



Brightstar Burner for LPG Propane Gas

**Fire Pit Design Guide
Appliance Installation
Operating Instructions
Troubleshooting**

Firepits UK Ltd. Trading as: Brightstar Fires

Unit 19 Williams Industrial Park, Gore Road, New Milton, Hants. BH25 6SH
Company No: 7268571 VAT No: 995 9481 39 EORI No: GB995948139000

Website: www.brightstarfires.co.uk email: sales@brightstarfires.co.uk

Tel: 01425 626171

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1. Product Description

This Brightstar gas fire pit burner kit is designed to be installed permanently into a brick or stone structure commonly known as a fire pit. The appliance has been designed and approved for **outdoor use only**.

During product development, the appliance has been extensively tested to ensure it is safe and robust. However, we also rely on the design of the fire pit structure to adhere to certain design parameters, in order for the burner to operate correctly and safely. When designing the fire pit, please **refer to the design guide** in the manual. This will highlight essential design elements such as fire pit dimensions and structure ventilation.

There are also gas safety regulations that must be followed, to ensure the appliance is installed correctly. Failure to follow these regulations could cause an unsafe and potentially dangerous installation. Any modification to this appliance may be dangerous and will invalidate the warranty coverage.

Please **read this manual carefully** before designing the fire pit, installing or operating the appliance. Please observe all warnings and safety messages. The safety instructions are not exhaustive. Care and common sense should also be used. If there are any doubts over the instructions in this manual or your knowledge of gas installations, please contact us or seek advice from a professional gas safety engineer.

1.1. Gas types

There are two different gas types available. The appliances are not interchangeable. Please ensure you have purchased the correct gas type before unpacking the burner. The serial label on the packaging and on the control box shows which type of burner you have.

LPG (Liquid Petroleum Gas) eg. Propane. Available in portable gas bottles, or in larger on-site storage tanks. A 19kg propane bottle (or a larger bottle or tank) is required. We recommend using a gas safety engineer to install. The appliance must only be installed by persons who are competent ie, experienced or knowledgeable in connecting to LPG bottles.

Natural Gas eg. Methane. Mains gas supply from the property's gas meter. The gas capacity at the meter must be checked if you are installing multiple natural gas burners. A gas safety engineer should be used to connect this product to the mains supply.

1.2. Serial number location

The serial number is located on the packaging and on the label on the control box.

LPG appliances: S/N L - **** NG appliances: S/N N - ****

The serial number is required when ordering spare parts or requesting product support.

1.3. Unpacking the box

Please check the box and appliance on delivery and report any visible damage promptly. The lava rock will cover any minor defects in the mounting plate. These are of no concern.

Care should be taken when removing the appliance from its packaging. The connections between the burner and the control box are flexible. During transit, the control box is secured with a cable tie. When this is cut, please take care that the connections are not pulled, tugged or kinked, particularly the copper thermocouple.

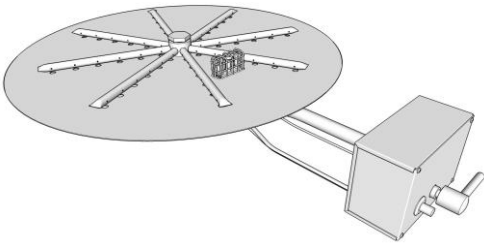

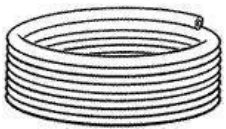



The flattened part of the copper thermocouple, near the valve end, is completely normal, and is no cause for concern.

This appliance has been burn tested prior to leaving our workshop. Although it has been cleaned, there may be some scorch marks on the burner.

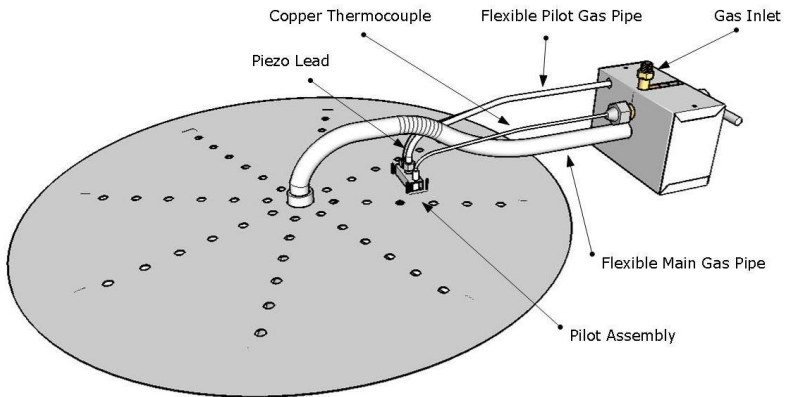
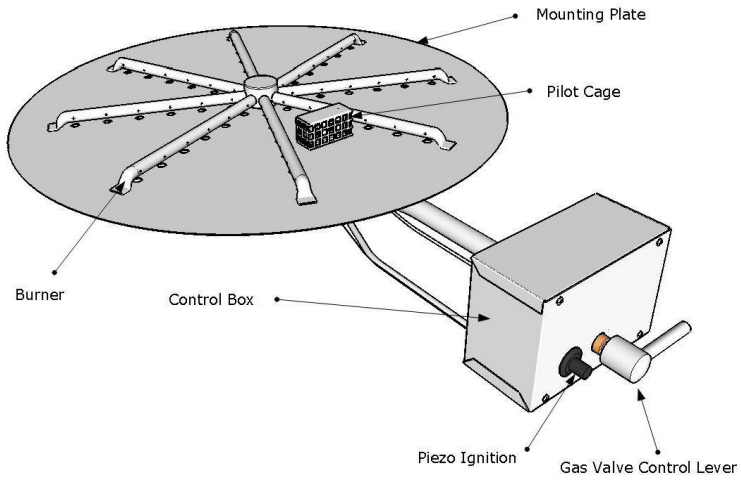
1.4. Specifications

