



# TECHNICAL MANUAL

# MALVERN

Multifuel Stove  
Model MV1MF

To be retained by the user for future reference

Serial Number .....  
Version 1 Date 17/10/13

Document MV1MF 0101

**Thank you for purchasing an ACR Heat Products stove.**

# Important

**To ensure that you gain the most from your purchase, please take a few minutes to read through this manual before lighting the appliance for the first time.**

SINCE APRIL 2002 ONLY REGISTERED COMPETENT INSTALLERS CAN INSTALL SOLID FUEL APPLIANCES. INSTALLATIONS CARRIED OUT BY NON-REGISTERED INSTALLERS MUST BE INSPECTED BY LOCAL AUTHORITY BUILDING CONTROL. FOR MORE INFORMATION PLEASE CONTACT HETAS AT [www.hetas.co.uk](http://www.hetas.co.uk) OR TELEPHONE 0845 6345626

- The installation of this appliance must comply with current Building Regulations and local regulations, including those referring to national and European standards need to be complied with when installing the appliance.
- Do not operate this appliance if it becomes damaged.
- Improper use, maintenance or fitting parts other than those approved by the manufacturer could lead to the appliance becoming damaged or unsafe which in turn could lead to personal injury or damage to the property and will void the warranty.
- The appliance must not be modified in anyway unless authorized by ACR Heat Products Ltd.
- The appliance should be inspected regularly to ensure the airways are clean and free from obstruction and the chimney swept at least once a year.
- The external surfaces of this appliance will be very hot to the touch when in operation and due care will need to be taken when operating the appliance to ensure safety. A fire guard should be fitted if it is likely that the elderly, infirm or children may come into contact with the appliance.
- This appliance must not be used as an incinerator.
- This appliance has been designed for intermittent operation.

**Before installation, please ensure that the correct model has been supplied.**

**Please also make a note of the serial number of your appliance in the space provided on the front cover of this manual as this will be requested if you require technical assistance in the future.**

## **MALVERN SPECIFICATIONS**

Nominal heat output .....	5.2 kW – WOOD	4.8 kW – SMOKELESS FUEL
Chimney draft required .....	12Pa	
Height .....	535 mm	
Width .....	445 mm	
Depth .....	285 mm	
Weight .....	80 kg	
Air Requirement .....	N/A ***	
Flue Mass Gas Flow .....	4.3g/s – WOOD	7.1g/s – SMOKELESS FUEL
Mean Flue Gas Temperature...	273°C – WOOD	273°C - SMOKELESS FUEL
Efficiency .....	78.3% - WOOD	70.8% - SMOKELESS FUEL
Log Length .....	Up To 300 mm	

\*\*\* Please note that Building Regulations Document J advises that additional permanent air supply is required for appliances with an output of above 5Kw.

With modern properties additional air may be required as Document J suggests that adequate air would be a benefit.

If design air permeability  $\geq 5.0\text{m}^3/(\text{h.m}^2)$  then 550mm<sup>2</sup>/kW of appliance rated output above 5kW

