



BUILD IN APPLIANCES

FOR USE WITH LIQUIFIED PETROLEUM (LPG) OR NATURAL GAS

CAUTION – ALL OUTER SURFACES WILL GET HOT WHEN IN USE

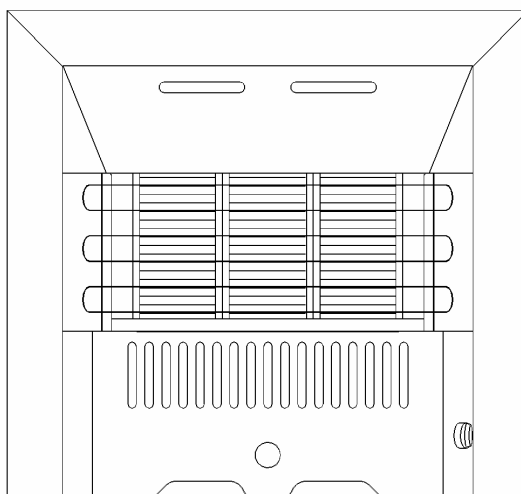
RADIANT GAS FIRE

MODELS (LPG)

S~FI 20000 S~FI 21000 S~FI 22000 S~FI 23000

MODELS (NATURAL GAS)

S~FI 20000NG S~FI 22000NG S~FI 23000NG



USER AND INSTALLATION INSTRUCTIONS

FOR USE IN: -

GB, IE, FR, NL, BE, LU, ES, IT, NO, DE, DK, SE

WARNING

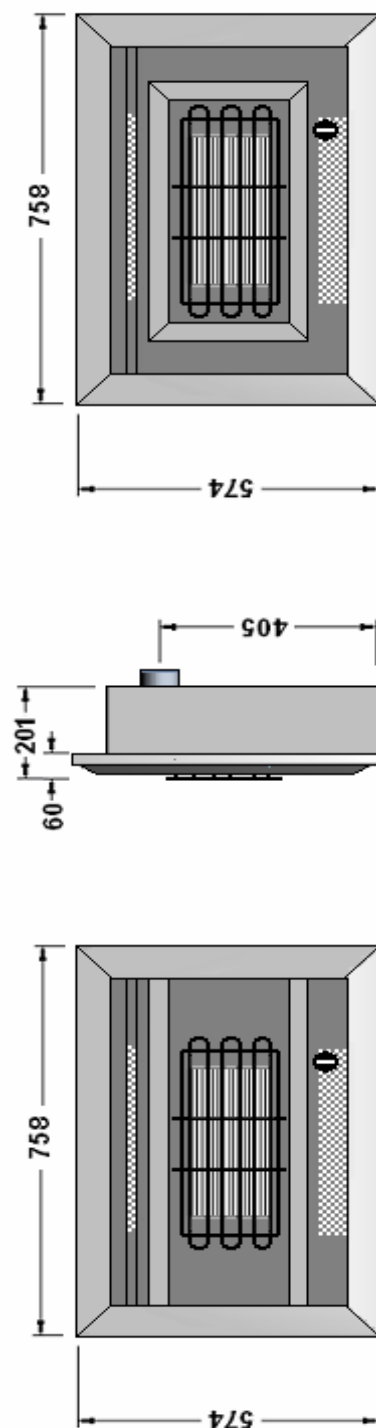
- Only use this appliance in a well-ventilated area.
- Read the instructions before use.
- This appliance must be installed in accordance with the regulations in force.

**SPINFLO LIMITED, Unit 19, Oakham Drive, Parkwood Industrial Estate
Rutland Road, Sheffield S3 9QX, ENGLAND.**

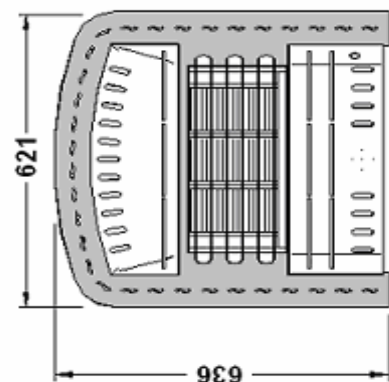
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Fig. 2 GENERAL DIMENSIONS