Gas Type	LPG - G31 Propane	Appliance category	I 3+
Supply pressure	37 mbar	Maximum flow rate	1.3 kg/hr
Heat input - Low	9 kW	Heat input - High	18 kW

1.5. What's Included

Burner Assembly Note: Depending on which model you have purchased, this will be either Round, Square, Octagonal, Rectangular or Twin rectangular					
Lava rocks 5kg bag x 2		4m of LPG rubber hose (2m if an installation kit has been purchased) For above ground use only			
Hex key (for removing control handle)		Brass nozzle		Hose Clips x2	

1.6. Burner components



Electrode - Pilot - Thermocouple



2. Safety

2.1. Intended use

The appliance is intended as an outdoor heater and should not be installed indoors or in any room with closed sides or a roof covering. Any other use, or use beyond that specified, shall be considered as improper use. The appliance is not designed to be cooked on. Food and fats can block the burner jets. The manufacturer is not liable for any damage or injury resulting from such use.

In the event of improper use there is a risk of injury or death to the user or others, as well as damage to the product and other property. The appliance is not designed to be installed or used by persons who do not have enough experience or knowledge. Firepits UK Ltd highly recommends using a gas safety engineer to install this appliance.

The appliance has been tested and approved for use with the lava rock supplied. No other 'toppings' should be used, such as ceramic pebbles, logs or fire glass. This can lead to issues with cross lighting and cause a gas leak. The appliance may also overheat and fail.

2.2. Basic safety instructions



Risk of fire: If you smell gas, do not attempt to light the appliance. Immediately shut off the gas supply. Contact your installer or a local gas engineer. Do not attempt to light the burner until the cause of the leak has been found and fixed.



Risk of injury: During use, accessible parts may become very hot, please keep pets away and supervise children at all times. Flames from the appliance can be almost invisible in direct sunlight.



Warning: Always isolate the appliance from the gas supply when not in use. Turn off LPG bottles. Do not use or leave the appliance unattended in windy conditions.



Information relating to building and gas regulations: If the installation does not conform to local gas and building regulations, it may be dangerous and in some cases invalidate your home insurance. If in doubt, please check local conditions and seek advice from a gas engineer.

3. Firepit Design Guide

3.1. Location

Locate the appliance only in a well ventilated area. Never use the appliance inside a building. Generally a distance of at least three meters from nearby structures is recommended. Do not install under overhanging trees or power cables.

As a general rule, this appliance should not be installed under any form of roof covering. However this may be possible under certain circumstances. i.e. the area must have open sides, that cannot be enclosed and there must be a non-combustible canopy or hood, above the appliance, to allow the heat and fumes to escape through the roof.



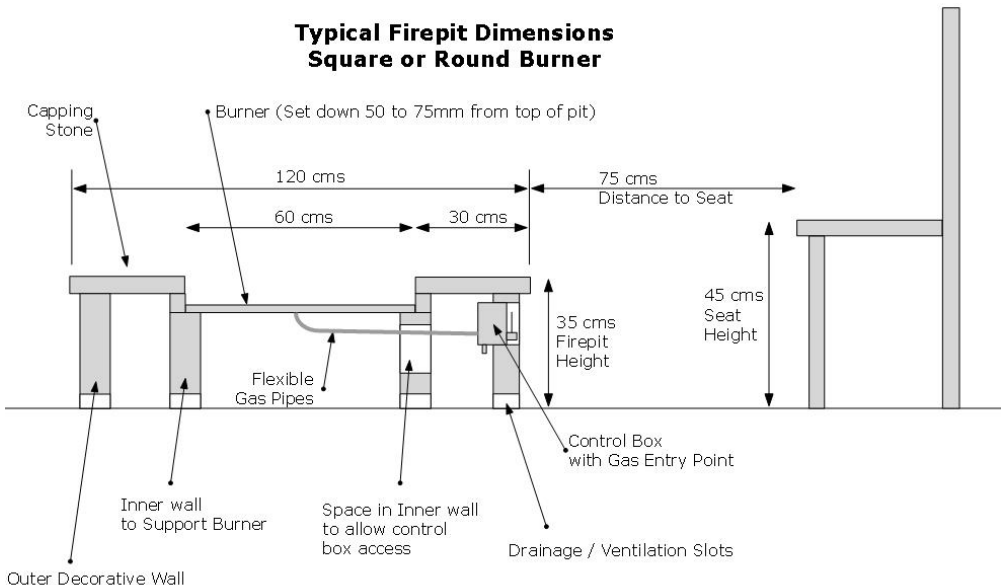
It is against gas regulations to install an LPG appliance below ground level or within two meters of an open drain or sump, or any void where unburnt LPG gas could accumulate. LPG is heavier than air and will sink to the lowest point.



The LPG appliance must not be installed into a fire pit, in a sunken patio area, unless there is some means for any unburnt gas to escape in the event of a leak. Consult a gas engineer before you finalise the design or start building.

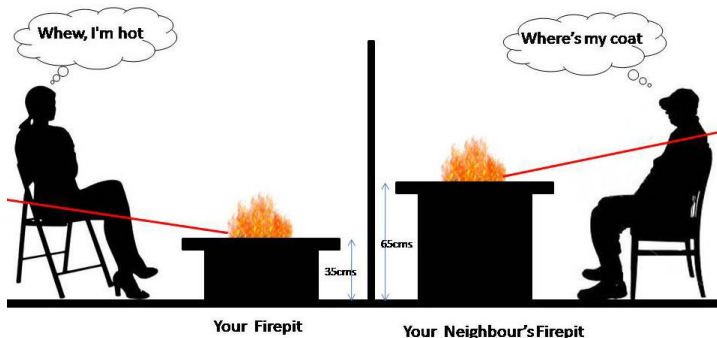
3.2. Fire pit dimensions

If permanent seating is being built around the fire pit, an ideal distance from the edge of the fire pit to the edge of the seating would be around 75cms. This allows enough room for other people to pass between you and the pit, whilst also keeping you close enough to feel the heat. The further away the seating, the less effective the heat.

