

Micro bubbles bring  
pleasure to the  
craft of brewing.





### Who is BOC?

BOC is a member of The Linde Group which supplies compressed and bulk gases, chemicals and equipment around the globe. The company develops safe, sustainable and innovative solutions for customers in many specialty sectors, such as food, beverage and leisure.

Our Food & Leisure business supports customers in various market segments including, Craft Breweries, Pubs, Clubs, Hotels, Restaurants, Fast Food outlets, Wineries, Food Packaging, Catering Services, Swimming Pools, Entertainment and Party Shops.

BOC understands the effort, expertise and processes needed to brew your unique blend so you can expect the following:

- Support from our team of Food & Leisure Specialists and Customer Engineering Services (CES) working with you to design, install and maintain a gas system.
- Customer Engagement Centre available to take your order, enquiry or provide technical support Monday-Friday between 7.30 am–5.00 pm.
- Extensive gas distribution network including Gas Agents with flexible delivery options.
- Customer Engineering Services (CES) provide a 24 hour, 7 day maintenance and service offer to ensure you can continue focusing on your customers.
- A large network of Gas & Gear retail outlets to provide you with product and equipment advice, support or your choice of picking up cylinders.
- BOC website with online ordering, product, equipment, industry, safety and quality information at [www.boc.com.au](http://www.boc.com.au)

# We serve quality solutions to Craft Breweries.

## BOC gases used to brew

During the brewing process, BOC provides the Oxygen (O<sub>2</sub>) added for fermentation to feed and keep yeast healthy. We are a major supplier of Carbon Dioxide (CO<sub>2</sub>) which is typically used for push out, tank purge, carbonation, bottle pre-evacuation, keg purging and pressurisation.

Venues that have a bar service on site will also use bulk liquid or compressed CO<sub>2</sub> for:

- CARBONATION of beer, cider and soft drinks
- PRESSURISATION in order to push liquid from storage source to point of dispense
- HEAD RETENTION of beer after it is poured

Our gases have many applications which is why BOC invests so heavily in the supply chain. We are committed to the excellence of our products and services and aim to ensure our products meet the quality specification every time. It is important to us that your customers keep coming back.

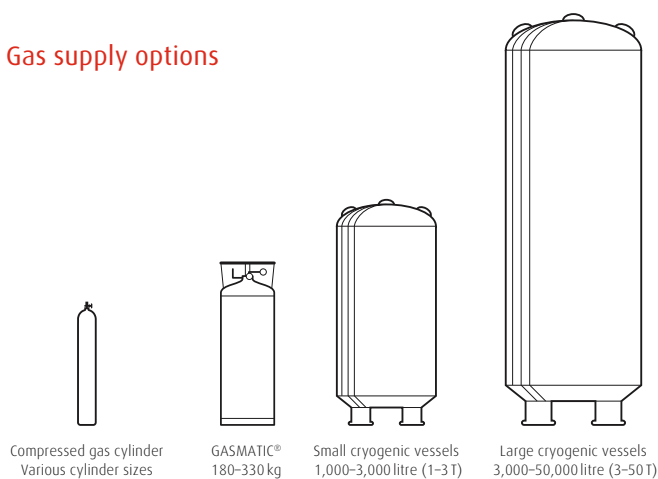
Our focus on high quality includes:

- HACCP and ISBT accreditation for our compressed Food Grade Carbon Dioxide
- Safety Data Sheets available anytime at [www.boc.com.au](http://www.boc.com.au)
- The ability to provide quality batch test results or certificates for our products as part of a solution.

When determining the most appropriate and cost effective package, parameters such as pressure, volume, usage and flow rate are factors which need to be considered. We have developed a comprehensive range of gas supply packages with the following options available to suit your specific needs:

- Compressed gas cylinders in various sizes
- GASMATIC® cryogenic vessels ranging from 180 kg – 330 kg
- Small CRYOSPEED® Cryotank vessels – 1,000 litre (1 tonne) – 3,000 litre (3 tonne)
- Large cyrogenic vessels – 3,000 litre (3 tonne) – 50,000 litre (50 tonne)

