



# Chilli Penguin Stoves



Short Penguin  
Chubby 5  
Woody  
Hungry Penguin  
Fat Penguin  
High and Mighty  
Penguin 8  
Chubby 8  
Eighty Ate "88"

**Installation and Operating Manual**

[www.chillipenguin.co.uk](http://www.chillipenguin.co.uk)

# SIMPLE GUIDE TO YOUR FIRST FIRE

We recommend the goldilocks and the three bears method;  
small fire, medium fire, hot fire.

## READ THIS MANUAL AND ALL WARNINGS CAREFULLY

The A, B & C of lighting your 1st stove fire are:

A = air control

B = burn dry wood

C = cure paint carefully



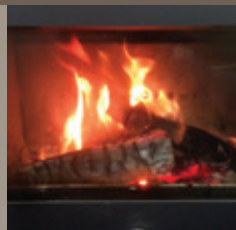
## PREPARE A SMALL KINDLING FIRE

- scrunch up newspaper or firelighters, place kindling over the top, light the fire, close the stove door
  - open all air controls
  - ventilate room
- maintain this SMALL FIRE for 15 minutes
- this warms up the stove components gently to prevent the paint from being "shocked"



## MEDIUM FIRE

- add a few split logs
  - maintain medium fire for one hour
- close air boost disc and primary air (left hand knob) when burning well
  - aim to raise the surface temp to 450°F/230°C
- control on secondary air control (right hand knob)



## HOT FIRE

- add additional wood
- adjust controls to allow additional air flow to achieve a hot fire
  - aim to achieve 600°F/315°C
- control on secondary air control (right hand knob)
  - maintain hot fire for one hour



# IMPORTANT - READ BEFORE FIRST FIRE

## *To Set / Cure the paint*

The painted finish must be cured and set properly.

We use a high temperature stove paint on all of our stoves. It is extremely important that the paint is cured properly the first time that you light the stove. This is done to ensure the paint finish will be able to withstand the high temperatures needed. Curing is done by following the three step process on the facing page. If this process is not done properly you may experience issues with the paint peeling. We want your Penguin to be perfect!

Once this initial process has been completed, the paint will be properly cured and you can operate your stove normally according to the instructions provided in this manual. If any peeling of the paint occurs on your stove this will only be as a result of improper curing or misuse of the stove such as over fuelling or running the stove too hot. Therefore any peeling is not covered by your warranty.

**Note:** *During the final higher temperature burn phase there may be some visible smoke near the stove surface. There may also be an unpleasant odour. To mitigate this effect, ventilate the room with open windows and doors to provide airflow.*

**Health warning:** The smoke from the curing process displaces oxygen. Small children, the elderly and people with existing breathing problems should vacate the area during the hot burn to avoid discomfort. The smoke is primarily Carbon Dioxide, is non-toxic but can feel uncomfortable.

YOU'VE BOUGHT AN AMAZING STOVE,  
LET IT BE AMAZING



## THE CHARTER OF THE PENGUIN

**We guarantee** that your stove is good quality and well made

**We guarantee** that your stove will give you years of warm and efficient heating

**We know** this because we design and make them ourselves here in Wales

**We are convinced** that stoves make the autumn fabulous and the winter sublime

**We hope** that your stove will make the bad days bearable and the good days great

**We think** that human beings with stoves are happier than those without

**We believe** that your life has just got better

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# PENGUIN SERIES SUMMARY

This manual is for the following stoves in the Penguin Series.

<b>SHORT PENGUIN SERIES (SP)</b>		
Model	Short Penguin	Chubby 5
Output	5kW	5kW

<b>Woody</b>	
Model	Woody
Output	5kW

<b>HUNGRY PENGUIN SERIES (HP)</b>			
Model	Hungry Penguin	Fat Penguin	High and Mighty
Output	5kW	5kW	5kW

<b>PENGUIN 8 SERIES (P8)</b>			
Model	Penguin 8	Eighty Ate "88"	Chubby 8
Output	8kW	8kW	8kW

# INTRODUCTION

Thank you for purchasing a Chilli Penguin Stove. You have purchased a quality product that has been built to last, designed and manufactured in the UK with a cleanburn system to ensure a clean and efficient performance.

We put a lot of time and energy into developing and improving our stoves to enable them to run as efficiently as possible and be simple to use. Please spend a few minutes familiarising yourself with this manual, so you can get the best possible performance out your stove.

We love to hear how the penguins get on in their new homes, if you have any comments or questions, please get in touch or share a picture on social media.

If you have a quiet moment and want to make a penguin very happy, our penguins love good reviews - Google, Facebook and Whatstove are a few most used for reviews.

[www.facebook.com/chillipenguin](http://www.facebook.com/chillipenguin)

[www.whatstove.co.uk](http://www.whatstove.co.uk)

[www.chillipenguin.co.uk](http://www.chillipenguin.co.uk)

## YOUR STOVE SHOULD ARRIVE WITH...

- A pair of heat resistant gloves
- A tool for operating the stove and removing the ash pan
- An instruction manual
- An ash pan
- A smoke control kit - *must be fitted in smoke control areas and/or where a 5" flue system is used*
- A stove collar
- A fuel retainer bar
- An aerosol of spray paint - coloured stoves only
- An oven bottom shelf for the Hungry Penguin, High and Mighty & Fat Penguin
- An oven shelf for the Eighty Ate "88"



Section 2

THE PLANS &  
TECHNICAL DETAILS

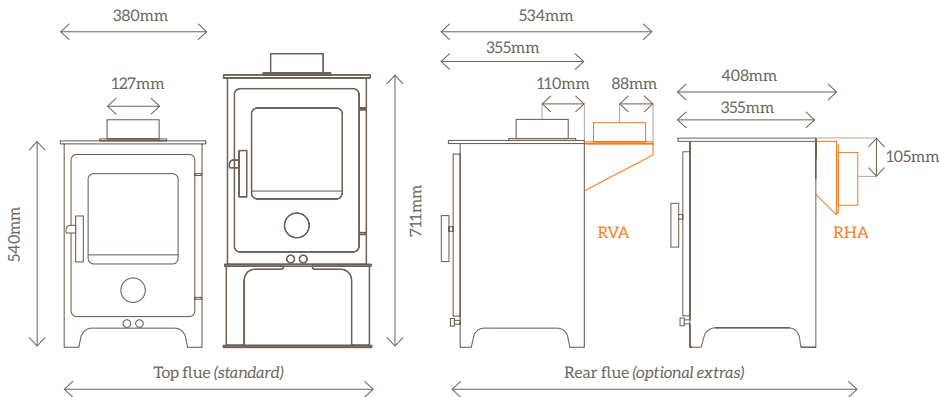
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# 2.a The Plans & Tech Details

## The Short Penguin (Penguin Bach)

### The Plans



### The Tech Details



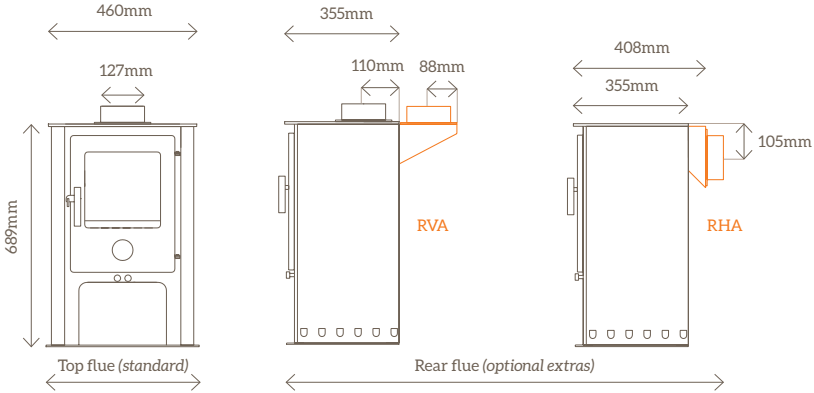
Multi-Fuel	Yes
Nominal Output	5kW
Total Energy Efficiency % (wood/smokeless fuel)	81.9%/72.7%
Flue gas g/s (wood/smokeless fuel)	3.3/3.1
Co content @13% O2 (wood/smokeless fuel)	0.21%/0.14%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	240/287
Exemption Testing complete	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	270mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Rear Horizontal (RHA)/Vertical Adaptor (RVA)Required
Optional Boiler (non pressurised systems)	1.4kW <i>Not tested for use in smoke control areas</i>
Hearth Type No Base Heat Shield/Plinth	Constructional
Hearth With Base Heat Shield/Plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	71kg
<b>Tested to EN13240</b>	

For distances to combustible/non-combustibles see pages 21-22

# 2.b The Plans & Tech Details

## The Chubby 5 (Pengwin Llond Eu Crwyn 5)

### The Plans



### The Tech Details



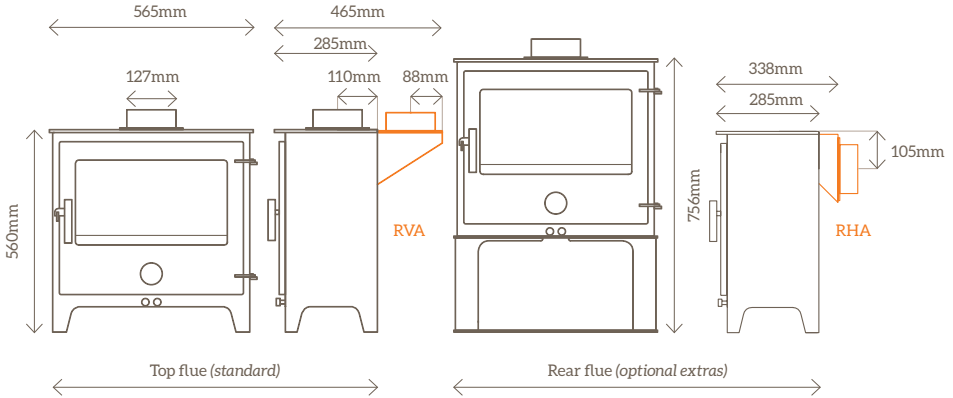
Multi-Fuel	Yes
Nominal Output	5kW
Total Energy Efficiency % (wood/smokeless fuel)	81.9%/72.7%
Flue gas g/s (wood/smokeless fuel)	3.3/3.1
Co content @13% O2 (wood/smokeless fuel)	0.21%/0.14%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	240/287
Exemption Testing complete (Same fire box as Short Penguin)	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	270mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Rear Horizontal (RHA)/Vertical Adaptor (RVA) Required
Optional Boiler (non pressurised systems)	1.4kW <i>Not tested for use in smoke control areas</i>
Hearth With Integral Plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	100kg
<b>Tested to EN13240</b>	Part of Short Penguin Series

*For distances to combustible/non-combustibles see pages 21-22*

# 2.c The Plans & Tech Details

## The Woody (Dim ond Woody)

### The Plans



### The Tech Details



Multi-Fuel	Yes
Nominal Output	5kW
Total Energy Efficiency % (wood/smokeless fuel)	82%/87%
Flue gas g/s (wood/smokeless fuel)	4.0/3.2
Co content @13% O2 (wood/smokeless fuel)	0.19%/0.21%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	273/223
Exemption Testing complete	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	430mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Rear Horizontal (RHA)/Vertical Adaptor (RVA) Required
Optional Boiler (non pressurised systems)	2.3kW <i>Not tested for use in smoke control areas</i>
Hearth Type No Base Heat Shield/Plinth	Constructional
Hearth With Base Heat Shield/Plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	88kg

