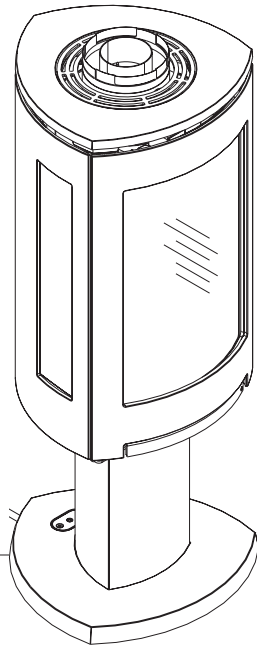


Jøtul GF 373 BF
Balanced Flue Gas Stove



Installation and Operation Instructions

WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS**
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instruction.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

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**THIS OWNER’S MANUAL PROVIDES
INFORMATION TO ENSURE SAFE
INSTALLATION AND EFFICIENT,
DEPENDABLE OPERATION OF YOUR STOVE.**

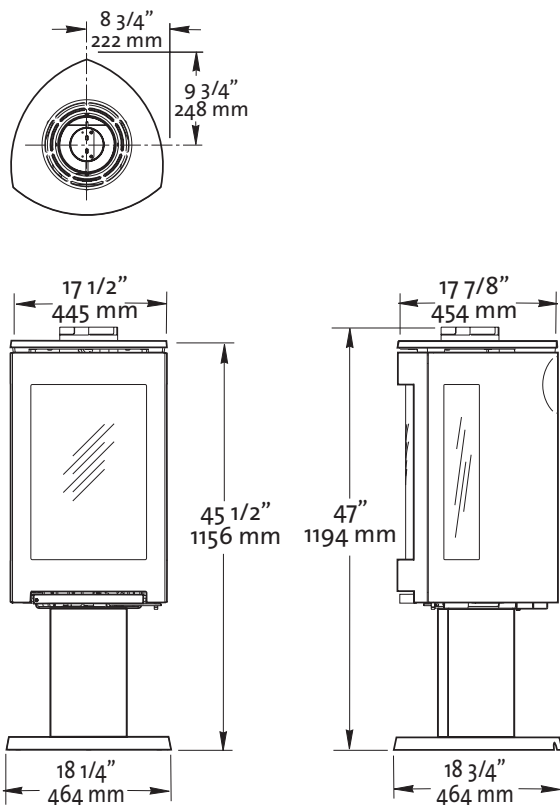
**PLEASE READ THESE INSTRUCTIONS
IN THEIR ENTIRETY AND MAKE THEM
AVAILABLE TO ANYONE USING OR
SERVICING THIS GAS STOVE.**

Jøtul GF 373 BF

Technical Information

Material: Cast iron /steel
 Finish: Matt Black paint
 Flue outlet: Top
 Vent system: DV- Balanced flue Muelink & Grol
 Weight: Approx. 260 kg (product)
 PIN: 0558CN1362
 Product dimensions: See fig. 1
 Countries of Destination: GB, IE
 Appliance Category: II2H3P
 Gas Types and Pressures:
 Natural Gas - G20 at 20mbar¹
 LPG (Propane) G31 at 37mbar²
 State of Adjustment: I2H or I3P

Figure 1. Product dimensions.



Countries of Destination	GB, IE	
Appliance Category	II _{2H3P}	
Gas Types	NG (G20) ¹	LPG (G37) ²
State of Adjustment	I _{2H}	I _{3P}
Supply Pressure (mbar)	20	37
Nominal Heat Input (Net, kW)	6.9	7.0
Burner Pressure at Full Rate – Hot (mbar):	9.2	26.7
Efficiency (Net %):		
Horizontal Termination (Net, %)	82.2	5.7
Vertical Termination (Nett %)	72.3	5.0
Maximum Heat Output (Net %):		
Horizontal Termination (Net, kW)	78.4	5.5
Vertical Termination (Nett %)	72.7	5.1
Main Burner Injector Marking	40	1.50
Pilot Injector Marking	51	30
Maximum Gas Consumption at Full Rate: (m ³ /h at 15°C 1013.25mbar)	0.729	0.286
Maximum Gas Consumption at Full Rate: (kg/h at 15°C 1013.25mbar)	-	0.543
Efficiency Class	2	2
NOx Class	4	5
Notes:	<p>¹ The appliance is supplied at the default factory settings for Natural Gas (G20 at 20mbar).</p> <p>² The appliance will have this setting following conversion to LPG (G31 at 37mbar).</p>	

General Information

- This product has been approved to the European Standard EN 613:2000 and is in accordance with EC Gas Appliances Directive 2009/142/EC (ex-90/396/EEC).
- Before installation, ensure that the local distribution conditions (identification of the type of gas and pressure) and the adjustment of the appliance are compatible.
- This product, the Jøtul GF 373 BF 2, may only be used with Natural Gas G20 or be converted for the use of Propane G37.
- Assembly, installation and maintenance must be performed by a qualified person in accordance with the instructions for Assembly, Installation, and Use enclosed with the product. The installation may only be operated after it has been inspected by a qualified person and a certificate of completion has been issued.
- The Installation should be carried out in accordance with the Building Regulations which include the following standards for installation and maintenance of flues, ventilation and installation of Gas Fires. For UK BS5440:1, BS5440:2, BS5871 for Republic of Ireland IS813, ICP3, IS327
- The appliance is designed as a freestanding unit and no additional fixing methods need apply.
- This appliance is intended for use on a gas installation with a governed meter.

Safety Precautions

- This appliance must be installed in accordance with the rules in force. Consult instructions before installation and use of this appliance.
- The appliance is designed as a heating device and all components will become hot (excluding control knob, control cover and control switch). Care should be taken not to touch unit when it is in operation.
- **WARNING! If you detect an odour of gas:**
 - Do not light the Stove or any other appliance.
 - Do not use electrical switches or the telephone.
 - Contact your gas supplier's emergency number.
- The appliance must only be installed and repaired by qualified personnel. Always turn off the gas supply before service.
- The appliance must be inspected following installation and at least once a year by qualified personnel.
- The appliance must only use gas of the correct type and pressure. See technical data for more details.
- If Propane G31 is to be used, the appliance must be converted using the conversion instructions and kit supplied by Jøtul. This is only to be installed by qualified personnel.
- It is permitted to install the appliance against a wall made of combustible material with the clearances specified in figs. 2-4.
- The minimum clearance to combustible material in front of the appliance is 600 mm.
- **WARNING:** Curtains may not be placed within 600 mm above the appliance.
- Never store combustible gas or liquid in the same room with the appliance.
- **WARNING:** Never use the appliance if the front glass panel has been removed, is cracked, or is open.
- Replacement of the glass should be done by a licensed or qualified service person. Only remove glass for routine service. Always handle glass carefully.
- Do not burn solid fuel in the appliance.
- Do not place combustible material on or near the appliance, as the appliance becomes hot.
- This appliance becomes hot in use so it advisable to keep young children, the aged, or infirm, and animals at a safe distance using a fireguard conforming to BS6539 or BS6778 to provide extra protection.

