

# Part I: Installation Instructions for **WAGENER SPARKY**

(Please keep these Instructions for future Reference)

## **Important Message to the Owner**

Please read fully the Operation & Maintenance Instructions with your Wagener Sparky **BEFORE lighting** your first fire. Your insurance company may require notification of the installation. Please check.  
**If a Wet Back is fitted it must be connected to the water supply or damage will result.**  
Such damage is not covered by Warranty. Tempering Valves should be installed to the system for safety. Tempering Valves may be a Permit Requirement. Check with your Building Inspector or Local Council.  
BIA: As from 22 April 2003 Automatic Smoke Detectors/Alarms are mandatory in all new homes and when solid fuel heating appliances are installed. Permits will not be signed off if alarms are not fitted.

## **Important Message to the Installer**

**The Wagener Sparky freestanding multi-fuel heater has been tested to and complies with AS/NZS 2918:2001 - Domestic Solid Fuel Burning Appliances.**  
The Wagener Sparky must be installed in accordance with these installation instructions to comply with AS/NZ 2918-2001-Domestic Solid Fuel burning appliances.

## **Installer's Responsibilities**

Installation of the Wagener Sparky must be in accordance with these instructions.  
Any variation from these installation instructions or any doubts about them must be checked against requirements of the AS/NZS 2918-2001. The installation must be carried out by a suitably qualified installer. We recommend using an NZHHA Accredited Technician.

**WARNING: THE APPLIANCE AND FLUE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH AS/NZS 2918: 2001 AND THE APPROPRIATE REQUIREMENTS OF THE RELEVANT BUILDING CODE OR CODES.**

**THE APPLIANCE AND FLUE SYSTEM SHOULD NOT BE MODIFIED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE MANUFACTURER.**

**WARNING: DO NOT CONNECT WET BACKS TO AN UNVENTED HOT WATER SYSTEM**

**INSTALL IN ACCORDANCE WITH AS 3500.4.1 OR NZS 4603 AND THE APPROPRIATE REQUIREMENTS OF THE RELEVANT BUILDING CODE OR CODES**

CAUTION: MIXING OF APPLIANCE OR FLUE SYSTEM COMPONENTS FROM DIFFERENT SOURCES OR MODIFYING THE DIMENSIONAL SPECIFICATION OF COMPONENTS MAY RESULT IN HAZARDOUS CONDITIONS. WHERE SUCH ACTION IS CONSIDERED, THE MANUFACTURER SHOULD BE CONSULTED IN THE FIRST INSTANCE.

CAUTION: CRACKED AND BROKEN COMPONENTS, e.g. GLASS PANELS OR FIRE BRICKS, MAY RENDER THE INSTALLATION UNSAFE.

## **Flue System**

Must be manufactured in accordance with AS/NZ 2918-2001 and tested to Appendix F. See installation instruction section on page 5.

**PLEASE LEAVE THESE INSTRUCTIONS WITH THE OWNER WHEN THE INSTALLATION IS COMPLETED**

# **Preliminary Installation Procedures for WAGENER SPARKY**

To get full benefit from your Wagener Sparky it is important that it is installed correctly, both for efficiency and safety sake. The following points should be noted:-

1. The characteristics of the Wagener Sparky will determine its position within the home. As a general rule an interior wall installation suits flue requirements better than against an exterior wall. Sparky may also be positioned in front of an existing open fireplace – see separate specification page.
2. Check for flue obstructions above the ceiling. (e.g. header tanks, electrical mains or load bearing roof supports).
3. The minimum vertical flue height for satisfactory operation is 4.2metres above the top of Sparkys Flue Flange. The performance of Sparky depends more on the flue than on any other single component. It is the draw on the flue that drives the stove.
4. Remember a permit is required from your Local Authority.

## **Floor Protector/Hearth Requirements & Positioning**

**NB** Note different requirements for leg and log box base models

**Sparky on Legs** requires an **INSULATING floor protector hearth** a minimum size of 810mm wide x 760mm deep. Sparky can sit directly on to a concrete floor which may be overlaid with tiles etc .

