



# Solis

Multifuel Stove • Model SOLMF

To be retained by the user for future reference

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



Serial Number:

Document Solis • Version 1 Date 11/07/17

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# IMPORTANT INFORMATION

**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

- Before installation and/or use of this appliance please read these instructions carefully to ensure that all requirements are fully understood.
- This appliance must be installed by a registered engineer, or approved by building control, failure to do so may endanger life and property.
- All the instructions in this manual should work in conjunction with building regulations document J, if there is a variation the most stringent requirement should be adhered to.
- 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 authorised 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 has been designed for intermittent operation.
- This appliance must not be used as an incinerator.
- Each installation is unique to the property, the information contained in this manual may not give exact installation requirements for your installation.
- The installation must comply with Building Regulations, European Standards and Local authority bylaws.

## Asbestos

This appliance contains no asbestos, if there is the possibility of disturbing any asbestos in the installation of this appliance then specialist advice must be sought and appropriate precautions taken.

## Metal Parts

This appliance may contain sharp metal edges, take care when installing or servicing this appliance to avoid personal injury. Please use appropriate personal protective equipment at all times.

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

**Please 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.**

**Please also ensure that the commissioning checklist at the rear of the manual is completed in full.**

## Solis Specifications

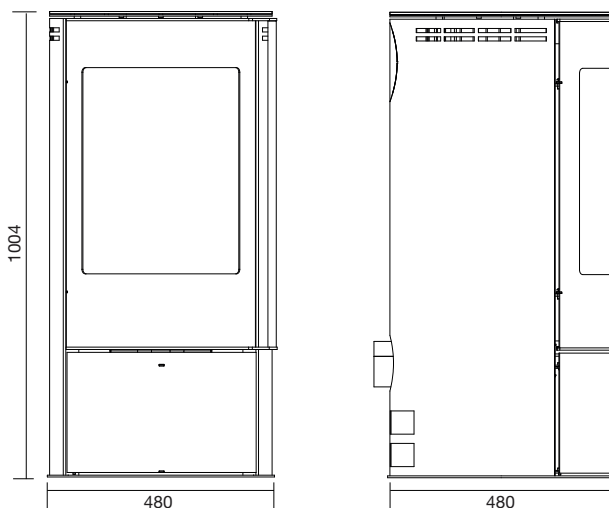
Nominal heat output	5 kW - Wood	5 kW - Maxibrite
Chimney draft required	12Pa	
Height	1004 mm	
Width	480 mm	
Depth	480 mm	
Weight	110 kg	
Air Requirement	N/A ***	
Flue Mass Gas Flow	5.7 g/s - Wood	3.1 g/s - Maxibrite
CO @ 13% O <sup>2</sup>	0.09 Wood vol %	0.06 Maxibrite vol%
Mean Flue Gas Temperature	205°C - Wood	254°C - Maxibrite
Efficiency	82% - Wood	80.9% - Maxibrite
Mean CnHm @13%O <sub>2</sub>	Wood - 18Nmg/M3	Maxibrite - 9Nmg/M3
Mean NOx @13%O <sub>2</sub>	Wood -139Nmg/M3	Maxibrite - 98Nmg/M3
DIN Plus Dust @13%O <sub>2</sub>	Wood -18Nmg/M3	Maxibrite -9Nmg/M3
Log Length	Up To 400 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  $\geq 5.0\text{m}^3/(\text{h}\cdot\text{m}^2)$  then 550mm<sup>2</sup>/kW of appliance rated output above 5kW
- Or
- If design air permeability  $\leq 5.0\text{m}^3/(\text{h}\cdot\text{m}^2)$  then 550mm<sup>2</sup>/kW of appliance rated output
- If in doubt, please consult your registered installer for advice.

If installing into a room containing an extractor fan, please ensure that the relevant tests are carried out according to Document J of the building regulations.



# 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).

In England appliances are exempted by publication on a list by the Secretary of State in accordance with changes made to sections 20 and 21 of the Clean Air Act 1993 by section 15 of the Deregulation Act 2015. Similarly in Scotland appliances are exempted by publication on a list by Scottish Ministers under section 50 of the Regulatory Reform (Scotland) Act 2014.

In Northern Ireland appliances are exempted by publication on a list by the Department of Agriculture, Environment

and Rural Affairs under Section 16 of the Environmental Better regulation Act (Northern Ireland) 2016.

In Wales appliances are exempted by regulations made by Welsh Ministers.

