chimney should be avoided, as these will prevent a steady flue draught. The appliance flue pipe should pass beyond the narrowing of the chimney.
- 1 Be terminated at least 1m above roof level so that the chimney does not terminate in a pressure zone.
- 1 If the appliance is installed as a freestanding appliance, it should not support any part of the chimney.
- 1 Be connected to this one appliance only.
- 1 Be free from cracks, severe bends, voids and obstructions.
- 1 New chimneys must be in accordance with local regulations.
- 1 The chimney must be capped to prevent ingress of rain.
- 1 A flue/chimney access point may also be required so that the state of the chimney can be checked and any fallen soot removed.
- 1 External flues must be insulated to prevent heat loss.
- 1 Do not fit an extractor fan in the same room as the appliance.
- 1 Be a minimum 4.6m high from hob chimney level to pot.

Note: The chimney / flue to which this appliance is being connected must be swept and examined for soundness prior to installation. Remedial action should be taken if required, seeking expert advice if necessary. Where the chimney is believed to have served an open fire installation it is possible that a higher flue gas temperature from a closed appliance may loosen deposits that were firmly adhered, with the consequent risk of flue blockage. It is therefore recommended that the chimney be swept a second time within a month of regular use after installation.

FLUE DRAUGHT

The chimney can be checked, before the cooking stove is installed, with a smoke match. If the chimney doesn't pull the smoke it may suggest the chimney needs attention (see the Flue Diagnosis Table below and the flue performance diagrams on page 6).

Note: This test is only a guide as an apparently poor flue may improve once the cooking stove is installed, lit and the flue is warmed. Once the cooking stove is installed, a flue draught reading should be taken.

FLUE DRAUGHT READING

Two flue draught readings should be taken, one with the cooking stove at minimum firing rate and one at maximum firing rate. The flue draught test hole must be drilled in the flue pipe as close to the cooking stove as possible and before any flue draught stabiliser.

MINIMUM

The cooking stove should be lit and allowed to warm the flue thoroughly. The air controls can then be set so that the cooking stove burns on a low setting. Allow the burning rate to become steady. The flue draught reading should now be taken with the primary air intake closed and the secondary air control fully open. The minimum flue draught required is 12 pascals (0.05" w.g.).

MAXIMUM

The primary air intake can now be opened to allow the cooking stove to burn at maximum rate. Give the cooking stove some time for the burning rate to become steady and then close the primary air intake. Make sure the secondary air control is fully open and take a flue draught reading immediately.

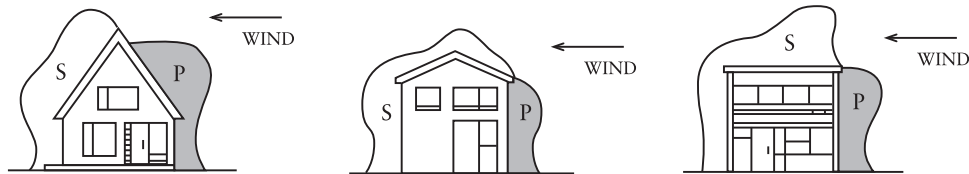
The minimum flue draught required is 12 pascals (0.05" w.g.).

The maximum is 24 pascals (0.1" w.g.).

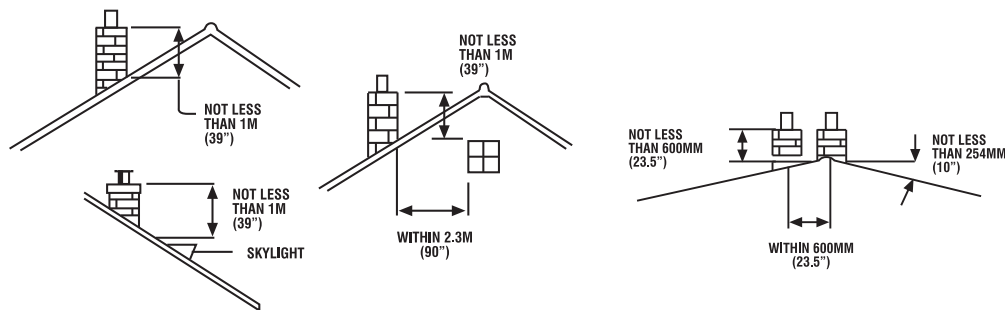
Low flue draught symptoms: difficult to light and smoke coming into the room.	
Cause	Remedy
Cold chimney	Line the chimney
Chimney too short	Extend the chimney
Down draught	Relocate/extend chimney terminal. Fit an anti down draught cowl
Chimney diameter too large	Line the chimney
Chimney obstruction	Clear/sweep the chimney
Restricted air supply	Check for competing draughts (other chimneys, extractor hoods/fans). Fit an air vent if the room is sealed.
High flue draught symptoms: fire difficult to control, fuel will not last, cooking stove too hot, cooking stove damage, chimney fire	
Cause	Remedy
External wind conditions combined with chimney terminal	Fit stabilizer cowl. Fit flue draught stabilizer.

