



# 700

MULTI - FUEL STOVE



INSTALLATION & USER INSTRUCTIONS  
*(TO BE LEFT WITH THE CUSTOMER)*

UK & IRELAND



## CONTENTS

|                           |        |                            |         |
|---------------------------|--------|----------------------------|---------|
| General Safety Notes      | Page 2 | Dimensions and Clearances  | Page 7  |
| Installation Instructions | Page 3 | Operating Instructions     | Page 7  |
| Chimney and Flue          | Page 4 | Wood Burning               | Page 8  |
| Flue Draught              | Page 4 | Solid Mineral Fuel Burning | Page 10 |
| Flue Stabiliser           | Page 6 | Maintenance                | Page 11 |
| Installing the Stove      | Page 6 |                            |         |

## GENERAL SAFETY NOTES



- ⚠ Properly installed, operated and maintained, this appliance will not emit fumes into the dwelling. However occasional fumes from de-ashing and re-fuelling may occur. Persistent fume emission is potentially dangerous and must not be tolerated. If fume emission does persist, open doors and windows to ventilate the room. Let the fire burn out or eject and safely dispose of fuel from the appliance. Once the fire is cold, check the flue and chimney for blockages and clean if required. Do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. Seek expert advice if necessary.
- ⚠ Do not fit an extractor fan in the same room as the appliance.
- ⚠ An adequate air supply for combustion and ventilation is essential. Air openings provided for this purpose must not be restricted.
- ⚠ It is important that flue ways are cleaned frequently and the chimney swept regularly. Also the stove must be maintained in good mechanical order. Regular sweeping means at least once a year for smokeless fuel and a minimum of twice a year for other fuels.
- ⚠ If the chimney was previously used for an open fire, it is possible that the higher flue gas temperatures generated by the stove may loosen deposits that were firmly adhering to the inner surface of the chimney and cause blockage of the fluepipe. We recommend that in such a situation a second sweeping of the chimney should be carried out within one month of regular use of the stove after installation. Also, lock or remove any existing dampers in the flueway.
- ⚠ Should it be likely that children, aged or infirm people approach the fire, then a fireguard should be fitted.
- ⚠ Avoid the use of aerosol sprays in the vicinity of the stove when it is in operation.