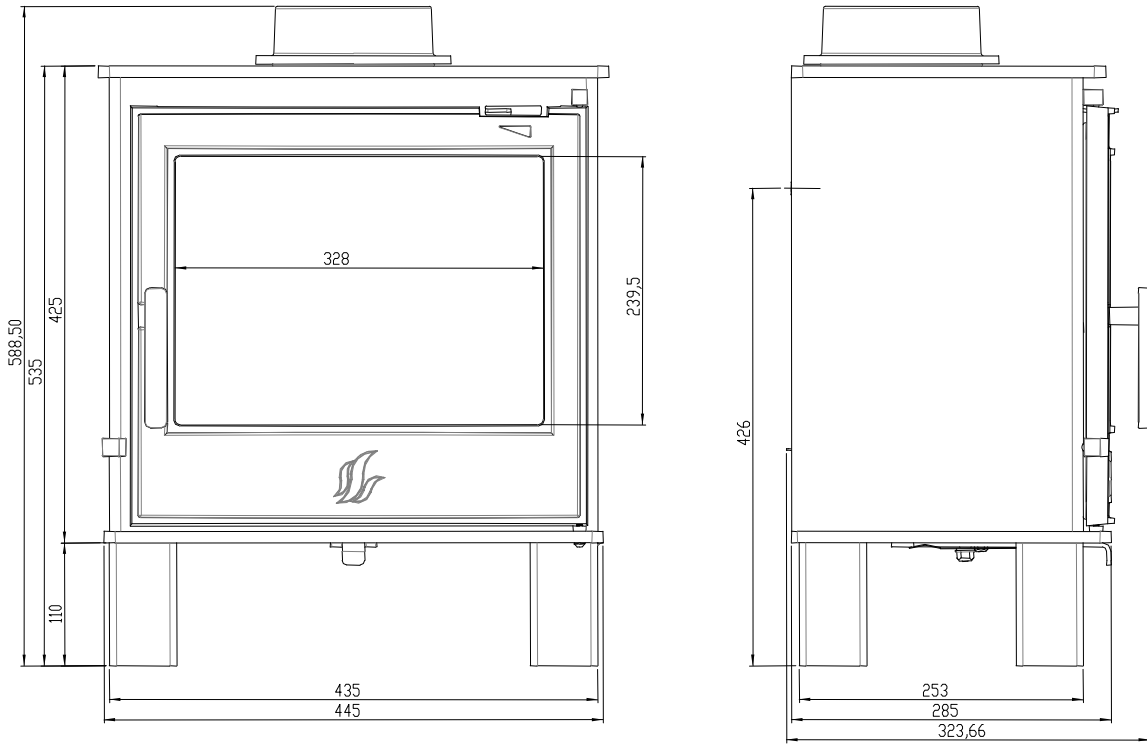
Or

If design air permeability  $\leq 5.0\text{m}^3/(\text{h.m}^2)$  then 550mm<sup>2</sup>/kW of appliance rated output

If in doubt, please consult your registered installer for advice.

**NOTE: DO NOT INSTALL IN A ROOM CONTAINING AN EXTRACTOR FAN**

## MV1MF Dimensions



## **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 "unauthorized 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 authorize 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 "authorized" in Regulations and that appliances used to burn solid fuel in those areas (other than "authorized" fuels) have been exempted by an Order made and signed by the Secretary of State or Minister in the devolved administrations.

The Malvern (MV1MF) has been recommended as suitable for use in smoke control areas when burning wood.

**When the primary air control is in the closed position, it remains permanently open by 5mm and is prevented from closing fully by a screw.**

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

# **Installation Instructions**

## **CO Alarms**

It is required by building regulations that whenever a new or replacement wood/solid fuel or biomass appliance is installed in a dwelling a carbon monoxide alarm to BS EN 50292:2002 must be fitted in the same room as the appliance.

The alarm should be installed according to the alarm manufacturer's instructions and should not be considered a substitute for the appliance being installed incorrectly or regular maintenance of the appliance or flue system.

## **Location of the unit**

### **Clearances to non-combustible materials**

There must be a minimum clearance of 150mm at each side of the appliance. A clearance of 150mm is required at the back of stove (if the rear wall has a thickness of 200mm or more this measurement can be reduced to 50mm) a minimum clearance of 300mm is required above the appliance.

### **Clearances to combustible materials**

There must be a minimum clearance of 450mm at each side and 750mm at the rear of the appliance from any combustible materials. If using single wall flue pipe, there must be a clearance of at least 3 times the diameter of the flue pipe (e.g. 125mm diameter pipe = 375mm minimum clearance) from any combustible materials e.g. wooden beam.

Curtains and soft furnishings should be a minimum of 1m away from the appliance.

Adequate space should be provided for servicing the appliance.

We do not recommend that plasma televisions and expensive artwork are hung over the fireplace.

Please remember that this appliance has been designed to provide heat and if installed into a recess enough space should be left around the appliance to enable the heat produced to rise and escape from the recess back into the room.

