

# NORVIK 5 Multi-fuel stove

Installation and operating Instructions  
**Manufactured to EN13240:2001**



## 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. 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

# Contents

Pre-installation checks Installation introduction with technical data

## 1. Technical data

## 2. Installation introduction

2.1 Unpacking the stove 2.2 Installing the stove

2.3 Stove placement/clearance requirements

2.4 The chimney

2.5 Pipe connections

2.6 Connecting to a masonry chimney

2.7 Connecting to a steel chimney

2.8 Draft conditions

1. Smokeless Operation

## 2. User Manual

3.1 Choice of fuel

3.2 Use

3.2.1 Use with wood

3.2.2 Use with solid fuel

3.2.3 Ash Removal

3.3 Maintenance

3.3.1 Cleaning glass

3.3.2 External surface cleaning

3.3.3 Gaskets

3.4 Operational problems – troubleshooting

## Pre-installation checks

Installation of a fireplace must be according to local codes and regulations in each country. All local regulations, including those which refer to national and European standards, must be observed when installing the product.

Both an installation manual with technical data and a manual on general use and maintenance are enclosed with the product. The installation can only be used after it has been inspected by a qualified inspector.

### 1.0 Technical data

Material: Cast iron Finish: High-temp. resistance paint

Fuel: Multi-fuel

Log length, max.: 28CM

Flue outlet: Top and rear Internal

Flue pipe dimensions: 125 mm/113cm<sup>2</sup> cross section.

Approx. weight: 87kgs

Dimensions, distances etc.: figure 2

### Technical data according to EN 13240

Nominal heat output: 4.9 kW

Flue gas mass flow: 5.0 g/sec

Recommended chimney draught: 12 Pa

Efficiency: Wood -81% @ 6.1 kW

CO emission (13% O<sub>2</sub>): Wood -0.15%

Flue gas temperature:Wood -261°C

Operational mode: Intermittent

*Intermittent combustion in this context means normal use of the fireplace, i.e. fuel is added as soon as the fuel has burnt down to embers. On all our products there is a label a suitable amount of embers.*