On wooden floors a minimum of one sheet of micorel60 board (16mm thick) with a non combustible and supportive upper surface of tiles, slate, treadle plate or the like is required.

**Sparky on a Log Box Base** requires an **ash hearth floor protector only** of a minimum size of 610mm wide and 760mm deep. (eg Tiles, slate, treadle plate etc) The Ash Hearth floor protector shall have an upper surface, including grouting, of durable, non-combustible material. All joints in the surface must be sealed to protect and prevent ash or spilled embers reaching the floor.

Floor protection must extend under the stove and forward 300mm and 200mm to each side of leg model and 150mm to each side of log box base model.

For concrete floors trim any floor coverings to the same minimum hearth requirement.

NOTE: SPARKY MUST BE AFFIXED TO THE HEARTH AND FLOOR FOR SEISMIC RESTRAINT.

For Seismic Restraint secure through two holes in the rear legs or through the base of the log box and screw through the hearth and into the floor.

## **Wet Back Fitting**

Sparky can be fitted with a wet back.

We recommend that you use the “Lion” Wet Back which has been designed and tested specifically for the Sparky. In general, wet backs are factory fitted at the time of ordering.

However, a suitably qualified person can fit or change the wet back out in the field if this is required.

Water must always be present in the wet back.

The wet back **MUST** be connected by a Registered Plumber to an open vented system.

Tempering valves are required.

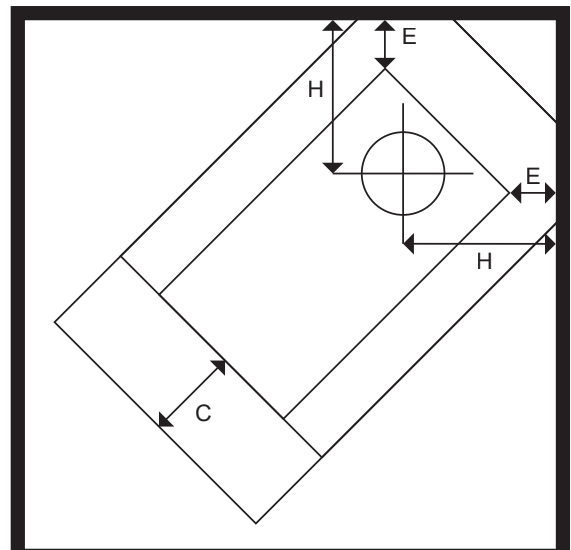
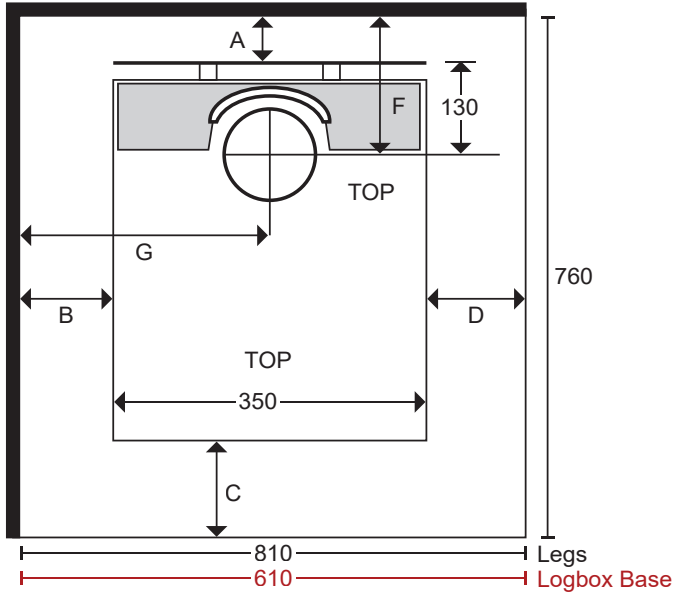
**Please check the PH level of the water supply as wet backs can become fouled with lime which will void the warranty. NB Some coals are very corrosive and may shorten the life of the wet back – please check with the supplier as this is NOT covered by warranty.**

Please advise the householders **NOT** to boil the wet back as this will cause vibrations and will fatigue the wet back, the pipes and the cylinder. This will **NOT** be covered by the warranty.

