

Brightstar Gas Fire Pits, Tables, Spheres & Bowls

Natural Gas

Installation Guide Operating Instructions Troubleshooting

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1. Product Description

This manual covers installation information for the following Natural gas products:

Gas fire pits: Vega, Atlas Tables: Callisto, Titan, Saturn

Fire spheres: English Country Garden, Tree of Life

Fire bowl: Lunar

This Brightstar gas fire pit product has been designed to be installed permanently in one place, or it can be moved around as required (subject to gas pipe installation). 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. There are certain gas safety and building regulations that must be followed, to ensure it is installed correctly, especially in regards to underground gas pipes. Failure to follow these regulations could cause a potentially dangerous installation. Any modification to this appliance may be dangerous and will invalidate the warranty coverage.

Please **read this manual carefully** before 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 installtions, please contact us or seek advise 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 onsite storage tanks. A 19kg propane bottle (or a larger bottle or tank) is required. The appliance must only be installed by persons who are competent ie, experienced or knowledgable in connecting appliances to LPG bottles. Installation by a gas safety engineer is recommend.

Natural Gas eg. Methane. Mains gas supply from the property's gas meter. The gas capacity at the meter must be checked if you intend to install multiple natural gas burners. Installation by a gas safety engineer is always recommend.

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.

2.1 Unpacking the box

Please check the box and appliance on delivery and report any visiable damage promptly.

Care should be taken when removing the appliance from its packaging. The connections between the burner and the controls are flexible. 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.

Products are dispatched in multiple boxes or on pallets. Please do not drop or roll the boxes as this can damage the products. When unpacking a fire pit table, leave it upside down on top of the protective packaging so that it can be conected to the gas inlet, situated underneath the controls.

2.2 Specifications

Gas Type	G20 - Methane	Appliance category	I 2H
Supply pressure	20 mbar	Maximum flow rate	1.7 cu.mtrs/hr
Heat input - Low	11.5 kW	Heat input - High	18 kW

2.3 What's included

The Vega unit will come with 4 legs and 8x M6 nuts and washers.

The Lunar bowl has a flexible pipe attached to the gas inlet to make installation easier.

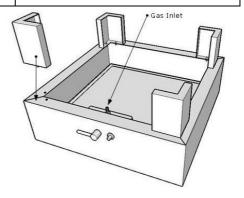
Lava Rocks 5kg Bag x 2



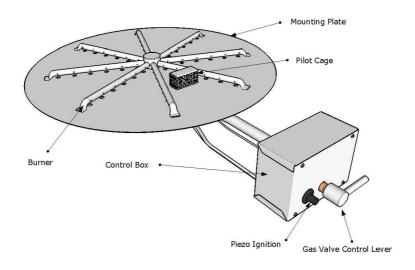
Vega model: Attach legs using nuts and washers provided. Tighten with a spanner.

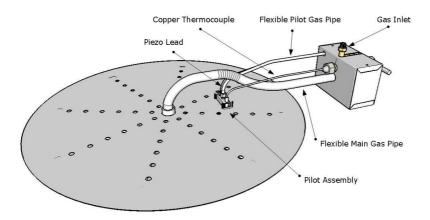
Be careful of sharp edges and use gloves if necessary. Leak test all connections.

The gas entry point is a ½ inch male BSP thread connection, located underneath the control box.



2.4 Burner components





Electrode - Pilot - Thermocouple



2. Safety

3.1 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. It is highly recommended that a gas safety engineer is used to install and maintain 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.

3.2 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/building insurance. If in doubt, please check local conditions and seek advise from a gas engineer.

3.3 Location

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

The appliance does not require an electrical supply for operation.

As a general rule, this appliance should not be installed under any form of roof covering. However, this may be possible in certain circumstances. i.e. the area must have open sides, that cannot be enclosed. There must be a metal 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 sunken patio area, unless there is some means for any unburnt gas to escape in the event of a leak. Please consult a local gas engineer for more information.



The heat directly below the burner can be quite considerable. The product should never be placed on anything combustible. If you wish to use the product on lawn or decking, place a paving slab or insulated fire board underneath the burner area.

3. Natural (mains) Gas Installation

This applaince must be connected to the mains by a registered gas engineer.



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.



When installing gas pipe work, there are gas and building regulations that must be followed. Please check the site specific conditions.