## **Hearth Requirements**

The appliance must stand on a level fireproof hearth with a minimum thickness of 12mm. The hearth temperature created by this stove is below 100°C. The hearth must protrude at least 300mm in front of the appliance and 150mm either side of the appliance.

The appliance shall be installed on a floor with an adequate load bearing capacity. If an existing construction doesn't meet with prerequisite, suitable measures (e.g. load distributing plate) shall be taken to achieve it.

## **Flue Requirements**

The chimney must comply with current Building Regulations. Provision must be made to provide access for cleaning the appliance, the flue gas connector and the chimney flue.

The flue must be:

- In sound condition and provide sufficient draft
- Suitable for use with solid fuel burning appliances
- Be able to clean the entire length of the flue system without removal of the appliance
- Free from deposits
- Well insulated
- At least 4.5m in height

The flue must not be:

- Shared with other appliances
- Weight bearing on the appliance
- A smaller diameter than the appliance flue collar size (125mm)

## **Assembly of the unit**

**This appliance is equipped with a manufactures smoke exempt stop pre – fitted, under no circumstances should it be tampered with or removed unless expressly authorized by a competent person**

The appliance is supplied pre-assembled with the flue spigot in the top exit position.

If you intend to install the appliance using a rear flue connection, the blanking plate should be swapped over as follows:

- Remove the internal baffle plate.
- Remove the rear blanking plate.
- Remove the flue spigot from the top exit by removing the securing bolts and rope seal.
- Refit the rope seal and flue spigot to the rear exit and secure with the bolts.
- Refit the blanking plate to the top exit using the rope seal and retaining bolts.



## **Maintenance**

The chimney should be swept at least once a year together with the flue pipe connection. Care should be taken to ensure that there is not a build up of soot on the baffle and in the airways of the appliance.

If the appliance has not been operated for long periods, the flue should be inspected and swept before use to ensure there are no blockages within the flue.

The grate should be cleaned regularly and the ashpan emptied daily. **NEVER ALLOW THE ASH IN THE ASHPAN TO OVERFILL ALLOWING ASH TO BE IN CONTACT WITH THE UNDERSIDE OF THE GRATE.** This will overheat the grate and cause premature wear and distortion.

The internal vermiculite panels of the appliance should be checked regularly for soundness. If any wear and tear is found, we recommend these parts are replaced immediately.

Check the rope door seals are intact and are not worn. These should be replaced on an annual basis to ensure the correct operation of this appliance.

The glass can be cleaned using a soft damp cloth and window cleaner or a ceramic glass cleaner (available from your local stockist)

Use only replacement parts recommended by the manufacturer.

*We recommend that the appliance is serviced annually by a competent engineer to ensure it's continued safe operation.*

## **User Instructions**

Please note that during the first firing, we recommend a small fire is lit and that you slowly increase the temperature to enable the various parts to expand normally.

You may also experience fumes and a haze being given off by the stove during the first firing and possibly for the next couple of firings as the paint cures. This is normal but please ensure that the room is well ventilated during this period.

The appliance should not be operated in mild weather with smokeless fuel. Under certain weather circumstances e.g. fog the chimney will not draw sufficiently and could cause asphyxiation. Either await better weather or burn wood only.

In the rare event of a malfunction due to overheating or a chimney fire, the air slides should be shut down completely and the fuel allowed to burn out. In the event of a chimney fire, once the air slides have been closed completely, dial 999 for assistance. If the appliance has overheated, the appliance will need to be inspected for any damage before it can be operated again.

### **Recommended Fuels**

Wood – hardwood such as ash, oak and beech which have been cut for at least 2 years and stored under shelter. The logs should have a maximum moisture content of 20%, and maximum length of up To 300 mm

Smokeless Fuels – such as Anthracite, Phurnacite, Ancit

### **Prohibited Fuels**

Green wood – i.e wood which is less than 2 years old with a moisture content of above 20%

Recovered wood – i.e pallets, railway sleepers etc. These will have been chemically treated and will pollute the atmosphere and possibly overheat the appliance.

Housecoal or Bituminous coal – these fuels will soot up the airways of the stove and possibly overheat the appliance.