PRESSURE ZONES, POSITION & DOWN DRAUGHT

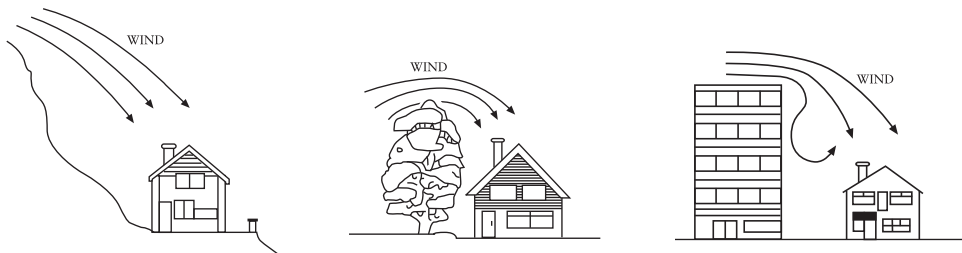
1) Pressure and suction zones created by wind



2) The position of chimney outlets



3) Potential causes of down draught



FLUE STABILISER

A flue stabiliser can be fitted to reduce the draught through the cooking stove if the flue draught is too high. The flue stabiliser should be fitted in the same room as the cooking stove, be the same size as the flue pipe and be fitted no closer than 700mm to the flue outlet of the appliance.

INSTALLING THE COOKING STOVE

FLUE CONNECTION

The flue pipe used to connect the appliance to the chimney is 6" (150mm) in diameter. (A 5"-6" adaptor is supplied to connect to the flue box of the range.

The flue connection is on the top of the appliance, in the centre at the back.

IMPORTANT INSTALLATION NOTES

1. The installation must allow access for adequate chimney sweeping and flue cleaning.
2. Avoid using bends greater than 45° to the vertical. All flue pipe sections should be as close to the vertical as possible.
3. All joints in the flue system must be effectively sealed.
4. All flue sockets must face upwards. On completing the installation of the appliance, the chimney, hearth and walls adjacent to the cooker must conform to local or national regulations currently in force. In the United Kingdom, the appropriate sections of the Building Regulations must be conformed to.
5. Air inlet grilles should be positioned so that they are not liable to blockage.
6. An air extraction device shall not be used in the same room as the appliance unless adequate additional ventilation is provided.
7. A flue cleaning door should be fitted to provide access for cleaning the flue and chimney.
8. Check the appliance for soundness of seals between castings and main components and that all supplied parts and fittings are correctly fitted.
9. Ensure the appliance is left operational, the heating system correctly ballanced and hand over the operating instructions and operating tools supplied.
10. Before leaving the installation demonstrate the operation of the appliance to the user. Explain all controls and flue way access for cleaning.

Note: The chimney / flue to which this appliance is being connected must be swept and examined for soundness prior to installation.