A multiple natural gas appliance installation, at the same location, will require additional gas capacity from the meter. Please check that the meter has enough spare gas capacity. Each burner is 18kw.



It is advisable to install an isolator valve inside the property, so that the appliance can be isolated from the supply when not in use. This can also be used as a safety shut off in case of emergancy. This can be a simple manual valve, or an electrically operated solinoid operated by a remote switch.

4.1 Gas pipe size

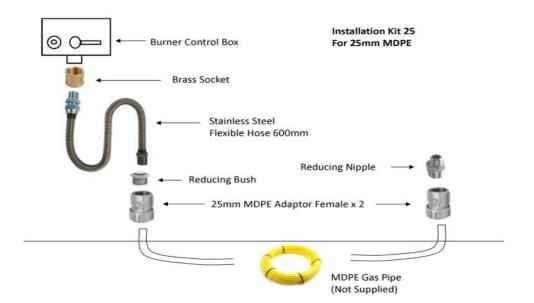
Gas pressure drops as the distance between the meter and the appliance increases. Each right angled bend introduces a further pressure drop. To compensate for this, the diameter of the gas pipe increases. A gas engineer will calculate the required pipe size for the specific installation. 25mm diameter MDPE can be used for a distance up to 30mtrs from the gas meter, to the appliance. Smaller diameter MDPE will only work for a distance up to 7mtrs.

Always check with a gas engineer first before finalising the design.

4.2 Installaing underground pipe work

To run a gas pipe underground from the bottle to a **permanent** table location, it is strongly recommended that you ask a **registered gas safety engineer** to check your design concept BEFORE the design is finalised, or you start digging trenches or laying pipes.

Yellow MDPE gas pipe is recommended, which must be buried directly into the ground. **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.





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' suitible for MDPE.

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

To aid installation and allow faster purging of air from the pipeline, it is reccomended to install a test point just below the gas inlet onto the burner. This will allow for a pressure test at the appliance, and will test the connecting pipework for leaks.



There is a connection on the main valve that looks like a pressure test point, but it is not. Do not use this as a test point.

4. 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.

5.1 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 extream 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 untill 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 1800^2 cm.



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.

5.2 Ventilation

Please ensure the gaps between the table legs, or the holes in the plinth are not blocked. This ventilation is to allow air to be drawn in underneath the burner for correct combustion. It also allows the hot air inside the structure to escape.

5.3 Tabletops & weather covers

The tables come with a tabletop or weather cover to protect the burner from the elements. 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 jets. This could make lighting difficult or impossible.

The Vega & Atlas units are not supplied with a weather cover as standard. Please view these on our website. These units are designed as a portable appliance, and therefore should not be left outside permanently. When the appliance is not being used it should be stored under cover to avoid adverse effects that may result from weathering. We do not currently offer a weather cover for the fire sphere however it is still advised that the burner is covered to protect it from the weather when not in use.

The lava rocks will remain hot for some time after switching the burner off. Do not replace the top or cover straight away as this could damage the cover or the burner.

5. Operating Instructions

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 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 too 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 check that the location of the fire pit table is suitable, and the installer has followed all the instructions in the manual.



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 100cm^2 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 & 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 knowledgable before it is used again.

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

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. If there is soot on the underside of the burner plate, this 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.

Controls: Check the connection onto the burner inlet under the controls for leaks.

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 recommened that appliances over two years old get a service. We offer service kits which contain all the componants to get an old burner working again, if any problems are found. These can be easily fitted by a knowledgable 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 uninstalled and returned to our workshop. Please contact us before returning.

Table care: The polished steel tables can be cleaned with a suitable stainless-steel cleaner and soft cloth. The zinc tables will mottle and become darker as the finish ages. These tables can be lightly cleaned with mild soap and water. Cleaning may accelerate the aging process. The corten tables can be cleaned with warm water.

8. Warantee

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.

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.

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.

We will rectify the fault within a reasonable amount of time from the point of receipt at our factory.

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-authorised 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.

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 vou.

We reserve the right to repair or replace any faulty components. Faulty goods may be replaced with factory-refurbished components.

The warranty is void if there is any attempt made to repair the appliance by a non-authorised party, or if the appliance is inadequately or improperly maintained or modified.

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.

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.

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.