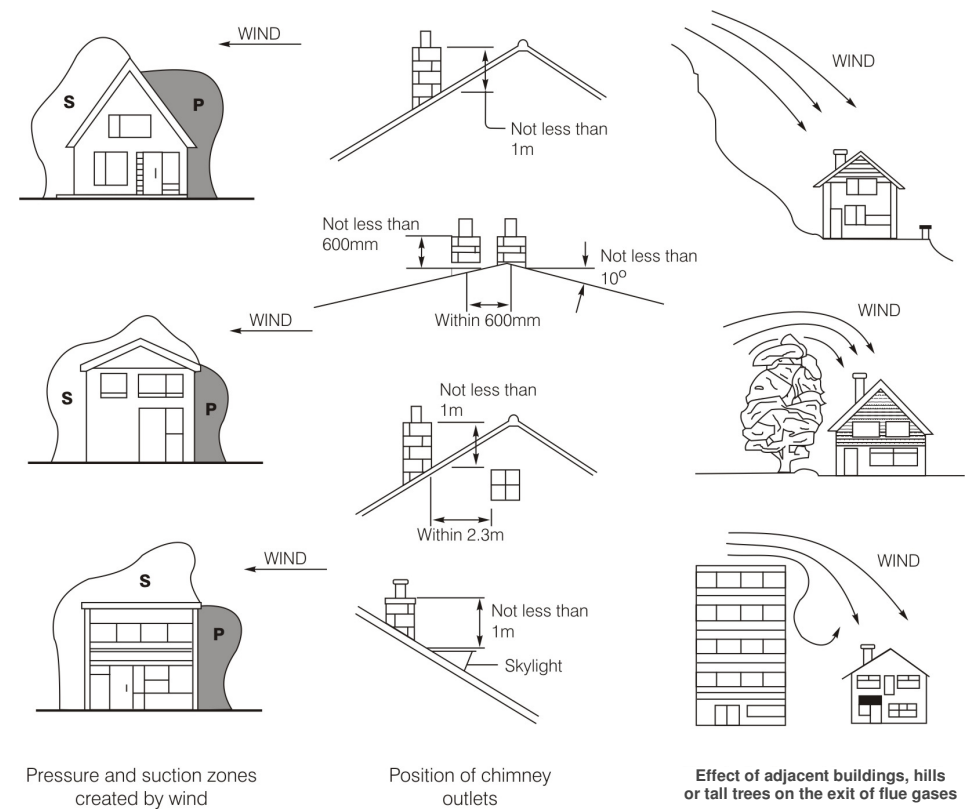
## INSTALLATION INSTRUCTIONS

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 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 absolves the installer from responsibilities to conform to British Standards, in particular **BS8303** and **BS EN 15287:2007**, relating to the installation of solid fuel appliances. The installation should also comply with local Building Regulations and Local Authority By-Laws.

The stove must be placed at least 40cm away from any combustible materials. If necessary, any adjoining walls should be protected from the effects of heat.

Fig. 1 - Chimney and Flue Performance



## CHIMNEY & FLUE

The successful operation of these appliances relies on the adequate performance of the chimney to which it is connected. The chimney must:

- Have an internal cross section of no less than 320 cm<sup>2</sup> (200mm dia). If a flue liner is used it should be 150mm diameter (6") and it should be suitable for solid fuel.
- Be a minimum 4.6m high from hearth level to pot.
- Be terminated at least 1m above roof level, so that the chimney does not terminate in a pressure zone (see Fig. 1).
- Be free from cracks, severe bends, voids and obstructions.
- Be connected to this one appliance only.
- New chimneys must be built in accordance with local building regulations.
- Existing chimneys must be tested in accordance with HETAS requirements.
- If the stove is installed as a free standing appliance, it should not support any part of the chimney.
- Voids in the chimney should be avoided, as these will prevent a steady flue draught.
- The stove flue pipe should pass beyond the narrowing of the chimney (See Fig. 2).
- Consideration should be given to falling soot. For rear outlet stoves it may be necessary to provide a soot catchment area in the flue pipe so that soot does not settle in the path of the flue gases. The optional rear flue box attachment available from ESSE has a detachable base that allows for fallen soot to be removed (See Fig. 2).
- A flue/chimney access point may also be required so that the state of the chimney can be checked and any fallen soot removed.
- External flues must be insulated to prevent heat loss.

## FLUE DRAUGHT

The chimney can be checked, before the 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 on page 6).

### MEASUREMENTS

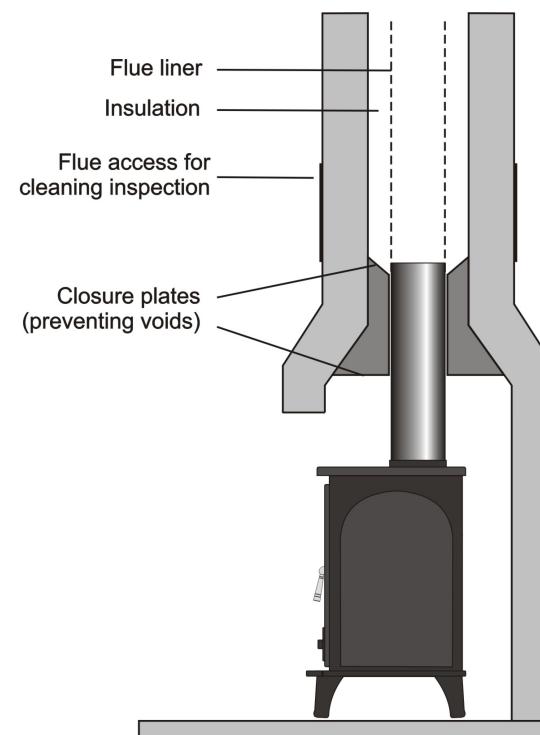
The flue draught test hole must be drilled in the flue pipe as close to the stove as possible and before any flue draught stabiliser.



