

# Everything you need to know about gas.

## What are Gas Cylinders?

A gas cylinder is a pressure vessel for the storage and containment of gasses at above atmospheric pressure. High pressure gas cylinders are also often called gas bottles.

Under the GHS classification, all hazardous gases have hazard classifications, e.g. Class 2 (flammable), Class 5 (oxidising), and Class 6 (toxic). Examples of these substances include LPG, propane, butane, CNG, hydrogen (flammables), Oxygen, chlorine, nitrous oxide (oxidisers), and phosgene, sulphur dioxide, and anhydrous ammonia (toxics).



## How should I store Gas Cylinders?

According to WorkSafe, irrespective of the type of gas or the quantity stored, gas cylinders should be stored in a location that:

- Is suitable for the type and quantity stored
- Is secure and well ventilated
- In the case of flammable gases, is of fire resisting construction
- In the case of flammable gases, is suitably separated from potential sources of ignition
- In the case of flammable or toxic gases, is not a person's work area and the quantities stored meet the required separation distances from areas of high and low intensity land use
- In the case of flammable or oxidising gases, has portable fire extinguishers available
- Where required by quantity, an emergency response and hazardous substance warning signage is in place

In addition to this, it is good practice for the cylinders to be adequately protected from the weather. It is important that cylinders are stored, handled, and used in an upright position wherever possible.

## What are the cabinet design requirements for Gas Cylinder stores?

The guiding document for the gas cylinders is the AS 4332-2004 Standard: Storage and handling of gases in cylinders.

## What are the ventilation requirements for Gas Cylinder stores?

The Standard requires ventilating the area where cylinders are stored so that safe exposure levels are maintained, and the gases remain within explosion limits.

## What are the ventilation requirements for Gas Cylinder stores?

The majority of New Zealand worksites using gas cylinders would store less than 2,000 litres of gas and are therefore classified as 'minor storage'. The 2,000 litres is an aggregate quantity of all gases, and if any of the gases exceed the quantities listed below, the site is no longer considered as 'minor storage' and the full Standard above applies:

- Class 2.1 Flammable Gases – 500 litres
- Class 2.2 Non-Toxic Gases – 2,000 litres
- Class 2.1 (5.1) Non-Toxic, Oxidising Gases – 1,000 litres
- Class 2.3 Toxic Gases – 50 litres

## What are the segregation requirements for Gas Cylinder?

Keep Class 2.1, Class 2.2 (5.1) and Class 2.3 gases segregated from each other (as well as other DG's) by at least 3 metres. If the gases are stored indoors, this must be 5 metres.

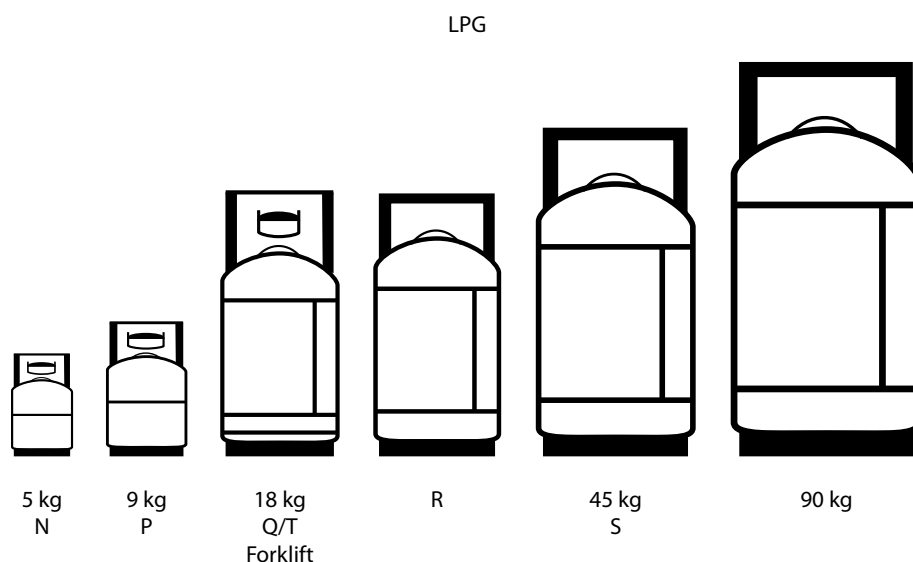
## At Hazero we have a range of Gas Cylinder Stores



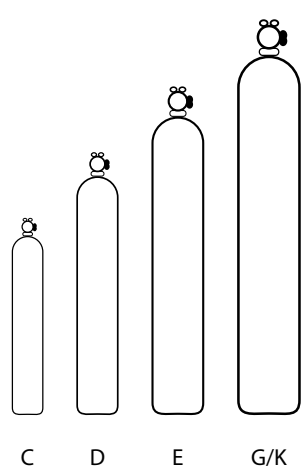
If you're unsure of what sized gas cylinder you have on site, our helpful resource sheet on common gas cylinder sizes can help, please see next page.

# Gas cylinder specifications

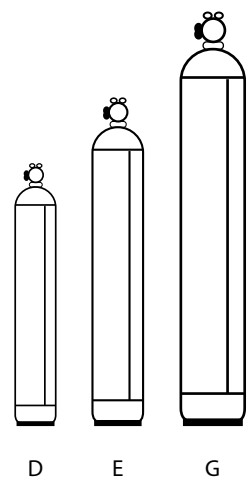
Dimensions and Unit	High Pressure Industrial Gases				LPG						Acetylene		
	C	D	E	G/K	N (5kg)	P (9kg)	Q/T (18kg) Forklift	R	S (45kg)	90kg	D	E	G
Capacity (L)	2.75	9.41	23	47	11	22.7	43.9	65.8	108	200	7.5	22.3	50.2
Height (mm)	460	760	910	1410	400	510	817	840	1240	1340	495	770	795
Diameter (mm)	100	150	200	230	260	310	310	375	375	508	160	210	310
Empty Weight (kg)	3.3	11	28	50	6.5	9.5	22	23	38	70	10	22	55



High Pressure Industrial Gases



Acetylene



## Need Extra Help?

If you have questions, need technical advice, or want to buy a gas store, Hazero is here to help. Contact us at [help@hazero.co.nz](mailto:help@hazero.co.nz), [www.hazero.co.nz](http://www.hazero.co.nz) or call our support team on **0800 688 844** for expert guidance.