



Aarrow Stove User Guide
June 2014



BS EN 13240:2001 +A2:2004 CE

Aarrow Stove User Guide

Arada Ltd

June 2014

Congratulations on the purchase of your new Aarrow stove!

More than 30 years of experience has been put into the development of your stove to ensure ultimate performance and years of trouble free use and enjoyment. Every detail of your stove has been carefully designed and engineered which is why we are so confident in the reliability of our products.

Your Aarrow stove is built to the highest standard of craftsmanship using the best materials and the most modern equipment available. It is a highly efficient and sophisticated piece of machinery and when properly installed and operated it should provide a lifetime of heating satisfaction.

Should you have any questions about your stove which are not covered by this manual, please contact the Arada retailer in your area, call our technical support department on 44 (0)1297 35998 or visit our website www.aradastoves.com which offers a wealth of information on how to care for, and get the best from your stove.

Please ensure that you read these instructions in full and understand them before operating your stove.

Arada has a policy of continuous product development and therefore we reserve the right to amend specifications without prior notice. Due to printing cycles, items or options may be described before they are generally available or after they have ceased. Please check with your retailer or dealer if you are unsure about any aspect of your stove, its installation or correct use.

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1 Warnings

Pure Petroleum coke or Bituminous house coal must not be burned in this appliance. The use of these fuels will invalidate the appliance guarantee.

Arada recommends the use of HETAS approved smokeless fuels which have been deemed suitable for use on closed appliances, including multi fuel stoves. If in doubt, contact The Solid Fuel Association, telephone: 0845 601 4406 / 01773 835400 or visit www.solidfuel.co.uk.

It is a legal requirement that the installation of all new or replacement, wood or solid fuel heating appliances obtain building control approval from your local authority. This can be done by using a qualified heating engineer, affiliated to a government approved competent persons scheme such as operated by HETAS. If in doubt, contact HETAS Limited, telephone: 0845 634 5626 or visit www.hetas.co.uk.

A fireguard conforming to BS 8423:2002 should be used in the presence of children or elderly people. Do not use aerosol sprays or any other flammable materials near the appliance when in use.

Arada Ltd will not be responsible for any consequential or incidental loss or injury however caused.

Any manufacturer's instructions must not be taken as overriding statutory requirements.

Any further warnings in this document will be marked out in a box such as this one. Ignoring the warnings could lead to damage/injury to persons and/or property.

1.1 Health and Safety

Please consult health and safety guidelines for advice on handling heavy and/or large items.

2 Advice on fuel types

2.1 Wood

As a natural and renewable fuel, wood is the first choice for burning, however burning wood requires a little effort and planning.

Any type of wood is suitable (though hardwood is preferable) provided it is well seasoned and has a moisture content below 20%. This usually implies that the timber has been suitably stored to allow moisture to evaporate for at least 9 months in the case of soft wood, and at least 24 months in the case of hard wood. We recommend that for general burning, wood should be split into logs of no more than 100mm (4") diameter.

If, when burning wood, you see signs of sticky tar inside the appliance or chimney, your wood is 'green' or too wet and requires further seasoning. An electronic moisture meter can be obtained in order to determine the moisture content of your wood fuel.

Paper will burn successfully. Burn dry paper only or chimney damage will occur.

Wet wood must not be used as this will greatly contribute to the creation of tar and creosote which may, in extreme cases, run down the chimney in liquid form. This will seriously damage both the chimney and the appliance and increase the risk of a chimney fire.

2.2 Solid fuel

If you have chosen a multi/solid fuel stove this will have a cast iron riddling grate which allows you to burn a wider variety of fuel types. It is important to ensure that your fuel is intended for use in a stove, modern stoves are designed for use with current cleaner burning and smokeless fuels.

Arada recommends the use of HETAS approved smokeless fuels which have been deemed suitable for use on closed appliances including multi fuel stoves, these are:

- Anthracite
- Ancit™
- Coalite
Newflame™
- Homefire™
- Homefire
Ecoal™
- Homefire
Coals™
- Maxibrite™
- Phurnacite™
- Pureheat™
- Supertherm™
- Sunbrite™
- Taybrite™

For additional advice on fuels, please refer to The Solid Fuel Association (www.solidfuel.co.uk) or HETAS (www.hetas.co.uk).

3 Before using your stove

Arrow stoves are designed to be operated with the fire door(s) closed at all times, apart from refuelling (when alight) or cleaning (when cold).

Never leave the appliance unattended for an extended length of time with the door(s) open.