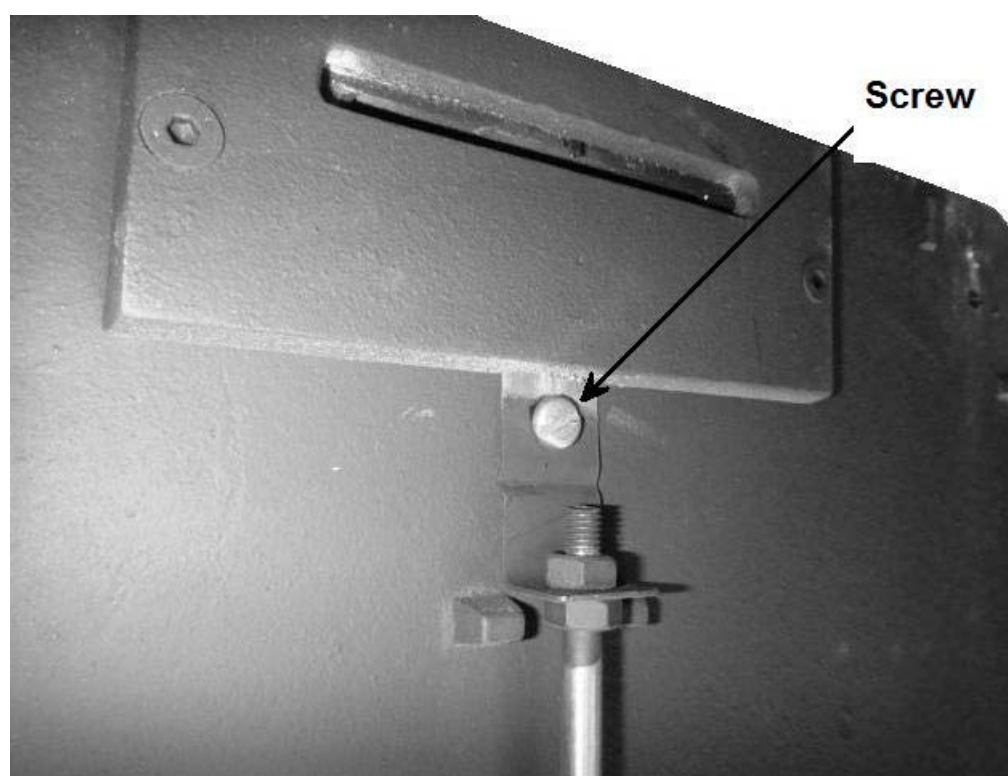
## 2.0 Installation

### 2.1 Unpacking the stove

After removing the outer packaging, remove the combustion chamber from the pallet and place it gently on its back. The cardboard packaging can be placed underneath to prevent marring. Remove the leg pack from the stove and bolt each leg securely to the underside of the base on the combustion chamber, using the bolts provided (found inside the stove). We recommend that two people perform the assembly and installation procedure.

Check to make sure that the screw (figure 1) in the tertiary air slider plate is secure and that the air intake is in the open position. If there is no screw, then the appliance cannot be installed until the screw is in place properly tightened and the air intake has been checked to ensure it is in the fully open position.

Figure 1



### 2.2 Installing this stove

The stove and chimney installations MUST comply to all current National and Local Building Regulations; your approved dealer or your local building control officer can advise regarding this. Ultimately, it is you and your installer who is responsible that the installation complies.

## 2.3 Stove placement/clearance requirements

### Wooden floor protection

The product can be placed directly on a wooden floor that is covered by a metal plate or other suitable, non-inflammable material. The recommended minimum thickness is 5mm.

**Any flooring made of combustible material, such as linoleum, carpets, etc. must be removed from under the floor plate. Requirement for protecting combustible flooring in front of fireplace, the front plate must be in accordance with national laws and regulations. See (figure 2)**

Contact your local building authority regarding restrictions and installation requirements.

### Walls protection

**Distance to wall made of combustible material see (figure 2)**

The fireplace is authorised for use with the distances to the wall of flammable material as shown in (figure 2)

*A heat shield for the back can be ordered and mounted depending on the position of the fireplace and the desired distance to combustible materials. See fig. 2.*

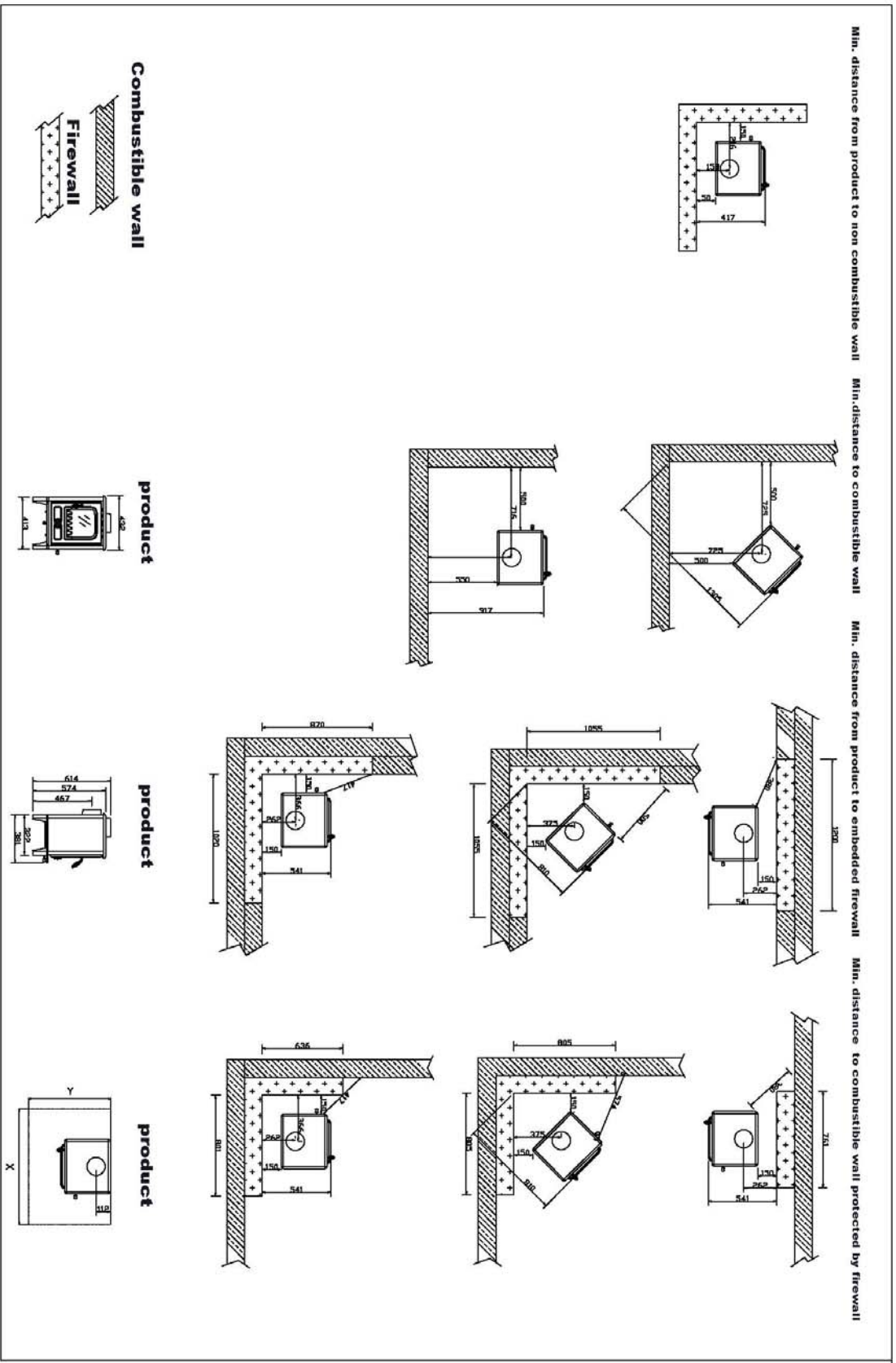
**Distance to walls covered by a firewall see (figure 2) Firewall requirement.** The firewall must be at least **100 mm thick** and be made of brick, concrete-stone or light concrete. Other materials and structures with satisfactory documentation may also be used.

