



Chilli Penguin
Stoves



The Eco Series

Short Penguin
Hungry Penguin
Fat Penguin
High and Mighty
Chubby 5
Woody (Cat)
Woody (Multi fuel)

www.chillipenguin.co.uk

CSP 9768 12/2019 ECO

Installation and Operating Manual

YOUR STOVE SHOULD ARRIVE WITH...

- A pair of heat resistant gloves
- A tool for operating the stove and removing the ash pan
- This instruction manual
- An ash pan
- A stove collar
- A fuel retainer bar
- An aerosol of spray paint - coloured stoves only
- A warm fuzzy feeling indicating that you are now part of the penguin family



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Your stove should arrive with

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INTRODUCTION



Thank you for purchasing a Chilli Penguin Stove. You have purchased a high quality eco design stove that has been built to last. It has been 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 of the most used platforms for reviews.

www.facebook.com/chillipenguin

www.whatstove.co.uk

www.chillipenguin.co.uk



Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit:
www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

ECO SERIES SUMMARY

This manual is for the following eco design stoves.

Multi Fuel

This is a non catalytic converter version and is suitable for both dry wood and smokeless fuel. The low emissions and high efficiencies are achieved by carefully designed flue and combustion air passageways. The advantage of this version is that it offers the option of using either dry wood or smokeless fuel.

SHORT PENGUIN ECO SERIES (ESP)		
Model	Short Penguin	Chubby 5
Output	5kW	5kW

HUNGRY PENGUIN ECO SERIES (EHP)			
Model	Hungry Penguin	Fat Penguin	High and Mighty
Output	5kW	5kW	5kW

WOODY ECO SERIES (EW)	
Model	Woody (Multi fuel)
Output	5kW

Cat (Wood only)

A catalytic converters (Cat) is a honeycomb structure that has a special coating that chemically converts harmful gases and superheats to burn off smoke particles. It can be seen glowing orange when functioning at high temperatures. The advantage of catalytic converters is that they produce excellent results over a wider band of operating conditions. It is critical to the life expectancy of a cat that dry untreated wood is burnt. The usual life expectancy of a cat is 3-5 years, but this will depend on usage.

WOODY ECO SERIES (EW)	
Model	Woody (Cat) wood only
Output	5kW

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



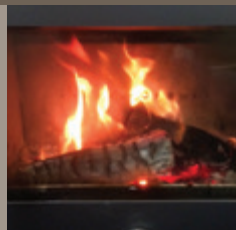
PREPARE A SMALL KINDLING FIRE

- scrunch up newspaper or use a firelighter, 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 surface must be cured or set properly during your first fire.

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 completed properly you may experience issues with the paint. Be aware that curing will cause a very slight colour change, the hotter areas will change colour the soonest, pay extra attention to the curing of lighter colours.

We want your penguin to be perfect, so give it the attention it deserves!

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 problems arise with the painted surface of the stove, this is a result of incorrect curing or misuse of the stove such as over fuelling or running the stove too hot. Therefore any problems with the painted surface are not covered by your warranty.

This penguin is a living, breathing, hard working appliance. Expect to touch up the painted surface occasionally over its lifetime.

***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, it 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



Section 2

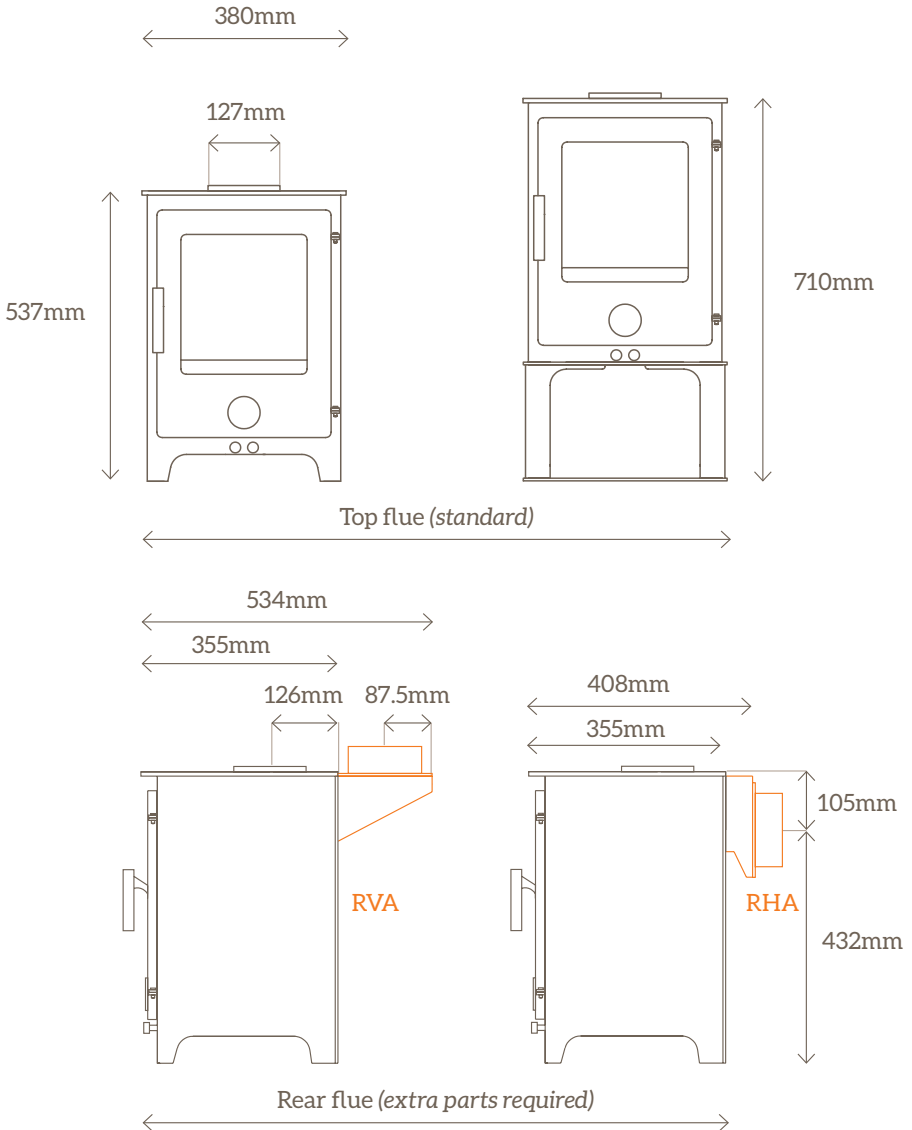
THE PLANS &
TECHNICAL DETAILS

Page 06-10

2.a The Plans & Tech Details

The Short Penguin Eco (Pengwin Bach Eco)

The Plans





Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

The Tech Details



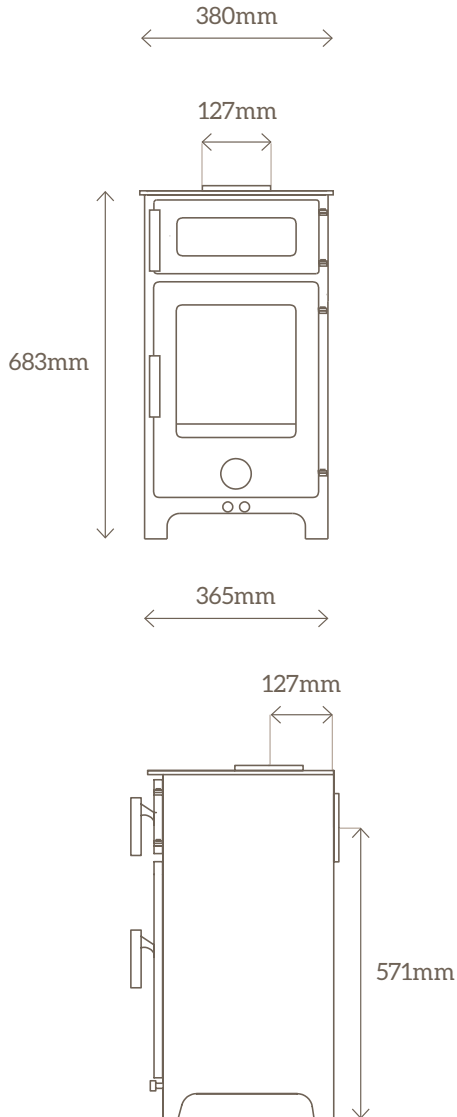
	WOOD	SMOKELESS FUEL
MULTI-FUEL		
Nominal Output	4.8kW	4.9kW
Total Energy Efficiency %	80.6%	80.4%
CO content @13% O₂	0.09%	0.03%
Dust Concentration @ 13% O₂	36mg/m³	15mg/m³
NO_x mg/m³	108mg/m³	129mg/m³
Cx Hy mg/m³	118mg/m³	9mg/m³
Flue Gas g/s	4.7g/s	4.1g/s
Mean Flue gas temp. °C	219°C	273°C
Smoke Control/DEFRA Exemption Testing complete	Yes	Yes
Seasonal Efficiency	70.6%	70.4%
Suitable For Smoke Control Zones (Factory Fitted)	Yes	Yes
Max. Log length x average diameter	270mm x 100mm	
Max. Fuel load	2.5kg	3kg
Flue Collar Diameter	127mm	127mm
Flue Size Required	Min 125mm	Min 125mm
Top Exit	Standard	Standard
Rear Exit	RHA/RVA Required	RHA/RVA Required
Hearth Type No Base Heat Shield/Plinth	Constructional	Constructional
Hearth With Base Heat Shield/Plinth	12mm	12mm
Chimney draught required	12Pa	12Pa
Construction	Welded steel	Welded steel
Weight	75kg	75kg
Tested to EN13240:2001-2004 / BS 3841-2:1994		

