

# Dean Stoves

Dean Forge Fabrication Ltd. Dean Prior, Buckfastleigh, Devon TQ11 0LS

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## **Operating Instructions for The Dean Forge Dartmoor 5 and Dartmoor 5 SE Stoves**

DM5 issue 1. March 2012

### **All stoves meet the essential type test requirement BS EN13240:2001 + A 2:2004**

#### **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.

The Dean Stoves, Dartmoor 5 SE has been recommended as suitable for use in smoke control areas when burning wood logs.

When using the Dartmoor 5 SE in smoke control areas the smoke control kit must be fitted.

Further information on the requirements of the Clean Air Act can be found here:

<http://smokecontrol.defra.gov.uk/>

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

#### **Safety Note**

Warning- The external parts of the appliance will get very hot to the touch and due care will be needed when operating.

All stoves before being operated must be checked that the installation complies with all local, national and European standards.

Before the stove is first used or when fitting other appliances into the room, please check that adequate air vents are in place to cover the requirements of such appliances.

**Extractor fans.** When operating an extractor fan in the same room or space as the appliance the extractor fan could cause the stove not to function properly and pull dangerous fume into the room. This must be checked by a trained qualified engineer before using the stove.

### Wood & Suitable fuels

**Dry wood, 18% moisture content or below must be used or the stove and flue will tar up and the door won't stay clean.**

Wood is best seasoned by splitting it into a log and drying it out for 2 years in a covered area so the air can pass through to dry it out. Peat can also be used but must be dry.

Maximum Log Length	Maximum Log Diameter
330mm	100mm

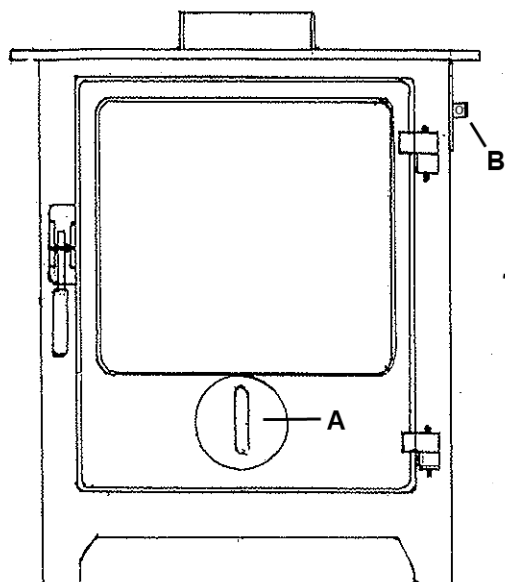
**When used as a Multi Fuel use only smokeless fuels recommended for enclosed appliances.**

**Please Note:** Appliances should not be used as general incinerators or with non-recommended fuels. **At no time** should liquid accelerants I.e.: Paraffin, Petrol, BBQ lighting liquid Etc be used.

### **Door Operation & controls**

The door handle can become very hot so use the glove provided. A tool is provided to control the spin wheel and air wash lever.

#### **Controlling the stove**



#### **Primary air controls –A spin wheel on the door**

The primary air control is a spin wheel on the door. This control is used for lighting the fire or boosting the fire. This is the main control when burning Solid Fuel.

#### **Secondary air- B control lever is situated on the right hand side near the top of the stove.**

This lever controls the air wash and is used as the main air control, when burning wood, once the fire is established.

#### **Control lever B works as follows:-**

For maximum air flow into the stove push the lever down to open and up to close.

The stove is at its maximum efficiency when the lever is approximately two thirds the way down.

## **Dampers Left Open**

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

## **Lighting the Stove with Wood**

Lay a fire of sticks and paper. Firelighters can be used if necessary. Check the secondary air lever is fully open and the primary air spin wheel is partially open. Light the fire and as the fire catches the paper you may then fully open the primary air.

When the fire has fully established and the logs are burning well shut the primary air spin wheel in the door and control the fire with the secondary air wash lever (if you are unable to sustain the fire with secondary control it is very likely that your logs have a high moisture content).

