

# Essential Health and Safety Information on the Use of Propane and Butane Gas Cylinders



# The Different Types of LPG

There are two different types of LPG – Propane and Butane. Propane (J Gas red cylinders) has a lower boiling point than Butane (J Gas white cylinders) and is stored at a higher pressure so it is more suited for storage outside. Butane's boiling point (conversion from liquid to gas) is around 0°C so in colder conditions around this temperature it will not work.

## Propane

Propane is predominately used for domestic heating, cooking and numerous commercial and industrial applications and is stored in bulk tanks which can be situated above ground or underground. J Gas red Propane cylinders are used as a fuel for a wide range of appliances from cookers, boilers, space heating, both at home and in the work place.



## Butane

Butane is predominately used for leisure applications through the warmer months and for internal domestic heating (mobile heaters) and is supplied in J Gas white cylinders.



## FLT Cylinders

These cylinders are used within the mechanical handling industry and are only suitable for this type of application, cylinders are available in 12kg & 18kg sizes, great care must always be taken when handling this type of cylinder.





## J Gas Propane Cylinders: 6kg, 11kg, 19kg and 47kg

### When using J Gas Propane **ALWAYS**:

- **Always** treat a cylinder with care to ensure that the valve is not damaged.
- **Always** use cylinders in the upright position unless specifically designed for liquid offtake (FLT).
- **Always** return the cylinder when empty or when not in use for long periods.
- **Always** read the instructions and labels provided with your appliance and keep them handy for future reference.
- **Always** keep your appliance clean and have it serviced regularly by a competent person.
- **Always** ensure there is an adequate supply of fresh air in the room where your appliance is used. If a room has ventilators or grilles ensure these are open. If a room becomes stuffy, open a window or door immediately
- **Always** be careful when lifting cylinders. Full cylinders weigh approximately twice the nett weight shown on the cylinder
- **Always** contact your local dealer should you have any questions on using J Gas Propane.



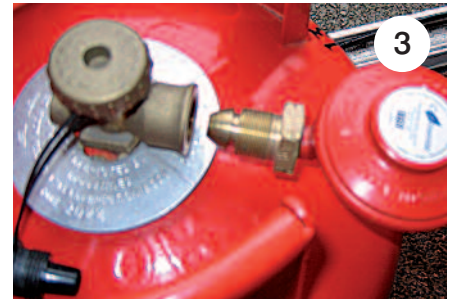
### When using J Gas Propane **NEVER**:

- **Never** subject a cylinder to heat as the pressure inside could build up to exceed the safe limit
- **Never** attempt to disconnect or unscrew a regulator from any cylinder if the flame does not go out when the cylinder handwheel is turned off. Leave appliance alight and call your local J Gas Dealer for advice.
- **Never** store or use cylinders in cellars or below ground level. LPG is heavier than air and if there was an escape the gas will collect at low level, can be asphyxiate, and can become dangerous in the presence of a flame or spark. For the same reason do not store cylinders any closer than 2 metres from untrapped drains, unsealed gullies or openings to cellars.
- **Never** use propane cylinders for use indoors at domestic premises or in high rise flats.
- **Never** attempt to force a regulator of one size on to a cylinder's valve of another size. If you have any difficulties contact your local dealer and have the appliance checked.
- **Never** improvise or modify your gas appliance. Do not let unqualified people tamper with or service your appliance; it could become unsafe to use.
- **Never** obstruct access to cylinders

## Connecting 6kg,11kg, 19kg & 47kg Propane Cylinders



Propane cylinders have a 'female' valve connection. Check the connection is clean and undamaged. This is a 'face to face' seal and is to be fully tightened by the correct size spanner. (**Left hand thread**).



1. Check that the valve handwheel is OFF by turning clockwise.
2. Remove the protective plug and leave hanging to replace later.
3. Inspect the bullnose connection of the regulator for damage before connecting.

NOTE: A gas tight seal is created by face to face connection between the bullnose & cylinder valve.

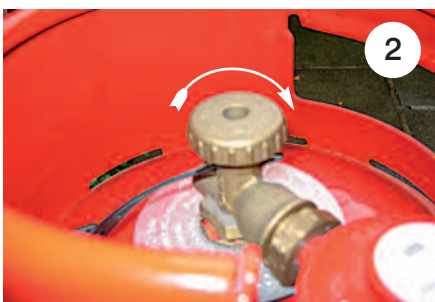
4. Fit the connecting nut (**left hand thread**) to the cylinder, using the correct spanner.



**Note that Propane cylinder connections must be tight.**

5. Ensure appliances are turned off.
6. When gas is required turn the valve handwheel anti-clockwise.
7. Check for gas soundness using leak detection solution.

## Disconnecting 6kg,11kg, 19kg & 47kg Propane Cylinders



1. Turn the appliance OFF. Wait until the burner/pilot light has gone out.
2. Close the cylinder valve handwheel OFF by **turning clockwise**.