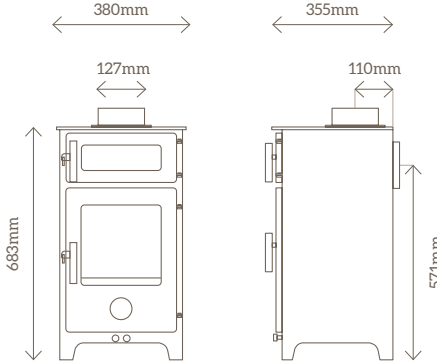
**Tested to EN13240**

*For distances to combustible/non-combustibles see pages 21-22*

# 2.d The Plans & Tech Details

## The Hungry Penguin (Pengwin Llwglyd)

### The Plans



### The Tech Details



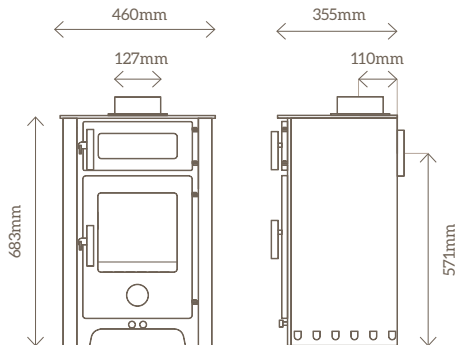
Multi-Fuel	Yes
Nominal Output	5kW
Total Energy Efficiency % (wood/smokeless fuel)	79%/83%
Flue gas g/s (wood/smokeless fuel)	4.0/3.2
Co content @13% O2 (wood/smokeless fuel)	0.2%/0.1%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	227/266
Exemption Testing complete	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	270mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Fit flue collar to rear
Internal cooker dimensions	Height 100mm Width 250mm Depth 220mm
Optional Boiler (non pressurised systems)	1.4kW <i>Not tested for use in smoke control areas</i>
Hearth Type No Base Heat Shield/Plinth	Constructional
Hearth With Base Heat Shield/Plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	90kg
<b>Tested to EN13240</b>	Part of Hungry Penguin Series

*For distances to combustible/non-combustibles see pages 21-22*

# 2.e The Plans & Tech Details

## The Fat Penguin (Pengwin Tew)

### The Plans



### The Tech Details



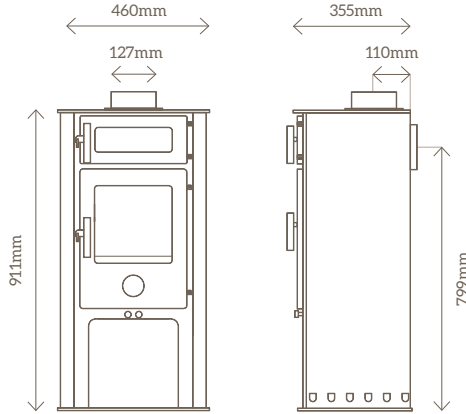
Multi-Fuel	Yes
Nominal Output	5kW
Total Energy Efficiency % (wood/smokeless fuel)	79%/83%
Flue gas g/s (wood/smokeless fuel)	4.0/3.2
Co content @13% O2 (wood/smokeless fuel)	0.2%/0.1%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	227/266
Exemption Testing complete	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	270mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Fit flue collar to rear
Internal cooker dimensions	Height 100mm Width 250mm Depth 220mm
Optional Boiler (non pressurised systems)	1.4kW <i>Not tested for use in smoke control areas</i>
Hearth Type No Base Heat Shield/Plinth	Constructional
Hearth With Base Heat Shield/Plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	98kg
<b>Tested to EN13240</b>	Part of Hungry Penguin Series

*For distances to combustible/non-combustibles see pages 21-22*

# 2.f The Plans & Tech Details

## The High and Mighty (Penguin Bonheddig)

### The Plans



### The Tech Details



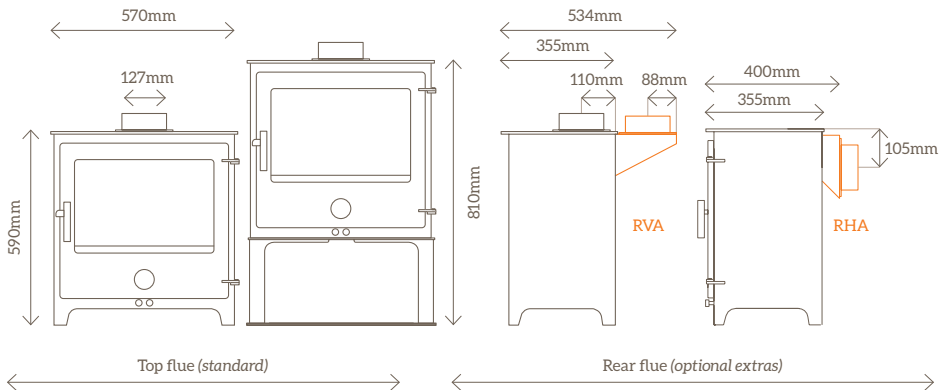
Multi-Fuel	Yes
Nominal Output	5kW
Total Energy Efficiency % (wood/smokeless fuel)	79%/83%
Flue gas g/s (wood/smokeless fuel)	4.0/3.2
Co content @13% O2 (wood/smokeless fuel)	0.2%/0.1%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	227/266
Exemption Testing complete	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	270mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Fit flue collar to rear
Internal cooker dimensions	Height 100mm Width 250mm Depth 220mm
Optional Boiler (non pressurised systems)	1.4kW <i>Not tested for use in smoke control areas</i>
Hearth type with integral plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	121kg
<b>Tested to EN13240</b>	Part of Hungry Penguin Series

*For distances to combustible/non-combustibles see pages 21-22*

# 2.g The Plans & Tech Details

## The Penguin 8 (Penguin Wyth)

### The Plans



### The Tech Details



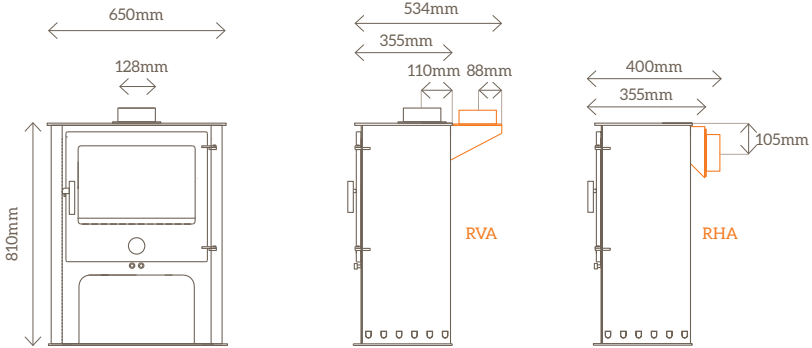
Multi-Fuel	Yes
Nominal Output	8kW
Total Energy Efficiency % (wood/smokeless fuel)	81%/71%
Flue gas g/s (wood/smokeless fuel)	5.1/9.8
Co content @13% O2 (wood/smokeless fuel)	0.31%/0.08%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	279/319
Exemption Testing complete	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	430mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Rear Horizontal (RHA)/Vertical Adaptor (RVA) Required
Optional Boiler (non pressurised systems)	3kW <i>Not tested for use in smoke control areas</i>
Hearth Type No Base Heat Shield/Plinth	Constructional
Hearth With Base Heat Shield/Plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	106kg
<b>Tested to EN13240</b>	Part of Penguin 8 Series

For distances to combustible/non-combustibles see pages 21-22

# 2.h The Plans & Tech Details

## The Chubby 8 (Pengwin Llond Eu Crwyn 8)

### The Plans



### The Tech Details



Multi-Fuel	Yes
Nominal Output	8kW
Total Energy Efficiency % (wood/smokeless fuel)	81%/71%
Flue gas g/s (wood/smokeless fuel)	5.1/5.1
Co content @13% O2 (wood/smokeless fuel)	0.31%/0.08%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	279/319
Exemption Testing complete	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	430mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Rear Horizontal (RHA)/Vertical Adaptor (RVA) Required
Optional Boiler (non pressurised systems)	3kW <i>Not tested for use in smoke control areas</i>
Hearth Type No Base Heat Shield/Plinth	Constructional
Hearth With Base Heat Shield/Plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	120kg
<b>Tested to EN13240</b>	Part of Penguin 8 Series

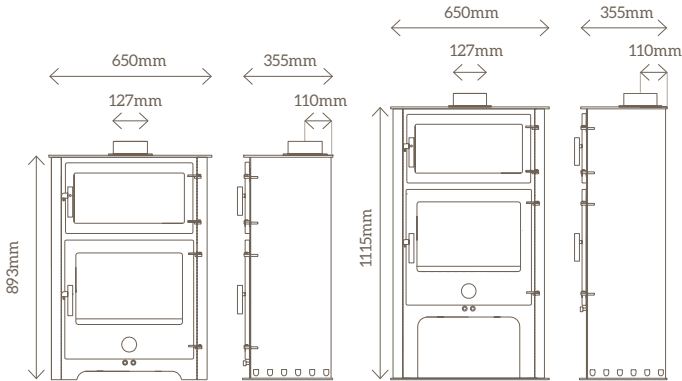
*For distances to combustible/non-combustibles see pages 21*



# 2.i The Plans & Tech Details

## The Eighty Ate “88” (Penguin Wyth Deg Wyth)

### The Plans



### The Tech Details



Multi-Fuel	Yes
Nominal Output	8kW
Total Energy Efficiency % (wood/smokeless fuel)	81%/71%
Flue gas g/s (wood/smokeless fuel)	5.1/9.8
Co content @13% O2 (wood/smokeless fuel)	0.31%/0.08%
Mean Flue gas temp. Deg.C (wood/smokeless fuel)	279/319
Exemption Testing complete	Yes
Smoke Control Kit Included (not fitted)	Yes
Max. Log length x average diameter	430mm x 100mm
Flue Collar Diameter	127mm
Flue Size Required	150mm (6")
Flue Size Required With Smoke Control Kit	min 125mm (5")
Top Exit	Standard
Rear Exit	Fit flue collar to rear
Internal cooker dimensions	Height 180mm Width 440mm Depth 220mm
Optional Boiler (non pressurised systems)	3kW <i>Not tested for use in smoke control areas</i>
Hearth type with integral plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	194kg
<b>Tested to EN13240</b>	Part of Penguin 8 Series

*For distances to combustible/non-combustibles see pages 21-22*



### Section 3

# INSTALLATION INSTRUCTIONS

Page 17-28

[www.chillipenguin.co.uk](http://www.chillipenguin.co.uk)

# 3. Installation Instructions

## 3.a Warning

All local and national regulations must be observed when installing the appliance. If installed incorrectly serious accidents can be caused.

Building Regulation Document J must be referred to when installing this appliance.