For distances to combustibles / non-combustibles see section 3

2.b The Plans & Tech Details

The Hungry Penguin Eco (Penguin Llwglyd Eco)

The Plans





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The Tech Details



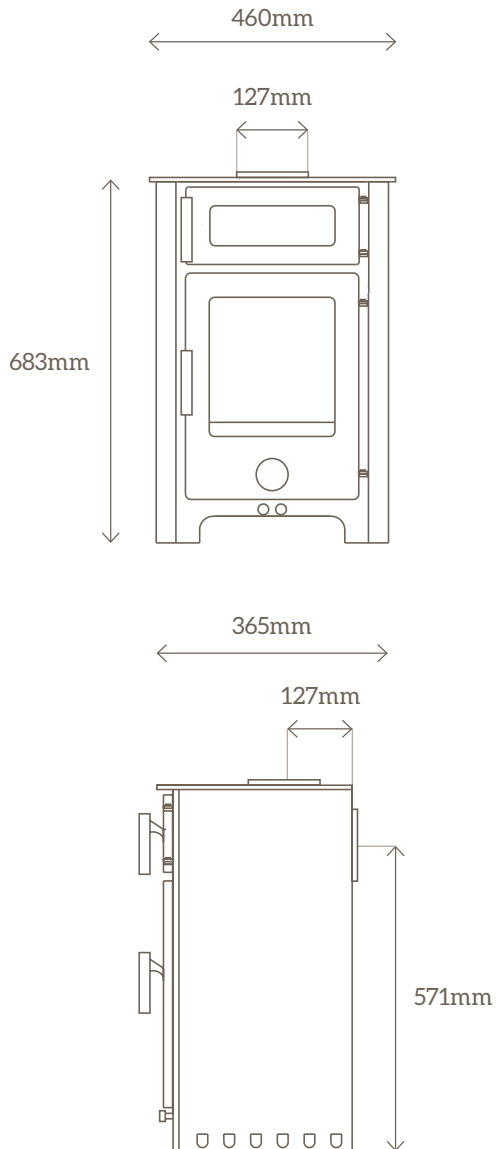
	WOOD	SMOKELESS FUEL
MULTI-FUEL		
Nominal Output	4.7kW	4.8kW
Total Energy Efficiency %	81.2%	86.6%
CO content @13% O₂	0.10%	0.06%
Dust Concentration @ 13% O₂	33mg/m³	12mg/m³
NO_x mg/m³	135mg/m³	119mg/m³
Cx Hy mg/m³	96mg/m³	37mg/m³
Flue Gas g/s	4.8g/s	2.9g/s
Mean Flue gas temp. °C	224°C	247°C
Smoke Control/DEFRA Exemption Testing complete	Yes	Yes
Seasonal Efficiency	71.2%	76.6%
Suitable For Smoke Control Zones (Factory Fitted)	Yes	Yes
Max. Log length x average diameter	270mm x 100mm	
Max. Fuel load	2.5kg	3kg
Flue Collar Diameter	127mm	127mm
Flue Size Required	Min 125mm	Min 125mm
Top Exit	Standard	Standard
Rear Exit	Fit flue collar to rear	Fit flue collar to rear
Hearth Type No Base Heat Shield/Plinth	Constructional	Constructional
Hearth With Base Heat Shield/Plinth	12mm	12mm
Chimney draught required	12Pa	12Pa
Construction	Welded steel	Welded steel
Weight	96kg	96kg
Tested to EN13240:2001-2004 / BS 3841-2:1994		

For distances to combustibles / non-combustibles see section 3

2.c The Plans & Tech Details

The Fat Penguin Eco (Pengwin Tew Eco)

The Plans





Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

The Tech Details



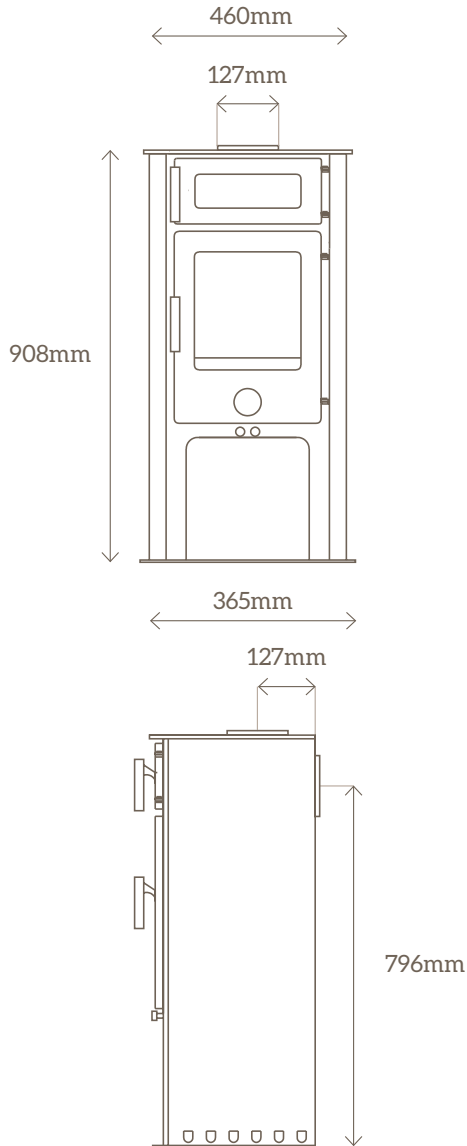
	WOOD	SMOKELESS FUEL
MULTI-FUEL		
Nominal Output	4.7kW	4.8kW
Total Energy Efficiency %	81.2%	86.6%
CO content @13% O₂	0.10%	0.06%
Dust Concentration @ 13% O₂	33mg/m³	12mg/m³
NO_x mg/m³	135mg/m³	119mg/m³
Cx Hy mg/m³	96mg/m³	37mg/m³
Flue Gas g/s	4.8g/s	2.9g/s
Mean Flue gas temp. °C	224°C	247°C
Smoke Control/DEFRA Exemption Testing complete	Yes	Yes
Seasonal Efficiency	71.2%	76.6%
Suitable For Smoke Control Zones (Factory Fitted)	Yes	Yes
Max. Log length x average diameter	270mm x 100mm	
Max. Fuel load	2.5kg	3kg
Flue Collar Diameter	127mm	127mm
Flue Size Required	Min 125mm	Min 125mm
Top Exit	Standard	Standard
Rear Exit	Fit flue collar to rear	Fit flue collar to rear
Hearth Type No Base Heat Shield/Plinth	Constructional	Constructional
Hearth With Base Heat Shield/Plinth	12mm	12mm
Chimney draught required	12Pa	12Pa
Construction	Welded steel	Welded steel
Weight	104kg	104kg
Tested to EN13240:2001-2004 / BS 3841-2:1994		

For distances to combustibles / non-combustibles see section 3

2.d The Plans & Tech Details

The High and Mighty Eco (Pengwin Bonheddig Eco)