# WAGENER SPARKY

## Installation Clearances

## AS/NZ Standard 2918:2001



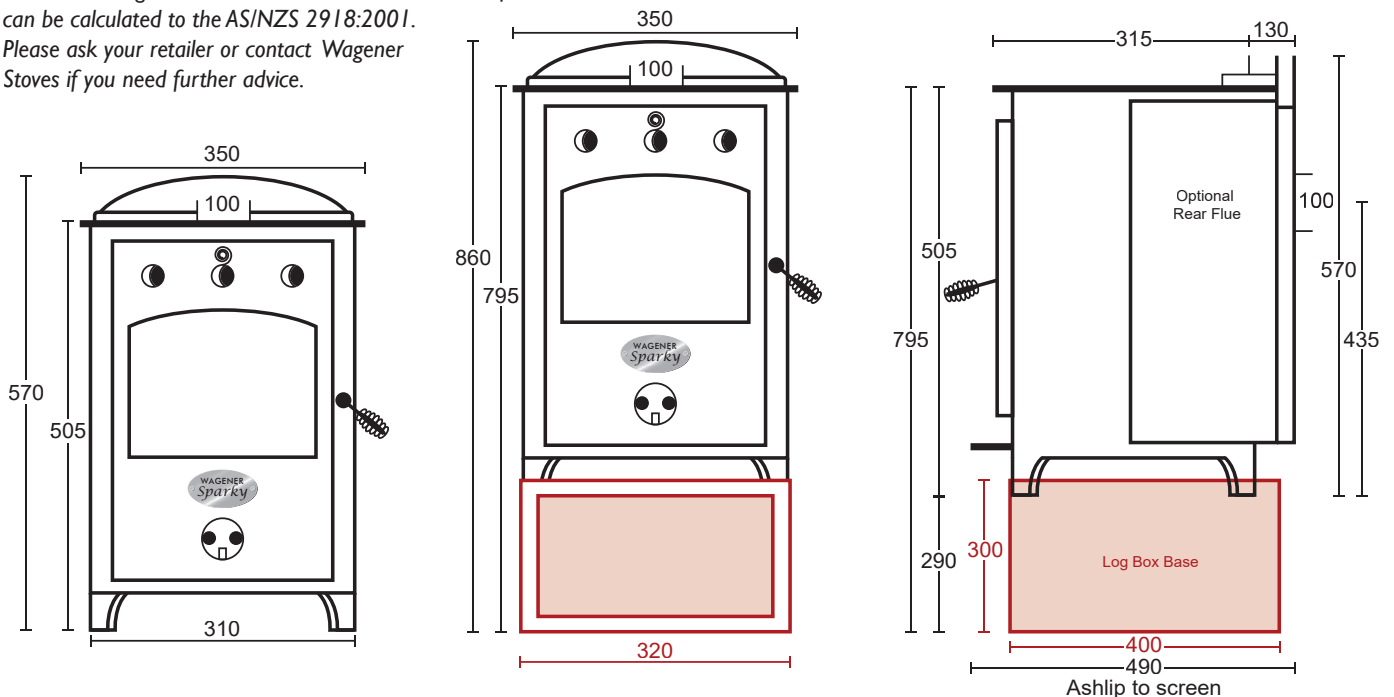
- Optional log box base requires ash hearth floor protector only
- Standard leg model requires insulated hearth floor protector (eg One sheet micore board with tiles glued and grouted to top surface)

### Wetback pipe heights

- On legs 205mm & 285mm
- On base 495mm & 575mm

Minimum clearance to Combustible Surfaces	A	B	C	D	E	F	G	H
With stainless steel flue shield to unprotected wall	50	550	300	150* 200*	250	180	725	450
As above 12mm Promina board spaced 25mm off wall	37	160	Floor protection must extend under the stove and forward 300mm. *Leg model 200mm to sides. Log base model 150mm to sides.		73	167	335	273
As above with sheet metal any type 0.5mm or thicker spaced 25mm off the wall.	26	165			75	156	340	275
Sheet metal as above 2 sheets spaced 12mmx12mm	26	110			50	156	285	250

Other screening materials are available and clearance factors can be calculated to the AS/NZS 2918:2001. Please ask your retailer or contact Wagener Stoves if you need further advice.