It is the installer's responsibility to ensure the manufacturer's instructions are complied with. A HETAS qualified installation engineer should carry out the installation and issue a compliance certificate or alternatively your local Building control department needs to inspect the installation and register the work carried out.

## 3.b Smoke Control Areas and Exemption of Appliances

**All our stoves are classed as exempt stoves which means you can burn seasoned wood or smokeless fuels in smoke control areas.**

If you live in a smoke control area (introduced by The Clean Air Act, 1993, see below) you are permitted to burn approved smokeless fuel only, this does not include wood. However if you use an Exempt stove then you can burn both seasoned wood and approved smokeless fuels. NEVER BURN HOUSE COAL in a closed appliance like a stove.

The following stoves have been recommended as suitable for use in smoke control areas **when fitted with a smoke control kit when burning wood logs**: the Short Penguin, Chubby 5, Woody, Hungry Penguin, Fat Penguin, High and Mighty, Penguin 8, Chubby 8, Eighty Ate "88". The appliances are not exempted when burning wood briquettes or paper bricks or unauthorised fuels.

When a smoke control kit has been fitted this should be recorded in this manual on the guarantee page.

The clip in boiler option on all our stoves is not approved for use in smoke control areas.

The general principle to be observed in an Exempt chilli penguin stove is that the air controls cannot be completely closed, allowing a permanent air supply to the fire chamber. This means that fuel burns more efficiently, thereby emitting less harmful emissions into the atmosphere.

### **"The Clean Air Act 1993 and Smoke Control Areas"**

*Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an "unauthorised fuel" for use within a smoke control area unless it is used in an "exempt" appliance ("exempted" from the controls which generally apply in the smoke control area).*

The Secretary of State for Environment, Food and Rural Affairs has powers under the Act to authorise smokeless fuels or exempt appliances for use in smoke control areas in England. In Scotland and Wales this power rests with Ministers in the devolved administrations for those countries. Separate legislation, the Clean Air (Northern Ireland) Order 1981, applies in Northern Ireland. Therefore it is a requirement that fuels burnt or obtained for use in smoke control areas have been “authorised” in Regulations and that appliances used to burn solid fuel in those areas (other than “authorised” fuels) have been exempted by an Order made and signed by the Secretary of State or Minister in the devolved administrations.

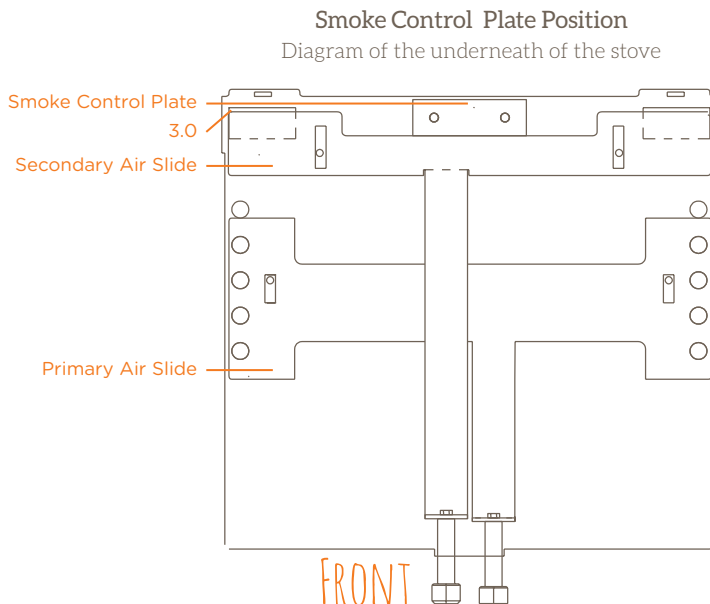
Further information on the requirements of the Clean Air Act can be found here: [www.gov.uk/smoke-control-area-rules](http://www.gov.uk/smoke-control-area-rules)

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.

### 3.c Fitting the Smoke Control Kit

If you are installing a stove in a Smoke Control Area you must fit the Smoke Control kit supplied. Record whether a smoke control kit has been fitted on the **Stove and Installation Details** page of this manual. The Smoke Control kit consists of a metal plate with 2 holes in, 2 screws and 2 bolts.

**To fit:** It is fitted to the underside of the stove prior to installation. See diagram below for the position. When correctly fitted the secondary air knob will not push in as far as the primary air knob.

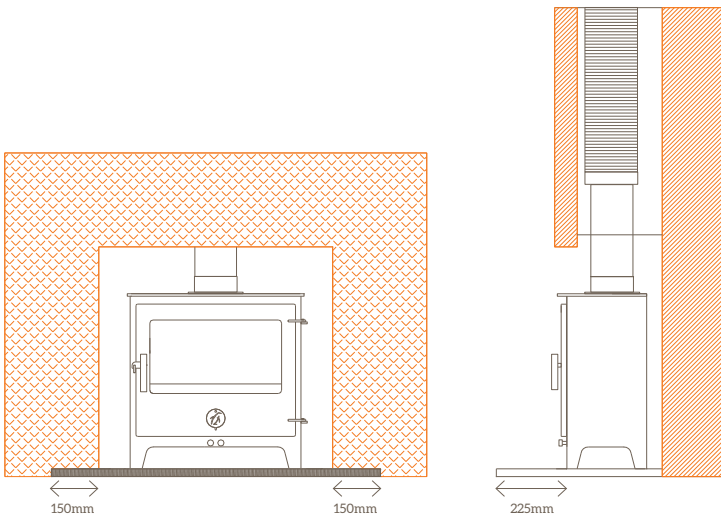


### 3.d Hearth

A hearth is made up of 2 layers: a constructional hearth (base concrete layer) and a superimposed hearth (top decorative layer). In some circumstances a superimposed hearth is acceptable on its own. All of our stoves require a constructional hearth **unless** the stoves are **either** on a plinth **or** have a base heat shield fitted. (The Penguin 8 has not currently been tested for use with a base heat shield but it can go on a plinth).

All models without base heat shield or plinth	Constructional total depth (incl. superimposed) 125mm
All models on plinth	Superimposed 12mm (minimum)
All models (except Penguin 8) with base heat shield	Superimposed 12mm (minimum)
In front of the stove	225mm (minimum)
Both sides of the stove	150mm (minimum)
All freestanding stoves require a superimposed hearth of at least 850x850mm square (in addition to any constructional hearth requirements)	

NB. Do not place any soft furnishings within 1150mm of the stove



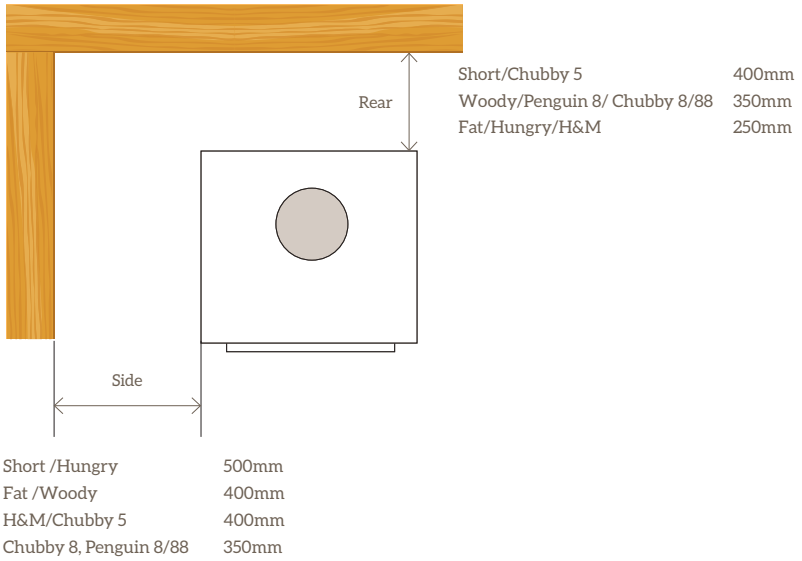
Minimum distance from stove to edge of superimposed hearth

### 3.e Floors

Make sure the floor can take the weight of the stove, the flue, the hearth and any decorative surround.

### 3.f Clearance to Combustible Walls

Diagram illustrating the minimum distances to combustible surfaces (i.e. wood/plaster board)

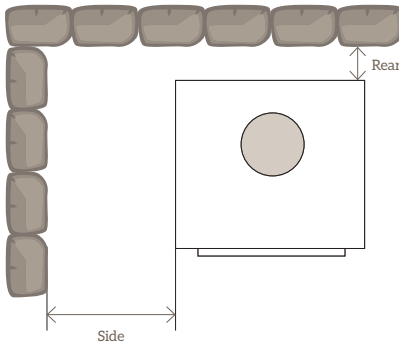


#### MINIMUM DISTANCES TO COMBUSTIBLE WALLS

Model	Rear	Both Sides	Above
Short	400mm	500mm	450mm
Chubby 5	400mm	400mm	450mm
Woody	350mm	400mm	550mm
Hungry	250mm	500mm	450mm
Fat	250mm	400mm	450mm
High & Mighty	250mm	400mm	450mm
Penguin 8	350mm	350mm	550mm
Chubby 8	350mm	350mm	550mm
Eighty Ate (88)	350mm	350mm	550mm

### 3.g Non Combustible Walls

Diagrams illustrating the minimum distances to non combustible walls. (i.e. stone/brick)



#### MINIMUM DISTANCES TO NON COMBUSTIBLE WALLS

Model	Rear	Sides	Above
All Models	50mm	100mm	150mm
Rear wall thickness needs to be at least 200mm thick.			
These are minimum distances.			

NB. Flue pipe safe distances can be greater than the appliance, depending on type

### 3.h Base Heat Shield

The temperature at the base of a stove will affect the type of hearth required, see “hearth requirements”. If a constructional hearth is required but is not possible, then a base heat shield can be fitted underneath the stove. This reduces the hearth temperatures and allow the stoves to be installed onto a superimposed (12mm) hearth.

Record on the guarantee page whether a base heat shield has been fitted.



**To fit:** Slide in at the base of the stove prior to installation. It needs to slide in from the **rear**. The edge with the cut-out should slide in first, resting at the front of the stove. The folded legs of the heat shield will sit on the tabs for the leveling screws, (these are small square tabs with a hole in the centre).

## 3.i Heat Shielding

### FREE STANDING STOVES, 5kW

It is possible to reduce the distances to combustibles with an appropriate heat shield, (British Standard 8303).

We manufacture several sizes of wall mounted heat shield made from 1.5 mm steel which maintain a 40 mm air gap. (This is greater than the minimum distance required by BS8303). They have an open top and bottom to allow for a flow of cool air between the heat shield and combustible material. Be aware that you are heat shielding both the stove and flue collar.

#### Distances to combustibles, square into corner & flat wall installation 5kW

The distances to combustibles can be reduced to a minimum of 95 mm from the rear of the stove to the front of the heat shield, when installed square into a corner. This applies to free standing installations on a flat wall as well, (see diagram on facing page).

#### Distances to combustibles, diagonal corner installation 5kW

If the stove is installed at an angle of 45 degrees to the wall, then the distance can be reduced to a minimum of 65 mm from the nearest point of the stove to the front face of the heat shield, (see diagram on facing page).