Prior to lighting the stove for the first time, please check with the installer that:

- Installation and all building work is complete. (Refer to the installation guide.)

- The chimney is sound, has been swept and is free from obstruction.
- Building Regulations and any local by-laws have been followed during installation.
- All firebox liner panels and throat plate are in place.
- The chimney draw has been checked and is within specification (between 0.1mb to 0.2mb, or 10-20 pascals). This ensures your stove will operate predictably and efficiently.
- A Carbon Monoxide detector is correctly installed in the same room as the appliance.

Ensure that you have read and understood these instructions before lighting the fire.

Our YouTube channel www.youtube.com/aradastoves features a collection of videos designed to help you get the best from your Aarrow stove.

Always wear suitable protective fire gloves when refuelling your stove, such as the Arada glove supplied with your stove.

We recommend that you light a small fire for the first few days of use to cure the paint and allow the castings to relax. During this process the paint surface may smoke briefly, and you smell a slight odour for an hour or so. The vapour is harmless and should not be confused with fume emissions, however, it is advisable to keep the area well ventilated until the vapour disperses.

You may hear your stove 'click' or 'tick' whilst it heats up or cools down. This is completely normal and is produced by the expansion and contraction of the steel components in your stove when its temperature changes.

4 Air inlet controls

If you have an Aarrow iSeries stove please turn to section 4.2.1 on the following page for information on how your air control system works and should be operated as it differs from the information below

4.1 Location and operation of the controls

Your stove has two air inlet controls. These are located either on the stove body or the stove door.

The primary air inlet provides under draught to the base of the fire chamber and the airwash system (secondary air) provides overdraught and airwash jets. *The exact controls may differ from those illustrated in this manual but will work in the same way.*

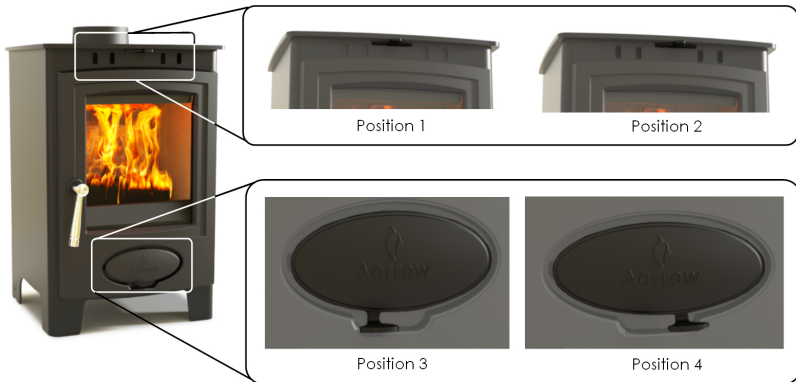


Figure1: Single door stove air inlet controls.

4.1.1 Primary air

Primary air enters the appliance through the inlets near to the bottom of the fire door. Your stove has a control knob to adjust the flow of the primary air.

Sliding the knob to the right will increase the amount of air intake to the stove, as shown in position 4 (in figure 1 on the previous page). To decrease, push the slider to the left, as shown in position 3 (in figure 1 on the preceding page).

4.1.2 Airwash system / Secondary air

The airwash/secondary air inlet has an internal sliding plate with slots, housed in a cover plate, and is located either above or at the top of the fire door.

Sliding the control knob to the right as far as it will go, achieves the fully open position, see position 2 (in figure 1 on the previous page). Sliding it to the left will shut off the air inlet slots as shown in position 1.

4.2 i Series air controls

4.2.1 i Series Cassette Stoves

The Arrow i Series cassette stove range features a single air control slider which correctly and conveniently configures both the primary and secondary air flow.

Figure 2 on the following page illustrates the four main settings of the air control which should be used when burning either wood or solid fuels respectively. Setting the slider somewhere between the fully open and fully closed settings allow you to control the burn rate of the fire.