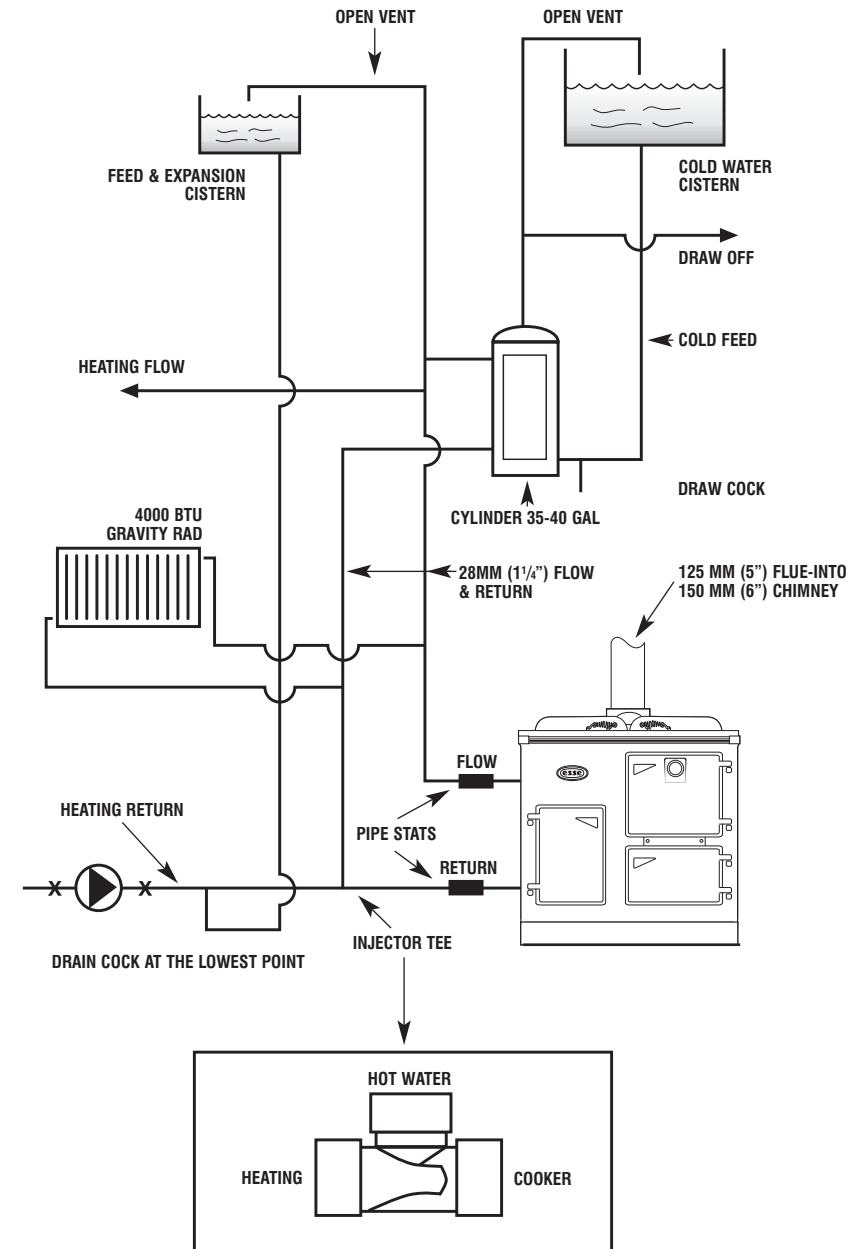
HOT WATER SYSTEM

- A) There are two connections, both 1" BSP Male on the left hand side. Follow general notes below.
- B) The EWB or DE-LUXE boiler is plain mild steel and capable of running a radiator in addition to domestic hot water.
- C) General Notes on Water System: -
 - 1) The cooker will produce hot water at differing rates depending on how it is operated. Heating control is manual, no thermostat is fitted.
 - 2) The system must be designed to cope with loads between the maximum and minimum output. When the central heating load is turned off there must be sufficient gravity load to absorb 2.6 kW for periods when the oven is being used for cooking, e.g. Domestic hot water plus gravity operated radiator.
- 3) An indirect storage cylinder is essential for domestic hot water supply, irrespective of whether the water supply is hard or soft. Minimum capacity 30 gallons. Cylinder should be as close to cooker as possible.
- 4) The central heating circuit may be gravity circulation, but a pumped system is preferred.

To allow heat from the boiler to be absorbed should there be a pump stoppage on an accelerated circuit, the primary domestic supply must be gravity operated.
- 5) Installation as a central heating system alone, i.e. without a domestic supply, is not recommended as the boiler will produce heat when the cooker is in use, irrespective of central heating demand, and primary absorption must be provided.
- 6) Whichever system is chosen the layout must follow established heating engineering practice.

To avoid trapping air in the boiler a 1" BSP connection must be used on the flow and return tapping, and any reduction in pipe size thereafter being made on a vertical rising pipe. The cooker must be level when fitted and the flow pipe must rise from the boiler. A drain cock must be fitted on the lowest point of the return pipe and a vent to atmosphere at the highest point of each circuit.
- 7) The cylinder and pipe work should be lagged to avoid heat loss.
- 8) The static head must not exceed 60 feet of water.
- 9) A drain cock should be fitted to the lowest part of the circuit.
- 10) The total water capacity of the boiler is 4 litres.
- 11) A heat leak radiator should be fitted to absorb any excess heat that may be produced.
- 12) The system must be properly vented and a double-feed indirect cylinder to current BS 1566 standard is required on a combined hot water and central heating system.

Typical DHW Gravity System



SPARE PARTS

- 1 Upper Door Handles
- 2 Lower Door Handles
- 3 Fire Guard
- 4 Cast Fire Door
- 5 Ash Door
- 6 Magnet Catch
- 7 Temperature Clock
- 8 Ceramic Glass Window
- 9 Flue Access Door
- 10 Oven Door Liner
- 11 Fuel Guard
12. Stainless Baffle - no longer in use
- 13 Flue Access Plate
- 14 Ashpan
- 15 Grate
- 16 Oven Tray
- 17 Lower Slider
- 18 Cast Shelf Supports
- 19 Door Hinge Assembly
- 20 Wire Shelf
- 21 Steel Baffle
- 22 Upper Slider
- 23 Flue Heat Shield
- 24 Hand Rail
- 25 Flue Restrictor Guide
- 26 Side Panel
- 27 Hand Rail Bracket
- 28 Hotplate
- 29 Cast Top
- 30 Flue Restrictor
- 31 Stove Body
- 32 Bottom Heat Shield
- 33 Legs
- 34 Rear Heat Shield
- 35 Side Panel
- 36 Cast Flue Box and Door
- 37 5" to 6" Adaptor
- 38 Bolster Lid Assembly
- 39 Fire Bricks
- 40 Cast Iron Door
- 41 Charcoal Spray Can