### FREE STANDING STOVES, 8kW

The higher output stoves are not covered under BS8303. We recommend the following.

#### Distances to combustibles, square into corner & flat wall installation 8 kW

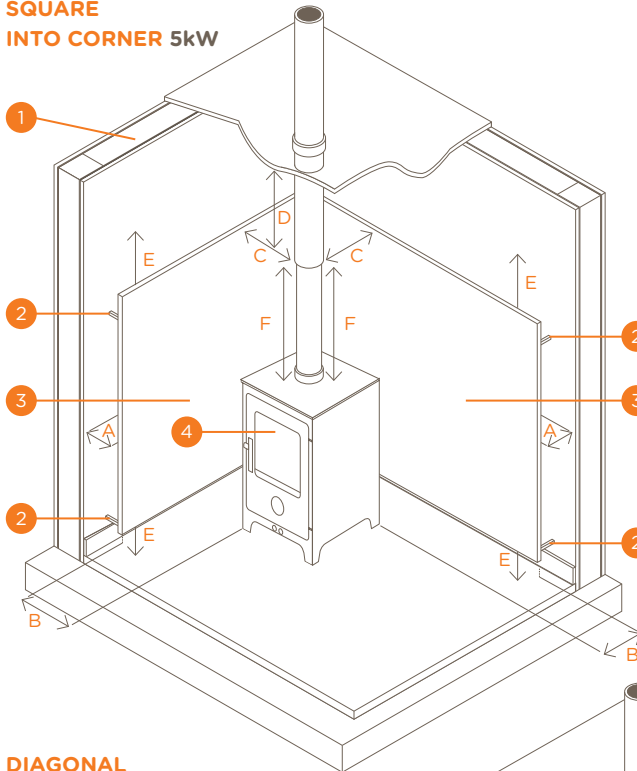
The distances can be reduced by half between the rear of the stove and the front of the heat shield, when installed square into a corner. This applies to free standing installations on a flat wall as well.

#### Distances to combustibles, diagonal corner installation 8kW

If the stove is installed at an angle of 45 degrees to the wall, then the distance can be reduced to half of the recommended distances to combustible, from the nearest point of the stove to the front face of the heat shield.



## SQUARE INTO CORNER 5kW



### Number Key

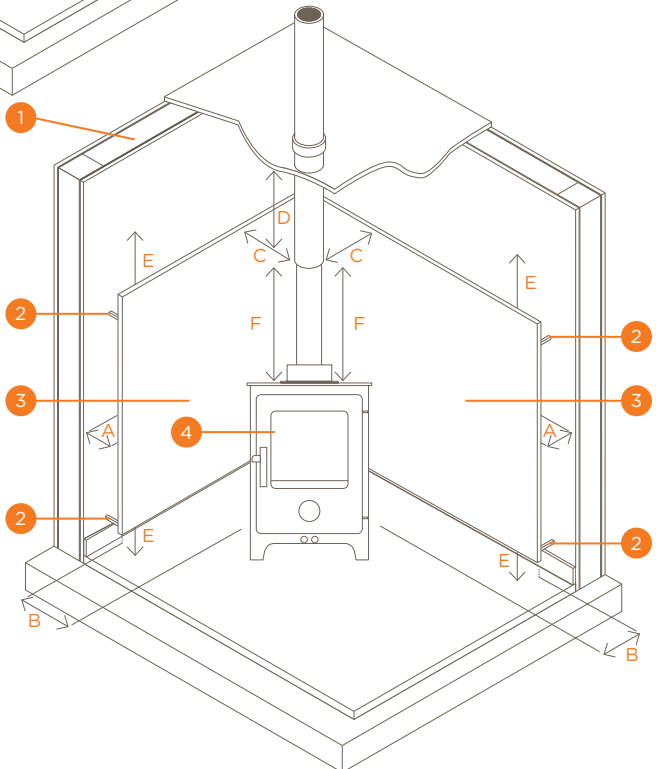
- 1 Combustible wooden stud wall
- 2 Fixing
- 3 Sheet metal shield
- 4 Stove

### Letter Key

- A Air gap behind shield min. 25mm  
 B Distance to closest point of appliance min. 95mm  
 C Distance from connecting flue pipe to metal shield: 1.5 x diameter of the flue pipe  
 D Distance from start of chimney to ceiling min. 425mm  
 E Air gap open at top and bottom: min. 25mm from hearth to bottom of shield  
 F Distance from top of stove to the top of the heat shield: min. 300mm

(diagram adapted from Hetas bulletin 13 ref BS8303)

## DIAGONAL INTO CORNER 5kW



### Number Key

- 1 Combustible wooden stud wall
- 2 Fixing
- 3 Sheet metal shield
- 4 Stove

### Letter Key

- A Air gap behind shield min. 25mm  
 B Distance to closest point of appliance min. 65mm  
 C Distance from connecting flue pipe to metal shield: 1.5 x diameter of the flue pipe  
 D Distance from start of chimney to ceiling min. 425mm  
 E Air gap open at top and bottom: min. 25mm from hearth to bottom of shield  
 F Distance from top of stove to the top of the heat shield: min. 300mm

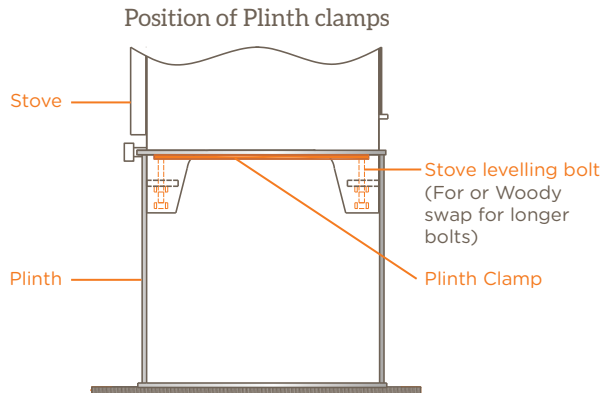
(diagram adapted from Hetas bulletin 13 ref BS8303)

### 3.j Ventilation

In order for the stove to operate correctly there needs to be sufficient combustion air. For stoves over 5kW a permanently open air vent is required. For stoves of 5kW and under it may sometimes be required. In new build houses air vents are required for all sizes of stoves, this can apply to new extensions as well. This will depend on the air leakage (air permeability) of your property. Your HETAS installer should be able to guide you on your particular property. If a stove is to be fitted in a room with an appliance such as an extractor fan, tumble drier or ceiling fan, it will affect the draw of the flue system and could lead to fumes entering the room. Additional room ventilation may be required, a flue draught test under worst case scenario must be carried out by a qualified installer. In the case of an extractor fan, often the simplest solution is to convert it to carbon filter extractor. Air vents should be positioned so that they are not liable to blockage.

### 3.k Plinth Clamp

If you order a plinth it will come with a plinth clamp. This consists of two flat bars. The Woody plinth clamp also has 4 bolts. It is designed to clamp the stove and the plinth together securely.



**To fit:** Place the bars inside the plinth, one on the left side and one on the right, running front to back. Use the levelling bolts attached to the legs of the stove to clamp the bar to the underside of the plinth on each side.

For Woody plinth, replace the levelling bolts with the longer ones, supplied.

### 3.1 Rear Fluing

The usual route for a flue is out of the collar on top of the stove. However the way some chimneys and fireplaces are set up, fluing out of the rear can be a better option. Our stoves fall into two groups as far as rear fluing, as follows.

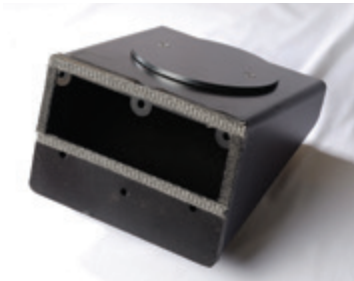
The oven models; the Hungry, the Fat, the High & Mighty and the Eighty Ate “88” have a removable blanking plate, so that a rear adaptor is not required, (a rear swept bend with soot trap or a 90° T and cap would be required).

All other models; the Short, Woody, Penguin 8 and Chubby 5 and 8 would need a rear adaptor, either vertical or horizontal.

### 3.m Rear Adaptor (Vertical or Horizontal)

The rear vertical adaptor (RVA) allows you to flue out of the rear of the stove, the flue pipe then goes vertically up the chimney (*diagram 1*).

There are some circumstances where you may want to flue horizontally from the rear of the stove (*diagram 2*). There is a very limited distance that you can rear flue horizontally (RHA), for safety reasons, regulated by building regulations, your installer will be able to advise.



Rear Vertical Adaptor (RVA)



Rear Horizontal Adaptor (RHA)

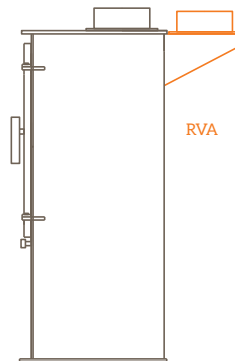


Diagram 1

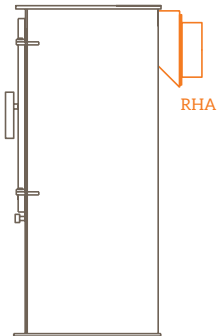
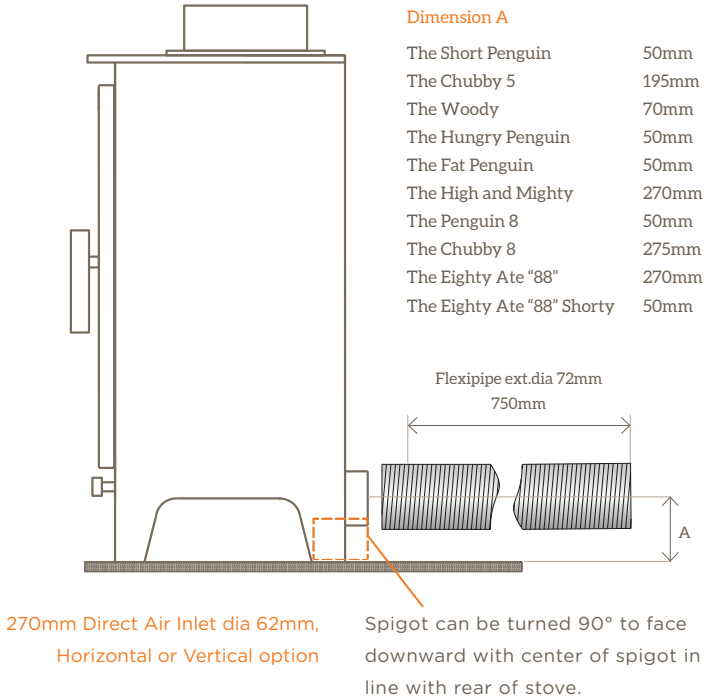


Diagram 2

**To fit:** Remove the rear heat shield and blanking plate (10mm & 13mm spanners required), bolt the rear vertical adaptor to the area where the blanking plate was removed from, with the blanking plate bolts. Replace the rear heat shield, having removed the cut out with tin snips. Place the circular blanking plate onto the top flue hole.

