

# Dovre 500 Natural Gas and Propane Cast Iron Stoves



**THIS BOOKLET MUST BE LEFT WITH THE CUSTOMER**

INSTALLATION & SERVICING INSTRUCTIONS

500LNG • 500PNG • 500LPR • 500PPR

# Dovre 500 Natural Gas & Propane Cast Iron Stove Installation and Servicing Manual

**These instructions should be read  
carefully and saved by the  
user for future reference**

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## 1.0 - IMPORTANT NOTES

The appliance is a radiant convector type fuel effect heater designed to work on Natural gas and Propane. It has been tested for compliance with the European Gas Appliances Directive to Standard EN613. The entire appliance body is classed as a working surface.

Prior to installation ensure that the local gas distribution conditions (identification of the type of gas and pressure) and the adjustment of the appliance are compatible and that it is only installed in the countries stated on the data badge.

The appliance must not be connected in a room containing a bath or shower or where steam may be present. Additionally it should not be installed in a garage.

This gas appliance is factory set and shall not be adjusted by the installer.

The Safety switch (TTB) must not be put out of operation.

If the safety systems require replacement parts, only original manufacturers spares shall be used. Fitting of similar looking parts designed for other appliances could give rise to a hazardous condition.

The appliance is not intended as a cooking stove or as an appliance for the drying of clothes.

The appliance must be operated with the inspection door in the locked closed position.

It is the law in the UK that ALL gas appliances are installed by a competent person in accordance with the GAS SAFETY (INSTALLATION & USE) REGULATIONS (As amended), the relevant British Standards for Installation work, Building Regulations, Codes of Practice and the manufacturer's instructions.

The installation should be carried out in accordance with the following where relevant: -

**1** BS8303 **2** BS5871 Parts 1 & 2 **3** BS5440 Parts 1 & 2

**4** BS6461 Parts 1 & 2 **5** BS6891 **6** BS1289

**7** Building Regulations & Standards issued as relevant by the Department of the Environment or the Scottish Development Department.

**8** British Gas Document DM2 for installations in timber framed buildings.

**9** Flue manufacturer instructions for the specified flue type

In the Republic of Ireland installation should be carried out in accordance with IS813, ICP3, IS327, Building Regulations, Codes of Practice, the Manufacturers instructions and any other rules in force. Particular note should be made of the ventilation requirement as it may differ from the UK, therefore adequate provision should be made.

Failure to comply with the above could leave the installer liable to prosecution and invalidate the appliance warranty.

This appliance is free from any materials known to contain asbestos.

## 2.0 - APPLIANCE DATA

### 2.1 - GAS DETAILS

	NATURAL GAS	PROPANE
GAS GROUP	G20 (Natural Gas)	G31 (Propane Gas)
GAS CATEGORY	Cat 1 <sup>H</sup>	Cat 1 <sup>P</sup>
HEAT INPUT (GROSS)	6.80 kW	6.50 kW
SUPPLY PRESSURE	20 mbar	37 mbar
BURNER PRESSURE	10-12 mbar	34-36 mbar
GAS RATE	0.63 m <sup>3</sup> /h	0.24 m <sup>3</sup> /h
INJECTOR SIZE	bray 18 / 480	bray 18 / 180
TTB CUT OFF TEMPERATURE 100°C RESET TEMPERATURE 85°C		

**THIS PRODUCT IS FOR USE IN GB AND I.E. ONLY.**

### 2.2 - GENERAL

Flue Size 127mm (5") diameter into inside of appliance coupling, 152mm (6") diameter over outside of appliance coupling.

This appliance is only for the gas type stated on the data plate.

## 3.0 - GENERAL INSTALLATION REQUIREMENTS

### 3.1 - VENTILATION

No purpose provided ventilation is normally required when this appliance is installed in the UK. Where other appliances operate in the same room or space, these appliances should be considered when sizing air vents. The spillage test in the section on commissioning may indicate that purpose provided ventilation is required. Where fitted, ventilation must comply with BS5440 Part 2.

For the Republic of Ireland the ventilation requirements may vary and if unsure, advice should be sought from the relevant authorities.

### 3.2 - GAS SUPPLY

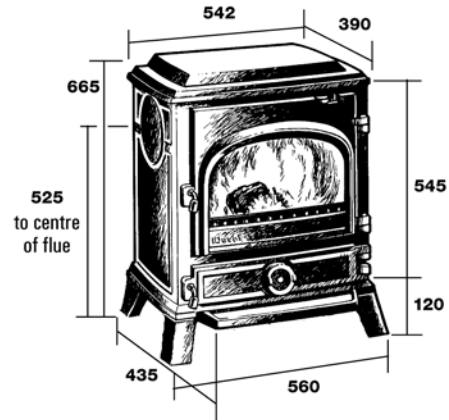
Gas supply provision should be made in accordance with the latest Gas safety (Installation & Use) Regulations as amended.

LPG appliances must not be installed in rooms below ground level.

An isolation device such as a gas cock or restrictor elbow should be incorporated into the gas line for servicing purposes. To prevent unacceptable pressure losses, no more than 1.5 m of 8mm gas pipe should be used on the appliance inlet. Care should be taken to protect exposed gas pipes from damage.