Installer Information

Minimum clearances from combustible material to vent system

Horizontal vent pipe:

From the top of the vent pipe to combustible material: 50mm
From the side and the bottom of the vent pipe to combustible material: 25mm

Vertical vent pipe: From all sides of the vent pipe to combustible material: 25mm

- Clearances for position of flue vent system
- Clearance under porch, covered entrance, storey or balcony, that has at least two open sides under the floor - 300 mm
- Clearance to window or door that can be opened - 300 mm
- Clearance to permanently closed window, recommended clearance to avoid condensation on the window - 300 mm
- Vertical clearance from vent to roof soffit - 300 mm
- Clearance to exterior corner - 230 mm
- Clearance to interior corner - minimum 150 mm
- Clearance surrounding gas meter/installed regulator in horizontal direction from the centre of the regulator - 900 mm
- Clearance to gas service cabinet with main shutoff valve - 900 mm
- Clearance to air channels or air supplies to all appliances - 300 mm
- Clearance to mechanical air channel - 1.8m
- Clearance from public walkway or motor road – 2.1m

Note! Do not install the vent over a walkway or motor road, which is located between two individual family houses and is used by both households.

Position of Outdoor Exhaust Hood

- If the clearance from ground level to the terminal exhaust hood is less than 3 m, the hood must be protected by a wire mesh guard.
- The clearance over the terminal must be minimum 300mm to protruding parts of the building.
- Do not place the exhaust hood under any ventilation opening.
- Do not place the exhaust hood closer than 300 mm from the side/above any ventilation opening.
- Do not place the exhaust hood closer than 300 mm to opening window.
- * Clearance from ground level, balcony or similar to the exhaust hood must be at least 300 mm.
- Do not place the gas cylinder closer to the exhaust hood than 1 metre.

Firewall Requirements

The stove may be placed directly against a wall made of combustible material with the clearances specified in figs. 2 - 4. Be sure to maintain adequate space for the vent system behind the stove and for the full height/length of the pipe.

Requirements for the Floor Plate

The stove may stand on a wooden floor. A floor plate of non-combustible material is required if the stove is to be placed on carpet, vinyl, linoleum or other combustible material.

Position of Appliance

Minimum Clearances

- Rear: 3" (76 mm) - from Rear of the unit
- Ceiling: 16 3/4" (425 mm) - from Stove Top
- Corner: 5" (127 mm) - from Stove Top
- Sides: 7" (178 mm) - from Stove Top
- A combustible shelf may not be placed within 520 mm of the top of the appliance.

Minimum Clearances from the Vent Pipe to Combustibles

Horizontal Run:

- Off the top of the pipe - 2" (51 mm)
- Alcove - 7" (178 mm)
- Off the sides and bottom - 1" (25 mm)

Vertical Run:

- All sides - 1" (25 mm)

Alcove Specifications

- Maximum Alcove Depth: 21 3/4" (55.2 cm)
- Minimum Alcove Width: 31 1/4" (79.3 cm)
- Minimum Ceiling Height: 62 1/4" (158.1 cm)

Figure 2.

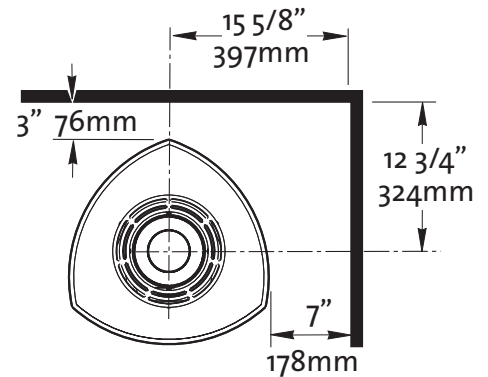
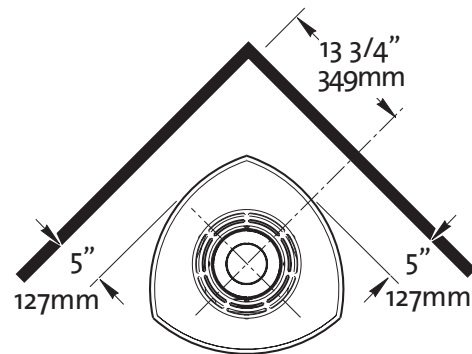
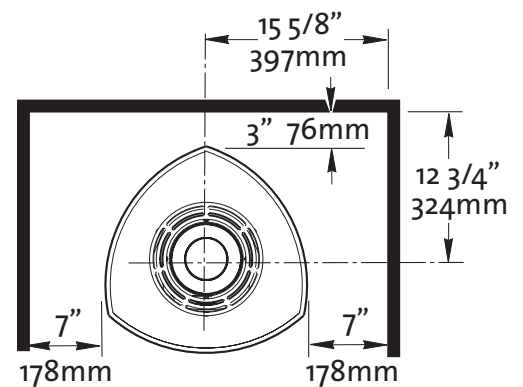


Figure 3.



Corner Installation

Figure 4.



Vent system

Note! During the installation of the vent, it is important to adhere to national and local regulations that apply. The system must only be installed with a vent system approved by Jøtul. Only one single stove may be connected to the vent system.

The vent system must terminate outdoors.

The vent system is a balanced system: 100% of the combustion air is supplied from outside the house and all exhaust gas is returned to outside the house. The vent pipe is a coaxial pipe in which the combustion air is supplied through the outer pipe and the exhaust gas returned through the inner pipe.

Flueing options

The GF373 BF is capable of a variety of flueing configurations using an assortment of balanced flue components and accessories from Muelink and Grol. See fig. 24, page 22.

1. Flue arrangement for horizontal termination

When a horizontal run of 600mm or less is required there should be a vertical rise first from the stove of 500mm (max 10m) for Natural gas installations and 1m (max 10m) for LPG.

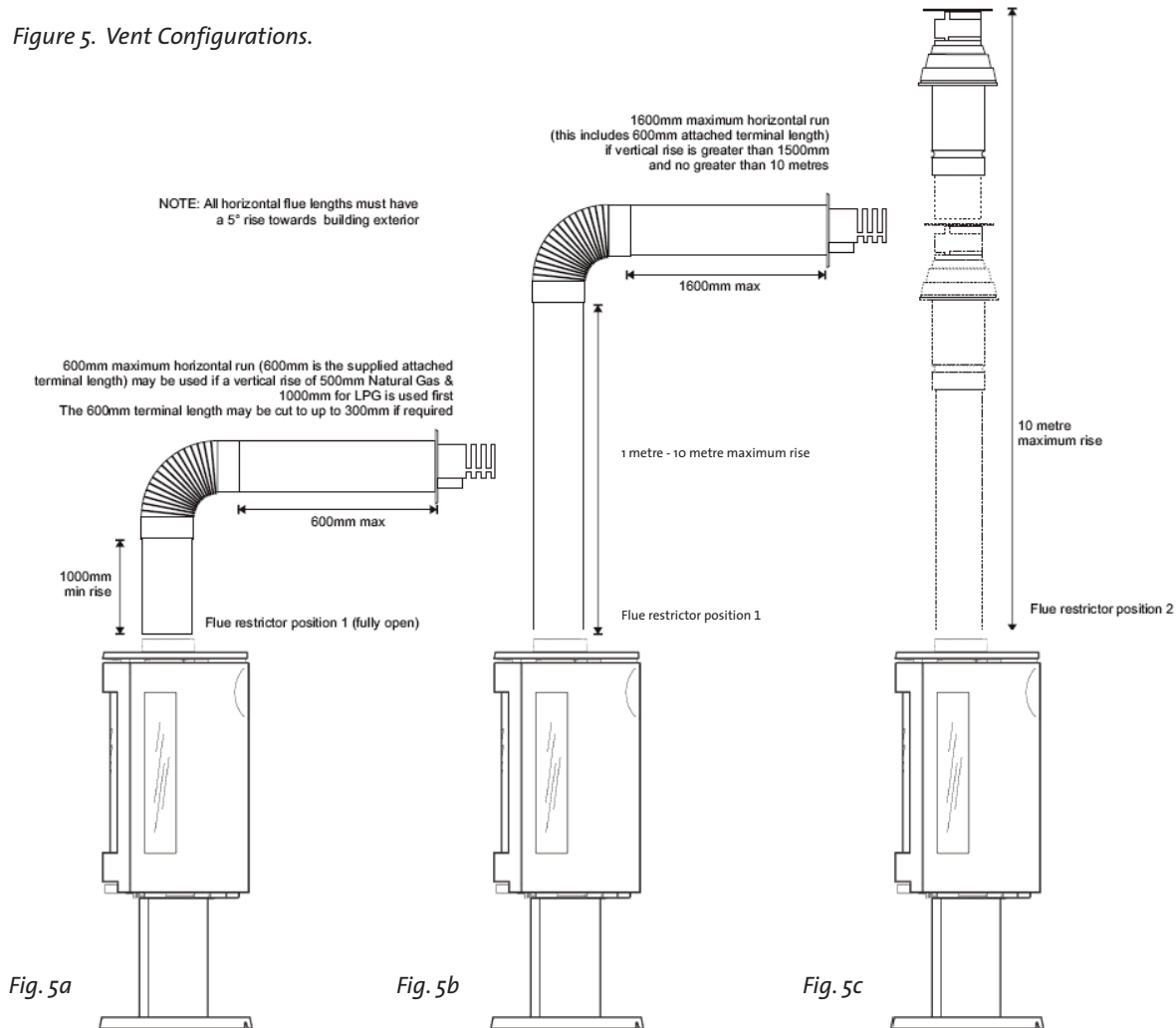
For horizontal flue runs greater than 600mm and less than 1600mm a vertical rise first from the stove of 1m (max 10m) for Natural and LPG should be used. The maximum horizontal flue length for the GF373 BF is 1600mm (this can be seen as the 600mm which is attached to the terminal and the addition of a 1m length)