### 3.n Direct Air Kit (non-room sealed only)

All of our models have the option of a factory fitted direct air kit. There are a large number of criterias that need to be assessed prior to fitting and commissioning. Please refer to the HETAS Guidelines and Commissions Procedure (HETAS TN-0020).



### 3.o The Flue Pipe (single wall)

Single walled flue pipe must be at least **3 times its diameter** away from any combustibles eg. a timber beam. This may be reduced if adequate protection is provided to prevent heat transfer (**see section 3, Heat shielding**). N.B be aware that it is possible, particularly in older properties for timber beams to enter the inside of the chimney cavity so it must be inspected.

### 3.p Chimney and Access for Sweeping

Chimney / Flueway	
Must comply with all current building regulations. We recommend that all masonry chimneys are lined.	
Minimum Flue Height	4.5 metres
Stove models with no smoke control kit fitted	Lined with 150mm diameter class 1 liner with 125mm stove pipe + adaptor
Stove models with smoke control kit fitted	Lined with 150mm diameter class 1 liner where possible, where not, 125mm flue is permitted
A flue way must not be shared with other appliances	
A flue way must be gas tight and free of tar deposits	
<b>New chimney:</b> A new chimney of factory made insulated flue system must comply with Building Regulations. Consult a chimney specialist for advice on suitable flue systems for solid fuel.	

Sweeping
<b>Provision must be made for sweeping access</b> and for the removal of soot and debris.
<p><b>Lined chimney</b></p> <p>If the correct super flexible rods are used. The debris will fall into the fire box from where it can be removed. All stoves including cooker models can be swept through unless a rear <i>horizontal</i> adaptor is used (in this case additional sweeping provision will be needed).</p>
<p><b>Unlined chimney</b></p> <p>If the chimney is unlined the cooker models cannot be swept through the stoves (due to size of brushes) so additional sweeping provision will need to be made.</p>

CHIM CHIMINEY, CHIM CHIMINEY, CHIM CHIM CHER-EE

A SWEEP IS AS LUCKY AS LUCKY CAN BE



*Section 4*

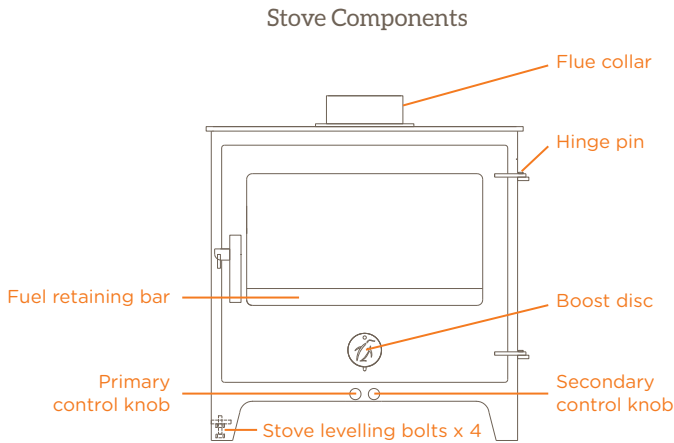
# INSTRUCTIONS FOR USE

*Page 29-39*

[www.chillipenguin.co.uk](http://www.chillipenguin.co.uk)

# 4. Instructions for use

## 4.a Diagram of the Outside of the Stove



**Grate:** the cast iron grill that sits on the base of the fire chamber (not shown in diagram).

**Fuel retaining bar:** this bar prevents logs falling against the glass and reduces ash fallout onto your hearth.

**Stove levelling bolts:** bolts on each leg used to level the stove during installation

**Primary air control knob:** stainless steel knob on the LH side of the stove as you face it. It controls the flow of air underneath the fire.

**Secondary air control knob:** stainless steel knob on the RH side of the stove as you face it (fully out it will protrude 10mm further than the other knob). It controls the flow of air over the top of the fire and the door glass.

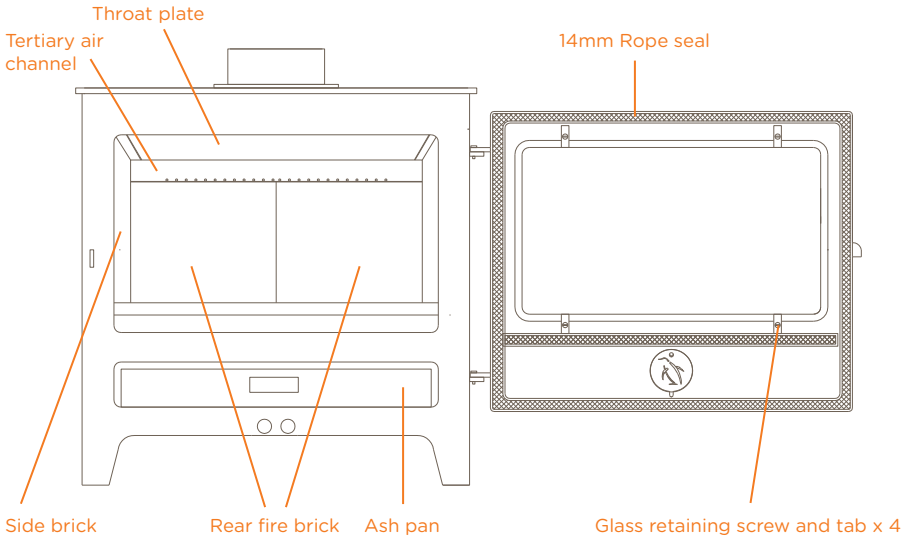
**Boost disc:** brushed stainless steel disc with penguin logo on it. In the balanced open position this will allow the maximum air flow in to the fire. It should swing easily into the closed position once the fire is established.

**Hinge pin:** pins to hold the door to the stove body

**Flue collar:** the 5"/125mm collar on the top of the stove. The stove is designed to burn on a 6" flue. A 5-6" adaptor is required unless the smoke control kit is fitted.

## 4.b Diagram of the Inside of the Stove

Internal Stove Components



**Throat plate:** this forms the “roof” of the fire box. It has 2 components, a steel plate and a vermiculite brick, the brick should be underneath the steel plate. It is designed to be easily removable for the removal of soot.

**Tertiary air channel:** this is the perforated metal channel running across the back of the stove, it is one of the passage ways for air into the fire box. The back of the throat plate rests on this.

**Side brick:** vermiculite brick at each side of the stove.

**Rear fire brick:** vermiculite brick at the rear, some models have 1 brick/some 2 bricks.

**Ash pan:** rectangular metal drawer used for the collection of ash.

**Glass retaining screws and tabs:** screw and plates to hold the door glass in situ.

**Rope seal:** seal used to form a gas tight seal around all door edge.

WHEN YOU LOOK AT YOUR PENGUIN...SMILE  
BECAUSE IT'S LOOKING BACK AT YOU



## 4.c Warnings and Pre-lighting Checks

**Chilli penguin stoves will not be responsible for any damage caused to the stove due to either the incorrect installation of the stove or the incorrect use of the stove, including the use of the wrong fuels. We strongly recommend the use of a qualified and experienced installer. Please read through these warnings and information carefully prior to use.**

### PROTECTING THE STOVE SURFACE

Your stove has been painted using a high temperature paint, this will give a long lasting and durable finish **after the paint has cured. The process of curing occurs during the first few times you light the stove, (see section 5).** Care must be taken when handling the stove prior to the first firings. It is at its most vulnerable at this stage. With the lighter colours, particularly the almond, we recommend that you wear clean gloves from unpacking onwards. Use dry cleaning methods only i.e. soft brush or Hoover. Do not use damp cloths. If you are plastering /decorating in the same room keep the stove covered.

### PAINTING FLUE OR STOVE

**IF** you wish to touch up your stove or paint your flue pipe to match the stove, please read **Painting your stove, section 5.** All coloured stoves will come with an aerosol of the matching colour.

### FUMES

While the stove paint is curing, it will give off fumes. Please ensure that you ventilate the room, opening doors and windows as necessary.

### SMOKE EMISSIONS

Properly installed and operated the stove will not emit smoke into your home with the exception of the occasional smoke from de-ashing and re-fuelling. Occasionally adverse weather conditions can cause a down-draught, this should be very occasional. Persistent smoke emission is dangerous and must not be tolerated. If smoke emission does persist:

- Open all doors and windows
- Let the fire go out
- Check flue or chimney for blockage

Do not re-light fire until cause of problem has been rectified. Seek professional help.

### HOT SURFACES

The surfaces of the appliance are designed to get hot during operation. It is recommended to use a fireguard in the presence of children or vulnerable adults.

### CO alarm

**It is a legal requirement to install a Carbon Monoxide and smoke alarm when you install a solid fuel appliance such as a stove.**

## WRONG FUEL

Only burn seasoned wood or smokeless fuels suitable for closed appliances. DO NOT burn house coal or treat your stove as an incinerator for general rubbish. DO NOT use any liquid fuels.

## CHIMNEY FIRE

In the event of a chimney fire, close all stove doors and air vents. Evacuate the house and phone the fire service.

## PRE-LIGHTING CHECKS

- Check that the door closes correctly and the rope seals and glass are intact
- Check that the throat plate is installed correctly
- Check that all labels and packaging have been removed (including from the flue system)
- Check that any access points in the flue are closed off e.g. sweeping access

## 4.d Simple Guide to your First Fire

We recommend the goldilocks and the three bears method; small fire, medium fire, hot fire.

### READ THIS MANUAL AND ALL WARNINGS CAREFULLY

The A, B & C of lighting your 1st stove fire are:  
A = air control B = burn dry wood C = cure paint carefully



### PREPARE A SMALL KINDLING FIRE

- scrunch up newspaper or firelighters, place kindling over the top, light the fire, close the stove door
  - open all air controls
  - ventilate room
- maintain this SMALL FIRE for 15 minutes
- this warms up the stove components gently to prevents the paints from being “shocked”



### MEDIUM FIRE

- add a few split logs
- maintain medium fire for one hour
- close air boost disc and primary air (left hand knob) when burning well
  - aim to raise the surface temp to 450°F/230°C
- control on secondary air control (right hand knob)



### HOT FIRE

- add additional wood
- adjust controls to allow additional air flow to achieve a hot fire
  - aim to achieve 600°F/315°C
- maintain hot fire for one hour

## 4.e Principles of Combustion

All fuels need the presence of oxygen to burn. The more oxygen a fire gets the hotter and faster it will burn. When, where and how air is introduced into a firebox of a stove will greatly influence the heat output, burning rate, fuel efficiency and impact on the environment. Different fuels burn in different ways and it is important to know the basics in order to operate your multi-fuel stove with confidence.

### WOOD

Wood needs to be seasoned (cut and stored for at least one year after cutting) or kiln dried prior to burning in the stove with a moisture content of less than 25%. As a fuel it gives a good flame and a reasonably high heat output, the burn rate is high and will vary considerably depending on size and species. The size of wood logs will vary but a guideline is given in the tech spec for each model. Wood requires combustion air to be directed down onto it (down draught) to burn most efficiently.