### 3.3 - HEARTH & FIREGUARD DETAILS

The surface on which the appliance is to stand must be flat, level and sufficiently strong to support the appliance and its attached flue pipe. If a hollow marble hearth is used it must be properly supported. The appliance has been tested to stringent standards and under these requirements can be fitted without a hearth onto



Width	Height	Depth	Weight	Energy input		Heat output		Flue dia
				NAT Gas	LPG	NAT Gas	LPG	
560 mm	665 mm	435 mm	118 kg	6.8 kw	6.0 kw	5.1 kw	4.5 kw	125 mm

Figure 1. Overall dimensions

a non-combustible floor. Where carpets or rugs are fitted around the appliance care should be taken to ensure that these cannot inadvertently slide against the hot surfaces as damage could occur.

From time to time, flue debris can become dislodged and expel from the draught diverter outlets. This could stain soft floor coverings and we therefore recommend that carpets are kept at least 300mm (12") away from the appliance. If debris does fall it is best to carefully remove this, when cool, with a vacuum cleaner.

A fireguard is not supplied with this appliance. However, it is recommended that one complying with BS 6539 or BS6778 is fitted if the appliance is to be used in the presence of young children, the elderly or the infirm.

### 3.4 - CLEARANCES AROUND APPLIANCE

In a situation where the appliance is to be fitted into an opening (such as an inglenook) made of a non-combustible material, the clearances shown in figure 2 apply. The appliance should not be sited less than 75mm (3") from the rear wall of the fireplace. A thermostatic safety device (TTB) is fitted to the rear of the appliance and therefore consideration should be given to sufficient space being allowed to access the TTB for servicing.

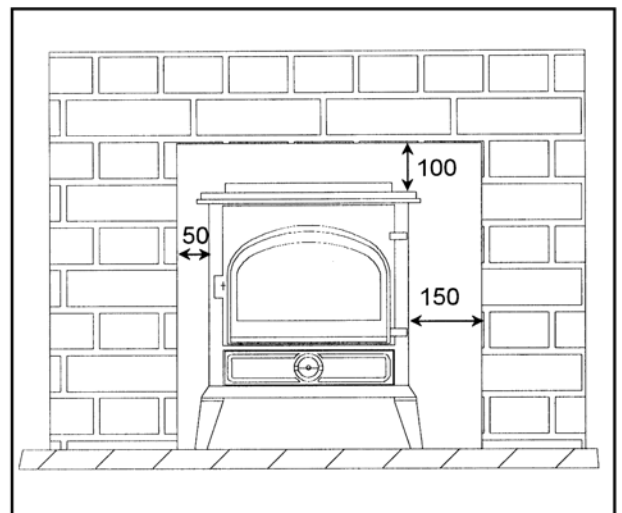


Figure 2. Clearances for non-combustible materials

### 3.5 CLEARANCES TO COMBUSTIBLE

#### MATERIALS AND SHELVES

A minimum clearance of 300mm (12") should be allowed between the back of the appliance and any combustible material

A combustible shelf may be fitted to within 450mm (18") of the top of the appliance. Any paints, varnishes or similar coatings should be adequate to cope with a temperature of 85 deg C. otherwise clearance distances may need to be increased.

With all heating appliances, soft furnishing, decorations and wall coverings may discolour or scorch if placed within 1 metre of the appliance and its flue outlets.

#### 3.6 - FLUE REQUIREMENTS

The appliance is capable of being flued from either the top or rear. The flue pipe required is of single or twin wall construction to BS715 of 127mm (5") diameter. The outside of the flue spigot is also capable of taking a 152mm (6") diameter flue pipe if this is preferred. It is also possible to fit the 127mm inner flue pipe with a decorative outer pipe of 152mm over the spigot as shown in figure 4. This is a very satisfactory arrangement as it lowers the temperature of the outer flue and is visually appealing.

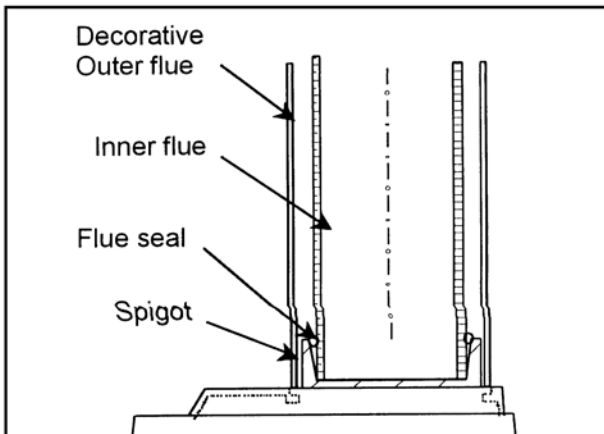


Figure 3. Decorative flue details

Where flues run close to combustible materials, through floors etc., the clearances specified in Building Regulations and flue manufactures instructions must be adhered to.