#### NOTE

This test is only a guide as an apparently poor flue may improve once the stove is installed, lit and the flue is warmed. If, once the stove is installed, there is any doubt that the chimney is providing an adequate draught, a flue draught reading can be taken with the stove lit. Two flue draught readings should be taken, one with the stove at minimum firing rate and one at maximum firing rate.

Fig. 2 - Ideal Flue Connections



### MINIMUM

The stove should be lit and allowed to warm the flue thoroughly. The air controls can then be set so that the 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.

### MAXIMUM

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

Ideally, the flue draught reading should range between 1mm wg (10 Pa) and 2.5mm wg (25 Pa). Any readings significantly outside this range may indicate the need for remedial action.

**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.<br>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/<br>fans). Fit an air vent if the room is sealed. |

**High flue draught symptoms:** fire difficult to control, fuel will not last, stove too hot, stove damage, chimney fire.

| CAUSE   | REMEDY   |
|---|--|
| External wind conditions combined with chimney terminal | Fit stabiliser cowl.<br>Fit flue draught stabiliser. |

## FLUE STABILISER

A flue stabiliser can be fitted to reduce the draught through the stove if the flue draught is too high. The flue stabiliser should be :

- Fitted in the same room as the stove.
- The same size as the flue pipe.
- Fitted no closer than 700mm to the flue outlet of the appliance.

## INSTALLING THE STOVE

### POSITIONING

The overall dimensions of the stove are shown in Fig. 3. The table on page 7 indicates recommended distances between the stove and surrounding combustible materials. As a rule, any surrounding combustible material should not exceed 80°C. There should be sufficient space around the stove for service work.

### HEARTH

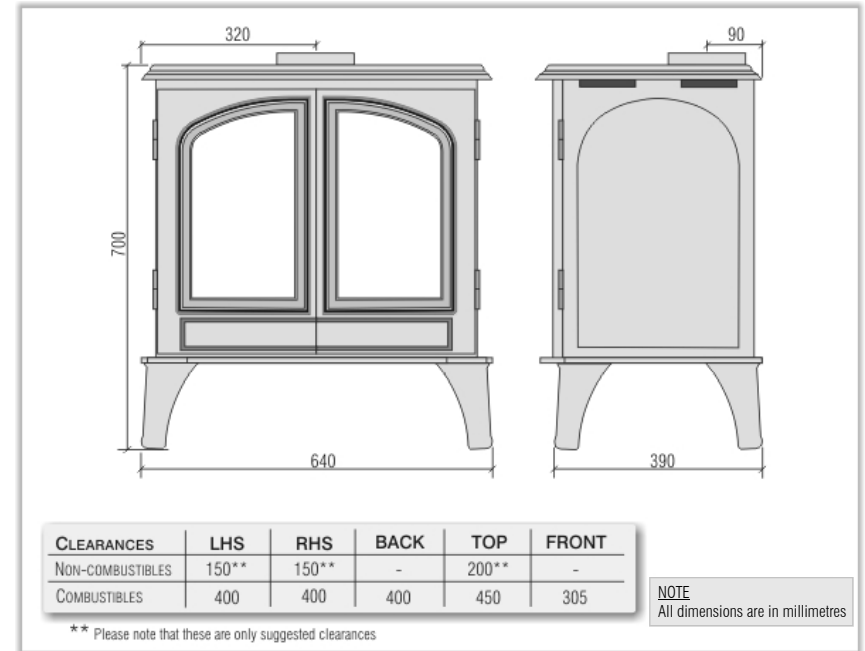
The construction of the hearth must conform to Building Regulations, must be firm, non-combustible and capable of supporting the stove.

### FLUE CONNECTION

The flue pipe used to connect the stove to the chimney is 6" (150mm) in diameter. The stove is supplied ready for top flue connection using a 5-6" (125-150mm) flue adapter. Fig. 2 shows suitable flue connection.

