

Introduction

Carbon Dioxide (CO₂) plays a vital role in the hospitality industry. Pubs, bars, restaurants and fast food outlets rely on tanks or cylinders of CO₂ for the carbonation of many beverages, including tap beers, ciders, and post-mix soft drink.

However, while necessary, CO₂ cylinders can also be extremely dangerous. Generally stored in confined spaces such as cellars or cool rooms, a leaking cylinder can result in a build-up of gases. These gases, if inhaled by humans, can result in asphyxiation and possible death.

While initiatives have been taken to reduce the chances of these accidents occurring, they are still not uncommon, and the potential for disaster in many venues is still very real.

This paper takes a brief look at the dangers of CO₂ in the hospitality industry, and available solutions for ensuring the safest possible working conditions are provided.

The Silent Killer

Often referred to as the 'silent killer', CO₂ is odourless and colourless, and is imperceptible to human senses. If CO₂ leaks in to the air, a person entering a cellar or cool room can be overcome without warning and become ill in only a few minutes¹.

The consequences of this can range from headaches and nausea through to suffocation and death.

Recently in Australia, an employee of a Melbourne pub was killed after a leaking carbon dioxide cylinder resulted in a significant increase in the level of gas in the cellar. When the man entered he was overcome by carbon dioxide gas and died on site. Following the incident, the owners of the pub were fined \$80,000 and directed to install a cellar alarm system to warn workers of leaks before they enter².

Prevention

Whilst leaks causing dangerous levels of CO₂ can often not be prevented, human exposure can be. Testing and monitoring of these spaces are crucial to providing a safe working environment and ensuring oxygen remains at safe levels.

In 2005, Australian Standards 5034 - Installation and use of inert gases for beverage dispensing came into effect. These standards were introduced to improve operation and reduce the risks associated with the hazards of compressed and refrigerated gases including carbon dioxide.

One of the key points of AS5034-2005 is the requirement for gas monitors in non-ventilated storage areas. Gas monitors are necessary to ensure safe levels of CO₂ are maintained.

Monitors must indicate CO₂ levels, with levels to be kept below 0.5%. The monitor system must also include visual and audible alarms that activate when CO₂ levels reach 1.5% and again at 3%. The alarms must both be within the cellar or cool room and at the entry point outside these areas³.

A wide range of CO₂ monitoring systems are available specifically designed for the hospitality industry for compliance with these standards.

CO₂ Cellarwarn

The CO₂ Cellarwarn Monitor is a gas monitor designed to detect the presence of carbon dioxide in the ambient air to protect people in confined spaces. The CO₂ Cellarwarn Monitor has an audible alarm and visual indication which activates when CO₂ concentration reaches 1.5% and 3%.

In addition to the alarms, the CO₂ Cellarwarn Monitor can be connected to up to 3 remote display units which clearly indicate the ambient CO₂ levels on large digital LCDs. This enables operators to monitor CO₂ levels without entering the room. The ability to view even the smallest increase in CO₂ levels alerts the operator that there is a leak, and can be actioned before a major leak or potential health risk occurs.

With thousands supplied and in use throughout venues across the country, the CO₂ Cellarwarn Monitor is ideal for hospitality venues that require CO₂ for their beverage service, to not only comply with current Australian Standards, but take cellar and cool room safety to the next level.





REFERENCES

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- ² Geelong company fined after pub death, Victorian WorkCover Authority, Friday 12 October 2012
<http://vwanews.com.au/news/item/271-geelong-company-fined-after-pub-death.html>
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<http://www.infostore.saiglobal.com/store/PreviewDoc.aspx?saleItemID=391579>



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