



Case Study

Oz Group. Australia's biggest blueberry co-op enters frozen fruit market.

Marketed under the Driscoll's brand, Oz Group's berries are sold in Australia's leading supermarkets including IGA, Woolworths, Coles and Costco – and processed from its state-of-the-art packing facility in Coffs Harbour. BOC worked with Oz Group to install a Linde CRYOLINE®CW freezer tunnel solution that has allowed the co-op to enter the growing frozen berry market.

Challenge

With millions of blueberries coming through its packing facility every season, a small portion of blueberries would often be set aside because the appearance did not meet Oz Group's requirements for shelf-ready fresh berries.

"These berries were still good quality and ready to eat, so we started looking at the potential to freeze them. In the supermarket, most frozen berries sold in Australia were from overseas, so there was a huge opportunity to introduce more Australian-grown frozen berries locally," said Adam.

Individually quick-freezing the berries was a preferred method that would retain the taste, texture and flavour of the product – which is often a challenge with other methods such as blast freezing.

"Liquid nitrogen is a very effective medium for freezing any food product because it is -196 degrees. It's very cold, making the freezing process very fast," said Steve McLoughlin, BOC Technical Engineer.

"When I looked into the Cryowave (CW) tunnel, it impressed me that it could freeze at a rapid rate. It would snap freeze berries within four minutes. This would mean we could freeze 200 to 300 kilograms of berries per hour – while keeping the integrity of the berry," said Adam.

Solution

BOC installed a five metre Linde CRYOLINE®CW freezer tunnel solution featuring CRYOWAVE, controllable vibration technology to individually quick-freeze the berries. A liquid nitrogen storage tank was installed outside the facility with an insulated pipeline connecting to the tunnel inside.

Adam Bianchi, Chief Executive of Oz Group:
"We now have more variety of product going out to the market and have found people are enjoying eating Australian-grown frozen berries."

Two large exhaust fans were installed on the roof, to safely exhaust cold produced from the liquid nitrogen process inside. An oxygen analyser installed on the walls to monitor gas levels and other emergency mechanisms built into the solution.

BOC's engineers programmed the tunnel's computer interface to allow Oz Group to easily see the temperature, operating parameters, safety panels and recipes for product freezing.

BOC also provided classroom training for Oz Group staff covering operation of the freezer tunnel, maintenance and comprehensive safety processes.

Benefits

In its first blueberry season, the CRYOLINE®CW freezer processed thousands of frozen berries which are now being

sold in supermarkets across Australia.

"It has transformed our operations and reduced waste by allowing us to process berries through the CRYOWAVE tunnel," said Shaun Tholen, Oz Group Operations Manager.

"BOC has been critical to the process in terms of training and implementation of the technology. The Cryowave has given us assurance that our frozen berries will retain nutrients and integrity," said Adam.

"They were really helpful in setting recipes for the Cryowave, giving us set options at the push of a button. Giving us comfort in terms of the safety and operations process because there are many things that go along with nitrogen and making sure it is safe".

"Having them on site and available gave us strong assurance that we're doing the right thing."



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BOC
A Member of The Linde Group

BOC Limited | ABN 95 000 029 729 | Riverside Corporate Park, 10 Julius Avenue, North Ryde NSW 2113, AUSTRALIA
131 262, contact@boc.com, www.boc.com.au

BOC Limited | NZBN 9429040953946 | Central Park, Level 1, Building 6, 666 Great South Road, Ellerslie, Auckland 1051, NEW ZEALAND
0800 111 333, sales@boc.com, www.boc.co.nz

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