**Distance to wall made of non combustible material see (figure 2)**

The fireplace is recommended for use with the distances to the wall of non combustible material as shown in (figure 2)

Contact your local building authority regarding restrictions and installation requirements.

**Figure 2**



## **Ceiling protection**

There must be a minimum distance of **1200 mm** to a combustible ceiling above the fireplace.

## **Clearances to furniture and soft furnishings**

We recommend that the stove be installed 800 mm from furniture. Serious consideration should also be given to positioning of any furniture that could be adversely affected by heat. The clearances to combustible materials in front of the stove should be a minimum of 800mm.

When lit, a wood-burning stove gets hot and therefore adequate protection must be provided, particularly in situations where there is a safety risk to children or the infirm. A suitable safety guard around the stove should be considered.

## **2.4 The chimney This product must never connect to any shared chimney.**

An efficient modern stove places heavy demands on the chimney, and you should have the chimney regularly swept and inspected by your approved chimney sweep.

The cross-sectional area of the chimney (at its narrowest point) must comply with National and Local Building Regulations. Generally, the area needed for a wood-burning stove installation should

measure at least 113 cm (125 mm diameter).

An over-sized chimney is generally hard to keep warm and results in poor draft. In cases where there is an oversized masonry chimney, it is recommended that the chimney be lined using an appropriate chimney lining system with the correct internal diameter.

With respect to the chimney termination, all chimneys should terminate in accordance with national and Local Building Regulations.

Note that National and Local Regulations also apply with regard to the placement of chimneys and flues in connection with thatched roofs.

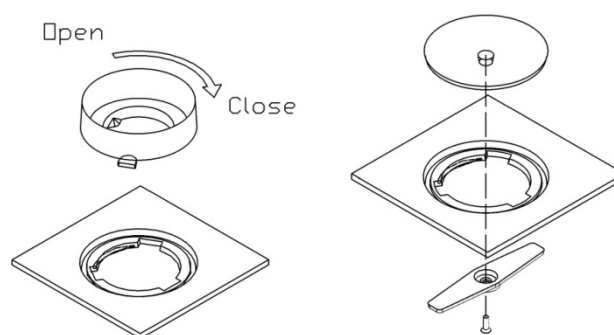
The chimney or flue system must be equipped with access doors for inspection and cleaning. The size of the cleaning door in the chimney must at least equal to that of the cross-sectional area of the chimney. In the event that a chimney fire occurs resulting from faulty operation or prolonged use of damp wood fuel, close the air vents completely and contact your local fire department immediately



## 2.5 Pipe connections

The stove must be installed with a 125 mm diameter flue pipe. This must be an approved thickness. The flue outlet for this product is inside the burn chamber during transportation. You can choose between a top or rear outlet from the flue pipe.

