

# Dean Stoves

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## **Operating Instructions for the Dean Stoves Sherford 5 and Sherford 5 SE**

SH5SE (issue 1) 20<sup>th</sup> July 2016

### **All stoves meet the essential type test requirement BS EN13240:2001 + and 2:2004, CE marked**

#### **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, Sherford 5 SE has been recommended as suitable for use in smoke control areas when burning wood logs.

To use the Sherford 5 SE in smoke controlled areas the smoke control kit must be fitted to the stove.

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

## **Unpacking Stove**

Remove all packaging and stickers, Check the protective brick lining and the baffle plate has not moved in transit. Remove the glove pack from the inside of the stove.

## **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 dried for 2 years in a covered area allowing air to pass through. Peat can also be used but must be dry.

Maximum Log Length	Maximum Log Diameter
330mm	100mm

**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.

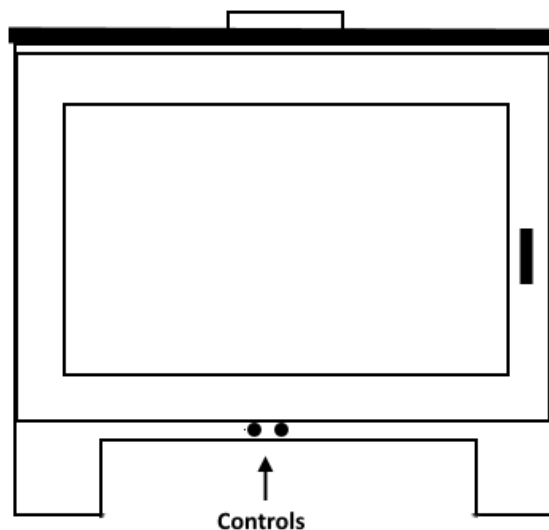
The chimney needs to be swept at least once a year.

## **Door Operation**

The door handle can become very hot so use the glove provided.

Handle:- When closed the door handle will be pointing down and straight with the door, twist the door handle about ¼ of a turn anti – clockwise to open the door.

## Controlling the stove



**Diagram A:**

### **Primary and secondary air controls situated below the door**

**Primary = One ring on the control knob**

**Secondary = Two rings on the control knob**

The primary air control is indicated with a single ring machined into the control knob. This control is used for lighting the fire or boosting the fire. Pull fully out for maximum air flow to the fire and push fully in to close the air flow.

The secondary air wash control is indicated with two rings machined into the control knob. This controls the preheated air wash system, once the fire in the stove is established this is the control that should be used to control the fire.

The secondary control works as follows:

Pull out fully for maximum air flow into the fire and fully in for the airflow to be in the smoke control burning mode when a smoke control kit is fitted. For non-Smoke control stoves push the secondary air control in until required flame pattern is established, about 75% closed. The appliance must not be operated with the air controls or door left open except as directed in the instructions.

## Lighting the Stove

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 is partially open. Light the fire and as the fire catches the paper you may then fully open the primary air control.

When the fire has fully established and the logs are burning well shut the primary air control 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).

### Refuelling

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 then be closed (pushed fully in) and the secondary air adjusted to create the desired flame pattern once these flames are 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.

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

### **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

### **Fuel overloading**

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

The door should always be closed between refuelling to prevent fumes and spillage from the firebox.

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.

The ash should be removed before it reaches the primary air holes (approximately 25mm down from the bottom edge of the door aperture) which are situated along the inside front edge of the fire box. Always leave about 10mm on ash in the stove, this will help a new fire establish when next lighting the stove.

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:**

When lighting the stove for the first time the paint on the stove will cure and give off a metallic smell. It is advisable to ventilate the room ie. open the windows. This will subside 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/fire bricks 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.

## **Notes**

### Down draughts

In adverse weather conditions a down draught may occur this could 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.

### Air vents

Check periodically that the internal and 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.