## Gas supply options



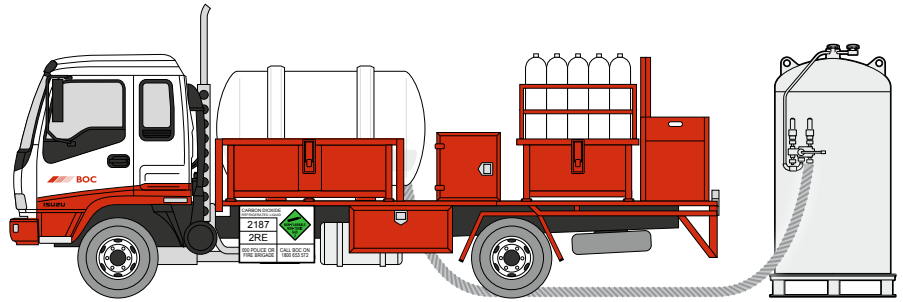
## GASMATIC® & CRYOSPEED® Vessels

GASMATIC® and CRYOSPEED® vessels can meet your needs by providing uninterrupted delivery of liquid carbon dioxide. Our cryogenic liquids are stored in vacuum insulated vessels. Our Specialised Delivery Service fill on site via a compact tanker vehicle small enough to accommodate most sites.

This service provides your workplace with;

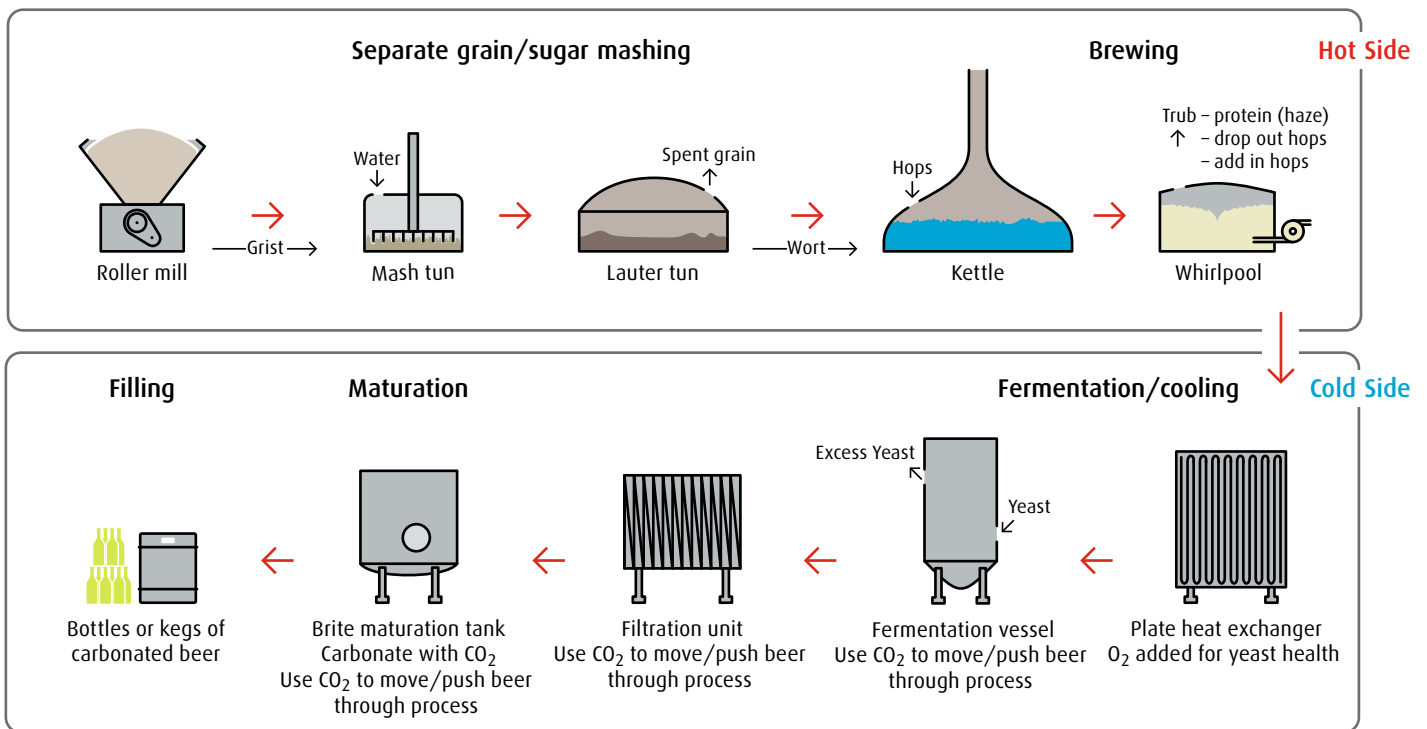
- Reliability – our extensive distribution network allows us to make every effort to deliver your product without assistance and provide true security of supply
- Flexibility – sporadic demands or unforeseen circumstances which make scheduled deliveries impractical can be managed provided you give us sufficient notice
- Efficiency – expert schedulers who understand customer usage patterns and adapt to changing requirements by looking at your demand
- Safety – no handling and small vessel footprint reduces storage space required