Petroleum Based Coke – this will overheat the appliance and possibly damage the unit.

Liquid fuels.

**Always check with your dealer or directly with the manufacturer as using the incorrect fuel may invalidate your guarantee and damage your appliance.**

### **Instructions for use with wood**

- Slide the top air control to the right and open the primary air fully by pulling the lever forward.
- Lay firelighters or rolled up newspapers on the grate and add a small amount of kindling wood to the top. Place 1 or 2 small logs on the top.
- Light the newspaper or firelighters using a long taper and push the door to.
- When the fire is burning fiercely, after a couple of minutes add more logs and close the door.
- When the fire has become established, close the primary air down by pushing the lever inwards.
- The burning rate can be altered by moving the top air slide – move to the left to close down and move to the right to open.
- Care should be taken to ensure that the logs are not placed higher than the log guard allows.

### **Instructions for use with smokeless fuel**

- Slide the top air control to the right and open the primary air fully by pulling the lever forward.
- Lay firelighters or rolled up newspapers on the grate and add a small amount of kindling wood to the top. Place a small quantity of smokeless fuel on top.
- Light the newspaper or firelighters using a long taper and push the door to.
- When the fire is burning fiercely, after a couple of minutes add more smokeless fuel and close the door.
- When the fire has become established, close the top air down by moving to the left.
- The burning rate can be altered by moving the primary air slide – pull forward to fully open and push inward to close down.
- Care should be taken to ensure that the firebox is not overfilled with smokeless fuel – it should be no higher than the log guard.

### **Re-fueling**

When refueling the stove **always refuel onto a bed of hot embers**, fully open the secondary and primary air controls until the new fuel is well alight, before adjusting the air controls for the desired setting.

If there is insufficient burning material in the firebed to light a new fuel charge, excessive smoke emission can occur. Refueling 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**

Never overload the stove – it will work very well with two medium sized logs. The 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 appliance dampers open fully can cause excess smoke. The appliance must not be operated with air controls, appliance dampers or door left open except as directed in the instructions.

### **Never leave the stove unattended until the new fuel is well alight.**

Persistent fume emission is dangerous and must be investigated. If fume emission persists, open doors and windows to ventilate the room and let the fire die out. Have the chimney inspected for blockages and clean if required. Do not relight the fire until the cause has been found. We recommend that you seek professional advice.

This appliance has been designed to be burned with the door closed at all times other than when refueling. It should not be operated as an open fire.

Typical refueling intervals for wood is 1 hour and smokeless fuel is 2 hours.

### **Daily Maintenance**

The ashpan should be checked and emptied regularly. You should never allow the ashes in the pan to build up to the level of the grate. If they are allowed to build up, the grate will become sandwiched between the ash below it and above it. This will overheat the grate and cause distortion and premature wear.