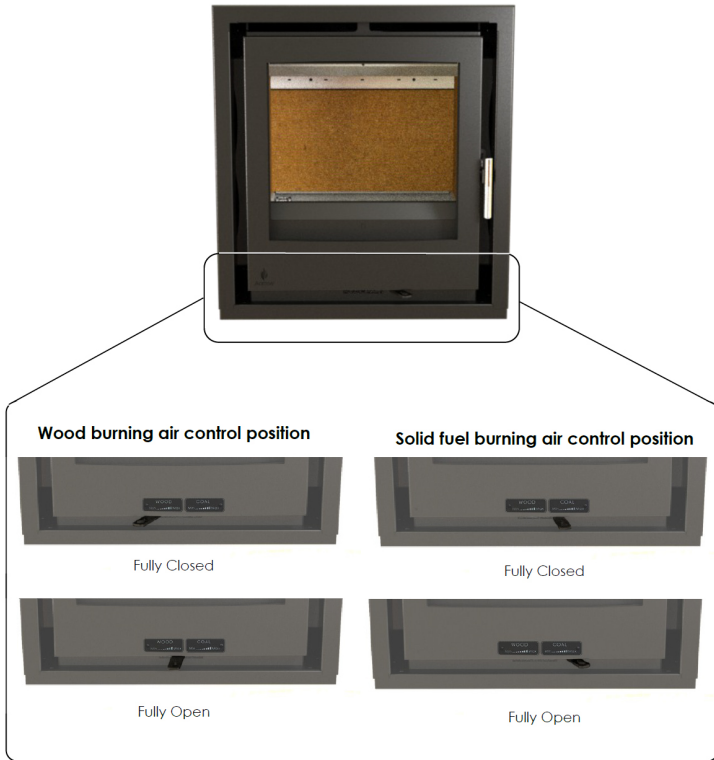


Figure2: i Series air inlet controls.

4.2.2 i Series Freestanding Stoves

The Aarrow i Series freestanding stove features two air control sliders. The slider on the right hand side is used when burning solid fuels, whereas the slider on the left is used when burning wood. Keep the unused slider in the closed position.

Figure 3 illustrates the open and closed settings of the two air controls. Setting the slider somewhere between the fully open and fully closed positions allows you to control the burn rate for either fuels.



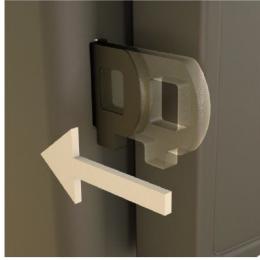
Figure3: i Series air inlet controls.

5 Lighting your stove

5.1 Burning wood

When wood is burnt it is in fact the wood gas that burns and this requires a good supply of air coming from above the fuel. For this reason we will use all the air inlets while igniting the stove, but will then reduce this to air coming from the airwash system and over draught. As much as 40% of the heat from burning wood is obtained from secondary combustion and this can be severely hampered by air entering the fire box from below the fuel via the primary air inlet control.

1. Multi fuel stoves need the grate system set to its wood burning position using the supplied operating tool as follows:



On stoves with a riddling lever at the front of the stove body, push the control inwards.



On stoves with a riddling lever to the side of the stove, lever the control into the 'up' position.

-
2. Set the fire by using scrunched up newspaper and placing a layer of dry kindling wood on top of this. The use of two or three fire lighters may assist in lighting the kindling.
3. Fully open your air control(s) and light the fire.
4. After the kindling has caught light, you should almost close the fire door leaving it ajar by about 20mm. This will aid flue draw during the initial lighting of the fire.
5. The flue temperature and draw should be established after five minutes, and the kindling reduced to form an ember bed. Carefully load the stove with well seasoned wood and fully close the fire door.
6. After ten to fifteen minutes, close the primary air control and regulate the airwash system to control the burn rate and maintain clear glass, typically by reducing to approximately half open. i Series stove owners can regulate the burn rate by adjusting the air control slider between its fully open and fully closed (for wood burning) settings.
7. Close the primary air control on non-i Series stoves as generally no air from below the grate is required when burning wood.

5.2 Burning solid fuels

If you have an i Series stove please read section 5.3 on the following page for instructions on burning solid fuels in your appliance.

Solid fuel burns best with its air supply for combustion coming from underneath the fuel. To achieve this the burn will be controlled by the primary air control (see section 4 on page 5). This allows you to control the flow of air underneath the grate. Riddling the stove occasionally will also help to ensure that burnt fuel does not prevent the supply of air from reaching the fire.

Please do not attempt to burn solid fuels in a dedicated wood burning stove. To burn solid fuel, your stove must have a cast iron grate to withstand the higher temperatures involved. To do so could damage your stove and will void your warranty.

1. To begin, set your stove riddling grate to its solid fuel setting as follows:



On stoves with a riddling lever at the front of the stove body, push the control inwards.



On stoves with a riddling lever to the side of the stove, lever the control into the 'down' position.

2. Set the airwash / primary air slider to about one quarter open and the primary air slider fully open (see section on Air inlet controls on page 5).
3. Light as with wood fuel (see steps 2, 3 and 4 on page 8), with kindling and fire lighters.