1. Tanker delivers cylinders or liquid by connecting to the vessel on site.



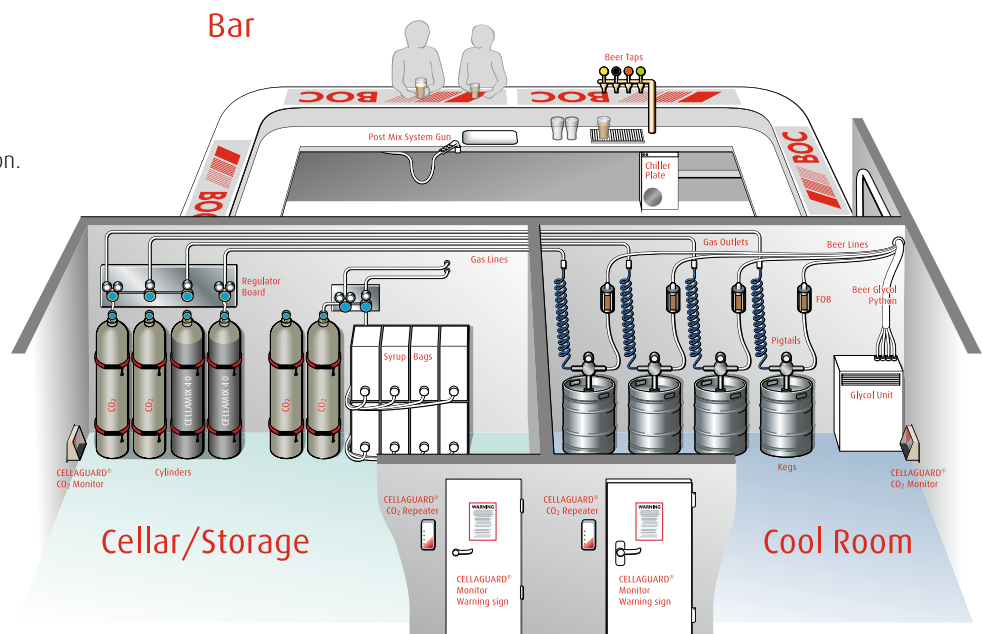
2. Processing facility of a brewery.

The gas delivered on site is an essential part of the brewing process.



3. Bar service on site.

The gas supply carbonates beer, cider or postmix in the bar. It may also be used for pressurisation or head retention.



Images are for illustrative purposes only.