When refuelling the fire, to ensure clean burning, the primary air control should be opened for a couple of minutes so that flames are established on the newly fuelled logs. The primary air should be closed once these flames are fully established and the logs have become blackened.

After refuelling, it is recommended that you do not leave the appliance unattended until it is certain that the logs are burning well with a sustained flame.

The appliance works best by refuelling with two medium sized logs. Typically, the logs should burn well for about 1 hour.

Please Note: For long periods of burning you will need to use seasoned hard wood. Longer periods of burning may cause the door glass to blacken, but this can be cleared when you get the fire back up to temperature and providing the secondary air control is kept slightly open the glass will then stay clear.

When loading the fire be careful not to leave logs projecting over the log retainer as you may crack the glass when closing the door.

When the stove is use in the winter season we suggest 25mm (1”) of ash is left in the bottom when cleaning, as a wood fire burns more efficiently on a bed of ash.

De-ashing the stove is achieved by removing the log retainer and shovelling the ash out into a non-flammable container, or we suggest using an ash clean attachment which can be plugged into your vacuum cleaner.

### **Please note:**

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

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

## **Lighting the stove with Solid Fuel and Multi-fuel kit fitted**

Lay a fire of sticks and paper, establish fire and then add the appropriate smokeless fuel, use the primary air control as the main control. When using a mixture of wood and coal balance the primary and secondary control to achieve the desired flame picture.

When using solid fuel in this stove you must only use fuels recommended for enclosed appliances, Oil derivative fuels must not be used as this will shorten the life of the grate.

The Ash pan will need emptying once a day.

When burning solid fuel the stove will work at its best using the primary air control only (door Spin wheel), it is unlikely you will need to use the secondary air control which will only need to be opened slightly to keep the glass clear.

In the summer or when the stove is not being used for a long period of time, clear all the ash out and leave primary and secondary air vents open to prevent condensation.

**Please Note:**

On lighting the stove for the first time from new the paint on the stove will cure and give off a metallic smell. It is advisable to ventilate the room i.e. open the windows. This will subside fairly quickly after the stove has been burning hot for at least 2 hours.

The appliances have been assessed and are suitable for intermittent burning.

Operation with the door open can cause excess smoke. The appliance must not be operated with the appliance door left open except as directed in the instructions.

**Pre-Season Check:**

The chimney needs to be swept at least once a year.

The chimney must be checked at this stage for blockages before lighting i.e.: bird's nests

This is probably the time to have the chimney swept before the beginning of the seasons.

Before lighting at the beginning of the season or after prolonged shutdown periods, check the door seals are in good condition; the steel insulating plates are in good condition and baffle plate is in position.

If the stove has been used for a long period of time we suggest the chimney be swept twice a year.

Air vents

Check periodically that the exterior ventilation grill is clear.

Servicing

All servicing must to be carried out by a qualified competent engineer on a regular basis.

No unauthorised modifications of the appliance should be carried out.

Use only replacement parts recommended by the manufacturer.

Notes

Down draughts

In adverse weather conditions a down draught may occur and will make the stove smoke, if this should happen shut all the stove air controls.

If this occurs on a regular basis call in your engineer.

It is possible a chimney cowl could cure this problem.

## **Refuelling**

When refuelling, the primary air control should be opened for a couple of minutes so that flames are established on the newly fuelled logs. The primary air should be closed once these flames are fully established and the logs have become blackened.

After refuelling, do not leave the appliance unattended until it is certain that the logs are burning well with a sustained flame.

**Do not load the fuel above the log retainer.**

## **Faultfinding**

If the stove starts emitting fumes into the room:-

- (1) Check there is no blockage or restriction in the flue.
- (2) Check the external air vent is not blocked.
- (3) Check the baffle plate has not dislodged itself from the stove.
- (4) Call an engineer.

If the stove does not perform properly this could be due to unseasoned wood or too much ash in the firebox.

In the case of the stove malfunctioning shut all vents, open the windows and let the residual fuel in stove burn out.