Figure 3



Flue pipes are placed directly onto the product flue outlet. There are three lips on the flue collar. These are used to fasten the flue collar into the body of the stove by twisting clockwise see Figure 3. The unused outlet must be sealed with the plate and screwed firmly into place.

**Note! It is important that the joints are completely sealed. Air leakage etc. may lead to malfunction**

## 2.6 Connecting to a masonry chimney

A wall sleeve should be bricked securely into the wall of the chimney at the appropriate height and the stovepipe inserted centrally. The pipe must not extend into the actual chimney opening, but rather must reach only to the inside of the chimney aperture. The gap between the stovepipe and sleeve must be sealed using glass fibre packing rope.

## 2.7 Connecting to a steel chimney

If your installation involves taking the chimney straight up and through the ceiling, you must comply with National, Local Building Regulations or flue manufacturer's instructions concerning clearances to combustible materials such as walls, floor joists and ceilings. The joint between the stove flue collar and the stovepipe must also be sealed using the glass fibre rope provided.

It is important that the insulated flue system is properly supported both at ceiling level and at roof level. **THE STOVE MUST NOT BEAR THE WEIGHT OF THE CHIMNEY SYSTEM** (See chimney manufacturer's instructions). Excessive weight on the stove will inhibit expansion and could lead to damage of the stove top.

**In the event that a chimney fire occurs resulting from faulty operation or prolonged use of damp wood fuel, close the air vents completely and contact your local fire department immediately.**

### CAUTION:

**Cleaning procedure:** Discuss this with chimney sweep or qualified installer prior to or during the stove installation.

### Chimney draft:

If the chimney draft is naturally poor it is better to install the flue from the top of the stove so as to minimise any internal resistance of the flue gases. Avoid having any more than 2 bends in the flue system and limit the length of the offset between bends.

### Fresh air supply:

A wood-burning stove requires air for combustion and therefore you may need to install additional ventilation to the room (*ATTENTION: don't use any extractor fans or any similar device in the same room with this product. It could make the draft too weak*), especially so in well insulated houses.

If the air supply is inadequate the chimney draft may be too weak, with the possible result that the stove will not burn properly; smoke spillage may also occur during the refueling process. On a positive note, a properly installed wood-burner will give even the most efficient houses a pleasant and natural ventilation.

## 2.8 Draft conditions

If smoke spillage occurs when the fire door is opened, it is probably due to poor chimney draft. This type of stove requires at least **12 pa** of chimney draft to achieve satisfactory combustion and smoke spillage prevention. However, in cases where the stove door is opened too vigorously you could expect that slight smoke spillage may occur. If you have any doubts, you may want to have your installer measure the draft in the chimney.

**Draft conditions**

The chimney's draft is the resulting effect within the flue caused by the difference in temperature within the flue and the cooler temperature outside. Other factors that can influence the level of draft include the length of the flue, insulation of the chimney, adverse weather conditions or tall buildings or trees nearby the flue terminal.

**Poor draft occurs when:**

- The atmospheric temperature difference is too low, e.g. a poorly insulated chimney. If the chimney is excessively cool, it may help to 'prime' the flue before the fire is lit. Just place a screwed-up sheet of newspaper in the flue ways of the stove and ignite.
- The outside temperature is too high, e.g. during the summer months.
- There is no air movement (wind) outside.
- The chimney is not tall enough, with the result that the terminal sits in the lee of the roof surface or in the vicinity of tall trees or neighbouring buildings. These conditions are also associated with downdraft where the flue gases are pushed back down the chimney. Flue draft is diluted by residual air entering the chimney, e.g. due to inadequate fluepipe joints or leaks at the cleaning door or flue collar.
- Unsealed, unused fireplaces are connected to the chimney.
- The flue is blocked, e.g. by soot, due to inadequate cleaning, loose debris or even a birds nest.