The flue can also be connected to Class 1 and Class 2 masonry chimneys and pre-cast flues. It may be necessary to connect to these through a closure or register plate, which should be sealed to the wall and flue in the normal manner, see figures 5, 6 & 7. Where the chimney does not have a clay liner it will be necessary to fit a new flue liner.

Prior to installations, existing flues should be swept and any dampers removed or fixed in a permanently open position. The flue should be inspected and any damage made good. No more than 350mm (14") of horizontal flue is permissible from the rear outlet of the appliance, before the flue rises vertically for at least 1 metre. A minimum effective flue height of 3 metres is recommended with the effect of directional changes to be taken into account. It is recommended that a cowl or suitable gas terminal is fitted to the top of the flue to prevent the ingress of moisture, which could detrimentally affect the performance of the flue and appliance.

**PLEASE CONSULT BUILDING REGULATIONS BS5440 PART 1 FOR FURTHER INFORMATION.**

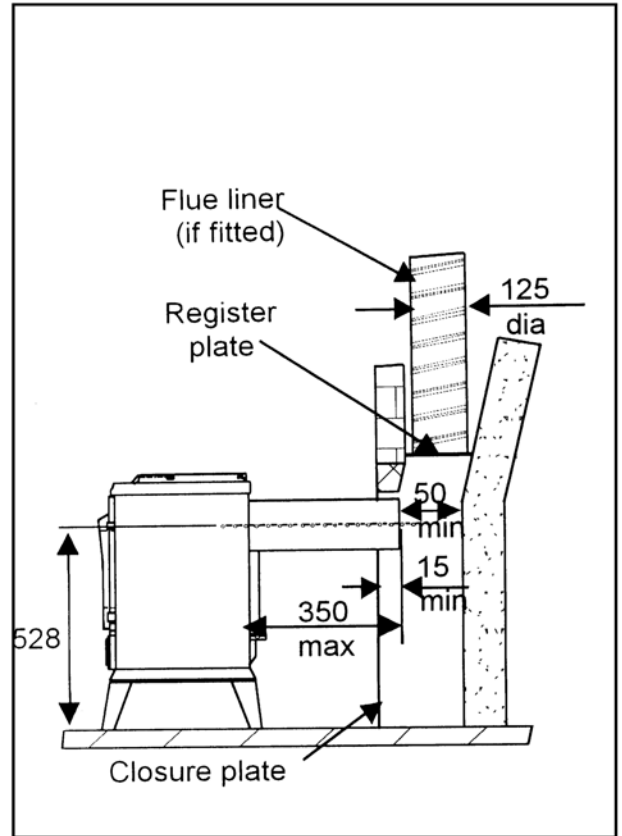


Figure 4. Fitting with closure plate

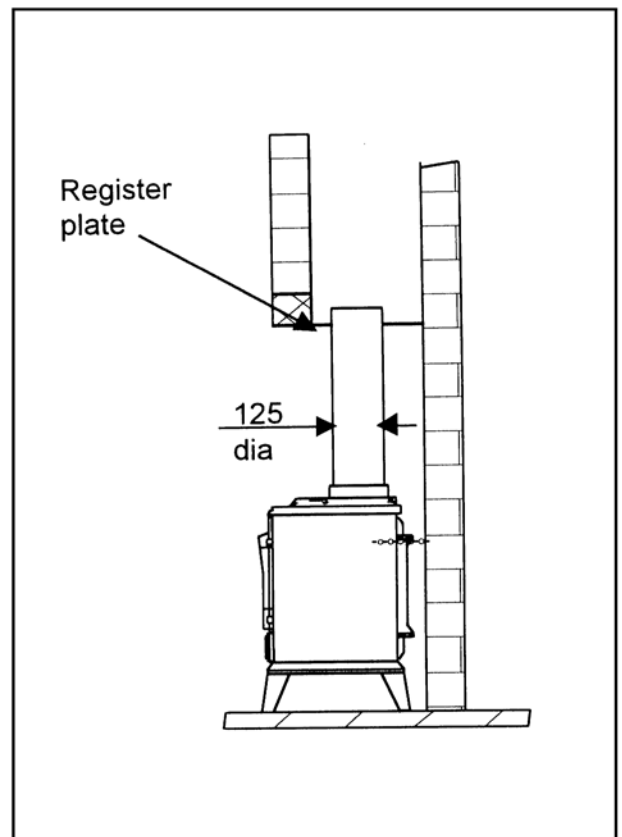


Figure 5. Fitting into clay lined flue



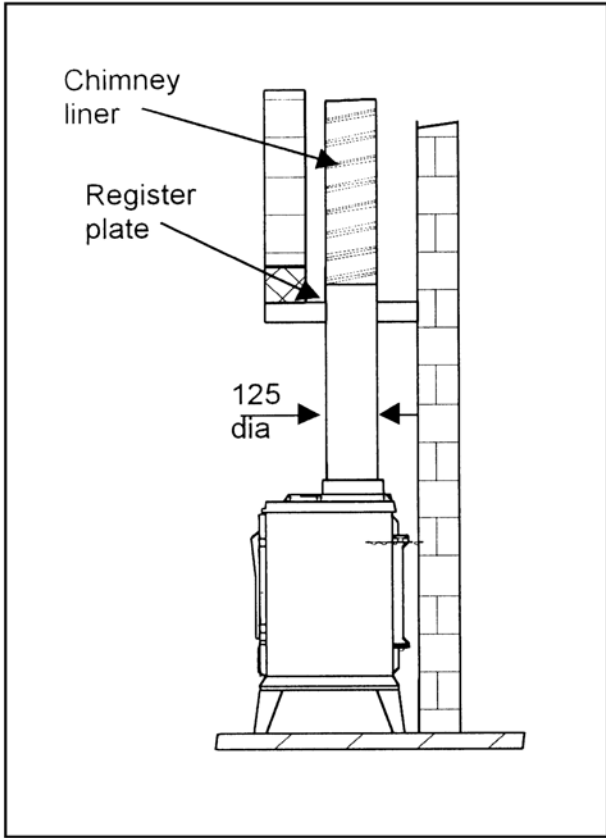


Figure 6. Fitting with a chimney liner

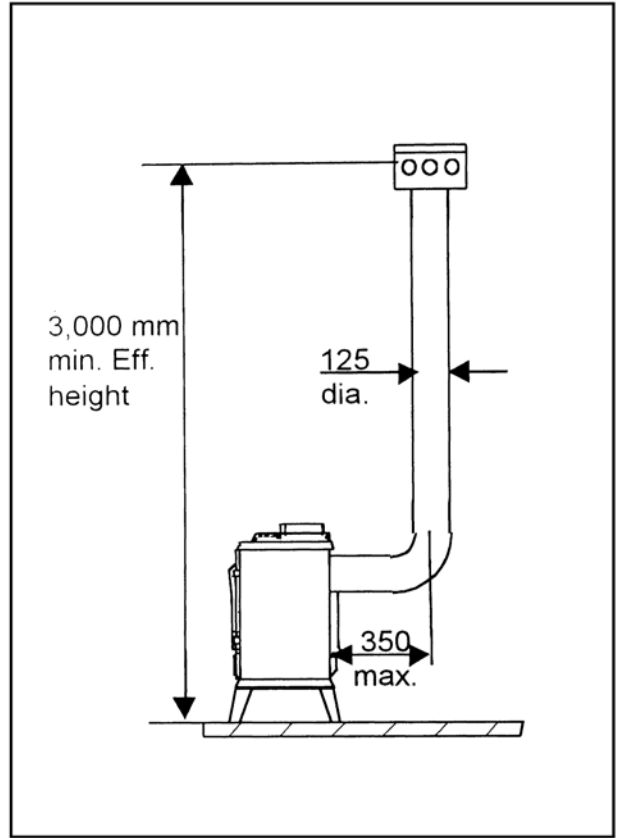


Figure 8. Prefabricated flue - horizontal

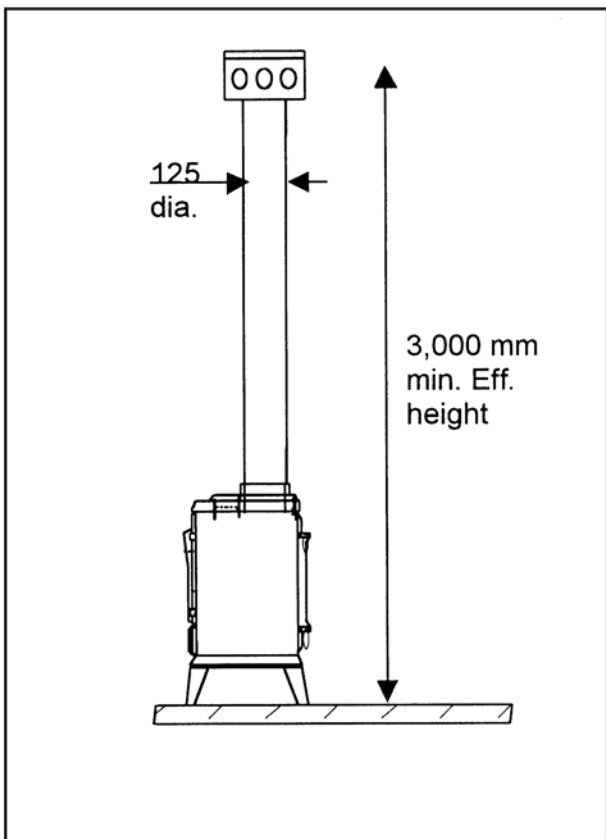


Figure 7. Prefabricated flue - vertical outlet

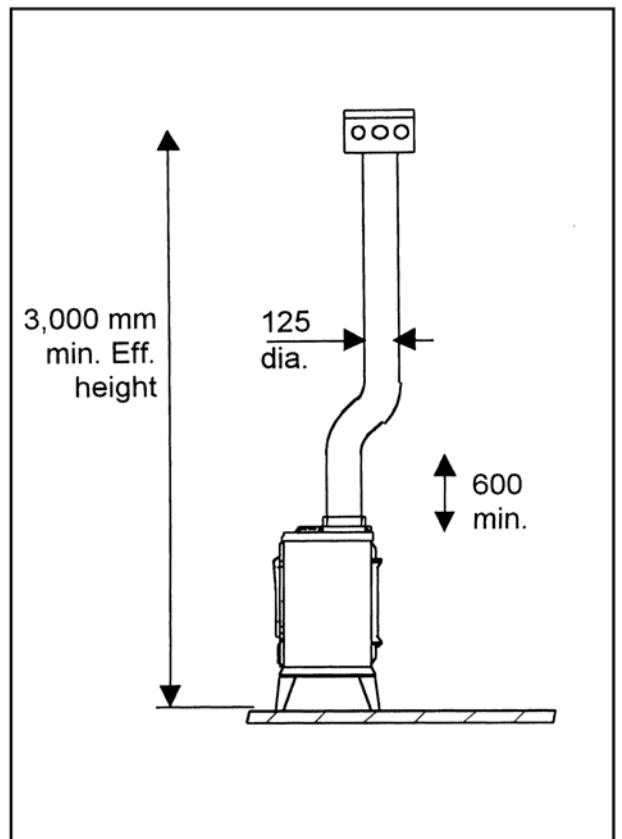


Figure 9. Change in flue direction

