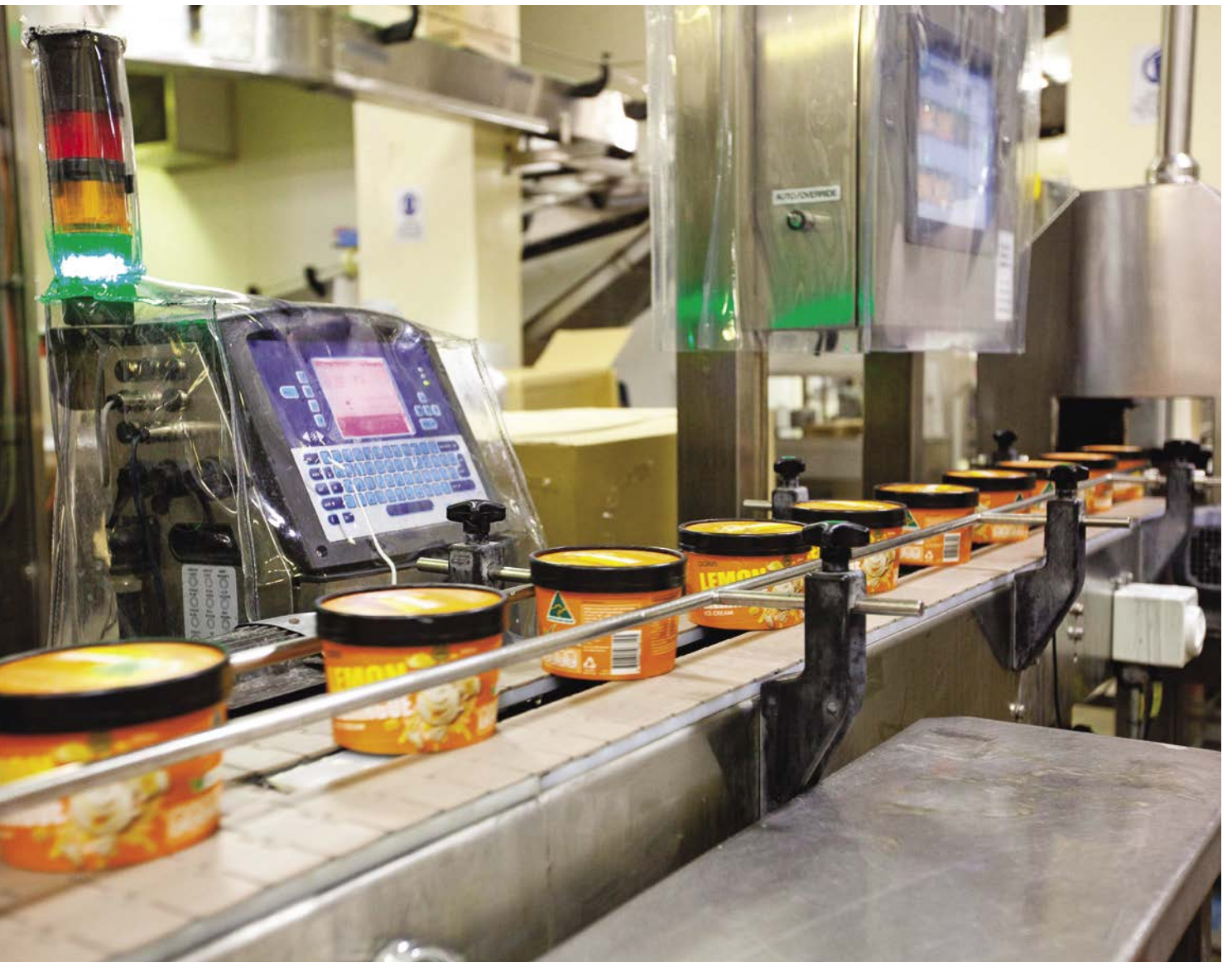


BEST PRACTICE | NORCO CO-OPERATIVE LIMITED

Sweet success for Norco expansion

Ice cream plant doubles production and increases reliability
with Bürkert valve control technology.





Norco Co-operative Limited is an agricultural supply and marketing co-operative based in northern New South Wales, Australia, and its primary activities extend along the agriculturally rich and diverse northern New South Wales and southern Queensland coastal strip.