#### Tips for identifying dry wood

- 1) Visible cracks at the end of the log
- 2) Bang two logs together, they will sound hollow
- 3) Wood moisture content measuring devices are available

### THERE ARE 3 STAGES IN THE BURNING OF WOOD

#### STAGE 1

Drying out. When a piece of wood enters the firebox it will stay below the boiling point of water (100°C) until all the moisture has been driven out. Between 150 – 200°C wood begins to give off volatile gases, some of these will burn while others will mix with the carbon dioxide and water vapour and be carried out the chimney as smoke.

#### STAGE 2

In the second stage of combustion temperatures must reach 600°C for the gases to start burning off. This will only occur with the right amount of air and heat leading to higher efficiencies. These gases burn as a yellow flame above the wood.

#### STAGE 3

Charcoal is left once all the gases have been burnt off. The charcoal contains at least half of the wood's heat potential, at this stage the fire will burn more slowly and without flame requiring less air.

The secondary combustion air supply on your stove provides the air necessary for burning off the volatile gases.

It is important to burn wood in complete loads, this will ensure all the wood in the load is at the same stage of combustion as much as possible. By doing this the firebox temperature will stay in the gas burning stage for longer making the stove more efficient and cleaner burning.

It is not advised to try and keep a wood fire in overnight. When the air controls are put on a low setting, logs can smoulder and burn inefficiently, releasing harmful emissions into the atmosphere.

It is advised not to burn wood and solid fuels simultaneously, it can effect both your glass and flue.

## SOLID FUELS

Those which are suitable for your stove include:

- Natural smokeless fuel - anthracite
- Manufactured smokeless fuels for closed appliances. The fuel must state **“suitable for closed appliances”** and **“suitable for heating appliances”**. It should have a low petroleum content. A fuel with a high petroleum or sulphur content can damage both the stove glass and flue liner

Your local approved coal merchant will be able to source a suitable product for you. The Solid Fuel Association will also advise on fuels, [www.solidfuel.co.uk](http://www.solidfuel.co.uk), however if your property is located in a smoke control area you should only burn authorised fuels. A list can be found at [www.smokecontrol.defra.gov.uk/fuels.php](http://www.smokecontrol.defra.gov.uk/fuels.php). If in any doubt contact your Chilli Penguin stockist.

These fuels burn most effectively when air is introduced beneath the fuel bed (up draught). Depending on the type of fuel used, they will gas off different amounts during the first stage of combustion. Secondary combustion air assists in the burning of these gases before they escape up the chimney. When you are left with glowing coals the secondary air requirement reduces.

Solid fuels have a relatively low burning rate due to its high density and low volatility, ideal for longer periods of burning. They need relatively low amount of air to keep burning.

## 4.f Instructions for use with wood

### Making a fire - wood

We recommend placing scrunched up paper or firelighters in the centre of the grate. Arrange kindling in a tepee shape around it. Light the paper or firelighter. Once the kindling is burning gradually increase the size of log until the fire is established.

#### THE AIR CONTROLS

**To start** 

Pull both controls out to the open position and swing the boost disc up (the RH knob will protrude approx 10mm further than the LH knob in the fully open position).

**Once established**  

Close the boost disc.

If you are burning wood you can now close the primary air control (LH knob) fully. The rate of burn is now controlled using only the secondary knob (RH knob). When the smoke control kit is fitted your stove has a restrictor plate fitted to this control, so that it cannot be fully closed. This is to prevent excessive smoke.

Wood will burn most efficiently when burnt in complete loads – let the fire burn down to a bed of glowing embers before refuelling the fire box with new logs. Open both controls fully again to get the new fuel burning – once alight re-adjust controls to the desired position.

#### REFUELLING ON TO A LOW FIRE BED (NOT MUCH FUEL GLOWING)

If there is insufficient burning material in the fire bed to light a new load of fuel, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash that the new fuel load will ignite in a reasonable period. If there are too few embers in the fire bed, add suitable kindling and follow previous steps i.e. open controls and disc etc.

**WARNING - LOADING FUEL WITHOUT OPENING CONTROLS CAN LEAD TO A SUDDEN IGNITION AND POTENTIAL DAMAGE TO YOUR STOVE AND FLUE SYSTEM.**

## FUEL OVERLOADING

The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke.

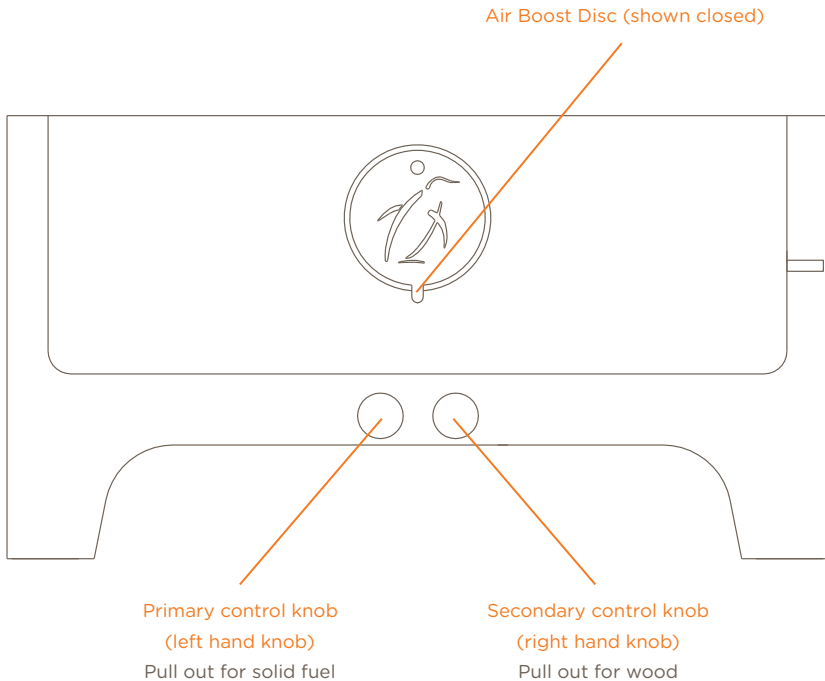
## DE ASHING

De-ashing is only required periodically as wood burns better on a bed of ash, wood burns better with a down-draught.

## SAFETY

Always use the glove provided when opening the doors of the stove.

Your stove has not been designed to run with the door open, it should therefore be kept shut except when refuelling is carried out



## 4.g Instructions for use with authorised smokeless fuels

### Making a fire – authorised smokeless fuel

Solid fuels can be more difficult to light in a cold stove – especially when damp. We recommend placing scrunched up paper or firelighters in the centre of the grate. Arrange kindling in a tepee shape around it. Then arrange the smokeless fuel on and around the tepee shape. Light the paper or firelighter. Leave this to start glowing before adding more fuel. It is easy to smother the fire by adding too much fuel too soon.

#### USING THE AIR CONTROLS

##### To start

When you first light the fire, close the glass door and pull both controls out fully. Also open the air boost disc (the RH knob will always protrude approx 10mm more than the LH knob in the fully open position).

##### Once established

Close the boost disc.

When you are burning anthracite or manufactured smokeless fuel you need to close the Secondary knob (RH) **nearly all the way** once the volatiles have burnt off leaving the glowing coals, (leaving it a little open will prevent the door glass blackening). The rate of burn is now controlled using the Primary Air knob (LH). (1.4kg /3 lb of smokeless fuel will last about 2 hours when the stove output is 5 kW).

Before refuelling open primary knob (LH) fully for a few minutes before adding new fuel – do not put too much on at once as you may smother the fire.

#### REFUELLING ON TO A LOW FIRE BED (NOT MUCH FUEL GLOWING)

If there is insufficient burning material in the fire bed to light a new load of fuel, excessive smoke emission can occur. Refuelling must be carried out on to a sufficient quantity of glowing embers and ash so that the new fuel load will ignite in a reasonable period. If there are too few embers in the fire bed, add suitable kindling and follow previous steps.

**WARNING - LOADING FUEL WITHOUT OPENING CONTROLS CAN LEAD TO A SUDDEN IGNITION AND POTENTIAL DAMAGE TO YOUR STOVE AND FLUE SYSTEM.**

#### FUEL OVERLOADING

The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke.

## DE-ASHING

De-ashing is carried out by using a poker to make the ashes fall into the ash pan for safe removal. When burning solid fuel it is necessary to de-ash daily, this allows combustion air to flow up through the fuel. Solid fuel burns better with an up-draught.

## SAFETY

Always use the glove provided when opening the doors of the stove.

Your stove has not been designed to run with the door open, it should therefore be kept shut except when refuelling is carried out.

## 3.h Cooking on a Penguin

**ALL MODELS:** The top surface of all of our stoves (the top plate) is hot and can be used to boil a kettle or warm up a small saucepan. You will require flat bottomed kettle or pans. If you plan to use it regularly you will want items with a heavy bottom. Place on shelf provided (never direct on over floor).

**COOKER MODELS:** All our cooker models have an oven box above the stove. Do not place cookware directly on to the oven bottom. If cookware is placed on the oven bottom the lower layer of food will burn. If you plan to cook on it regularly consider rear fluing the stove. There is a small rectangular cut out at the rear of the oven box, this is a vent for cooking smells.

**The oven temperatures** are completely dependent on the fire below, the fuel used and how it is maintained. Cooking over fire is one of the oldest methods of cooking but one of the least familiar to most people. When you begin using it, it will involve trial and error. Once the fire has been established for 20-30 minutes you can achieve temperatures between 140-280°C. 140-180°C is the average for a nicely established, medium fire, with fuel glowing. Longer, slower cooking is easier to achieve. Always begin with a familiar well-tried recipe and compare the results with what you would normally expect from your usual cooker, then adjust accordingly.

You can purchase an oven thermometer to monitor the oven temperature. You can also purchase a stove pipe thermometer. Be aware that a stove pipe thermometer will not give you the oven box temperature but the flue temp. However, what it will do is indicate how steady the temperature is and any rises and fall in it. It has the advantage that you can see this while you are cooking. The fire should always be well established before you begin so you can be more sure of getting a steady temperature. The usual precautions apply as with all applying heat to any food item. Ensure that food is thoroughly and safely cooked. Always check the centre of the food, use visual checks. Use a meat thermometer if you are unsure. If in doubt do not consume.

**CARE OF THE OVEN BOX:** The oven box is a steel chamber with an oven door. It may arrive with a thin spray coat of paint over the internal surface. This is just to preserve the steel surface in storage and transit. The heat of the fire will burn off waste food that falls onto the oven box interior, any deposits can be scraped off. Check periodically that the vent is clear and that the rope seals are sound.





*Section 5*

MAINTENANCE

Page 40-48

# 5. Maintenance

## 5.a Routine Checks and Cleaning

### AS REQUIRED

**Stove surface** should be cleaned with a soft brush or lint free cloth when cold, some people use a vacuum cleaner attachment.

**Ash pan** should be emptied daily when using smokeless fuel, if this is done while the stove is still warm, use glove and tool provided. Ensure hot ashes are disposed of safely.

**Glass cleaning** should be done when cold. There are proprietary stove glass cleaners available, however a paste made from wood ash and water is very effective (or dip a damp cloth/kitchen roll into the wood ash). For stubborn carbon deposit fine grade wire wool can be used..

### EVERY FEW MONTHS

**Throat Plate** must be removed monthly for cleaning, ensure it is refitted correctly - failure to do this could result in a partial blockage of the flue.