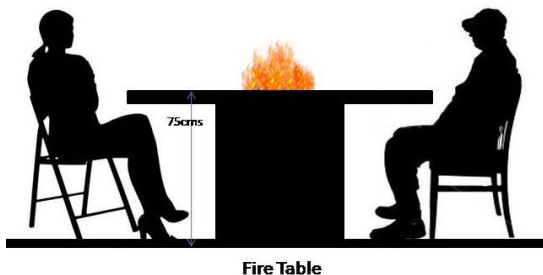


The majority of fire pits are usually low, coffee table height structures, with the burner in the centre, surrounded by brick or stone walls to form the 'pit'. The top surrounding the burner can be wide or narrow but **must not overlap** the burner plate.

A typical fire pit height is around 35-40cms, with the burner recessed down 50mm from the top level of the structure.



Another type of design incorporates a burner within a dining table. These tables are much higher, with a large overhang so you can sit close.



This type of design is less effective as a heater as most of your body is shielded from the heat by the table. Because you are closer to the flames, the burner usually must be turned down quite low.



The area under the burner will become extremely hot. There should be adequate ventilation but no access to the burner from underneath the table.

3.3. Fire pit structure design

It is strongly recommended that you ask a gas engineer to check the design concept BEFORE it is finalised. Before you start building and before laying underground gas pipes.



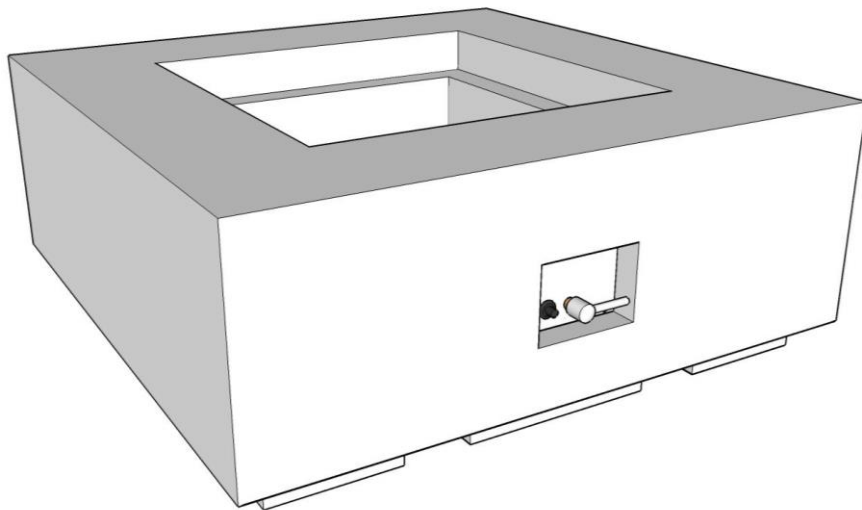
Outdoor gas appliances come under the same building regulations as indoor gas appliances, particularly relating to underground gas pipe work.

There are many ways to build a fire pit. Most standard non-combustible building materials can be used. When using uncommon materials, especially for the top surround, please check with the supplier that they are suitable for use on a fire pit. Firepits UK is not liable for damage to materials used in construction.

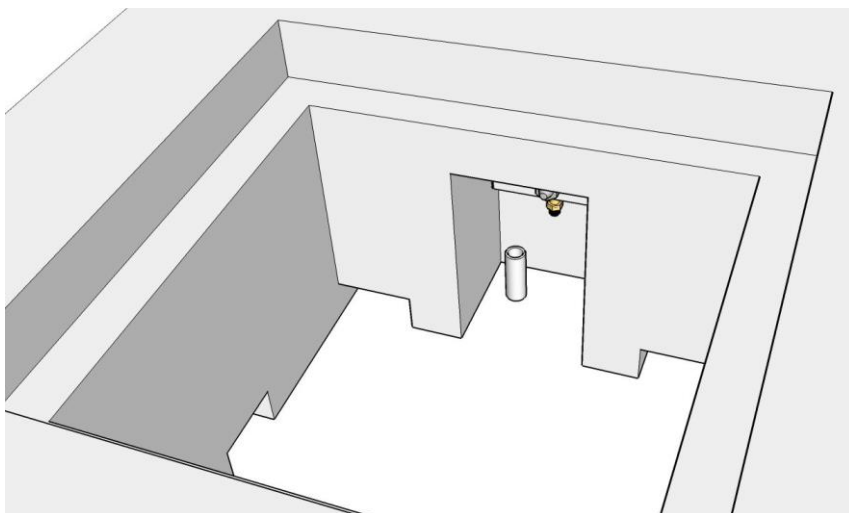
We have included the most common fire pit design concepts in this manual.

Example 1 - Single wall design

This method uses a single wall structure. Note the ventilation slots at the base. The control box can be flush or recessed. Leave a large opening inside the pit to allow the control box to be installed, and connected to the gas supply.

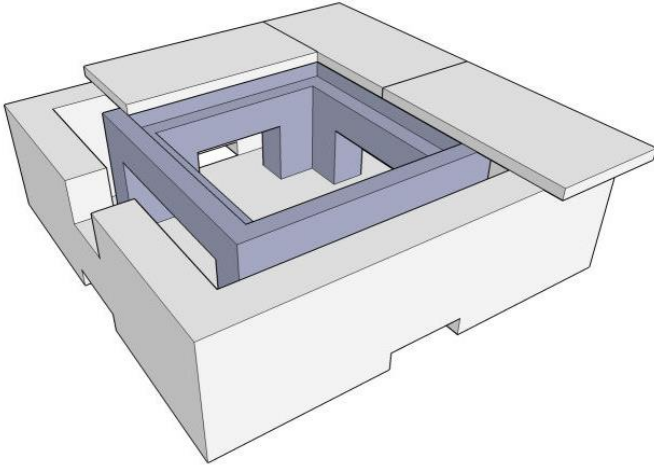


Bring the gas supply pipe up in the area underneath the control box, so it is away from the heat generated directly under the burner. If MDPE plastic gas pipe or rubber gas hose is not protected from the heat generated directly underneath, it can melt and cause a gas leak.