4. Once flue draw has been established, after about five minutes, carefully load the stove with fuel and close the door.
5. When the fire is well alight regulate the burning rate by controlling the primary air inlet control.
6. The airwash should be opened sufficiently to keep the door glass clean.

Whilst burning solid fuel it can be beneficial to occasionally riddle the grate bars so any burnt fuel will fall between the grate bars into the ash pan below. This will ensure a good under draught is maintained. This should be done with the supplied operating tool whilst wearing protective gloves.

5.3 Burning solid fuels in an i Series stove

Solid fuel burns best with its air supply for combustion coming from underneath the fuel. To achieve this the burn will be controlled by setting the air control slider into the solid fuel range of settings (see section 4.2.1 on page 6). This allows you to control the flow of air underneath the grate. Riddling the stove occasionally will also help to ensure that burnt fuel does not prevent the supply of air from reaching the fire.

Please do not attempt to burn solid fuels in a dedicated wood burning stove. To burn solid fuel, your stove must have a cast iron riddling grate to withstand the higher temperatures involved. To do so could damage your stove and will void your warranty.

1. To begin, set your stove riddling grate to its solid fuel setting as shown below by pulling the grate control (found behind the stove door) outwards with the operating tool:



2. Set your slider position to fully open for solid fuels by sliding it to the right (see instructions on page 6).
3. Light as with wood (see steps 2, 3 and 4 on page 8), with kindling and fire lighters.
4. Once flue draw has been established, after about five minutes, carefully load the stove with fuel and close the door.
5. When the fire is well alight regulate the burning rate by setting the air control slider along its range of motion for solid fuel burning.

Whilst burning solid fuel it can be beneficial to occasionally riddle the grate bars so any burnt fuel will fall between the grate bars into the ash pan below. This will ensure a good under draught is maintained. This should be done with the supplied operating tool whilst wearing protective gloves.

5.4 Warning - Fume / Smoke emissions

Warning: Properly installed, with a suitable flue or chimney, operated and maintained correctly, this appliance will not emit fumes into the dwelling.

Occasional fumes when de-ashing and refuelling may occur. However, persistent fume emission is potentially dangerous and must be investigated by a HETAS registered installer.

Stop using the appliance if you smell fumes or see smoke escaping.

If fume emission does persist, the following immediate actions should be taken:

- Open doors and windows to ventilate room.
- Let the fire die or extinguish and safely dispose of fuel from the appliance.
- Check for flue or chimney blockage, and clean if required.

Seek expert advice from your HETAS registered installer. Do not attempt to re-light the fire until the cause of the fume emission has been identified and corrected.

6 Further information for all stove owners

6.1 Door glass

The door glass should remain clear during normal burning. However under certain conditions, such as burning at a low rate, using damp wood or overnight burning, the glass may become somewhat blackened. To remedy this, operate the appliance at a fast rate. Alternatively when the stove is cold,

open the door and clean the inside face of the glass with a damp cloth or with glass cleaner (available from stove shops and www.aradastovesandspares.com).

6.2 Reduced burning

When wood is burnt slowly in a closed appliance, it produces moisture and tar, which will create condensation and deposits in the chimney. This effect can be minimised by burning hard for a short period, fifteen to twenty minutes twice a day.

To avoid chimney problems your appliance should not be burnt at a reduced burn rate without a period of fast burning. Fast burning is when the stove is burnt with a 'lively flame' and a higher temperature. We also advise against stoking the fire with wood and reducing the air intake(s) before leaving the stove to extinguish (perhaps when retiring to bed) as this can lead to a cooling of the stove and flue also resulting in incomplete combustion and sooty deposits.

Over firing and chimney fires

DO NOT over fire your appliance. Firing the stove at maximum for prolonged periods may result in over-firing. If the chimney connector or casing glows red the appliance is being over-fired and this may result in a chimney fire.

6.3 Periods of non-use (summer months)

Please ensure that your stove is left clean and moving components are well lubricated with a water repelling corrosion inhibitor for the summer months (during periods of prolonged non-use). If possible store the throat plate outside of the stove. Check all moveable components at regular intervals, to ensure they are moving freely.

Allow air movement through the stove by opening the airwash and primary air inlet control(s) to about half way, open or leave the door ajar. This will allow a free flow of air through the appliance thus preventing moisture and condensation forming inside the stove and chimney. This preventative maintenance will ensure your stove stays in the best condition for the coming winter months.