**N.B. Never remove the Regulator with the cylinder valve open.**

3. Remove the Regulator (**left hand thread**) with the correct spanner.
4. Replace the protective plug into the valve outlet.



### Change over valves

- a. If the installation does not have a changeover valve fitted, turn off the gas tap, if fitted, to an appliance.
- b. For installations with a changeover valve, it is only necessary to turn off the empty cylinder.





## J Gas Butane Cylinders: 7kg and 13kg

### When using J Gas Butane **ALWAYS:**

- **Always** treat a cylinder with care to ensure that the valve is not damaged
- **Always** use cylinders in the upright position
- **Always** return cylinders when empty or when not in use for long periods to your local dealer
- **Always** read the instructions and labels provided with your appliance and keep them handy for future reference
- **Always** keep your appliance clean and have it serviced regularly by a competent person
- **Always** ensure there is an adequate supply of fresh air in the room where your appliance is used. If a room has ventilators or grilles ensure these are open. If a room becomes stuffy, open a window or door immediately
- **Always** try to exchange full for empty cylinders out of doors. A change indoors should only be done away from any sources of ignition such as, open fires, boilers, electric heaters, pilot lights, lit cigarettes etc. The appliance must also be switched off and preferably allowed to cool before the cylinder change takes place
- **Always** be careful when lifting cylinders. Full cylinders weigh approximately twice the nett weight shown on the cylinder



### When using J Gas Butane **NEVER:**

- **Never** subject a cylinder to heat as the pressure inside could build up to exceed the safe limit
- **Never** attempt to disconnect a clip-on regulator from any cylinder if the flame does not go out when the regulator is turned off. Leave appliance alight and call your local J Gas Dealer
- **Never** store or use cylinders in cellars or below ground level. LPG is heavier than air and if there was an escape the gas will collect at low level, can be an asphyxiate, and can become dangerous in the presence of a flame or spark. For the same reason do not store cylinders any closer than 2 metres from untrapped drains, unsealed gullies or openings to cellars
- **Never** attempt to force a regulator of one size on to a cylinder's valve of another size. If you have any difficulties contact your J Gas Dealer and have the appliance checked
- **Never** improvise or modify your gas appliance. Always ask your J Gas retailer for advice and do not let unqualified people tamper with or service your appliance. It could become unsafe to use
- **Never** obstruct access to cylinders

## Connecting 7kg & 13kg Butane Cylinders

7kg, and 13kg Butane Cylinders have a 21mm valve and must only be used with a 21mm regulator.

1. Turn the orange cap so that the arrow is pointing to the gap in the shroud.
2. Remove the orange safety cap by pulling the lanyard out, then up. Do not use tools and leave the cap hanging.
3. Check the black sealing washer is fitted inside the cylinder valve.
4. Ensure the regulator switch is in the disconnect position (3 o'clock position).
5. Fit the 21mm regulator as per the manufacturers instructions.
6. When gas is required, turn the switch to the vertical on position.

If the regulator on/off switch gets stuck when turning the supply on, it means that the regulator has been connected incorrectly. In this event the regulator must be disconnected and the correct steps to reconnect repeated from the beginning.



## Disconnecting 7kg & 13kg Butane Cylinders

1. Never disconnect the Regulator with the switch in the on position.
2. Turn the regulator switch to the off position.
3. Wait until the burner and pilot lights have gone out. If the flame does not go out, turn the switch back to on; leave the appliance alight and call your gas supplier.
4. For the:
  - COMAP 1590 regulator press the push button on the lower part and lift the regulator from the valve.
  - SRG 541 regulator lift up the lever at the base of the regulator and lift the regulator from the valve.
  - Recla Comapact Quick-On regulator press horizontally on the regulator on/off switch and pull upwards at the same time.
  - TPA clip on regulator – lift the red tag on the on/off switch and pull upwards at the same time.
5. Replace the orange safety cap onto the cylinder valve of the empty or part full cylinder, when not in use.



## Carbon Monoxide

Carbon monoxide (CO) is a highly poisonous gas which can be produced if an appliance is not working correctly. It is difficult to recognise as it has no colour, smell or taste. Symptoms of CO poisoning are similar to that of a viral infection. It affects the mental ability causing a person to become incapable without knowing.

### **Symptoms of exposure to Carbon Monoxide:**

- Tightness across the forehead.
- Headache.
- Severe headache, weakness, dizziness, nausea, vomiting.
- Coma, intermittent convulsions.
- Depressed heart action, slowed respiration. If the exposure has been severe it may cause death.

