



FAQ's for Cylinder Customers

How do I safely check the gas level in my cylinder?

LPG cylinders will come filled to around 80% of the height of the cylinder. This is normal as it allows for the expansion of the liquid LPG inside the cylinder. If you would like to test the level of LPG in the cylinder the safe and accurate way is to:

1. Pour warm water down the side of the cylinder
2. Wait a few minutes
3. Run your hand down the side of the cylinder
4. It will feel cold to the touch at the level of LPG.

What should I do if I think I might smell gas around my cylinder station or in a building?

If you suspect a gas cylinder is leaking, check for leaks using soapy water. If you see bubbles then it is most likely that a leak is present. NEVER USE A MATCH to find a leak. Turn off the valve and inform your gas supplier.

If you smell gas inside a building do not operate any electrical switches (on or off) or do anything that could create a spark (or other source of ignition). Turn off the gas supply and get out of the house immediately. Wait for a while until you are confident the gas has dispersed. You can then return and open the windows to ventilate the premises. Check for any obvious source of the leakage and shut any gas valve that may be still open. Call a gas fitter for testing and re-commissioning.

Potential causes for why LPG cylinders frost / ice up.

An appliance burns gas which is provided by boiling off from the liquid LPG stored in the cylinder. The amount of gas boiling off is dependent on the temperature of the day. The warmer the temperature a greater quantity of gas can be boiled off, likewise the colder the temperature a lesser quantity of gas will be boiled off. In colder temperatures the boiling off will cause frosting or icing on the cylinders. This can also occur if more appliances have been installed and the number of cylinders has not been increased.

How an auto change over valve works – Is it OK to leave my reserve cylinder turned off at the cylinder valve?

The auto changeover is a specially designed regulator that automatically closes the supply from one cylinder or bank of cylinders and opens another in order to ensure continuity of the gas supply. To do this, all cylinder valves must be left in the open position. This prevents any loss of supply when the a cylinder or bank of cylinders have run out of gas. Several types of automatic changeover regulators are available. All use a visual indicator to show you when a cylinder is empty and it has switched over to the other cylinder. The indicator typically turns red when the first cylinders is empty. Do not touch or turn the indicator. When it turns red, that's your signal to call your gas supplier for a delivery.

Potential causes for believing partially full cylinders have been delivered to customer sites with auto changeover regulators.

All LPG cylinders are filled on scales and the filling process is automatically shut off when the maximum filled weight for the cylinder has been reached. This is typically 80% of the cylinder volume and is set by legislation.

Cylinder access issues.

Cylinder installations should be located such that the delivery of gas can be made safely by one person without excessive manual handling or risk to customers property. In situations where the following conditions cannot be satisfied, other options such as locating the cylinders remotely and piping to the installation should be considered.

- (a) Cylinder installation must be designed to be capable of accommodating the size of cylinder intended for use, for either exchange or on site (insitu) fill applications.
- (b) A minimum distance of 600 mm should be provided between front of the cylinder installation and other structures to allow adequate access for the cylinder delivery to be made.
- (c) The cylinder compound should be accessible by cylinder trolley.
- (d) Paths should have a minimum width of 600 mm.
- (e) Steps should have a minimum of 2:1 tread depth to tread rise. Maximum tread rise should be 125 mm.
- (f) Steps should not exceed 1.5 m total rise.
- (g) Paths should not exceed 20 deg gradients.
- (h) Total distance from cylinder delivery truck parking area and cylinder installation should not exceed 75 m.

- (i) It must be possible to legally and safely park the truck while making the delivery.
- (j) Access route should be firm and compact with adequate grip even in wet conditions.
- (k) The access route should not be over delicate or decorative surfaces such as terracotta.

Are all company cylinders the same?

Yes, all cylinders in New Zealand are manufactured to government approved standards.

Can any cylinder be fitted on to my installation?

Yes, any 45 kg cylinder can be fitted to the installation, these cylinders all use the same valve. 9 kg cylinders have different valves and may not fit the pigtails (cylinder connections) on your installation.