Figures 7, 8 & 9 show the appliance fitted in typical pre-fabricated flue installations with the limiting dimensions shown.

If a change in direction is required bends no greater than 45 degrees should be used. There should be a minimum distance of 600mm (24") vertical flue from the appliance before any change in direction. See figure 9

### 3.6 - FLUE SPIGOT

Start by attaching either the blanking plate or flue spigot (depending whether the installation is for top or rear flue connection), to the top position.

Attach the flue spigot or blanking plate required using the adhesive cement and fixings supplied. Attach the circular blanking plate to the top or rear outlet as required, again using the adhesive cement and fixings supplied.

### 3.8 - FITTING

Ensure that the thermostatic safety device (TTB) located on the back of the appliance, is connected to the leads.

Once the correctly positioned flue spigot and blanking plate are fixed, move the appliance into position.

Fit the flue and seal to the appliance using the adhesive cement supplied.

Due to its weight, the appliance does not need to be fixed to the floor.

### 3.9 - CONNECTING THE GAS SUPPLY

8mm semi-rigid inlet pipe should be connected to the inlet of the gas valve using the nut and olive supplied.

Purge and fit the gas supply, taking care to support the gas control when doing so. Check the gas supply for leaks using an approved method.

## 4.0 FUEL BED LAYOUT INSTRUCTIONS

Check that all of the fuel bed fibre components are present and not damaged. Suitable replacements are available from your Dovre distributor.

PART NO.	DESCRIPTION	NUMBER PER APPLIANCE