The Plans





Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

The Tech Details



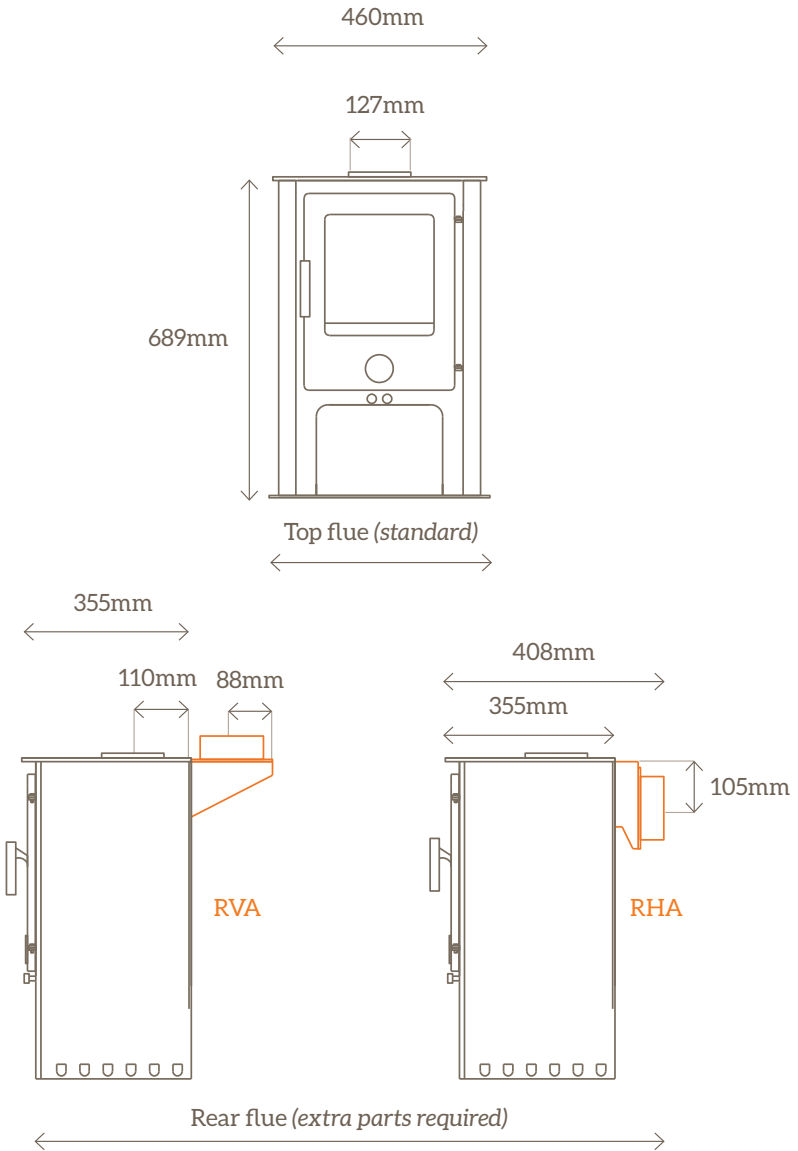
	WOOD	SMOKELESS FUEL
MULTI-FUEL		
Nominal Output	4.7kW	4.8kW
Total Energy Efficiency %	81.2%	86.6%
CO content @13% O₂	0.10%	0.06%
Dust Concentration @ 13% O₂	33mg/m³	12mg/m³
NO_x mg/m³	135mg/m³	119mg/m³
Cx Hy mg/m³	96mg/m³	37mg/m³
Flue Gas g/s	4.8g/s	2.9g/s
Mean Flue gas temp. °C	224°C	247°C
Smoke Control/DEFRA Exemption Testing complete	Yes	Yes
Seasonal Efficiency	71.2%	76.6%
Suitable For Smoke Control Zones (Factory Fitted)	Yes	Yes
Max. Log length x average diameter	270mm x 100mm	
Max. Fuel load	2.5kg	3kg
Flue Collar Diameter	127mm	127mm
Flue Size Required	Min 125mm	Min 125mm
Top Exit	Standard	Standard
Rear Exit	Fit flue collar to rear	Fit flue collar to rear
Hearth Type No Base Heat Shield/Plinth	Constructional	Constructional
Hearth With Base Heat Shield/Plinth	12mm	12mm
Chimney draught required	12Pa	12Pa
Construction	Welded steel	Welded steel
Weight	126kg	126kg
Tested to EN13240:2001-2004 / BS 3841-2:1994		

For distances to combustibles / non-combustibles see section 3

2.e The Plans & Tech Details

The Chubby 5 Eco (Pengwin Llund Eu Crwyn 5 Eco)

The Plans





Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

The Tech Details



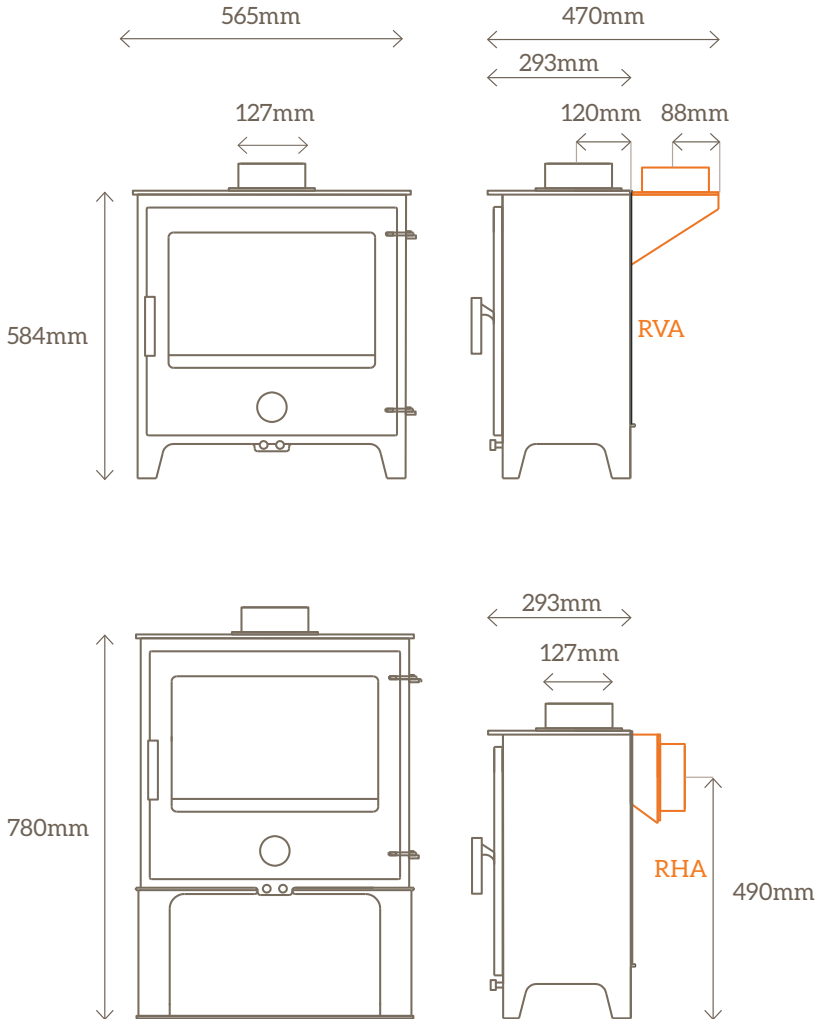
	WOOD	SMOKELESS FUEL
MULTI-FUEL		
Nominal Output	4.8kW	4.9kW
Total Energy Efficiency %	80.6%	80.4%
CO content @13% O₂	0.09%	0.03%
Dust Concentration @ 13% O₂	36mg/m³	15mg/m³
NO_x mg/m³	108mg/m³	129mg/m³
Cx Hy mg/m³	118mg/m³	9mg/m³
Flue Gas g/s	4.7g/s	4.1g/s
Mean Flue gas temp. °C	219°C	273°C
Smoke Control/DEFRA Exemption Testing complete	Yes	Yes
Seasonal Efficiency	70.6%	70.4%
Suitable For Smoke Control Zones (Factory Fitted)	Yes	Yes
Max. Log length x average diameter	270mm x 100mm	
Max. Fuel load	2.5kg	3kg
Flue Collar Diameter	127mm	127mm
Flue Size Required	Min 125mm	Min 125mm
Top Exit	Standard	Standard
Rear Exit	RHA/RVA Required	RHA/RVA Required
Hearth Type No Base Heat Shield/Plinth	Constructional	Constructional
Hearth With Base Heat Shield/Plinth	12mm	12mm
Chimney draught required	12Pa	12Pa
Construction	Welded steel	Welded steel
Weight	101kg	101kg
Tested to EN13240:2001-2004 / BS 3841-2:1994		

For distances to combustibles / non-combustibles see section 3

2.f The Plans & Tech Details

Woody Eco (Cat) (Woody Eco (Cat))

The Plans





Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

The Tech Details



WOOD ONLY

Nominal Output	5kW
Total Energy Efficiency % (wood)	83%
CO content @13% O₂ (wood)	0.06%
NO_x mg/m³	105mg/m³
Cx Hy mg/m³	116mg/m³
Dust Concentration @ 13% O₂	11mg/m³
Flue gas g/s (wood)	4.0 g/s
Mean Flue gas temp. °C (wood)	222°C
Exemption Testing complete	Yes
Seasonal Efficiency	73%
Suitable For Smoke Control Zones (Factory Fitted)	Yes
Max. Log length x average diameter	430mm x 100mm
Max. Fuel load	2.5kg
Flue Collar Diameter	127mm
Flue Size Required	Ideal 6"/Min 5"
Top Exit	Standard
Rear Exit	Rear Horizontal (RHA)/Vertical Adaptor (RVA) Required
Hearth Type No Base Heat Shield/Plinth	Constructional
Hearth With Base Heat Shield/Plinth	12mm
Chimney draught required	12Pa
Construction	Welded steel
Weight	97kg

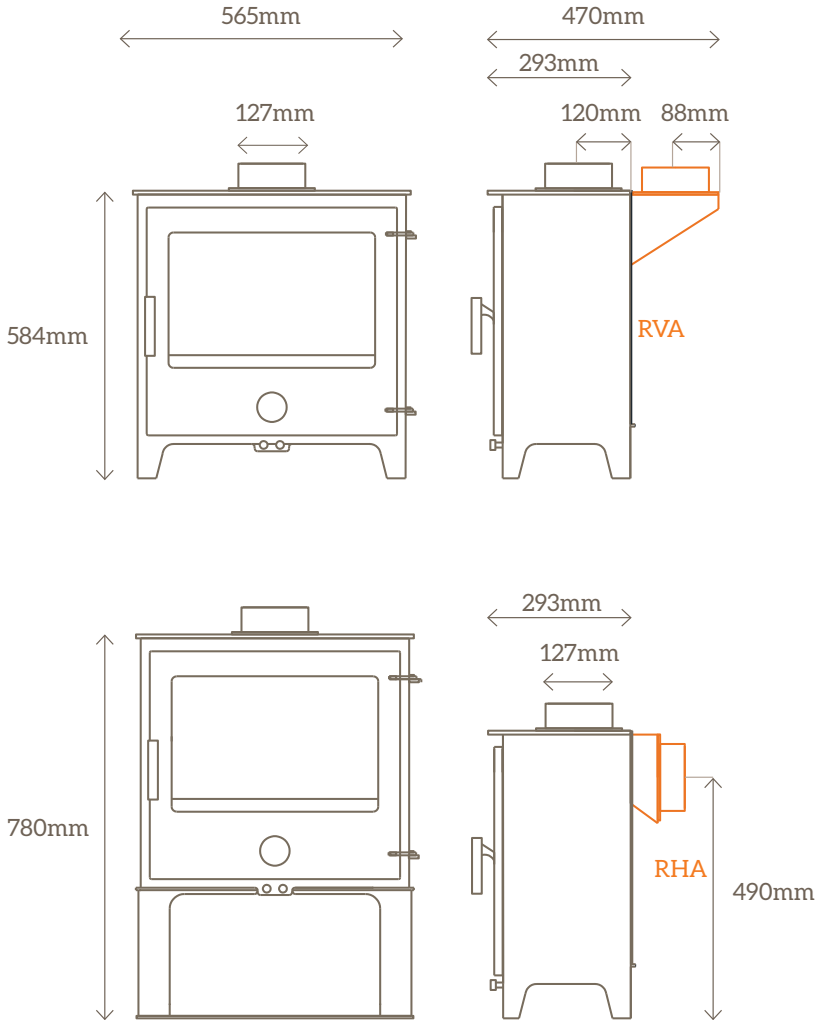
Tested to EN13240:2001-2004 / BS 3841-2:1994