# Compressed gases.

Description	Gas Composition	Package Size*	Package Content	Package Diameter**	Package Height**	Package Length	Gauge Pressure	Outlet Connection
 <p><b>Carbon Dioxide Food Grade</b> Gas Code: 082</p> <p>Food grade quality gas used in pressure beverage dispensing.</p>	Carbon Dioxide 99.9%	D	6.0 kg	175 mm	585 mm		5700 kPa	AS 2473 Type 30
		VT	10.0 kg	215 mm	625 mm			
		F	22.0 kg	215 mm	1245 mm			
		G	31.0 kg	250 mm	1365 mm	–		
 <p><b>Nitrogen</b> Gas Code: 036</p> <p>Beverage gas used in pressure beverage dispensing.</p>	Nitrogen 99.99%	D	1.4 sm <sup>3</sup>	175 mm	585 mm		16300 kPa	AS 2473 Type 50
		E	3.6 sm <sup>3</sup>	215 mm	955 mm			
		G	7.2 sm <sup>3</sup>	250 mm	1365 mm	–		
 <p><b>Oxygen</b> Gas Code: 025</p> <p>Beverage gas used to speed up fermentation.</p>	Oxygen 99.5%	E	4.1 sm <sup>3</sup>	215 mm	955 mm	–	16300 kPa	AS 2473 Type 10
		G	8.9 sm <sup>3</sup>	250 mm	1365 mm	–	17500 kPa	
 <p><b>MULTIMIX® 30</b> Gas Code: 037</p> <p>Beverage gas.</p>	Carbon Dioxide 30%, Nitrogen 70%	VT	2.3 sm <sup>3</sup>	215 mm	625 mm		13400 kPa	AS 2473 Type 50
		F	5.2 sm <sup>3</sup>	215 mm	1245 mm			
		G	7.3 sm <sup>3</sup>	250 mm	1365 mm	–		
 <p><b>CELLAMIX® 40</b> Gas Code: 085</p> <p>Beverage gas.</p>	Carbon Dioxide 40%, Nitrogen 60%	VT	2.2 sm <sup>3</sup>	215 mm	625 mm		12000 kPa	AS 2473 Type 30
		F	4.9 sm <sup>3</sup>	215 mm	1245 mm	–		
 <p><b>CELLAMIX® 55</b> Gas Code: 098</p> <p>Beverage gas.</p>	Carbon Dioxide 55%, Nitrogen 45%	VT	2.7 sm <sup>3</sup>	215 mm	625 mm		12000 kPa	AS 2473 Type 30
		F	6.0 sm <sup>3</sup>	215 mm	1245 mm	–		
 <p><b>CELLAMIX® 75</b> Gas Code: 097</p> <p>Beverage gas.</p>	Carbon Dioxide 75%, Nitrogen 25%	F	6.0 sm <sup>3</sup>	215 mm	1245 mm	–	9300 kPa	AS 2473 Type 30

\*Availability of package sizes will vary across the states. \*\*Based on aluminium cylinders without a valve.

## Gas cylinder safety.

For anyone using compressed gas cylinders, knowledge and understanding of the Do's and Don'ts is essential.

Please refer to the Guidelines for Gas Cylinder Safety available at [www.boc.com.au](http://www.boc.com.au) for detailed information relating to safe handling of gas cylinders.

# Equipment. CELLAGUARD® monitors, regulator board and nitrogen generator.

Whilst CO<sub>2</sub> is a non-hazardous gas, there are potential dangers if high levels accumulate within an enclosed area or confined space such as cellars or cool rooms. Guidelines as advised by AS5034 and BOC CELLAGUARD® monitoring systems are designed to assist you in reducing your risk and providing a safe environment.

## CELLAGUARD® monitors

BOC CELLAGUARD® monitors are available in Carbon Dioxide (CO<sub>2</sub>) or both Carbon Dioxide and Oxygen (O<sub>2</sub>) models. There are two key components, the monitor and the repeater.

- The monitor is installed inside the cellar or cool room (close to the point of gas supply and/or gas use) and monitors the quality of the air in the environment.
- The repeater is installed near the entrance to the cellar and 'repeats' or mimics the conditions of the monitor. Where there is more than one entrance to the area, extra repeaters can be installed.



CELLAGUARD® Carbon Dioxide (CO<sub>2</sub>) monitor and repeater.



CELLAGUARD® Carbon Dioxide (CO<sub>2</sub>) and Oxygen (O<sub>2</sub>) monitor and repeater.



BOC Regulator board.

The BOC CELLAGUARD® monitor package includes:

- CELLAGUARD® CO<sub>2</sub> monitor or CELLAGUARD® CO<sub>2</sub> and O<sub>2</sub> monitor
- CELLAGUARD® alarm repeater
- Splashguard
- Signage
- Warranty

This package is designed to ensure you know the CO<sub>2</sub> and O<sub>2</sub> levels inside the room are at a safe level for you to enter, reducing the risk of exposure.