F10278	Rear matrix	1
F10279	Front left hand rail	1
F10280	Front right hand rail	1
LF28	Large Coals	4
AF18	Small Coals	6

**DO NOT FIT ALTERNATIVE FUEL BED COMPONENTS OR EXTRA COALS AS THIS COULD AFFECT THE SAFE PERFORMANCE OF THE APPLIANCE.  
DO NOT OBSTRUCT THE PILOT LIGHT**

This product uses man made vitreous ceramic fibre fuel effect pieces containing Refractory Ceramic Fibre (RCF). Excessive exposure to RCF may cause temporary irritation to eyes, skin and respiratory tract, therefore care should be taken when handling fuel bed components to keep dust to a minimum. dust should be vacuumed using a suitably filtered vacuum cleaner and disposed of carefully.

### 4.1 - POSITION THE 3 PART MATRIX

- 1** Lay the white ceramic mat on top of the burner.
- 2** Place the rear matrix (with the 7 holes towards the front) on the mat ensuring that the rear side of the matrix is touching the rear stainless steel plate. The holes in the rear matrix should line up with the rear row of holes on the burner tray. See fig 10
- 3** Place the 2 front matrix in front of the rear matrix. Ensure that the front matrix touches the rear matrix. The smaller of the two front matrix is located on the left side and the larger front matrix is located on the right side. See Fig 11.

- 4** Place 4 large pieces of coal and 3 small pieces of coal as shown in Fig 12.
- 5** Place the remaining 3 small coals as shown in Fig 13.
- 6** Place the cast iron fuel guard in position in front of the fuel bed, tapping into place with rubber mallet if required.

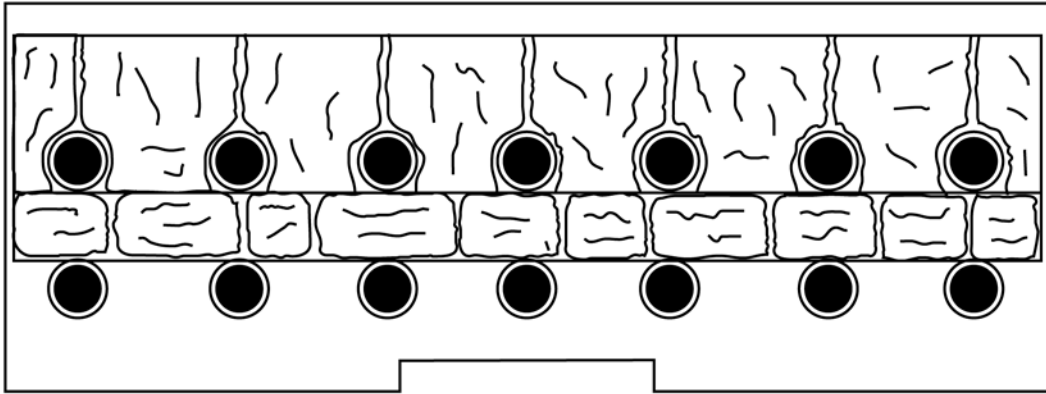


Figure 10.