2. Flue arrangement for vertical termination

The flue may be installed with a vertical termination. The minimum length of a vertical flue termination should be a 1m length plus the vertical flue terminal.

The maximum vertical flue length is 10m plus the vertical flue terminal.

Figure 5. Vent Configurations.



Exhaust Restriction

The GF373 BF is equipped with an Exhaust Restrictor Plate which enables you to regulate the flow of exhaust gas. The plate prevents overly strong draft that can cause poor combustion and weak flame picture.

The Restrictor Plate is situated above the Top Baffle plate and is supplied from the factory in Position 1, (fully open).

The Exhaust Restrictor should be set in the following positions for each flue configuration. See fig. 5.

- All installations that incorporate horizontal termination the exhaust restrictor should be left in Position 1 (fully open) as factory set. Fig. 5a.
- All vertical installations up to 2m plus the vertical terminal length should be left in Position 1 (fully open) as factory set. Fig. 5b.
- All installations above 2m plus the vertical terminal length should have the Exhaust Restrictor moved to Position 2. Fig. 5c.

Adjusting Exhaust Restrictor Plate

1. Remove top casting and decorative trim pieces from top of unit.
2. Open Door.
3. Remove 4 screws and remove firebox glass frame.
4. Remove 2 #8 sheet metal screws from top of burn chamber. Fig. 6.
5. Inside firebox, remove 2, #8 screws to uninstall the exhaust restrictor Fig. 7.
6. Slide plate to the rear and reattach using the secondary holes.
7. Reassemble baffle and other components.

Figure 6. Top Baffle removal.

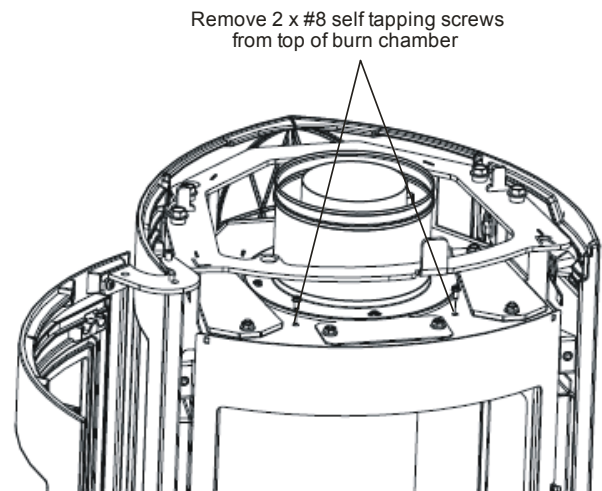
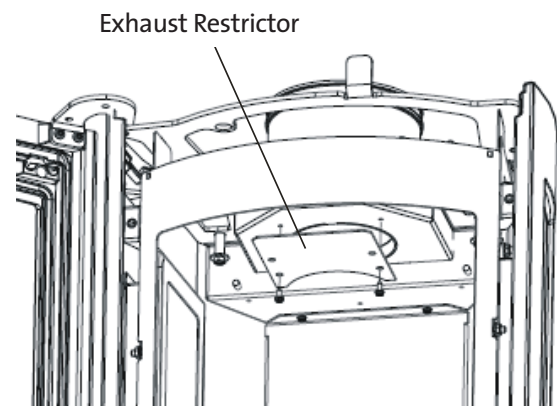


Figure 7. Adjust the Exhaust Restrictor for the appropriate vent configuration.



Assembly Prior To Installation

The firebox contains a propane Fuel Conversion Kit and a Log Set that includes a bag of textured Ember Stones.

1. Prior to installing the Log Set or Fuel Conversion Kit, remove the skamol panel shipping bracket from the rear burner skirt as shown in Fig. 10.
2. If propane fuel is to be used, install the LP Fuel Conversion Kit before installing the Log Set. See pages 11-12.

Log Set Installation

WARNING: The ceramic fuel effect (logs) should only be arranged by qualified service engineer and under no circumstances should extra elements be added to the fuel effect, (i.e. extra logs or Coals) or the fuel bed be changed.

Use gloves to handle log parts.

1. Engage the Bottom Log with the two center pins in the burner plate. Fig. 9.
2. Lean the Right Log up against the upper right corner of the firebox and engage its toe with the indentation in the Bottom Log. Fig. 10.
3. Engage the Left Log with the rear burner plate pin. Fig. 11.

Fig. 9.
Install Bottom
Log.

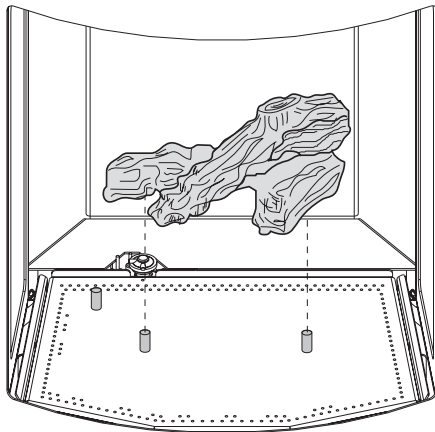


Fig. 10.
Install Right Log.

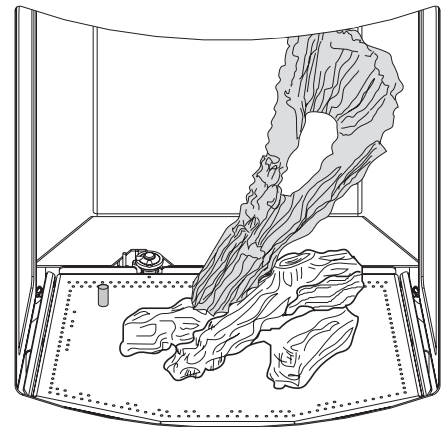


Fig. 11.
Install Left Log.