- **The Solis has been recommended as suitable for use in smoke control areas when burning wood, as such, when the secondary/tertiary slider is in the closed position it remains open by 2mm and is prevented from closing by a screw.**



Further information on the requirements of the Clean Air Act can be found here: [www.gov.uk/smoke-control-area-rules](http://www.gov.uk/smoke-control-area-rules)

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.

## 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 manufacturers instructions and should not be considered a substitute for the appliance being installed correctly and regular maintenance of the appliance and flue system by a competent person.

# Installation Instructions

## Location of the unit

### Clearances to non-combustible materials

#### • Solis

There is a recommended 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

#### • Solis

If using an insulated flue with an integrated appliance connector, such as the Midtherm HT-S Starter length, the minimum distance to combustibles is 200mm at the rear and 400mm to the sides of the appliance. If using a single walled flue pipe there must be a minimum clearance of 250mm clearance at the rear and a 400mm clearance to the sides of the appliance. There must be a minimum clearance of 450mm above the appliance to 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 televisions or artwork are positioned above the appliance.

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 225mm 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 (minimum 12 Pa)
- ✓ 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 4m 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 (150mm)

**This appliance is equipped with a pre-fitted manufacturers smoke exempt stop. Under no circumstances should it be tampered with or removed unless expressly authorised by a competent person and the appliance is not installed in a smoke exempt area.**

If the appliance is to be installed in a non smoke exempt area you can remove the restricting screw on the secondary air slider to allow full movement.

- **This appliance is only able to be fitted with a top flue outlet.**
- **The appliance comes pre-installed with the collar in place.**
- **Please ensure that the glass top plate is fitted prior to making the flue connection.**
- **Please check that none of the internal components have moved during the transportation of the appliance.**

## Operating your stove

**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.

Await better weather conditions before attempting to use the appliance.

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

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

### Recommended Fuels

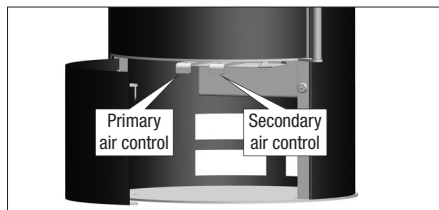
- ✓ **Wood:** hardwood such as ash, oak and beech which have been cut for at least 2 years and stored under shelter. The logs should have a maximum moisture content of 20%. Maximum log length 400mm, maximum width 125mm.
- ✓ **Smokeless Fuels:** below 20% Petroleum coke content such as Anthracite, Phurnacite, Maxibrite suitable for use with a closed heating appliance.

### Prohibited Fuels

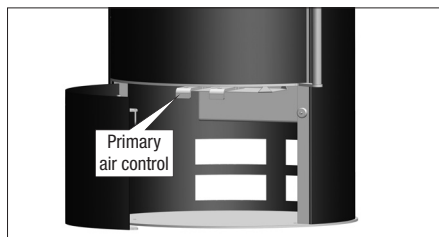
- ✗ **Green wood:** i.e wood which is less than 2 years old with a moisture content of above 20%
- ✗ **Recovered wood:** i.e pallets, railway sleepers etc. These will have been chemically treated and will pollute the atmosphere and possibly overheat the appliance.
- ✗ **Housecoal or Bituminous coal:** these fuels will soot up the airways of the stove and possibly overheat the appliance.
- ✗ **Petroleum Based Coke:** over 20% - this will overheat the appliance and possibly damage the unit.
- ✗ **Liquid fuels.**
- ✗ **Paraffin fire lighter blocks:** these can cause damage to the glass of your appliance.

# Operating your stove

## Instructions for use with wood



- A** Fully pull outwards both air controls (accessed by opening the cupboard door), giving maximum air to the combustion chamber.
- 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 but do not engage the locking mechanism fully.
  - When the fire is burning fiercely, after a couple of minutes add more logs and close the door.
- B** When the fire has become established, close the primary air slider (on the left).

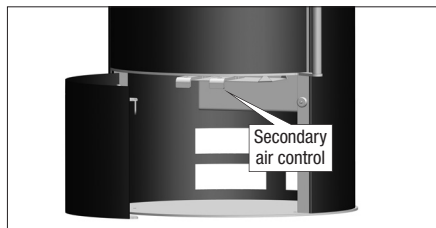


- C** The burning rate can be altered by closing down the secondary air slider (on the right) push inwards to slow the burn or pull fully outwards to increase the burn rate and heat output.