### Fault finding

If the stove starts to emits 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 is could be due to unseasoned/wet 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 Stoves, Sherford 5 SE**

### **Introduction**

Before lighting the stove check that all installation instructions have been carried out.

### **Health And Safety Precautions**

All work must be carried out to the requirements 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.

N.B

A suitably qualified person must fit the stove. i.e. a HETAS engineer or with the supervision of building control,

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

### **Chimney**

All Dean 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.

The chimney must be sound and not too large in section. If not sound or too large, a liner will have to be fitted; Stainless steel or ceramic liner suitable for solid fuel.

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.

When a flue is connected directly into an existing chimney without a liner the register plate must be fitted with removable doors to facilitate cleaning. If it not possible to fit doors in the register plate then a cleaning door will need to be fitted as near as possible to the connecting length of flue in the front, side or back of the chimney breast.

## **Hearth, Surround and Register Plate**

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

If the stove is installed into a fire opening made of non-combustible materials, we recommend a minimum of 150mm gap to the sides and 300mm above from non-combustible materials.

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 or a load distributing plate could be fitted.

## **Table of distances from combustibles**

<b>Stove Type</b>	<b>Minimum from back of appliance to combustibles</b>	<b>Minimum from side of appliance to combustibles</b>
<b>Sherford 5 SE</b>	700 mm	600 mm

It may be necessary to shield a beam or mantle piece from the heat. The single wall flue must be at least 3 times its diameter away from combustible materials i.e. 150mm (6") flue 450mm (18") away from combustible materials.

Be careful not to place furniture or other combustible material too close to the stove.

## **Register plates**

Chimneys without continuous flue to the top , must have the register a plate made of 1.5mm steel treated to prevent corrosion (BS8303 part 3 9.5)

Register plates made of fireboard may only be used if a liner or flue runs from the top of the stove to the top of the chimney without a break. Always check the current building regulations.

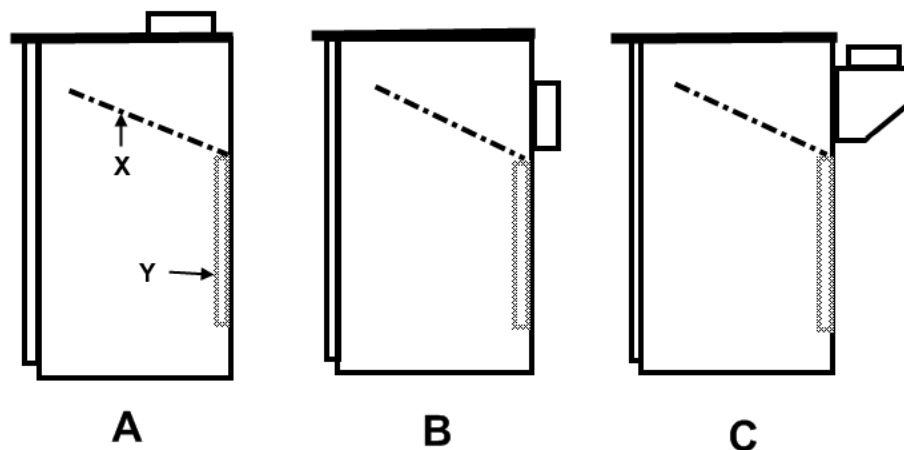
## Flue Connections and Outlets

Dean 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. 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 flue 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 Sherford 5 SE model requires a 125mm (5") first length of flue then stepping up into a minimum of 150mm (6") liner. When the Sherford 5 SE has a smoke except air slider fitted the flue liner can be reduced to 125mm (5"). We strongly advise a 150mm (6") flue liner be fitted when possible.