Example 2 - Twin wall design

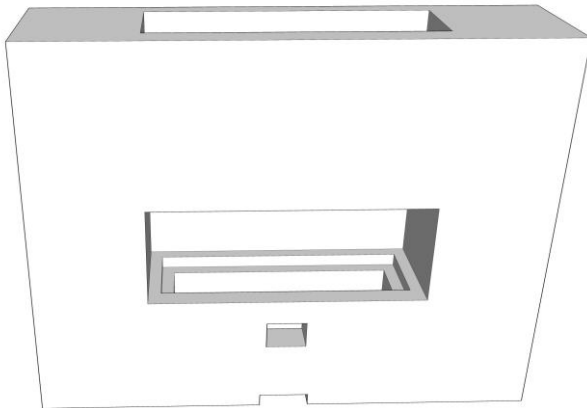
This is common for pits with wider table tops surrounding the burner. This example shows an outer wall with space for the control box, and ventilation holes through the internal and external walls. The inner wall supports the burner and the capping stones.



The inner wall has larger ventilation holes to allow plenty of air to circulate within the structure. It also needs a large hole to allow the control box to be passed through from the inside of the pit, to the outer wall.

Example 3 - Hole in the wall fireplace design

This design is less common, however if designing this type of outdoor fireplace, there are certain requirements that need to be addressed. Usually this design uses the rectangular burner.



The burner rests on a shelf recessed into the structure, just like a standard firepit. The area below the burner is hollow, with space for the control box, and ventilation at the base. The area above the burner is also hollow to allow the heat and fumes to escape up the chimney.

The back and side walls will be close to the heat, and may need to be protected with heat proof insulation.

It is recommended that the opening is wide enough to allow for one of our weather covers to fit inside. For more information on this design concept please refer to the Hole in the Wall Design Guide, available to download from our website.

3.4. Design principles

When designing the fire pit, there are a few rules that all fire pit structures must follow.



Rule 1. The firepit should be designed so that the appliance can be installed and removed, **WITHOUT** having to disassemble any part of the appliance. The burner, control box and connecting pipe work need to be installed as one complete assembly. If any part of the appliance is disconnected, this could introduce a gas leak, or render the appliance inoperative, or dangerous. It will also invalidate the warranty.



Rule 2. The fire pit should be designed so that the appliance can be installed and removed, **WITHOUT** having to break up the pit. Access is required to underneath the burner by allowing it to be lifted, and access to the back of the control box from inside the pit, for later servicing. Access is also required to allow the gas feed to be connected to the burner inlet. The front of the control box must be able to slide on and off.

Coping stones should not overlap the burner mounting plate. This would bring the stone closer to the flames and could cause it to crack. The mounting plate must be able to be lifted clear of the pit for access underneath for later servicing.

The burner should be supported around its perimeter, on a ledge recessed 50mm into the pit. If using a decorative edge trim, this must also be supported. There are a series of holes in the mounting plate that align with the jets in the burner tubes. These holes allow air to be drawn up from underneath the burner. It is essential that no holes are blocked by the ledge that supports the burner plate.

The metal mounting plate will expand and contract with the heat. It will also warp and lift slightly. This is perfectly normal and is no cause for concern. It is not noticeable under the lava rocks. For this reason, there should be a slight clearance around the mounting plate to ensure it can move.

The warping of the rectangular model, can be more noticeable, so the mounting plate should be anchored to its supporting ledge to stop it lifting. Use stainless steel anchors, so they can be removed easily for later servicing. The rectangular plate will expand and contract with the heat, so use washers under the anchor head, and do not tighten down completely. This allows the plate to move, but stops it lifting.

The appliance does not require an electrical supply for operation, however you may decide to incorporate outdoor lighting around the fire pit. In this case cables should not be routed under the burner and electrical points should not be installed inside the fire pit.

There should be nothing combustible inside the pit, underneath the burner. This includes plastic MDPE or plastic wrapped Tracpipe or equivalent.

3.5. Ventilation & drainage

A fire pit structure must have ventilation holes in the side walls of the pit. These are usually at ground level and their purpose is to allow air to be drawn in underneath the burner for correct combustion. They also allow the hot air inside the pit to escape.

A **minimum of 100²cm of ventilation** is required. That can be a single hole 10x10cms, or multiple smaller holes that make up that area.

If using air bricks, the standard bricks have only eighteen 1cms holes. Use 'high flow' airbricks instead as they give much better ventilation. Or leave larger holes and cover with decorative vents. Make sure the holes in the vents add up to at least 100²cms.



In the event of a gas leak, the ventilation holes will allow the unburnt gas to escape. If the gas cannot escape, it will fill the pit, until it reaches an ignition source and ignites.



The ventilation holes also act as drainage holes, allowing any rainwater that enters the pit to escape. Without these, the pit will fill with water which could damage to the appliance.



Without adequate ventilation the heat inside the pit will build up, and could cause the appliance to overheat and fail.

4. LPG Propane Installation

Firepits UK Ltd highly recommends using a gas safety engineer to install this appliance.



Failure to install this appliance correctly could lead to fire or explosion and could cause serious injury or damage to property.



This appliance should be installed as a complete assembly. Do not disassemble the connections between the burner and the control box. This could introduce a gas leak, might render the appliance inoperative, and will invalidate the warranty.



LPG propane gas is **heavier than air**. Therefore if there is a leak, the gas will fall to the ground and flow to the lowest point. For this reason it is against gas regulations to install an LPG appliance below ground level or within two meters of an open drain or sump, or any void where gas could accumulate.