Established in Byron Bay in 1895, it sells products and services locally and internationally. Its more than 200 dairy farm members supply over 200 million litres of milk to its two milk bottling factories (Raleigh, near Coffs Harbour, NSW and Labrador on the Gold Coast, Queensland) and to its ice cream factory in Lismore, NSW. It also has a fledgling fresh milk export business in China.

An Innovative Upgrade



Brett Ferrier

Business Development Manager
Bürkert Australia

In 2018 the co-operative announced a doubling of its ice cream manufacturing capacity in Lismore with a \$10 million investment by its farmer owners.

As part of the new investment a new production line was built utilising all new technology, and includes two new clean-in-place (CIP) systems, an upgrade of 14 tanks, a flavour addition system and pasteuriser integration. Future work planned includes two spiral freezer tunnels and the installation of a fully automated robotic palletising system.

The doubling of production will substantially improve the ice cream business unit's profitability, which will lead to increased farm gate prices to farmers after the completion of the project.

"These investments will take us to the next level of creating better technical efficiencies and growing business volume," said former Norco chief executive officer Brett Kelly when announcing the investment.

"The co-op is trading very well and ice cream in Lismore is a big part of the business, so this will increase our business capabilities."



Ryan Orbell

National Segment Manager Hygienic
Bürkert Australia

Valve reliability crucial

The main steps in the production of ice cream – milk pasteurisation, homogenisation, blending of ingredients and packaging, as well as clean-in-place (CIP) processes – all require extensive liquid flow control and therefore a broad range of valve equipment. However, in implementing its hygienic valves of choice, Norco was experiencing some technical difficulties with the valve control heads. It was therefore decided to look for a different type of control head to work with the existing valves.

Norco already had an existing engineering and support relationship with Bürkert Fluid Control Systems (Bürkert) and approached the company about providing suitable control heads.

Desirable features

Ryan Orbell, National Segment Manager - Hygienic Processing at Bürkert, had visited Norco prior to the project to present the Type 8681. Subsequently a control head was installed and trialled locally, proving it to be technically suitable to meet the needs of the plant.

“The Type 8681 control heads offer a number of advantages for Norco,” said Orbell. “They offer greater visibility with the ultra-bright LED indication, are more durable and have high IP ratings, and also offer a patented manual override functionality without the need to remove the top cover, which offers increased security around wet

environments as it reduces the risk of operator error causing failure.”

Because the valves themselves were from a different manufacturer, Bürkert also supplied a universal adaptor that allowed the new control heads to be combined with all commercially available hygienic valve types, such as butterfly valves, ball valves and single and double-seat valves. This meant it was possible to achieve a standard solution for the automation of all the hygienic process installations – eliminating the need for multiple brands and types of control head.



Ryan Orbell // Bürkert Australia

Michael Mountain // Norco System Improvement Manager

Reliability improved

Previously we had reliability issues with the control heads we were using,” said Michael Mountain, System Improvement Manager at Norco. “We had issues with water ingress, control tops coming loose and losing feedback, and difficulties with cable terminations – terminals came screwed closed with a gap under the terminal, and new contractors would often strip the threads.”

“For us, the main benefits of the Burkert control heads are moisture control due to the control tops being internally pressurized - positive pressure to prevent any moisture ingress. Plus their excellent IP rating and lid removal for easy access,” he continued. “The slimmer design also allows more compact valve clusters with fewer dead legs, and they provide improved 360-degree visibility for plant operators.”

“Other advantages have been the ability to achieve external stroking of the valve without affecting the control top seal, as well as the simple setup.”

Future-proofed communications

The Type 8681 control head offers a variety of digital communication options, through AS-interface, DeviceNet, IO-Link or bus/CANopen

The Burkert bus/CANopen interface provides the ability to unify the communication across a number of valves and – with the addition of Burkert’s Type ME43 gateway – to integrate the valves into an industrial Ethernet network, making future Industry 4.0 integration possible should Norco decide to go that way.



Security across the board

// Not only have the new Burkert valve control heads contributed to the security of ice cream production through improved reliability and functionality, but the entire expansion project has contributed to the security of the existing 240 jobs at Norco’s Lismore ice cream factory and ensured more workers are needed when the factory moves to 24/7 operation.

We learn from you every day Including when we think outside the box

When it comes to dealing with liquids and gases, Bürkert is a sought-after partner all over the world. Why? Probably because we have been learning for, and from, our customers for more than 70 years. This enables us to always think that crucial step ahead – or even sideways.

We make ideas flow.



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