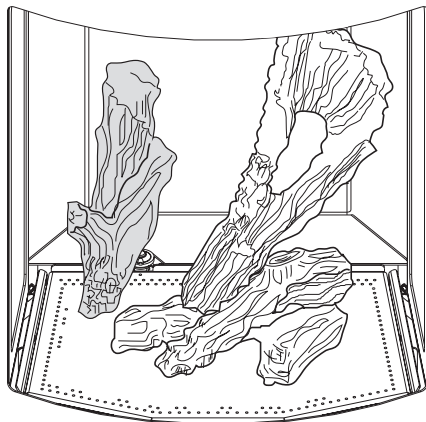


Fig. 12.
Install Ember
Stones.

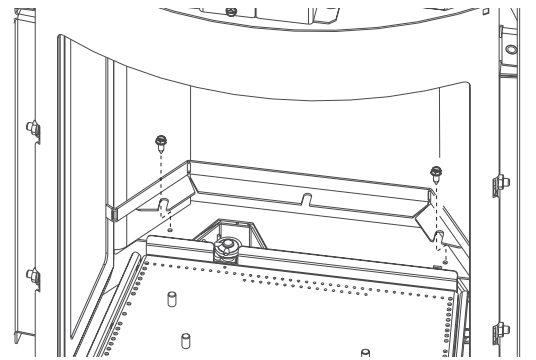
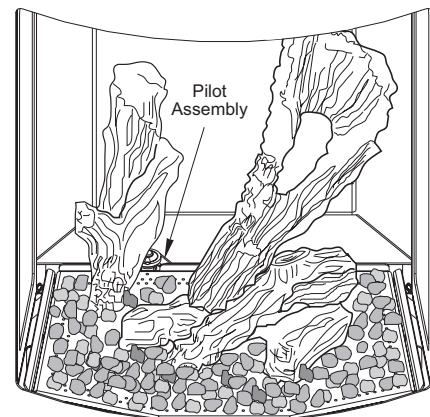


Fig. 8. Shipping retainer bracket removal.

4. Evenly spread the ember stones over the burner plate. **DO NOT POSITION THE EMBER STONES TO BLOCK THE PILOT ASSEMBLY AREA.** The carry-over ports directly in front of the pilot must remain clear for proper ignition. Embers should be positioned in front of - not over - the rear burner ports. Fig. 12.
5. Reinstall the glass frame using the 4 mm hex key and socket head screws previously removed.

Gas Installation

Gas installation must only be performed by qualified personnel. It is important to adhere to national and local regulations that apply. In the UK these include BS5440 Parts 1 and 2, and BS5871 in Ireland.

- The LPG gas container must be stored/installed according to national regulations. The gas container must have a pressure regulator that reduces the pressure to the required level. See technical data on page 4 for gas type and pressures before connecting to the appliance.
- The appliance must not be exposed to pressure above 55 mbar (5,5 kPa) during pressure testing.
- Gas tubes must be made of steel (DIN 2448/1629, DIN 2458/1626, DIN 2440, DIN 2441) or copper (DIN 2110).
- For practical reasons, the vent system should be installed before the appliance is connected to the gas supply.
- The stove is supplied with a 3/8" to 8mm compression union. The gas valve has a 3/8" NPT threaded connection.
- All tube connections must be approved and the gas pipeline must have an approved shutoff valve. Only use approved sealing agent (tape) at all the pipe connections. When the pipe sections have been assembled and connected to the appliance, open the gas supply and light the appliance (see lighting instructions). Perform a tightness test on all the pipe connections.

Fuel Conversion

The GF 373 BF gas stove is shipped from the factory equipped to burn Natural gas. Propane Fuel Conversion Kit #157452 is included with the stove to enable use with LP gas if necessary. The kit contains all the components needed to complete the task and ensure safe operation, including labels that must be affixed to the stove.

Tools Required:

- 1/2" & 13 mm open end wrench or deep-well socket
- Torx T20 or slotted screwdriver
- 7/16" open end wrench
- 3 mm Allen wrench
- 1/4" nut driver
- 4 mm Allen wrench
- manometer

Conversion Kit Contents:

- 1 regulator tower labelled for the appropriate fuel
- 2 regulator tower Torx screws
- 1 burner injector (marked 40 for NG and 1.50 for LPG)
- 1 pilot orifice (#51 for NG, #30 for LP)
- Label A - to be completed and applied to the base of the valve compartment
- Label B - apply to the rating plate in the space indicated on the plate.
- Small valve label - apply to valve body
- Conversion instructions

Fuel Conversion Procedure

1. Turn off gas supply to the stove.
2. Remove the glass panel frame with removal of the four socket head screws using the 4 mm hex key provided.
3. Loosen the primary air shutter wing nut and push the stem all the way back. Fig. 13.
4. Pull the Burner Plate forward to disengage it from the burner orifice and lift it out of the firebox.
5. Locate the main burner injector. See fig. 14 Slide the Air Shutter out of the way and use a 1/2" open end wrench or deep-well socket to remove the burner orifice from the brass orifice holder. Replace with the orifice supplied in the kit. Tighten securely.
6. Change the Pilot Orifice. Pull the Pilot Hood off of its base. It will snap by the retainer clip shown in Fig. 14. Using a 4 mm Allen wrench, unscrew the pilot orifice. Replace it with the orifice from the kit. Be sure the new orifice is tightly secured to prevent by-pass leakage. Replace the pilot hood by simply pushing it back into place on its base.
7. Change the Air Shutter orientation: Lift the shutter tube up in its hinge pin slots and turn the tube over, so that the appropriate fuel type indicator (LPG or NG) is oriented facing you. See fig. 15. Push the shutter all the way back over the injector.
8. Reinstall the Burner Plate by engaging the venturi tube with the Air Shutter.

BE CERTAIN THE BURNER IS LEVEL AND SECURELY SEATED ON THE SUPPORT LEGS ON THE FIREBOX FLOOR.

9. Replace the variable regulator. Using a Torx T-20 screwdriver, remove the two specialty screws from the regulator tower on the front of the valve. Note: To help identify which screws to remove, refer to the new regulator in the kit. See fig. 16.

Install the new variable regulator tower from the kit. Be sure that the gasket is properly positioned and tighten screws securely

10. Set the Air shutter for the appropriate fuel. See fig. 16.
 - Propane - FULLY OPEN** (slide the wing nut all the way forward to the first hash mark on the bottom plate.

Natural Gas - 50% OPEN (half of its allowed travel- to the second hash mark on the bottom plate).

11. Apply the identification labels to the stove so that they can be seen by any person that may be servicing the stove.
 - Label "A": Apply to front lip of the valve compartment.
 - Label "B": Apply to the Rating Plate.
 - Small valve sticker: Apply to valve.

12. Install the Log Set. See page 10.
13. Apply anti-seize lubricant to the socket head glass frame screws before reinstalling the glass frame.
14. Apply gas to the system and check for leaks using a soapy water solution or gas sensor.
15. Follow the guidelines on page 14 for testing and confirming correct gas pressure and pilot flame pattern.

Fig. 13. Push the air shutter stem back to enable burner plate removal.