This appliance cannot be installed into a fire pit, within a sunken patio area unless there is some means for the unburnt gas to escape in the event of a leak. Gas alarms can be fitted but please consult a knowledgeable gas engineer before you finalise your design or start building.

4.1. LPG bottle size

You will need a minimum **19kg propane bottle** to operate this 18kw burner. This bottle is around 80cms high. You can also connect to a larger 47kg bottle. Both these bottles require a screw on regulator. Please read the regulator section for more information.

A 5kg propane bottle can only provide 6kw of gas. A 13kg bottle provides 15kw. If you are interested in why, please view the LPG Gas Bottle Guide on the support page on our website.

4.2. Bottle storage

- Always store and use gas bottles in an upright position.
- Store gas bottles in a well-ventilated area.
- Do not store bottles in an enclosed space such as a garage or shed.
- Ensure gas bottles are stored away from sources of heat and ignition.
- Do not store bottles below ground level.
- Make sure gas bottles are stored outside, away from building entry/exit points and drains.



Using an LPG bottle on its side is highly dangerous. This allows liquid propane to enter the gas line and the resulting high pressure gas will bypass the gas seals in the valve causing a major gas leak. For further safety advice please contact your local gas bottle stockist.

4.3. Regulators

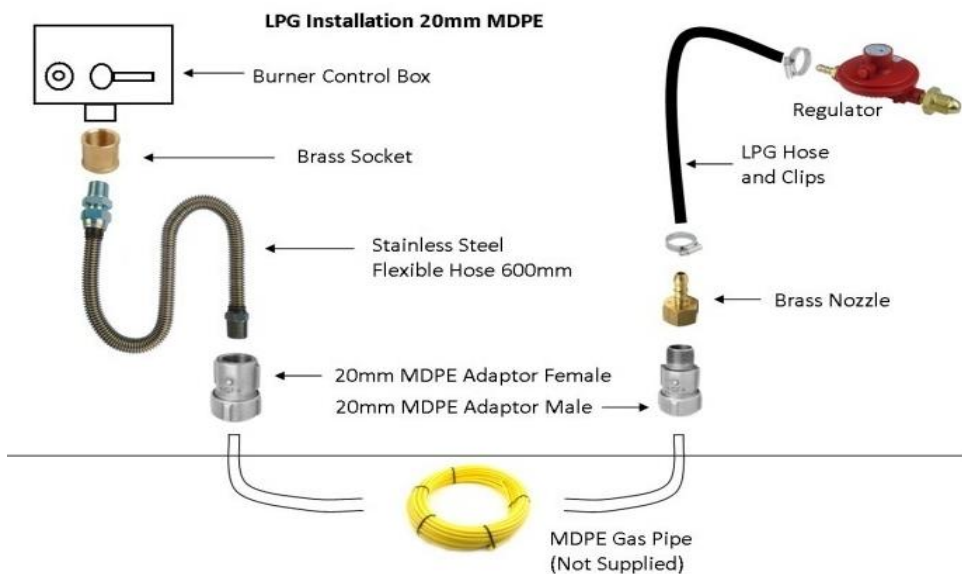
A regulator is a device that connects to the gas bottle. Its purpose is to reduce the pressure inside the bottle, down to something that the appliance can handle. In other words it controls the pressure and flow rate of the gas going to the appliance.



It is extremely important that a regulator with the correct rating is used. This appliance requires a regulator with a **rating of 37mbar (millibar) and 4kg**. Using a different regulator may damage the appliance and cause a gas leak.

4.4. Installing underground pipe work

The best installation method is to run a gas pipe underground from the pit, to where you want to store the bottle. In this case, only use the rubber hose that is supplied with the burner, to make the final connection onto the LPG bottle or tank. Please refer to the rubber hose section for information on how to connect.



We recommend using yellow MDPE gas pipe which should be buried directly into the ground under the patio. **It should not be run through an additional conduit.** Alternatively stainless steel flexible gas pipe, Tracpipe equivalent or copper can be used, depending on the local circumstances. Pipework size and connections will vary depending on site specific conditions. Please check before starting the gas pipe installation. A gas engineer will advise the most suitable option for the installation.

20mm diameter MDPE gas pipe can be used for a distance up to 45mtrs from the fire pit to the gas supply. The MDPE pipe must be brought up near to the inside wall of the fire pit, close to the control box, and away from the heat under the burner.



Do not bring the MDPE pipe up in the centre of the pit, directly under the burner, as this can cause the plastic to melt, resulting in a major gas leak.



MDPE pipe should be installed below ground in accordance with standard building and gas regulations. As a general rule this should be laid to a minimum depth of 400mm.

Each end of the MDPE pipe will require a compression adaptor. At the fire pit end, this is connected to the burner inlet with a flexible stainless steel gas pipe. These fittings are available from Brightstar Fires as an 'Installation Kit' suitable for MDPE.

More information on MDPE gas pipe installation can be found in the Support Guide section on the support page of our website.

4.5. Using the rubber hose above ground

If the fire pit has been built on top of an existing patio, or underground gas pipe cannot be laid, then the 4mtr LPG rubber hose that is supplied with the burner can be used.



Rubber LPG hose is for **above ground use only** and cannot be used underground, or anywhere out of sight. It is extremely important that you do not route the rubber gas hose directly under the burner.



It is against gas regulations to run a rubber LPG hose inside a conduit, or under decking, or anywhere it could deteriorate and cannot be inspected.

If you are using the rubber hose supplied, attach the brass nozzle to the gas inlet using two spanners, to ensure the stem into the control box does not rotate. This gas joint must be **sealed with PTFE tape**.

New hose can be quite stiff and hard to push onto the nozzle. The end of the hose can be softened by running it under a hot tap for a few seconds. Shake any excess water out of the hose before connecting.

Attach the hose onto the nozzle and secure with the hose clips supplied. **Do not overtighten the hose clips** as this can cause a gas leak. Connect the other end of the hose to the bottle regulator and secure.