**A good draft is achieved when:**

- The temperature difference between the chimney and outside is high. This also applies during firing, when the need is greatest.
- The weather is clear and there is a good wind.
- The chimney is of the proper height, i.e. minimum 4 meters over the stove and the termination adequately clear of the roof line.

**2.8 Smokeless Operation**

The Stove is fitted with a screw locking the tertiary air control in an open position underneath the base of the stove this screw must not be removed as the tertiary air intake must be permanently open to minimize smoke emissions should the primary and secondary air controls be completely closed by the user.

## 3.0 User Manual

### 3.1 Choice of fuel

Recommended fuel: **Wood** -Use hard wood logs.

Although you can fire this product with almost all kinds of wood, you should not fire with wet wood, or unseasoned wood. Wood ought to be stored under a roof for at least 1 year, and preferably 2 years, with free access to wind. Wood should be chopped as soon as possible after felling if it is to dry quickly. The wood can be used once the moisture content is less than 20%. During the EN test, all stoves are tested with wood with a moisture content of  $(16 \pm 4)\%$ .

-Hardwood has a higher calorific value. (oak, ash, maple, birch, elm, beech, etc.). -Pieces of wood with a diameter greater than 10 cm should always be chopped. The pieces of wood should be short enough to be able to lie flat over the layer of embers, with air at both ends. The maximum length of fuel in the stove must be no more than 28cm.

Recommended fuel: **Mineral Fuel**: Smokeless fuels, including coalite nuts, Anthracite Briquettes (phurnacite, ancit) and extracite.

**Not recommended as fuel**: “green wood”. Green or damp wood reduces stove efficiency and soils the glass, the internal walls and the flue (soot, tar, etc.).

“used timbers”. Burning treated wood (railway sleepers, telegraph poles, off cuts of plywood or chip board, pallets, etc.) quickly clogs the flue ways (soot, tar, etc.), pollutes the environment (pollution and smell, etc.) and cause the fire to burn too quickly and overheat. “Green wood” and “recovered wood” can eventually cause a chimney fire.

**Prohibited fuel** : Plastic bags and any form of bituminous coal or petroleum based coke. **This may harm the product and pollute the atmosphere.**

## 3.2 Use

### Using the fireplace for the first time

This product is painted using Forrest Paint. Their advice is as follows:

Most high-temperature paints operate in the same way. There are two resins in the paint. One resin dries at room temperature, giving the paint the initial properties seen on an un-used stove. Then, when fires are built in the stove, this air-dry resin burns away. The other resin is a silicon resin (silicone gives the paint it's high heat resistance) that will not cure until it is heated to high temperatures. This cross-linking occurs at around 400°F - 450°F. The air dry resin will burn away at about 600°F.

We recommend a two-stage curing process. Do not burn at full heat (900°F or more) for the first two burns as this could "shock" the paint and cause failure. The initial fire should be medium temperature (450°F) for about 60 minutes. As the paint heats it will soften, even appear wet, and must not be touched with anything. Gradually, at the hottest spots, the paint will again appear dry. When this process is complete, the paint will be ready for the next stage.

A second, hotter burn of around 600°F for another 45 minutes will burn away the air-dry resin. You will know when this occurs because the process creates some smoke and odor. The nontoxic smoke is primarily Carbon Dioxide, but there are other residual components that make its smell bad and may cause physical distress for some individuals or animals. It will also displace oxygen, so we recommend a "ventilate and vacate" procedure which calls for open windows and fans during the burn-in process. Until the second stage is reached, the curing process will be incomplete and may be a smoky annoyance at a later time.

### Air Control: (Figure 4)

The amount of heat emitted by the stove is regulated using three air controls. The primary air supply, where air passes up through the riddling grate, is controlled using the air control situated in the lower door, and the secondary air (airwash system), which is supplied to the combustion over the glass, is controlled using the upper air control. A third air inlet (normally named secondary air) provides a constant, pre-heated air supply to the combustion just above the fire, is controlled using the air control below ash lip. This air supply normally does not need to be regulated. It's necessary to keep this air supply always open.

