# Dean Stoves

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

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## Operating Instructions for the Dean Stoves Sherford 5 Eco, Sherford Slimline 5 Eco, and Sherford 8 Eco

DFESH (issue 1) 17.10.2019

## 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 Eco, Sherford Slimline 5 Eco and Sherford 8 Eco have been recommended as suitable for use in smoke control areas when burning wood logs.

The Dean Stoves Sherford 5 Eco, Sherford Slimline 5 Eco and Sherford 8 Eco is factory fitted with a permanent stop to prevent closure of the secondary air control for use in a smoke-controlled area.

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 fumes into the room. This must be checked by a trained qualified engineer before using the stove. We do not recommend installing a stove into a room where an extractor fan is installed.

## Wood & Suitable fuels

**Dry wood, 20% moisture content or below must be used.**
**Using wood with a moisture content above 20% will cause the stove to work inefficiently, produce more smoke and particle emissions, it will also cause the stove and flue to tar up and the door glass 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.

| Stove | Maximum Log Length | Maximum Log Diameter |
|---|---|---|
| Sherford 5 Eco | 330mm | 100mm |
| Sherford Slimline 5 Eco | 400mm | 100mm |
| Sherford 8 Eco | 400mm | 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.

## Door Operation

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

Handle: - When opening the door pivot the handle up to realise the catch and the door can be swung open by pulling lightly towards you. To close the door, push the door closed with the handle pivoted up. When the door is fully against the body of the stove a slight pushing pressure might be required to engage the latch then push the handle down and forward

## Controlling the stove

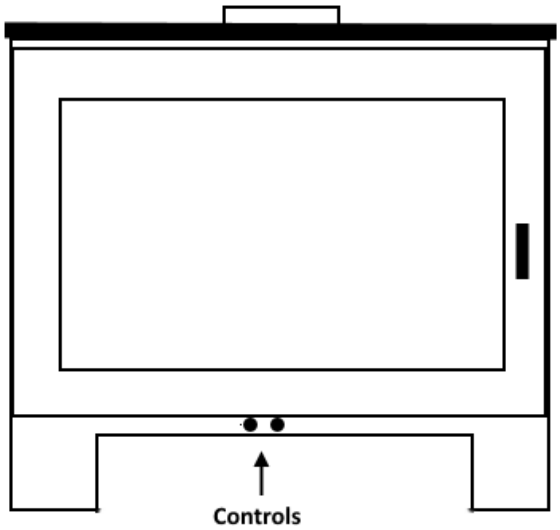



**Diagram A:**

**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

**Controls Left Open**

Operation with the air controls open can cause excess smoke. The appliance must not be operated with the air controls 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 instead of paper. Check the primary and secondary air controls are fully open. Light the paper or firelighter and then close the door all but the last 5mm. After about 5 to 10 minutes you should be able to close the door fully.
When the fire has fully established and the logs are burning well, "this is usually about 10 to 20 minutes," shut the primary air control and control the fire with the secondary air control. If you are unable to sustain the fire with secondary control it is very likely that your logs have a high moisture content.

**Refuelling**

Before refuelling open the door very slightly for about 5 seconds to help any smoke or loose ash to be drawn away from the door opening, then slowly open the door. Opening the door quickly can pull smoke and ash into the room. After adding the new logs to ensure clean burning, the primary air control should be opened for a couple of minutes until 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.

**Do not load the fuel above the log retainer or load logs that may roll forward onto the glass or out of the stove if the door is opened.**

**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 so that the new fuel charge will ignite in a reasonable time, about one to two minutes. 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 glass also will become very black if a log is allowed to burn when touching the glass.

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 log retainer. Always leave about 10mm of 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 which will corrode the inside of the stove.

.**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 in that area. This will subside after the stove has been burning hot for about 1 hour.

The appliances have been assessed and are suitable for intermittent burning not continuous 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 for blockages before lighting i.e.: bird's nests
This is probably the time to have the chimney swept before the beginning of the season.
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 or smoke in the room
In adverse weather conditions a down draught may occur this could make the stove smoke into the room. If this should happen shut all the stove air controls, open the windows and vacate the room until the smoke has cleared. At all times consider the safety of yourself and others before taking the above action.
Downdraughts are generally caused by adverse weather or could be poor flue draught or not enough ventilation and not a fault with the stove. If this occurs on a regular basis call in your engineer.
It is possible a chimney cowl could cure this problem.