## **In the event of a chimney fire**

- Call the fire brigade
- Raise the alarm to let others in the house know
- Close down all the air controls of the stove, but be careful they could be very hot
- Move furniture, rugs and other objects away from the stove
- Check the chimney breast in other rooms for signs of excessive heat and move objects away if necessary
- At all times consider the safety of yourself and others in taking the above action

# **Fitting Instructions for The Dean Forge Dartmoor 5 Stove**

These fitting and operating instructions cover the Dartmoor 5 Stove.

## **Introduction**

The Dean Forge range of stoves has been continuously updated for the last 37 years. These stoves have a robust fully welded carcass with a cast iron door. This stove has sacrificial insulated steel plates, incorporating an air wash system with 3 outlet options- Top, Rear or Vertical Back box outlets of 125mm (5").

## **Unpacking Stove**

The baffle plate will be found on the base of the stove and will need to be positioned. The stove comes with a gauntlet and a universal air vent- ash pan tool.

Before lighting the stove you must check that the installation has been carried out as per instructions and complies with current building regulations.

## **Health and Safety Precautions**

All work must be carried out to the required Health and Safety at Work Act 1974.

There must not be an extractor fan fitted in the room.

There must be an air vent for all stoves of 5 kilowatt and over or meet current building regulations.

Stoves must be fitted to BS8303, BS6461 PT1-2 1984 building regulations.

All local regulations, including those referring to national and European standards need to be complied with when installing the appliance.

## **Flue Connections and Outlets**

Dartmoor 5 stoves can be flued from the top and the back, or with a vertical back box. Horizontal flue from back of stove should not exceed 150mm.

All flue connections must be sealed with fire cement. Doors in the register plate must be present or a soot box fitted in the back or side of the fireplace to enable access to clean the chimney when the stove is installed without a liner.

If the chimney has been lined and cannot be swept through the stove an access door on the first length of flue must be installed for cleaning access.

The Dartmoor 5 model requires a 125mm (5") first length of flue then stepping up into a minimum of 150mm (6") liner. When using this stove with the smoke exempt air stop fitted the flue liner can be reduced to 125mm (5"). We strongly advise a 150mm (6") flue liner be fitted when possible. The installation of a flue liner is recommended.

N.B

All stoves must but installed by a suitably qualified person, such as a HETAS engineer or with the supervision of building control.

As with all stoves fireguards must be installed when young children are present.

## **Stove Performance**

Dean Forge Dartmoor 5 Wood Burning	5kW nominal	81.9% Net Efficiency
Dean Forge Dartmoor 5 Solid Fuel (Ancit)	5.0kW nominal	70.7% Net Efficiency
Dean Forge Dartmoor 5 SE Wood Burning	5kW nominal	81.9% Net Efficiency
Dean Forge Dartmoor 5 SE Solid Fuel (Ancit)	4.9kW nominal	70.5% Net Efficiency

All stoves are tested to nominal outputs and will often well exceed these kilowatt ratings.

## **Chimney**

The Dartmoor stoves must have a minimum chimney height of 4m measuring from the stove outlet, the chimney must not be less than 150mm (6") internal diameter.

These stoves are not suitable to be used in a flue-shared situation.

If the chimney draw is too high a flue stabilizer will have to be installed. When the chimney is warm the draw should not be lower than 0.10 water gauge.

All appliances have been tested at 12 PA with the doors closed.

It is recommended that this stove is fitted with a liner; the baffle plate can be removed to facilitate cleaning through the stove.

### Hearth, Surround and Register Plate

#### If the stove is fitted with an optional under firebox heat shield

The stove must stand on non-flammable material at least 12mm thick (1/2"). The hearth must extend at least 225mm in front of the firebox and 150mm to the sides.

#### If fitted without an under firebox heat shield

It will need to sit on a constructional hearth and must extend at least 300mm in front of the firebox and 150mm to the sides.

The appliance must be installed on a floor with an adequate low bearing capacity.