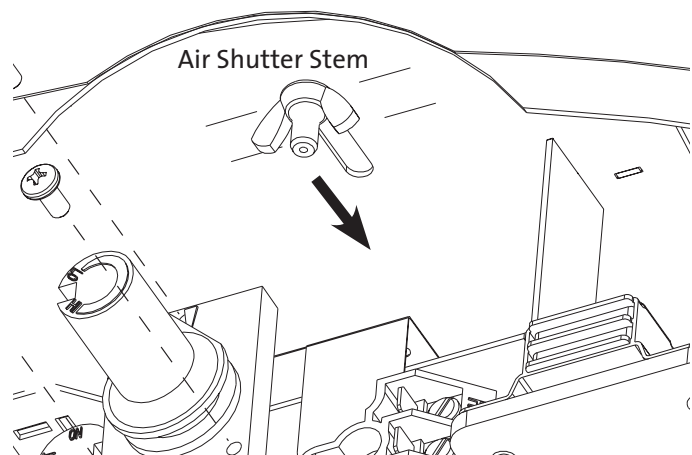


Fig. 14. Burner and Pilot orifice locations.

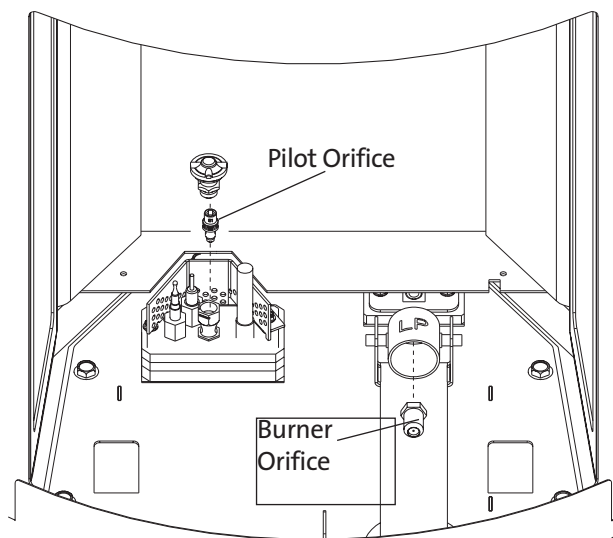


Fig. 15.
Change the Air Shutter orientation for the appropriate fuel type.

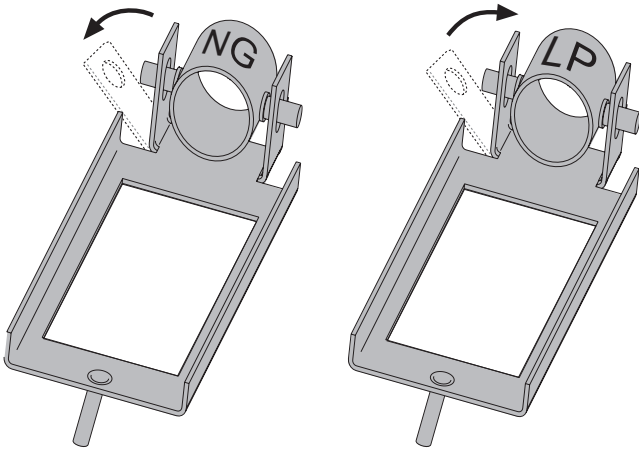
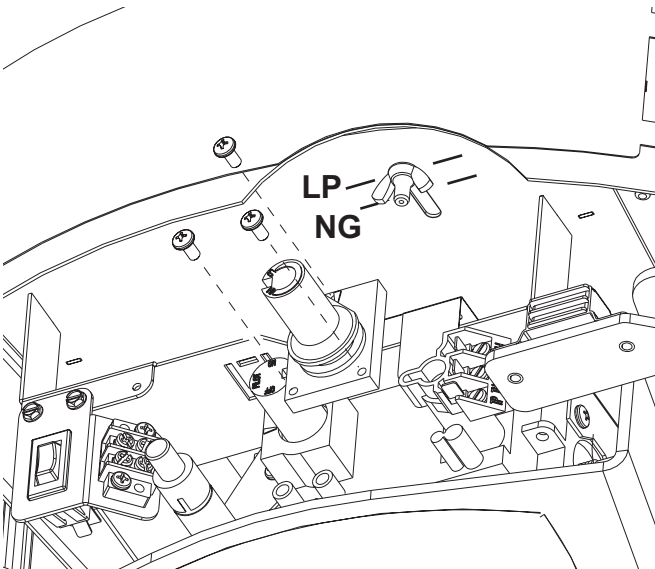


Fig. 16.
Install the alternate gas Regulator.
Adjust the air shutter setting for the appropriate fuel.



Commissioning

Testing Gas Pressure

Correct gas pressure is important for the safe use of gas in the appliance. It is important that the correct gas pressure is set during the installation of the appliance.

The gas valve is equipped with outlets (taps) for the testing of gas pressure. The outlets are located at the front of the valve below the ON/OFF/Pilot knob. The outlets are marked as shown in fig. 17.

- **Outlet D:** For gas pressure to the valve (volume of gas to the valve) See technical data.
- **Outlet E:** For gas pressure from the valve (volume of gas coming out of the valve to the burner).
- **Regulator** - Always test the gas pressure with the valve regulator knob on High (Hi).

Loosen the screw in the outlet and attach the tube from the manometer to the outlet. Remember to tighten the screw when the testing is completed and test for leaks at the outlets with test fluid.

Required gas pressure from the vent (Outlet E) is displayed in the table below. (Note that the installer is required to operate the appliance for at least 20 minutes before measuring the burner pressure.)

GAS TYPE	Burner Pressure (Hot), mbar
Natural Gas (G20)	9.20 mbar
Propane (G37)	26.7 mbar

Inspection of the Pilot Flame

The pilot flame should have three flames as shown in fig. 18. The center pilot should align with the carry-over ports on the burner without ember stone interference.

The two thermo-elements should be fully engulfed by the two other flames as shown in fig. 19.

The flames should be stable and the colour mainly blue. If you detect a deviation from this, turn off the pilot flame and call for service.

Fig. 17. Valve Pressure Tap locations.

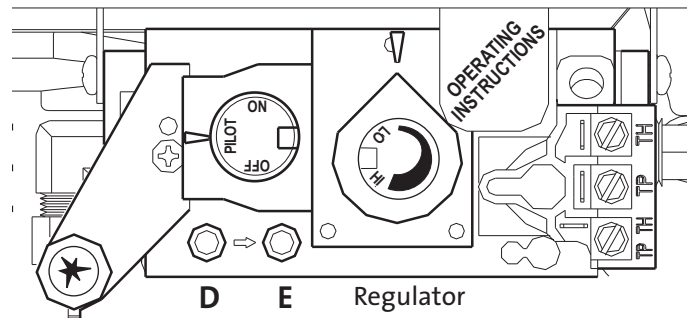
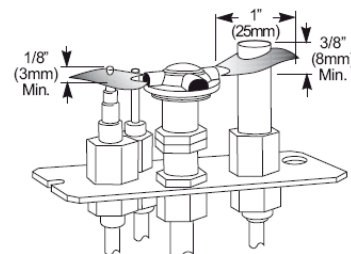


Figure 18. Proper pilot flame / carry-over alignment.



Figure 19. The thermocouple and thermopile should be full engulfed by the pilot flames.



Annual Service

Annual service of the appliance includes the following check points.