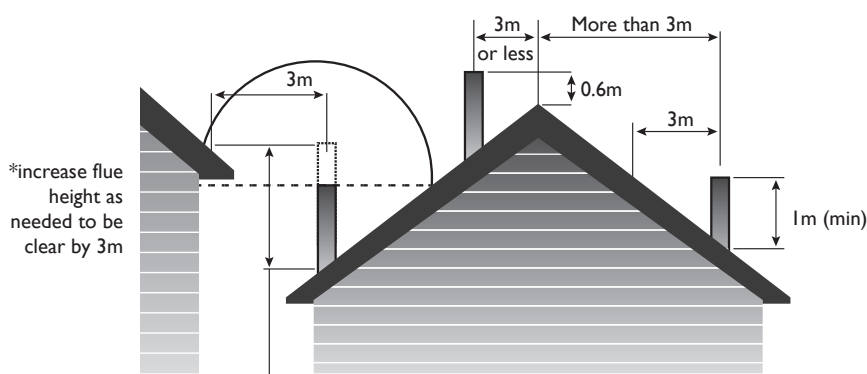


# Flue Installation

The Wagener Sparky uses a 100mm diameter flue. It is imperative that the connection between the flue and the flue spigot is sealed using a recommended flue sealant. If an offset bend is required it should be as steep as possible to enable ease of cleaning. Extra flue height may be required to compensate for any lack of draw through the bend.

**The performance of Wagener Sparky depends more on the flue than on any other single component as it is the draw on the flue that drives the Sparky. We recommend 4.2 metres of flue.**

Diagram C



The top of the flue system should be at least 1000mm above the roof or at least 600mm higher than any obstacle or ridge within 3 metres of the flue. The flue pipe shall extend **not less than 4.6M ABOVE the top of the floor protector.** However a total minimum vertical height ABOVE the Wagener Sparky of 4.2 metres is recommended for adequate draft.

Joints between sections of the flue pipes are push fitted so that the upper section enters the bottom section and must be SEALED using a flue sealant.

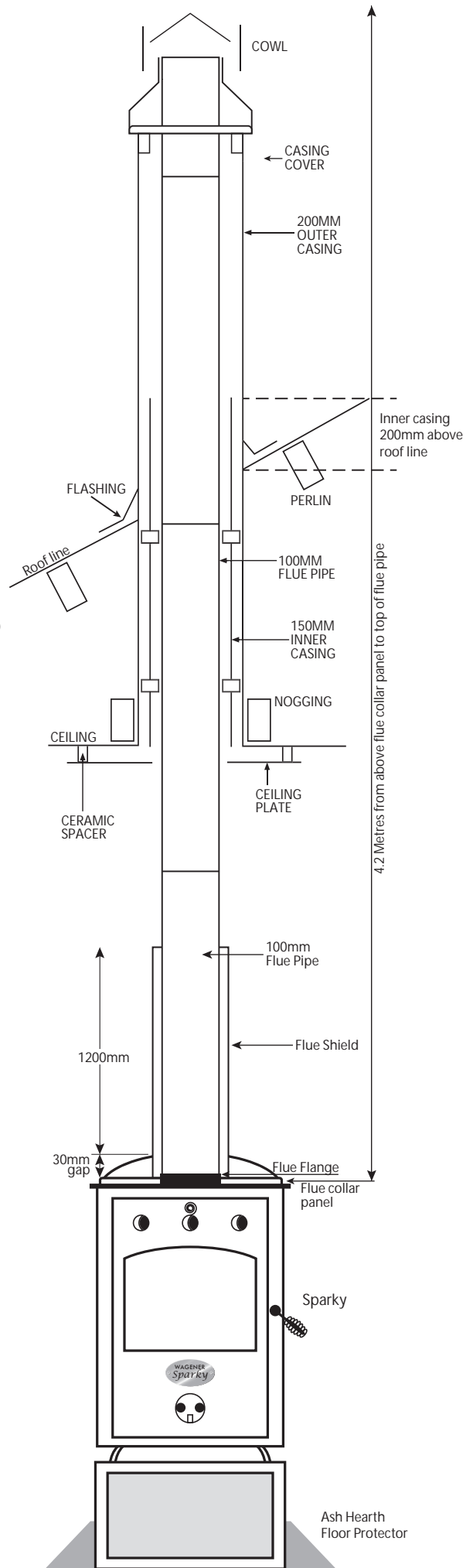
Each section should be secured to prevent separation using three stainless steel self tapping screws or three monel steel rivets. Only flue systems which comply with the AS/NZS 2918-2001 should be used.