If the construction doesn't meet the existing prerequisite the floor must be reinforced and a load distributing plate could be fitted.

### Optional Rear Heat Shield

When the stove is fitted with a rear heat shield the distance from combustibles to the rear of the stove can be reduced to 500mm.

If fitted without a rear heat shield the distance to combustibles from the rear of the stove must be a minimum of 950mm.

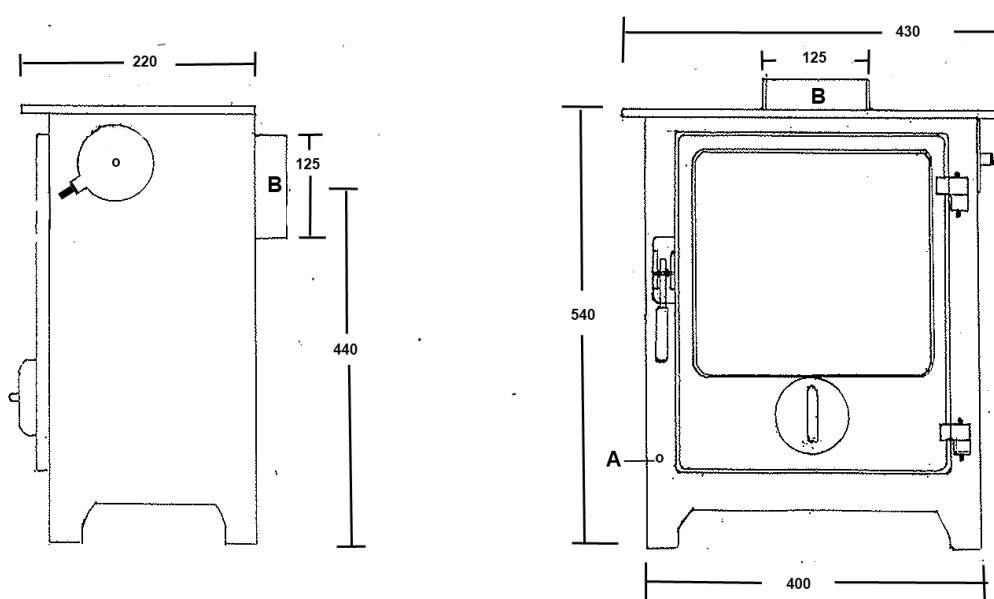
Distances from the sides of the stove to combustibles must be a minimum of 750mm.

### Flue Connections and Outlets

**Please Note:** All profile top stoves use the 6mm black rope seal supplied under the flue spigot to bring the flue spigot flush with the top of the stove

### Diagram of flue outlet

(A) = Hole for Multi Fuel riddling arm      (B) = Flue outlet 125mm (5")



## **Table of mean flue temperatures with closed doors**

Stove Type	Flue gas temp down stream of spigot, closed doors.
Dean Forge Dartmoor 5 (Wood)	236C
Dean Forge Dartmoor 5 Solid Fuel (Ancit)	308C

## **Flue Gas Mass Flow**

Stove Types	Flue gas mass flow (gs)
Dean Forge Dartmoor 5 Wood Burning	3.9
Dean Forge Dartmoor 5 Solid Fuel (Ancit)	4.7

### **Pre – Lighting Check and Commissioning**

Check all Building Regulations have been adhered to.

The baffle plate is in the right position.

A smoke test has been done to check the chimney is clear.

### **Data Plate**

All stoves are numbered and performance marked on a data plate which is found on a swinging arm located at the base of the stove.

### **Air Vent**

Under part J of building regulations an air vent of the appropriate size must be fitted for all stoves with a kw rating of over 5kw.

In very air tight properties designed with air permeability less than or equal to 5.0 m<sup>3</sup>/ (h.m<sup>2</sup>) per hour, an air vent will need to be fitted for all kilowatts.

When fitting air vents any other appliance fitted within the room must be taken into account.

**Please Note:** Extractor fans when operating in the same room or space as the appliance may cause problems.

Air vent inlet grills must not be inadvertently blocked.