- Care should be taken to ensure that the logs are not placed higher than the log guard allows.

## Instructions for use with smokeless fuel

- A** Fully pull outwards both air controls located below the appliance door, giving maximum air to the combustion chamber.
- 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 but do not engage the locking mechanism fully
  - When the fire is burning fiercely, after a couple of minutes add more smokeless fuel and close the door.
- B** When the fire has become established, close the secondary air slider (on the right).
- C** The burning rate can be altered by closing down the primary air slider (on the left) push inwards to slow the burn or pull fully outwards to increase the burn rate and heat output.



- Care should be taken to ensure that the firebox is not overfilled with smokeless fuel - it should be no higher than the log guard.

# Operating your stove

## Re-fueling

When refueling the stove **always refuel onto a bed of hot embers**, once the new fuel charge has been introduced, open the secondary air control fully until the new fuel is well alight before adjusting the air control to 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.

## Ashpan removal

Open the door of the stove the ash pan is located below the combustion chamber.

**Be careful this part of the appliance will be Hot!**

We recommend that you use the glove provided.

## 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.

## 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.

## Air controls left open

Operation with the air controls or appliance dampers open fully can cause damage to the appliance. The appliance must not be operated with air controls, appliance dampers or door left open except as directed in the instructions. Operation with the air controls or appliance dampers open can cause excess smoke.

- **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. 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.**



# Commissioning Check List

Please tick boxes when each procedure is 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.
- ☐ Record the flue draught reading of the appliance

## Maintenance

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

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 or a ceramic glass cleaner (available from your local stockist)