Who is responsible for the installation on my premises?

The property owner engages a licensed gas fitter to install the gas regulator, changeover valve and the pigtails (cylinder connections). The gas fitter also connects the gas line from the regulator to your appliance(s). These components and the appliances are the property of the homeowner. The gas supplier owns and provides the gas cylinders.

What should I do if I can't close the valve on my cylinder?

Contact your gas supplier.

Which way do I screw in the pigtail?

The pigtail has a left hand thread and can only be screwed in anti-clockwise.

What is the recommended standard installation requirements?

The recommended standard installation requirements are set out in the hazardous substance legislation and associated standards for gas installations. In summary these requirements are:

1. Up to 100 kg can be installed within one metre of a building (up against the wall of a building) provided there are no openings in the building below the top of the cylinders and within one metre from the sides of the cylinders.

2. Between 100 to 300 kg can be installed within 2 metres of a building (up against the wall) provided the walls of the building behind the cylinders and 2 metres either side of the cylinders are vapour tight and constructed of fire resisting material. There must be no openings in the building below the top of the cylinders or within two metres from the sides of the cylinders.
3. Between 300 to 1,000 kg can be installed within two metres of a building (up against the wall) provided the walls of the building behind the cylinders and 2 metres either side of the cylinders are vapour tight and are constructed of 60/60/60 fire resistance rated material. There must be no openings in the building below the top of the cylinders or within two metres from the sides of the cylinders.
4. There is a minimum vertical clearance from openings into buildings of 150 mm above the top of any cylinder. This clearance increases to 500 mm for on-site filled cylinders.

Are there specific safety distances to openings and sources of ignition I should be aware of?

For installations of 2 x 45 kg cylinders there must be no openings into a building within 1 metre of the cylinders and there must be no sources of ignition within 500 mm above the cylinders and 1.5 metres from the sides of the cylinders.

For any installation over 2 x 45 kg there must be no openings into a building within 2 metres from the sides of the cylinders and there must be no sources of ignition within 500 mm above the cylinders and 1.5 metres from the sides of the cylinders.

There is a minimum vertical clearance from openings into buildings of 150 mm above the top of any cylinder. This clearance increases to 500 mm for on-site filled cylinders.

Who do I contact if my installation does not comply?

For workplaces the contact is WorkSafe NZ, Ph 0800 030 040 or through the notification section of their website **www.worksafe.govt.nz**

For non-workplaces the contact is the EPA (Environmental Protection Authority), Ph 04 9162426 or **info@epa.govt.nz**

The cylinders that were delivered were badly rusted, is this OK?

Yes, when the cylinder was last filled it would have been checked by the filler to ensure it meets a minimum standard before it is filled. Should you have any concerns about the condition of your cylinder, contact your gas supplier.

I am building a new home, where should the LPG gas cylinder installation be best located?

The cylinders can be located anywhere on your home provided they are kept 1 metre away from any opening into the home i.e. doors, vents etc. There are some restrictions where cylinders cannot be placed within a building, under a stairway and restricted access for the cylinder delivery person.

Is all LPG the same irrespective of which company I buy from?

Yes, the LPG in New Zealand is a mixture of propane and butane and is the same from all companies throughout New Zealand.

Can you provide me with the MSDS for LPG?

Safety data sheets are available from your gas supplier, they can be downloaded from their websites.

What are the dangers of using LPG in my home?

Used wisely, gas is instant, reliable, efficient and safe. However, like other forms of energy, it must be treated with respect to prevent accidents. The main things to remember is to keep combustible material 1 meter away from the heated surface and to ensure there is sufficient ventilation to ensure the appliance has the right amount of air and the combustion products can be removed from the air where the appliance is being used.

Why can I smell gas – odorant?

Pure LPG has no smell, an odorant is added to the LPG to help detect any leaks. If you can smell gas, it means you may have a gas leak at the cylinder or appliance. If you smell gas keep flames and cigarettes away from the area, do not operate electrical switches or use mobile phones in the area, if possible turn off the appliance and cylinder, open doors and windows to ventilate the area, call the emergency services.