Turn the gas supply on and test all connections for leaks before lighting the burner. Leak detection fluid can be used or a mixture containing washing up liquid. If in doubt, please seek professional advice.

The LPG hose should be positioned so that it is not a trip hazard, it is not subjected to undue strain or placed where it could be damaged. The hose should be checked before each use to ensure it is undamaged.

After you have finished using the fire pit, disconnect the hose and store safely ready for next time. This is not as convenient as running a permanent underground gas pipe, but it does allow you to have a gas fire pit without having to take up an existing patio.

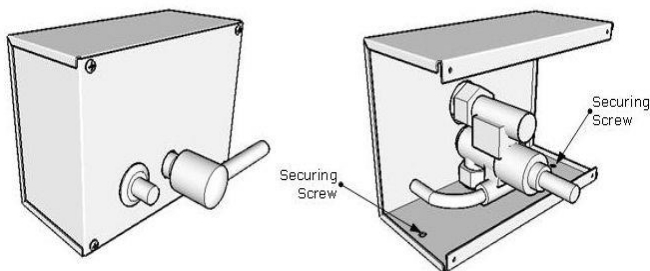


Do not lay the rubber LPG hose inside the fire pit, as the heat can cause it to melt resulting in a major gas leak. It should connect to the inlet under the controls and exit the fire pit structure through the nearest ventilation hole, ie directly below the control box.

4.6. Control box

The control box is 160x 110x 72mm on all models. The gas entry point is a ½ inch male BSP thread connection, located underneath the control box.

Holding the burner above the pit, pass the control box down through the top of the pit and locate in the side wall of the pit from the inside. Set the control handle to the off position. Loosen the grub screw behind the control lever and remove the handle. Remove the four retaining screws and carefully slide out the front of the control box.



Ensure the piezo lead does not become disconnected or damaged at this point.

There are two holes in the base of the control box which can be used to secure the box into the surrounding brickwork.

The front of the control box slides off and must be able to be removed for future servicing. Do not cement or permanently fix the control box in place.

Do not turn the valve shaft or tamper with the valve adjustment screws. If the appliance does not work, **DO NOT take the valve apart**. This can cause more issues and will invalidate the warranty. Please contact us for advice.

Once the control box is secure, slide the front cover back into place, ensuring the piezo lead is still attached and undamaged. Replace the four retaining screws. Do not overtighten the screws as this can damage the threads, making removal of the screws at a later date, difficult.

Reattach the handle onto the valve shaft ensuring the grub screw aligns with the hole in the valve shaft, then tighten the grub screw.



4.7. Testing

Prior to placing the lava rock onto the burner, and before attempting to light the appliance for the first time, all installation pipework and gas connections must be tested for leaks.



Failure to carry out proper leak detection could result in a fire or explosion, and serious injury or death. If any leaks are found, they must be rectified and another leak test carried out, before attempting to light the appliance.

Test all gas connections, including the regulator connected to the gas bottle. This should be re-tested every time the regulator is reconnected after changing the bottle.

After determining there are no leaks, the appliance can be lit for the first time. Please refer to the lighting procedure within this manual.



The gas valve has been set by the manufacturer. Valve adjustment screws must not be altered. The anti-tamper paint must remain intact. The valve does not have a test point. If you require this, please install a pressure test point before the inlet onto the valve.



Running the appliance without lava rock can produce some visible smoke. This is no cause for concern and will disappear once the lava rocks are in place.

During manufacture, the burner tubes are machined and sometimes oil can remain in the tubes. When running the appliance for the first time, this oil burns away and can create an odd smell. This is of no concern. The oil will disappear after the appliance has been used.

Once the appliance is working, turn off and add the lava rock. Please follow the guidance in the next section regarding lava rock.

For first time use please run the appliance for a minimum of 20 minutes.

4.8. Lava Rock

All standard burners are supplied with two 5kg bags of lava rock. This is a natural product and the bags may contain rocks of various colours and sizes.



Do not empty the bags directly onto the appliance. The bags usually contain some small pieces and dust, which can block the burner jets. Please empty the bags into a suitable container then place the rocks on by hand. Some large pieces of rock can be broken up into smaller pieces.



Lava rock should be placed only one layer deep so it covers the burner tubes and mounting plate. Do not place lava rocks on top of the pilot cage as this can cause the pilot to overheat and fail.

During use, the rocks can become sooty. Most of this will burn away, but some will remain. If the soot builds up too much, the rocks can be removed and cleaned with water and a stiff brush to remove any loose debris.



The lava rocks are washed before bagging, so they can contain moisture. Let the rocks dry out before placing them on the burner. If the appliance is lit with wet lava rock, the rocks may pop and crack as the water turns to steam inside.



In extreme cases this can cause small pieces of rock to fly out of the pit. Once the rocks are dry, they don't tend to pop. Keep the burner covered when not in use. If the burner has not been used for some time, and left uncovered, the lava rock could be wet.

It is advisable to light the burner and keep people and furniture away. If the lava rock has become very wet, leave running for around 30 minutes, or until the rocks stop popping.

The rocks supplied should be enough to cover the burner area, however if the pit is larger additional rocks can be purchased from our website. One bag (5kg) of lava rock covers 1800²cm.



The appliance has been tested and approved for use with the lava rock supplied. No other 'toppings' should be used, such as ceramic pebbles, logs or fire glass. This can lead to issues with cross lighting and cause a gas leak. The appliance may also overheat and fail.

4.9. Weather covers

Although the appliance is made from stainless steel and has been designed to be installed in an outdoor environment, it is highly recommended that the burner is covered when not in use. The odd shower of rain will not damage the appliance, however if the burner is not used for prolonged periods, water may collect in the tubes or block the pipes or pilot. This could make lighting difficult or impossible.