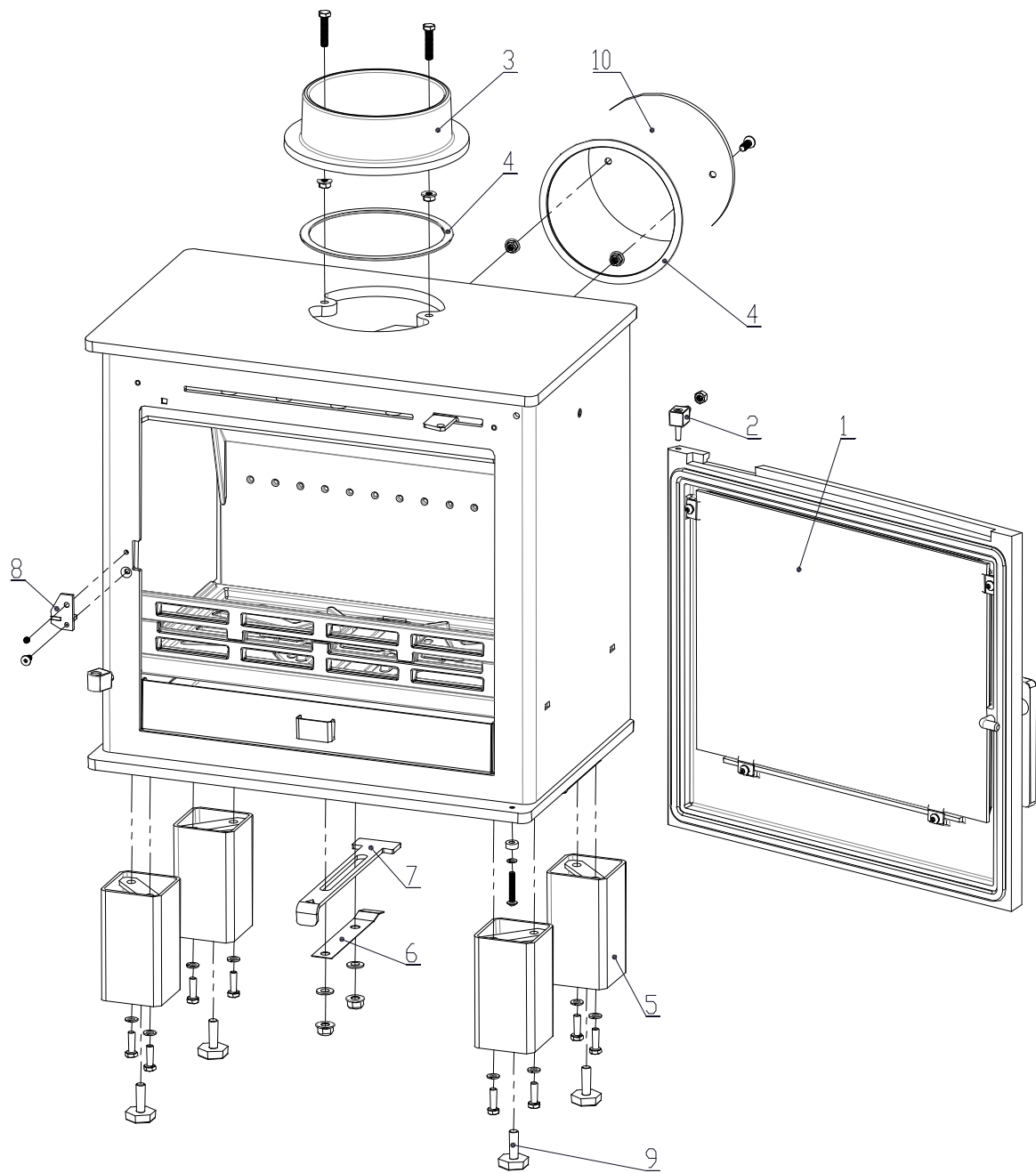
## Troubleshooting

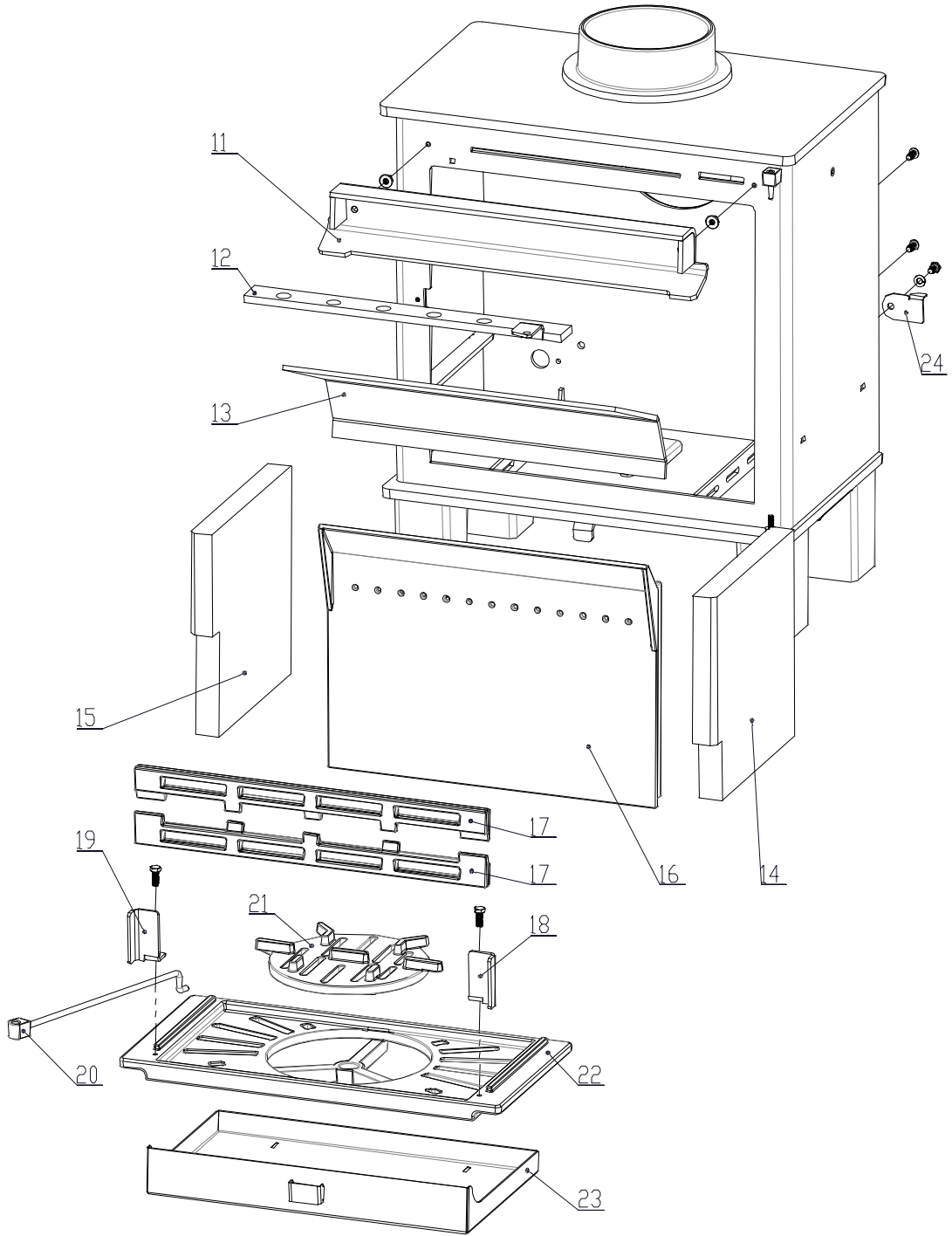
<b>Problem</b>	<b>Probable Cause</b>	<b>Action Recommended</b>
Fire difficult to Start / Fire goes Out	Green wood / wet wood	Use hardwood logs with a maximum moisture content of 20%
	Logs are too large	Use kindling and small logs to start the fire and once established use split logs
	Not enough primary air	Open air control
	Insufficient draft	Check the flue is not Obstructed
Fire burns too Quickly	Too much draft	Reduce the air control
	Excessive draft	Install a draft stabiliser
Smokes on initial Lighting	Flue is cold	Burn paper and kindling to increase heat in flue
Smokes while Burning	Insufficient draught	Check the flue is not obstructed
Low heat output	Poor quality wood	Use seasoned Hardwood (this has a Higher calorific value)