I'm out of gas – how do I get the bottles refilled?

Ring your gas supplier.

If I want to change companies do I need to change anything on the installation?

No, all gas suppliers use the same or very similar installation equipment and there will be no need to change anything.

I am wanting to install a heat pump, what precautions do I need to make?

The heat pump must be kept a minimum of 1.5 metres from the cylinders.

Is the gas in by 9 kg BBQ bottle the same as in the 45 kg bottle?

Yes, it is a mixture of propane and butane.

Can I use my 9 kg bottle inside my house?

Yes you can, you will be limited to a maximum of 20 kg inside the house and the maximum capacity of each cylinder must not be more than 10 kg.

I want to buy a gas heater, is it safe to use inside?

LPG heaters are used widely to warm New Zealand homes and businesses. Used wisely, gas is instant, reliable, efficient and safe. However, like other forms of energy, it must be treated with respect to prevent accidents. In small rooms (for example bedrooms and bathrooms), a permanently installed gas heater may only be used in certain restricted circumstances. Ask a licensed gas worker for advice. Don't use unflued gas appliances, such as LPG cabinet heaters or instantaneous water heaters in small rooms or in bedrooms and bathrooms. Always keep your heater at least 1 metre away from anything that could catch fire. Put a safety guard around your heater if you have young children in your home or there is a lot of foot traffic. Keep a window open when you use your unflued heater, to help remove heater emissions (combustion products) and to keep the air fresh and reduce condensation.

Where is the best place to install the gas supply in my home?

The cylinders can be located anywhere on your home provided they are kept 1 metre away from any opening into the home i.e. doors, vents etc. There are some restrictions where cylinders cannot be placed within a building, under a stairway and restricted access for the cylinder delivery person.

Do I need to have concrete pads for the cylinders to stand on?

No, cylinders should be installed on a firm, level, non-combustible base, and not resting on soil. The floor or base should be constructed so that water cannot accumulate within any enclosure or recess.

Is it safe to transport my 9 kg gas bottle inside my boot and inside my car?

It is preferable to transport your cylinder inside your boot rather than inside the car. Cylinders should be secured in an upright position to prevent possible liquid discharge (which is even more dangerous than a gas leak). Devices to secure cylinders upright are available in many stores selling LPG cylinders. Cylinders should not be left unattended inside the vehicle, particularly during hot weather.

How long should a 45 kg LPG bottle last?

Good question, it really does depend on what you are running and how you use it.

Use this calculation to work this out:

1 kg of LPG contains 50.4 MJ of energy, which means 1 x 45 kg cylinder has 2268 MJ of energy (45 kg x 50.4 MJ = 2268 MJ). To work out how many hours your cylinder will last, you need to know the total Megajoule rating of all the appliances you are running. This can normally be found on the data plate or in the product manual, and if you don't have that try Google with the product and model number and look for the heat input rating for the appliance.

Let's look at in INFINITY® VT 26 as an example:

Minimum operating 2.4 litres per minute = 14 MJ/hr

Divide the total energy (MJ) in the cylinder by the total MJ input as above 14 (in MJ/hr).

$2268 \text{ MJ} \div 14 \text{ MJ/hr} = 162 \text{ hours of continuous use (per 45 kg cylinder)}$

Maximum operating 26 litres per minute = 199 MJ/hr

$2268 \text{ MJ} \div 199 \text{ MJ/hr} = 11.39 \text{ hours of continuous use (per 45 kg cylinder)}$

So there is quite a difference between 162 hours and 11 hours of continuous use, so how much are you going to use?

A shower typically uses 10 – 12 litres of water per minute in total. Approx 6 – 8 litres will be hot, the rest you'll mix with cold to get your perfect temperature, As a very rough average you may expect to get 40 – 50 hours of continuous showering from 1 x 45 kg cylinder.