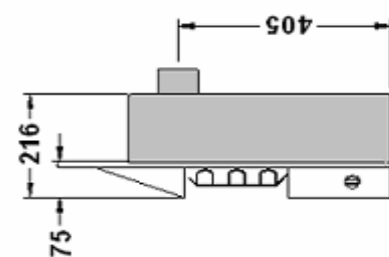
MODEL RANGE:- S~FI 23000 SOLARIS LS



MODEL: S~FI 22000 MAGNA



MODEL: S~FI 20000 SOLARIS



MODEL: S~FI21000 SOLARIS

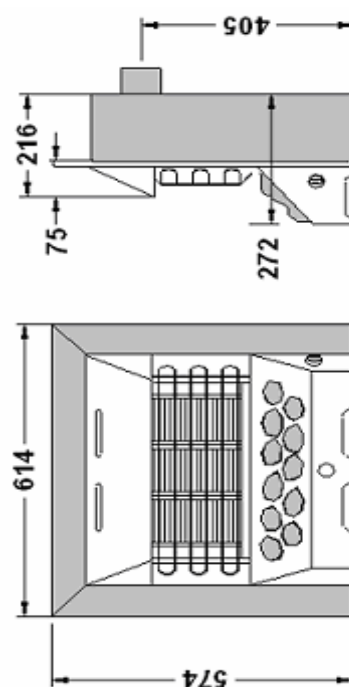


Fig. 2 Control Positions