## **Commissioning Check List**

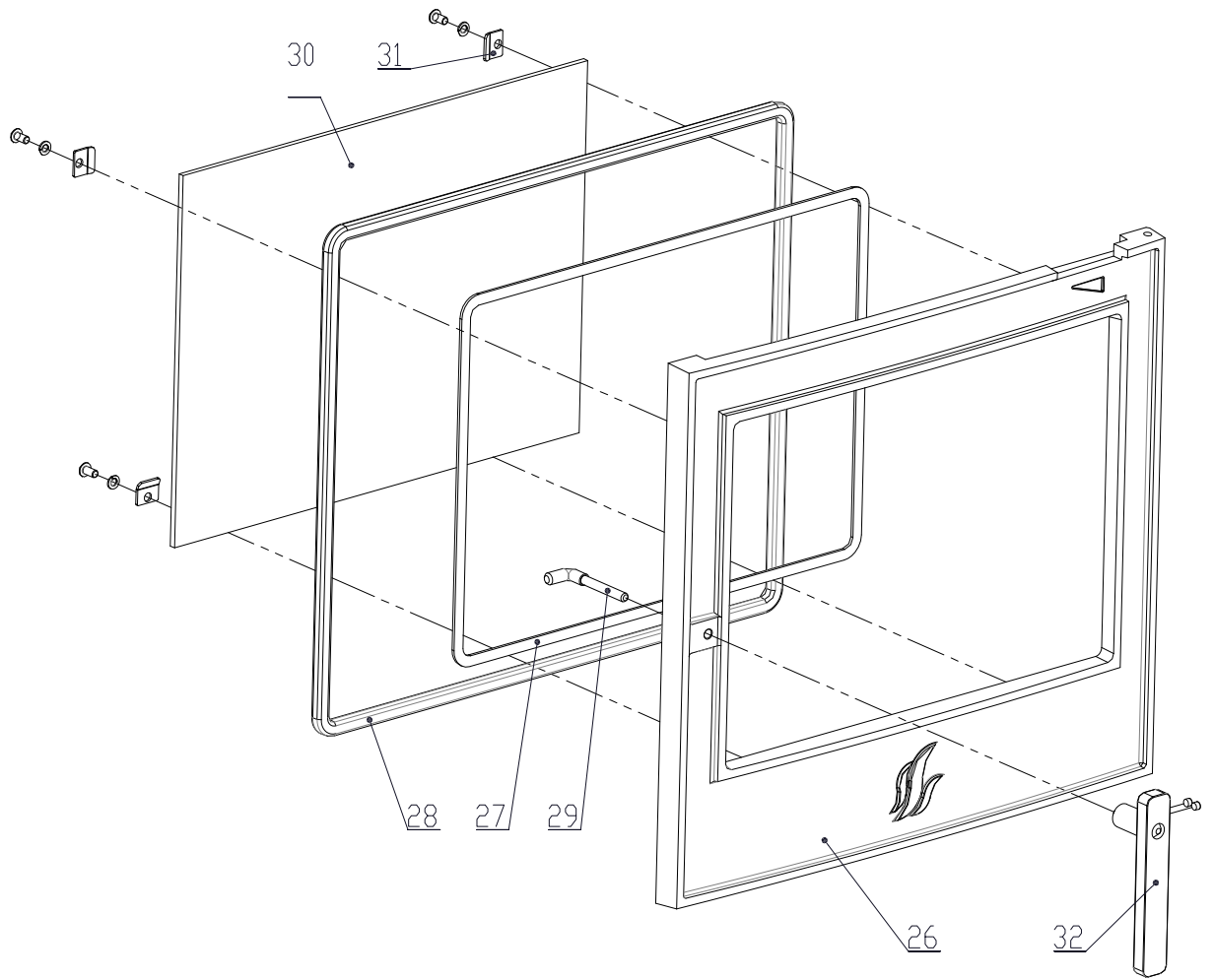
(Please mark box when completed)

- Ensure the serial number has been recorded on the front of this manual for any future use
- Ensure the door seals are in good condition and that the glass is secured correctly in the door (do not over tighten the glass as this will prohibit its expansion and could cause the glass to crack)
- Ensure that all internal components are fitted correctly (these may have shifted in transit)
- Ensure that the appliance operates correctly during the first firing
- Ensure the customer is aware that fumes may be given off during the first firings as the paint cures
- Advise the customer on the safe operation of the appliance
- Leave the instruction manuals, operating tool and glove for the customer's use.