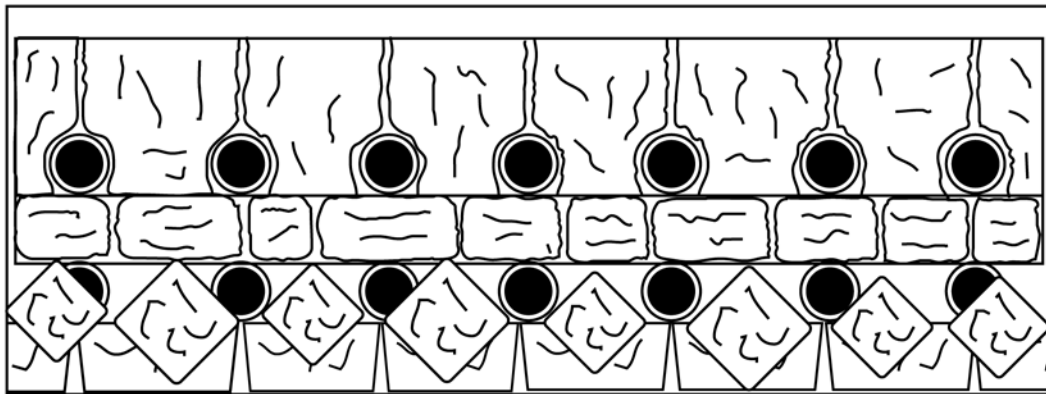


Figure 11.

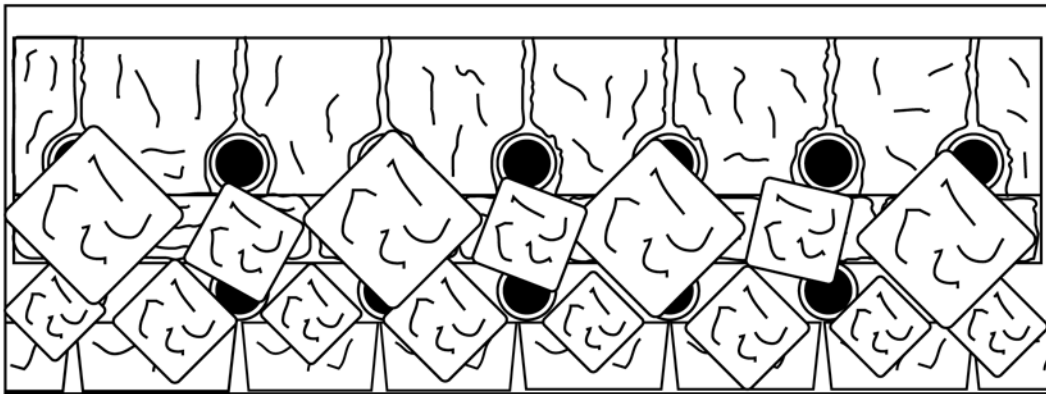


Figure 12.

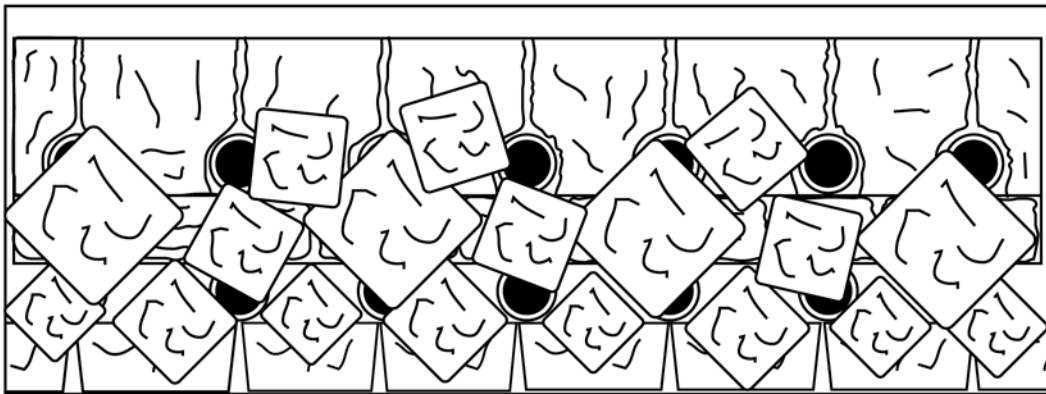


Figure 13.

