



Case study

Say cheese: new gas solution supports growing Victorian dairy producer

Ferraro Dairy Foods, Tullamarine Victoria

Ferraro Dairy Foods in Tullamarine, Victoria is a tight knit family-run cheese producer that supplies more than 25 varieties to some of Australia's leading food manufacturers including Arnotts, Paddy's Pies and Goodman Fielder.

As production of shredded mozzarella, shredded parmesan and grated parmesan increased, Ferraro Dairy Foods needed larger volumes of nitrogen and carbon dioxide gas which resulted in a new solution to support their modified atmosphere packaging (MAP) process.

John Ferraro, Owner of Ferraro Dairy Foods said: "Since moving to BOC, we've had no gas supply issues and can confidently increase our cheese production knowing that we have the right gas solution. We don't change for the sake of change – but BOC's offer was competitive and they have really looked after us."

The challenge

Ferraro Dairy Foods had outgrown their gas system by a previous supplier, now requiring more nitrogen and carbon dioxide gas flows and larger vessels to support increasing quantities of cheese packs being produced using a modified atmosphere packaging (MAP) process.

"We have a single chamber and double chamber machines that need gas all day long. The high pressure mixed gas cylinder packs we had were connected directly to each individual machine which meant a higher risk of pipe freezing and interruption of gas flow.

"After hearing about what BOC did from one of our contacts, we were impressed and got in touch to tell them what we needed. They were able to offer us a perfect solution for our consumption that was competitive and different to what we had heard or seen elsewhere."

The solution

BOC's experts assessed the factory setup and processing area and provided recommendations to Ferraro Dairy Foods which involved installing gas storage vessels, incorporating a mix onsite unit and liquefied gas delivery by BOC's CRYOSPEED® operators.

"We took the BOC expert into the factory and processing area, showed him the machines we had and the gas line that was coming in. It wasn't left up to us – we're not the experts on that – BOC nussed it all out."

BOC installed a gas system comprising of a two tonne cryotank vessel for liquid nitrogen, two 350 kilogram GASMATIC® vessels for the food grade liquid carbon dioxide and a mix onsite unit to create the 30/70% CO₂/N₂ mixture required for the packaging process. Pipework was also designed and installed to ensure the flow rate requirement for each machine was met.

This provided Ferraro Dairy Foods with a convenient, efficient and cost effective gas supply solution that met their growing needs.

With high volumes of CO₂ being used indoors, BOC ensured Ferraro Dairy Foods was compliant with Australian Standard 5034, installing a CELLAGUARD® CO₂ Monitor with four CELLAGUARD® repeater displays at each entrance to the factory.

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The vessels and equipment have a small footprint and take up minimal storage space. All vessels can be refilled directly from BOC's specialised CRYOSPEED® trucks, instantly removing the need for manual handling and switchover of cylinder packs.

The benefits

Since installing the pipeline and vessels, Ferraro Dairy Foods has been able to increase its productivity with a consistent flow rate of gas achieved to all its packaging machines.

The stationary vessels located outside the factory are replenished automatically by BOC with a telemetry system installed on the cryotank vessel to indicate when a refill is required. This has reduced the need for John and his team to manually handle cylinder packs and placing orders for new supplies thus creating a convenient and safe work environment.

"We found that the gas was very competitively priced and have already seen some savings since the solution was installed – there is no longer a need to spend 20 minutes each time we have to changeover a cylinder pack.



"We don't need to think about our gas deliveries – every second Monday they top it up. BOC can track the usage levels and will refill it when it gets low. They have also installed a cylinder backup system to cater for any issues from the vessels but we have never needed to use them.

"BOC is always making sure any problem is addressed straight away and we are really looked after. We feel really comfortable with the setup. Every six months they come to the door to service our vessels.

"Most importantly, this solution has given us the confidence needed to expand our business while maintaining the strict food safety requirements of our industry."

About Ferraro Dairy Foods: Ferraro Dairy Foods is a father and two sons owned and run business, offering that family service the bigger companies can't. Because our company has grown and developed so much in the past thirty years we have had to expand twice in the past five years, enabling our well trained staff to create the twenty five cheese varieties that we are famous for. We take great pride in the manufacturing of our products to produce safe cheese products which exceed our customer expectations. We also maintain that our Food Safety Program and the manufacturing facility are in accordance with legislative requirements. We are continually improving our operations through training of our employees and renewing our systems and procedures.

About 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, heavy industry and medical environments. For more than a century the company's gases and expertise have contributed to advances in industry and everyday life, including steelmaking, refining, chemical processing, environmental protection, wastewater treatment, welding and cutting, food processing and distribution, glass production, electronics and health care. For further information, see www.boc-limited.com.au.

About Linde: In the 2015 financial year, The Linde Group generated revenue of EUR 17.944 bn, making it one of the leading gases and engineering companies in the world, with approximately 65,000 employees working in more than 100 countries worldwide. The strategy of The Linde Group is geared towards long-term profitable growth and focuses on the expansion of its international business with forward-looking products and services. Linde acts responsibly towards its shareholders, business partners, employees, society and the environment in every one of its business areas, regions and locations across the globe. The company is committed to technologies and products that unite the goals of customer value and sustainable development. For more information, see The Linde Group online at www.linde.com.

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BOC Limited

ABN 95 000 029 729

Australia

131 262
contact@boc.com
www.boc.com.au

New Zealand

0800 111 333
customer-service@boc.com
www.boc.co.nz

Papua New Guinea

675 472 2377
sales.lae@boc.com.png
www.boc-png.com