Air vents must not be fitted in positions where they can be inadvertently covered up.

As from the 1<sup>st</sup> October 2010 a compliant Carbon Monoxide Alarm must be fitted

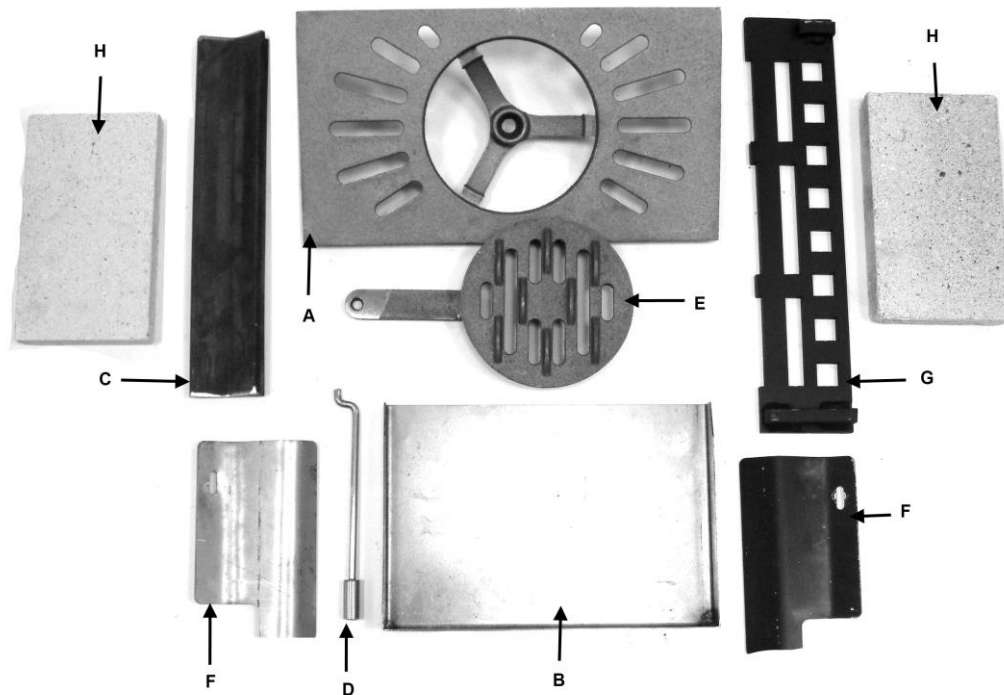
Operation with the door open can cause excess smoke. The appliance must not be operated with the appliance door left open except as directed in the instructions.