6.4 Replacement parts

As a leading manufacturer we are conscious of being able to support all our stove users with the supply of spare parts to ensure your continued enjoyment and warmth from your Aarrow stove from Arada. You can find a complete list of spares and consumables such as liners, grate bars and throat plates as well as items to enhance its visual appearance and efficiency such as Arada anthracite stove paint and rope kits.

All replacement parts or accessories can be ordered from your local stove dealer or online direct from Arada at www.aradastovesandspares.com or visit www.aradastoves.com/support.

It is worth noting that the fitting of non-official Arada parts to your stove may invalidate its guarantee.

6.5 Ash removal

The appliance will require ash to be removed periodically but an ash bed of approximately 20mm (3/4") should be maintained when burning wood.

The ash pan should be emptied when the level of ash reaches the top of the ash pan. On no account should the ash be allowed to build up to touch the underside of the grate bars, as this will greatly reduce the life span of the grate.

To remove ash use the supplied operating tool:

- Open the door of the stove, pausing briefly when ajar so as to allow the fire to adjust to the increased air supply.
- Put the fork end of the operating tool into the slots of the ash pan and remove from the ash pit chamber.
- Empty the ash into a suitable container and replace the ash pan into the stove, withdraw the operating tool and close the fire door.

Warning: The ash can be very hot. Care must be taken not to burn hands or household objects with falling embers.

Empty only into a metal container. Even if the ash appears cold, red-hot embers may be concealed and could easily start a fire or cause an injury.

7 Further information for multi fuel stove owners

7.1 Multi fuel or *Flexifuel* grates

The grate in your Aarrow stove comprises of a series of reciprocating cast iron bars seated on a pivoted comb. These should come pre-assembled in your new stove.

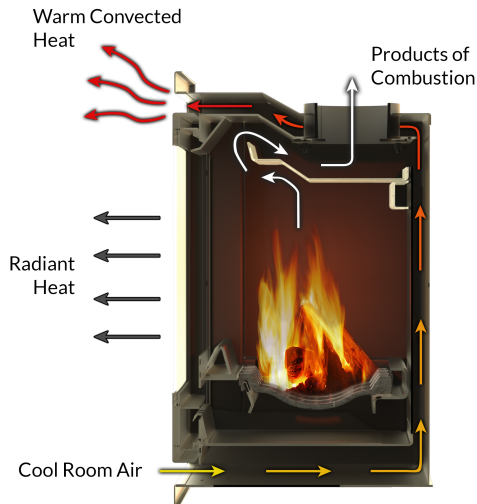
All bars in the grate are identical, but every other bar is turned 180 degrees, with the ends of the bars marked 'H' sitting on the high sections of the comb, and the ends marked 'L' sitting on the low sections.

The riddling lever, either on the side or front of your stove, can be operated with the stove operating tool to riddle ash into the ash pan below. Only riddle the stove with the door closed unless your stove requires you to open the door to access the riddling

mechanism. Stop riddling once red embers begin to fall into the ash pan.

After extended use it may be necessary to replace some of the grate bars. Periodic inspection of the bars is recommended and any damaged bars should be replaced. Also check for obstructions that may prevent the operation of the riddling mechanism.

8 How heat is delivered by your stove



8.1 Radiant heat

All Arrow stoves radiate heat into the room. The radiated heat is most intense at the front of the stove and less intense the further you move away from the stove.

This radiated heat is delivered as infrared rays which heat the objects they strike. It is then these objects (such as the chimney

breast, hearth etc.) which heat the surrounding air.

8.2 Convected heat

Air immediately adjacent to the stove is heated as a result of contact with its hot surfaces. This air then rises being replaced by cooler air which is then heated and rises again.

This creates a circuit or flow of air referred to as a convection current, which helps to distribute heat around the room in which the stove has been installed.

Aarrow i Series cassette stoves benefit from having a convection system which further encourages this movement of air supplying additional heat to the room. The colder air is drawn into a chamber at the base of the stove and warms up as it goes around the back of the stove before entering the room from the top of the stove.

9 Ongoing care for your Aarrow stove

The following items should be checked on your stove at regular intervals to help ensure that the safe and efficient use of your stove continues for many years to come. This should only be done when the stove is unlit and cold.

9.1 Adjusting the door hinges

Once the appliance has been under fire for a period of time the fire door may appear to have moved out of alignment with relation to the door aperture or catch. This is quite normal and due to the settling of the casting.

Doors attached with two hinges fixed to the body with screws can be re-aligned as follows:

When the appliance is cold, open the fire door so that it is at right angles to the front of the stove and then lift the fire door up off its hinges.