Please follow flue manufacturers instructions on page 5 and 6 "100mm Free Standing Woodfire Flue Kit Installation" Instructions'

**NB. Bird netting is available**

**Note:** We recommend this purpose designed 100/150/200 flue system with reduced sized flue shield. ARS Test Report 18/2916. However a tested 100/200/250 system is compliant with the requirements of the standard.

Diagram B



# 100mm / 200mm Free Standing Woodfire Flue Kit Installation Instructions (see illustration page 4)

**WARNING: THIS FLUE KIT HAS BEEN MANUFACTURED IN ACCORDANCE WITH AS/NZS 2918:2001 AND TESTED TO APPENDIX F. TO ENSURE SAFETY THIS FLUE KIT MUST BE INSTALLED AS OUTLINED IN THESE INSTRUCTIONS AND THE APPROPRIATE REQUIREMENTS OF THE RELEVANT BUILDING CODE OR CODES. WOOD FIRE AND FLUE CLEARANCES FROM COMBUSTIBLE WALLS MUST BE IN ACCORDANCE WITH WOOD FIRE MANUFACTURER'S SPECIFICATIONS AND AS/NZS 2918:2001. THESE INSTALLATION INSTRUCTIONS ARE FOR TESTED APPLIANCES ONLY.**

CAUTION: MIXING FLUE SYSTEM COMPONENTS FROM DIFFERENT SOURCES OR MODIFYING THE DIMENSIONAL SPECIFICATIONS OF COMPONENTS MAY RESULT IN HAZARDOUS CONDITIONS. WHERE SUCH ACTION IS CONSIDERED, THE MANUFACTURER SHOULD BE CONSULTED IN THE FIRST INSTANCE.

CAUTION: IT IS THE RESPONSIBILITY OF THE INSTALLER TO ENSURE THAT THE INSTALLATION OF THIS FLUE KIT COMPLIES WITH AS/NZS 2918:2001, THE APPLIANCE MANUFACTURERS SPECIFICATIONS FOR FLUE PIPE SHIELD AND CEILING PLATE AND THAT THE RELEVANT BUILDING CODES ARE ADHERED TO.

BENDS AND EXTENSIONS TO THE LENGTH OF A FLUE SYSTEM ARE PERMITTED (AS/NZS 2918:2001 4.1)

1. Locate Wood Fire in its proposed position and mark a point on the ceiling that is directly above the centre of the Wood Fire's Flue Spigot. Check that the Wood Fire's location allows the OUTER CASING to clear all the structural roof timbers.
2. Cut a 200mm square hole in ceiling, directly above a cut hole in roof to accommodate OUTER CASING.
3. Fit timber nogs around ceiling i.e. Nogs form a 200mm square aperture that allows air to circulate freely over the OUTER CASING surface.
4. Position the OUTER CASING so that it is flush with the underneath of the ceiling and protrudes through the roof the required height. Note that AS/NZS 2918:2001 4.9.1(a) states, "the FLUE PIPE shall extend not less than 4.6m above the top of the floor protector." Refer to Diagram B. Fix into position using appropriate fastenings.
  - a) If the FLUE PIPE is within 3 metres of the ridge, the FLUE PIPE must protrude at least 600mm above the ridge of the roof.
  - b) If the distance from the ridge is more than 3 metres, the FLUE PIPE must protrude at least 1000mm above roof penetration.
  - c) The FLUE PIPE must be more than 3 metres from any nearby structure. (Refer to diagram C).