For distances to combustibles / non-combustibles see section 3

2.g The Plans & Tech Details

Woody Eco (Multi fuel) (Woody Eco (Aml Danwydd))

The Plans





Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

The Tech Details



	WOOD	SMOKELESS FUEL
MULTI-FUEL		
Nominal Output	4.8kW	5kW
Total Energy Efficiency %	83%	87%
CO content @13% O₂	0.09%	0.04%
Dust Concentration @ 13% O₂	20mg/m³	16mg/m³
NO_x mg/m³	106mg/m³	161mg/m³
Cx Hy mg/m³	89mg/m³	11mg/m³
Flue Gas g/s	3.9g/s	2.9g/s
Mean Flue gas temp. °C	231°C	223°C
Smoke Control/DEFRA Exemption Testing complete	Yes	Yes
Seasonal Efficiency	73%	77%
Suitable For Smoke Control Zones (Factory Fitted)	Yes	Yes
Max. Log length x average diameter	430mm x 100mm	
Max. Fuel load	2.5kg	3kg
Flue Collar Diameter	127mm	127mm
Flue Size Required	Min 125mm	Min 125mm
Top Exit	Standard	Standard
Rear Exit	RHA/RVA Required	RHA/RVA Required
Hearth Type No Base Heat Shield/Plinth	Constructional	Constructional
Hearth With Base Heat Shield/Plinth	12mm	12mm
Chimney draught required	12Pa	12Pa
Construction	Welded steel	Welded steel
Weight	97kg	97kg
Tested to EN13240:2001-2004 / BS 3841-2:1994		

For distances to combustibles / non-combustibles see section 3



Section 3

INSTALLATION INSTRUCTIONS

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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. In addition, they should complete the commissioning checklist at the back of this manual. If a HETAS installer is not installing your stove your local Building Control department needs to inspect the installation and register the work carried out.

3.b Health and Safety Precautions

Special care should be taken when installing a stove so that the requirements of the Health and Safety at Work Act are met, with particular attention to the following.

Lifting and handling: adequate facilities must be available for loading, unloading and handling

Fire cement: some types of fire cement are caustic and should not come into contact with the skin. In case of contact, wash immediately with plenty of water

Asbestos: our stoves do not contain asbestos. If there is any possibility of disturbing asbestos in the course of installation, please seek specialist guidance and use appropriate protective equipment

Metal parts: when installing/servicing this stove take care to avoid the possibility of personal injury

A SAFE PENGUIN
IS A HAPPY PENGUIN

3.c Smoke Control Areas and Exemption of Appliances

Chilli Penguin Eco design stoves are classed as exempt stoves which means you can use them 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 multi fuel stove then you can burn both seasoned wood and approved smokeless fuels. NEVER BURN HOUSE COAL in a closed appliance like a stove.

The appliances are not exempted when burning wood briquettes or paper bricks or unauthorised fuels.

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. This adaptation is factory fitted in the eco series.

These Chilli Penguin eco design stoves are fitted with a mechanical stop to prevent closure of the secondary air controls beyond 35mm (CAT) and 36mm open (MF).

“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

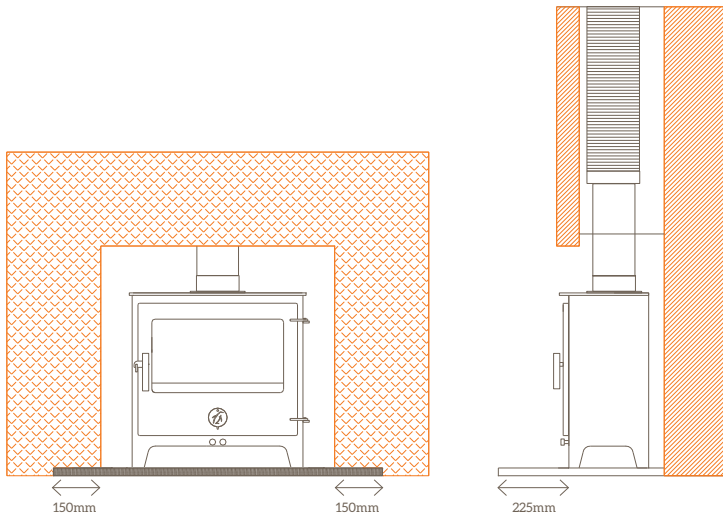
Your local authority is responsible for implementing the Clean Air Act 1993 including designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements.

3.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.

All models without base heat shield or plinth	Constructional total depth (incl. superimposed) 125mm
All models on plinth	Superimposed 12mm (minimum)
All models 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

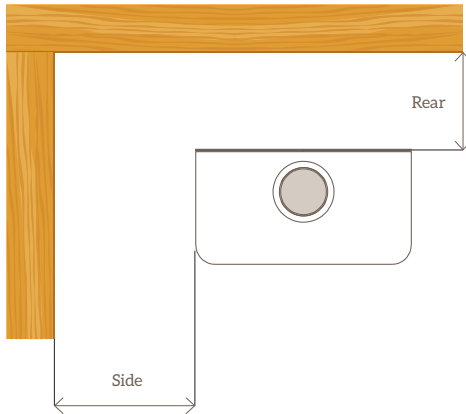
Make sure the floor can take the weight of the stove, the flue, the hearth and any decorative surround.



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3.f Combustible Walls

Diagrams illustrating the minimum distances to combustible walls i.e wood/plasterboard



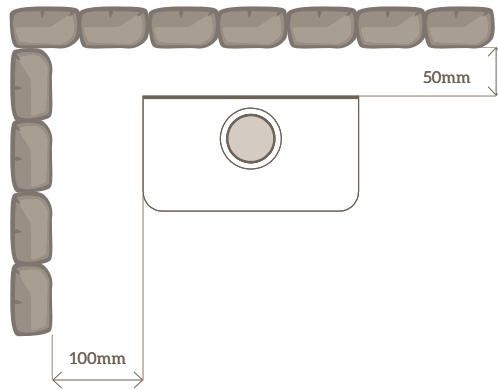
MINIMUM DISTANCES TO COMBUSTIBLE WALLS

Model	Rear	Both Sides	Above
Short Penguin Eco	350mm	500mm	450mm
Short Penguin Eco with insulated pipe	200mm	500mm	450mm
Hungry Penguin Eco	350mm	550mm	450mm
Hungry Penguin Eco with insulated pipe	250mm	550mm	450mm
Fat Penguin Eco	350mm	250mm	450mm
Fat Penguin Eco with insulated pipe	250mm	250mm	450mm
High and Mighty Eco	350mm	250mm	450mm
High and Mighty Eco with insulated pipe	250mm	250mm	450mm
Chubby 5 Eco	350mm	250mm	450mm
Chubby 5 Eco with insulated pipe	200mm	250mm	450mm
The Woody (Cat)	350mm	400mm	550mm
The Woody (Cat) with insulated pipe	150mm	400mm	550mm
The Woody (Multi fuel)	350mm	400mm	550mm
The Woody (Multi fuel) with insulated pipe	150mm	400mm	550mm

Rear distances to combustibles using a non-insulated flue pipe include safe distances required by building regulations. See heat shielding section if reduced distances are required.

3.g Clearance to Non Combustible Walls

Diagram illustrating the minimum distances to combustible surfaces 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 stove installation 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 CO Alarms

Building regulations require that when ever a new or replacement fixed solid fuel or wood/ biomass appliance is installed in a dwelling a carbon monoxide alarm must be fitted in the same room as the appliance. Further guidance on the installation of the carbon monoxide alarm is available in BS EN 50292:2002 and from the alarm manufacturer's instructions.

Provision of an alarm must not be considered a substitute for either installing the appliance correctly or ensuring regular servicing and maintenance of the appliance and chimney system.

3.j Flue Dampers

We recommend that dampers are not used with our stoves.

3.k 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 maintains 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.