Gently tap the hinge pins to compensate for the misalignment and then re-fit the door and check to ensure it now sits square to the body; if not repeat the above steps.

If the fire door needs to be raised, please follow the instructions below:

When the appliance is cold, open the fire door so that it is at right angles to the front of the stove and lift the fire door up off the hinges.

Drop one washer on the top and bottom hinge pins. Fit the door and check. Repeat again if necessary.

9.2 Liners / firebricks

The stoves liners (also known as firebricks) may become cracked after long periods of heavy use or after being knocked by the loading of fuel or a poorly aimed fire poker. If the liners are still staying in situ and are able to support the throat plate correctly there is no need to replace them. Cracked liners will not in themselves affect the performance of the stove.

9.3 Throat plate

The throat plate should be removed from the stove and checked once a month and any accumulated deposits should be cleaned off. This is best done with a brush. After a period of time the throat plate may begin to corrode or distort and will require replacing. A replacement throat plate can be sourced from your dealer or at www.aradastovesandspares.com.

9.4 Fire door seal

The rope seal around the edges of the main fire door should also be checked. Look for signs of fraying, peeling away or the ends not meeting. If the rope is unable to create a good seal with the stove body it should be repaired/replaced. A poor seal will decrease your ability to control the burn rate and its efficiency whilst leading to an increase in heat lost through the flue.

9.5 Cracked glass

It is not recommended to operate the stove with cracked glass; this can lead to over firing due to air leaking into the firebox and it may fail completely leading to personal injury or a fire. You should discontinue use of your stove until it has been repaired. You can source replacement glass kits from your stove dealer or online at www.aradastovesandspares.com

10 Further resources / reading

Once again we would like to thank you for buying your Aarrow stove. When you buy a Aarrow stove, you are not only buying a first class appliance, you are buying a commitment from us to look after you and your appliance.

We appreciate that we have given you a lot of information to read, but we hope it has been clear and helpful and that you are now able to enjoy the full benefits of your stove.

However if you have any queries, doubts or would like further advice please do not hesitate to speak to your Aarrow dealer or call us. You will find our contact details after this paragraph as well as a list of resources where you can discover more information about your stove and associated articles.

- HETAS
www.hetas.co.uk

- Solid Fuel Association
www.solidfuel.co.uk
- Document J Building Regulations (Combustion Appliances)
www.planningportal.gov.uk/
- The National Association of Chimney Sweeps (NACS)
www.nacs.org.uk/

- Arada Technical Support
0844 8567181
technical@aradastoves.com
- Arada's Support Site
www.aradastoves.com/support
- Arada's Spares Site
www.aradastovesandspares.com

11 Guarantee

Arrow stoves comes with a LIFETIME GUARANTEE against splitting or cracking of the main body. The main body being defined as the steel outer casing and items fixed immovably to the casing.

All other parts, which would be subject to normal wear or tear are excluded from this guarantee. These include the firebox liner panels, fuel retainers, throat plate, door rope, door glass, grate bars, gaskets, hotplate and spigot.

This guarantee shall not apply to any stove that has been altered in any way, or which in our professional judgment has been subjected to misuse, neglect, accident, abuse or excessive wear and tear. The guarantee is also conditional upon the appliance being serviced and checked annually by a qualified heating engineer, with documentation to be retained and produced in the event of a claim being made.

Claims are not valid where installation does not conform with all building regulations in force at the time of purchase. The manufacturers decision shall be final. However, if your appliance proves to be defective as a result of faulty materials or workmanship during the guarantee period, we will repair or replace it FREE OF CHARGE.

THE USE OF SPARE PARTS OTHER THAN THOSE SUPPLIED BY ARADA WILL INVALIDATE THE APPLIANCE WARRANTY. ARADA WILL NOT BE RESPONSIBLE FOR ANY CONSEQUENTIAL OR INCIDENTAL LOSS, DAMAGE OR INJURY HOWEVER CAUSED.

All guarantee periods commence on the date of purchase and are non-transferable. Our guarantee is offered as an addition to your statutory rights.

If you think your stove is not operating correctly please contact your local Arrow dealer who will have the knowledge and facilities to help you. When you contact your dealer they will want to know:

- Your name, address, post code and telephone number.
- Clear and concise details of the fault.
- Your proof of purchase, installation and annual servicing details will also be required.

Please telephone: 01297 35998 -or- email:
info@aradastoves.com Information is also available at
www.aradastoves.com/support

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