**Air vents**
If an air vent is installed check periodically that the internal and exterior ventilation grill is clear. It is also good practice to check the air passage behind the vent covers as this can sometimes get blocked up with spiders' webs

**Servicing**
All servicing must to be carried out by a qualified competent engineer at least once a year.
No unauthorised modifications of the appliance should be carried out.
Use only replacement parts recommended by the manufacturer.

**Fire Brick Lining**
The brick lining in the stove will wear and crack with use. Small cracks will occur, this is normal. The brick linings will only need replacing if they fall apart or are worn down to 50% of their original thickness.
The brick linings, baffle plates, rope seals and grates are wearing parts of the stove and will need replacing at times through the life of the stove. Keeping the brick linings in good condition and replacing them when required will prolong the life of the stove.

**Fault finding**

If the stove starts emitting fumes into the room: -
(1) Check there are no blockage or restriction in the flue.
(2) Check the external air vent is not blocked.
(3) Check a baffle plate has not been dislodged.
(4) Call an engineer.

If the stove does not perform properly this could be due to unseasoned/wet wood, too much ash in the firebox or poor flue draught.

**In the event of a chimney fire**

- Raise the alarm to let others in the house know
- Call the fire brigade
- 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 Sherford stoves

**Unpacking Stove**
Remove all the polystyrene transit blocks holding the baffles. Check all the fire bricks and baffle plates are in place and have not moved or been damaged in transit.
Inside the stove packed with these instructions will be gauntlet, a universal tool a tool to operate the tertiary air slider and a spigot shield.

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.
We do not recommend installing a stove into a room where an extractor fan is fitted.
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.
As with all stove's, fireguards must be installed when young children are present.
N.B
A suitably qualified person must fit the stove. i.e. a HETAS engineer or with the supervision of building control,

**Chimney**

The Sherford 5 and Sherford Slimline 5 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 minimum diameter of 150mm (6") flue

liner be fitted when possible. The Sherford 8 must have a flue with a minimum internal diameter of 150mm. The installation of a flue liner is recommended.
The chimney height must meet current building regulations.

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

The chimney must be sound and the flue not too large in section. If the existing flue is too large, a liner will have to be fitted to reduce this flue size.

**Flue Draught**
When the chimney is warm the draw must not be lower than 12PA with the door closed. If there is excess flue draught a flue stabilizer might have to be installed.
On all Dean Stove flue spigots, you will find an 8mm grub screw. When installing the stove, a hole must be drilled in the flue corresponding with this grub screw. This is the flue draught access point allowing you to check the correct flue draught has been achieved. A 4mm Allen Key will be needed to remove the grub screw. **THIS IS NOT A FIXING HOLE**.

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

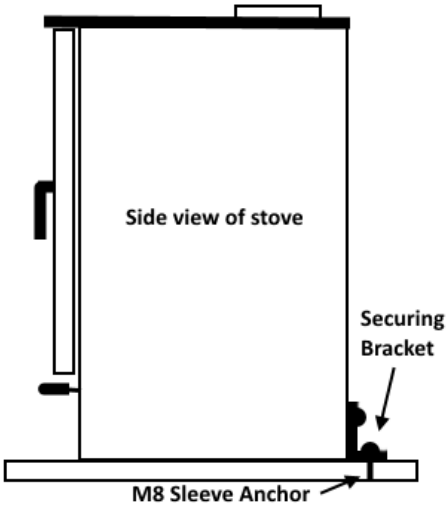
## Hearth, Surround and Register Plate

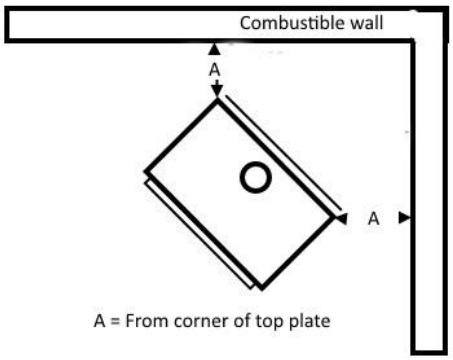
The stove must stand on non-flammable material at least 12mm thick (1/2”). The hearth must extend a minimum of 225mm in front of the firebox and 150mm to the sides. Due to some of the stove doors being large we recommend that the hearth projects forward further than the above minimum, to help prevent any ash on the door falling onto the floor when the stove door is opened.
If the stove is installed into a fire opening made of non-combustible materials, we recommend a minimum of 150mm gap to the sides, 300mm above and 50mm behind the stove. For minimum distances to combustible material see table below.