## DIMENSIONS & CLEARANCES

Fig. 3 - 700 Stove



### IMPORTANT INSTALLATION NOTES

The installation must allow for adequate chimney sweeping.

Avoid using bends greater than 45° to the vertical. All flue pipe sections should be as close to vertical as possible.

All joints in the flue system must be effectively sealed.

All flue sockets must face upwards.

On completing the installation, check that all the internal components of the stove are positioned correctly.

Check - ashpan, iron grate, baffle, side and back bricks, coal bar.

## OPERATING INSTRUCTIONS

### YOUR STOVE

Fig. 4 shows the stove and its controls.

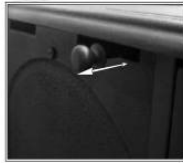
Additional loose parts supplied inside your stove include:

A stove mitt is provided - for removing the ash pan, adjusting the air wash control and operating the door handle.

Fig. 4 - Controlling the Fire in MF700

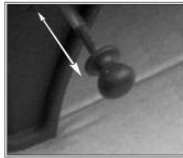
SECONDARY AIR CONTROL

PULL to open  
PUSH to close



PRIMARY AIR CONTROL

PULL to open  
PUSH to close



## WOOD BURNING

### LIGHTING & CONTROLLING THE FIRE

Before lighting the fire for the first time ensure that the baffle, side and back bricks and all the internal components are in position.

Open the secondary air control and the primary air control fully. Place some tightly rolled paper on top of some crumpled paper or some firelighters on the base towards the back of the stove. On top of this, place some small pieces of kindling wood. Light the crumpled paper and close the primary air control. Once the fire becomes established add some larger pieces of wood. As the stove comes up to temperature close the spinner. The burning rate of the stove can now be regulated by the rate at which fuel is added and by adjusting the secondary air control.

With the above in mind it is plain to see that the stove should ideally be run with the primary air control closed and the secondary air control open whenever possible. Another advantage of running the stove with the secondary air control open is that the air being drawn into the stove travels across the glass forming an air barrier between the glass and the fire bed helping to prevent smoke particles sticking to the glass. If the fire dies down too low, opening the primary air control for a short period will revive it.

When burning wood, start a small fire with firelighters and some dry kindling. Both the primary and secondary air controls should be fully open. It may be necessary to crack open the doors to allow additional air through the stove until the fire is established. Gradually add further logs and close the primary air control. The fire may now be controlled with the secondary air control.



**NOTE**

Wood burns most efficiently when the air for combustion is supplied from above the fire bed rather than below. The air supplied above the fire bed provides the oxygen necessary for the volatile gases (smoke), given off by the wood as it heats to combust. This ensures that the gases are burnt and used to heat the stove instead of being wasted up the chimney or condensing and forming tarry deposits inside the stove, in the flue or on the stove glass. Running the stove with the primary air control open and the secondary air control closed will provide oxygen for the wood to burn on the fire bed but will not provide air for the volatile gases above the fire bed to combust resulting in a smoky inefficient fire.

### CORRECT RUNNING TEMPERATURE FOR BURNING

To get the best results from your stove it is recommended that a wood stove thermometer (available from your stove dealer) be fitted to the flue pipe above the stove, at eye level if possible. The figures below show the recommended temperature of the flue gases:

115°C - 245°C (240°F - 475°F)

The flue gases should be in this temperature band for the safest, most efficient and most economical operation of your stove.

Below 115°C (240°F)

This is below the condensation point of wood gases and may cause the build up of tar in the chimney, dirty the stove glass and result in the inefficient burning of the fuel.

Above 245°C (475°F)

Too hot. Heat will be wasted up the chimney. Excess heat may damage the stove or ignite any existing accumulation of tar resulting in a chimney fire.