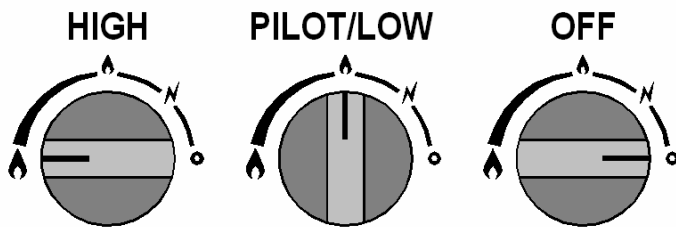


Fig. 3 Fixings

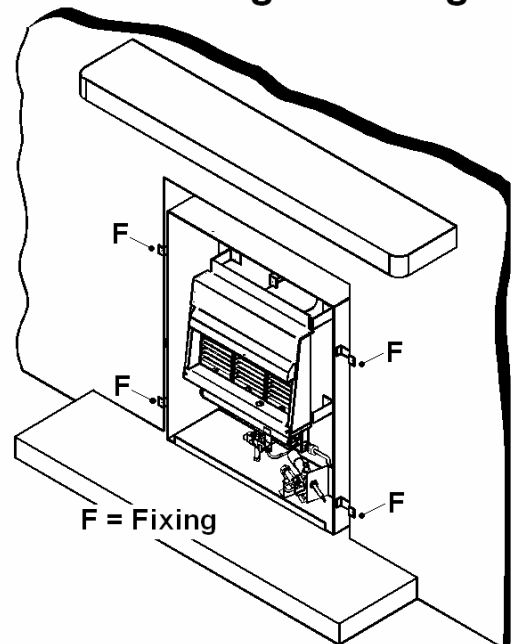


Fig. 4 Shelf & Hearth Position

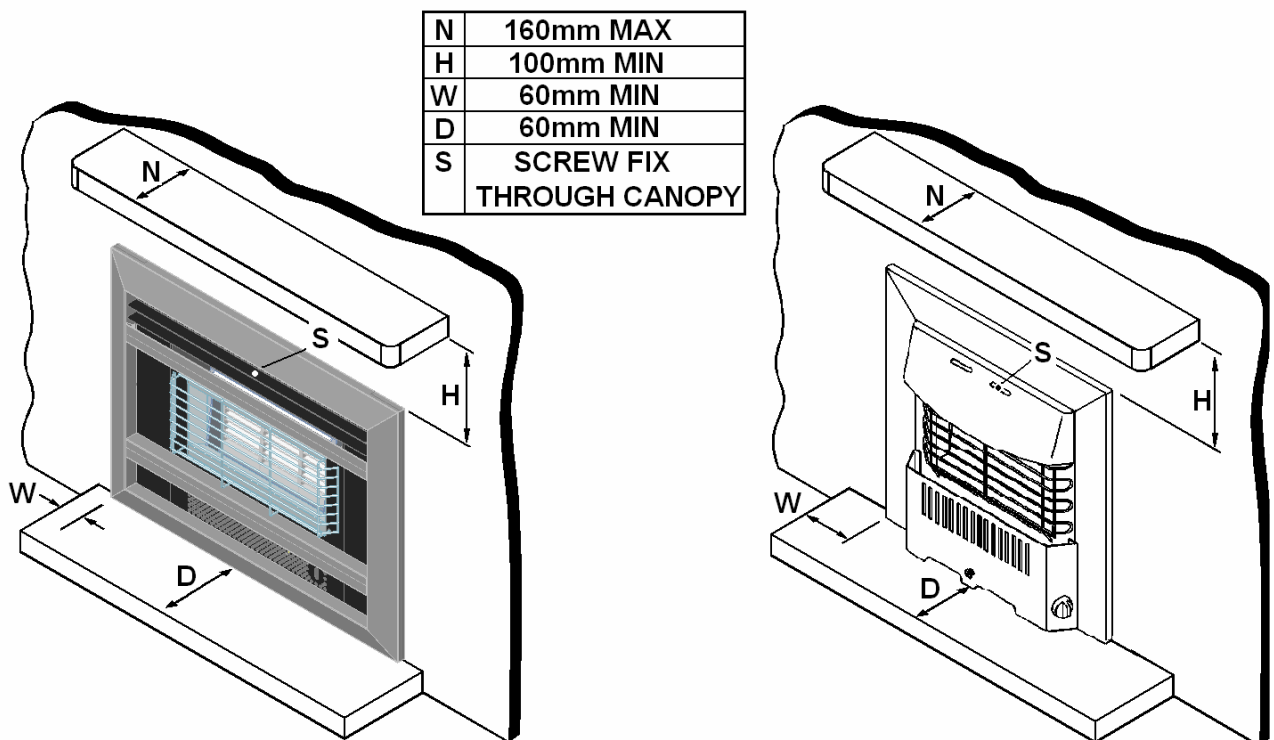
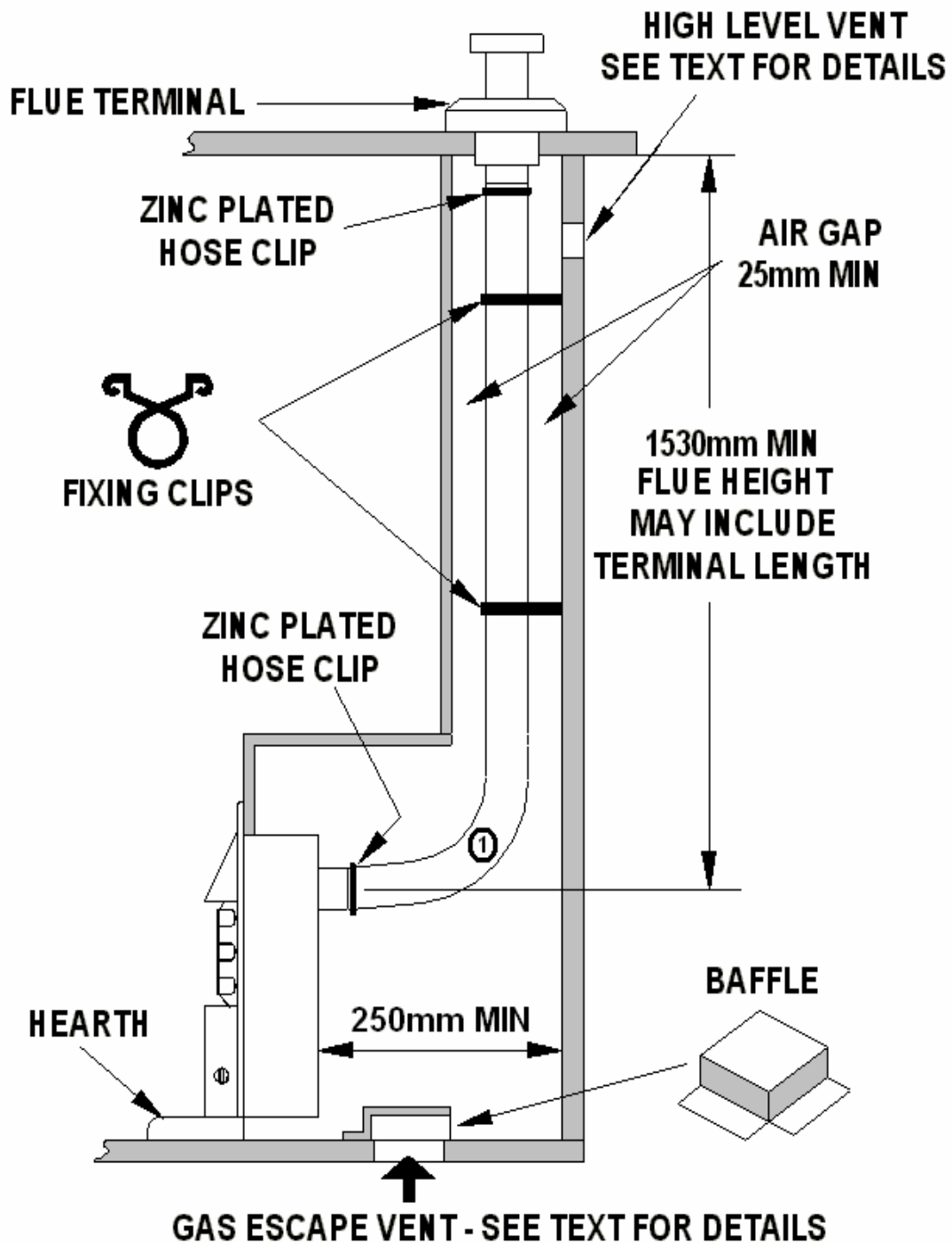