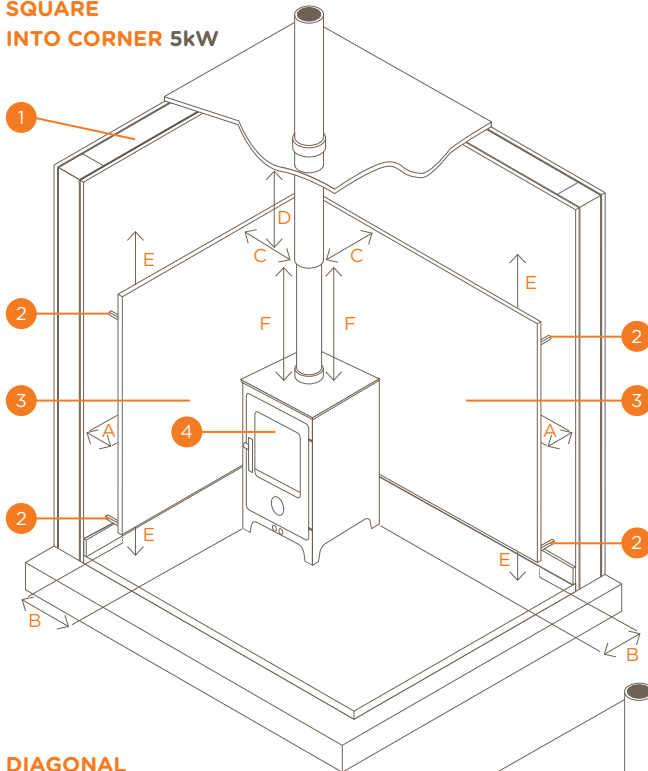
Distances to combustibles, square into corner & flat wall installation 5kW

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).

**SQUARE
INTO CORNER 5kW**



Number Key

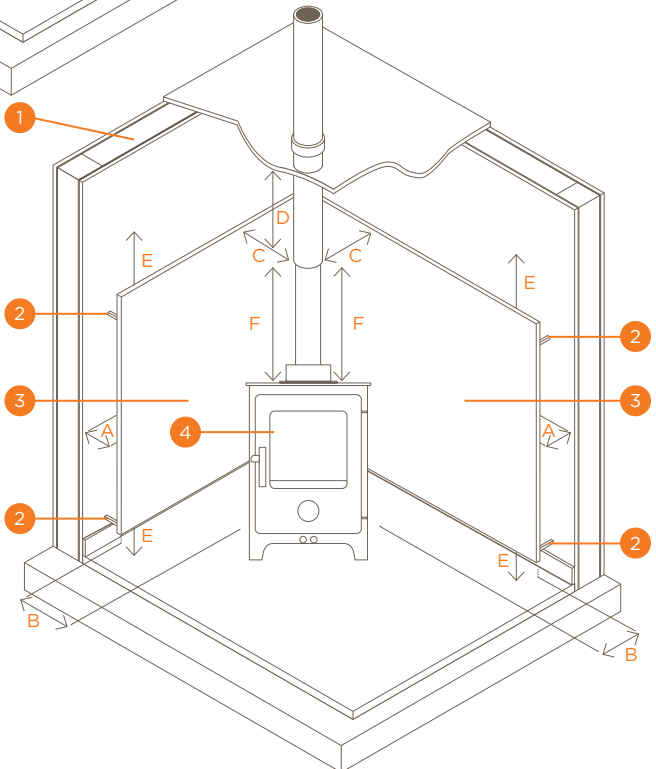
- 1 Combustible wooden stud wall
- 2 Fixing
- 3 Sheet metal shield
- 4 Stove

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)

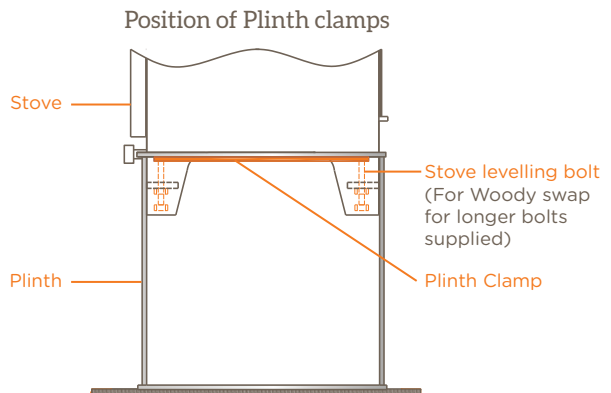
3.1 Ventilation

It is essential that the fire has adequate air supply for combustion and ventilation. Apertures provided for this purpose shall not be restricted. For stoves of 5kW and under like the Woody a permanently open air vent 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. Permanent ventilation must be fitted in accordance with the guidelines given in Approved Document J of The Building Regulations.

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.m Plinth Clamp

If you order a plinth it will come with a plinth clamp. This consists of two flat bars. In addition the Woody plinth clamp 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. Replace the levelling bolts with the longer ones, supplied.

3.n 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.

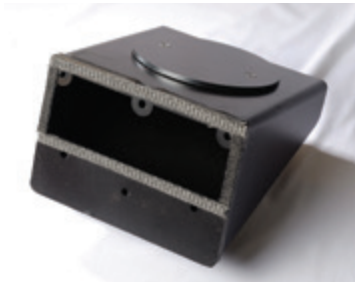
The Short, Chubby 5 and both the Woody models would need a rear adaptor, either vertical or horizontal.

The other models; the Hungry Penguin, Fat Penguin, High and Mighty do not need the chilli rear adaptors, they have a removable blanking plate suitable for a rear swept bend with soot trap or 90° “T” and cop.

3.o 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)

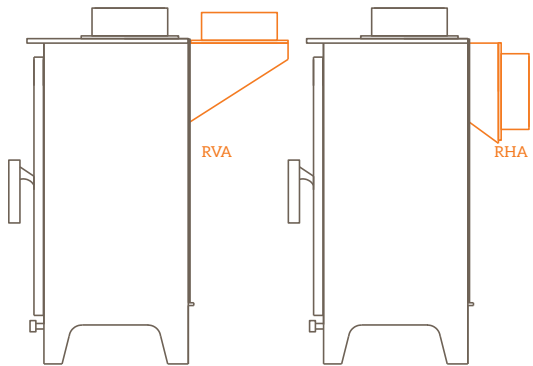


Diagram 1

Diagram 2

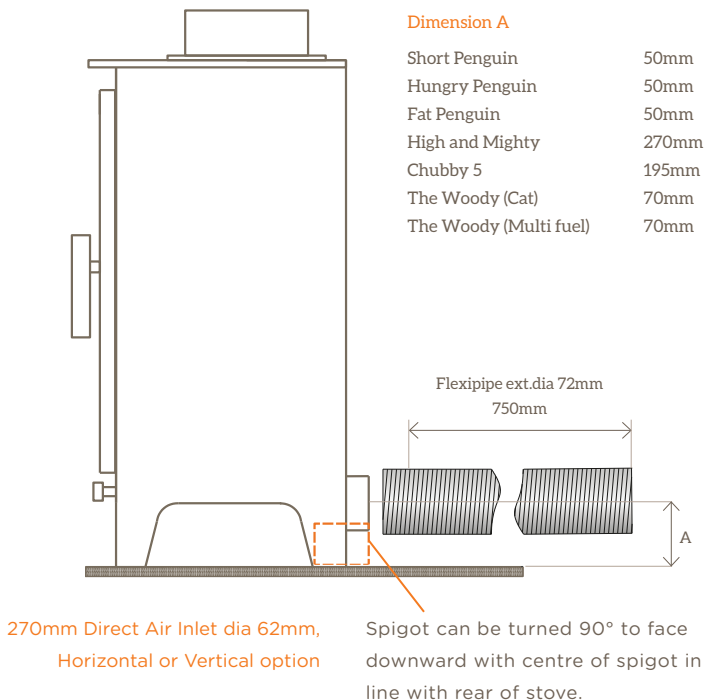


Rear Horizontal Adaptor (RHA)

To fit: Remove both rear heat shields 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.p 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).



HETAS product approval only covers this appliance when installed conventionally in accordance with the manufacturer's instructions and current relevant standards and guidance. When installed using ducted combustion air supply, (direct air kit) responsibility for the correct operation of the appliance and for appropriate manufacturer's instructions is carried by the appliance manufacturer, as allowed for under the Building Regulations.

3.q 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 Heat Shielding, section 3**). 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.r Chimney and Access for Sweeping

Chimney / Flueway	
Must comply with all current building regulations (British Standards BS EN 15287-1:2007 design, installation and commissioning of chimneys).	
We recommend that all masonry chimneys are lined.	
Minimum Flue Height	4.5 metres
Flue Diameter	Lined with 150mm diameter class 1 liner where possible, where not, 125mm flue is permitted, due to pre fitted smoke control adaptation
A flue way must not be shared with other appliances	
A flue way must be gas tight and free of tar deposits. The chimney must be swept and examined for soundness and suitability before the stove is installed. Remedial action should be taken if required, seeking expert advice if necessary.*	
Where the chimney is believed to have previously served an open fire installation it is possible that the higher flue gas temperature from a closed appliance may loosen deposits that were previously firmly adhered, with the consequent risk of flue blockage. It is therefore recommended that the chimney be swept a second time within a month of regular use after installation.	
New chimney: 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
The chimney must be swept and examined for soundness and suitability before the stove is installed (see note above*)
Provision must be made for sweeping access and for the removal of soot and debris.
Sweeping access Woody Eco (Cat) Remove throat plate brick and sweep through stove.
Sweeping access SP/HP/FP/H&M/Chubby 5/The Woody (Multi fuel) Remove throat plate and sweep through stove.
Lined chimney All stoves, including the cooker models can be swept through if the correct super flexible rods are used with the correct size brush head. However there is one exception; when a rear <i>horizontal</i> adaptor is used (in this case additional sweeping provision will be needed).
Unlined chimney If the chimney is unlined an access panel is required in the register plate.