**Doors** should be checked for positive closure against the seals.

**Seals** check to make sure the seals are secure, free from damage and not brittle. Your local stove shop should be able to supply replacement rope seal and glue, alternatively they can be ordered through our online spares shop. All our door seals have a diameter of 14mm for fire box doors and 10mm for oven doors.

### ANNUALLY

**The chimney** should be swept at least once a year, before the winter season. With the correct flue brushes and rods all our stoves can be swept through the fire box, when the chimney is lined, unless a rear horizontal adaptor is used (**see Section 3, Chimney and Access for sweeping**). In unlined chimneys it is not possible to sweep through the cooker models and additional access is required as described in the installation section. We recommend using an experienced and qualified sweep. Extra flexible rods with the appropriate size brushes should only be used with flexible stainless steel liners. The use of incorrect rods can damage your flue.

If the stove is left for long periods without use, i.e. over the summer, it is advisable to clean the stove thoroughly and leave all the vents open. This will help prevent any build-up of condensation and allow the stove to keep dry and limit internal corrosion. The whole system should be checked after any prolonged period of inactivity to ensure that it is free from blockage.

**Note: The appliance should be regularly maintained by a competent engineer.**

## 5.b Painting your Stove or Stove Pipe

If you are painting your vitreous flue to match the stove colour or touching up an area of your stove there are 3 steps.

### 1. Preparing the surface

### 2. Applying the paint

### 3. Curing or setting the paint

The most critical step is surface preparation. The paint will adhere to the surface coat, if there is rust, it will fail. If the stove/flue has a coating that is peeling, blistering or chalking in any way, the topcoat will release in the same way. If there is oil/grease/contaminant the paint will not adhere.

#### 1. Preparing the surface

- Remove all rust by sandblasting, sanding or grinding. IF YOU APPLY ON TOP OF RUST the paint will adhere to the rust and fail . A new stove /flue should arrive rust free, this will only be relevant if you are renovating an old stove
- Remove oil, grease, contaminants. New flue can arrive with a chemical on the surface used during the manufacturing process. We recommend the use of an acetone based paint thinner and that you key the surface with fine sandpaper. This preparation is vital

## TROUBLE SHOOTING

Paint coming off in patches indicates a problem with surface preparation. The remedy is to remove the paint, prepare the surface and start again.

#### 2. Applying the paint (vapour and propellant are flammable, avoid all naked flames and sparks)

- Best results are achieved when the paint, the stove/flue surface and the air temp. are above 18°C/66°F - 29°C/85°F. You can warm a cold can of paint by running a hot tap over it for 2 minutes. DO NOT expose to flames
- Shake the paint for 2 minutes to thoroughly mix the pigments, metallics and solvents
- Do a test spray onto a piece of cardboard, the first spray can be mostly propellant with no pigment
- Apply the first of 2-3 light coats. The first coat should be a mist coat (it will look like dots on the surface). Apply from 12-15 inches, if you are too close the paint will drip/run, if you are too far away you will get a gritty finish

- You can apply the second coat after 15 minutes. The paint will be touch dry in about 20 minutes. We recommend leaving it 4 hours before lighting the first fire, described above
- If you are touching up a stove be aware that there are minute variations from batch to batch of paint so you may need to paint a whole surface to avoid these variations showing. eg if you are covering a mark on the top you may want to apply a coat to the whole top plate. YOU WILL BE COMPARING CURED PAINT WITH UNCURED PAINT SO THE DIFFERENCE WILL BE MORE APPARENT UNTIL THE NEW PAINT HAS CURED

## TROUBLE SHOOTING

If paint peels/looks like shattered glass/comes off in thin strips, too much paint was applied. If the surface is gritty the spray was applied too far from the surface. The remedy is to remove as much paint as possible, prepare the surface and repaint.

### 3. To set or “cure” your paint

- Wait 4 hours after paint is applied (this does not apply if unpacking a new stove, this time is allowed in the workshop). Then we recommend the Goldilocks and the 3 bears method; small fire, medium fire, big fire
- Light a small kindling fire, keep burning for 10-15 minutes
- Add fuel gradually to build a medium fire. Building a hot fire immediately will “shock” the paint and cause it to release from the surface. Keep it burning like this for about 60 minutes (bringing the stove surface temperature to 450°F/230°C)
- For the final stage of curing, add fuel to make a very hot fire. Keep it at this level for about 60 minutes (achieving temperatures above 600°F/315°C)

## WARNING

Don't touch the surface with anything during the curing process. There is likely to be a strong smell when the paint is curing, ventilate the room well, open windows/doors as necessary. Take extra care if anyone else in the household has breathing difficulties.

## 5.c Keeping your Stove Glass Clear

To maintain clear glass there are 2 factors.

- 1. Correct and dry fuel (see section 4, Principles of combustion)**
- 2. Correct use of air controls (see section 4, Making a fire - wood/solid fuel)**

As a general rule the hotter the fire the clearer the glass will be. If you have wet fuel the fire will struggle to reach high temperatures, an inefficient burn = blackening. If not enough air is being drawn through the firebox, due to incorrect use of the controls, the fire will slumber and not burn as well or efficiently also leading to blackening.

However there are also times within both the burn cycle and areas within the physical firebox where the temperatures are cooler. As far as the burn cycle you can just wait for a hotter fire and any discolouration will burn off. Cooler spots in the fire box such as in front of the fuel retaining bar and the corners of the glass can show signs of discolouration after a number of fires. This is easily dealt with. When the stove is cool either use an off the shelf stove glass cleaner or dip a damp cloth/piece of kitchen roll in wood ash and rub the area. Any persistent areas can be cleaned with wire wool.

## 5.d Door Seal

If the door seal shows signs of deterioration, you may need to replace it. This is a 14mm diameter rope on the fire box door and 10mm for the oven doors. To test the effectiveness of the seal, when the stove is cold, trap a piece of paper between the door seal and stove body shutting the door completely, you should feel resistance when you try to pull the paper out. Repeat this for each edge.

## 5.e Door Glass Replacement



Remove the 4 stainless steel screws retaining the glass. Replace the 2mm x 10mm seal if necessary. Position replacement glass and fit retaining clips, tighten screws just enough to pinch the glass. Overtightening can result in the glass cracking.

## 5.f Vermiculite Bricks

The vermiculite bricks which line the fire chamber will need replacing over time, they are a perishable item. They are a pressed board, not a ceramic brick so they should be treated with care. They insulate the stove allowing it to burn more efficiently and protect the steel body from the heat of the stove. The amount of time they will last depends on stove usage, the fuel you burn and the care you take re-fuelling.

Fire brick signs of damage	
Cracks	Hairline cracks are caused by impact or vibration, usually a log thrown in a little roughly or a log that is slightly too large being pressed against the bricks when the door closes, replace if steel body of the stove is exposed or if the crack causes part of the brick to fall into the fire. A hairline crack in a brick will not damage the stove body.
Crumbling edges and corners	Expected wear and tear, replace if steel of stove body is exposed.

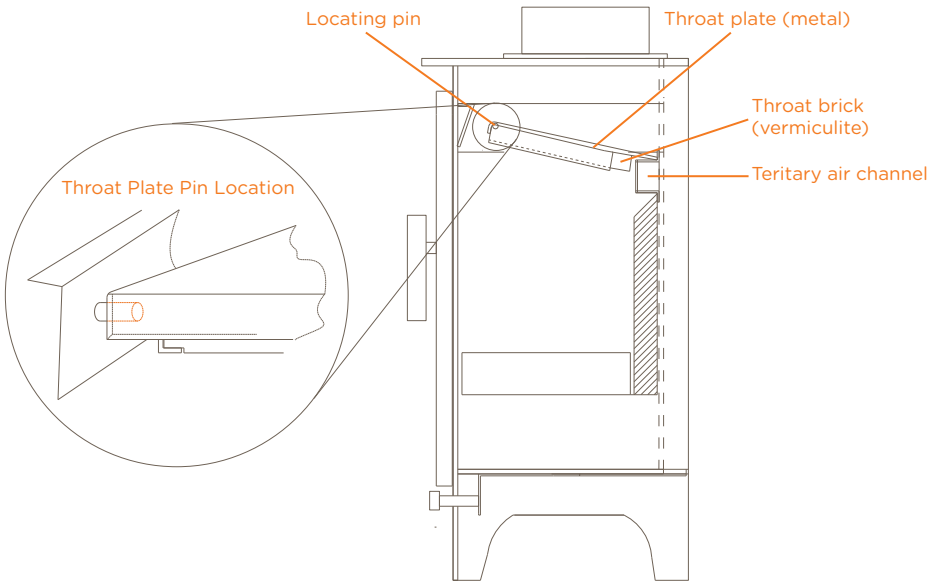
Caring for your vermiculite bricks
Do not use over sized logs
Do not over fill the fire chamber
Place logs in rather than throwing or dropping
If using a poker or tool inside the fire box try not to disturb the bricks
Do not use water or water based cleaning agents to clean the interior of the stove, vermiculite will weaken if it absorbs water
Only burn seasoned wood, due to moisture content, see point above

If the bricks require replacement it will first be necessary to remove the throat plate and the grate. Take a note of their position. Some of the fire bricks in older models were held in place with high temperature silicone. They have been re-designed now to maintain their position mechanically (a jigsaw effect). It is very common when replacing one fire brick to damage another. For this reason we recommend that if very small areas of damage/hairline crack are visible and the steel is not exposed, wait until you are ready to replace the whole set.

Bricks are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct bricks.

## 5.g To Remove the Throat Plate

Diagram illustrating the location of the throat plate.



### LOCATING THE THROAT PLATE

#### STEP 1

Take note of the position of the throat plate before removal, the correct position is important, it can move in transit, and it needs to be removed regularly for soot clearance.

#### STEP 2

To remove it – slide it forward until the back drops down. Lift it off the pins.

#### STEP 3

To re-install it you must push the front edge of the plate (side with the bent over lip) over the locating pins. Then slide it back to rest on top of the tertiary air channel. The front edge will be higher than the back edge.

#### STEP 4

Confirm by feeling that the supporting pins are located on the underside of the lip.

#### STEP 5

The vermiculite throat brick faces down into the fire chamber, underneath the steel throat plate. Do not use the stove without the throat brick inserted into the throat plate or it will warp.

## 5.h To Remove the Grate

Take care when doing this as the new grate is heavy and it is possible to trap your fingers. Wear gloves if possible and do not rush the job.

Please see our online video at:

[www.chillipenguin.co.uk/faqs/looking-after-your-penguin/vermiculite-fire-bricks/](http://www.chillipenguin.co.uk/faqs/looking-after-your-penguin/vermiculite-fire-bricks/)



### STEP 1

Remove the ash pan, place one hand inside and push the grate upwards, lifting the grate into the diagonal position (left to right, not front to back).

### STEP 2

Reach into the fire chamber with your other hand to receive the grate, support the grate on the stove while you find a comfortable 2 handed hold.

### STEP 3

Tilt the grate onto an angle which will allow it to exit the door.

### STEP 4

Manoeuvre carefully out of the stove, usually a left to right angle first, then tilt forward.