Additional FLUE PIPE, OUTER CASING and/or INNER CASING may have to be added to ensure the following.

- The correct minimum roof penetration height.
- Sufficient overall height to encase the FLUE PIPE which must extend a minimum of 4.6 metres from the floor protector. Refer to diagram B.

# 100mm / 200mm Free Standing Woodfire Flue Kit Installation Instructions (continued)

**Note** that the INNER CASING MUST extend 200mm above roof penetration.

**NB:** Do not secure the OUTER CASING SLIP EXTENSION onto the OUTER CASING, as a final adjustment will be required when fitting cowl assembly. See paragraph 11.

5. Fix an appropriate flashing around the OUTER CASING to seal onto the roofing material. Refer to the manufacturer's recommendations for correct fitting. **NB:** On iron roofs, fixings such as metal angle brackets (approximately 25mm x 25mm) can be fitted under the flashing to securely fix the roof to OUTER CASING.

6. Place CEILING PLATE over Wood Fire's Flue Spigot, ensuring the folded edges are facing the ceiling.

7. Position bottom length of FLUE PIPE (crimped end downwards) into Wood Fire Flue Spigot. Refer to the supplier of the Wood Fire and use the flue pipe sealant recommended.

8. Assemble FLUE PIPES together ensuring seams are straight, offsetting the seams will ensure a neat fit. FLUE PIPES **must** be assembled with crimped ends down (towards Wood Fire). Secure each joint with a minimum of three Monel Steel Rivets equally spaced around the joint. If using HI-THERM FLUE PIPE the protective wrapping should be left on the FLUE PIPE during installation.

9. From the roof lower FLUE PIPE through OUTER CASING into the bottom FLUE PIPE securing the 3 Monel rivets.

10. Check that the FLUE PIPE SPACING BRACKETS inside the INNER CASING are correctly positioned and then from the roof slide the INNER CASING into the OUTER CASING until the brackets rest on to the internal swage ring of the OUTER CASING, this will ensure the INNER CASING is the correct 12mm above ceiling level.

Check the INNER CASING when correctly positioned extends a minimum of 200mm above the roof penetration.

11. Before securing the OUTER CASING SLIP EXTENSION to the OUTER CASING with 3 rivets, ensure the FLUE PIPE is either flush or extends above the top of the OUTER CASING SLIP EXTENSION by no more than 15mm. Adjust SLIP EXTENSION to obtain this measurement.

12. Push CASING COVER (with spigot inside FLUE PIPE) down onto the OUTER CASING SLIP EXTENSION. The 3 locating brackets with holes must be on the outside of the OUTER CASING SLIP EXTENSION and are secured using 3 rivets.

13. Fit COWL but do not secure, as removal for flue cleaning will be necessary. Deform or ovalise the stub of the COWL to ensure it is a tight friction fit.

14. Fasten CEILING PLATE to ceiling using screws and ceramic spacers required. Ensure an even air gap around FLUE PIPE when fixing. Remove protective plastic from CEILING PLATE **N.B** 12mm air gap between ceiling plate and ceiling must be maintained.

15. Fit the flue shield to the flue pipe as per fitting instructions supplied with the flue shield kit.

16. Please leave all instructions with the owner.

# Part 2: Operation & Maintenance Instructions for WAGENER SPARKY – Multi Fuel

## Message to the Owner

Thank you for purchasing a New Zealand designed and made Wagener Stove.  
With care and common sense your Wagener Sparky will give you many years of trouble free service.  
We recommend an annual safety check of flues, bricks, door seals, door catches, air controls and the like.