Fig. 5 DUCTING INSTALLATION



- ① INSPECT THE PIPE AFTER FORMING THE BEND TO VERIFY THE FORM AND CONTINUITY OF SPIRAL SEAM

Fig 6 - Connections

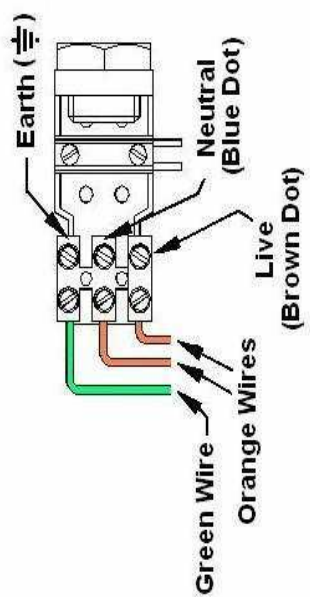


Fig 8 - Spillage Test

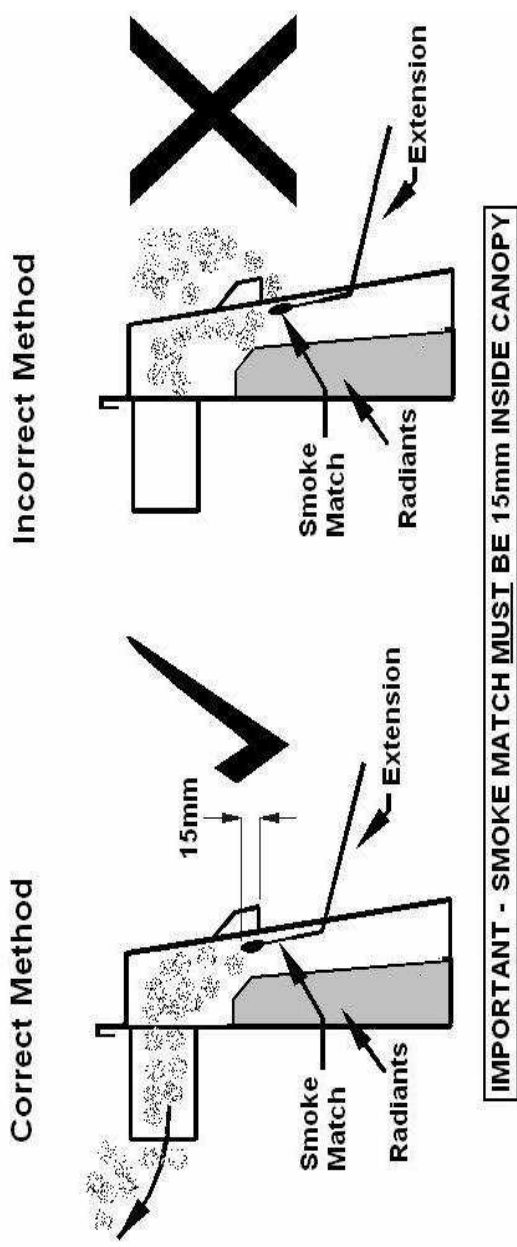


Fig 7 - Radiant Fixing

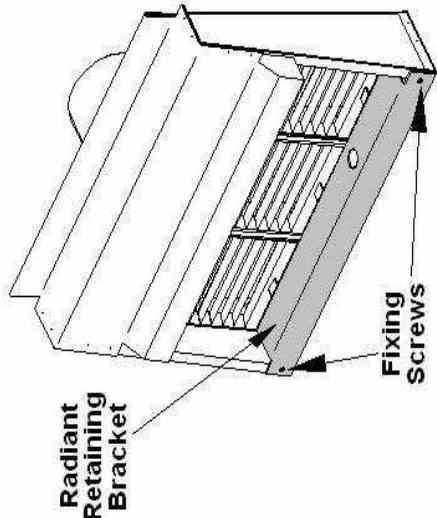
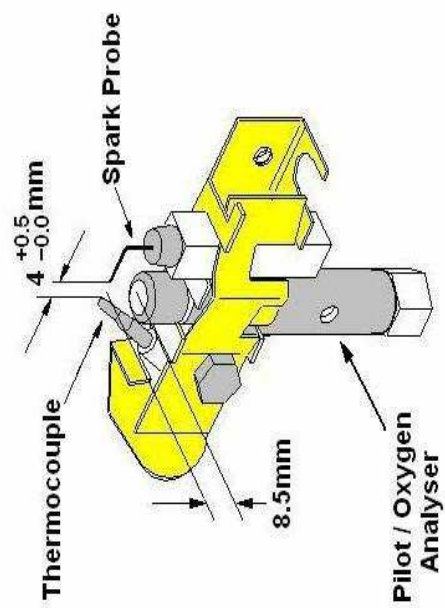