1. Lighting and inspection of the pilot flame (see the section - Inspection of the Pilot Flame above);
2. Cleaning the glass;
3. The gasket around the glass must be inspected annually for wear and replaced if necessary;
4. Check if the textured embers need to be replaced;
5. Look for soot. It could be a result of the ceramic logs not being centred in the stove and completely pushed onto the metal plate, or the air regulator has been adjusted incorrectly. (see section xx : Adjusting the burner);
6. Check the gas pressure if other gas equipment is connected to the gas supply;
7. Look for signs of corrosion on the appliance and the vent system;
8. Look for obstructions in the vent system (such as bird's nests, or branches from bushes and trees).

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User Information

Operating Instructions

Commissioning, Lighting

NOTE! Odours may be present when using the stove for the first time:

When used for the first time and hot, the appliance may emit a harmless, non-toxic odour. It is recommended that the room should be thoroughly ventilated (by opening doors or windows) during first time use. The gas is not toxic, but the room should be thoroughly aired out. During first use, it may take a short time before the gas tube is cleared of air, but subsequently the appliance should function as described in the lighting instruction. The appliance operates with the aid of a pilot flame, which is lit manually according to the lighting instruction.

Prior to lighting:

Check the area around the appliance for possible gas leaks/odors. Especially check near the floor, since propane is heavier than air and would gather close to the floor in the event of a leakage. (Note: Natural gas is lighter than air and will gather under the ceiling). If you detect an odor of gas, see warning under: Safety precautions.

- Only use your hands to operate the control knobs; do not use tools. If you are unable to turn or push in the control knob, do not use force. Call for service.
- Do not use the appliance if any part of it has been submerged in water. Call for service to replace the parts that have been in water.

Lighting Instructions

Lighting the Pilot Flame

The valve and burner controls are located on the under the firebox and behind the access door. See fig.20.

The Burner switch has three settings ON/OFF/STAT. The STAT position is for use of a remote thermostat.

This feature is not available at present, and this setting should not be used.

1. Place the Burner Control switch in the “OFF” position. Make sure the gas valve on the pipeline to the appliance is open.
2. Push in the Gas Control knob on the front of the valve a little, and turn clockwise to “OFF”. Note: It is impossible to turn the gas control knob unless it is pushed in a little. Do not use force.
3. Push in the Gas Control knob a little and turn counter-clockwise to “PILOT”.
4. Push in the Gas Control knob as far as possible and hold it in. Simultaneously, repeatedly press the Ignitor button until the spark ignites the pilot flame located to the left rear corner of the burner..
5. Continue to press in the Gas Control knob for approximately 20 seconds after the pilot flame has been lit. Then let go of the knob. It should spring back out and the pilot flame should remain lit.

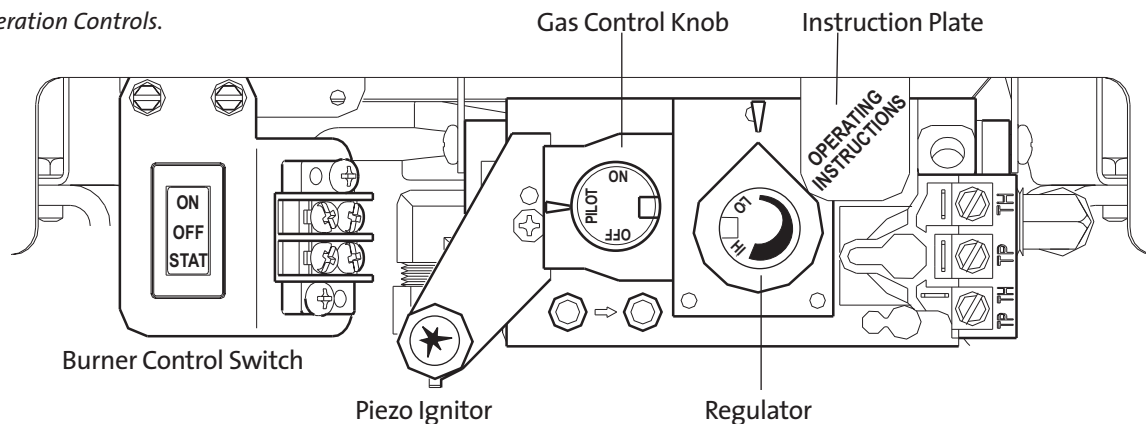
If the pilot flame goes out, repeat Steps 1-5.

If the pilot light goes out intentionally or unintentionally, it should not be relit within 3 minutes.

NOTE: If the gas control knob does not pop out when released, call for service.

NOTE: If the pilot flame does not remain lit after several attempts, turn the gas control knob to OFF and call for service.

Figure 20. Operation Controls.



Lighting the Main Burner

1. Turn the Gas Control knob clockwise to “ON”.
2. Push the Burner Control switch to “ON”. The burner will light.

NOTE: When the appliance is used for the first time, condensation may form in the firebox. Some smoke may also appear from the appliance during the initial hours, due to the burning off of paint and lubrication used in the production process. See section Odours when using the stove for the first time.

Adjusting the Heat Setting

- Heat and flame intensity can be adjusted by turning the Regulator knob between the HI and LO designations as desired. Maximum flame size provides maximum heat output. Make sure the appliance has been operating for at least 30 minutes before adjusting the flame.

Turning Off the Appliance

- Push the Burner Control switch to the OFF position. The burner flames will extinguish, however, the pilot flames will continue to burn. To fully extinguish the appliance, push in the Gas Control knob and turn it clockwise to OFF.

NOTE: If the appliance will not be used for an extended period, it is advisable to shut off the main gas supply line valve .

Maintenance

The complete installation, which includes the gas supply, the actual appliance and the vent system, must be inspected annually. The inspection must be carried out by qualified service engineer.

External Maintenance

Painted products may change color after some years of usage. The surface should be cleaned and brushed free of any loose particles before new stove paint is applied. Enameled products must only be cleaned with a soft damp cloth and only the surface is cold.

Do not use water or soap. Enamel surfaces stain easily when hot. A solution of vinegar and baking soda may be used to remove stains.

Troubleshooting

When No Spark is Generated at the Pilot Head

It is uncommon for the Piezo spark ignitor (fig. 21-A) to fail, unless it has mechanical damage. If the spark is not conducted forward, it could be the result of a break in the electrical circuit leading up to the pilot head. The spark is small or weak if there is too much resistance from a bent wire (E), or if corrosion appears at the electrode (G) or the pilot head (H). This could result in insufficient heat to light the gas. Inspect the pilot burner by looking for damage to the individual parts. Check for damaged wires or wires crushed between plate sections of the appliance and check for loose connections.

Follow the trouble-shooting procedure below when no spark is generated at the pilot head electrode:

1. Make sure the spark gap between electrode (G) and pilot head (H) is smaller than or equal to 3.2 mm. If not: check if the electrode is loose or damaged
2. Make sure the spark igniter (A) is securely mounted and the ground connection is in contact with the bracket. If not: turn the spark igniter until the ground connection is in contact with the bracket and tighten the nut at the back of the spark igniter.
3. Make sure the insulated wire (E) is intact and without cracks and properly connected between spark igniter (A) and electrode (G). If not: properly fasten the insulated wire to establish a connection between the spark igniter and the electrode. Replace the electrode if the wire is damaged or cracked.
4. Make sure the ceramic insulation (F) is intact and without cracks. If not: replace the electrode.
5. Make sure a spark is generated when you dismantle the Piezo spark igniter and put the ground connector against a metal piece, and the control knob (red mark) on the spark igniter is finally pushed to the bottom (B). If not: replace the Piezo spark igniter.