## Multi fuel kit fitting instructions

Fitting of M/F kit for Dean Forge Dartmoor 5

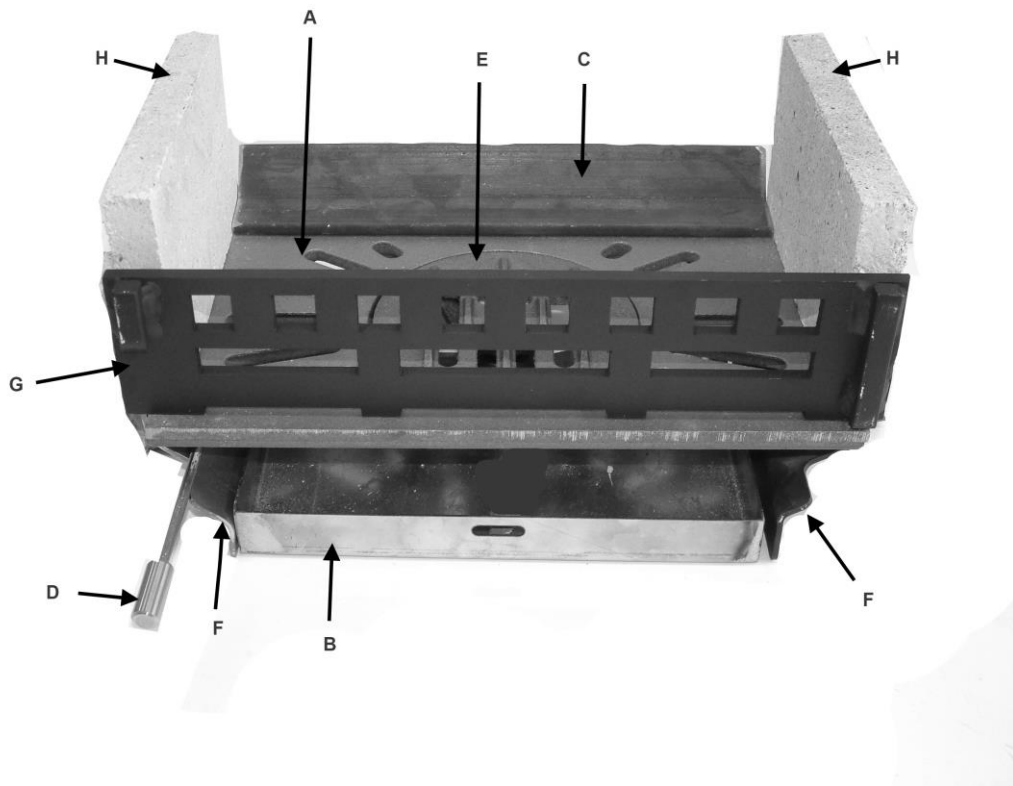
Dean Forge Dartmoor 5 Multi Fuel Parts



**This M/F kit consists of eight parts plus two firebricks**

- A. Main Grate
- B. Ash pan
- C. Back fuel guide
- D. Riddling rod & knob
- E. Riddling Grate
- F. Side Ash Guides (2)
- G. Stove Log Retainer
- H. Side Firebricks (2)

## Dean Forge Dartmoor 5 Multi Fuel kit Assembled



### To fit:

Open the door and remove the ash retainer and the bolt on the left hand side on the front of the stove near the bottom.

Using the side plate retaining bolts fit the side ash guides (F), slide the guides forward to touch the inside front of the stove checking the log retainer (G) will still fit between the front of the stove and the side plates before retightening the bolts.

Place the main grate (A) into the stove with the leg to the rear of the stove and the front resting in the slots in the side plates at the front of the stove. Fit the two side bricks (H) to each side of the main grate (A) then fit the back fuel guide (C), this fills the gap between the back of the stove and the main grate (A) make sure the bracket on the under side sits against the very back edge of the main grate.

Insert the riddling rod (D) from the inside and screw the knob back on.

Fit riddling grate (E) by first fitting over the riddling rod as you place the riddling grate in the centre of the main grate.

Fit the log retainer (G) remembering the lugs face towards the front of the stove. Leave out the ash retainer that was supplied with the stove.

Slide the ash pan (B) under the main grate (A)

Note: The Multi tool supplied with the stove is also used to remove the ash pan.

## EC Declaration Of Conformity

The Undersigned, representing the following:

<b>Manufacturer</b>
<b>Dean Forge Ltd</b> Dean Prior, Buckfastleigh, Devon, TQ11 0LS

Herewith declare that the products:

<b>Description</b>	<b>Product Code</b>
Dartmoor 5	STDFDA5, STDFFOH STDFFOL
Dartmoor W5	STDFDAW5, STDFHU
Dartmoor 6	STDFDA6
Dartmoor 8	STDFDA8
Dartmoor 5 Inset	STDFDA5I

### **Description of product:**

Dartmoor wood and multifuel heating stove product range.

Steel bodied stove fitted with cast iron doors. Supplied in various sizes to give a range of heat output options.