Fig 9 - ODS System



CONTENTS

User's Section	
Specification	6
Introduction	7
Operating the Fire	8 - 9
Installation and Servicing	
Installation Dimensions	2 - 5
Specification	6
Installation Instructions	10 - 13
Maintenance & Servicing	14

SPECIFICATION

Model Range	FI20000	FI20000NG	FI21000	FI22000	FI22000NG	FI23000	FI23000NG
Model Name	SOLARIS	SOLARIS	SOLARIS	MAGNA	MAGNA	SOLARIS LS	SOLARIS LS
GAS TYPE	LPG	NATURAL GAS	LPG	LPG	NATURAL GAS	LPG	NATURAL GAS
Size, mm	H x W x D	H x W x D	H x W x D	H x W x D	H x W x D	H x W x D	H x W x D
Fire Front	574X614X75	574X614X75	574X614X131	639X621X75	639X621X75	574X758X60	574X758X60
Rear Box	509X484X141	509X484X141	509X484X141	509X484X141	509X484X141	509X484X141	509X484X141
Fire Opening	Min 538 x 540 Max 570 x 540	Min 538 x 540 Max 570 x 540	Min 538 x 540 Max 570 x 540	Min 538 x 540 Max 570 x 540	Min 538 x 540 Max 570 x 540	Min 538 x 540 Max 570 x 540	Min 538 x 540 Max 570 x 540
Total Input	3.8kW	3.8kW	3.8kW	3.8kW	3.8kW	3.8kW	3.8kW
Injector Size	Sabaf 1.0mm	Sabaf 1.4mm	Sabaf 1.0mm	Sabaf 1.0mm	Sabaf 1.4mm	Sabaf 1.0mm	Sabaf 1.4mm
Ignition	Integral Piezo	Integral Piezo	Integral Piezo	Integral Piezo	Integral Piezo	Integral Piezo	Integral Piezo
Voltage	N/A	N/A	230V ~ 50Hz	N/A	N/A	N/A	N/A
Nox Rating (Highest Butane) :- 192.37 mg/kWh All Models							

Gas Category

CAT I₃+ (28-30/37)

BUTANE (G30) 28-30 mbar

PROPANE (G31) 37 mbar

CAT I₃ B/P (30)

BUTANE (G30) 30 mbar

PROPANE (G31) 30 mbar

CAT I₂ H (20)

NATURAL

GAS (G20) 20 mbar

IMPORTANT

- **THIS APPLIANCE IS SUITABLE FOR USE WITH EITHER LIQUIFIED PETROLEUM GAS (LPG) OR NATURAL GAS AS SPECIFIED AND SHOULD NOT BE USED ON ANY OTHER GAS**
- **USE ONLY THE GAS PRESSURES SPECIFIED ABOVE**

INTRODUCTION

This appliance shall be installed in accordance with the local and national/European standards in force. Particular attention shall be given to the requirements regarding ventilation. Read the instructions before installing or using this appliance.

Failure to install the appliance correctly could invalidate any warranty or liability claims and lead to prosecution. Please refer to the methods of installation within this handbook.

Our policy is one of continuous development and improvement. Specifications and illustrations may change subsequent to publication.

PROVISION OF VENTILATION

The use of a gas appliance results in a production of heat and moisture in a room in which it is installed. Ensure the room is well ventilated, keep natural ventilation holes open or install a mechanical ventilation device, (mechanical extractor fan).

Prolonged intensive use of the appliance may call for additional ventilation, for example opening a window, or more effective ventilation, for example increasing the level of mechanical ventilation where present.

The room containing the fire should have an air supply in accordance with local and national/European standards.

POSITION

This appliance must be positioned free from draughts, which may affect the combustion, and in a manner that will prevent the accumulation of unburnt gas. When in use ensure that air vents are not inadvertently blocked or shut off.