### 3.2.1 Use with wood

#### Lighting (Figure 4)

- Slide the top air control to open. Open the lower control.
- Lay firelighters or rolled up newspapers on the grate with a reasonable quantity, if necessary, of dry kindling wood. Place 2 or 3 small logs on top.
- Light the newspaper or firelighters using a long taper and close the door.
- When the fire is burning fiercely, add further logs of a diameter up to 10 cm.
- When the stove body is very hot, close the lower door control.

- The burning rate can now be reduced by moving the top air control to smaller air inlet.

#### **Re-fuelling (Figure 4)**

- Open the lower control.
- Open the glass door and add logs . (To load fuel, the door should be opened slowly avoiding a sudden rush of intake air so that the smoke does not escape into the room.
- Leave the lower control open for a few minutes to allow the initial volatiles in the wood to burn. Close the lower door control.

#### **Refuelling on to 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. 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.

#### **Air Controls left fully open**

Operation with the air controls open can cause excess smoke and result in inefficient combustion. The appliance must not be operated with air controls or dampers door left open except as directed in the instructions.

**Very Important:** Wood is a material that contains a great deal of gas (approximately 75 %). The gases are released when the wood is lit and heated up. For this reason, it is important that the gases are ignited quickly after stoking. If the wood just lies smouldering, especially after re-stoking, a lot of smoke is created, which, in the worst case, may cause an explosive ignition of the gasses, resulting in damage to the stove.

In order to ignite the gases that are released from the wood, and to keep clear, lasting flames during the combustion process, it is important to let in the required quantity of oxygen (air supply) at all times. The setting of the air supply, the method of ignition and the lighting intervals depend on the draught in the chimney, the wind and weather, the amount of heat required, the fuel, etc. This means that it may take some time before you get to know the correct functioning of the stove under any given circumstances.

### **3.2.2 Use with solid fuel**

#### **Lighting (Figure 4)**

- Slide the top air control to open. Open the lower control.
- Close the rear air control (under the base of the stove)

- Lay firelighters or rolled up newspapers on the grate with a reasonable quantity, if necessary, of dry kindling wood. Place a small quantity of solid fuel on top.
- Light the newspaper or firelighters using a long taper and close the door.
- When the fire is burning fiercely, add further fuel. ☒ When the stove body is hot, close the top air control.
- The burning rate can now be adjusted by the lower door control.

#### **Re-fuelling (Figure 4)**

- Open the lower control.
- Open the glass door and add fuel. (To load fuel, the door should be opened slowly, avoiding a sudden rush of intake air, so that smoke does not escape into the room.).
- Leave the lower door control open for a few minutes to allow the initial volatiles in the fuel to burn.
- Adjust the lower door control to the desired position.

#### **Refuelling on to 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. 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.

#### **Air Controls left fully open**

Operation with the air controls open can cause excess smoke and result in inefficient combustion. The appliance must not be operated with air controls or dampers door left open except as directed in the instructions.