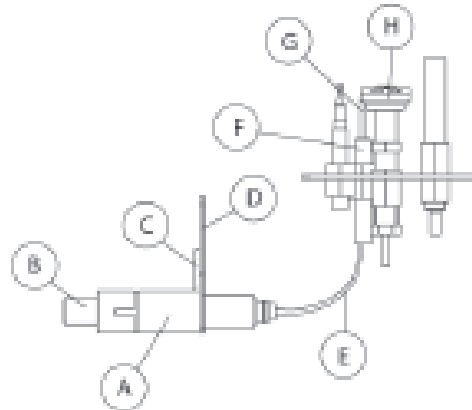


Figure 21. Pilot ignition components.

Fuel Gas

Correct gas pressure is important; see the section about gas pressure under Gas Installation, page 14. The gas pressure before the valve and the gas pressure from the valve to the main burner and pilot burner, are equally important. These parameters may be the cause of various performance problems.

If the gas pressure is too low, it can cause low pilot flame, insufficient production of electricity at thermopile and thermocouple, and poor flame pattern.

If the gas pressure is too high it can cause valve damage if the pressure rises above 60 mbar. This is usually the result of faulty installation or lack of a gas regulator on the gas tank or cylinder. High gas pressure may also cause an abnormally large pilot flame which can overheat the thermopile and thermocouple, and further cause a shutoff of the valve due to insufficient millivolt production. Problems involving high flames and soot indicate that the air volume is too small in relation to the gas volume. It is wrong to correct the problem by adjusting the air regulator, if the cause is that the gas pressure is too high. Checking the gas pressure before the valve will uncover faults in the gas supply at the valve or from the tank/cylinder.

If the gas pressure to the valve is correct, the fault must be found after the valve. A measurement performed with a manometer will help you to swiftly uncover and eliminate sources of errors. As mentioned above, blocked or poor gas supply may lead to faulty combustion. Make sure all gas tubes are dirt-free, as a small dust particle can obstruct the pilot orifice. Components must remain free of dirt during installation of the gas supply and connection to the appliance, and when the valve is being replaced.

When There is No Gas Flow To The Pilot Head

This is the trouble-shooting procedure for the gas supply: Check if all gas connections are sealed by using strong soapy water (avoid synthetic soaps). Be certain all valves from the gas tank/cylinder are fully open.

When the pilot is to be lit for the first time with a new installation, after a scheduled disconnection or after the propane tank has been refilled, there will often be air in the gas tube leading up to the appliance. The tube system must be cleared of air before the pilot burner can be lit.

The recommended method for clearing air out of the tube system, is to push in the gas control knob and turn anti-clockwise to "PILOT". Then push in the gas control knob for 5 seconds and push the control knob on the spark igniter to the bottom several times. Repeat the procedure until the pilot is lit.

If the pilot does not light after attempts to clear the tube system of air, it indicates a problem with the gas tank/cylinder or a leak in the gas tube. Check the gas pressure as instructed in the section Gas Installation on page 10 and determine if the fault/leak is before or after the valve on the appliance. If the gas pressure at outlet D (fig. 17) is too low or there is no gas pressure at all, the fault or leak must be located before the valve on the appliance. If the gas pressure is OK at outlet (D), but too low at outlet (E), then the fault or leak must be located after the valve.

Note! SIT valves are always equipped with a fine filter at the inlet to prevent debris from entering into the valve. Consequently, a clogged valve is not a common occurrence. If gas tubes are dismantled, all gas tubes must be reinstalled and checked for gas leaks prior to operating the appliance.

When the Pilot Goes Out - Problems With the Gas Supply

This is the trouble-shooting procedure for the gas supply: Remember to push in the gas control knob for at least 30 seconds. Make sure the flame is centred at the thermocouple. Make sure the thermocouple is enveloped by the flame up to at least 3 mm (1/8") from the tip (fig. 19).

If the flame is abnormally large or small, check the gas pressure first. See section about gas pressure, page 14. Then check for errors, dirt or corrosion on the pilot burner, the pilot orifice and the gas supply to the pilot burner.

Note! There could be a leak after the valve even if the pressure is OK at outlet E. You should therefore always check for leakage.

Figure 26.

Thermocouple (Fig. 22 and Thermopile (Fig. 23)

A thermocouple is in principle a thermal generator and consists of a copper wire (copper-nickel alloy) and an iron wire twisted together. These wires will create friction and generate 25 millivolt when exposed to a temperature difference of 200°C. This voltage is sufficient to make the gas valve function. In order to produce higher voltage a thermopile is used, which is based on the same principle as the thermocouple, but with more copper and iron wires.

The thermopile produces approximately 500-700 millivolts. This only amounts to 1/3 of the voltage in a flashlight battery. It is important to understand that even minor resistance (ohm) will have great impact on such a small voltage. If resistance is too great, the gas valve may not receive enough voltage to operate. If there is too much resistance, the cause may be that the copper wire conducting the voltage is too long, or there are too many connections. If the copper wire comes in contact with metal, it may increase resistance and consequently reduce the voltage.

When the Pilot Goes Out, But the Gas Supply is OK.

This is the trouble-shooting procedure for the thermocouple, fig. 22B: Check the copper wire (F) of the thermocouple for cracks or damage.

Check the gasket (C) at the valve by loosening the nut that holds the copper wire. Look for signs of damage, if the nut has been tightened too hard. A damaged gasket results in resistance at contact with metal and consequently the voltage to the valve will be too small.

Make sure the flame is centred at the thermocouple. Make sure the thermocouple is enveloped by the flame up to at least 3 mm from the tip (see fig. 19). Check the voltage generated by the thermocouple. Connect the multimeter (fig.22-E) with plus to the ball point (D) at the end of the copper wire. Connect minus to the copper wire. Light the pilot (A) and hold in the control knob to prevent the flame on the pilot burner from going out. At this point the multimeter should show 14-28 mV at the thermocouple.

Note that there are 2 threaded holes that can be used when installing a new thermocouple. Make sure the blue wire (A) is fastened at the same threaded hole. The nut on the thermocouple must not be tightened too much, just a 1/2 turn. If the gas pressure is correct and the possible faults above have been checked, the pilot flame can be adjusted with the adjusting screw. The gas volume is increased when the screw is turned anti-clockwise.

Thermocouple (Fig. 22 and Thermopile (Fig. 23)

A thermocouple is in principle a thermal generator and consists of a copper wire (copper-nickel alloy) and an iron wire twisted together. These wires will create friction and generate 25 millivolt when exposed to a temperature difference of 200°C. This voltage is sufficient to make the gas valve function. In order to produce higher voltage a thermopile is used, which is based on the same principle as the thermocouple, but with more copper and iron wires.

The thermopile produces approximately 500-700 millivolts. This only amounts to 1/3 of the voltage in a flashlight battery. It is important to understand that even minor resistance (ohm) will have great impact on such a small voltage. If resistance is too great, the gas valve may not receive enough voltage to operate. If there is too much resistance, the cause may be that the copper wire conducting the voltage is too long, or there are too many connections. If the copper wire comes in contact with metal, it may increase resistance and consequently reduce the voltage.

When the Pilot Goes Out, But the Gas Supply is OK.