IMPORTANT

- **THIS APPLIANCE IS SUITABLE FOR USE WITH EITHER LIQUIFIED PETROLEUM GAS (LPG) OR NATURAL GAS AS SPECIFIED AND SHOULD NOT BE USED ON ANY OTHER GAS**
- **AN APPLIANCE FOR LP GAS SHALL NOT BE INSTALLED IN A ROOM OR INTERNAL SPACE BELOW GROUND LEVEL. E.G. IN A BASEMENT.**

OPERATION

Ensure the gas cylinder is turned on.

In the event of a gas smell, turn off at the cylinder and contact supplier.

IGNITION

- Press in the control knob (**See Fig. 2 - Control Positions**)
- Rotate anti-clockwise, until the spark igniter clicks twice.
- Ensure the pilot and main burner flames are established.
- If ignition fails then return the knob to '**OFF**' position and repeat the above sequence holding the knob depressed for longer.
- Once the pilot and main burner are lit, keep the knob pressed for approximately fifteen seconds then release.

IMPORTANT

IF FOR ANY REASON THE FLAME SHOULD GO OUT DO NOT ATTEMPT TO RE-IGNITE THE BURNER FOR AT LEAST THREE MINUTES.

OPERATION

- Light the fire (follow ignition sequence above)
- After ignition the setting of the fire is on **LOW** (**See Fig. 2 - Control Positions**)
- To adjust to **HIGH** setting, rotate the knob fully anti-clockwise until it comes to a stop.
- To turn **OFF**, rotate the knob fully clockwise until the line on the knob is adjacent to '**O**' on the control panel.

IMPORTANT

AN ODS SYSTEM (OXYGEN DEPLETION SENSOR) IS FITTED AS STANDARD, WHICH WILL EXTINGUISH THE FLAME IF EVACUATION OF THE COMBUSTION PRODUCTS IS INTERRUPTED. IF REPEATED OPERATION OF THE ODS SYSTEM OCCURS, TURN OFF THE GAS AND CONTACT YOUR DEALER.

OPERATION

The burner on this appliance has fixed aeration and no adjustment is required. Depending on the gas being used, the burners should flame as follows: -

- Propane - The flames should burn quietly with a blue/green colour with no sign of yellow tips.
- Butane - Normally on initial lighting, a small amount of yellow tipping will occur and then slightly increases as the burner heats up.
- Natural gas - The flames should burn with a blue/green colour with no sign of yellow tips.

DO'S AND DON'TS

- DO read the user instructions carefully before using the appliance for the first time.
- DO allow the fire to burn off for one hour to expel any smells or lubricants.
- DO clean the appliance regularly with a damp cloth, only when the fire has cooled down.
- DO check that controls are in the off position when finished.
- DO have the appliance serviced at least once a year.
- DO check periodically that the air vents and flue are clear from obstructions.

- DO NOT allow children near the fire when in use.
- DO NOT use abrasive cleaners or powders that will scratch the surfaces of the fire.
- DO NOT during operation touch any parts of the fire other than the control knob.

LEAKS

If a smell of gas becomes apparent, the supply should be turned off at the cylinder **IMMEDIATELY**. Extinguish naked lights including cigarettes and pipes. Do not operate electrical switches. Open all doors and windows to disperse any gas escape. Butane/Propane gas is heavier than air; any escaping gas will therefore collect at a low level. The strong unpleasant smell of gas will enable the general area of the leak to be detected. Check that the gas is not escaping from an unlit appliance

IMPORTANT

- **NEVER CHECK FOR LEAKS WITH A NAKED FLAME**
- **NEVER USE SOAPY WATER FOR LEAK DETECTION, SALT AND OTHER INGREDIENTS IN SOAP CAN SERIOUSLY DAMAGE THE PRECISION COMPONENTS OF THE FIRE**

INSTALLATION

Regulations and Standards

In your own interest of safety, it is law that all gas appliances are installed and serviced by competent persons. CORGI (Confederation for the Registration of Gas Installers) registered installers undertake to work to safe and satisfactory standards.

Failure to install the appliance correctly could invalidate any warranty or liability claims and lead to prosecution. This appliance shall be installed in accordance with the local and National/European standards in force. Particular attention shall be given to the requirements regarding ventilation. Read the instructions before installing or using this appliance.

Location of Appliance

This appliance may be installed in a kitchen/kitchen diner but NOT in a room containing a bath or a shower. LP gas appliances must not be fitted below ground level. e.g. in a basement.

Ventilation

This appliance is suitable for installation into Holiday Homes only. In all cases the national standards with regard to ventilation for the particular vehicle into which the appliance is to be installed must be adhered to.