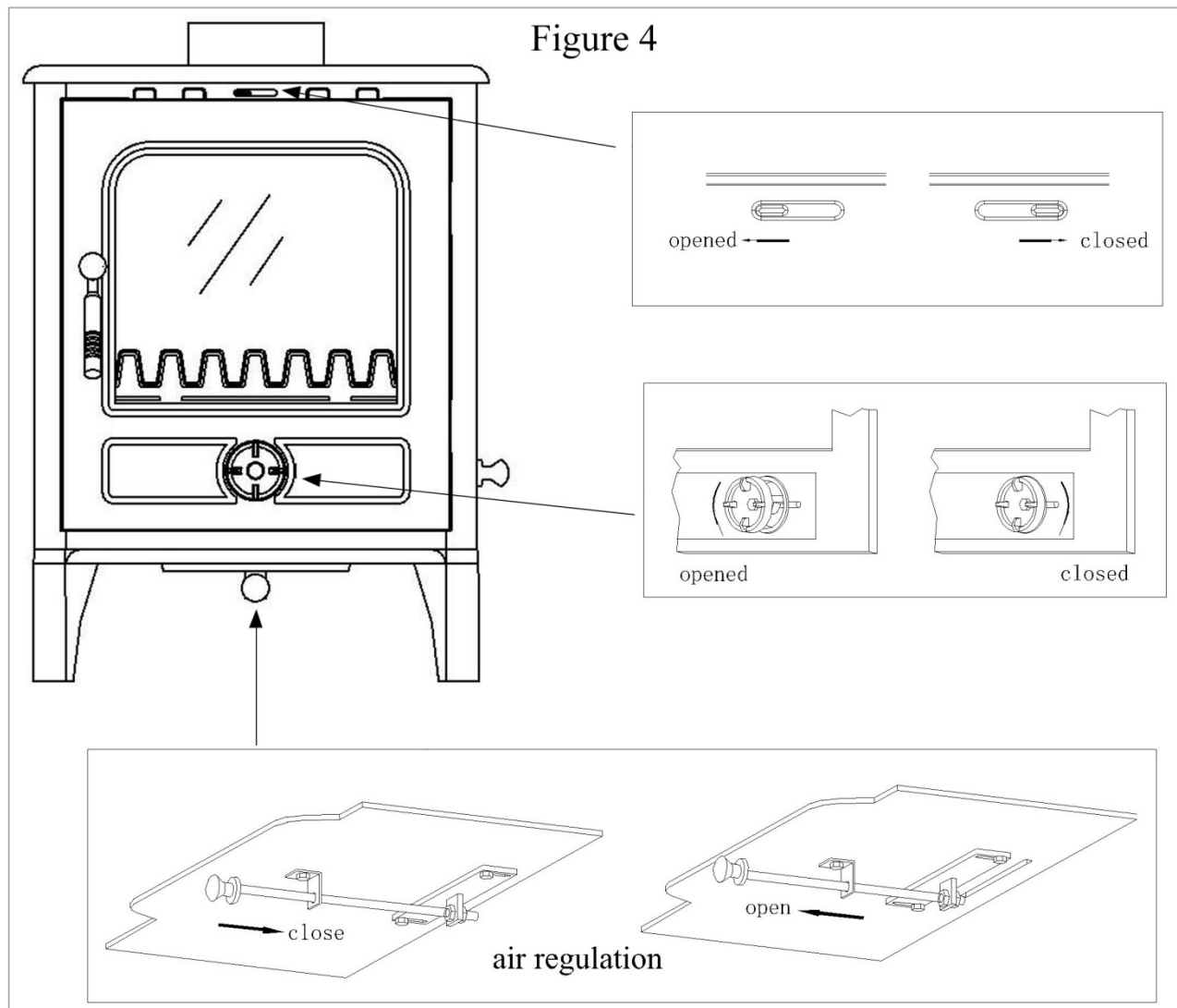
#### **Very Important: The stove door should never be opened when the stove is being fired vigorously.**

**We would strongly recommend that you do not leave your stove alit at night. It harms the environment and constitutes very poor use of the wood, as the gases in the wood do not ignite at the low temperature, but settle as soot (unburned gases) in the chimney and stove. Extreme conditions, such as poor draught in the chimney, large quantities of wood or wet wood may, in the worst-case scenario, cause an explosive ignition.**

**When firing in the summer period, when there is minimal need for heat, the combustion will be poor. The stove provides too much heat, so the combustion should be reduced. But always remember to**

make sure that there are lasting flames until the wood becomes charcoal. If you want a weaker fire, stoke up using less wood.

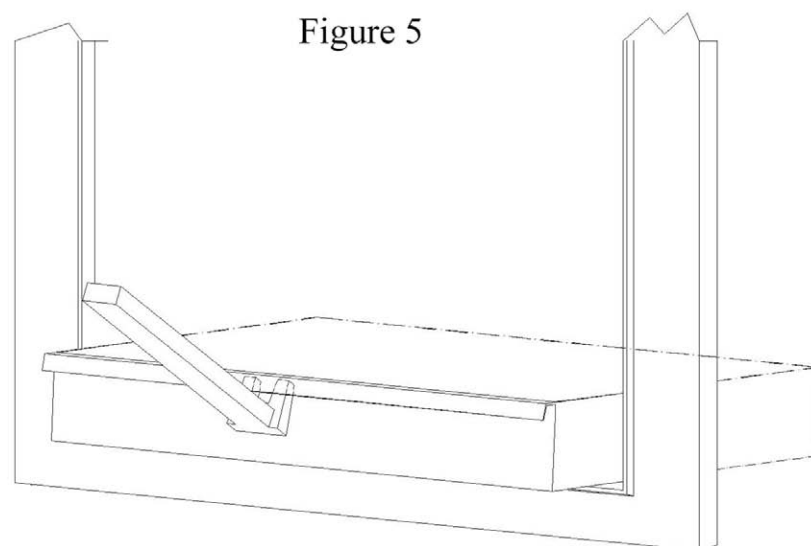
If you fire the stove using wet wood, a lot of the fuel's thermal energy will be spent forcing the water out of the wood, without releasing any heat to the stove. This incomplete combustion results in a layer of soot being left in the stove, pipe and chimney.