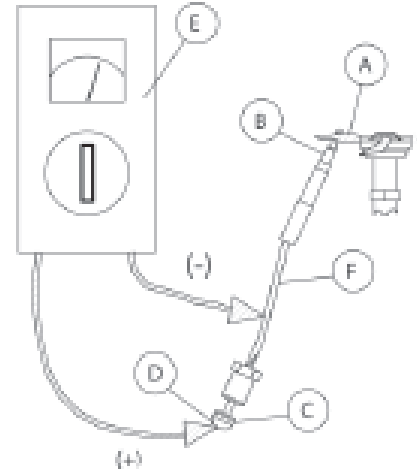
This is the trouble-shooting procedure for the thermocouple, fig. 22B: Check the copper wire (F) of the thermocouple for cracks or damage.

Check the gasket (C) at the valve by loosening the nut that holds the copper wire. Look for signs of damage, if the nut has been tightened too hard. A damaged gasket results in resistance at contact with metal and consequently the voltage to the valve will be too small.

Make sure the flame is centred at the thermocouple. Make sure the thermocouple is enveloped by the flame up to at least 3 mm from the tip (see fig. 19). Check the voltage generated by the thermocouple. Connect the multimeter (fig.22-E) with plus to the ball point (D) at the end of the copper wire. Connect minus to the copper wire. Light the pilot (A) and hold in the control knob to prevent the flame on the pilot burner from going out. At this point the multimeter should show 14-28 mV at the thermocouple.

Note that there are 2 threaded holes that can be used when installing a new thermocouple. Make sure the blue wire (A) is fastened at the same threaded hole. The nut on the thermocouple must not be tightened too much, just a 1/2 turn. If the gas pressure is correct and the possible faults above have been checked, the pilot flame can be adjusted with the adjusting screw. The gas volume is increased when the screw is turned anti-clockwise.

Figure 22.
Thermocouple system check.



When There is No Gas Supply to the Burner.

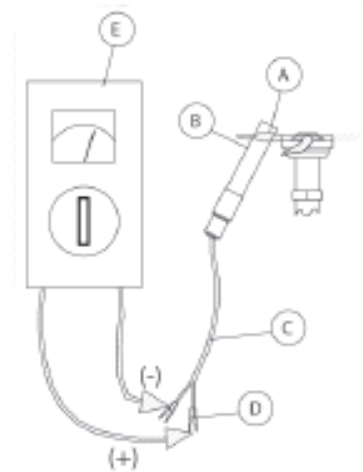
This is the trouble-shooting procedure for the electrical components:

1. Make sure the control knob on the valve is set to "ON". Check the position on the "ON/OFF/Thermostat" switch at the back of the appliance. It should be set to the ON position.
2. Make sure the wire from the valve to the "ON/OFF/STAT" switch is connected correctly.

This is the trouble-shooting procedure for the thermopile (fig. 23):

1. Make sure the gas pressure is correct (see section about gas pressure, page 14).
2. Make sure the pilot burner has 3 flames.
3. Make sure the flame is centred on the thermocouple.
4. Make sure the thermocouple is enveloped by the flame up to at least 10mm (3/8") from the tip (fig. 19).
5. Check the wires to the thermopile for cracks or damage.
6. Dismantle the wires from the vent.
7. Dismantle optional equipment, such as thermostat or remote control.
8. Check the voltage generated by the thermopile (see fig 23). Connect the multimeter with plus to one cable clip (D). Connect minus to the other cable clip. Light the pilot and make sure the control knob remains on "PILOT" (fig. 20). At this point the multimeter should show 500-700 mV.
9. Reconnect the wires to the valve and make sure only the ON/OFF/STAT switch is connected.
10. Turn the control knob on the valve to "ON" and turn the ON/OFF/STAT switch to "ON". At this point the multimeter should show more than 300 mV.
11. If a thermostat or remote control is to be connected, it can be done now. At this point the multimeter should show more than 175 mV.

Figure 23.
Thermopile system check.



Problems With the Flame Pattern

Tall, narrow, yellow flames

These flames can soot the vent system and may result from the following conditions:

- **Insufficient Oxygen Supply - For Propane and Natural Gas, the air shutter should be fully open.** Loosen the air shutter wing nut under the stove and pull it forward (toward yourself) as far as it will go. See fig. 13. **Warning!** To avoid burns, do not adjust the air opening until the burner has cooled down.
- **Blocked Orifice** - Make sure the main orifice (fig. 14) is dirt-free and that the orifice is the appropriate size. See technical data.
- **Poor draught** in the vent system may be due to improper installation, or because the vent is not inclined toward the chimney.

Tall, blue flames

The cause may be too much oxygen. Check for correct air volume by measuring the opening (fig. 13) at the air shutter. The cause may also be that the gas pressure is too high. Also confirm the correct gas pressure as described in the section on page 12.

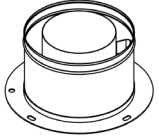
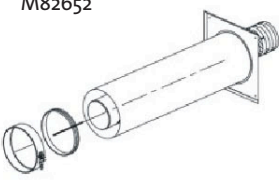




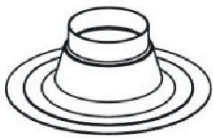
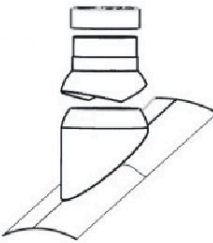
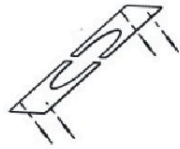


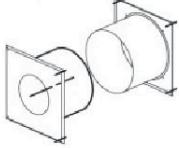



<p>M410082697</p>  <p>100 / 150mm flue adaptor</p>	<p>M82652</p>  <p>Ø100/150mm L=600mm</p>	<p>M82650</p>  <p>Ø100/150mm L=300mm</p>
<p>M82653</p>  <p>Ø100/150mm L=500mm</p>	<p>M82654</p>  <p>Ø100/150mm L=1000mm</p>	<p>M82668</p>  <p>Ø100/150mm L=325-440mm</p>
<p>M87379</p>  <p>Ø150mm 0-5°</p>	<p>M87913</p>  <p>Ø150mm >5°</p>	<p>M30170</p>  <p>Ø150mm</p>
<p>M82656</p>  <p>90° Ø100/150mm</p>	<p>M82657</p>  <p>2 X 45° Ø100/150mm</p>	<p>M82667</p>  <p>Ø150mm L=150-350mm</p>
<p>M82655</p>  <p>Ø100/150mm L=500mm</p>	<p>M87196</p>  <p>Ø150mm</p>	<p>M82661</p>  <p>Ø150mm</p>

Figure 24. Muelink and Grol flue components. All balanced flue accessories include locking bands.

Jøtul GF 373 BF

INSTALLATION SIGNATURE FORM

With proper usage and maintenance, this appliance will provide you with many years of satisfactory service. Please contact your Jøtul dealer for assistance if any problems should arise with your Jøtul appliance. Save this user manual and make sure it is available to service personnel.

Model Name: Jøtul GF 373 BF
 Serial No: (on Rating Data Plate) _____
 Purchase Date: _____
 Name of Installer: _____
 Fuel Type: _____
 Was the appliance converted? _____
 Notes: _____

Annual service - year 1 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 2 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 3 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 4 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 5 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 6 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 7 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 8 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 9 Sign.:
 Company: _____ Date: _____
 Service details: _____

Annual service - year 10 Sign.:
 Company: _____ Date: _____
 Service details: _____

February 15, 2013
139478_Rev_02

This appliance must be installed in conformance with local and national building regulations. Before beginning the installation, it is important that these instructions be carefully read and understood. Jøtul maintains a policy of continuous product development. Consequently, products may differ in specification, color or type of accessories from those illustrated or described in various publications.

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