The flue cavity **MUST** be ventilated, either by a flue terminal with integrated vent or by a vent in the wall as detailed in Fig. 5. The gas escape vent should be positioned as detailed in Fig. 5 and **MUST** be baffled to prevent direct draught to the fire.

The vents **MUST** comply to the following dimensions:-

High Level Vent	5000 sq mm (Minimum Size) 6000 sq mm (Maximum Size)
Gas Escape Vent	5000 sq mm (Minimum Size) 14400 sq mm (Maximum Size)

IMPORTANT

- THIS APPLIANCE **MUST** BE INSTALLED INTO A VENTILATED ENCLOSURE WHICH MEETS THE SPECIFICATION DETAILED WITHIN THIS HANDBOOK. HOLES FOR CABLES AND PIPES MUST BE SIZED TO MINIMIZE AIR LEAKAGE BETWEEN COMPARTMENTS.
- THE GAS SUPPLY INPUT PRESSURE TO WHICH THIS APPLIANCE IS CONNECTED, **MUST** NOT RISE OR FALL BY MORE THAN

2.5 MBAR (BUTANE/PROPANE)
1.0 MBAR (NATURAL GAS)

FROM NOMINAL, WHEN ALL CONNECTED APPLIANCES ARE OPERATED SIMULTANEOUSLY.

INSTALLATION

POSITION

All models must be installed and positioned on a hearth with a minimum distance of 60mm from the outside of the surround trim to the outside of the hearth. The hearth should also extend a minimum of 60mm from the front of the grate.

The Solaris LS (Landscape Fire) is also designed to be installed without a hearth in a raised position. When located in a raised position the base of the fire **MUST** be a minimum distance of 100mm from the floor.

If the fire is to be installed with a shelf/curtain above, the shelf/curtain must be a minimum of 100mm above the surround trim and not exceed 160mm in depth. As shown in fig. 4.

Fires produce high levels of heat therefore materials for the hearth and fire surround should be verified to ensure their suitability for use in close proximity to the fire. This should be undertaken, verifying that the temperature rise above ambient, does not exceed the maximum allowable temperature, to avoid damage, as detailed within the suppliers material specification.

This appliance must be positioned free from draughts, which may affect the combustion, and in a manner that will prevent the accumulation of unburnt gas. When in use ensure that air vents are not inadvertently blocked or shut off.

FIXINGS

The aperture for the appliance is 570mm high by 540mm wide, and the appliance is fixed as shown in fig 3. The flue pipe must be fixed to the rear outlet of the appliance and to the flue terminal by the use of the worm drive clips provided.

Where installations do not allow a vertical rise of the flue pipe directly behind the appliance the flue pipe **MUST** be incline towards the flue terminal rising to vertical as soon as possible. If the appliance cabinet is unusually deep then the flue pipe must rise with a minimum gradient of 10°.

Fire surround must fit flush against fire front and provide rigid mounting for the fire securing brackets.

IMPORTANT

- **INLET COMPRESSION JOINT – ASSEMBLE NUT AND OLIVE ONTO PIPE, PUSH AND HOLD PIPE FULLY INTO HOUSING, TIGHTEN NUT BY HAND. CONTINUE HOLDING PIPE IN POSITION, TIGHTEN NUT BY SPANNER 1 FULL TURN (6 FLATS). CHECK FOR LEAKS. IF NECESSARY NUT CAN BE TIGHTENED A FURTHER 2 FLATS TO ACHIEVE SEAL. MAX TIGHTNESS 8 FLATS**
- **IF THE JOINT CANNOT BE MADE GAS TIGHT, THE NUT, OLIVE AND PIPE MUST BE REMOVED AND REPLACED WITH NEW PARTS.**
- **THE FLUE PIPE IS SUPPLIED WITH THE FIRE, AND IS THE ONLY PIPE THAT SHOULD BE USED. THE PIPE IS Ø75MM INTERNALLY, AND MUST BE SECURED IN PLACE WITH THE WORM DRIVE CLIPS PROVIDED.**
- **THE FLUE TERMINAL (COWL) IS SUPPLIED WITH THE FIRE, AND IS THE ONLY TYPE THAT CAN BE USED WITH THE FIRE.**

INSTALLATION

GAS CONNECTION

The connection is made to an 8mm OD inlet pipe through the middle of the rear case of the fire. It is recommended that the fire be connected by copper tubing using a compression fitting. Rubber tubing must **NOT** be used.