We offer a range of stainless steel covers to suit our burners, or one of your own can be used. The lava rocks will remain hot for some time after switching the burner off. Do not replace the cover straight away as this could damage the cover or the burner, by trapping the heat. Allow the burner to cool before covering.

The rubber trim supplied with our weather covers can be pressed on by hand. To create a seamless join, start attaching on one of the sides of the cover and not at the corner. If the trim is longer than needed, please cut to length.

5. Lighting Procedure



1. OFF

2. Spark

3. High

4. Low

Step 1: From the off position (1), press the handle in slightly and turn anticlockwise to the spark position (2). Now press the handle in fully. Notice the pin on the shaft behind the handle should engage in the slot on the valve body.

Note: For newly installed burners or if it hasn't been used in a while, it can take several minutes to purge the air out of the pipework, please keep the handle depressed to fully purge the air from the pipe. You should hear a faint hiss coming from the pilot.

Step 2: With the handle pressed in, press the black ignition button to light the pilot flame. If it does not light, it could mean there is still air in the pipe. Keep the handle pressed in, wait another 10-15 seconds, then try the ignition button again. This will only light the pilot flame and not the main burner.

Note: The spark can be weak in damp weather. In this case a lighter can be used to ignite the pilot.

Step 3: Once the pilot is lit, keep the handle pressed in for a further 10-15 seconds. After this time you can release the handle and check the pilot flame is still alight.

Step 4: To light the main burner, turn the handle quickly from the spark position (2) to the high position (3).

Note: If you move the handle slowly, the sudden pressure drop can cause the pilot flame to go out before it lights the main burner.

Step 5: To vary the heat, turn the handle between the maximum high position (3) and minimum low position (4).

Step 6: To turn the burner off, rotate the handle back to the spark position (2). The main burner will go out. Press the handle in slightly and turn to the off position (1). The pilot flame will go out.

The gas supply should be isolated when not in use.

6. Troubleshooting - New Installations

Please read the design guide section, installation and operating instructions in this manual to ensure the burner has been installed correctly, and you are following the correct lighting procedure.



The valve will not allow the main burner to light, until the pilot is lit first.

Pilot Won't Light

No Gas: If you cannot hear a hiss, either the gas supply is blocked or switched off (refer to installer), or the pilot is blocked (see below). If you can hear a hiss and have waited for the gas to reach the burner, move your head away from the pilot and keep trying the ignitor every 10 seconds or so. Once gas reaches the pilot spark, it will ignite the pilot flame.

No Ignition: If the ignition button works but there is no visible spark at the pilot, (it is hard to see the spark in the daylight) it could be the ignition lead has become dislodged or broken during installation. Also check the white ceramic electrode for cracks/damage.

Sometimes the pilot cage moves during installation causing the spark to hit the cage, rather than the top of the pilot (see image). Simple move the cage or electrode slightly, so the spark hits the right place. The ignition spark won't work in very wet conditions. The burner should be covered to protect it from the weather. Even without the ignition, you can light the pilot with a lighter for testing.



Blocked Pilot Jet

If gas is present at the burner inlet under the control box, but nothing comes out of the pilot (when the valve lever is in the correct position and depressed), then the pilot jet could be blocked. Sometimes small bits of lava rock dust or water can block the pilot jet. To unblock the pilot, remove the lava rock and carefully lift the burner tray to an upright position. Disconnect the smaller flexible pilot gas pipe using two spanners. If you are not confident to do this, please consult a gas engineer. Remove the gas pipe and blow through the pilot from underneath. This should clear any blockage. Reassemble the gas pipe to the pilot again using two spanners. Ensure a gas tight joint. Test for leaks using a suitable leak detection fluid around the pilot joint. Check if the pilot will light. If it works replace the tray back into the pit and recover with lava rock.



Pilot lights ok, but goes out when control lever is released

Once the pilot is lit, continue to hold the control lever in for another 10 seconds then release. This allows the pilot flame to heat the thermocouple which sends a signal back to the main valve. Make sure there is a flame coming from the pilot hitting the thermocouple. If the pilot flame goes out when the handle is released, then the copper thermocouple is not hot enough or could be damaged.

Correct thermocouple position

Sometimes the thermocouple can move in the bracket, causing it to lean away from the flame. Move it closer to the pilot so that it is in the flame. You may need to carefully manipulate the copper pipe underneath to make the thermocouple lean towards the flame. If the thermocouple is not directly in the flame, the burner will keep cutting out.

Thermocouple damaged

The thermocouple lead is the most fragile part of the burner and often gets kinked or broken during installation. If the copper pipe is kinked then straightened, it can damage the electrical wire inside causing intermittent or complete failure. This will need to be replaced.

Main burner lights but shuts off after 20 to 60 seconds

This can be caused by the thermocouple cooling slightly, therefore telling the main valve to shut off. Sometime after the main burner is lit, the gas pressure to the small pilot flame reduces, making the flame shrink just enough to allow the thermocouple to cool down. To keep the thermocouple hot, move some of the lava rock around between the thermocouple and the closest main gas jet. Allowing the main burner flames to hit the thermocouple should keep it hot enough in this time frame.

Main burner lights but shuts off after 10 to 20 minutes

Thermocouple damage

Possibly, the thermocouple was kinked during installation but not completely broken. This allows it to work for a while until the heat from the burner causes it to fail. The burner might relight, but it won't last as long, until eventually it won't stay lit at all. The thermocouple should be replaced.

Overheating

Lava rock should be placed one layer deep across the burner and none should be covering the pilot cage. Do not put additional lava rock or alternative toppings on top, ie. ceramic pebbles, logs, or glass. There should be 100cm² of clear ventilation through the walls of your pit. The holes on the burner plate under the gas jets should not be covered. Overheating will damage the pilot.

The burner draws most of its air up from underneath the burner. This air must be replaced by cool fresh air coming in at the base of the pit. Without this, the burner doesn't perform as well, and the heat inside the pit can build up, causing the burner to overheat and fail.