Are in conformity with the provisions of the following EC Directive (S) when installed in accordance with the installation instructions in the product documentation:

98/106/EEC- 305/2011 Construction Products Directive

And the standards referenced below have been applied:

EN 13240: 2001 + Amendment A2: 2004 & inset BS EN13229:2001 + A1: 2003 + A2: 2004

Provisions to which the product conforms:

Product: Roomheater fired by solid fuel as covered under the scope of the standards listed. Intended use: Space heating in residential building.		
Characteristic	Performance	Report
Fire Safety	Satisfies	
Emission of combustible products and Thermal output/Efficiency	Dartmoor 5 Inset- STDFDA5I Co @ 13% O <sup>2</sup> Wood 0.35% Ancit 0.40% 5Kw @ 83.3% Wood – 4.7Kw @ 73.2% Ancit	6700/1
	Dartmoor 5- STDFDA5/ STDFFOH/ STDFFOL Co @ 13% O <sup>2</sup> Wood 0.38% Ancit 0.40% 5Kw @ 81.9% Wood -5Kw @ 70.7% Ancit	6931-1
	Dartmoor W5- STDFDAW/ STDFHU co@ 13% O <sup>2</sup> Wood 0.38% Ancit 0.46% 5Kw @ 80.6% Wood -5Kw @ 76.0% Ancit	60020/4- SE
	Dartmoor 6- STDFDA6 Co @ 13% O <sup>2</sup> Wood 0.38% Ancit 0.46% 6Kw @ 77.8% Wood - 6Kw @ 73.6% Ancit	60020-3
	Dartmoor 8- STDFDA8 Co@ 13% O <sup>2</sup> Wood 0.17% Ancit 0.18% 8Kw @ 74.9% Wood – 73.6% Ancit	60020/1
Release of dangerous substances	None	
Surface temperature	Satisfies	
Mechanical resistance (to carry a chimney/flue)	Maximum weight to be supported 30Kg	

Test laboratory: 0692

Name: M.P Chew

Signature: 

Position: Technical Director (s)

Date: 24<sup>th</sup> September 2012

Product Fiche according to Commission Delegated Regulation (EU)2015/1187	
Energy Labelling of Local Space Heaters	
Supplier's Name	Dean Stoves
Model	Dartmoor 5
Energy Efficiency Class	A+
Nominal Heat Output to Room (KW)	5.0
Nominal Heat Output to Water (KW)	n/a
Seasonal Space Efficiency (%)	71.9
Net Efficiency (%)	81.9

## **THE DEAN FORGE FABRICATION LTD STOVES GUARANTEE**

Dean Forge Fabrication Ltd offers a five year guarantee which covers the main body of the stove for manufacturing defects.

In the event of any failure we will replace any defective part free of charge, labour cost excluded.

This guarantee is invalid if the stove is not assembled, installed or operated as per these instructions or properly maintained or does not comply with current building regulations and any regional legislation in force at the time.

Dean Forge Fabrication Ltd does not guarantee the onsite assembly, installation or operation of the stove. Please seek advice from your supplier / installer for any relevant guarantees applicable to the installation.

Dean Forge Fabrication Ltd will not be held liable for any consequential or incidental loss, damage or injury, however caused.

Claims under this guarantee should be first made through your retailer.

This guarantee is only applicable in the UK.

Nothing in this guarantee shall affect your statutory rights.

### **Exclusions**

The following consumable parts are not covered by this guarantee:-

Fire grate, log retainer, baffle plate, fire bricks, glass panels and door seals.

Paint is also excluded from the guarantee as it will eventually deteriorate due to the normal working of the stove.

Your assistance is requested by filling in and returning the product Registration and Guarantee Form. This will help maintain our records and assist us in identifying your stove in the unlikely event of any problem occurring and also when you need to order any spare parts.



**Dean Forge Fabrication Ltd  
Dean Prior  
Buckfastleigh  
Devon  
TQ11 0LS**

**PRODUCT REGISTRATION**

**Name** .....

**Address** .....

.....

.....**Phone Number:** .....

**Suppliers Details:**

**Name** .....

**Address** .....

.....

.....**Phone Number:** .....

**Installers Details:**

**Name** .....

**Address** .....

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.....**Phone Number:** .....

**Date of Purchase:** ..... **Date of Installation:**.....

**Stove Serial No:** ..... **Model** .....