| **Stove Type** | **Minimum from back of appliance to combustibles With spigot shield fitted **** | **Minimum from side of appliance to combustibles **** |
|---|---|---|
| **Sherford 5 Eco** | 200mm | 400mm |
| **Sherford Slimline 5** | 250mm | 500mm |
| **Sherford 8** | 300mm | 400mm |

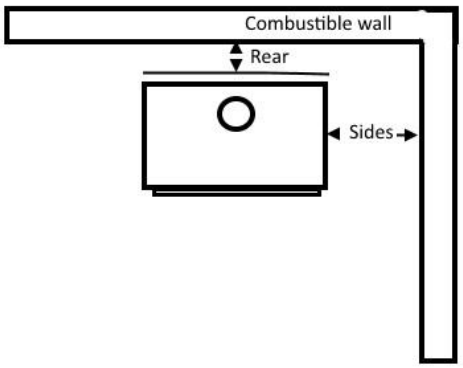
**** Please note a single heat shield is fitted to the appliances as standard and therefore is considered to be the back of the appliance. All distances to the rear must be taken from the back of the nearest heat shield to the combustible materials directly behind the stove.**

Due to the weight of the Sherford Slimline 5 door you must secure this stove to the hearth to prevent the possibility of the stove toppling forward when opening the door. This can be done by using the two rear brackets supplied. Two sleeve anchors are also supplied if the sleeve anchors are not suitable for your particular installation, then you must source suitable fixings. See diagram beside.



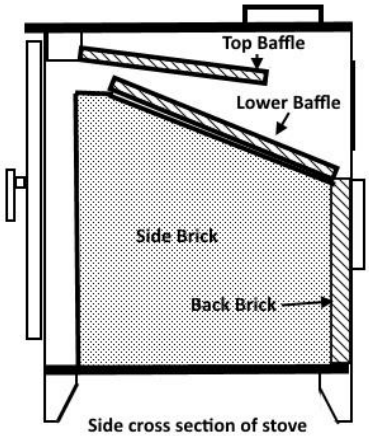




**Corner installation from combustible walls**

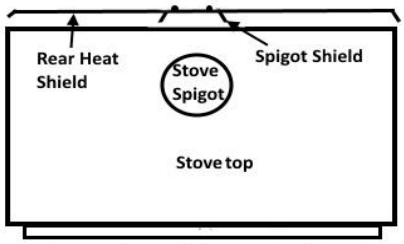



**Rear and side wall installation from combustible walls**

**Baffles**
Once all the packaging has been removed and the stove is in its final position you must make sure all the fire bricks and baffle plates are in place. Particular attention must be taken when checking the top baffle plate is in place. See diagram below.



Side cross section of stove showing the baffle plates



looking down with spigot shield fitted

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The Top vermiculite baffle sits on a ledge across the front and on an angle bracket to each side towards the rear. If the top baffle has a section cut out this must be positioned with the cut out at the rear.
The lower baffle is steel with a vermiculite brick that sits inside to the top face. The steel section is held up by the two outer bricks to each side and the steel ledge to the rear of the stove. The folds in the steel baffle must point up and the vermiculite brick sits between the folds.
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# Flue Connections and Outlets

## 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.
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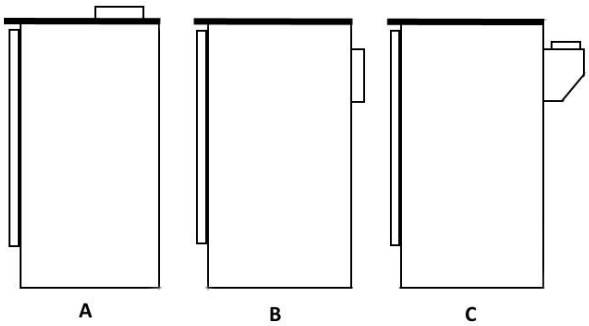


Diagrams showing the flue outlet from the top (**A**), back (**B**) and back box (**C**)
All flue connections must be sealed with fire cement. Doors in the register plate must be present or a soot box fitted in the back or side of the fireplace to enable access to clean the chimney when the stove is 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.

**Leg Adjusters**
To level the stove there are two adjusters on each side of the Sherford Stove on the inside corners, a 13mm spanner will be required to make any adjustment.

**Pre – Lighting Check and Commissioning**

Check all Building Regulations have been adhered to.