## **WARNINGS AND CAUTIONS**

1. **WARNING: ANY MODIFICATION OF THE APPLIANCE THAT HAS NOT BEEN APPROVED IN WRITING BY THE TESTING AUTHORITY IS CONSIDERED AS BREACHING AS/NZS 4013.**
2. **WARNING: DO NOT USE FLAMMABLE LIQUIDS OR AEROSOLS TO START OR REKINDLE THE FIRE.**
3. **WARNING: DO NOT USE FLAMMABLE LIQUIDS OR AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHEN IT IS OPERATING.**
4. **WARNING: DO NOT STORE FUEL WITHIN HEATER INSTALLATION CLEARANCES.**
5. **WARNING: DO NOT OPERATE THIS APPLIANCE AS AN OPEN FIRE. IT IS NOT TESTED TO BE USED IN THIS WAY AND WILL BE CONSIDERED AS BREACHING AS/NZS2918:2001.**
6. **WARNING: OPEN AIR CONTROL TO FULL AIR SUPPLY BEFORE OPENING FIRE DOOR.**
7. **CAUTION: THIS APPLIANCE SHOULD NOT BE OPERATED WITH A CRACKED GLASS.**
8. **CAUTION: THIS APPLIANCE SHOULD BE MAINTAINED AND OPERATED AT ALL TIMES IN ACCORDANCE WITH THESE INSTRUCTIONS.**
9. **CAUTION: THE USE OF SOME TYPES OF PRESERVATIVE TREATED WOOD AS A FUEL CAN BE HAZARDOUS TO THE ENVIRONMENT AND DETRIMENTAL TO YOUR APPLIANCE.**

## **Further Cautions & Over Firing**

Never run Sparky with the door ajar or open. This will cause over firing and damage to your stove & flue which will **NOT** be covered by warranty as well as being potentially dangerous.  
**SIGNS OF OVER FIRING:** Flue turns red hot, stove “roars”, cooktop surface becomes red hot.

### POSSIBLE CAUSE OF OVER FIRING

1. Excess flue length/ windy conditions
2. Appliance run with door ajar
3. Faulty door seals
4. Full load of very dry, small wood
5. Dirty flue catches fire

### REMEDY

Move Air Control to reduce or close air supply  
Close the door  
Replace faulty door seals  
Don't load excess quantities of fuel  
Close Air Supply. Call fire brigade if necessary.  
Inspect & Clean Flue when cold.

Sparky is HOT while in operation and caution is required as contact may cause burns.

### **CREOSOTE OR SOOT FIRE:**

In the unlikely event of a soot or creosote fire occurring see Remedy 5 above.

# Operating Your WAGENER SPARKY

## Fuels – Wood & Coal

1. **Wood** - Dry, seasoned wood should be used at all times and, as a general rule, the harder the wood the longer it will burn.

Try to buy wood well in advance and store so that the air can circulate through the pile to assist drying. Wet, unseasoned wood (under 12 months old) can cause creosote problems, especially if it is burned slowly. If unseasoned fuel is used, special care should be taken to ensure that the fire is actually burning and not just smouldering which will precipitate a creosote problem.

DO NOT burn driftwood or treated timber as they will damage your Sparky and flue and void your warranty.

2. **Coal** – To burn coal you will need to start the fire with wood to establish a good base fire bed of hot embers. Then add coal a little at a time allowing the coal to burn before adding more. Once the desired fuel load has been added and is burning well adjust the air controls to achieve desired burn rate.

WARNING: Some coal types are very corrosive to the fire box, flue and wet back. Corrosion is not covered by the warranty – please check with your coal supplier.

NOTE: The heat output level of Sparky is controlled not only by the air control but also by the type and quality of fuel in the firebox.

## First Burn on a New Appliance or Repainted Appliance

On INITIAL LIGHTING, the high temperature paint used on Sparky will give off smoke and odour for a short period. This is a temporary condition.

Open your doors and windows to give adequate ventilation.

To condition the firebricks (ie remove moisture to prevent cracking) your first 2-3 fires must be small.

## Start Up

1. Open both air controls above and below door glass to the fully open position. Slide wire air control above door to the right and rotate lower air control so that holes are fully open.
2. Open the firebox door. Place crumpled newspaper on top of the firebox grate (if using firelighters place firelighters under the newspaper). Stack kindling around it like an Indian Tepee and light the newspaper (or firelighters), then close the firebox door. Once the kindling is well alight add slightly larger pieces of wood until you have a good healthy fire. **If burning coal see instruction above.**
3. Refuel once the fire is established and adjust the air controls to the desired setting when the fire is burning well.
4. It should not be necessary to fill the firebox to capacity. Smaller loads of wood burned on half air supply will produce more heat per kg of wood. Flue length and outside wind may affect the performance of the fire.
5. Over Firing will damage your stove & flue system and will void your warranty. Please refer to page 6 - Signs of Over Firing, Causes and Remedies.