CHIM CHIMINEY, CHIM CHIMINEY, CHIM CHIM CHER-EE

A SWEEP IS AS LUCKY AS LUCKY CAN BE



Section 4

INSTRUCTIONS FOR USE

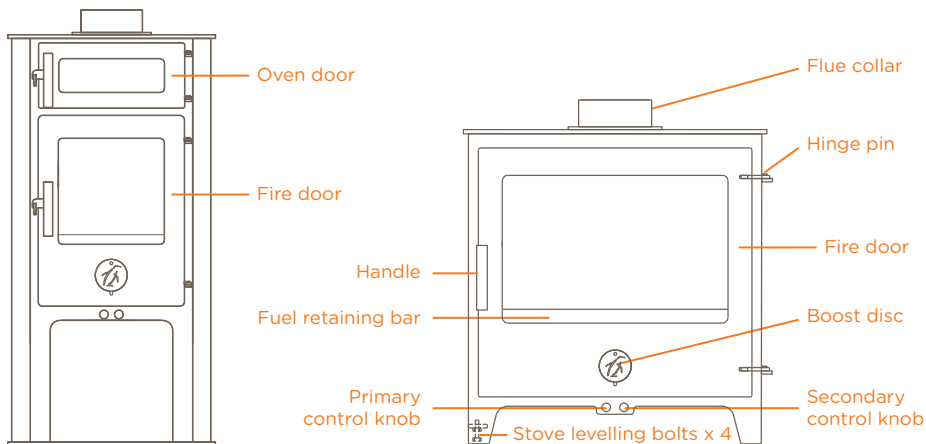
Page 33-45

www.chillipenguin.co.uk

4. Instructions for use

4.a Diagram of the Outside of the Stove (with and without oven)

Stove Components



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.

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"/127mm collar on the top of the stove. The stove is designed to burn on a 6" flue. The minimum size flue diameter that can be used is 5"/125mm, this is because there is a smoke control adaptation fitted.

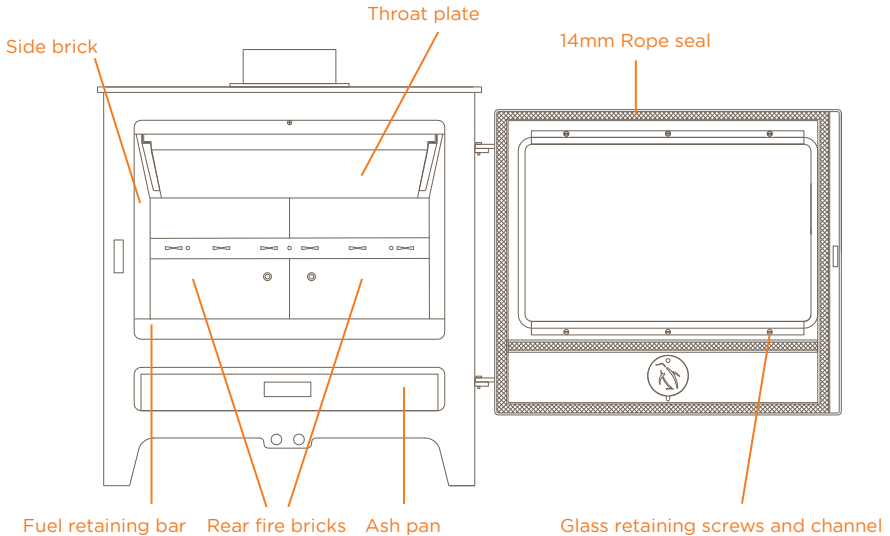
Fire door: The main glass door in front of the fire.

Oven door: The smaller glass door in front of the oven (cooker models).

4.b Diagram of the Inside of the Stove - Multi Fuel Version

Short Penguin Eco / Hungry Penguin Eco / Fat Penguin Eco
High and Mighty Eco / Chubby 5 Eco / Woody Eco (Multi fuel)

Internal Stove Components



Throat plate and brick: This forms the “roof” of the fire box.

Tertiary air jets: additional pre-heated combustion air is introduced into the fire box.

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

Rear fire bricks (4): vermiculite bricks at the rear.

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

Glass retaining screws and channel: screw and channels to hold the door glass in situ.

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

Oven: not shown.

WARNING

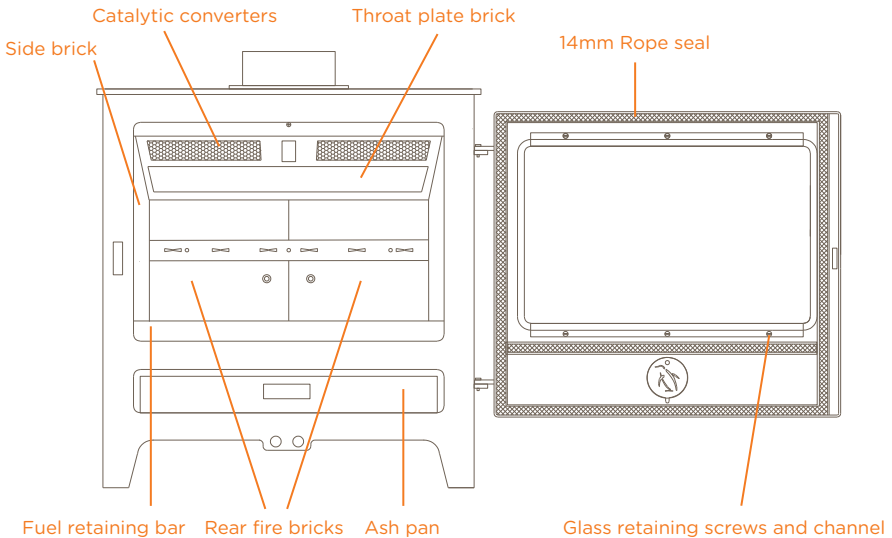
IN THE PRESENCE OF CHILDREN, AND OLD AND/OR INFIRM PEOPLE.

THE FIREGUARD SHOULD BE MANUFACTURED IN ACCORDANCE WITH BS 8423:2002,
FIREGUARDS FOR USE WITH SOLID FUEL APPLIANCES.

4.c Diagram of the Inside of the Stove - Cat. Version

Woody Eco (Cat)

Internal Stove Components



Catalytic converter cassette: This forms the “roof” of the fire box. The throat plate brick and catalytic converters are assembled in a steel “cassette”. The throat plate brick can be removed without disturbing the cassette.

Tertiary air jets: additional pre-heated combustion air is introduced into the fire box.

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

Rear fire bricks (4): vermiculite bricks at the rear.

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

Glass retaining screws and channels: screws and channels to hold the door glass in situ.

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

Oven: not shown.

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

4.d 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.

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 polar colour, 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.

AIR SUPPLY FOR COMBUSTION AND VENTILATION

It is important that apertures provided for ventilation and combustion air are not covered.

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. In addition we strongly advise fitting a smoke alarm when you install a solid fuel appliance such as a stove. Take advise for position of both. (see CO Alarm, section 3)

WRONG FUEL

Only burn dry, seasoned wood in the Woody Cat. In the Multi Fuel stoves, dry, seasoned wood or smokeless fuel can be used. DO NOT 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 brick is positioned 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.e 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.f 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 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. Wood requires combustion air to be directed down onto it to burn most efficiently. The secondary combustion air supply on your stove provides the air necessary for burning off the volatile gases

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.

If you are looking for a local wood supplier www.woodsurre.co.uk has a list of certified fuel suppliers.

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.

We do not advise you 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.

If you have the multi fuel version it is advised not to burn wood and solid fuels simultaneously, it can effect both your glass and flue.

SOLID FUELS (Cannot be used in The Woody (Cat))

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, 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. If in any doubt contact your Chilli Penguin stockist.

These fuels burn most effectively when air is introduced beneath the fuel bed. 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.



Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

4.g 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. Only burn seasoned wood.

Damp, impregnated or painted wood will damage the catalytic converter and tar up your flue. Damp wood will also give reduced heat to room and cause more emissions.

THE AIR CONTROLS

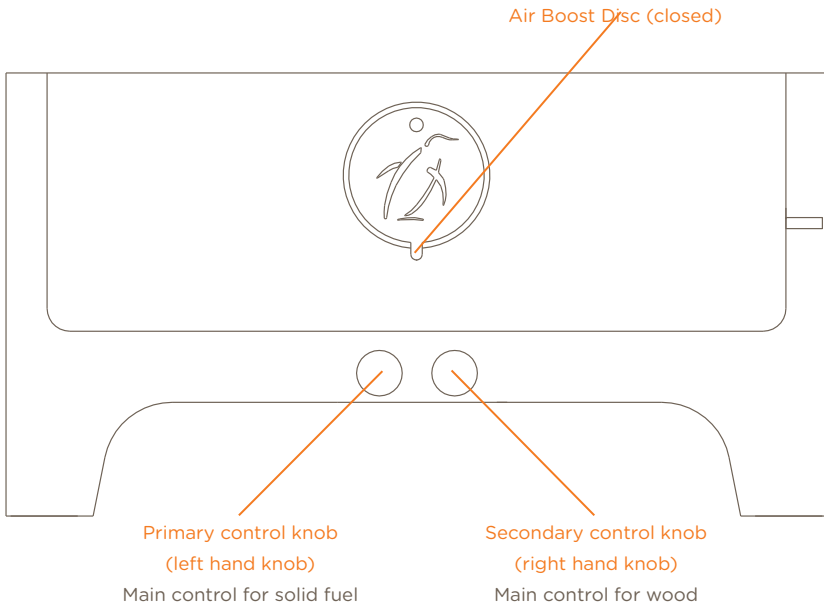
To start 

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.