### EXTENDED BURNING

Loading a large amount of wood into the stove all at once will reduce the temperature inside the stove. If the temperature is too low, the gases given off from the wood will be too low to combust resulting in a lot of smoke covering the inside of the stove, including the glass, with soot. To combat this problem it is a good idea to increase the temperature of the stove before loading by further opening the air inlets. Load the wood and leave the air controls open until the moisture is driven out of the wood and the stove is back up to an efficient operating temperature. The air inlets can then be reduced to hold the temperature of the stove. Loading the stove little and often will help keep the stove temperature steady. When loading wood, make sure that the end grain of the wood in the stove is pointing away from the glass, otherwise the moisture and gases coming from the end grain of the wood will dirty the glass.



**NOTE**

The above text should be used as a guide only. The ideal operation of your stove depends on a number of factors, which vary with each installation, and so gaining experience operating your stove is the only way to learn its best operation.

## TYPES OF WOOD FOR FUEL

---

For best results use well seasoned hardwood such as Oak, Ash or Beech. Allow wood to dry out under cover in well-ventilated conditions for at least twelve months. Wood is ready for burning when radial cracks appear in the end of the logs. Burning wood that is not seasoned will result in tar being deposited in the stove, on the glass and in the flueways. This build up of tar is a hazard and if it ignites may cause a chimney fire. Resinous softwood burns well and gives a high output for short periods but is not as efficient and does not last as long as hardwood.

## PEAT

---

Peat is a fuel conveniently available in some areas and should be burned in the same manner as wood.

## SOLID MINERAL FUEL BURNING

---



### NOTE

Remove steel plate below the grate.

## LIGHTING AND CONTROLLING THE FIRE

---

When burning a solid mineral fuel, start with a small fire of dry wood and firelighters. Once burning well, add a little solid fuel and keep adding to establish the desired firebed. Start with the primary air control fully open, and once the bed of coals burns enough, regulate the fire by closing the primary air control to the required setting.

Initially the secondary air control should be fully open, but once the fire is burning cleanly, this can be closed and remain closed.

## EXTENDED BURNING

---

Before adding a large amount of fuel, the grate should be de-ashed and the ash pan emptied. Add the fuel sloping it from the front coal bar up to the back of the stove. If a lot of smoke is produced on reloading, the secondary air control can be opened further to keep the smoke back from the glass. As the fire gets back up to temperature, reduce the secondary air control and reduce the primary air inlet to suit the burning rate. The exact setting of the air controls depends on a number of variables including: the flue draught, the fuel used and the installation and so the best settings for your stove can only be learned by experience.

## ASH REMOVAL

---

The level of ash should not be allowed to build up to the level of the grate. If the level of ash becomes too high the air through the grate will become restricted causing the grate bars to overheat and preventing the fuel from burning efficiently. Damage to the bottom grate will occur.

## MAINTENANCE

---

### MINERAL FUELS

---

There are numerous natural anthracites and manufactured smokeless fuels that will burn cleanly and have more reliable burning characteristics. A list of these fuels and their suitability is produced by HETAS (<http://www.hetas.co.uk>). Consult your local fuel merchant to find out what is available in your area. Petro-coke should not be used as it burns very hot and may damage the stove castings.



### WARNING

Ordinary bituminous coal is not recommended and must not be burned. Petro-coke should not be used as it burns very hot and may damage the bottom grate and stove castings.

### CLEANING THE STOVE

---

The stove should only be cleaned when it is cold. The exterior can be dusted with a firm brush. DO NOT use a cloth, as this will drag on the paint finish leaving lint on the surface. From time to time it may be necessary to renovate the exterior by repainting. High temperature stove paints in aerosol form are available from your stove dealer. Do not use this form of paint until the stove is cold and always read the instructions on the container before starting to paint. The door glass is made of a special heat resisting ceramic and may be cleaned when cold with proprietary glass cleaning liquids and a dry cloth.

### SHUTTING DOWN THE STOVE (LONG TERM)

---

The following procedure should be followed if the stove is not to be used for a long period, summertime for instance. Remove all the ashes from the grate and ash pan and use a vacuum cleaner nozzle to clean ash from the base of the stove. Remove the baffle plate and brush the flue ways. Close the door and open the air inlets fully. This action will allow air circulation through the flue ways and help to avoid corrosion and condensation.