**If you suspect you are suffering from the symptoms above seek medical advice and call the J Gas Emergency Service Number: 07739 882001.**

## Regulators

A regulator must be included in the connection between the cylinder and the appliance, except for appliances designed to be supplied at cylinder pressure. The regulator is precisely set by the manufacturer to control the pressure of the supply and **Must Not Be Adjusted**. If a Regulator shows signs of wear, it should be replaced. **Regulators must be marked BS3016 or BS EN12864.**

Butane regulator



Propane regulator

## Flexible Hoses

Use only certified hoses to BS3212 or BSEN1763 which **bear the year and name of manufacturer** as LPG attacks and erodes natural rubber. Keep hose lengths as short as possible. All hoses must be secured with proper hose clips. Make sure that the hoses are kept clear of 'hot spots' and inspect them from time to time. Replace any hose that shows signs of wear, cracking or other damage.

Hoses fitted to cabinet heaters must be marked BS3212 type 2 (or BSEN1763 Class B) and be of 8mm inside diameter.

## Emergency Advice

If you suspect a leak, turn off the gas, open all the doors and windows and ensure there is no source of ignition nearby i.e. extinguish any cigarettes and switch off your mobile phone. Examine all pipes and connections. If the leak is not located, turn on the gas supply and brush over the connections with leak detection fluid – it will bubble where there is a leak.

Butane has a special odorant added to help with the detection of leaks. **NEVER USE A NAKED FLAME** to search for a leak.

### **In the Event of Fire**

- Immediately raise the alarm and call the **Fire Brigade** advising them of the presence of LPG.
- Shut all valves on cylinders.
- Keep cylinders cool by water spray if possible.
- Ring the **J Gas Emergency No: 07739 882001**



# J Gas Liquid Offtake FLT Cylinders: 12kg and 18kg



## User Instructions

### Description

A FLT cylinder designed to give liquid propane offtake only when operating in the horizontal or vertical position. The body of the FLT cylinder is painted red and the shroud black.



### Instructions for changing a cylinder

1. Park truck and apply handbrake. Ensure that there are no naked lights, no smoking, or other sources of ignition including the use of mobile phones, pagers or radio transmitters, are permitted in the vicinity of the truck.
2. Close cylinder offtake valve and allow engine to stop before switching off ignition.
3. Release coupling connection from the cylinder offtake valve by hand, slowly; care should be taken that the face of the union is not damaged by dropping the flexible hose after disconnecting , or that the sealing surface becomes dirty.
4. Release cylinder holding brackets or clamps and carefully remove empty cylinder. **DO NOT** drop or otherwise mistreat the cylinder. Remove cylinder to a suitable storage site for collection; full and empty cylinders should be segregated and any damage or faulty cylinders clearly labelled.

N.B **Be careful when lifting cylinders.** Full cylinder weighs approximately twice the nett weight shown.

5. Position the replacement cylinder on truck. When horizontally mounted cylinders are used the **ARROW ON THE BASE MUST BE POINTING VERTICALLY DOWNWARDS.**

The cylinder must then be securely clamped.

6. Ensure the cylinder offtake valve is in the closed position and that the black rubber washer inside the valve is in position and in good condition.
7. Re-connect the flexible hose and tighten the coupling by hand, ensuring that the coupling is screwed fully home to completely open the self-sealing valve.





8. Open cylinder offtake valve **SLOWLY** to its full extent. Opening this valve quickly may cause the automatic excess flow valves to close and so impede the flow of gas to run the engine. This is a safety feature and if it occurs turn off the cylinder, wait a few minutes and then retry.
9. Start engine in the normal way

## Health & Safety Information

**Appropriate PPE must always be worn when changing cylinders. Gloves, preferably gauntlets, goggles or face shield, long sleeved cotton overalls and safety footwear are recommended.**

In the event of a **suspected leak** drive the truck to open air, ensure that there are no naked lights, smoking or other sources of ignition in the vicinity of the truck and then check the installation with a leak detection solution, **NEVER** search with a naked flame to determine the point of leakage.

**Care** must be taken to ensure that LPG cylinders are correctly positioned on trucks to avoid damage and ensure safety. The most appropriate position will normally have been assessed and provided by the truck supplier, but users should always make their own assessment against their usage conditions. The cylinder **MUST NOT** overhang the truck body. **IF IN DOUBT CONSULT YOUR TRUCK SUPPLIER.**

**If you require further advice please contact J Gas Technical Department on 01506 656535.**



Standhill, Bathgate, EH48 2HR  
Tel: (01506) 656535 Fax: (01506) 632049

11 Andersons Lane, Lochee, Dundee, DD2 2RD  
Tel: (01382) 611164 Fax: (01382) 612995

Earlston Road, Newtown, St. Boswells, TD6 0SD  
Tel: (01835) 823001 Fax: (01835) 823622

Kirkton Dv., Raiths Ind. Est., Dyce, Aberdeen AB21 0BG  
Tel: (01224) 774774 Fax: (01224) 774777

Castle Laurie Court, Bankside Ind. Est., Bainsford, Falkirk FK2 7XY  
Tel: (01324) 611028 Fax: (01324) 611028

Jet Garage, Post Road, Tranent, EH33 1NF  
Tel: (01324) 611028 Fax: (01324) 611028