You can now close the LH (primary) knob fully. The rate of burn is now controlled using only the RH (secondary) knob. Your stove is smoke control compliant, meaning the RH (secondary) knob is pre set to prevent it being completely shut down. This prevents excessive smoke emissions. If you have the Woody Eco (Cat) you will observe the catalytic converter glowing (see picture overleaf).



REFUELLING

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.

WARNINGS

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 so that the new fuel load will ignite in a reasonable period. If there are too few embers in the fire bed, add 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.

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

Catalytic converters



4.h Instructions for use with Authorised smokeless fuels

MAKING A FIRE

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



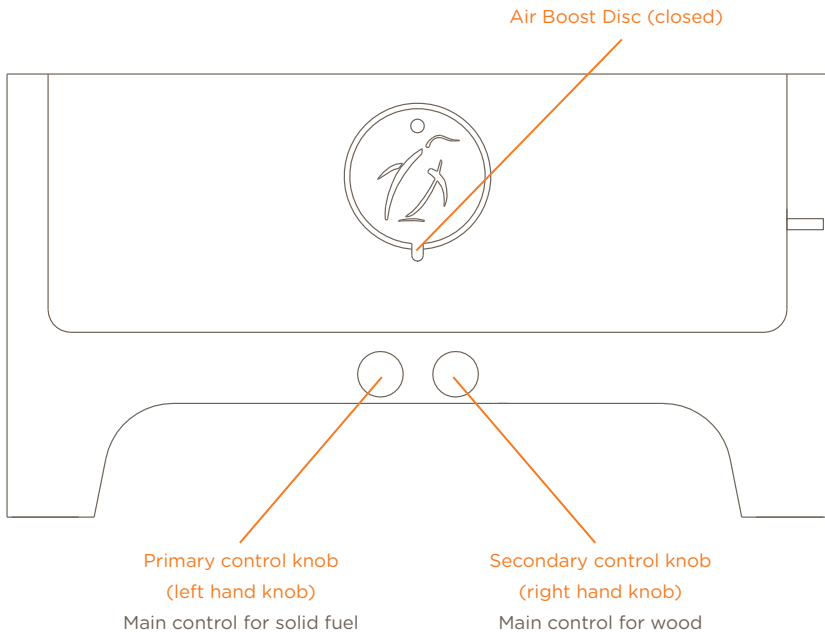
When you first light the fire, close the glass door and pull both controls out fully. Also open the air boost disc (the RH knob will always protrude approx 10mm more than the LH knob in the fully open position).

ONCE ESTABLISHED



Close the boost disc.

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



REFUELLING

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.

WARNINGS

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 air from underneath.

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.

YOU LIGHT MY FIRE

4.i 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 a flat bottomed kettle or pans. If you plan to use it regularly you will want items with a heavy bottom.

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.

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 when 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.

COOKWARE: We have some cookware available designed for our oven dimensions. Ask your local stockist or see our online shop www.chillipenguin.co.uk/spares-shop. Alternatively any cookware designed for a normal domestic oven is usually suitable for our ovens if you can source a suitable size.



Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin



Section 5

MAINTENANCE

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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.

MONTHLY

Throat plate brick (Cat. version) - must be removed monthly for cleaning, ensure it is refitted correctly – failure to do this could result in a partial blockage of the flue.

Throat plate (multi fuel version) - must be removed monthly for cleaning, ensure it is refitted correctly – failure to do this could result in a partial blockage of the flue.

Catalytic converters - remove throat plate brick, brush soot off the top of the converters and Hoover from the underside. Catalytic converters have a lifespan, once they have stopped glowing on a high flame they will need replacing.

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 doors and 10mm for oven doors.

ANNUALLY

With a lined chimney all our stoves can be swept through the fire box (unless a rear horizontal adaptor is used) but the correct flue brushes and rods must be used (**see Chimney and Access for Sweeping, section 3**). 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, 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 (do not use an aerosol spray when the stove is lit).

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 between 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
- 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. There will be a very slight colour change as the paint cures, the hottest areas will cure the soonest. This is completely normal. (It can be more obvious in the lighter colours)

5.c Keeping your Stove Glass Clear

To maintain clear glass there are 2 factors.

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

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. 14mm diameter rope is required for fire doors, 10mm for 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



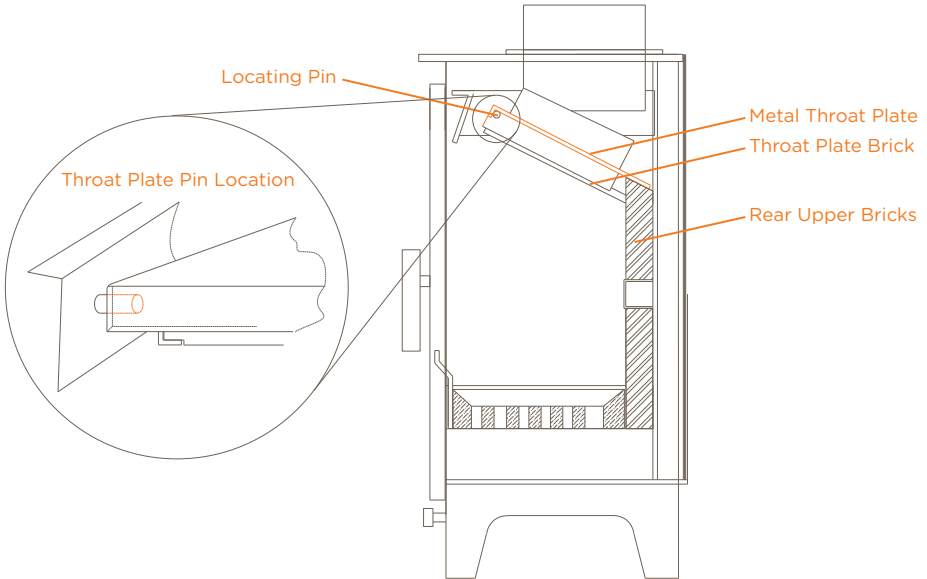
FIRE DOOR: Remove the 4 or 6 stainless steel screws retaining the double glazed glass panel. This panel is two pieces of glass with a 2mm x 10mm seal between them. Replace the 2mm x 10mm seal if necessary. Position replacement glass and fit retaining channels, tighten screws just enough to pinch the glass. Overtightening can result in the glass cracking.

OVEN DOOR: The oven door is single glazed and held in place with tabs. 2mm x 10mm seal is used between the door and the glass.

5.f To Remove the Throat Plate - Multi Fuel Version

Short Penguin Eco / Hungry Penguin Eco / Fat Penguin Eco
High and Mighty Eco / Chubby 5 Eco / Woody Eco (Multi fuel)

Diagram illustrating the location of the throat plate.



LOCATING THE THROAT PLATE

STEP 1

Take note of the position of the throat plate and bricks. Remove top rear brick by pushing the rear of the plate upwards.

STEP 2

Push up front of throat plate to 'unhook' from side pins. Drop the rear of the plate down.

STEP 3

Manoeuvre plate diagonally out of stove.

STEP 4

Brick can now be slid out of throat plate and replaced.

STEP 5

For cleaning brush soot off brick.

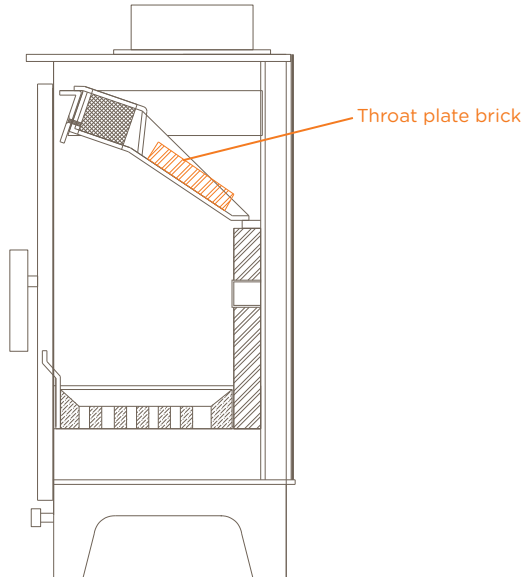
STEP 6

Refitting of plate is the reversal of removal.

5.g To Remove the Throat Plate Brick - Cat. Version

Woody Eco (Cat)

Diagram illustrating the location of the throat plate.



LOCATING THE THROAT PLATE

STEP 1

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

STEP 2

Push brick up from inside the stove and withdraw it through the cut outs in the middle of the aperture.

STEP 3

For cleaning, brush soot off the top of the Cat and Hoover it from the underside. Then brush off the brick and replace.

STEP 4

To fit new bricks it is the reversal of step 2. Make sure the brick is sitting flat and central.

5.h 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. 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.



Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit:
www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

5.i To Remove the Catalytic Converters

Diagram illustrating the location of the catalytic converters.



STEP 1

Take out top rear fire bricks.