## 5.0 - TESTING, COMMISSIONING & USE

Close the appliance door and lock securely by tightening the grub screw with an Allen key. During its first period of use any protective coatings and oils will burn out of the appliance and it is wise to ventilate the room during the first 1 or 2 hours of use.

NO RUBBISH IS TO BE THROWN ONTO THE FUEL BED.

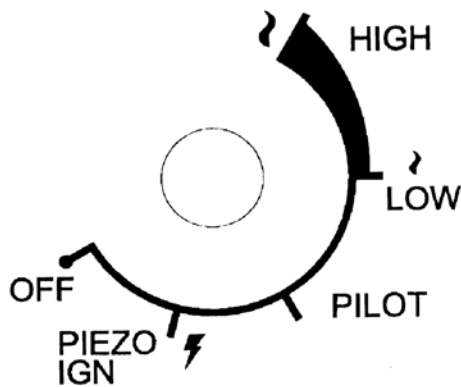
### 5.1 - THERMOSTATIC SAFETY SWITCH (TTB)

- 1 The TTB is a normally closed bi-metallic switch which is designed to open at a pre-set temperature (100° C) and reset to the closed position when the temperature falls to a reset level (normally 15° C below the operating temperature).
- 2 The system is not adjustable, and should not be rendered inoperative.
- 3 If parts of the system require replacement only original parts must be used.

The TTB system will detect a fault if the evacuation of combustion products is interrupted, for example by a blocked or malfunctioning flue.

### 5.2 - LIGHTING THE FIRE

The gas control panel is located under the right hand side of the appliance. the pilot light is visible at the centre of the front matrix. If the Flame Supervision Device Actuating Flame (pilot light) is extinguished either by intention or not, do not attempt to re-light until three minutes have elapsed.



#### Lighting the pilot light

- 1 Depress control knob fully
- 2 Whilst depressed, turn knob sharply 90 degrees anticlockwise to 'PILOT' setting.

Repeat until pilot light is visibly lit

- 3 KEEP KNOB DEPRESSED AT THIS POINT FOR 15 - 20 SECONDS.
- 4 Upon releasing the knob, the permanent pilot light should stay on. If the pilot light goes out, it may be necessary to repeat the process several times to clear air from the system. This is likely when the appliance is first installed or has been out of service for long periods of time.

#### Running the appliance at low setting

- 1 Ignite permanent pilot as shown in previous section "lighting the pilot light"
- 2 With control knob at 'PILOT' setting, depress and turn in an anti clockwise direction to 'LOW' setting
- 3 Release the knob. The appliance is now burning at its lowest operating output.

#### Running the appliance at a higher output

- 1 Ignite appliance to 'low' setting by following instructions in previous section "Running the appliance at low setting"
- 2 Output can be increased, by turning the control knob progressively in a clockwise direction until the desired level is achieved, up to a maximum as shown by the 'HIGH' symbol on the control panel.

#### Extinguishing the appliance back to permanent pilot setting

- 1 From any heat setting, press control knob fully and turn clockwise to 'PILOT' position.
- 2 Release the control knob - the pilot remains on.

#### Extinguishing the appliance fully

- 1 From any heat setting or the permanent pilot, depress control knob fully and turn clockwise to 'OFF' position.

**PLEASE EXPLAIN TO THE CUSTOMER THESE LIGHTING AND EXTINGUISHING PROCEDURES.**

### 5.3 - TESTING FOR SPILLAGE (INSTALLER TEST)

A spillage test must be performed before the installed fire is left with the customer.

A spillage test should be undertaken in accordance with the requirements of BS5440 Part 1 Detection of Spillage.

Before carrying out a spillage test, check the following conditions are correct

- a The appliance gas rate is correct and the flame picture is satisfactory
- b The correct flue is installed

Detection of the spillage of combustion products can be detected in one of the following ways:

- 1 Using a smoke match or lighted taper with the flame approximately 3mm inside the lower edge of the draught diverter. If spillage is present, smoke will be displaced outwards from the draught diverter.
- 2 Hold a piece of cold, polished metal or mirror close to the lower edge of the draught diverter. If spillage is present, the surface of the metal or mirror will show signs of condensation.
- 3 By directing smoke, e.g. from a smoke puffer, just below the edge of the draught diverter. If spillage is present, smoke will be displaced outwards from the draught diverter.

**Note:** In the above methods, the whole of the perimeter of the draught diverter should be checked.

- 4 Ignite a smoke pellet in the combustion chamber of the appliance and observe whether smoke emerges from the draught diverter. This method is useful when access to the draught diverter is difficult.



Note: This test should be carried out with the flue at its operating temperature but with the burner off. A powerful light source should be used to check for smoke emission.

#### TEST WHEN NO FAN IS PRESENT

Close all doors and windows in the room containing the appliance.

Turn on the appliance.

After 5 minutes carry out the spillage test.

If spillage occurs leave the appliance operating for a further 10 minutes, then re-test.

If spillage still occurs, check the flue system to confirm that it is unobstructed.

If spillage is still detected, treat the installation as dangerous and take the appropriate action - Gas Safety Regulation Part E.34.