Pilot failure due to overheating

During product development our burners were tested under extreme conditions, for prolonged periods. Providing they are installed as per the design guide and installation instructions, they should give years of trouble free use. However the design of the pit is very important, to ensure the burner works correctly, and stays working.

With too much heat inside the pit, the pilot jet under the burner tray starts to bend. It can then fracture, causing a gas leak under the burner tray. This then ignites, which usually causes the flame at the top of the pilot to go out.

The flame failure device cuts the gas supply to the burner. If this happens, do not attempt to relight the burner. Wait for the burner to cool then check underneath. If you see black soot around the pilot area, this shows it has failed and the pilot needs to be replaced. The cause of the overheating needs to be address.

Pilot failure by overheating is caused by incorrect fire pit design, not by a fault with the product, and is not covered under the terms of the warranty.

Existing installations

For troubleshooting on appliances that have been previously working correctly, or that are over a year old, please contact us direct.

7. Servicing and Maintenance

Firepits UK Ltd highly recommends an annual maintenance check of the appliance and the installation. If the appliance has not been used for some time, usually over the winter, it is advisable to have it checked by someone experienced and knowledgeable before it is used again.

Supply pipework: Check the supply pipe work for any signs of damage and check for leaks.

The pit: Check all ventilation holes are clear.

Lava rock: This will last forever, however it can become dirty. Although not a major issue, you can remove the rocks and scrub with a stiff or wire brush in water to remove any loose soot. Allow the rocks to dry before placing them back onto the burner.

The appliance: With the lava rocks removed, check the burner tubes for any damage. Lift the burner and check underneath for any damage or soot build up. If there is soot on the underside of the burner plate, then that means it has been leaking and has ignited. This needs to be fixed before using the burner again.

Pilot: Check the pilot carefully and if the gas pipe onto the pilot looks like it is leaning over, this can be a sign of overheating. It may not have failed yet, but could if not addressed. Contact us or a gas engineer for further advice.

Control box: Check the connection onto the burner inlet under the back of the control box for leaks. If this leaked and ignited, then there will be black soot under the control box.

For burners more than eight years old, the centre gas pipe connection will look corroded. If left alone this has an estimated life of 7-10 years, however if the burner has been left uncovered, this may corrode more quickly. If it is leaking it will need to be replaced. For burners less than eight years old the centre connection is stainless and will not corrode.

Service Kits

It is recommended that appliances over two years old get a service. We offer service kits which contain all the components to get an old burner working again, if any problems are found. These can be easily fitted by a knowledgeable person and we have installation guides available to download from our website.

The main gas valve cannot be replaced locally, as it requires specialised equipment to adjust and set to the correct flow rate for the appliance. A valve replacement would require the appliance to be removed from the fire pit and returned to our workshop. Please contact us before returning.

8. Warranty

All gas fire pit appliances delivered to a UK mainland address are covered by our 12 months, return to base, limited warranty. Should you have any problems, please use the contact details on the front of this manual. Please quote your invoice or web order number, and product serial number, which can be found on the label on the control box. If purchased through a third-party please also supply their contact details.

Firepits UK Ltd make every effort to ensure all appliances leave our factory in perfect working order. Each burner is 'burn tested', to ensure it functions safely and correctly. Due to the nature of the product, problems can arise during the installation process, which are not covered by the manufacturers' warranty.

To return the appliance, please contact us first explaining the reason for the return.

1. Return to Base warranty warrants the appliance, to the end user, against defects in materials and workmanship for the period of one year, which begins on the date of purchase.
2. Please return in the original packaging if available and include the installation manual. Under a return to Base warranty the end user is responsible for the cost of packaging and shipping the unit to us. We recommend the product is insured for loss or damage during transit. We are not responsible if the appliance is lost or damaged during the return transit.
3. We will rectify the fault within a reasonable amount of time from the point of receipt at our factory.
4. The Return to Base warranty covers only those defects which arise as a result of normal use of the product. It does not apply to the following: Improper & inadequate maintenance or modification. Repairs carried out by non-authorized persons. Damage caused by improper handling or installation. Operation outside the product specifications. Physical damage, accidental damage, neglect, or user abuse. Normal wear and tear.
5. If there is no fault found or the problem has been caused by a third-party installer, user error or any of the reasons stated in section 4, a 'no fault found' charge may be applied. You will be contacted to confirm this charge within 7 days of the item being tested. You will also be charged the carriage to return the goods to you.
6. We reserve the right to repair or replace any faulty components. Faulty goods may be replaced with factory-refurbished components.
7. The warranty is void if there is any attempt made to repair the appliance by a non-authorized party, or if the appliance is inadequately or improperly maintained or modified.
8. The warranty is void if any part of the appliance has been disconnected, in order to install into the pit, or if the anti-tamper paint has been removed from the valve screws.
9. We reserve the right to replace discontinued products that are still under warranty with the nearest equivalent specification product. All repairs and replacements will carry a 90 day warranty or the original warranty balance, whichever is greater.
10. This document is not proof of purchase or proof of warranty.

No-Fault Returns Conditions

For no-fault returns purchased directly from Firepits UK Ltd, please contact us within 14 days of receiving the appliance. All non-faulty returns must be returned within one month of purchase. They must be returned undamaged in their original packaging, along with all accessories and manuals etc. If any returned item is damaged or parts missing, including the original packaging and manuals etc, we reserve the right to charge a 15% restocking fee. Goods returned after one month of purchase can be liable for a 15% restocking fee. Any goods found to be damaged upon receipt at our factory, may be subject to a repair fee of up to 50%.

Goods Damaged in Transit:

If goods are visibly damaged on receipt, it is very important to contact us immediately or within 3 days of the delivery. If damage is noticed when unpacking the appliance, please contact us immediately. Photos of the damage to the packaging and product, as well as the delivery address label, are required.

We cannot accept claims for carrier damage unless this has been reported to us promptly.