STEP 2

Lower Cat. cassette, remove catalytic converters.

STEP 3

Pull out the catalytic converters from the cassette.

STEP 4

Carefully drop in the new converters. Refit cassette and rear fire brick.

5.j 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/



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.



Spares are available through your local Chilli stockist or our online shop. There are diagrams online to help you identify the correct parts and advice about how to fit: www.chillipenguin.co.uk/FAQ/looking-after-your-penguin

5.k Trouble Shooting

PROBLEM

POSSIBLE CAUSE

REMEDIAL ACTION

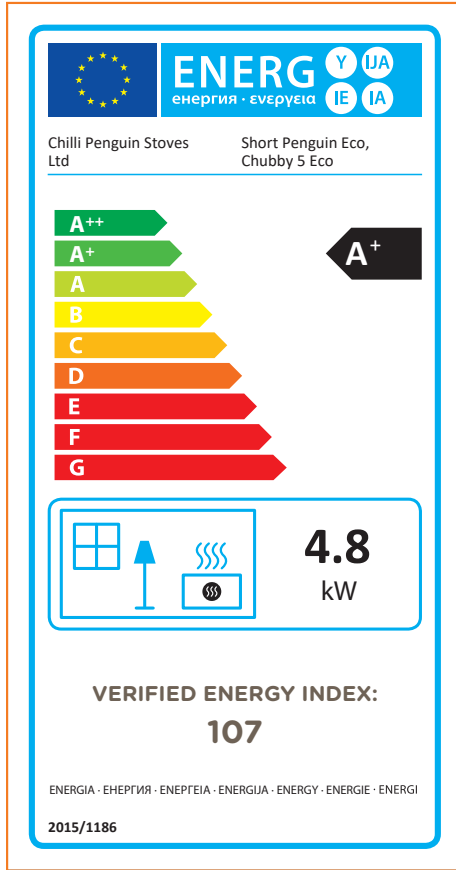
CANNOT GET FUEL TO STAY ALIGHT	
<ul style="list-style-type: none">1. Fuel is damp2. Fire has been smothered3. Insufficient air	<ul style="list-style-type: none">1. Ensure fuel is dry2. Load smaller amounts of fuel at a time – be patient!3. Air boost disc has been closed before the fire has been established (see Making a Fire, section 4)
SMOKE ENTERS ROOM	
<ul style="list-style-type: none">1. Blocked flue way2. Damaged chimney3. Site and location of chimney	<ul style="list-style-type: none">1. Let the fire go out then drop the throat plate or throat plate brick down and check for blockages. Sweep chimney2. Get chimney inspected3. If flue is clear and stove installed correctly and problem persists – seek professional advice
GLASS BLACKENS	
(SMALL LOCALISED AREAS WHERE WOOD HAD FALLEN AGAINST THE GLASS IS NORMAL, THIS WILL BURN OFF AS THE FIRE GETS HOTTER)	
Air controls closed down too soon before fire established	<p>Leave air controls open longer</p> <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 (see Keeping Stove Glass Clear, section 5)</p>
CATALYTIC CONVERTER HAS STOPPED GLOWING	
Cat. is contaminated	Could be contaminated with fly ash or deposits from incorrect fuel - Hoover catalytic converters (see Maintenance, section 5).
Cat. is exhausted	If they do not glow orange on a high flame they will need to be replaced (see Maintenance, section 5).

CHIMNEY FIRE

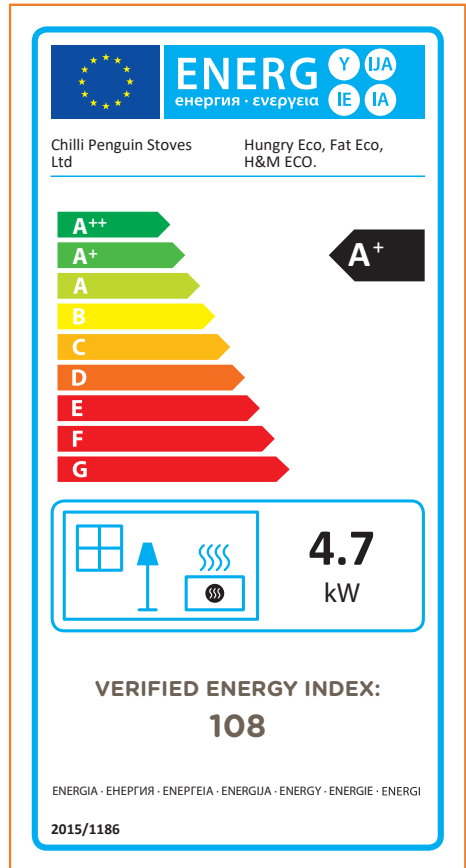
By following the instructions in this manual, including regular cleaning of the stove and flue system you should avoid the possibility of a chimney fire. In the unlikely event that one occurs, raise the alarm to let others in the house know, call the Fire Service, if time and safety allows close the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

6. Energy Efficiency & Guarantee

6.a Energy Efficiency Labels



Short Penguin Eco
Chubby 5 Eco

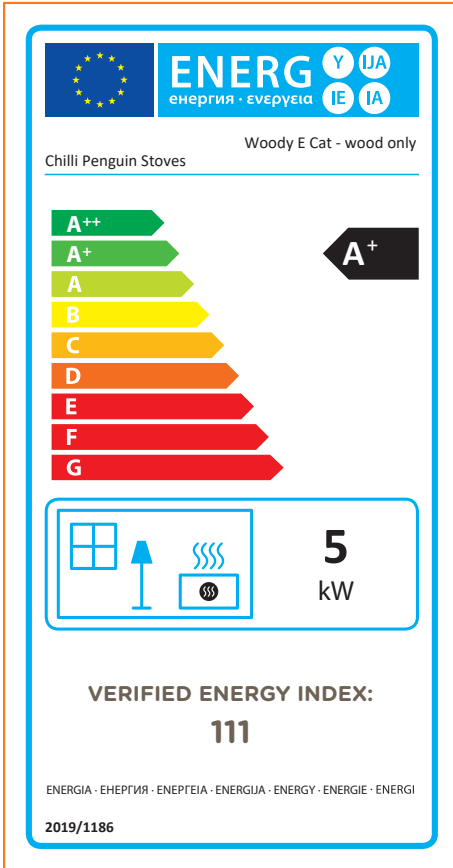


Fat Penguin Eco
Hungry Penguin Eco
High & Mighty Eco

6. Energy Efficiency & Guarantee

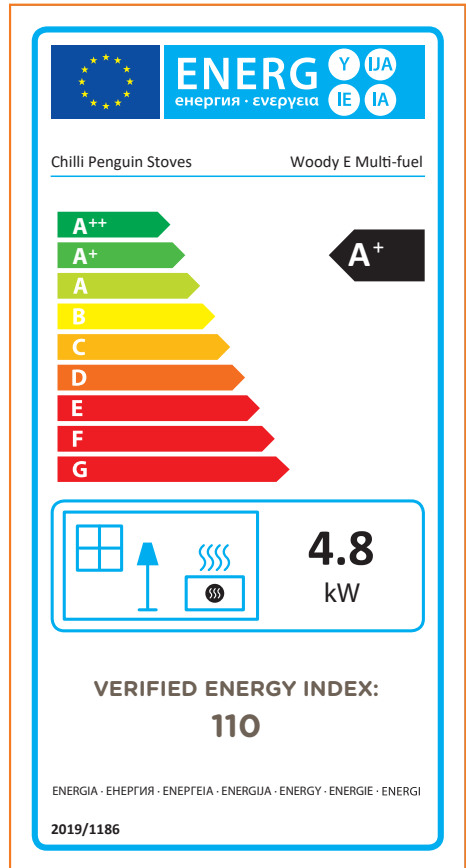
6.a Energy Efficiency Labels

Woody Eco (Cat)



Woody Eco (Multi Fuel)

Energy rating shown for wood as primary fuel



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 Stove 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. The painted surface of the stove does not come under the guarantee.

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. Catalytic converters carry a 3 year guarantee.

Items NOT covered
Those items that are considered service items, these include; vermiculite bricks, door seals, door glass, ash pan, operating tool, gloves and painted surface.
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 Disposal / Recycling

To dispose of the stove after the product life has expired, please observe the following information:

- Dispose of the items correctly, i.e. separate the parts to be disposed of in material groups
- Always dispose of items in a way that is as sustainable as possible and that is in line with the current environmental protection, reprocessing/ recycling and disposal technology

6.d Commissioning, Stove and Installation Details

Commissioning checklist		(Initials)
01	Have all parts been fitted in accordance with the instructions?	
02	Has fire cement and mortar dried out before lighting the stove?	
03	Once under fire have all seals been checked for soundness?	
04	Is the flue functioning correctly so that all combustion products are vented safely to the atmosphere via the chimney terminal?	
05	Have operating instructions, tool and gloves been left with the customer?	
06	Has the customer been advised about the correct use of the stove ?	
07	Has the customer been warned to only used the correct fuel for this stove?	

Stove and installation details			
Shop Name			Purchase Date
Installers Name			Installation Date
Installers HETAS No.			Or Building Control Ref.
Direct Air Kit Fitted	Yes	No	Is Direct Air Commissioning Test Completed
Base Heat Shield	Yes	No	Sign
SERIAL NO. (Your local stockist will need this to register your stove)			

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VEGETABLE BASED
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