The baffle plates are in the right position.

A smoke test has been done to check the chimney is clear.
Take a flue draught reading and make sure it meets the requirements for the stove.

**Data Plate**
All stoves are numbered and performance marked on a data plate which is found on a swinging arm located in the middle front 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 m3/ (h.m2) 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. Extra air venting must be in place to counteract this affect.
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 1st 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.

**Stove Performance**

| **Appliance** | | **Sherford 5 Eco** | **Sherford Slimline 5 Eco** | **Sherford 8 Eco** |
|---|---|---|---|---|
| Fuel | | Wood | Wood | Wood |
| Total Efficiency | % | 82.4 | 81.4 | 75.1 |
| Nominal heat output | kW | 5.0 | 5.0 | 8.0 |
| Mean CO emission (at 13 % $O_2$) | % | 0.09 | 0.11 | 0.08 |
| Mean flue gas temperature | ºC | 244 | 245 | 290 |
| Flue gas mass flow | g/s | 4.3 | 4.3 | 8.5 |
| Mean $C_nH_m$ (at 13 % $O_2$) | $Nmg/m^3$ | 119 | 97 | 62 |
| Mean NOx (at 13 % $O_2$) | $Nmg/m^3$ | 66 | 66 | 64 |
| DIN Plus dust (at 13 % $O_2$) | $Nmg/m^3$ | 35 | 16 | 18 |
| Appliance weight | | | | |

# EC Declaration Of Conformity

The Undersigned, representing the following:

| Manufacturer |
| --- |
| **Dean Forge Ltd**<br>Dean Prior, Buckfastleigh, Devon, TQ11 0LS |

Herewith declare that the products:

| Description | Product Code |
| --- | --- |
| Sherford 5 Eco | STDFESH5 |
| Sherford Slimline 5 Eco | STDFESHSL5 |
| Sherford 8 Eco | STDFESH8 |

**Description of product:**

Sherford woodburning 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.<br>Intended use: Space heating in residential building. | | |
|---|---|---|
| Characteristic | Performance | Report |
| Fire Safety | Satisfies | |
| | Sherford 5 – STDFESH5<br>Co @ 13% $0^2$ 0.09%<br>5Kw @ 82.4% Wood | |
| | Sherford Slimline 5 – STDFESHSL5<br>co@ 13% $0^2$ 0.11%<br>5Kw @ 81.4% Wood - | |
| | Sherford 8 – STDFESH8<br>co@ 13% $0^2$ Wood 0.08%<br>8Kw @ 75.1% Wood | |
| 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: 23rd October 2019

| Product Fiche according to Commission Delegated Regulation (EU)2015/1187 | |
|---|---|
| Energy Labelling of Local Space Heaters | |
| Supplier's Name | Dean Stoves |
| Model | Sherford 5 Eco |
| Energy Efficiency Class | A+ |
| Nominal Heat Output to Room (KW) | 5.0 |
| Nominal Heat Output to Water (KW) | n/a |
| Seasonal Space Efficiency (%) | 72.4 |
| Net Efficiency (%) | 82.4 |

| Product Fiche according to Commission Delegated Regulation (EU)2015/1187 | |
|---|---|
| Energy Labelling of Local Space Heaters | |
| Supplier's Name | Dean Stoves |
| Model | Sherford Slimline 5 |
| Energy Efficiency Class | A+ |
| Nominal Heat Output to Room (KW) | 5.0 |
| Nominal Heat Output to Water (KW) | n/a |
| Seasonal Space Efficiency (%) | 71.4 |
| Net Efficiency (%) | 81.4 |

| Product Fiche according to Commission Delegated Regulation (EU)2015/1187 | |
|---|---|
| Energy Labelling of Local Space Heaters | |
| Supplier's Name | Dean Stoves |
| Model | Sherford 8 |
| Energy Efficiency Class | A |
| Nominal Heat Output to Room (KW) | 8.0 |
| Nominal Heat Output to Water (KW) | n/a |
| Seasonal Space Efficiency (%) | 65.1 |
| Net Efficiency (%) | 75.1 |

# Dean Forge Fabrications Ltd
# Dean Prior
# Buckfastleigh
# Devon
# TQ11 0LS

## PRODUCT REGISTRATION

**Name** .....

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

**Suppliers Details:**

**Name** .....

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

**Installers Details:**

**Name** .....

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

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

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

# 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 a manufacturing defect 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.