**Use only replacement parts recommended by the manufacturer.**

# Parts Information

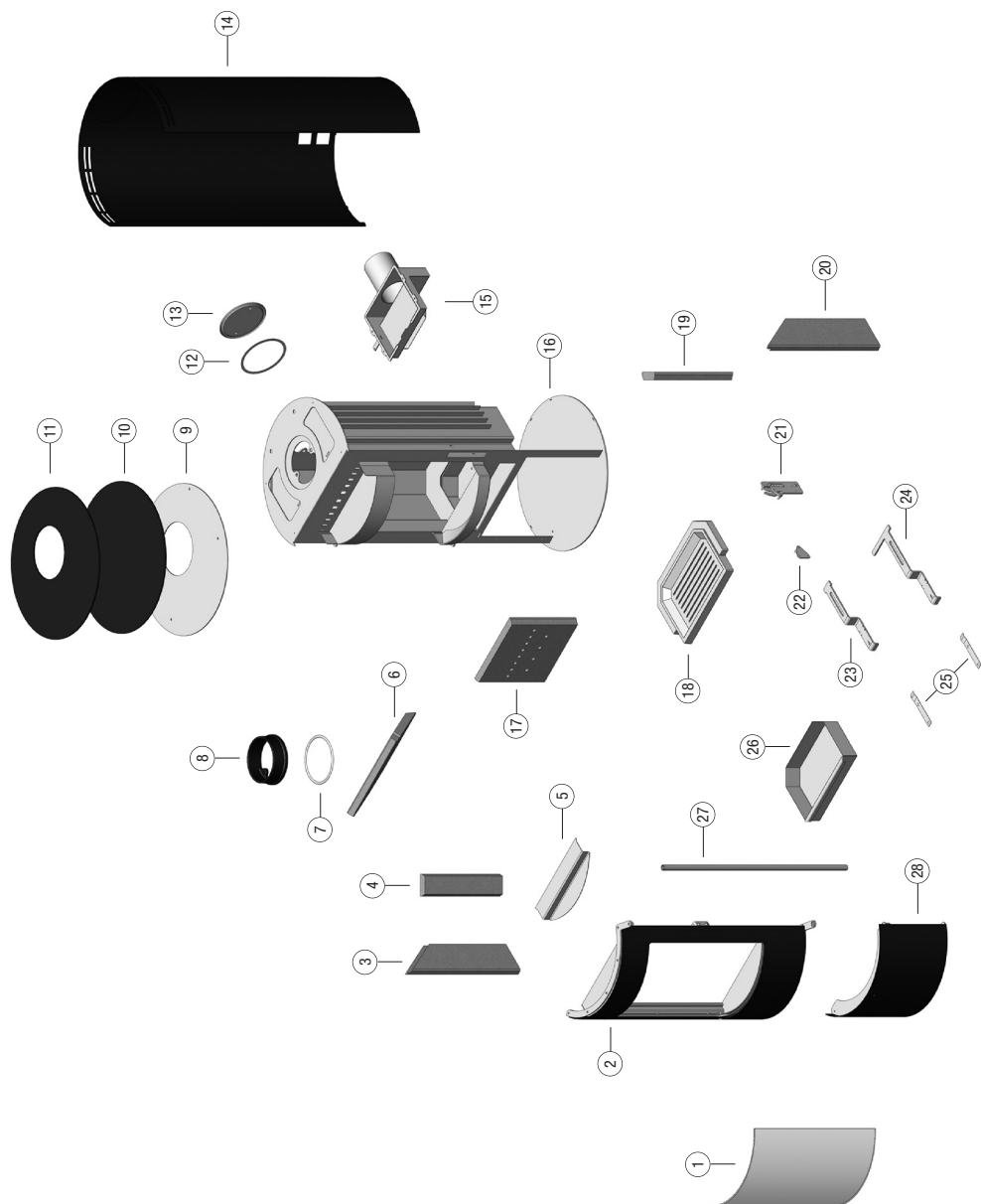


Diagram No.	Description	Part No.	Quantity Required
1	Front door glass	5540-371	1
2	Steel door complete	4411-1820	1
3	Left hand vermiculite side brick	6081-995	1
4	Left rear vermiculite side brick	6081-599	1
5	Airwash deflector	3811-994	1
6	lower vermiculite baffle	6081-1057	1
7	Flue collar gasket	1982-019	1M
8	Flue collar	3490-002	1
9	Lower steel top plate	3311-1069	1
10	Upper steel top plate	5540-395	1
11	Black glass top plate	5540-385	1
12	Blacking plate gasket	1982-019	1M
13	Blanking plate	4111-001	1
14	Outer steel shell	3211-483	1
15	Bottom air chamber	3811-874	1
16	Steel body complete	3311	1
17	rear vermiculite brick	6081-1057	1
18	Cast multifuel grate	5490-139	1
19	Right rear vermiculite side brick	6081-599	1
20	Right vermiculite side brick	6081-994	1
21	Door lock assembly	5011-453	1
22	Door locking cam	5011-518	1
23	Primary control lever	5311-771	1
24	Secondary control lever	5311-772	1
25	Air control linear spring	6536-018	1
26	Ashpan	4911-174	1
27	Door handle	5722-234	1
28	Cupboard door	7111-235	1
29	Door Gasket (Not Shown)	1982-012	3M
30	glass gasket (Not Shown)	1982-004	2M

## Troubleshooting

Problem	Probable Cause	Action Recommend
<b>Fire difficult to start / goes out</b>	• 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
<b>Fire burns too quickly</b>	• Too much draft	Reduce the air control
	• Excessive draft	Install a draft stabiliser
<b>Smokes on initial lighting</b>	• Flue is cold	Burn paper and kindling to increase heat in flue
<b>Smokes while burning</b>	• Insufficient draught	Check the flue is not obstructed
<b>Low heat output</b>	• Poor quality wood	Use seasoned Hardwood (this has a Higher calorific value)



Notes

[illegible]

## Warranty Information



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 (e.g. HETAS) or inspected by local authority Building Control.

The appliance must be installed and operated in accordance with our instruction manual.

All Stoves are covered by a 10 year warranty which covers all stove body castings / stove body steel panels. It does not include

consumable items such as glass, door seals, vermiculite panels, baffle plates and ashpan runners. This 10 year warranty is only applicable when the stove is purchased from one of our recommended retailers.

If a stove from any of our brands is purchased from a non-recommended retailer then only a 12 month warranty will be applicable as outlined below.

All stoves are covered by a 1 year warranty when purchased through a non-recommended retailer. The warranty covers the stove body castings only and does not include consumable items such as grates, firebricks, vermiculite panels, baffles, log guards, door rope and glass.

Your statutory rights are not affected by this warranty.

# Warranty Claim Form

**In the unlikely event of a warranty claim, please complete the below claim form and return it to your supplying dealer:**

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:

Installer's Registration Number:

Building Control Certificate Number:

(if not installed by a registered competent installer)

Dealer Name and address:



ACR Heat Products Limited, Unit 1, Weston Works,  
Weston Lane, Tyseley Birmingham B11 3RP, England.

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- E-mail: [enquiries@acrheatproducts.co.uk](mailto:enquiries@acrheatproducts.co.uk)
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- [www.acrheatproducts.co.uk](http://www.acrheatproducts.co.uk)