## Stove Top Cooking

Establish a good fire and allow Sparky to heat up. Never cook food directly on the top of the stove. Sparky is not a BBQ. Always use pots, pans and appropriate cooking implements.

## Slow Burning

Ensure that your Air Controls are fully open and that you have a good base of hot embers. Add a full load of larger pieces of hardwood. Allow to burn for 10-20 minutes before moving the Air Controls to low (almost closed position).

Sparky will now burn away for long periods on low.

**At the end of a slow burn** open the air controls. Rake the embers and re-establish the fire by adding a few small split logs and allow the firebox temperature to build up before adding the balance of the fuel.

The addition of large quantities of cold fuel to a low fire will reduce the firebox temperature dramatically and this may result in 'losing' the fire. Proceed with fire as before.

## **MAINTENANCE AND CLEANING**

Ensure that Sparky is cold and that there are no hot embers in the fire box.

The outside of Sparky may be cleaned with a soft dry rag. Sparky is coated with "high temperature black paint" and can be recoated using a spray can of suitable high temperature paint.

### **Ash Removal**

Over a period of time ash will build up in Sparky requiring removal. Ash build-up will depend upon the quality and quantity of your fuel.

To empty ashes from the fire box, rake ashes on the grate with poker, to loosen and allow them to fall through to the ash pan below. Dispose of the contents of the ash pan in a non-combustible container with a tightly fitting lid. Place container outdoors immediately to a location clear of any combustible materials.

### **Door Glass**

Under normal operating conditions, using seasoned fuel, the door glass in Sparky should remain relatively clear. If the glass becomes dirty it can be cleaned by dipping a damp paper towel into the dry cold ashes, and rubbing gently on the dirty glass to clean. If in the unlikely event your door glass breaks it must be replaced with a 5mm ceramic glass. This can be purchased through your Wagener Stoves Dealer.

NOTE: Do not operate Sparky with broken door glass and under no circumstance should a non-ceramic type glass be used as it may explode due to the intense heat inside the fire box.

### **The Door Seals**

The door seal should be checked and adjusted to provide a perfect seal at all times. Excess air entering the fire box past a faulty seal will make it impossible to achieve a slow burn, and may result in over firing Sparky and causing damage.

### **Fire Box Bricks**

Fire Bricks serve two purposes. Firstly, to protect the steel chassis and secondly to maintain high temperatures in the fire box to effect complete combustion of the fuel. Cracked and broken bricks should be replaced. Remember to place your fuel in the firebox rather than throwing it in. This will extend the life of your bricks.

### **Baffle & Brick Removal & Assembly**

Ensure Sparky is cold

Remove the ash pan, grate and grate stand through the door. Remove back brick by lifting up and pulling forward at the top and position to bring out through the door. Slide side bricks out at the bottom, one at a time, angled towards the centre of the fire box and lift out diagonally. Then remove steel grate supports from each side. Note Bricks sit on lugs of the grate supports which should face the outside of the fire box.

Reach up and lift the front baffle upwards, then tilt it forward and bring it down to a position where it can be removed through the door. Next slide the rear baffle forward and drop the front edge down towards the door and angle to remove. Note when replacing rear baffle holes are to the front and front baffle bolts locate in these holes. No nuts are required. Both baffles smooth surface faces upwards

Reverse this order for replacing bricks, baffles and grates etc

### **Flue Cleaning**

Flue cleaning and maintenance is probably best done by a professional who can also advise you on the condition of your flue and other parts like bricks and seals. This should be done annually. However, if you are cleaning the flue your self first allow the fire to go out and Sparky to cool down. Remove the cowl and rod the flue downwards from the roof. Remove the baffle to clean out the soot from the firebox. Alternatively remove the baffle and rod the flue upwards, from inside, through the open firebox door.