### STEP 5

To re install it, follow the same steps in reverse, then replace the ash pan.



## 5.i Trouble Shooting

### PROBLEM

### POSSIBLE CAUSE

### REMEDIAL ACTION

#### CANNOT GET FUEL TO STAY ALIGHT

- |  |  |
|--|--|
| <ol style="list-style-type: none"><li>1. Fuel is damp</li><li>2. Fire has been smothered</li><li>3. Insufficient air</li></ol> | <ol style="list-style-type: none"><li>1. Ensure fuel is dry</li><li>2. Load smaller amounts of fuel at a time – be patient!</li><li>3. Air boost disc has been closed before the fire has been established</li></ol> |
|--|--|

#### SMOKE ENTERS ROOM

- |  |  |
|--|--|
| <ol style="list-style-type: none"><li>1. Blocked flue way</li><li>2. Damaged chimney</li><li>3. Site and location of chimney</li></ol> | <ol style="list-style-type: none"><li>1. Let the fire go out then drop the throat plate down and check for blockages. Sweep chimney</li><li>2. Get chimney inspected</li><li>3. If flue is clear and stove installed correctly and problem persists – seek professional advice</li></ol> |
|--|--|

#### FIRE DOES NOT BURN THROUGH THE NIGHT

WOOD FIRES SHOULD NOT BE LEFT TO BURN THROUGH THE NIGHT, SOLID FUEL ONLY

- |  |   |
|--|---|
| <ol style="list-style-type: none"><li>1. Fuel burns away<br/>- too much air</li><li>2. Fire goes out<br/>- not enough air</li><li>3. Not enough fuel</li><li>4. Incorrect fuel</li></ol> | <ol style="list-style-type: none"><li>1. Try closing the primary knob slightly</li><li>2. Make sure the fuel bed has been de-ashed before banking for the night. Pull the primary knob out slightly</li><li>3. Fill fuel bed to top of grate allowing the fuel to slope upwards toward the back of the stove</li><li>4. Use only approved smokeless fuels, (wood will not burn through the night)</li></ol> |
|--|---|

#### GLASS BLACKENS

(SMALL LOCALISED AREAS WHERE WOOD HAS FALLEN AGAINST THE GLASS IS NORMAL, THIS WILL BURN OFF AS THE FIRE GETS HOTTER)

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>1. Incorrect fuel used</li><li>2. Air controls closed down too soon before fire established</li></ol> | <ol style="list-style-type: none"><li>1. House coal or resinous unseasoned and/or wet wood is being used</li><li>2. Leave air controls open longer</li></ol> <p>Some discolouration of the glass is normal after several fires, in the cooler areas of the glass door: near the fuel retainer and the corners. This will burn off in a hot fire or can be removed when stove is cold with glass cleaner/damp cloth dipped in wood ash</p> |
|---|---|

#### CHIMNEY FIRE

By following the instructions in this manual, including regular cleaning of the stove and flue system you should avoid the possibility of a chimney fire. In the unlikely event that one occurs, raise the alarm to let others in the house know, call the Fire Service, if time and safety allows close the stove air controls, and exit the building.



Section 6


ENERGY EFFICIENCY  
& GUARANTEE

Page 49-54

# 6. Energy Efficiency & Guarantee

## 6.a Energy Efficiency Labels

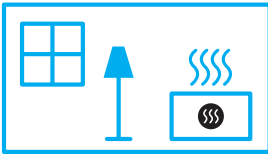
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Chubby 5

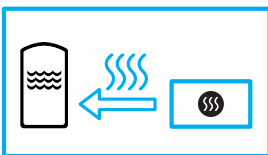
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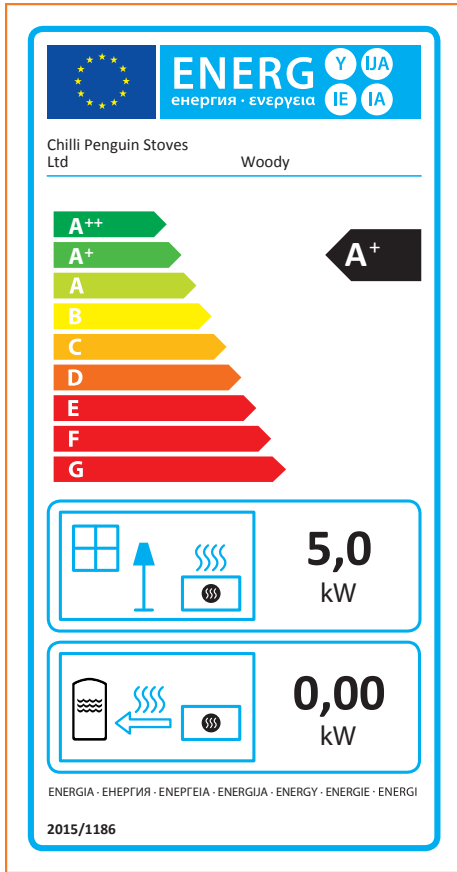
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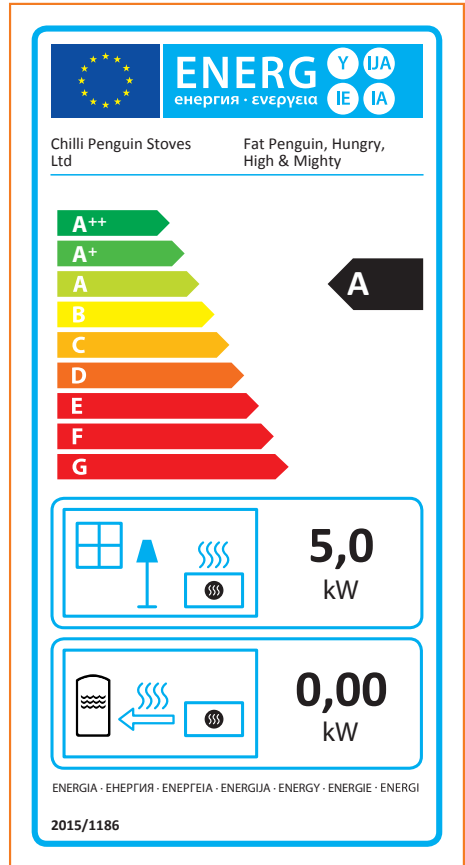
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## 6.a Energy Efficiency Labels



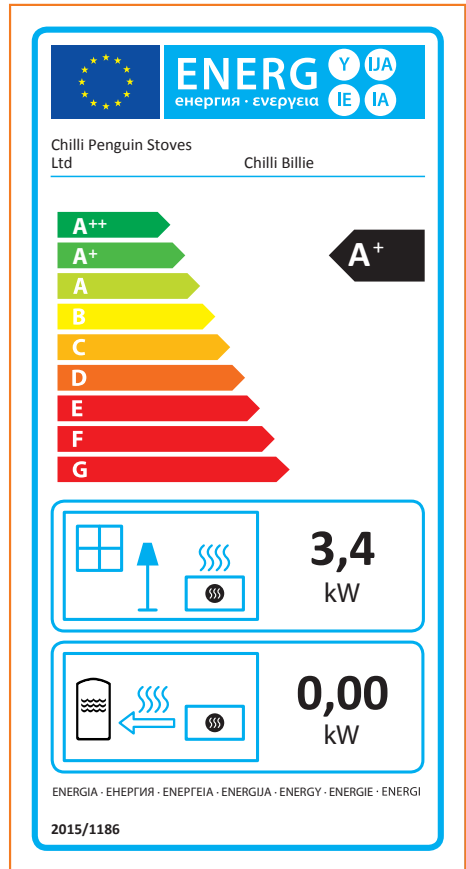
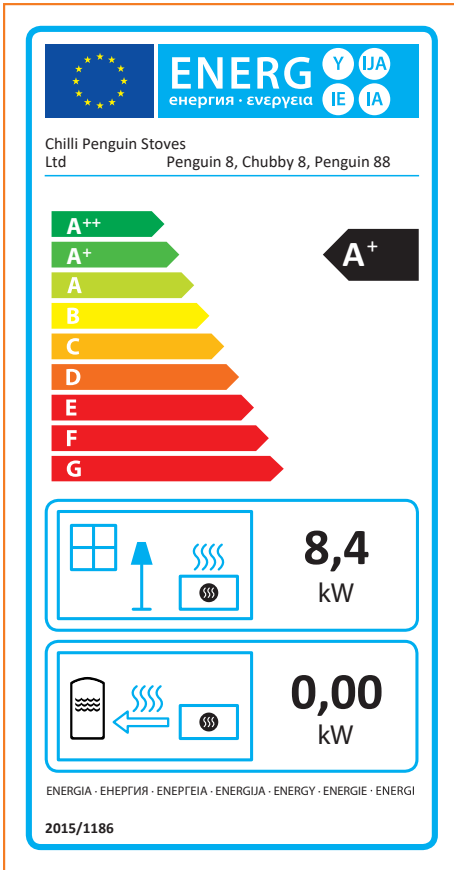
Woody

Fat Penguin  
Hungry Penguin  
High & Mighty



## 6.a Energy Efficiency Labels

Penguin 8  
Chubby 8  
Penguin 88



Chilli Billie

## 6.b Guarantee

### 7 Year Guarantee (available on registration)



A free 7 year extended guarantee is offered if your stove is purchased and registered through your local approved Chilli Penguin stockist.

We run this extended guarantee scheme through our stockist network so that you have access to a local, competent and experienced engineer with whom you will already have an established trade relationship.

A Chilli Penguin Stoves' guarantee covers the materials listed plus the construction and workmanship. The assembly, installation and operation of the stove, because they do not come under our direct control, are not included in this guarantee. You are advised to take these matters up with your stove supplier or accredited installation engineer.

In the unlikely event of the failure of components covered by this guarantee, CPS will repair or replace them to their original specification. Labour and shipping costs will be discretionary. It is important to use only replacement parts recommended by CPS.

Should any components arrive in a damaged state upon delivery, they will be replaced provided a written claim is made within 5 days.

Items covered
The steel body, door, handles and grate. Boilers carry a 4 year guarantee.

Items NOT covered
Those items that are considered service items, these include; vermiculite bricks, door seals, door glass, ash pan, operating tool and gloves.
The whole of the guarantee is invalid if there is any unauthorised modification of the appliance or if any part of the stove assembly, installation, operation and maintenance does not comply with the instructions supplied and with all Building Regulations in force at the time of purchase. In addition they must be certified by either a Hetas installer or your local building control dept.

## 6.c Stove and Installation Details

Purchase date	
Official Stockist's shop name	
Installation Date	
Installer's Name	
Installer's HETAS number	
Or Local Authority Building Control Ref	
Smoke Control kit fitted (please circle)	YES NO
Base heat shield fitted (please circle)	YES NO
Direct Air kit fitted (please circle)	YES NO
Direct Air commissioning test completed (please circle)	YES NO
Serial number (Your local stockist will need this to register your stove)	



ENGINEERING  
ON FIRE

# CHILLI PENGUIN

## STOVES



**Sales and Technical Support**  
Call: 01758 721 247



**stoves@chillipenguin.co.uk**



**Local Stockists**  
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**Chilli Penguin Workshop**  
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