<i>SPAREPART LIST</i>			
<i>STOVE-K4221 MALVERN</i>			
<i>Position</i>	<i>Quantity</i>	<i>Description</i>	<i>Part number</i>
1	1	<i>burning chamber door complete</i>	8400-314
2	1	<i>hinge</i>	9900-972A
3	1	<i>flue spigot</i>	3490-047
4	2	<i>flue spigot gasket (8x3)</i>	1982-004
5	4	<i>leg</i>	9900-1258B
6	1	<i>linea spring</i>	6536-018
7	1	<i>primary air regulator</i>	5311-645A
8	1	<i>door cover plate</i>	9900-993
9	4	<i>adjustable feet</i>	4300-949
10	1	<i>blanking plate</i>	4111-136
11	1	<i>secondary air box</i>	9900-971B
12	1	<i>secondary air regulator</i>	9900-973A
13	1	<i>baffle plate</i>	3711-170A
14	1	<i>right vermiculite brick</i>	6081-736
15	1	<i>left vermiculite brick</i>	6081-744
16	1	<i>back panel</i>	4290-1199
17	1	<i>log guard</i>	4290-1216A
18	1	<i>log guard rail right</i>	7911-1212
19	1	<i>log guard rail left</i>	7911-1211
20	1	<i>riddling rod</i>	9900-978
21	1	<i>oscillating grate</i>	4290-1201A
22	1	<i>grate frame</i>	4290-1200A
23	1	<i>ash pan</i>	9900-974
24	1	<i>tertiary regulation plate right</i>	5111-410
25	1	<i>tertiary regulation plate left</i>	5111-411
26	1	<i>cast iron door</i>	4490-1385
27	1	<i>glass gasket (8x3)</i>	1982-004
28	1	<i>door rope (D10)</i>	1982-012
29	1	<i>locking rod door handle</i>	5035-405
30	1	<i>glass</i>	5540-312
31	4	<i>glass retaining brackets</i>	6612-241
32	1	<i>door handle</i>	9900-1142
<i>Vermiculite set</i>			9900-1092



## **Commissioning Check List**

(Please mark box when completed)

- Ensure the serial number has been recorded on the front of this manual for any future use
  
- Ensure the door seals are in good condition and that the glass is secured correctly in the door (do not over tighten the glass as this will prohibit its expansion and could cause the glass to crack)
  
- Ensure that all internal components are fitted correctly (these may have shifted in transit)
  
- Ensure that the appliance operates correctly during the first firing
  
- Ensure the customer is aware that fumes may be given off during the first firings as the paint cures
  
- Advise the customer on the safe operation of the appliance
  
- Leave the instruction manuals, operating tool and glove for the customer's use.

## **Warranty Certificate**

The specifications within this document are provided for information purposes only and are under no circumstances binding.

With the aim of constantly improving our products, all modifications considered necessary may be made without notice.  
This manual is correct at time of printing.

Our appliances are guaranteed against faults and hidden defects subject to the following conditions:

- The appliance must have been installed by a registered competent installer (HETAS) or inspected by local authority Building Control.
- The appliance must be installed and operated in accordance with our instruction manual.
- The guarantee is for a period of 5 years on the appliance body from the date of purchase.

The following components are considered as consumables and are excluded from the guarantee:

- Grates
- Rope seals
- Ashpan
- Internal vermiculite panels
- Glass
- Baffle plates

Your statutory rights are not affected by this warranty.

**In the event of a warranty claim, please return the form overleaf to  
ACR Heat Products Ltd, Unit One, Weston Works, Weston Lane, Tyseley,  
Birmingham, B11 3RP, UK.**

**Warranty Claim Form**

Customer Name: .....

Customer Address: .....

.....

..... Postcode .....

Daytime Tel: ..... Mobile Tel: .....

Model Name: ..... Model Number: .....

Serial Number: .....

Date of purchase: .....

Date of installation: .....

Installer's Name and address: .....

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Installer's Registration Number: .....

Building Control Certificate Number (if not installed by a registered competent installer): .....

Dealer Name and address: .....

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Unit One Weston Works, Weston Lane, Tyseley, Birmingham, B11 3RP. UK  
Tel: 0121 706 8266 Fax: 0121 706 9182  
Email: [enquiries@acrheatproducts.co.uk](mailto:enquiries@acrheatproducts.co.uk)