



CAN I USE A 9KG INSTEAD OF A 45KG BOTTLE?



Where would we be without Gas?

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INDUSTRY ADVICE

Connecting a 9kg gas bottle in lieu of a 45kg bottle is **not** recommended which is supported by the PGDB. This is due to a number of safety concerns, as well as protecting gas appliances and ensuring they are capable of performing as they were designed to.

Part of the requirement for a compliant gas installation (as per AS/NZS 5601) is that the gas supply must be capable of meeting the demand, and therefore replacing a 45kg gas bottle with a 9kg gas bottle can become problematic to an existing installation which was designed for a higher gas supply. As well as causing a safety risk, this can also cause potential damage to the appliance which can affect performance and warranties.



WHY?

A 9kg gas bottle, due to its size will always have a lower vaporization rate than a 45kg gas bottle, however when you put a 9kg bottle under increased demand, this level drops even further and it is therefore no longer able to keep supplying LPG at the same rate to meet the demand.

As long as the gas bottle is full it can seem like a simple, temporary fix when a 45kg gas bottle isn't available temporarily, for a number of reasons. Unfortunately having gas in the bottle is not the only underlying factor when it comes to gas supply.

This is because of the vaporization capacity of the cylinder (the rate at which LPG turns from liquid to a vapor). To learn more about vaporization, see our Guide: **LPG Vaporization Explained**.

Put simply:

- The larger the surface area of the gas bottle = the higher the vaporization capacity
- The lower the temperature = the lower the vaporization capacity
- The more gas drawn from a gas bottle, quickly = the colder the bottle = the lower the vaporization rate

SAFETY CONCERNS

See below some of the safety concerns with using a 9kg gas bottle as a temporary replacement:

- When a 45kg gas bottle is delivered, the connection is leak-tested which may / may not happen if the end user is connecting the 9kg by themselves
- The 9kg cylinder may have a different valve connection than that of the existing pigtail. If this fit is not exact it can create a leak
- Due to the length of the pigtail hoses the 9kg gas bottle may not be grounded, which can cause an ignition hazard
- If the 9kg cylinder is in an unstable position it could fall over or be left hanging by the pigtail which increases the risk of a serious gas leak
- Most household gas appliances (or a group of gas appliances used at once) will not get the gas supply needed to perform properly which could damage the appliances or have them working at less than full capacity.

ALTERNATIVES

Most gas suppliers are able to deliver a full 45kg gas bottle within a week of placing an order. If an installation is running a twin 45kg set up, this should then allow the installation to draw enough gas supply from the single 45kg cylinder whilst awaiting the replacement.

If for some reason the empty LPG cylinder needs to be removed from the installation prior to being replaced, the pigtail can be plugged by a POL cap to ensure there are no subsequent leaks until the second 45kg gas bottle can be replaced.

If in doubt, always talk to a licensed Gasfitter to ensure an installation is safe and the demand can be met by the supply.