ELECTRICAL CONNECTION

MODEL FI21000 ONLY

Fuse Rating – Max 5A

Access is gained by removing the terminal block cover in the bottom left hand corner of the appliance. For ease and positive identification of connections, remove the locknut off the terminal block and connect as indicated in fig 6. Replace locknut and cover to complete the installation

IMPORTANT

- **AFTER INSTALLATION THE APPLIANCE MUST BE TESTED FOR SOUNDNESS.**
- **MODEL FI21000 ONLY - THIS APPLIANCE MUST BE EARTHED**

OPERATIONAL TESTS

1. Ensure the gas cylinder is turned on.
2. Check the ignition functions correctly and the pilot remains lit – see page
3. Turn to high rate, check function correct. – see page
4. Turn off, check flame extinguished and knob position correct – see page
5. Test For Spillage

**THIS TEST MUST BE CARRIED OUT BEFORE THE INSTALLATION
IS PASSED OVER TO THE CUSTOMER.**

- Ensure all doors and windows to the room containing the fire are closed.
- Ignite the fire and turn on to full rate as previously described.
- After a period of between ten and fifteen minutes, a lighted smoke match should be held adjacent to the fire outlet, central to the middle radiant, halfway between the radiant and the front of the radiant housing canopy as shown in fig 8. Use an extension tube to hold the match. Ensure that smoke is drawn into the fire outlet.

INSTALLATION

- If smoke is drawn into the outlet then the flue assembly is working correctly, if not then check the following points:-
 - The flue pipe has been properly sealed.
 - That there is not a blockage in either the flue pipe or terminal.
- The test should be repeated after an interval of at least a further fifteen minutes and if still unsatisfactory advice should be sought from the supplier.
- If an extractor fan is fitted in the same or adjacent room as the fire, then the test should be carried out with the fan switched on.

FINAL CHECKS

1. Ensure all removable panels are securely attached.
2. Clean off any marks or dust that may have occurred during installation.
3. Ensure installation and user instructions are available for the owner.

IMPORTANT

- **DO NOT OVER TIGHTEN GAS JOINTS.**
- **WHEN REMAKING THE JOINT, HAND TIGHTEN NUT ONTO OLIVE, JOINT CAN THEN BE MADE GAS TIGHT BY TURNING NO MORE THAN 2 FLATS USING A SPANNER**

MAINTENANCE & SERVICING

This appliance needs little maintenance other than cleaning. All parts should be cleaned using either a duster or a damp cloth. Do not use abrasive cleaners, steel wool or cleansing powders. The control knob is a push fit and can be removed for cleaning.

**ALL SERVICING MUST BE CARRIED OUT BY AN APPROVED COMPETENT PERSON
AFTER EACH SERVICE THE APPLIANCE MUST BE CHECKED FOR GAS SOUNDNESS**

IMPORTANT

- **AT LEAST ONCE EVERY 12 MONTHS THE FIRE, FLUE & TERMINAL SHOULD BE CHECKED FOR CORRECT OPERATION.**

1. Remove front cover from appliance

Remove the push fit control knob. Remove fixing screw located through slot in the hood (fig. 4). Pull top of cover away from fire and lift off.

2. Change the lamp (Model FI21000 Only).

Unplug lamp unit before replacing the lamp

Remove front cover (1) and change the lamp.

3. Remove appliance from housing

Remove front cover (1). Disconnect gas supply. Remove four fixing screws from fixing brackets (fig. 3). Pull fire out of opening until access to flue pipe is gained. Loosen hose clamp and pull flue pipe away from fire.

4. Control replacement

Remove front cover (1). Disconnect gas supply. Unscrew burner pipe, pilot pipe and thermocouple and remove from the control. Disconnect spark ignition lead from spark electrode by pulling. Unscrew locknut from mounting bracket and remove control.

5. Burner replacement

Remove front cover (1). Disconnect gas supply. Unscrew the screw that attaches the pilot assembly to the burner. Remove the locknut from the injector assembly. Then remove the two screws, which attach the burner to the radiant housing. Remove the burner.

6. Burner injector replacement

Remove front cover (1). Disconnect gas supply. Remove the locknut from the injector assembly. Disconnect burner pipe from control tap and remove pipe/injector.

7. Thermocouple replacement

Remove front cover (1). Disconnect gas supply. Disconnect thermocouple from control tap. Remove screw and retaining flange from pilot assembly. Remove thermocouple.

8. ODS / pilot replacement

Remove front cover (1). Disconnect gas supply. Disconnect pilot pipe from control tap. Remove screw and retaining flange from pilot assembly. Remove ODS / pilot.

9. Radiant replacement

Remove front cover (1). Remove fixing screws shown in fig 7. Remove the radiant retainer. Remove radiants.