### 3.2.3 Ash removal

It is essential to keep the grate free from a heavy build up of ashes. This product is equipped with a grate riddling device which is used to “shake” ashes off the grate into the ash pan. Whenever the stove is burning lifelessly and the lower control is open, use the riddling lever to clear the grate of surplus ashes. If burning solid fuel, always empty the ash pan at least once a day or whenever it is full of ashes. Never allow the ashpan to overfill allowing ash to be in contact with the underside of the grate. If this condition is allowed, the grate will wear out pre-maturely.



### 3.3 Maintenance

#### 3.31 Cleaning glass

This product is equipped with an air wash for the glass. Air is sucked in through the air vent above the fireplace and down along the inside of the glass. However, some soot will always stick to the glass, but the quantity will depend on the local draught conditions and adjustment of the air wash vent. Most of the soot layer will normally be burned off when the air wash vent is opened all the way and a fire is burning briskly in the fireplace.

**Good advice!** For normal cleaning, moisten a paper towel with warm water and add some ash from the burn chamber. Rub it over the glass and then clean the glass with clean water, dry well. If it is necessary to clean the glass more thoroughly we recommend using a glass cleaner (follow the instructions on the bottle).

### **3.3.2 External Surface Cleaning**

The cast surface of the stove is painted with heat-resistant paint. It is best maintained by simply vacuuming it with a soft brush attachment or wiping it down with a dry, dust-free cloth. If the stove is used too vigorously, the painted surface may assume a greyish tinge over time, but the stove can easily be freshened up with spray paint, which is available from your local retailer.

### **3.3.3 Gaskets**

The gaskets in the door will wear out over time, and should be replaced as required in order to prevent runaway combustion.

### 3.4 Operational problems – troubleshooting

<b>Problem</b>	<b>Probable causes</b>	<b>Action</b>
Fire difficult to start Fire goes out	<p><b>Wood green, too damp or poor quality.</b></p> <p><b>Logs are too big.</b></p> <p><b>Air starvation.</b></p> <p><b>Insufficient draught.</b></p>	<p>– Use the recommended fuel.</p> <p>– To light the fire, use small, very dry twigs. To maintain the fire, use split logs.</p> <p>– Open lower spin wheel and top air control lever.</p> <p>– Check that the flue is not obstructed, sweep it if necessary <b>Seek advice from a chimney specialist.</b></p>
Fire burns too quickly.	<p><b>Too much draught.</b></p> <p><b>Excessive draw.</b></p> <p><b>Poor quality wood.</b></p>	<p>– Ensure that the lower spin wheel is closed Partially close the top air control lever.</p> <p>– Install a draught stabiliser. Consult your Dealer.</p> <p>– Do not continuously burn small wood, sticks, bundles, carpentry offcuts (plywood, pallets), etc.</p>
Smokes when lighting up.	<p><b>Flue duct is cold.</b></p> <p><b>Room is in decompression.</b></p>	<p>– Burn paper and kindling wood to increase heat.</p> <p>– In houses equipped with mechanical ventilation, open a window until the fire is well established.</p>
Smokes while burning.	<p><b>Draught is insufficient.</b></p> <p><b>Down draught.</b></p> <p><b>Room is in decompression.</b></p>	<p>– Consult a chimney specialist. Check that the flue is not obstructed, sweep if necessary.</p> <p>– Install an anti-down draught cowl. Consult your Dealer.</p> <p>– In houses equipped with Mechanical Ventilation, an outside air intake must be installed for the chimney.</p>
Low heat output.	<b>Incorrect Fuels.</b>	– Use the recommended fuel.