#### TEST WHEN A FAN IS PRESENT

It should be remembered that a number of modern appliances, not just extractors, have fans fitted to them, which will de-pressurise the room or space and can adversely effect any open-flued appliance. Examples of extract fans are tumble dryers, ducted cooker hoods, room extractor fans or warm air units (gas fired or otherwise).

With the fan switched off, carry out the tests described in the section above, "Test When No Fan Is Present".

Turn on the appliance.

After 5 minutes, carry out the spillage test.

Assuming that this test is satisfactory, fix in the open position, all doors connecting the room containing the appliance and the room containing the fan. Close all other doors and windows in the premises. Switch the fan on to its highest setting and repeat the spillage test.

*If spillage is detected it will be necessary to:*

**a** Increase the permanent ventilation of the room (until spillage ceases and the flue works satisfactorily), if the permanent ventilation exceeds 50 sq. cm, seek expert advice.

or

**b** Treat the installation as dangerous and take the appropriate action - Gas Safety Regulation Part E.34.

#### 5.4 - CHECKING THE PRESSURE SETTING

Remove the screw from the pressure test point at the burner and check the pressure with the appliance running on high setting. The pressure should be checked in accordance with these instructions in the table in section 2.1. The fire is set to these pressures and no adjustment is possible.

#### 5.5 - SPARK FAILURE

The gap between the pilot electrode and the pilot should be 3.3mm to 4.5mm and normally adjustment is not necessary.

#### 5.6 - FIREGUARDS

A fireguard is not supplied with this appliance. It is recommended that a fireguard be fitted if the appliance is to be used in the presence of young children, the elderly or the infirm.

#### 5.7 - BRIEFING THE CUSTOMER

The installer should brief the customer on the operation of the appliance and all instructions should be handed to them.

The customer must be briefed on the need for regular servicing of the appliance; this will normally be once a year.

The customer must be told that the appliance can only be operated with the door closed.

#### 5.8 - CLEANING THE APPLIANCE

The coals and 3 matrix sections can be removed and gently vacuumed off using a soft brush attachment. Note that these components are extremely fragile and on no account should they be washed or treated with chemicals. Some discoloration of coloured stains is quite normal and adds to the realism of the fire. The fuel bed parts should be replaced strictly in accordance with the instructions in Section 4 of this manual.

Painted parts can be gently cleaned using a soft brush or a proprietary stove polish. If it becomes necessary, a Dovre aerosol paint for re-painting or touching up, can be purchased from your Dovre distributor.

*Never use an aerosol paint with appliance switched on.*

#### 6.0 - SERVICING

**1** Ensure the fire is cold before proceeding. Isolate the gas supply to the fire and lay a dust sheet around the appliance. Open the appliance door and lift off its hinges. Remove the front cast iron fuel guard.

**2** Carefully remove all coals. Any deposits can be gently vacuumed off using a soft brush attachment. Note that these components are extremely fragile and on no account should they be washed or treated with chemicals. Some discoloration of coloured stains is quite normal and adds to the realism of the fire. Do not attempt to paint the coals.

**3** Remove the fibre mat from the burner tray and clean with a soft brush. Using a brush attachment, remove any deposits from the burner tray.

**4** Disconnect the gas supply and remove the burner from the appliance. Inspect the burner making sure it is in a serviceable condition. Clear any deposits of lint or fluff from around the pilot head. Check the spark gap between electrode and pilot head is between 3.5 and 4.5 mm. The pilot light itself contains no other serviceable items.

**5** Remove the main injector . Blow the jet clear and remove linting from the air inlets. On no account must the jet be cleared using wires or drills as this could damage the calibrated orifice. Care should be taken to tighten and leak test any joints disturbed during this process.

**6** Control Tap - Contains no user serviceable parts but ignition system should be checked to ensure that the lead is in good condition and that all connections are securely made.

- 7 Test the TTB circuit and replace leads and / or TTB if necessary.
- 8 Re-assemble the fire in reverse order replacing any worn or faulty parts as necessary. Re-connect the gas supply. Re-assemble the fuel bed as described in section 4.
- 9 Carry out a leak test and the commissioning procedures, including the spillage test.

**NOTE:** If any parts need replacing, use only genuine Dovre parts supplied by the manufacturer. Some components look similar to those used in other gas appliances but these are not necessarily the same due to performance variations and must not be used.

### LIGHTING TROUBLESHOOTING CHART





## TWO YEAR WARRANTY

If the castings on this appliance should prove to be defective within five years of the purchase date, the faulty castings will be replaced free of charge, subject to the following conditions:

- 1) The purchaser shall complete the registration card enclosed and return it within seven days of purchase. Failure to return the registration card could result in delays in processing any claims.
- 2) The appliance shall have been installed in compliance with the installation instructions.
- 3) The appliance shall not have been used for the burning of unseasoned wood and/or prohibited fuels.
- 4) This warranty only applies to the appliance body castings and does not include renewable components including grates, ashpans, and glass, seals, baffle plates and chips on enamel castings.
- 5) This warranty does not cover site visits and any claims should be notified to your dealer.

This warranty does not affect your Statutory Rights.

For more information visit [www.dove.co.uk](http://www.dove.co.uk)

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