## CELLAGUARD® CO<sub>2</sub> monitor

The CELLAGUARD® CO<sub>2</sub> monitor is designed to detect increased levels of CO<sub>2</sub> in an enclosed area like a store room, cellar or cool room (ambient air). The monitor has two preset CO<sub>2</sub> alarm levels of 1.5% and 3% that provide an audible and visual indication of potentially dangerous levels of CO<sub>2</sub> in the air surrounding the monitor. The CELLAGUARD® CO<sub>2</sub> monitor is suitable for areas where Carbon Dioxide is used exclusively.

## CELLAGUARD® CO<sub>2</sub> and O<sub>2</sub> monitor

The CELLAGUARD® CO<sub>2</sub> and O<sub>2</sub> monitor is designed to detect the presence of CO<sub>2</sub> or a reduction in O<sub>2</sub> levels in an enclosed area like a store room, cellar or cool room (ambient air). The monitor has two preset CO<sub>2</sub> alarm levels of 1.5% and 3%, and a preset O<sub>2</sub> alarm level of 19% that provide an audible and visual indication of potentially dangerous levels of CO<sub>2</sub> or O<sub>2</sub> in the air surrounding the monitor. The CELLAGUARD® CO<sub>2</sub> and O<sub>2</sub> monitor is suitable for areas where Nitrogen and Carbon Dioxide are used.



Mk 5.






## Mk 5 Nitrogen generator

The Mk 5 on-site nitrogen generator produces a continuous supply of clean, dry, high purity nitrogen from compressed air using Pressure Swing Adsorption (PSA) technology and an integral oil-free air compressor. The unit is compact and wall mounted so it won't get in the way. 100% nitrogen is required for the preservation or dispensing of wines. When the unit is connected to a CO<sub>2</sub> source, the system can also produce mixed blends of CO<sub>2</sub> and N<sub>2</sub>.

## BOC Regulator board

Compliant with AS 5034.

# Equipment. Food and leisure regulator range.

	Part No.	Description	Inlet Pressure	Inlet Connection	Outlet Pressure	Outlet Connection	Pressure Gauges	Relief Valve	Non-return Valve
	801325	Primary CO <sub>2</sub> reg	21,000 kPa	Rear, Type 30	400 kPa max	Side 5/8" UNF RH nut and nipple	Contents and delivery	Yes	Yes
	801327	Primary CO <sub>2</sub> reg – single gauge	21,000 kPa	Rear, Type 30	400 kPa max	Bottom 5/8" UNF nut and nipple	Delivery only	Yes	Yes
	801326	Secondary CO <sub>2</sub> reg	21,000 kPa	Rear, Type 30	400 kPa max	Bottom 5/16" quick connect tube lock	Delivery only	Yes	No
	801330	Postmix reg	21,000 kPa	Side 1/2" 20 UNF	Preset 800 kPa max – key adjustment	Bottom 1/4" O.D. tube	Contents and 2 deliveries	Yes	Yes
	801331	Primary N <sub>2</sub> reg	21,000 kPa	Rear, Type 50	400 kPa max	Side 5/8" UNF nut and nipple	Contents and delivery	Yes	Yes

## Features

Designed for the food and leisure industry with non-perforated Teflon and Nitrile rubber diaphragm.

Complies with Australian Standard AS 4267 and AS 2473.

Fully encapsulated regulator valve.

High quality machined brass body rated to 30,000kPa inlet pressure with large 3.2mm orifice and 0–400 kPa outlet pressure to meet requirements of Australian Standard AS 5034.\*

Failsafe components including diaphragm bursting disc.

Non-return valve<sup>†</sup> to stop back-flow of liquid into gas supply.

## Benefits

Quality components selected for use with beverage gases extending regulator life. Includes 5 year conditional warranty on body.

Suitable for use in Australia and New Zealand.

Maintains and safely controls the outlet pressure.

Delivery of gas at constant flow and pressure which ensures consistent dispense of beverages.

Risk of dangerous pressure build-up is reduced.

Stops contamination.

\*0–1–1000kPa applies to Part No. 801330.

<sup>†</sup>Does not apply to Part No. 801326.

These useful videos can be found on the BOC South Pacific YouTube Channel.



What is AS5034?



Properties and hazards of carbon dioxide  
in the food and leisure industry.



Signage in your cellar or cool room.



Cellar and cool room ventilation  
and monitoring.

For more information contact the BOC Customer Engagement Centre on 131 262.

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