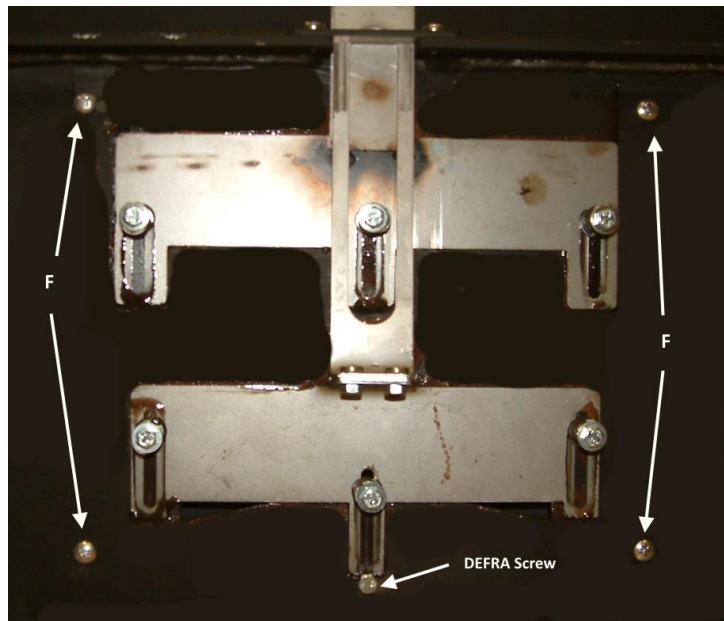
Diagrams showing the flue outlet from the top (A), back (B) and back box (C).

**X** = Position of baffle plate

**Y** = Back protection brick



## **DEFRA screw and close combustion manifold.**



The Sherford 5 SE is supplied with a DEFRA screw fitted and must be left in place when using the stove in smoke controlled areas. This screw can be removed when installed in a non-smoke controlled area.

Screws marked (F) in the above picture are for securing a direct air manifold.

## **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 rear 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.

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.

It must be considered when fitting air vents that it is taken into account any other appliance fitted within the room.

**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

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

Stove Type	Flue gas temp downstream of spigot, closed doors.
	Wood logs
Sherford 5 SE	233°C

## **Flue Gas Mass Flow**

Stove Type	Flue gas mass flow (g/s)
	Wood logs
Sherford 5 SE	3.7

## **Stove Performance**

Sherford 5 SE                      Wood burning   5kW nominal   83% Net Efficiency

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

## EC Declaration Of Conformity

The Undersigned, representing the following:

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

Herewith declare that the products:

Description	Product Code
Sherford 5	STDFSH5
Sherford Slimline 5	STDFSHS5
Sherford 8	STDFSH8

### **Description of product:**

Sherford 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, other 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: Room heater 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	Sherford 5- STDFSH5 Co @ 13% 0 <sup>2</sup> Wood 0.31% 5.3Kw @ 83% Wood	6931-2
	Sherford 5 Slimline- STDFSHS5 Co@ 13% 0 <sup>2</sup> Wood 0.44% 5Kw @ 81.6% Wood	60424-1
	Sherford 8- STDFSH8 Co@ 13% 0 <sup>2</sup> Wood 0.28% 8.4Kw @ 76.4% Wood	60424-2
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  
Position: Technical Director (s)

Signature:   
Date: 20<sup>th</sup> July 2016

Product Fiche according to Commission Delegated Regulation (EU)2015/1187	
Energy Labelling of Local Space Heaters	
Supplier's Name	Dean Stoves
Model	Sherford 5
Energy Efficiency Class	A+
Nominal Heat Output to Room (KW)	5.0
Nominal Heat Output to Water (KW)	n/a
Seasonal Space Efficiency (%)	73.0
Net Efficiency (%)	83.0

## **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 by a HETAS registered engineer or recognised competent person 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 advise 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 effect 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.





## PRODUCT REGISTRATION

Name .....

Address .....

.....

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

### Suppliers Details:

Name .....

Address .....

.....

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

### Installers Details:

Name .....

Address .....

.....

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

HETAS Registration Number.....

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